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APPENDIX N: Water Resources



ADDENDUM 6-DECEMBER-2022

APPENDIX N - WATER RESOURCES - Proposed ROW Change

US 380 McKinney EIS - Coit Road to FM 1827, Collin County CSJs 0135-02-065, 0135-03-053, and 0135-15-002; Dallas District

PURPOSE OF ADDENDUM:

Changes were made to the proposed right-of-way (ROW) limits for the US 380 McKinney project in the 60% Geometric Schematic Design submittal made on 1-JUL-2022. A copy of that submittal is included in Appendix B of this DEIS. This addendum describes where the changes occurred and summarizes how those changes affected the impacts and findings disclosed in the previously approved technical reports that make up the project appendices. The revised impacts to water features based on the proposed ROW changes are disclosed in the DEIS.

DESCRIPTION OF THE PROPOSED ROW CHANGE

To streamline and accelerate the NEPA process for this project, technical studies were initiated at an early stage in schematic development. Initial technical report submittals were based on the proposed ROW established in JUN-JUL-2021, with progressive modifications made through NOV-2021. The JUL-2022 Geometric Schematic Design submittal reflects the continued refinement of the alternatives and consideration of input received during the MAR-2022 public meeting and ongoing coordination with the City of McKinney, Collin County, and the North Texas Municipal Water District.

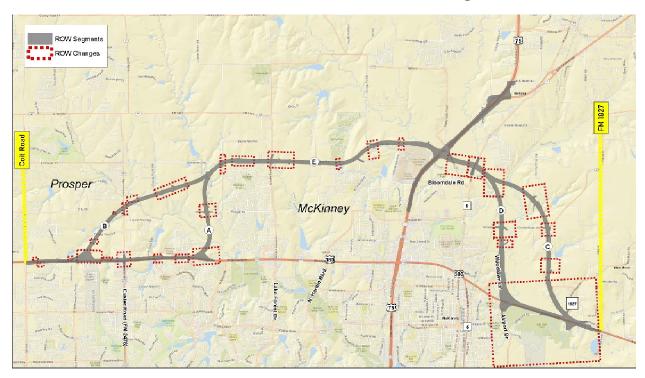
The JUL-2022 submittal made adjustments to the proposed ROW limits throughout the length of the proposed alignments to account for drainage, access, and geometric improvements. Areas connecting to existing and planned roadway projects, under the direction of the City of McKinney, have also been included on the schematics and will still be under refinement into the FEIS. A design decision at the crossing of SH 5 in proximity of the East Fork Trinity River also added improvements within the existing ROW extending farther along SH 5 than was previously reviewed.

In lieu of an actual Addendum, an updated version of the previously approved Water Features Delineation Report (October 2022) is included in this appendix along with an updated 404-10 Impact Table.

Figure 1: Proposed ROW Change - November 2021 to July 2022

Build Alternative	November 2021 Proposed ROW (Acres)	July 2022 Proposed ROW (Acres)	Change in Proposed ROW (Acres)
PURPLE ALTERNATIVE W/O SPUR	1,047.7	1,113.9	66.2
PURPLE ALTERNATIVE W/ SPUR	1,069.1	1,133.1	64.0
BLUE ALTERNATIVE W/O SPUR	1,042.0	1,083.5	41.5
BLUE ALTERNATIVE W/ SPUR	1,081.3	1,098.9	17.6
BROWN ALTERNATIVE W/O SPUR	1,010.3	1,056.4	46.1
BROWN ALTERNATIVE W/ SPUR	1,049.5	1,071.8	22.3
GOLD ALTERNATIVE W/O SPUR	1,015.9	1,086.8	70.9
GOLD ALTERNATIVE W/ SPUR	1,037.4	1,106.0	68.6

Illustration of the July 2022 Proposed ROW Changes



Project Name: US 380 from Coit Road to FM 1827

CSJ(s): **CSJ 0135-02-065, 0135-03-053, and 0135-15-002**

County(ies): Collin

Date Analysis Completed: 23 MARCH 2022

Prepared by: HDR Engineering, Inc.

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated December 9, 2019, and executed by FHWA and TxDOT.

I. Section 402 of the Clean Water Act

No project-specific analysis is required as part of the environmental review process under Section 402 of the Clean Water Act for the reasons provided below:

Since TPDES Construction General Permit (CGP) authorization and compliance (and the associated documentation) occur outside of the environmental clearance process, compliance is ensured by the policies and procedures that govern the design and construction phases of the project. The Project Development Process Manual and the Plans, Specifications, and Estimates (PS&E) Preparation Manual require a storm water pollution prevention plan (SWP3) be included in the plans of all projects that disturb one or more acres. The Construction Contract Administration Manual requires that the appropriate CGP authorization documents (notice of intent or site notice) be completed, posted, and submitted, when required by the CGP, to Texas Commission on Environmental Quality (TCEQ) and the municipal separate storm sewer system (MS4) operator. It also requires that projects be inspected to ensure compliance with the CGP.

The PS&E Preparation Manual requires that all projects include Standard Specification Item 506 (Temporary Erosion, Sedimentation, and Environmental Controls), and the "Required Specification Checklists" require the current version of Special Provision 506 on all projects that need authorization under the CGP. These documents require the project contractor to comply with the CGP and SWP3, and to complete the appropriate authorization documents.

For more information regarding Section 402 of the Clean Water Act, see **ENV's Water Resources Handbook**.

II. Section 404 of the Clean Water Act

Select the appropriate statement(s) below:

This project will <u>not</u> involve any regulated activity in any jurisdictional waters and
therefore does not require a United States Army Corps of Engineers (USACE) "dredge
and fill" permit under Section 404 of the Clean Water Act.

Some or all regulated activity in jurisdictional waters will be authorized under a <u>non-reporting nationwide permit (i.e., no pre-construction notification required)</u> . If this
statement applies, indicate which non-reporting nationwide permit(s) will be used below.
(In the unusual situation in which NWP 16 will be used, select the third checkbox below instead of this one.)
Non-reporting NWP no(s): <enter no(s)="" non-reporting="" nwp=""></enter>
Some or all regulated activity in jurisdictional waters cannot or may not be able to be authorized under a non-reporting nationwide permit; therefore, a <u>nationwide permit with pre-construction notification</u> , individual standard permit, letter of permission, or regional general permit will or may be required.
(In the unusual situation in which NWP 16 will be used, select this third checkbox, even if the project qualifies for a non-reporting NWP 16.)

For more information regarding Section 404 of the Clean Water Act, see **ENV's Water Resources Handbook**.

III. Section 14 of the Rivers and Harbors Act (33 USC 408)

No project-specific analysis is required as part of the environmental review process under Section 14 of the Rivers and Harbors Act (33 USC 408) ("Section 408") for the reasons provided below:

Any project that involves alterations to, or will temporarily or permanently occupy or use, a USACE federally authorized civil works project (e.g., sea walls, bulkheads, reservoirs, levees, wharfs, or other federal civil works projects, or associated federal land (fee simple) or easements) will require USACE authorization under Section 408 prior to construction of the project. Obtaining any required authorization under Section 408 from the USACE is generally handled by hydraulic and/or design engineers. For any project that requires authorization under both Section 404 and Section 408, the Section 404 authorization cannot be issued until the Section 408 authorization is issued.

For more information regarding Section 408, see ENV's Water Resources Handbook.

IV. Section 303(d) of the Clean Water Act

For a CE project, no project-specific analysis is required as part of the environmental review process under Section 303(d) of the Clean Water Act for the reasons provided below:

To date, TCEQ has not identified (through either a total maximum daily load (TMDL) or the review of projects under the TCEQ MOU) a need to implement control measures beyond those required by the construction general permit (CGP) on road construction projects. Therefore, compliance with the project's CGP, along with coordination under the TCEQ MOU for certain transportation projects, collectively meets the need to address impaired waters during the environmental review process. As required by the CGP, the project and associated activities will be implemented, operated, and maintained using best management practices to control the discharge of pollutants from the project site.

For an EA or EIS project, further analysis regarding impaired waters is required under TxDOT's MOU with TCEQ for inclusion in the body of the environmental assessment or environmental impact statement. To do this further analysis, determine whether the project is located within five linear miles (not stream miles) of, is within the watershed of, and drains to, an impaired assessment unit under Section 303(d) of the federal Clean Water Act.

For an EA or EIS project only, provide the date of the Section 303(d) list consulted: **05 OCT 2021**For an EA or EIS project only, check the appropriate box below:

This project is not located within five linear miles (not stream miles) of, is not within the watershed of, or does not drain to, an impaired assessment unit under Section 303(d) of the federal Clean Water Act.

This project is located within five linear miles (not stream miles) of, is within the watershed of, and drains to, an impaired assessment unit under Section 303(d) of the federal Clean Water Act.

<u>For an EA or EIS project only,</u> if the second box is checked, fill-in the table below for any impaired assessment units within five miles of the project and within the same watershed as the project:

Watershed	Segment name	Segment number	Assessment unit number
East Fork Trinity River-Lavon Lake	East Fork Trinity River Above Lavon Lake	0821D	0821D_01
East Fork Trinity River-Lavon Lake	Wilson Creek	0821C	0821C_01
<enter text=""></enter>	<enter text=""></enter>	<enter text=""></enter>	<enter text=""></enter>
<enter text=""></enter>	<enter text=""></enter>	<enter text=""></enter>	<enter text=""></enter>
<enter text=""></enter>	<enter text=""></enter>	<enter text=""></enter>	<enter text=""></enter>
<enter text=""></enter>	<enter text=""></enter>	<enter text=""></enter>	<enter text=""></enter>

For more information regarding Section 303(d) of the Clean Water Act, see **ENV's Water Resources Handbook**.

V. General Bridge Act/Section 9 of the Rivers and Harbors Act

Select the appropriate statement below:

\boxtimes	This project will not require a permit, bridge lighting authorization, or exemption from the
	United States Coast Guard under Section 9 of the Rivers and Harbors Act, which outlines the requirements for approval to construct dams, dikes, bridges, or causeways in or over a navigable waterway.
	This project will require a permit, bridge lighting authorization, or exemption from the United States Coast Guard under Section 9 of the Rivers and Harbors Act, which outlines

the requirements for approval to construct dams, dikes, bridges, or causeways in or over a navigable waterway.

For more information regarding the General Bridge Act/Section 9 of the Rivers and Harbors Act, see **ENV's Water Resources Handbook.**

VI. Section 10 of the Rivers and Harbors Act

Select the appropriate statement(s) below:

\boxtimes	This project does <u>not</u> require authorization from the USACE under Section 10 of the Rivers and Harbors Act, which outlines the requirements for approval to construct smaller structures in a navigable waterway.
	This project <u>does</u> require authorization from the USACE under Section 10 of the Rivers and Harbors Act. Some or all regulated activity in a navigable waterway will be authorized under a <u>non-reporting nationwide permit (i.e., no pre-construction notification required)</u> . If this statement applies, indicate which non-reporting nationwide permit(s) will be used below.
	Non-reporting NWP no(s): <enter any="" non-reporting="" number="" numbers="" nwps="" of="" or="" used=""></enter>
	This project <u>does</u> require authorization from the USACE under Section 10 of the Rivers and Harbors Act. Some or all regulated activity in a navigable waterway cannot be authorized under a non-reporting nationwide permit; therefore, <u>a nationwide permit with pre-construction notification</u> , individual standard permit under Section 404/10, letter of permission, regional general permit, or individual Section 10 permit will be required.
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VII. Section 401 of the Clean Water Act

Select the appropriate statement below:

- This project will not require authorization under Section 404 of the federal Clean Water Act. Therefore, this project is not required to comply with TCEQ's Water Quality Certification Program, established under Section 401 of the Clean Water Act.
- \boxtimes This project will require authorization under Section 404 of the federal Clean Water Act. Therefore, this project is required to comply with TCEQ's Water Quality Certification Program, established under Section 401 of the Clean Water Act.

If the project is required to comply with TCEQ's Water Quality Certification Program, established under Section 401 of the Clean Water Act, then select the appropriate statement below:

		This project will require a NWP under Section 404 that <u>is</u> covered by TCEQ's blanket 401 water quality certification (i.e., all NWPs other than NWP 16) and therefore will comply with Section 401 of the Clean Water Act by implementing TCEQ conditions for NWPs.
		This project will require authorization under a NWP under Section 404 that is <u>not</u> covered by TCEQ's blanket 401 water quality certification (i.e., NWP 16), or under an Individual Standard Permit, Letter of Permission, or Regional General Permit under Section 404; therefore, TxDOT will coordinate a Section 401 water quality certification with TCEQ.
For m		mation regarding Section 401 of the Clean Water Act, see ENV's Water Resources
VIII.	Execu	tive Order 11990, Protection of Wetlands
Select	t the app	ropriate statement below:
		This project is <u>not</u> federally funded and therefore is <u>not</u> subject to Executive Order 11990, Protection of Wetlands.
		This project <u>is</u> federally funded and therefore <u>is</u> subject to Executive Order 11990, Protection of Wetlands, and will <u>not</u> involve construction in any wetlands.
		This project <u>is</u> federally funded and therefore <u>is</u> subject to Executive Order 11990, Protection of Wetlands, and <u>will</u> involve construction in one or more wetlands. Explanation of how the project will comply with Executive Order 11990 is provided below.
		Explanation of why there is no practicable alternative to such construction:
		The build alternatives are constrained by existing and proposed residential and commercial development, existing and planned utility corridors, parklands, and an expansive floodplain.
		Explanation of how the project includes all practicable measures to minimize harm to wetlands:
		All alternatives include bridges to span wetland areas to minimize impacts where feasible. As the schematic design evolves and the hydraulic analysis is completed, additional design improvements will be made to avoid and minimize impacts on wetlands where feasible. Based on the presence of wetlands in relation to the existing transportation system and adjacent constraints in this highly populated area, there are no practicable alternatives that would completely avoid impacts on wetlands.
		ormation regarding Executive Order 11990, Protection of Wetlands, see ENV's Water andbook.
IX.	Execu	tive Order 11988, Floodplain Management

Surface Water Analysis Form					
Select the app	ropriate stateme	nt below:			
	This project is <u>not</u> federally funded and therefore is <u>not</u> subject to Executive Order 11988 Floodplain Management.				
	. , –	federally funded and therefore <u>is</u> subject to Executive Order 11988, nagement, and will <u>not</u> involve construction in the floodplain.			
	This project <u>is</u> federally funded and therefore <u>is</u> subject to Executive Order 11988, Floodplain Management. However, the project will <u>not</u> involve a significant encroachment in the floodplain.				
	likely base floo	croachment" means "a highway encroachment and any direct support of od-plain development that would involve one or more of the following r flood-related impacts:			
	(1)	A significant potential for interruption or termination of a transportation facility which is needed for emergency vehicles or provides a community's only evacuation route.			
	(2) (3)	A significant risk, or A significant adverse impact on natural and beneficial flood-plain values." 23 CFR 650.105(q)			
		efinition, "risk" means "the consequences associated with the probability ibutable to an encroachment. It shall include the potential for property			

loss and hazard to life during the service life of the highway." 23 CFR 650.105(o).

X This project is federally funded and therefore is subject to Executive Order 11988, Floodplain Management, and will involve a significant encroachment in the floodplain. Explanation of how the project will comply with Executive Order 11988 is provided below.

Explanation of how the project has been designed or modified, or will be designed or modified, to minimize potential harm to or within the floodplain:1

The alternatives considered included bridge crossings of the major streams, and where feasible, the floodway would be spanned and pier placements within the floodplain planned to minimize hydraulic impacts. The use of the other bridged or elevated sections versus the use of earthen fill embankment will continue to be evaluated in consideration of project costs versus impacts to wetlands and waters of the U.S., natural habitats, and the effects on the hydraulic function of the stream system.

Reasons why the proposed action must be located in the floodplain:²

¹ EO 11988, Section 2.(a)(2).

² 23 CFR 650.113(a)(1).

Based on the physical constraints in the study area, the orientation of the streams and associated floodplains, and the relationship of the proposed project to the existing transportation system, there are no practicable alternatives that would completely avoid impacts to floodplains.

Alternatives considered and why they were not practicable (i.e., capable of being done within reasonable natural, social, or economic constraints):³

The orientation of the Rutherford Branch and Wilson Creek in the northwestern portion of McKinney, Honey Creek and East Fork of the Trinity River around the northern and eastern portions of McKinney, and the location of US 75 through the confluence of these streams restricted the development of alignments that could avoid one or the other while also providing a freeway facility that meets the stated transportation needs. Therefore the consideration of an alternative that avoids floodplain impacts in not practicable. The comparison of the build alternatives including the segments that differ in the amount of floodplain encroachment along the East Fork of the Trinity River as well as other natural resource and socioeconomic effects is ongoing.

Statement indicating whether the action conforms to applicable State or local floodplain protection standards:⁴

The project will comply with the standards in the TxDOT Hydraulic Design Manual.

For more information regarding Executive Order 11988, Floodplain Management, see **ENV's Water Resources Handbook**.

X. Drinking Water Systems

No project-specific analysis is required as part of the environmental review process for drinking water systems for the reasons provided below:

In accordance with TxDOT's Standard Specifications for Construction and Maintenance of Highways, Streets and Bridges (Item 103, Disposal of Wells), any drinking water wells would need to be properly removed and disposed of during construction of the project.

XI. Resources Consulted

Indicate which resources were co	onsulted/actions were taken to ma	ke the surface water determinations
recorded in this form (DO NOT A	ATTACH TO THIS FORM OR UPL	OAD TO ECOS ANY RESOURCES
CONSULTED – JUST CHECK TH	IE APPROPRIATE BOX(ES)):	
\square Aerial Photography (list dates r	nm/yyyy): <u>12/1985, 3/1995, 2/2001</u>	, 12/2003, 3/2005, 10/2005, 7/2008,
12/2009, 3/2011, 4/2012, 8/2012,	10/2013, 11/2014, 3/2015, 7/2015,	12/2015, 4/2016, 1/2017, 2/2017,
<u>9/2017, 12/2017, 3/2018, 11/2018</u>	<u>, 9/2019, 12/2019, 11/2020</u>	
⊠ Topographic Maps	⊠ Floodplain Maps	
⊠ Site Visit		
⊠ NHD		□ LIDAR

³ 23 CFR 650.105(k), 650.113(a)(2).

⁴ 23 CFR 650.113(a)(3).



☐ USACE Approved JDs	□ USACE Section 10 waters	□ USACE 408 data			
	8				
□ Contacted resource agency (list agency and reason):					
☐ Other (list):					



Water Features Delineation Report

US 380 McKinney

(CSJs 0135-02-065, 0135-03-053, and 0135-15-002)

Texas Department of Transportation, Dallas District

October 2022

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated December 9, 2019, and executed by FHWA and TxDOT.

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1.0 Introduction

The Texas Department of Transportation (TxDOT) conducted a delineation of water features for the proposed route of U.S. Route (US) 380 from Coit Road to Farm-to-Market (FM) 1827 in McKinney and Prosper, Collin County, Texas (the Project) (CSJ 0135-02-065, 0135-15-002, and CSJ-0135-03-053). The delineation was completed on August 24, 28; September 8, 10, 11, 14, 16, 17, 24, 25; October 12, 13, 15, 20; November 3, 9, 11, 29; December 1, 3, 22; 2020; January 17, 19; June 8; August 12, 16, 17, 18, 25; and September 22; 2021. The delineation was performed to evaluate water features and identify their boundaries within the established Environmental Footprint.

Waterbodies were delineated according to United States Army Corps of Engineers (USACE) Regulatory Guidance Letter (RGL) 05-05 Ordinary High Water Mark (OHWM) Identification for non-tidal waters. As required under Section 404 of the Clean Water Act (CWA), wetlands were delineated using the routine method described in the USACE 1987 Wetlands Delineation Manual (1987 Manual; USACE, 1987) and the USACE Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (2010 Regional Supplement; USACE, 2010). Wetland types and boundaries were determined through initial map review, followed by fieldwork involving the examination of three (3) parameters: hydrology, vegetation, and soils. Delineation criteria and indicators for each of these parameters are outlined in the 1987 Manual and the 2010 Regional Supplement. The 2010 Regional Supplement presents wetland indicators, delineation guidance, and other information that is specific to the Great Plains Region, per the regional supplement. Wetlands were classified according to the Cowardin Classification System used for the United States Fish and Wildlife Service's (USFWS) National Wetlands Inventory (NWI).

This document contains the following five (5) attachments:

- Attachment 1 Figures: contains maps of the Environmental Footprint
- Attachment 2 Wetland Determination Data Forms and Stream Data Forms
- Attachment 3 Antecedent Precipitation Tool for McKinney, Texas
- Attachment 4 Site Photographs: contains photographs taken during the site visit(s)
- Attachment 5 Historical Aerial Photographs: contains historical aerial imagery, starting with the oldest photographs first

2.0 Project Overview

TxDOT proposes to extend and upgrade US 380 in the vicinity of McKinney, Texas to interstate standards. The US 380 route would be an eight-lane, access-controlled freeway with one-way frontage roads on each side within an anticipated right-of-way (ROW) width of between 340 to 500 feet (ft) depending on location. Frontage roads may be eliminated, and the primary travel lanes may be elevated (on bridge/viaduct). The freeway facility would also include ramps, direct connector roadways, frontage roads, and arterial roadways to support connectivity to the existing roadway network. Grade-separated interchanges would be constructed at major crossroads including US 75 and existing US 380. The Environmental Footprint is an area initially established to identify water features. It is larger than the proposed ROW (Project Area), encompasses approximately 2,427 acres (ac), extends approximately 27.87 miles, and intersects 480 parcels. The Project Area is the proposed ROW which is the area needed to construct the alternative and where direct impacts would occur. This Project Area includes permanent and temporary easements (included in Project design plans). The Study Area is defined as the large geographic area encompassing the alternatives under consideration and the associated built and natural environment. This report will primary discus water features within the Environmental Footprint and the environmental context within the overall Study Area.

The Project begins near the intersection of Coit Rd and US 380 (approx. lat/long: 33°13'07.4"N, 96°46'02.9"W) and continues east toward N Custer Road, then splits into two separate alignments (approx. lat/long: 33°13'07.0"N, 96°45'00.6"W). The southern alignment, also referred to as Segment A, follows the current route of US 380 and heads east before turning north (approx. lat/long: 33°13'09.1"N, 96°42'29.5"W). The northern alignment, also referred to as Segment B, continues northeast before rejoining the southern alignment at the intersection of County Road (CR) 161 and CR 123 (approx. lat/long: 33°14'49.8"N, 96°41'50.8"W). The middle portion of the Environmental Footprint, also referred to as Segment E, then heads east, crossing US 75 (approx. lat/long: 33°14'56.2"N, 96°37'13.1"W), and continues southeast before splitting at its crossing with N McDonald Street (State Highway 5) (approx. lat/long: 33°14'41.4"N, 96°36'31.2"W). The west alignment, also referred to as Segment D, heads south until reaching the current route of US 380 at the intersection of US 380 and Airport Drive (approx. lat/long: 33°12'16.1"N, 96°35'55.5"W). The east alignment, also referred to as Segment C, heads southeast and follows the current route of FM 2933 south (approx. lat/long: 33°13'29.8"N, 96°35'00.0"W). Once reaching the current route of US 380, both alignments rejoin and head east to the culmination at CR 330 (approx. lat/long: 33°11'42.5"N, 96°33'54.1"W), east of FM 1827. Additionally, the west alignment, Segment D, extends south of US 380 along Airport Drive and terminates south of Enloe Road (approx. lat/long: 33° 11' 35.7144"N, -96° 35' 49.0122"W), and extends south of US 380 near New Hope Road West and terminates south of the East Fork Trinity River (approx. lat/long: 33° 11' 15.2412"N, 96° 34' 39.9684"W). This additional portion of the Environmental Footprint is associated with the Spur 399 project and is discussed in further detail below. Refer to Figure 1 in Attachment 1 that illustrates the study segments.

A separate, independent project is under development for the extension of Spur 399 south of the eastern US 380 project terminus. Because an alignment has not been determined for the Spur 399 project to determine how, or if, the two projects would connect to one another, options are evaluated for both scenarios "with Spur 399" and "without Spur 399". Because the timing of the US 380 action is presumed to follow after any decision on the Spur 399 Extension, the Environmental Footprint for the US 380 project was updated to include options for Segments C and D (east of McKinney and US 75) that would account for the effects of US 380 implemented as a standalone project ("without Spur 399" or W/O Spur) and options that would account for the effects of connecting the US 380 project to either of the alternatives under consideration for the Spur 399 Extension ("With Spur 399" or W/Spur). The Environmental Footprint shown on the figures is that of the W/Spur, but the effects of both W/Spur and W/O Spur are tabulated in this report.

Attachment 1 – Figures contains numbered maps of the Environmental Footprint. Figure 1 provides a vicinity map that depicts the location of the Environmental Footprint. Figure 2 is an aerial overview map of the Environmental Footprint. Figure 3 is a 7.5-minute series United States Geological Survey (USGS) topographic overview map. Figure 4 is a series of NWI mapped features. Figure 5 is a series of Natural Resources Conservation Service (NRCS) soil unit maps. Figure 6 is a series of maps indicating the Federal Emergency Management Agency (FEMA) 100-year floodplain areas. Figure 7 is a series of TxDOT Contour maps showing 2-foot contours of the Environmental Footprint. Figure 8 is a series of Water Features maps depicting delineated water feature boundaries.

3.0 Ecological Site Description

The Study Area is located within the Southwestern Prairies Cotton and Forage Land Resource Region (LRR J) of the Great Plains and is more specifically located in Major Land Resource Area (MLRA) 86A (Texas Blackland Prairie, Northern Part). This area is characterized by level to gently sloping and dissected plains with steep slopes along river and creek valleys, meander belts associated with major streams, and wide floodplains along stream terraces (NRCS, 2006). Geology in this area consists of chalk, claystone, marl, and shale. Average annual precipitation in the area ranges from 30 to 46 inches. Average annual temperature in the area ranges from 63°Farenheight (F) to 69°F.

Historic vegetation was little false bluestem (*Schizachyrium scoparium*), big bluestem (*Andropogon gerardii*), yellow Indian grass (*Sorghastrum nutans*), and tall dropseed (*Sporobolus asper*). Other species commonly encountered include silveanus dropseed (*Sporobolus silveanus*), Mead's sedge (*Carex meadii*), long-spike fluff grass (*Tridens strictus*), asters (*Aster sp.*), prairie clovers (*Dalea sp.*), and coneflowers (*Rudbeckia sp.*). Lowland sites and swales are often dominated by eastern gamagrass (*Tripsacum dactyloides*) and switchgrass (*Panicum virgatum*). Riparian areas included bur oak (*Quercus macrocarpa*), Shumard oak (*Quercus shumardii*), sugarberry (*Celtis laevigata*), elm (*Ulmus sp.*), ash (*Fraxinus sp.*), eastern cottonwood (*Populus deltoides*), and pecan (*Carya illinoinensis*). Currently, only remnants of this system exist, with most of the historical distribution replaced by crop production or improved pasture.

The Study Area is within the East Fork Trinity River-Lavon Lake Watershed, including the Clemons Creek-East Fork Trinity River Sub Watershed in the eastern portion of the Study Area, the Lower Wilson Creek Sub Watershed in the central southern portion of the Study Area, the Honey Creek Sub Watershed in the central northern portion of the Study Area, and the Upper Wilson Sub Watershed in the western portion of the Study Area, of the Trinity River Basin (Hydrologic Unit Code 8: 12030106). The Study Area consists of existing ROW, residential areas, pastures, rangelands, as well as forested and emergent wetlands.

4.0 Methods

4.1 Map and Database Review

The following information sources were considered and, if applicable, consulted prior to and during the field delineation to assist in the identification of water features within the Environmental Footprint.

4.1.1 USGS Topographic Maps

USGS topographic maps illustrate elevation contours, drainage patterns, and hydrography. The Frisco, McKinney West, and McKinney East, Texas, USGS Quadrangle maps were reviewed to determine the likelihood of the Environmental Footprint containing water features (USGS, 7.5 Minute Topographic Map Series, Frisco, McKinney East, McKinney West, Texas, 2019).

4.1.2 USFWS NWI Data

NWI data was reviewed as a contributing resource to help identify potential wetland features located within the Environmental Footprint.

4.1.3 NRCS Soil Survey Data

The United States Department of Agriculture (USDA) NRCS maintains an online Web Soil Survey database. The data provided in the Web Soil Survey provides a good basis for the soil textures and types one can expect to find at a particular delineation area. NRCS-mapped soil types in the Environmental Footprint were reviewed to determine which of the soils exhibit hydric characteristics. NRCS-mapped soil types are assigned a hydric indicator status of "hydric" or "non-hydric" by the National Technical Committee for Hydric Soils.

4.1.4 Aerial Photography

Aerial photography provides good insight to the state and function of land resources. Signs of inundation and vegetative signatures on aerial images indicate whether land might be functioning as a wetland or supporting a stream system. Historic and current aerial photography was reviewed utilizing Google Earth, prior to and during the field delineation, in order to further understand the nature of the Study Area. Historic and current aerial photography was utilized to photo-interpret water features for areas without access and with limited ground verification from the public ROW.

4.1.5 FEMA FIRM

FEMA maintains flood insurance rate maps (FIRMs). The FIRM including the Environmental Footprint was reviewed to determine if the 100-year floodplain is mapped. The USACE utilizes the 100-year floodplain to assist in determining presence of water features. FEMA FIRM data was reviewed to evaluate the location of any mapped floodplain in relation to water features located within the Environmental Footprint.

4.1.6 LIDAR

Light detection and ranging (LiDAR) is a remote sensing technique that measures spatial and temporal data. LiDAR was not available for the Environmental Footprint; however, TxDOT contours collected in 2011 were reviewed for microtopographic changes in elevation within the Environmental Footprint.

4.2 Water Features Delineation Methodology

With respect to any non-tidal water features located within the Environmental Footprint, biologists followed the methodology outlined in USACE RGL 05-05.

Data collected for any water features includes average water depth, average width per waterbody, length of linear segments within the Environmental Footprint, and water flow classification (i.e., tidal, non-tidal, ephemeral, intermittent, and/or perennial).

Any wetland delineation was conducted based on the 1987 Manual and the 2010 Regional Supplement, as well as the three (3) parameters described within. The three-parameter approach requires investigation of hydrological characteristics, hydrophytic vegetation, and hydric soils at selected sample points within the Environmental Footprint. Sample points are located to ascertain upland/wetland boundaries and to record significant spatial changes in wetland plant communities. All three (3) indicator parameters must be met in order for the area to be classified as a wetland. See subsections on Hydrology, Vegetation, and Soils, below, for indicator-specific information.

Geospatial data was collected utilizing a Trimble GeoXT 2007 Global Positioning System (GPS) and Trimble Nomad 5 with sub-meter accuracy.

4.2.1 Hydrology

Wetland hydrology is characterized when, under normal circumstances, the surface is either inundated or the upper horizon(s) of the soil are saturated at a sufficient frequency and duration to create anaerobic conditions. Seasonal and long-term rainfall patterns, local geology and topography, soil type, local water table conditions, and drainage are factors that influence hydrology.

Wetland hydrology indicators include: oxidized rhizospheres along living roots, saturated soils, standing surface water, algal mat, aquatic fauna, high water table, iron deposits, sparsely vegetated concave surface, geomorphic position, moss trim lines, water-stained leaves, crawfish burrows, watermarks, drainage patterns, and surface soil cracks.

During the field survey, these indicators were used to determine if an area exhibited wetland hydrology.

4.2.2 Vegetation

In accordance with the procedure set forth in the 1987 Manual and the 2010 Regional Supplement, the hydrophytic status of vegetation communities was determined by identifying dominant species and, if necessary, calculating a "Prevalence Index," as defined in the 1987 Manual.

Individual plant species were checked against the current National Wetland Plant List (NWPL), and their regional wetland indicator status was determined. Species are classified as follows:

Obligate Wetland (OBL) if they almost always occur in wetlands (>99 percent of the time)

- Facultative Wetland (FACW) if they usually occur in wetlands (67-99 percent of the time)
- Facultative (FAC) if they are equally likely to occur in wetlands and non-wetlands (34-66 percent of the time)
- Facultative Upland (FACU) if they usually occur in non-wetlands (67-99 percent of the time)
- Obligate Upland (UPL) if they almost always occur in non-wetlands (>99 percent of the time)

A no indicator (NI) status is recorded for those species for which insufficient information is available to determine an indicator status.

Hydrophytic (wetland) vegetation is considered present where more than 50 percent of the dominant species in a plant community have an indicator status of OBL, FACW, or FAC. However, in cases where the vegetation community does not meet this hydrophytic threshold, but indicators of hydric soils and wetlands hydrology are present, the prevalence index can be applied. Calculation of this index is based on consideration of both dominant and non-dominant plants in the vegetation community, whereby each indicator status category is given a numeric code and weighted by absolute percent cover. The prevalence index ranges from 1.0 to 5.0, and an index of 3.0 or less signifies that hydrophytic vegetation is present.

4.2.3 Soils

Hydric soils are defined as soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper horizons. Anaerobic conditions created by repeated or prolonged saturation or flooding result in permanent changes in soil color and chemistry. The changes in soil color are used to differentiate hydric from non-hydric soils.

At each sample point, in areas where the absence of inundation or heavy saturation allowed, a pit was excavated to a depth of at least 16 inches below the ground surface to reveal soil profiles and to determine whether positive indicators of hydric soils were present. Hydric soil indicators relate to color, structure, organic content, and the presence of reducing conditions. Color characteristics (Hue, Value, and Chroma) were recorded using Munsell® Charts.

5.0 Results

5.1 Map and Database Review

5.1.1 USGS Topographic Maps

Topographic maps reviewed for the Environmental Footprint reported elevations of 600 to 650 ft above sea level (asl) near roadways, 550 ft asl near Wilson Creek, 500 ft asl near the East Fork Trinity River, 550 to 600 ft near Throckmorton Creek, 650 ft asl near Rutherford Branch, 650 to 700 ft asl near Franklin Branch, 600 to 650 ft asl near Stover Creek, 550 ft asl near Honey Creek, 500 to 550 ft asl near Jean's Creek, and 550 to 600 ft asl near Clemons Creek. Surface water flow in the Environmental Footprint is assumed to be to the southeast toward Lavon Lake. A topographic overview map is included in Attachment 1, Figure 3.

5.1.2 USFWS NWI Data

The table below summarizes the NWI features within the Environmental Footprint. Refer to Figure 4 in Attachment 1 for an illustration of the NWI features in and surrounding the Environmental Footprint.

Table 1: NWI Features

Classification Code	Code Description	Wetland Type
PFO1/EM1C	Palustrine Forested/Emergent Broad- Leaved Deciduous/Persistent Seasonally Flooded	Freshwater Forested/Shrub and Emergent Wetland

Classification Code	Code Description	Wetland Type
PEM1C	Palustrine Emergent Persistent Seasonally Flooded	Freshwater Emergent Wetland
PEM1Ch	Palustrine Emergent Persistent Seasonally Flooded and Dike/Impounded	Freshwater Emergent Wetland
PFO1A	Palustrine Forested Broad-Leaved Deciduous Temporarily Flooded	Freshwater Forested/Shrub Wetland
PF01C	Palustrine Forested Broad-Leaved Deciduous Seasonally Flooded	Freshwater Forested/Shrub Wetland
R4SBC	Riverine Intermittent Streambed Seasonally Flooded	Riverine
PSS1A	Palustrine Scrub-Shrub Broad-Leaved Deciduous Temporarily Flooded	Freshwater Forested/Shrub Wetland
PUBHh	Palustrine Unconsolidated Bottom Permanently Flooded and Dike/Impounded	Freshwater Pond
PUBHx	Palustrine Unconsolidated Bottom Permanently Flooded Excavated	Freshwater Pond
R5UBH	Riverine Unknown Perennial Unconsolidated Bottom Permanently Flooded	Riverine

5.1.3 NRCS Soil Survey Data

The table below summarizes the soil units represented within the Environmental Footprint based on information collected from the Web Soil Survey database. Refer to Figure 5 in Attachment 1 for an illustration of the mapped soil units in and surrounding the Environmental Footprint.

Table 2: NRCS Soil Units

Soil Unit	Soil Unit Name	Description	Hydric Soil
AID2	Altoga silty clay, 5 to 8 percent slopes, eroded	Very deep, well drained, Calcareous clayey alluvium found on stream terraces.	No
AIE3	Altoga silty clay, 8 to 12 percent slopes, severely eroded	Deep, well drained clayey alluvium found on stream terraces.	No

Table 2: NRCS Soil Units

Soil Unit	Soil Unit Name	Description	Hydric Soil
AuB	Austin silty clay, 1 to 3 percent slopes	Moderately deep, well drained residuum weathered from chalk. This clay loam is found on ridges and is classified as a farmland of state importance.	No
AuC2	Austin silty clay, 2 to 5 percent slopes, eroded	Moderately deep, well drained residuum weathered from chalk. This clay loam soil is found on ridges.	No
AuD2	Austin silty clay, 5 to 8 percent slopes, moderately eroded	Moderately deep, well drained, moderately slowly permeable soils on nearly level to sloping erosional uplands.	No
BcA	Burleson clay, 0 to 1 percent slopes	Very deep to clayey alluvium, moderately well drained soils of nearly level to gently sloping soils on treads of Pleistocene stream terraces.	No
ВсВ	Burleson clay, 1 to 3 percent slopes	Very deep to clayey alluvium, moderately well drained soils of nearly level to gently sloping soils on treads of Pleistocene stream terraces.	No
EdD2	Eddy gravelly clay loam, 3 to 8 percent slopes, eroded	Soils on gently sloping to moderately steep uplands and native pasture.	No
Fo	Frio clay loam, occasionally flooded	Very deep, well drained loamy alluvium. This Loamy Bottomland soil is found in flood plains.	No
GP	Gravel pits and quarries	Gravel pits and quarries	No
HcC2	Heiden clay, 3 to 5 percent slopes, eroded	Deep, well drained clayey residuum weathered from mudstone. This eroded Blackland soil is found primarily on ridges.	No
НоА	Houston Black clay, 0 to 1 percent slopes	Nearly level to sloping uplands found in center of a micro-pasture.	No
НоВ	Houston Black clay, 1 to 3 percent slopes	Nearly level to sloping uplands found in center of a micro-pasture.	No

Table 2: NRCS Soil Units

Soil Unit	Soil Unit Name	Description	Hydric Soil
HoB2	Houston Black clay, 2 to 4 percent slopes, eroded	Nearly level to sloping uplands found in center of a micro-pasture.	No
LeB	Lewisville silty clay, 1 to 3 percent slopes	Very deep, well drained, moderately permeable soils of upland pasture.	No
LeC2	Lewisville silty clay, 3 to 5 percent slopes, eroded	Very deep, well drained, moderately permeable soils of upland pasture.	No
SeC2	Stephen-Eddy complex, 2 to 5 percent slopes	Shallow, well drained calcareous clayey residuum weathered from chalk. This soil is found on ridges.	No
Tf	Tinn clay, 0 to 1 percent slopes, frequently flooded	Very deep, moderately well drained, very slowly permeable soils on flood plains of dissected plains that drain the Blackland Prairies.	Yes
То	Trinity clay, 0 to 1 percent slopes, occasionally flooded	Very deep, moderately well drained, clayey bottomland found in Flood plains.	Yes
W	Water	Water	No

5.1.4 Aerial Photography

Historic aerial imagery for the Study Area was evaluated using images provided by Google Earth, Texas Orthoimagery Program (TOP), National Agriculture Imagery Program (NAIP), and Pictometry. Historic and recent natural color aerial photography, color infrared, and Pictometry were reviewed. The table below summarizes observations for the Study Area for each year reviewed. Attachment 5 contains copies of the historic aerial photographs reviewed for the Study Area.

Table 3: Historic Aerial Photography Observations

Year	Observations
	Study Area is largely undeveloped farms and minimal housing. US 380 is pre-expansion, as
1952	it is still a two-lane highway. Most residential, County, and Farm roads have not been
1952	developed, including CR 123 and CR 164. Streams are clearly defined with vegetated
	buffers. US 75 N Central Expressway has not yet been constructed.
	Study Area is largely undeveloped farms and minimal housing. US 380 is pre-expansion, as
	it is still a two-lane highway. Area between US 380 and East Fork Trinity River (just west of
1972	where the northernmost landfill is currently location) is ditched to drain water out of the
	floodplain, resulting in the loss of wetlands and stream channel. US 75 N Central Expressway
	is now established but not completed thus altering the hydrological flow regimes of streams,

Year	Observations
	as well as the hydroperiods of wetlands within the Study Area. Additional County Roads have
	also been developed. There are more defined disturbances as a result of increased farming and road developments.
1985	Study Area is largely undeveloped farms and homesteads. US 380 is pre-expansion, as it is still a two-lane highway.
1995	Study Area is largely undeveloped farms and homesteads. US 380 is pre-expansion, as it is still a two-lane highway.
2001	Study Area is largely undeveloped farms and homesteads. Housing developments were under construction in the vicinity of the Study Area. US 380 has been expanded to a 4-lane divided highway.
2005	No new development has taken place within the Study Area. However, large subdivision projects have begun immediately to the southwest, thus altering the hydrology of streams and wetlands located within the southwest side of the Study Area boundaries.
2008	Large subdivision projects have continued to expand directly south of the Study Area heading north. There is an increase in farmland disturbance that altered the hydrological flow regimes of streams, as well as the hydroperiods of wetlands within the Study Area.
2011	Large subdivision projects have increased frequency in the entire area to the west of US 75 and south of the Study Area. These land use changes continue to alter the hydrological flow regimes of streams, as well as the hydroperiods of wetlands within the west side of the Study Area. The N. McDonald Street Bridge over the East Fork Trinity River is re-constructed, possibly causing an alteration of that stream. Construction on US 380 to the west of McKinney has been started, ultimately transforming that roadway into a 6-lane divided highway. This could have impacted water features within the Study Area.
2014	Urbanization has continued near the Study Area on the west side of US 75. These land use changes continue to alter the hydrological flow regimes of streams, as well as the hydroperiods of wetlands within the west side of the Study Area.
2017	Subdivision development begins on the east side of US 75, altering the hydrological flow regimes of streams, as well as the hydroperiods of wetlands within the east side of the Study Area.
2019	No notable change.
2020	Urbanization has continued to expand near and within the Study Area west of US 75. These land use changes continue to alter the hydrological flow regimes of streams, as well as the hydroperiods of wetlands within the Study Area.

5.1.5 FEMA FIRM

A review of FEMA FIRMs indicated the Study Area is intersected by 100-year floodplain, 500-Year floodplain, and regulatory floodway hazard areas. The floodplains are associated with Wilson Creek and the East Fork Trinity River as well as stream branches including Throckmorton Creek, Rutherford Branch, Franklin Branch, Stover Creek, Honey Creek, Jean's Creek, and Clemons Creek. Base Flood Elevation (BFE) for Wilson Creek is between 524 and 547 ft.; BFE for the East Fork Trinity River is between 561 and 578 ft; BFE for Throckmorton Creek is

between 577 and 584 ft.; BFE for Rutherford Branch is between 674 and 676 ft.; BFE for Franklin Branch is between 581 to 591 ft.; BFE for Stover Creek is between 635 to 638 ft.; BFE for Honey Creek is between 562 and 565 ft; BFE for Jean's Creek is between 603 and 617 ft.; BFE for Clemons Creek is between 557 and 560 ft (FEMA, 2021). Refer to Figure 6 in Attachment 1 for an illustration of the FEMA FIRM data within and surrounding the Study Area.

5.1.6 LiDAR

LiDAR was not available for the Environmental Footprint, however, TxDOT contours were reviewed for microtopographic changes in elevation within the Environmental Footprint. Two-foot TxDOT Contours (2011) were reviewed. Reduced elevation occurs within the floodplains of and near Wilson Creek, the East Fork Trinity River, Throckmorton Creek, Rutherford Branch, Franklin Branch, Stover Creek, Honey Creek, Jean's Creek, and Clemons Creek. Refer to Figure 7 in Attachment 1 for an illustration of TxDOT Contours within the Environmental Footprint.

5.2 Water Features Delineation Results

Table 4 summarizes the water features identified within the Environmental Footprint. Refer to Figure 8 in Attachment 1 for a depiction of the boundaries of each water feature, as well as the location within the Environmental Footprint where sample point data was collected. Refer to Attachment 2 – Wetland Determination Data Forms and Stream Data Forms that provide the wetland and stream data collected. Refer to Attachment 4 – Representative Site Photos, for representative photographs of each waterbody/wetland feature observed within the Environmental Footprint.

Certain contiguous features are assigned more than one label for serval reasons. Features that were partially field delineated and partially photo-interpreted are given multiple labels to differentiate which portions are delineated and which are photo-interpreted. Features that are split by either the Environmental Footprint boundary or a culvert are given a new label for each segment to provide better clarity on the impacts assessment. Additionally, streams with characteristically different reaches were split and each of those reaches was assigned a unique label. For example, Rutherford Branch has 10 different labels as follows. Water Feature 14* is a 15-foot photo-interpreted perennial stream. The stream widens and is assigned label 15* where the stream is 20 feet wide. The stream is then assigned several different labels as it transitions in and out of delineated versus photo-interpreted areas (Water Features 16, 17*, and 19*). Rutherford Branch then exits the Environmental Footprint and re-enters the Environmental Footprint in two other locations which are assigned both photo-interpreted and field delineated labels (Water Features 130*, 131*, 136, 138, and 142).

Water feature types used in Table 4 are palustrine forested wetland, palustrine scrub-shrub wetland, palustrine emergent wetland, isolated wetland, perennial stream, intermittent stream, ephemeral stream, swale drainage feature, ditch drainage feature, upland pond, and on-channel pond. Palustrine wetlands are inland, freshwater habitats often categorized by vegetation types. Emergent wetlands are dominated by erect, rooted, and nonwoody herbaceous vegetation. Scrub-shrub wetlands are dominated by woody vegetation less than 20 ft in height. Forested wetlands are dominated by woody vegetation taller than 20 ft in height. Isolated wetlands are not contiguous, bordering, or neighboring a relatively permanent water (RPW), traditionally navigable water (TNW), or a wetland associated with a RPW or TNW. Streams are characterized by having a defined OHWM and a level of water flow. Perennial streams have flowing water year-round in a typical year and a water table above the stream bed for most of the year. Intermittent streams have water flowing during certain times of the year when groundwater provides water for stream flow, and intermittent dry periods. Ephemeral streams only exhibit water flow during, and for a short duration after, precipitation events and do not exhibit seasonal flow. Swales do not have a defined OHWM and are characterized by low volume and infrequent, short duration flow. Ditches are constructed or excavated channels used to convey water and may have a defined OHWM. Upland ponds are characterized as having been constructed or excavated in uplands. On-channel ponds are naturally formed by hollowing or embankment of water flow or stream flow.

Table 4: Summary of Water Features

	Table 4: Summary of Water Features								
Water Feature Number	Name	Туре	Lat/Long	Acres within Environmental Footprint (all water features including streams)	Linear feet (LF) within Environmental Footprint (streams only)	Associated Study Segment(s)	Figure Reference(s)	Photo Log Reference(s)	
1	Ditch	Ditch Drainage Feature	33.217923/ -96.765890	0.01	195	A, B	8-1	1	
2	Ditch	Ditch Drainage Feature	33.218490/ -96.764102	0.01	238	А, В	8-1	2	
3*	Swale	Swale Drainage Feature	33.219044/ -96.763878	-	132	А, В	8-1	-	
4	Swale	Swale Drainage Feature	33.218733/ -96.763637	-	157	А, В	8-1	3	
5	Emergent Wetland Associated with Rutherford Branch	Palustrine Emergent Wetland	33.218465/ -96.763637	0.01	-	А, В	8-1	4, 5	
6	Unnamed Tributary to Rutherford Branch	Intermittent Stream	33.218306/ -96.763060	0.05	421	А, В	8-1	4, 5, 6	
7	Unnamed Tributary to Rutherford Branch	Ephemeral Stream	33.218074/ -96.762245	0.001	16	A, B	8-1	6	
8	Unnamed Tributary to Rutherford Branch	Ephemeral Stream	33.218238/ -96.759790	0.02	399	A, B	8-1	7	
9	Ditch	Ditch Drainage Feature	33.218845/ -96.759538	0.01	293	А, В	8-1	13	
10	Ditch	Ditch Drainage Feature	33.218443/ -96.759338	0.01	252	A, B	8-1	8	
11	Unnamed Tributary to Rutherford Branch	Intermittent Stream	33.218289/ -96.758225	0.08	731	А, В	8-1	7, 8, 9	
12*	Unnamed Tributary to Rutherford Branch	Intermittent Stream	33.218343/ -96.757167	0.003	28	А, В	8-1	-	

Water Feature Number	Name	Туре	Lat/Long	Acres within Environmental Footprint (all water features including streams)	Linear feet (LF) within Environmental Footprint (streams only)	Associated Study Segment(s)	Figure Reference(s)	Photo Log Reference(s)
13*	Ditch	Ditch Drainage Feature	33.219366/ -96.756797	0.12	536	A, B	8-1	-
14*	Rutherford Branch	Perennial Stream	33.218139/ -96.757183	0.06	169	A, B	8-1	-
15*	Rutherford Branch	Perennial Stream	33.218250/ -96.756545	0.17	378	A, B	8-1	-
16	Rutherford Branch	Perennial Stream	33.218613/ -96.756079	0.08	167	A, B	8-1	10
17*	Rutherford Branch	Perennial Stream	33.218959/ -96.756047	0.05	99	A, B	8-1	-
18*	Forested Wetland Associated with Rutherford Branch	Palustrine Forested Wetland	33.219598/ -96.755041	2.41	-	А, В	8-1	-
19*	Rutherford Branch	Perennial Stream	33.219622/ -96.755236	0.28	618	А, В	8-1	-
20*	Unnamed Tributary to Rutherford Branch	Intermittent Stream	33.220075/ -96.755335	0.02	186	А, В	8-1	-
21*	Emergent Wetland Associated with Rutherford Branch	Palustrine Emergent Wetland	33.219966/ -96.754664	0.08	-	А, В	8-1	-
22	Ditch	Ditch Drainage Feature	33.218422/ -96.755725	0.02	228	А, В	8-1	11
23	Ditch	Ditch Drainage Feature	33.218428/ -96.754735	0.02	349	A, B	8-1	11
24*	Unnamed Tributary to Rutherford Branch	Ephemeral Stream	33.219272/ -96.751874	0.02	340	A	8-1	-
25	Unnamed Tributary to Rutherford Branch	Ephemeral Stream	33.218622/ -96.751921	0.01	134	А	8-1	12

Water Feature Number	Name	Туре	Lat/Long	Acres within Environmental Footprint (all water features including streams)	Linear feet (LF) within Environmental Footprint (streams only)	Associated Study Segment(s)	Figure Reference(s)	Photo Log Reference(s)
26*	Unnamed Tributary to Rutherford Branch	Ephemeral Stream	33.218410/ -96.751938	0.002	23	А	8-1	-
27	Ditch	Ditch Drainage Feature	33.218815/ -96.751178	0.03	629	A	8-1 and 8-2	13
28	Ditch	Ditch Drainage Feature	33.218365/ -96.748640	0.04	860	А	8-1 and 8-2	13
29	Ditch	Ditch Drainage Feature	33.218820/ -96.748870	0.04	258	Α	8-2	14
30*	Unnamed Tributary to Rutherford Branch	Perennial Stream	33.218149/ -96.748407	0.04	190	А	8-2	-
31	Unnamed Tributary to Rutherford Branch	Perennial Stream	33.218763/ -96.748396	0.09	271	А	8-2	15, 16, 17, 61
32	Forested Wetland Associated with Rutherford Branch	Palustrine Forested Wetland	33.219023/ -96.748507	0.19	-	А	8-2	15, 16, 17, 61
33	Emergent Wetland Associated with Rutherford Branch	Palustrine Emergent Wetland	33.219978/ -96.748478	1.95	-	А	8-2	15, 16, 17, 61, 62
34	Ditch	Ditch Drainage Feature	33.218394/ -96.747561	0.02	384	А	8-2	13
35	Ditch	Ditch Drainage Feature	33.218371/ -96.746613	0.01	128	А	8-2	18
36	Ditch	Ditch Drainage Feature	33.218772/ -96.747506	0.02	514	A	8-2	13

Water Feature Number	Name	Туре	Lat/Long	Acres within Environmental Footprint (all water features including streams)	Linear feet (LF) within Environmental Footprint (streams only)	Associated Study Segment(s)	Figure Reference(s)	Photo Log Reference(s)
37	Unnamed Tributary to Rutherford Branch	Perennial Stream	33.219339/ -96.746994	0.17	723	А	8-2	17, 18, 19, 61, 62
38	Ditch	Ditch Drainage Feature	33.218752/ -96.743624	0.08	1,791	А	8-2	13
39	Ditch	Ditch Drainage Feature	33.218387/ -96.745977	0.002	37	Α	8-2	13
40	Ditch	Ditch Drainage Feature	33.218384/ -96.744802	0.01	125	А	8-2	13
41	Ditch	Ditch Drainage Feature	33.218374/ -96.744162	0.004	78	Α	8-2	13
42	Ditch	Ditch Drainage Feature	33.218373/ -96.743701	0.004	85	А	8-2	13
43	Ditch	Ditch Drainage Feature	33.218361/ -96.742495	0.002	50	Α	8-2	13
44	Ditch	Ditch Drainage Feature	33.218353/ -96.741615	0.04	275	А	8-2	14
45	Unnamed Tributary to Wilson Creek	Ephemeral Stream	33.218590/ -96.740878	0.02	247	Α	8-2	20
46*	Unnamed Tributary to Rutherford Branch	Ephemeral Stream	33.219223/ -96.740196	0.04	416	А	8-2	-
47	Ditch	Ditch Drainage Feature	33.218333/ -96.739581	0.05	983	Α	8-2	13
48	Ditch	Ditch Drainage Feature	33.218726/ -96.738955	0.03	548	А	8-2	13
49	Ditch	Ditch Drainage Feature	33.218758/ -96.738247	0.02	153	Α	8-2	14
50*	Unnamed Tributary to Rutherford Branch	Intermittent Stream	33.218192/ -96.738089	0.01	88	А	8-2	-

Water Feature Number	Name	Туре	Lat/Long	Acres within Environmental Footprint (all water features including streams)	Linear feet (LF) within Environmental Footprint (streams only)	Associated Study Segment(s)	Figure Reference(s)	Photo Log Reference(s)
51	Unnamed Tributary to Wilson Creek	Intermittent Stream	33.218521/ -96.737984	0.02	183	Α	8-2	21
52*	Unnamed Tributary to Rutherford Branch	Intermittent Stream	33.219211/ -96.738022	0.04	370	А	8-2	-
53*	Scrub/ Shrub Wetland Associated with Rutherford Branch	Palustrine Scrub/ Shrub Wetland	33.219728/ -96.738218	0.28	-	А	8-2	-
54	Ditch	Ditch Drainage Feature	33.218319/ -96.736534	0.03	406	А	8-2	22
55	Ditch	Ditch Drainage Feature	33.218290/ -96.735923	0.02	349	Α	8-2	13
56	Ditch	Ditch Drainage Feature	33.218706/ -96.736021	0.04	868	А	8-2	13
57	Ditch	Ditch Drainage Feature	33.218626/ -96.726919	0.11	2,464	Α	8-3	13
58	Unnamed Tributary to Wilson Creek	Ephemeral Stream	33.218955/ -96.727926	0.001	10	А	8-3	23
59*	Unnamed Tributary to Wilson Creek	Ephemeral Stream	33.219454/ -96.727602	0.03	409	А	8-3	-
60	Ditch	Ditch Drainage Feature	33.219045/ -96.725615	0.06	1,237	А	8-3	13
61	Emergent Wetland Associated with Wilson Creek	Palustrine Emergent Wetland	33.218671/ -96.722608	0.08	-	А	8-3	24, 25
62	Unnamed Tributary to Wilson Creek	Perennial Stream	33.219013/ -96.722532	0.05	391	А	8-3	24, 25, 26

Water Feature Number	Name	Туре	Lat/Long	Acres within Environmental Footprint (all water features including streams)	Linear feet (LF) within Environmental Footprint (streams only)	Associated Study Segment(s)	Figure Reference(s)	Photo Log Reference(s)
63	On-Channel Pond Associated with Wilson Creek	On-Channel Pond	33.219555/ -96.722655	0.03	-	А	8-3	25, 26, 27, 28
64	Swale	Swale Drainage Feature	33.219633/ -96.722775	-	72	А	8-3	27
65	Unnamed Tributary to Wilson Creek	Perennial Stream	33.220010/ -96.722409	0.06	432	Α	8-3	26, 28
66	Unnamed Tributary to Wilson Creek	Ephemeral Stream	33.220332/ -96.723075	0.01	133	А	8-3	29
67	Ditch	Ditch Drainage Feature	33.219215/ -96.721670	0.02	449	Α	8-3	13
68	Ditch	Ditch Drainage Feature	33.218850/ -96.721321	0.002	40	А	8-3	13
69	Forested Wetland Associated with Wilson Creek	Palustrine Forested Wetland	33.220057/ -96.720336	0.01	-	А	8-3	30, 31
70	Unnamed Tributary to Wilson Creek	Ephemeral Stream	33.219558/ -96.720128	0.06	416	А	8-3	30, 31
71	Swale	Swale Drainage Feature	33.218809/ -96.719705	-	74	А	8-3	32
72	Swale	Swale Drainage Feature	33.218782/ -96.719183	-	207	А	8-3	33
73	Ditch	Ditch Drainage Feature	33.219245/ -96.717606	0.04	888	А	8-3 and 8-4	13, 35
74	Ditch	Ditch Drainage Feature	33.218865/ -96.716807	0.06	1,288	А	8-3 and 8-4	13
75	Ditch	Ditch Drainage Feature	33.218776/ -96.716939	0.19	1172	Α	8-3 and 8-4	14

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76	Swale	Swale Drainage Feature	33.218701/ -96.717855	-	388	А	8-3	35
77	Swale	Swale Drainage Feature	33.218667/ -96.715812	-	474	А	8-4	34
78	Swale	Swale Drainage Feature	33.219421/ -96.714552	-	488	А	8-4	35
79	Unnamed Tributary to Wilson Creek	Ephemeral Stream	33.218511/ -96.715135	0.002	48	А	8-4	36
80	Forested Wetland Associated with Wilson Creek	Palustrine Forested Wetland	33.218560/ -96.714480	0.19	-	А	8-4	36, 37, 39, 40
81	Swale	Swale Drainage Feature	33.218851/ -96.714506	-	139	Α	8-4	38
82	Unnamed Tributary to Wilson Creek	Ephemeral Stream	33.218248/ -96.714173	0.01	188	А	8-4	39
83	Swale	Swale Drainage Feature	33.218502/ -96.714133	-	12	Α	8-4	34
84	Unnamed Tributary to Wilson Creek	Ephemeral Stream	33.218783/ -96.714340	0.02	91	А	8-4	40
85	Unnamed Tributary to Wilson Creek	Ephemeral Stream	33.219871/ -96.713216	0.06	690	Α	8-4	41
86	Ditch	Ditch Drainage Feature	33.218916/ -96.713041	0.03	746	А	8-4	13
87	Unnamed Tributary to Wilson Creek	Ephemeral Stream	33.220048/- 96.712232	0.01	212	Α	8-4	42
88	Unnamed Tributary to Wilson Creek	Ephemeral Stream	33.219529/ -96.711973	0.01	216	А	8-4	42
89	Unnamed Tributary to Wilson Creek	Ephemeral Stream	33.218792/ -96.711567	0.01	161	Α	8-4	43
90	Ditch	Ditch Drainage Feature	33.218906/ -96.711278	0.01	279	А	8-4	13

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91	Upland Pond	Upland Pond	33.218726/ -96.711093	0.05	-	А	8-4	43
92	Unnamed Tributary to Wilson Creek	Intermittent Stream	33.221653/- 96.710545	0.003	25	A	8-4	44
93	Ditch	Ditch Drainage Feature	33.218891/ -96.706051	0.09	2,012	А	8-4	13
94	Unnamed Tributary to Wilson Creek	Intermittent Stream	33.218160/ -96.704640	0.06	334	A	8-4	45
95	Ditch	Ditch Drainage Feature	33.218094/ -96.703239	0.003	58	Α	8-4	13
96	Ditch	Ditch Drainage Feature	33.218081/ -96.702292	0.03	580	А	8-4	13
97*	Unnamed Tributary to Wilson Creek	Intermittent Stream	33.218822/ -96.701420	0.11	618	А	8-4	-
98*	Upland Pond	Upland Pond	33.220354/ -96.700691	0.12	-	А	8-4	-
99	Forested Wetland Associated with Wilson Creek	Palustrine Forested Wetland	33.223393/ -96.706169	0.04	-	A	8-4	46, 47
100	Unnamed Tributary to Wilson Creek	Intermittent Stream	33.223528/- 96.705798	0.02	158	А	8-4	47, 48
101	Unnamed Tributary to Wilson Creek	Intermittent Stream	33.223483/- 96.705110	0.05	302	Α	8-4	47, 48
102	Unnamed Tributary to Wilson Creek	Ephemeral Stream	33.223098/ -96.706252	0.01	267	А	8-4	49, 50
103*	Unnamed Tributary to Wilson Creek	Intermittent Stream	33.221721/ -96.705961	0.02	383	Α	8-4	-
104	Unnamed Tributary to Wilson Creek	Intermittent Stream	33.222946/ -96.705536	0.03	686	А	8-4	48, 50
105	Unnamed Tributary to Wilson Creek	Intermittent Stream	33.223040/ -96.703494	0.08	681	Α	8-4	48, 50, 51

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106*	Unnamed Tributary to Wilson Creek	Ephemeral Stream	33.221959/ -96.703509	0.02	478	А	8-4	-
107	Unnamed Tributary to Wilson Creek	Ephemeral Stream	33.222544/ -96.702733	0.01	205	Α	8-4	52
108*	Unnamed Tributary to Wilson Creek	Intermittent Stream	33.222915/ -96.701594	0.06	534	А	8-4	-
109	Emergent Wetland Associated with Wilson Creek	Palustrine Emergent Wetland	33.223723/ -96.704052	1.39	-	А	8-4	53
110	Wilson Creek	Perennial Stream	33.223770/ -96.703243	0.45	777	А	8-4	53, 54
111*	Wilson Creek	Perennial Stream	33.223230/ -96.701580	0.33	573	А	8-4	-
112*	Unnamed Tributary to Wilson Creek	Intermittent Stream	33.224154/ -96.701728	0.09	643	А	8-4 and 8-5	-
113	Unnamed Tributary to Wilson Creek	Intermittent Stream	33.225126/ -96.702920	0.06	434	Α	8-4 and 8-5	55, 56, 57
114	Unnamed Tributary to Wilson Creek	Ephemeral Stream	33.225108/ -96.703308	0.04	289	Α	8-4 and 8-5	56
115	Unnamed Tributary to Wilson Creek	Ephemeral Stream	33.226399/ -96.703030	0.10	828	Α	8-4 and 8-5	57
116	Erosion Gully	Erosion Gully Drainage Feature	33.226528/ -96.702918	-	18	А	8-4 and 8-5	58
117	Erosion Gully	Erosion Gully Drainage Feature	33.227200/ -96.703333	-	50	А	8-5	58
118	On-Channel Pond Associated with Stover Creek	On-Channel Pond	33.234368/ -96.703329	0.34	-	А	8-5	59, 60
119	Unnamed Tributary to Stover Creek	Ephemeral Stream	33.234524/ -96.703814	0.01	233	А	8-5	59, 60

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120*	Unnamed Tributary to Stover Creek	Ephemeral Stream	33.234612/ -96.704455	0.01	201	А	8-5	-
121*	Stover Creek	Perennial Stream	33.237106/ -96.703034	0.07	202	А	8-6	-
122*	Upland Pond	Upland Pond	33.237941/ -96.703706	0.13	-	Α	8-6	-
123*	Stover Creek	Perennial Stream	33.243315/ -96.703941	0.78	1,709	Α	8-6	-
124	On-Channel Pond Associated with Rutherford Branch	On-Channel Pond	33.220264/ -96.748534	1.94	-	В	8-2	17, 61
125	Forested Wetland Associated with Rutherford Branch	Palustrine Forested Wetland	33.219799/ -96.747518	0.27	-	В	8-2	17, 61, 62
126	Upland Pond	Upland Pond	33.224514/ -96.743508	0.19	-	В	8-2	63
127	Unnamed Tributary to Rutherford Branch	Intermittent Stream	33.225262/ -96.743959	0.03	202	В	8-2	63, 64
128*	Forested Wetland Associated with Rutherford Branch	Palustrine Forested Wetland	33.227954/ -96.739946	0.19	-	В	8-7	-
129*	On-Channel Pond Associated with Rutherford Branch	On-Channel Pond	33.228394/ -96.740234	1.04	-	В	8-7	-
130*	Rutherford Branch	Perennial Stream	33.228508/ -96.741457	0.11	125	В	8-7	-
131*	Rutherford Branch	Perennial Stream	33.229666/ -96.737644	0.67	1,936	В	8-7	-

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132*	Unnamed Tributary to Rutherford Branch	Intermittent Stream	33.229268/ -96.737587	0.09	341	В	8-7	-
133*	Upland Pond	Upland Pond	33.230436/ -96.738767	0.27	-	В	8-7	-
134*	Upland Pond	Upland Pond	33.231118/ -96.736338	0.37	-	В	8-7	-
135*	Upland Pond	Upland Pond	33.231615/ -96.737054	0.49	-	В	8-7	-
136	Rutherford Branch	Perennial Stream	33.233875/ -96.732090	0.01	33	В	8-7	65, 69
137	Emergent Wetland Associated with Rutherford Branch	Palustrine Emergent Wetland	33.233851/ -96.732061	0.004	-	В	8-7	65, 69
138	Rutherford Branch	Perennial Stream	33.233876/ -96.732026	0.01	34	В	8-7	65, 69
139	Unnamed Tributary to Rutherford Branch	Ephemeral Stream	33.234057/ -96.732213	0.003	36	В	8-7	66, 68
140	Emergent Wetland Associated with Rutherford Branch	Palustrine Emergent Wetland	33.234150/ -96.732071	0.02	-	В	8-7	66, 67, 68, 73
141	Upland Pond	Upland Pond	33.234111/ -96.732081	0.01	-	В	8-7	68
142	Rutherford Branch	Perennial Stream	33.234912/ -96.729925	1.12	1,960	В	8-7 and 8-8	65, 67, 68, 69
143*	Wilson Creek	Perennial Stream	33.236659/ -96.726896	0.45	559	В	8-8	-
144*	Unnamed Tributary to Wilson Creek	Perennial Stream	33.238332/ -96.720178	0.34	984	В	8-8	-
145*	Unnamed Tributary to Wilson Creek	Intermittent Stream	33.240636/ -96.710871	0.10	712	В	8-6	-
146*	Unnamed Tributary to Stover Creek	Intermittent Stream	33.244158/ -96.704012	0.25	732	В	8-6	-

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147*	On-Channel Pond Associated with Stover Creek	On-Channel Pond	33.245694/ -96.701397	0.12	-	A, B	8-6	-
148	Unnamed Tributary to Stover Creek	Intermittent Stream	33.246399/ -96.700038	0.03	435	E	8-6 and 8-9	70
149*	Unnamed Tributary to Stover Creek	Ephemeral Stream	33.246927/ -96.699184	0.02	353	E	8-6 and 8-9	-
150*	Unnamed Tributary to Stover Creek	Ephemeral Stream	33.246598/ -96.698414	0.04	600	E	8-6 and 8-9	-
151*	Swale	Swale Drainage Feature	33.247041/ -96.691761	-	164	E	8-9	-
152*	Unnamed Tributary to Wilson Creek	Ephemeral Stream	33.246426/ -96.692100	0.04	328	E	8-9	-
153*	On-Channel Pond Associated with Wilson Creek	On-Channel Pond	33.245938/ -96.691875	0.13	-	E	8-9	-
154*	Unnamed Tributary to Wilson Creek	Intermittent Stream	33.244453/ -96.691061	0.21	1,144	E	8-9	-
155*	Unnamed Tributary to Wilson Creek	Ephemeral Stream	33.245542/ -96.691911	0.03	225	E	8-9	-
156*	Unnamed Tributary to Wilson Creek	Ephemeral Stream	33.244454/ -96.691441	0.03	242	E	8-9	-
157*	Franklin Branch	Intermittent Stream	33.248581/ -96.680349	0.06	174	E	8-10	-
158	Franklin Branch	Intermittent Stream	33.247541/ -96.679926	0.19	558	Е	8-10	71
159	Ditch	Ditch Drainage Feature	33.247322/ -96.680134	0.01	134	E	8-10	72
160*	Emergent Wetland Associated with Franklin Branch	Palustrine Emergent Wetland	33.246746/ -96.679775	0.02	-	E	8-10	-

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161*	Franklin Branch	Intermittent Stream	33.246272/ -96.679629	0.13	483	E	8-10	-
162*	Unnamed Tributary to Franklin Branch	Ephemeral Stream	33.246427/ -96.678601	0.13	547	E	8-10	-
163*	Unnamed Tributary to Franklin Branch	Ephemeral Stream	33.247688/ -96.677824	0.11	461	E	8-10	-
164*	Swale	Swale Drainage Feature	33.246572/ -96.673953	-	297	E	8-10	-
165*	Emergent Wetland Associated with Franklin Branch	Palustrine Emergent Wetland	33.247558/ -96.666942	0.12	-	E	8-10 and 8-11	-
166*	Upland Pond	Upland Pond	33.247126/ -96.660494	0.04	-	E	8-11	-
167*	Upland Pond	Upland Pond	33.247211/ -96.659766	0.48	-	E	8-11	-
168*	Unnamed Tributary to Honey Creek	Perennial Stream	33.246221/ -96.654502	0.13	556	E	8-11	-
169	Swale	Swale Drainage Feature	33.249904/ -96.644105	-	50	E	8-12	73
170	Forested Wetland Associated with Honey Creek	Palustrine Forested Wetland	33.249743/ -96.644096	0.08	-	E	8-12	74
171	Emergent Wetland Associated with Honey Creek	Palustrine Emergent Wetland	33.249776/ -96.643753	0.02	-	E	8-12	75
172	Unnamed Tributary to Honey Creek	Ephemeral Stream	33.251272/ -96.640619	0.13	690	E	8-12	76, 77
173	Unnamed Tributary to Honey Creek	Ephemeral Stream	33.251488/ -96.639341	0.01	211	E	8-12	76, 77
174*	Unnamed Tributary to Honey Creek	Ephemeral Stream	33.251817/ -96.639400	0.001	20	E	8-12	-

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175	Unnamed Tributary to Honey Creek	Intermittent Stream	33.250685/ -96.634914	0.01	56	E	8-12 and 8-13	78
176	Unnamed Tributary to Honey Creek	Perennial Stream	33.251867/ -96.634639	0.15	815	E	8-12 and 8-13	78, 79
177	Upland Pond	Upland Pond	33.252247/ -96.631389	0.30	-	Е	8-13	80
178	Forested Wetland Associated with Honey Creek	Palustrine Forested Wetland	33.252701/ -96.631361	0.001	-	E	8-13	81
179	Forested Wetland Associated with Honey Creek	Palustrine Forested Wetland	33.252001/ -96.630427	0.31	-	E	8-13	80, 82
180	Emergent Wetland Associated with Honey Creek	Palustrine Emergent Wetland	33.251104/ -96.629462	0.10	-	E	8-13	83
181	Swale	Swale Drainage Feature	33.251761/ -96.629191	-	431	E	8-13	84
182	Honey Creek	Perennial Stream	33.251321/ -96.627645	1.09	1,905	Е	8-13	85, 88
183	Ditch	Ditch Drainage Feature	33.250508/ -96.626477	0.001	8	E	8-13	86
184	Swale	Swale Drainage Feature	33.251501/ -96.626326	-	784	E	8-13	87
185	Emergent Wetland Associated with Honey Creek	Palustrine Emergent Wetland	33.251157/ -96.625670	0.33	-	E	8-13	88
186	Swale	Swale Drainage Feature	33.250810/ -96.625172	-	448	E	8-13	87
187	Unnamed Tributary to Honey Creek	Ephemeral Stream	33.249546/ -96.623804	0.003	31	E	8-13	89
188*	Upland Pond	Upland Pond	33.249000/ -96.621990	0.55	-	E	8-13	-

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189	Unnamed Tributary to Honey Creek	Ephemeral Stream	33.235599/ -96.630674	0.001	15	E	8-14	90
190	Emergent Wetland Associated with Honey Creek	Palustrine Emergent Wetland	33.244049/ -96.625342	0.14	-	E	8-13	91
191	Emergent Wetland Associated with Honey Creek	Palustrine Emergent Wetland	33.245441/ -96.625876	0.12	-	E	8-13	92
192	Honey Creek	Perennial Stream	33.246292/ -96.623565	0.25	430	E	8-13	85
193	Ditch	Ditch Drainage Feature	33.250117/ -96.620078	0.01	261	E	8-13	94
194	Emergent Wetland Associated with Honey Creek	Palustrine Emergent Wetland	33.250437/ -96.619792	0.02	-	E	8-13	93
195	Swale	Swale Drainage Feature	33.250440/ -96.619701	-	77	E	8-13	94
196	Unnamed Tributary to Honey Creek	Intermittent Stream	33.251764/ -96.618083	0.01	34	E	8-13 and 8-15	95
197*	Ditch	Ditch Drainage Feature	33.252437/ -96.614511	0.003	23	E	8-15	-
198*	Forested Wetland Associated with Honey Creek	Palustrine Forested Wetland	33.252589/ -96.614307	0.05		E	8-15	-
199	Unnamed Tributary to the East Fork Trinity River	Ephemeral Stream	33.254211/ -96.614358	0.004	35	E	8-15	96

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200	Forested Wetland Associated with East Fork Trinity River	Palustrine Forested Wetland	33.254996/ -96.613371	0.005	-	E	8-15	97
201	Forested Wetland Associated with East Fork Trinity River	Palustrine Forested Wetland	33.256341/ -96.611674	0.02	-	E	8-15	98, 99, 100
202	Forested Wetland Associated with East Fork Trinity River	Palustrine Forested Wetland	33.256622/ -96.611323	0.01	-	E	8-15	98, 99, 100
203*	Forested Wetland Associated with East Fork Trinity River	Palustrine Forested Wetland	33.255802/ -96.610182	0.08	-	E	8-15	-
204	Unnamed Tributary to the East Fork Trinity River	Intermittent Stream	33.257379/ -96.610197	0.03	387	E	8-15	98, 99, 100
205	East Fork Trinity River	Perennial Stream	33.257266/ -96.609413	0.44	479	E	8-15	98, 99, 100, 101, 102, 103
206	Unnamed Tributary to the East Fork Trinity River	Intermittent Stream	33.257357/ -96.608135	0.01	98	E	8-15	102, 103
207	Forested Wetland Associated with East Fork Trinity River	Palustrine Forested Wetland	33.257582/ -96.607844	0.13	-	E	8-15	102, 103
208	Ditch	Ditch Drainage Feature	33.258426/ -96.606574	0.02	728	E	8-15	104

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209	Unnamed Tributary to the East Fork Trinity River	Ephemeral Stream	33.259247/ -96.607917	0.01	64	E	8-15	105
210	Ditch	Ditch Drainage Feature	33.259833/ -96.606720	0.02	794	E	8-15	104
211	Ditch	Ditch Drainage Feature	33.261973/ -96.601562	0.03	1,443	E	8-15 and 8-16	104
212	Unnamed Tributary to the East Fork Trinity River	Intermittent Stream	33.263000/ -96.603838	0.01	44	E	8-16	106
213	Ditch	Ditch Drainage Feature	33.265639/ -96.600129	0.04	1,664	E	8-16	104
214	Ditch	Ditch Drainage Feature	33.264217/ -96.602577	0.05	796	E	8-16	107
215	Unnamed Tributary to the East Fork Trinity River	Ephemeral Stream	33.263331/ -96.599624	0.01	68	E	8-16	108
216	Ditch	Ditch Drainage Feature	33.264423/ -96.597666	0.06	1,368	E	8-16	109
217	Ditch	Ditch Drainage Feature	33.269284/ -96.593762	0.002	80	E	8-16	104
218	Unnamed Tributary to the East Fork Trinity River	Intermittent Stream	33.269617/ -96.596378	0.01	23	E	8-16	110, 111, 128
219	Emergent Wetland Associated with East Fork Trinity River	Palustrine Emergent Wetland	33.269631/ -96.596155	0.08		E	8-16	110, 111

Water Feature Number	Name	Туре	Lat/Long	Acres within Environmental Footprint (all water features including streams)	Linear feet (LF) within Environmental Footprint (streams only)	Associated Study Segment(s	Figure Peference(s)	Photo Log Reference(s)
220*	Scrub/ Shrub Wetland Associated with Honey Creek	Palustrine Scrub/Shrub Wetland	33.249006/ -96.617080	3.11	-	E	8-15 and 8-17	-
221	Emergent Wetland Associated with Honey Creek	Palustrine Emergent Wetland	33.248874/ -96.618153	0.44		Е	8-13 and 8-17	112, 113
222	Forested Wetland Associated with Honey Creek	Palustrine Forested Wetland	33.247368/ -96.617542	1.45	-	E	8-13 and 8-17	112, 113, 114, 115
223	On-Channel Pond Associated with Honey Creek	On-Channel Pond	33.246915/ -96.619293	0.09	-	E	8-13 and 8-17	114
224	Unnamed Tributary to Honey Creek	Ephemeral Stream	33.246662/ -96.617975	0.02	405	E	8-13 and 8-17	114, 115
225*	Ditch	Ditch Drainage Feature	33.246357/ -96.614756	0.05	723	E	8-17	-
226*	Ditch	Ditch Drainage Feature	33.243197/ -96.614450	0.06	847	E	8-17	-
227	Honey Creek	Perennial Stream	33.244037/ -96.615003	0.09	164	Е	8-17	85
228*	Forested Wetland Associated with Honey Creek	Palustrine Forested Wetland	33.243055/ -96.614757	0.02	-	E	8-17	-
229*	Ditch	Ditch Drainage Feature	33.24238/ - 96.6143630	0.01	244	E	8-17	-
230*	Swale	Swale Drainage Feature	33.246310/ -96.610767	-	260	E	8-17	-
231	East Fork Trinity River	Perennial Stream	33.245586/ -96.610250	0.71	770	E	8-17	101
231A*	East Fork Trinity River	Perennial Stream	33.243895/ -96.609092	0.29	344	E	8-17	-

Water Feature Number	Name	Туре	Lat/Long	Acres within Environmental Footprint (all water features including streams)	Linear feet (LF) within Environmental Footprint (streams only)	Associated Study Segment(s)	Figure Reference(s)	Photo Log Reference(s)
232	Unnamed Tributary to the East Fork Trinity River	Ephemeral Stream	33.244123/ -96.608077	0.03	243	C, D	8-17	116
233	Emergent Wetland Associated with East Fork Trinity River	Palustrine Emergent Wetland	33.238427/ -96.600567	0.08	-	D	8-18	117, 131, 132
234	East Fork Trinity River	Perennial Stream	33.237547/ -96.602079	0.27	293	D	8-18	101
235	East Fork Trinity River	Perennial Stream	33.235245/ -96.600091	0.58	632	D	8-18	101, 117, 132, 133
236	East Fork Trinity River	Perennial Stream	33.226427/ -96.594895	0.23	255	D	8-19	101
237	Emergent Wetland Associated with Powerhouse Creek	Palustrine Emergent Wetland	33.222156/ -96.599051	0.87	-	D	8-19	118
238*	Emergent Wetland Associated with Powerhouse Creek	Palustrine Emergent Wetland	33.221288/ -96.599271	0.03	-	D	8-19	-
239*	Emergent Wetland Associated with Powerhouse Creek	Palustrine Emergent Wetland	33.221025/ -96.599104	0.13	-	D	8-19	-
240*	Emergent Wetland Associated with Powerhouse Creek	Palustrine Emergent Wetland	33.220494/ -96.598161	0.35	-	D	8-19	-
241*	Powerhouse Creek	Perennial Stream	33.219433/ -96.600522	0.04	194	D	8-20	-
242	Powerhouse Creek	Perennial Stream	33.219487/- 96.600146	0.01	41	D	8-20	119

Water Feature Number	Name	Туре	Lat/Long	Acres within Environmental Footprint (all water features including streams)	Linear feet (LF) within Environmental Footprint (streams only)	Associated Study Segment(s)	Figure Reference(s)	Photo Log Reference(s)
243*	Powerhouse Creek	Perennial Stream	33.219520/ -96.598770	0.19	808	D	8-20	-
244*	Emergent Wetland Associated with East Fork Trinity River	Palustrine Emergent Wetland	33.217489/ -96.597855	0.28	-	D	8-20	-
245*	Emergent Wetland Associated with East Fork Trinity River	Palustrine Emergent Wetland	33.215840/ -96.598849	0.36	-	D	8-20	-
246*	Emergent Wetland Associated with East Fork Trinity River	Palustrine Emergent Wetland	33.213372/ -96.597739	1.42	-	D	8-20	-
247*	Emergent Wetland Associated with East Fork Trinity River	Palustrine Emergent Wetland	33.213630/ -96.598832	0.35	-	D	8-20	-
248*	Unnamed Tributary to East Fork Trinity River	Intermittent Stream	33.213433/ -96.599171	0.10	852	D	8-20	-
249*	Emergent Wetland Associated with East Fork Trinity River	Palustrine Emergent Wetland	33.212561/ -96.598843	0.59	-	D	8-20	-
250*	Forested Wetland Associated with East Fork Trinity River	Palustrine Forested Wetland	33.211530/ -96.598204	2.95	-	D	8-20	-

Water Feature Number	Name	Туре	Lat/Long	Acres within Environmental Footprint (all water features including streams)	Linear feet (LF) within Environmental Footprint (streams only)	Associated Study Segment(s)	Figure Poforopoo(s)	Photo Log Reference(s)
251*	Emergent Wetland Associated with East Fork Trinity River	Palustrine Emergent Wetland	33.210946/ -96.599171	0.86	-	D	8-20	-
252*	Emergent Wetland Associated with East Fork Trinity River	Palustrine Emergent Wetland	33.209853/ -96.599061	0.43	-	D	8-20	-
253*	Swale	Swale Drainage Feature	33.208555/ -96.598910	-	210	D	8-20 and 8-21	-
254*	Emergent Wetland Associated with East Fork Trinity River	Palustrine Emergent Wetland	33.208363/ -96.598621	0.29	-	D	8-20 and 8-21	-
255*	Emergent Wetland Associated with East Fork Trinity River	Palustrine Emergent Wetland	33.207979/ -96.599244	0.11	-	D	8-21	-
256*	Emergent Wetland Associated with East Fork Trinity River	Palustrine Emergent Wetland	33.207611/ -96.600303	0.58	-	D	8-21	-
257*	Swale	Swale Drainage Feature	33.207095/ -96.598633	-	598	D	8-21	-
258	On-Channel Pond Associated with East Fork Trinity River	On-Channel Pond	33.206645/ -96.600286	2.01	-	D	8-21	120

Water Feature Number	Name	Туре	Lat/Long	Acres within Environmental Footprint (all water features including streams)	Linear feet (LF) within Environmental Footprint (streams only)	Associated Study Segment(s)	Figure Reference(s)	Photo Log Reference(s)
259	Emergent Wetland Associated with East Fork Trinity River	Palustrine Emergent Wetland	33.206064/ -96.599821	0.21	-	D	8-21	120, 121, 123
260*	Emergent Wetland Associated with East Fork Trinity River	Palustrine Emergent Wetland	33.205965/ -96.599456	1.28	-	D	8-21	-
261	Unnamed Tributary to the East Fork Trinity River	Perennial Stream	33.205839/ -96.600270	0.08	344	D	8-21	120, 122, 123
262	Unnamed Tributary to the East Fork Trinity River	Perennial Stream	33.205828/ -96.600035	0.01	50	D	8-21	120, 121, 123
263*	Unnamed Tributary to East Fork Trinity River	Perennial Stream	33.205404/ -96.599420	0.05	265	D	8-21	-
264	Forested Wetland Associated with East Fork Trinity River	Palustrine Forested Wetland	33.205275/ -96.600081	0.37	-	D	8-21	124
265*	Forested Wetland Associated with East Fork Trinity River	Palustrine Forested Wetland	33.205106/ -96.599609	0.25	-	D	8-21	-
266*	Unnamed Tributary to East Fork Trinity River	Intermittent Stream	33.205059/ -96.598912	0.02	139	D	8-21	-
267*	Unnamed Tributary to East Fork Trinity River	Ephemeral Stream	33.204858/ -96.598721	0.002	50	D	8-21	-

Water Feature Number	Name	Туре	Lat/Long	Acres within Environmental Footprint (all water features including streams)	Linear feet (LF) within Environmental Footprint (streams only)	Associated Study Segment(s)	Figure Reference(s)	Photo Log Reference(s)
268*	Unnamed Tributary to East Fork Trinity River	Ephemeral Stream	33.204910/ -96.598655	0.004	77	D	8-21	-
269	Unnamed Tributary to the East Fork Trinity River	Intermittent Stream	33.204744/ -96.598906	0.01	84	D	8-21	120, 123, 125
270*	Unnamed Tributary to East Fork Trinity River	Intermittent Stream	33.204775/ -96.598343	0.04	280	D	8-21	-
271	Unnamed Tributary to the East Fork Trinity River	Intermittent Stream	33.204740/ -96.597422	0.01	287	D	8-21	120, 126
272*	East Fork Trinity River	Perennial Stream	33.205744/ -96.596613	0.94	816	D	8-21	-
273	East Fork Trinity River	Perennial Stream	33.203712/ -96.596520	1.39	1,207	D	8-21	101, 123, 157
274*	Forested Wetland Associated with East Fork Trinity River	Palustrine Forested Wetland	33.203726/ -96.594190	0.12	-	D	8-21	-
275	Upland Pond	Upland Pond	33.202116/ -96.592066	0.26	-	D	8-21	123
276*	Emergent Wetland Associated with East Fork Trinity River	Palustrine Emergent Wetland	33.203361/ -96.586127	3.06	-	D, C	8-24	-
277*	Emergent Wetland Associated with East Fork Trinity River	Palustrine Emergent Wetland	33.201758/ -96.586379	0.21	-	D	8-24	-

Water Feature Number	Name	Туре	Lat/Long	Acres within Environmental Footprint (all water features including streams)	Linear feet (LF) within Environmental Footprint (streams only)	Associated Study Segment(s)	Figure Poforonco(s)	Photo Log Reference(s)
278*	Emergent Wetland Associated with East Fork Trinity River	Palustrine Emergent Wetland	33.201483/ -96.585436	0.11	-	D	8-24	-
279*	Emergent Wetland Associated with East Fork Trinity River	Palustrine Emergent Wetland	33.201723/ -96.584262	1.14	-	D	8-24	-
280*	On-Channel Pond Associated with East Fork Trinity River	On-Channel Pond	33.201973/ -96.583998	0.65	-	С	8-24	-
281	Upland Pond	Upland Pond	33.200143/ -96.584798	0.14	-	D	8-24	128
282*	Unnamed Tributary to the East Fork Trinity River	Intermittent Stream		0.02	53	D	8-24	-
283	Unnamed Tributary to the East Fork Trinity River	Intermittent Stream	33.199895/ -96.584019	0.30	875	D	8-24	128, 129
284*	Upland Pond	Upland Pond	33.200731/ -96.583557	0.51	-	С	8-24	-
285	Unnamed Tributary to the East Fork Trinity River	Ephemeral Stream	33.199700/ -96.583092	0.03	248	С	8-24	130
286	Forested Wetland Associated with East Fork Trinity River	Palustrine Forested Wetland	33.241816/ -96.602102	0.07	-	C, D	8-17 and 8-18	131
287	Unnamed Tributary to the East Fork Trinity River	Intermittent Stream	33.241048/ -96.600562	0.02	136	С	8-18	9, 131

Water Feature Number	Name	Туре	Lat/Long	Acres within Environmental Footprint (all water features including streams)	Linear feet (LF) within Environmental Footprint (streams only)	Associated Study Segment(s)	Figure Reference(s)	Photo Log Reference(s)
288	Emergent Wetland Associated with East Fork Trinity River	Palustrine Emergent Wetland	33.239786/ -96.600405	0.92	-	С	8-18	117, 131, 132
289	Forested Wetland Associated with East Fork Trinity River	Palustrine Forested Wetland	33.239861/ -96.599787	2.47	-	С	8-18	117, 131, 132, 133
290	Emergent Wetland Associated with East Fork Trinity River	Palustrine Emergent Wetland	33.239552/ -96.599151	0.31	-	С	8-18	131, 132, 133
291	Unnamed Tributary to the East Fork Trinity River	Perennial Stream	33.239576/ -96.597608	0.21	596	С	8-18	134
292*	Clemons Creek	Intermittent Stream	33.240009/ -96.596506	0.04	133	С	8-18	-
293	Clemons Creek	Intermittent Stream	33.238930/ -96.595902	0.43	1,554	С	8-18	135
294*	Clemons Creek	Intermittent Stream	33.238165/ -96.595550	0.06	221	С	8-18	-
295*	Clemons Creek	Intermittent Stream	33.237663/ -96.594190	0.11	308	С	8-18	-
296*	Forested Wetland Associated with Clemons Creek	Palustrine Forested Wetland	33.239179/ -96.594167	0.11	-	С	8-18	-
297	Forested Wetland Associated with East Fork Trinity River	Palustrine Forested Wetland	33.238731/ -96.594008	0.22	-	С	8-18	136
298*	Forested Wetland Associated with Clemons Creek	Palustrine Forested Wetland	33.237572/ -96.592708	3.09	-	С	8-18	-

Water Feature Number	Name	Туре	Lat/Long	Acres within Environmental Footprint (all water features including streams)	Linear feet (LF) within Environmental Footprint (streams only)	Associated Study Segment(s	Figure Poforonco(s)	Photo Log Reference(s)
299*	On-Channel Pond Associated with East Fork Trinity River	On-Channel Pond	33.238020/ -96.591986	0.67	-	С	8-18	-
300*	Upland Pond	Upland Pond	33.236651/ -96.587292	0.47	-	С	8-18	-
301*	Swale	Swale Drainage Feature	33.236214/ -96.587647	-	195	С	8-18	-
302*	Unnamed Tributary to East Fork Trinity River	Ephemeral Stream	33.235831/ -96.587578	0.01	103	С	8-18	-
303	Ditch	Ditch Drainage Feature	33.235688/ -96.587538	0.01	377	С	8-18	138
304	Unnamed Tributary to the East Fork Trinity River	Ephemeral Stream	33.235493/ -96.587832	0.03	249	С	8-18	137
305*	Unnamed Tributary to East Fork Trinity River	Ephemeral Stream	33.234379/ -96.588183	0.07	626	С	8-18	-
306	Ditch	Ditch Drainage Feature	33.234067/ -96.587806	0.01	481	С	8-18	138
307*	Upland Pond	Upland Pond	33.233418/ -96.585974	0.11	-	С	8-18	-
308	Ditch	Ditch Drainage Feature	33.232241/ -96.587912	0.01	489	С	8-18 and 8-22	138
309*	Unnamed Tributary to East Fork Trinity River	Ephemeral Stream	33.232385/ -96.585166	0.02	130	С	8-18 and 8-22	-
310*	Swale	Swale Drainage Feature	33.231893/ -96.585362	-	374	С	8-18 and 8-22	-
311*	Upland Pond	Upland Pond	33.231259/ -96.585414	0.46	-	С	8-18 and 8-22	-
312*	Unnamed Tributary to East Fork Trinity River	Intermittent Stream	33.230799/ -96.585407	0.30	1,321	С	8-18 and 8-22	-

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313*	Swale	Swale Drainage Feature	33.226374/ -96.581980	-	185	С	8-22	-
314	Swale	Swale Drainage Feature	33.226116/ -96.582434	-	165	С	8-22	139
315*	Swale	Swale Drainage Feature	33.225542/ -96.582632	-	274	С	8-22	-
316	Swale	Swale Drainage Feature	33.225108/ -96.583023	-	136	С	8-22	139
317*	Unnamed Tributary to East Fork Trinity River	Intermittent Stream	33.224687/ -96.584001	0.08	294	С	8-22	-
318*	On-Channel Pond Associated with East Fork Trinity River	On-Channel Pond	33.216803/ -96.584218	0.33	-	С	8-23	-
319*	Unnamed Tributary to East Fork Trinity River	Intermittent Stream	33.217229/ -96.582658	0.41	603	С	8-23	140
320*	Unnamed Tributary to East Fork Trinity River	Ephemeral Stream	33.216416/ -96.582486	0.08	450	С	8-23	140
321	Upland Pond	Upland Pond	33.215522/ -96.582352	0.17	-	С	8-23	140
322	Unnamed Tributary to the East Fork Trinity River	Intermittent Stream	33.212362/ -96.583132	0.12	658	С	8-23	141
323*	On-Channel Pond Associated with East Fork Trinity River	On-Channel Pond	33.211381/ -96.584341	0.04	-	С	8-23	-

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324	Ditch	Ditch Drainage Feature	33.210630/ -96.583835	0.01	161	С	8-23	13
325	Upland Pond	Upland Pond	33.210055/ -96.583050	1.13	-	С	8-23 and 8-24	142
326	Ditch	Ditch Drainage Feature	33.208982/ -96.582723	0.04	777	С	8-23 and 8-24	13
327	Upland Pond	Upland Pond	33.207525/ -96.583133	0.18	-	С	8-24	143
328	Swale	Swale Drainage Feature	33.206939/ -96.581384	-	26	С	8-24	144
329	Isolated Forested Wetland	Palustrine Forested Wetland	33.206586/ -96.581446	0.22	-	С	8-24	145, 146
330	Upland Pond	Upland Pond	33.206503/ -96.581560	0.34	-	С	8-24	146
331*	Upland Pond	Upland Pond	33.204476/ -96.581871	0.21	-	С	8-24	-
332	Upland Pond	Upland Pond	33.205040/ -96.584848	0.47	-	С	8-24	142, 145
333	Forested Wetland Associated with East Fork Trinity River	Palustrine Forested Wetland	33.204694/ -96.585839	0.49	-	С	8-24	147, 148, 149
334	Emergent Wetland Associated with East Fork Trinity River	Palustrine Emergent Wetland	33.204698/ -96.586051	0.26	-	С	8-24	147, 148, 149
335	Unnamed Tributary to the East Fork Trinity River	Intermittent Stream	33.204502/ -96.586364	0.001	33	С	8-24	147, 148, 149
336*	Unnamed Tributary to East Fork Trinity River	Intermittent Stream	33.198610/ -96.579331	0.12	645	С	8-24 and 8-25	-
337	Unnamed Tributary to the East Fork Trinity River	Intermittent Stream	33.199421/ -96.577880	0.07	384	С	8-24	150

Water Feature Number	Name	Туре	Lat/Long	Acres within Environmental Footprint (all water features including streams)	Linear feet (LF) within Environmental Footprint (streams only)	Associated Study Segment(s)	Figure Reference(s)	Photo Log Reference(s)
338	Unnamed Tributary to the East Fork Trinity River	Ephemeral Stream	33.200058/ -96.577682	0.001	20	С	8-24	151
339*	Unnamed Tributary to East Fork Trinity River	Ephemeral Stream	33.199887/ -96.577462	0.01	195	С	8-24	-
340*	Unnamed Tributary to East Fork Trinity River	Intermittent Stream	33.200075/ -96.576660	0.11	584	С	8-24	-
341	Upland Pond	Upland Pond	33.196063/ -96.577018	0.48	-	С	8-25	142
342	Unnamed Tributary to the East Fork Trinity River	Ephemeral Stream	33.197013/ -96.573852	0.01	133	С	8-25	152
343	Swale	Swale Drainage Feature	33.197243/ -96.573651	-	85	С	8-25	153
344	Ditch	Ditch Drainage Feature	33.196950/ -96.572117	0.01	258	С	8-25	154
345	Ditch	Ditch Drainage Feature	33.197160/ -96.571373	0.01	416	С	8-25	154
346*	Upland Pond	Upland Pond	33.197840/ -96.572053	0.08	-	С	8-25	-
347*	Unnamed Tributary to East Fork Trinity River	Ephemeral Stream	33.196025/ -96.570289	0.01	148	С	8-25	-
348	Swale	Swale Drainage Feature	33.196272/ -96.570125	-	59	С	8-25	32
349	Ditch	Ditch Drainage Feature	33.196130/ -96.569034	0.01	440	С	8-25	154
350	Ditch	Ditch Drainage Feature	33.196242/ -96.568203	0.02	937	С	8-25	154

Water Feature Number	Name	Туре	Lat/Long	Acres within Environmental Footprint (all water features including streams)	Linear feet (LF) within Environmental Footprint (streams only)	Associated Study Segment(s)	Figure Reference(s)	Photo Log Reference(s)
351	Unnamed Tributary to the East Fork Trinity River	Ephemeral Stream	33.195490/ -96.567568	0.01	140	С	8-25	155
352	Ditch	Ditch Drainage Feature	33.195556/ -96.567316	0.02	735	С	8-25	154
353*	Unnamed Tributary to the East Fork Trinity River	Intermittent Stream	33.198463/ -96.599552	0.01	60	С	8-21	-
354	Unnamed Tributary to the East Fork Trinity River	Intermittent Stream	33.198545/ -96.598042	0.08	588	С	8-21	156
355*	Unnamed Tributary to the East Fork Trinity River	Perennial Stream	33.202223/ -96.600293	0.15	298	С	8-21	-
356	Unnamed Tributary to the East Fork Trinity River	Perennial Stream	33.202855/ -96.598315	0.54	1078	С	8-21	157
357	Swale	Swale Drainage Feature	33.187564/ -96.577772	-	280	С	8-25	158
358	East Fork Trinity River	Perennial Stream	33.190381/ -96.577237	0.63	689	С	8-25	101
359	Unnamed Tributary to the East Fork Trinity River	Intermittent Stream	33.190661/ -96.576704	0.04	226	С	8-25	159
360	Swale	Swale Drainage Feature	33.191063/ -96.576946	_	262	С	8-25	159, 160
361	Swale	Swale Drainage Feature	33.191447/ -96.577235	-	379	С	8-25	160

Water Feature Number	Name	Туре	Lat/Long	Acres within Environmental Footprint (all water features including streams)	Linear feet (LF) within Environmental Footprint (streams only)	Associated Study Segment(s)	Figure Reference(s)	Photo Log Reference(s)
362	On-Channel Pond Associated with East Fork Trinity River	On-Channel Pond	33.191987/ -96.576904	0.07	-	С	8-25	161
363	Swale	Swale Drainage Feature	33.192322/ -96.576883	-	101	С	8-25	160
364	On-Channel Pond Associated with East Fork Trinity River	On-Channel Pond	33.192794/ -96.577035	0.20	-	С	8-25	161
365	Swale	Swale Drainage Feature	33.193421/ -96.577345	-	170	С	8-25	160
366	On-Channel Pond Associated with East Fork Trinity River	On-Channel Pond	33.192357/ -96.578068	0.21	-	С	8-25	162
367	Forested Wetland Associated with East Fork Trinity River	Palustrine Forested Wetland	33.192725/ -96.578163	0.15	-	С	8-25	162, 163
368	On-Channel Pond Associated with East Fork Trinity River	On-Channel Pond	33.193769/ -96.578011	0.05	-	С	8-25	164
369	Swale	Swale Drainage Feature	33.193878/ -96.577991	-	41	С	8-25	160
370	On-Channel Pond Associated with East Fork Trinity River	On-Channel Pond	33.194065/ -96.578005	0.10	-	С	8-25	164

Water Feature Number	Name	Туре	Lat/Long	Acres within Environmental Footprint (all water features including streams)	Linear feet (LF) within Environmental Footprint (streams only)	Associated Study Segment(s)	Figure Reference(s)	Photo Log Reference(s)
371	Upland Pond	Upland Pond	33.195288/ -96.576013	1.23	-	С	8-25	142
		Total		77.375 AC	105,670 LF			

^{*} Indicates a Photo-Interpreted Feature

5.2.1 Water Feature Summaries

The western portion of the Study Area primarily drains to Wilson Creek (Water Features 110, 111*, and 143*) which flows from northwest to southeast, exhibiting a 25 to 35-foot average OHWM width. Within the Environmental Footprint, Wilson Creek has a connection to several ephemeral, intermittent, and perennial tributaries as well as on-channel pond, forested wetland, and emergent wetland. Major, named tributaries include Rutherford Branch, Stover Creek, and Franklin Branch. Wilson Creek and all associated features are listed in Table 4 which includes information on name, feature type, location, and quantity within the Environmental Footprint and information on which study segment it is associated with, which figure this feature can be seen on, and which photos and associated photo descriptions represent this feature.

Rutherford Branch (Water Features 14*, 15*, 16, 17*, 19*, 130*, 131*, 136, 138, and 142) is a perennial stream with an average OHWM width of 15 to 40 feet within the Environmental Footprint, including one location where it forks around an emergent wetland (Water Feature 137) into two 12.5-foot channels (Water Features 136 and 138) then reverts back to a single 25-foot channel (Water Feature 142). Rutherford Branch flows southwest to northeast where it drains into Wilson Creek (Water Feature 143*). Within the Environmental Footprint, Rutherford Branch has a connection to several ephemeral, intermittent, and perennial tributaries as well as on-channel pond, forested wetland, scrub-shrub wetland, and emergent wetland. See Table 4 for a complete inventory of these features associated with Rutherford Branch.

Stover Creek (Water Features 121* and 123*) is a perennial stream with an average OHWM width of 15 to 20 feet within the Environmental Footprint. It flows from north to south and drains into Wilson Creek outside of the Environmental Footprint. Within the Environmental Footprint, Stover Creek exhibits a connection to on-channel ponds and ephemeral and intermittent tributaries. See Table 4 for a complete inventory of these features associated with Stover Creek.

Franklin Branch (Water Features 157*, 158, and 161*) is an intermittent stream with an average OHWM width of 12 to 15 feet within the Environmental Footprint. It flows from north to south and drains into Wilson Creek outside of the Environmental Footprint. Within the Environmental Footprint, Franklin Branch exhibits a connection to ephemeral tributaries and emergent wetland. See Table 4 for a complete inventory of these features associated with Franklin Branch.

The eastern portion of the Environmental Footprint primarily drains to the East Fork Trinity River (Water Features 205, 231, 234, 235, 236, 272*, 273, and 358) which flows from northwest to southeast, exhibiting a 40 to 50-foot average OHWM width. Within the Environmental Footprint, East Fork Trinity River has a connection to several ephemeral, intermittent, and perennial tributaries as well as on-channel pond, forested wetland, and emergent wetland. Major, named tributaries include Honey Creek, Clemons Creek, and Powerhouse Creek. East Fork Trinity and all associated features are listed in Table 4 which includes information on name, feature type, location, and

quantity within the Environmental Footprint and information on which study segment it is associated with, which figure this feature can be seen on, and which photos and associated photo descriptions represent this feature.

Honey Creek (Water Features 182, 192, and 227) is a perennial stream with an average OHWM width of 25 feet within the Environmental Footprint. Honey Creek flows northwest to southeast where it drains into East Fork Trinity outside of the Environmental Footprint. Within the Environmental Footprint, Honey Creek has a connection to several ephemeral, intermittent, and perennial tributaries as well as on-channel pond, forested wetland, scrubshrub wetland, and emergent wetland. See Table 4 for a complete inventory of these features associated with Honey Creek.

Clemons Creek (Water Features 292*, 293, 294*, 295*) is an intermittent stream with an average OHWM width of 12 to 15 feet within the Environmental Footprint. It generally flows from north to south and drains into East Fork Trinity River outside of the Environmental Footprint. Within the Environmental Footprint, Clemons Creek exhibits a connection to forested wetland. See Table 4 for a complete inventory of these features associated with Clemons Creek.

Powerhouse Creek (Water Features 241*, 242, and 243*) is a perennial stream with an average OHWM width of 10 feet within the Environmental Footprint. It flows from west to east and drains into East Fork Trinity River outside of the Environmental Footprint. Within the Environmental Footprint, Powerhouse Creek exhibits a connection an emergent wetland. See Table 4 for a complete inventory of these features associated with Powerhouse Creek.

An area of particular interest is the complex (see Photos 160 to 164) between US 380 and East Fork Trinity River (Water Feature 358). Between 1952 and 1972 (see Table 3) a ditch was excavated to the northwest of the Environmental Footprint to reroute the former alignment of Water Feature 358 and drain the floodplain, likely eliminating a historic wetland area. This modification resulted in a split watershed. Forested Wetland Water Feature 367, On-Channel Pond Water Features 366, 368, and 370, and Swale Water Feature 369 drain into the man-made alignment of the former stream and drain northwest to the East Fork Trinity River outside the Environmental Footprint. Alternately, a patchwork of channel scars drain south, where some portions of the old stream persist as deep, open water depressions and currently function as open water features (On-Channel Pond Water Feature 362 and 364). These ponds are connected by upland, vegetated swales (Swale Water Features 360, 361, 363, and 365). These swales and ponds drain to the only remaining portion of the original stream, Intermittent Stream Water Feature 359 which flows into the East Fork Trinity River (358). All water features in this complex are flooded by the East Fork Trinity River in a typical year.

Another area of particular interest is the wetland complex (see Photos 117 and 131 to 134) east of State Highway (SH) 5 and north of the East Fork Trinity River (Water Features 234 and 235). Emergent Wetland Water Features 233, 288, and 290, and Forested Wetland Water Feature 289 formed in the floodplain abutting an old railroad track. Overland flow from Water Features 234 and 235 provides annual hydrology to the area. Runoff from residential developments to the north also contributes to hydrology of the emergent and forested wetlands. Perennial Stream Water Feature 291 flows south into Water Feature 235 and contributes to overland flow in the area during high flow events.

5.2.2 Hydrology

A review of the Antecedent Precipitation Tool (APT) reported mostly normal conditions that ranged from wetter than normal to drier than normal within the Study Area at the time of the field investigations. The table below summarizes wetland hydrological indicators identified within the Environmental Footprint. Refer to the Wetland Determination Data Forms in Attachment 2 to see the specific hydrology recorded at each sample point. Refer to the APT for McKinney, Texas in Attachment 3 for hydrologic conditions during field investigations.

Table 5: Wetland Hydrological Indicators

Wetland Type	Water Feature Number(s)	Primary Wetland Hydrological Indicators	Secondary Wetland Hydrological Indicators
Palustrine Forested Wetland	32, 69, 80, 99, 125, 170, 178, 179, 200, 201, 202, 207, 222, 264, 286, 289, 297, 329, 333, 367	A1 – Surface Water A2 – High Water Table A3 – Saturation B1 – Water Marks B3 – Drift Deposits B4 – Algal Mat or Crust B7 – Inundation Visible on Aerial Imagery B9 – Water-Stained Leaves C4 – Presence of Reduced Iron	B6 – Surface Soil Cracks B8 – Sparsely Vegetated Concave Surface B10 – Drainage Patterns C9 – Saturation Visible on Aerial Imagery D2 – Geomorphic Position D5 – FAC-Neutral Test
Palustrine Emergent Wetland	5, 33, 61, 109, 137, 140, 171, 180, 185, 190, 191, 194, 219, 221, 233, 237, 259, 288, 290, 334	A1 – Surface Water A2 – High Water Table A3 – Saturation B3 – Drift Deposits B7 – Inundation Visible on Aerial Imagery B13 – Aquatic Invertebrates C3 – Oxidized Rhizospheres on Living Roots	B6 – Surface Soil Cracks B8 – Sparsely Vegetated Concave Surface B10 – Drainage Patterns C9 – Saturation Visible on Aerial Imagery D2 – Geomorphic Position D5 – FAC-Neutral Test

5.2.3 Vegetation

Normal conditions were reported within the Environmental Footprint at the time of the field investigations. Representative dominant taxa for each distinct habitat type encountered within the Environmental Footprint are listed in the tables below. Indicator status for each species was obtained from the 2018 NWPL.

Table 6: Wetland Dominant Forested Plant Species

Strata	Scientific Name	Common Name	NWPL Classification	
Tree	Celtis laevigata	sugar-berry	FAC	
Tree	Fraxinus pennsylvanica	green ash	FAC	
Tree	Maclura pomifera	Bois d 'arc	FACU	
Tree	Populus deltoides	Eastern cottonwood	FAC	
Tree	Salix nigra	black willow	FACW	
Tree	Ulmus americana	American elm	FAC	
Sapling/Shrub	Carya illinoinensis	pecan	FAC	

Strata	Scientific Name	Common Name	NWPL Classification
Sapling/Shrub	Celtis laevigata	sugar-berry	FAC
Sapling/Shrub	Fraxinus pennsylvanica	green ash	FAC
Sapling/Shrub	Salix nigra	black willow	FACW
Sapling/Shrub	Ulmus americana	American elm	FAC
Sapling/Shrub	Ulmus crassifolia	cedar elm	FAC

Table 7: Wetland Dominant Emergent Plant Species

Strata	Scientific Name	Common Name	NWPL Classification
Herbaceous	Alisma triviale	Northern water-plantain	OBL
Herbaceous	Carex vulpinoidea	common fox sedge	FACW
Herbaceous	Cynodon dactylon	Bermudagrass	FACU
Herbaceous	Chasmanthium sessiliflorum	long-leaf wood-oats	FAC
Herbaceous	Eleocharis obtusa	blunt spike-rush	OBL
Herbaceous	Eleocharis palustris	common spike-rush	OBL
Herbaceous	Iva annua	annual marsh-elder	FAC
Herbaceous	Leersia oryzoides	rice cut grass	OBL
Herbaceous	Persicaria hydropiperoides	swamp smartweed	OBL
Herbaceous	Phyla lanceolata	northern frogfruit	FACW
Herbaceous	Phyla nodiflora	turkey-tangle	FAC
Herbaceous	Typha angustifolia	narrow-leaf cattail	OBL
Herbaceous	Typha latifolia	broad-leaf cattail	OBL
Herbaceous	Xanthium strumarium	rough cocklebur	FAC
Herbaceous	Zizaniopsis miliacea	marsh-millet	OBL

Table 8: Upland Dominant Plant Species

Strata	Scientific Name	Common Name	NWPL Classification
Tree	Carya illinoinensis	pecan	FAC
Tree	Celtis laevigata	sugar-berry	FAC
Tree	Acer negundo	boxelder	FAC

Strata	Scientific Name	Common Name	NWPL Classification
Tree	Diospyros virginiana	common persimmon	FAC
Tree	Fraxinus pennsylvanica	green ash	FAC
Tree	Gleditsia triacanthos	honey-locust	FACU
Tree	Juniperus virginiana	Eastern red-cedar	UPL
Tree	Quercus muehlenbergii	chinkapin oak	FAC
Tree	Ulmus alata	winged elm	FACU
Tree	Ulmus americana	American elm	FAC
Sapling/Shrub	Celtis laevigata	sugar-berry	FAC
Sapling/Shrub	llex vomitoria	yaupon	FAC
Sapling/Shrub	Salix nigra	black willow	FACW
Sapling/Shrub	Sambucus nigra	black elder	FAC
Sapling/Shrub	Ulmus americana	American elm	FAC
Herbaceous	Ambrosia trifida	great ragweed	FAC
Herbaceous	Cardiospermum halicacabum	love-in-a-puff	FAC
Herbaceous	Cenchrus ciliaris	buffel grass	FACU
Herbaceous	Cynodon dactylon	bermudagrass	FACU
Herbaceous	Eragrostis spectabilis	petticoat-climber	UPL
Herbaceous	lva annua	annual marsh-elder	FAC
Herbaceous	Liriope muscari	big blue lilyturf	UPL
Herbaceous	Paspalum urvillei	Vasey's grass	FACW
Herbaceous	Schedonorus arundinaceus	tall false rye grass	FACU
Herbaceous	Solidago altissima	tall goldenrod	FACU
Herbaceous	Sorghum halepense	johnsongrass	FACU
Herbaceous	Stenotaphrum secundatum	St. Augustine grass	FAC
Woody Vine	Parthenocissus quinquefolia	Virginia-creeper	FACU
Woody Vine	Campsis radicans	trumpet-creeper	FACU
Woody Vine	Smilax bona-nox	fringed greenbrier	FACU
Woody Vine	Toxicodendron radicans	Eastern poison ivy	FACU

5.2.4 Soils

Normal conditions were present within the Environmental Footprint at the time of the field investigations. Refer to the Wetland Determination Data Forms in Attachment 2 to see the specific soil indicators recorded at each sample point. The table below summarizes hydric soil data identified within the Environmental Footprint.

Table 9: Hydric Soil Indicators

Wetland Type	Water Feature Number(s)	Hydric Soil Indicator(s)	
Palustrine Forested Wetland	32, 69, 80, 99, 125, 170, 178, 179, 200, 201, 202, 207, 222, 264, 286, 289, 297, 329, 333, 367	F3 – Depleted Matrix F6 – Redox Dark Surface F8 – Redox Depressions Other: Too saturated to determine color profile, organic layer within top inch, strong hydrology and hydrophytic vegetation	
Palustrine Emergent Wetland	5, 33, 61, 109, 137, 140, 171, 180, 185, 190, 191, 194, 219, 221, 233, 237, 259, 288, 290, 334	A4 – Hydrogen Sulfide F3 – Depleted Matrix F6 – Redox Dark Surface F8 – Redox Depressions Other: Netted matting visible on aerial imagery	

6.0 Conclusion

A water feature delineation was conducted for US 380 (From Coit Road to FM 1827) in McKinney and Prosper, Collin County, Texas (CSJ 0135-02-065, 0135-03-053, and 0135-15-002). The field delineation was completed on August 24, 28; September 8, 10, 11, 14, 16, 17, 24, 25; October 12, 13, 15, 20; November 3, 9, 11, 29; December 1, 3, 22; 2020; January 17, 19; June 8; August 12, 16, 17, 18, 25; and September 22; 2021. Refer to Section 5.2, above, for a table summarizing the water features (i.e., waterbodies/wetlands) identified within the Environmental Footprint.

The Environmental Footprint contained ephemeral, intermittent, and perennial tributaries, palustrine forested, scrub-shrub and emergent wetlands, open water features (on-channel ponds), excavated upland ponds, swales, ditches, water-filled depressions associated with road construction, stormwater retention ponds and an isolated wetland. Many of the water features are hydrologically associated with, connected to, or influenced by RPWs, including Wilson Creek, the East Fork Trinity River, Throckmorton Creek, Rutherford Branch, Franklin Branch, Stover Creek, Honey Creek, Jean's Creek, and Clemons Creek.

7.0 References

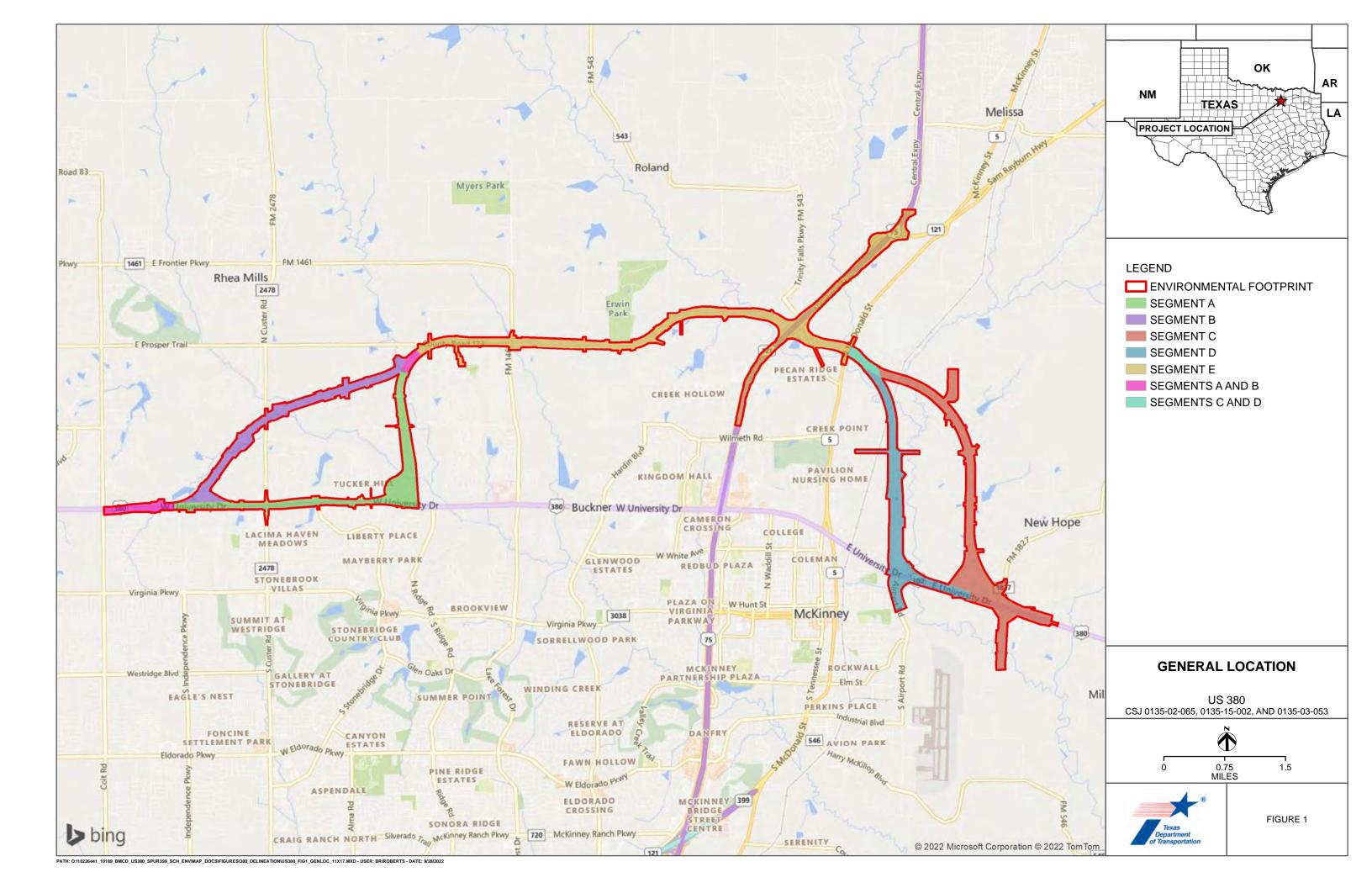
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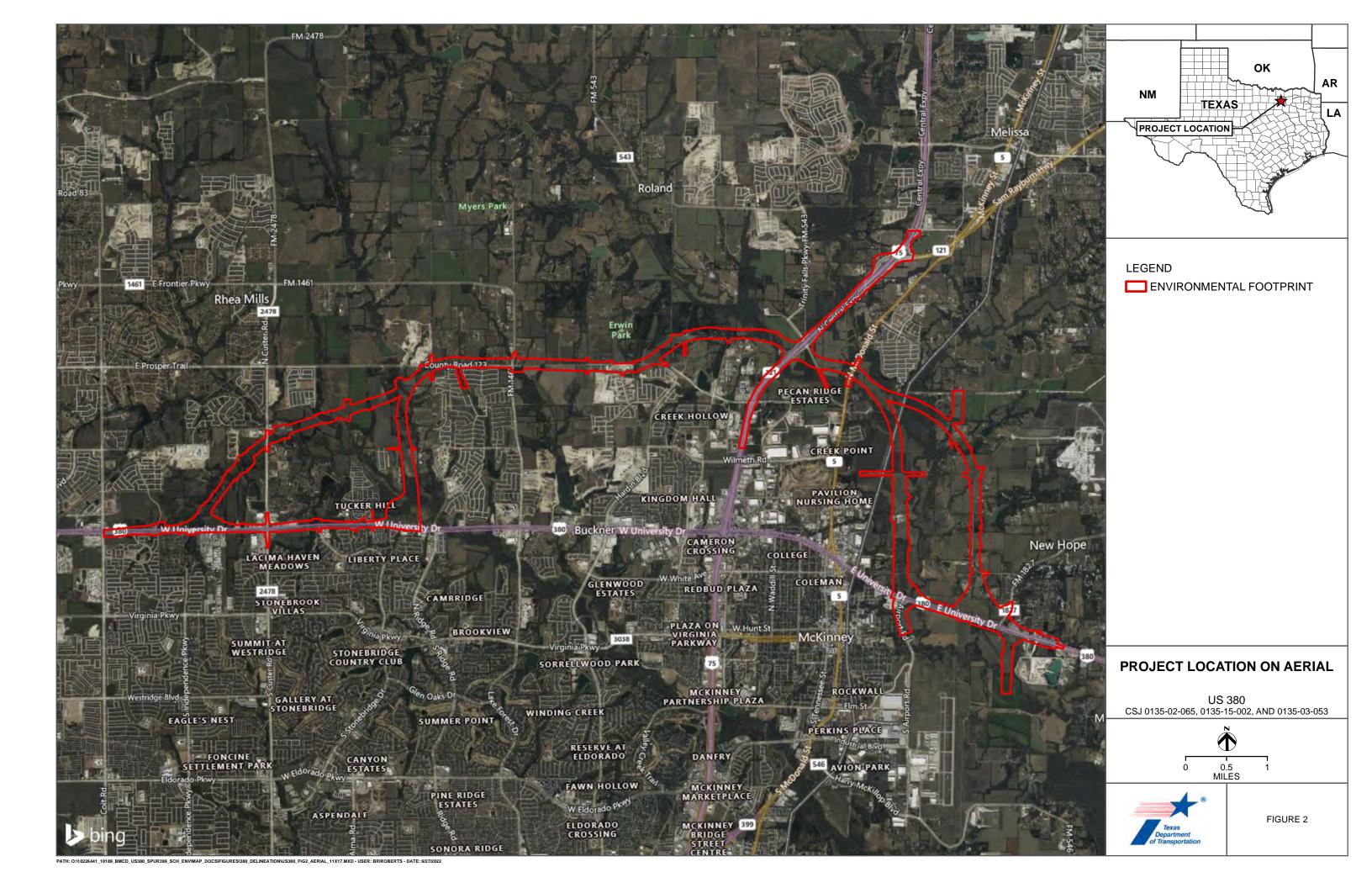
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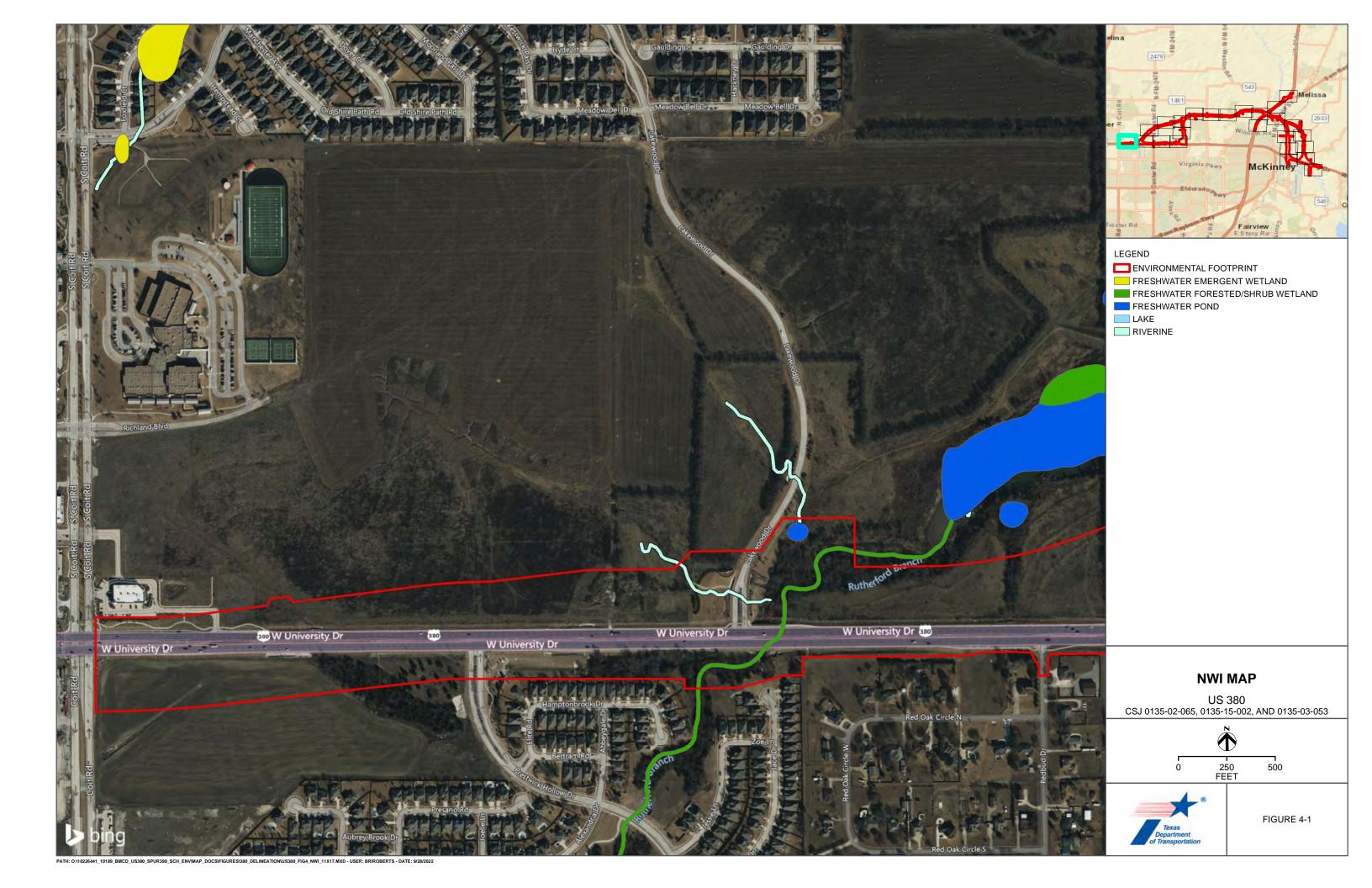
8.0 Attachments

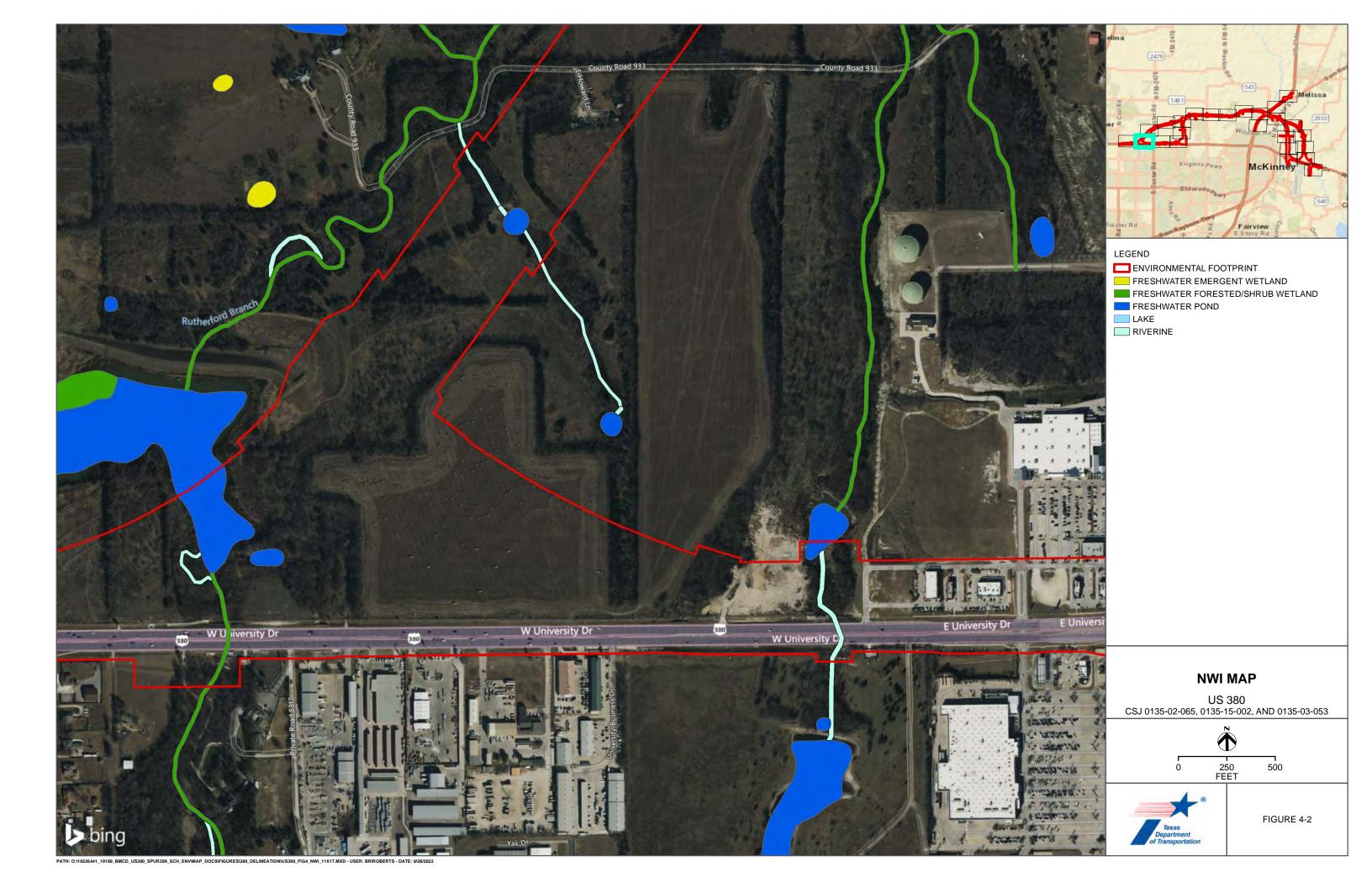
- 1. Figures
- 2. Wetland Determination Data Forms and Stream Data Forms
- 3. Antecedent Precipitation Tool for McKinney, Texas
- 4. Site Photographs
- 5. Historical Aerial Photographs

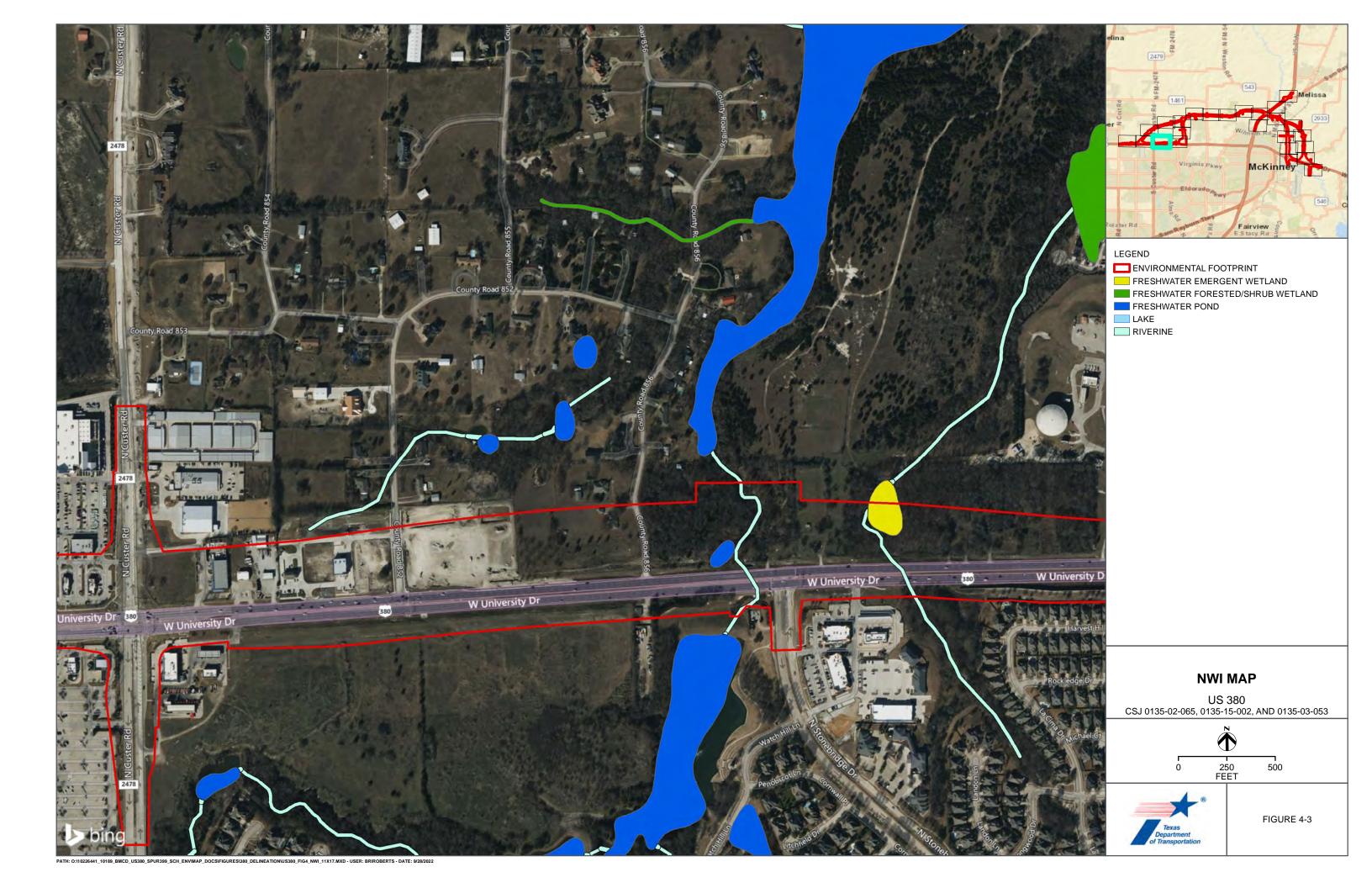
Attachment 1 - Figures



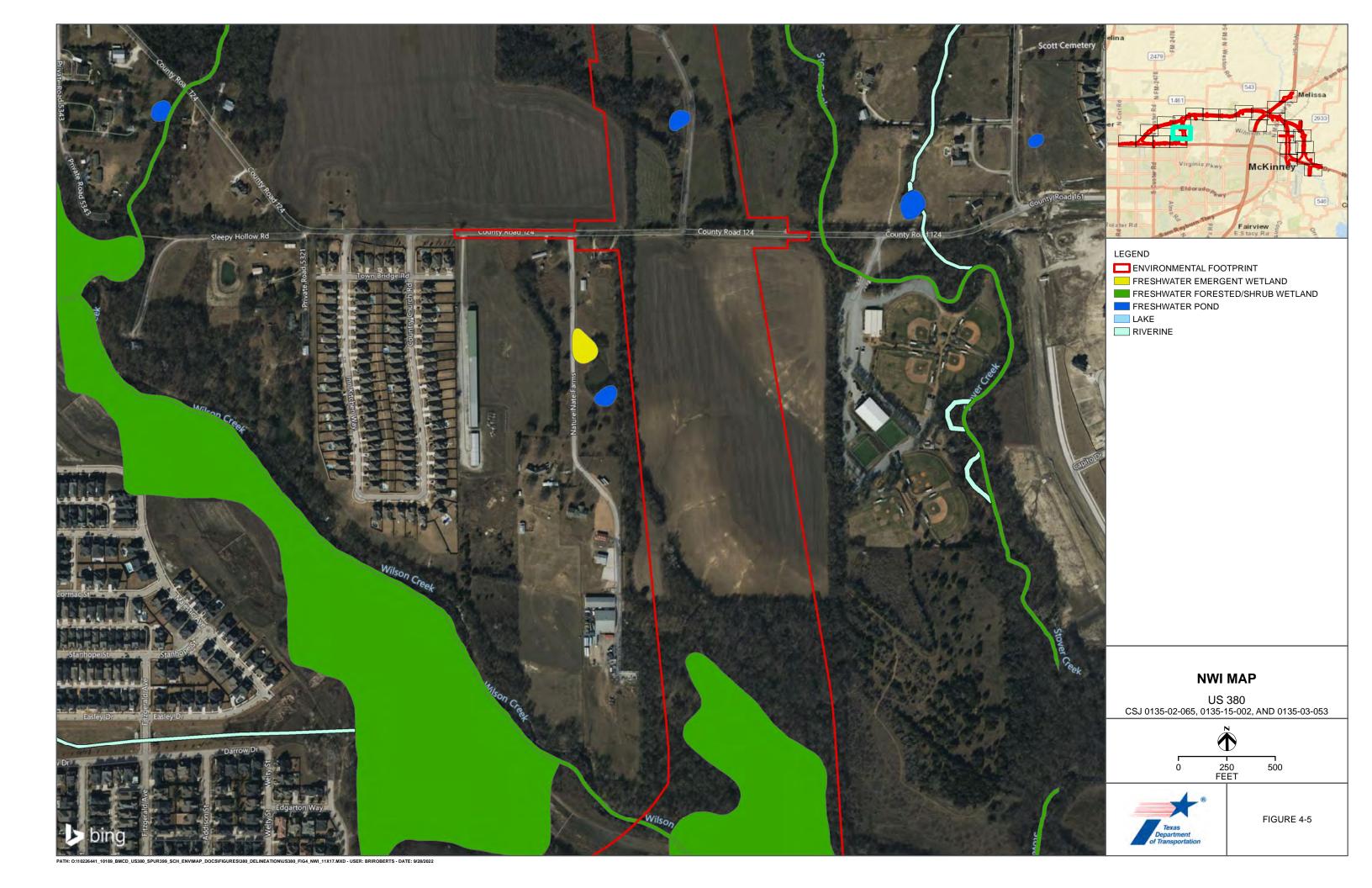


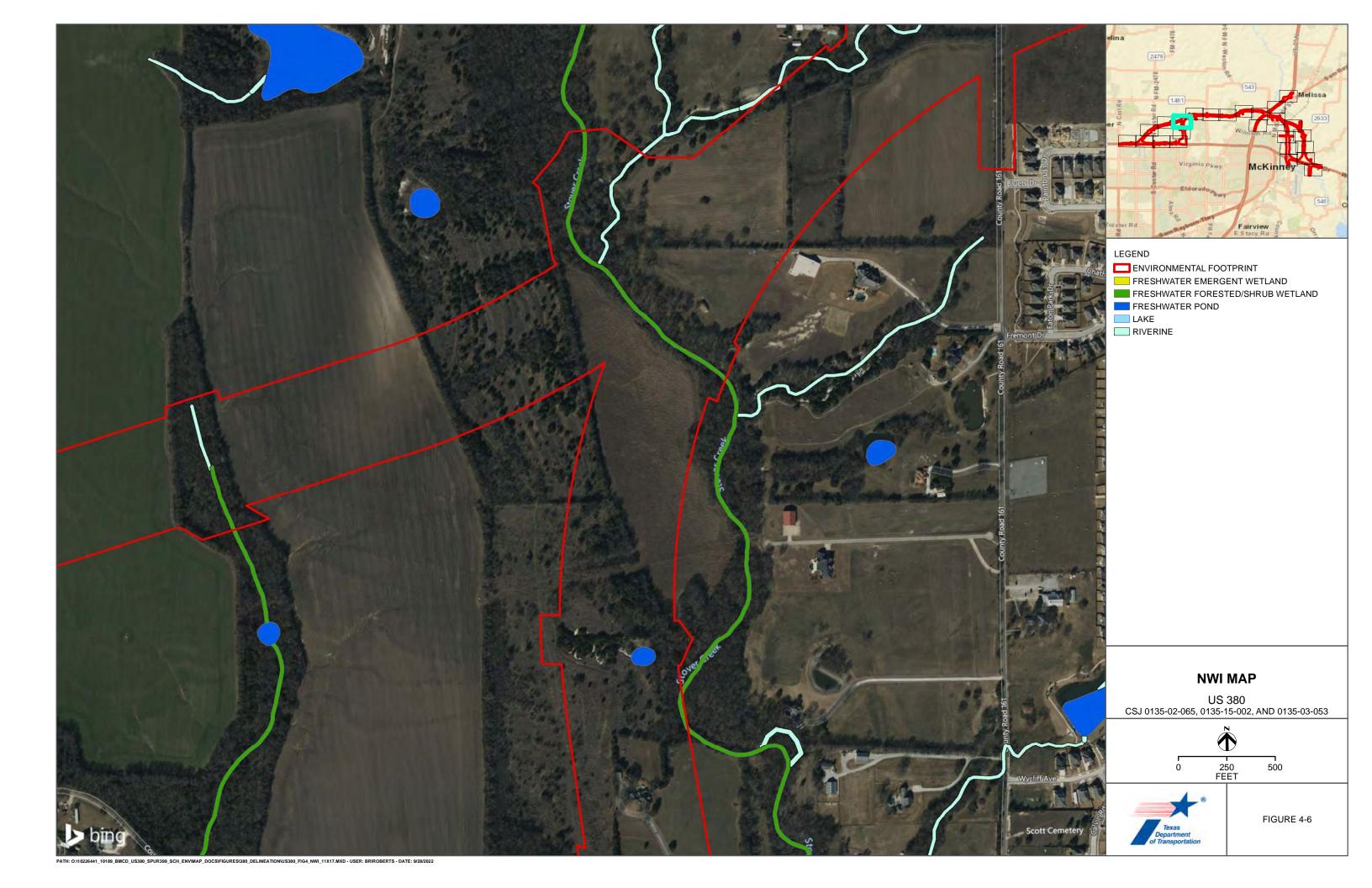




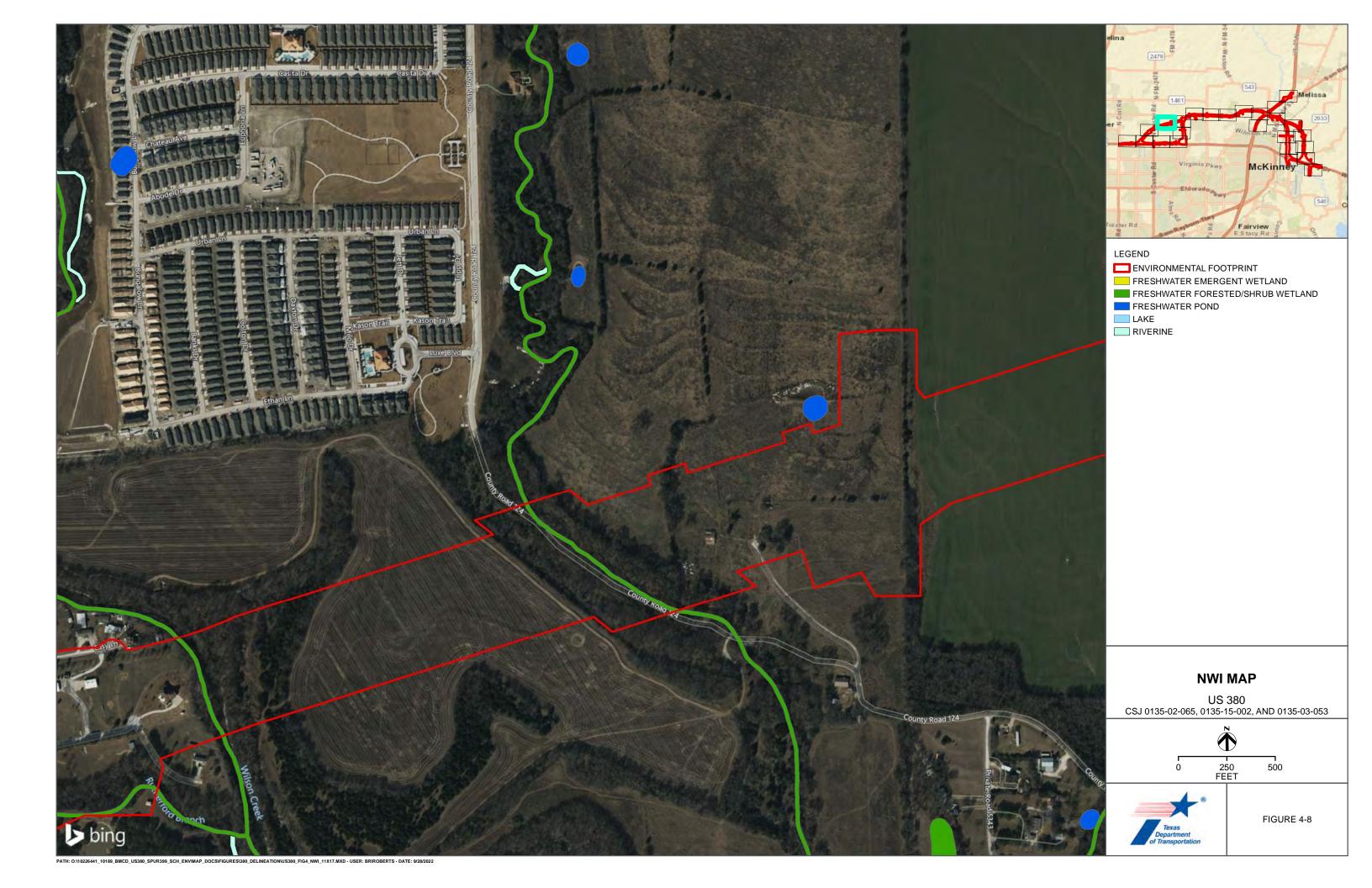


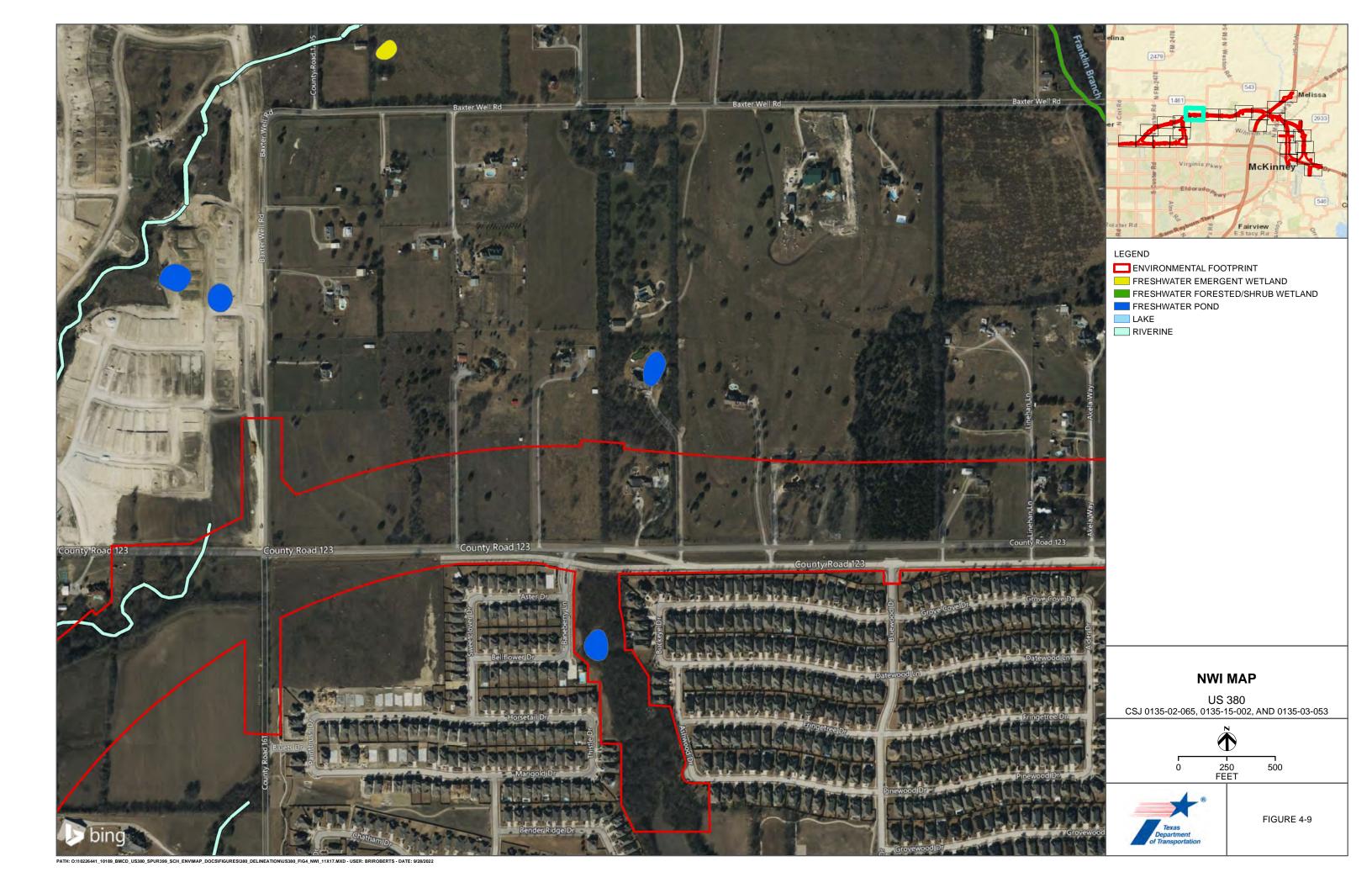


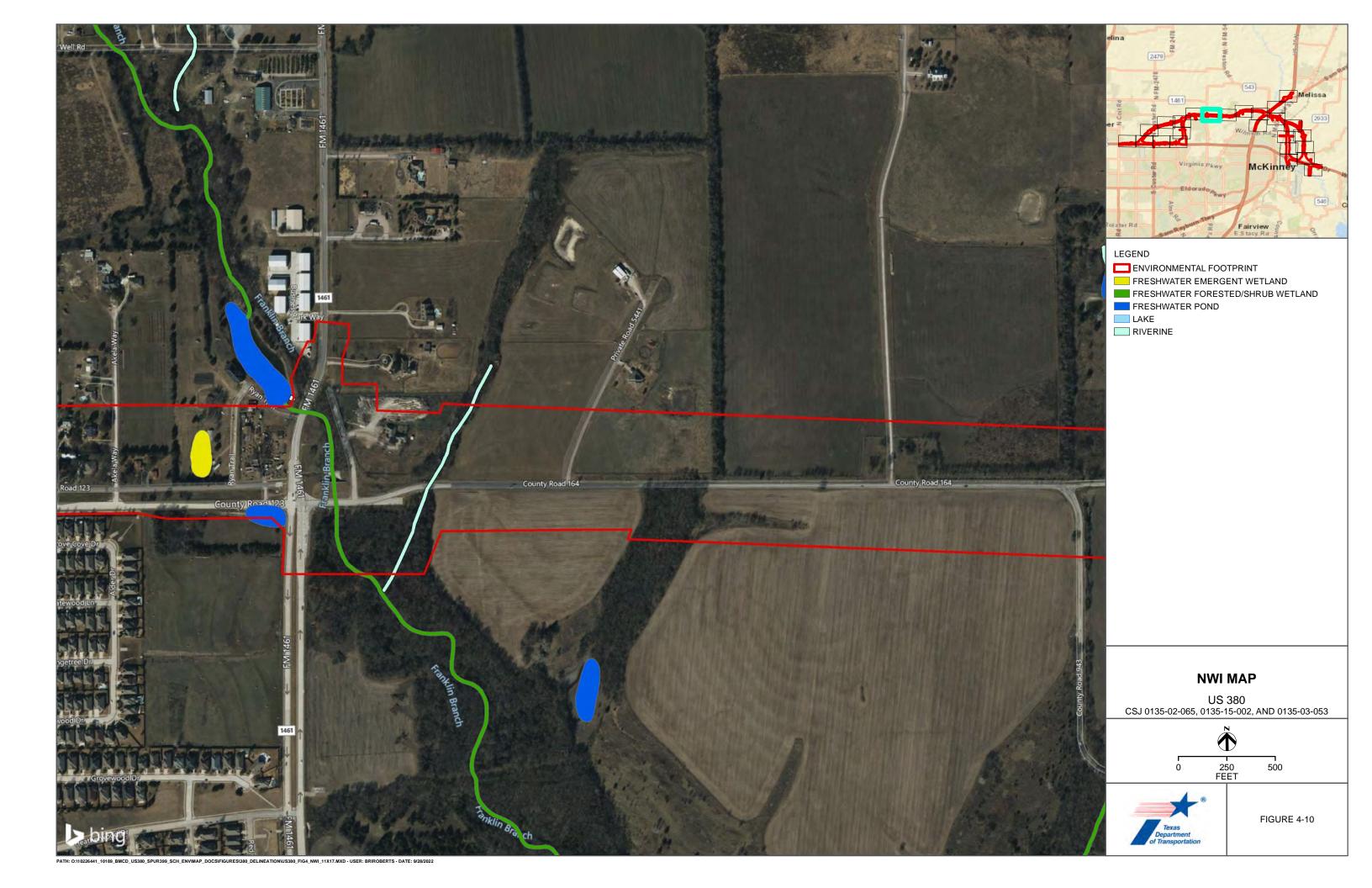


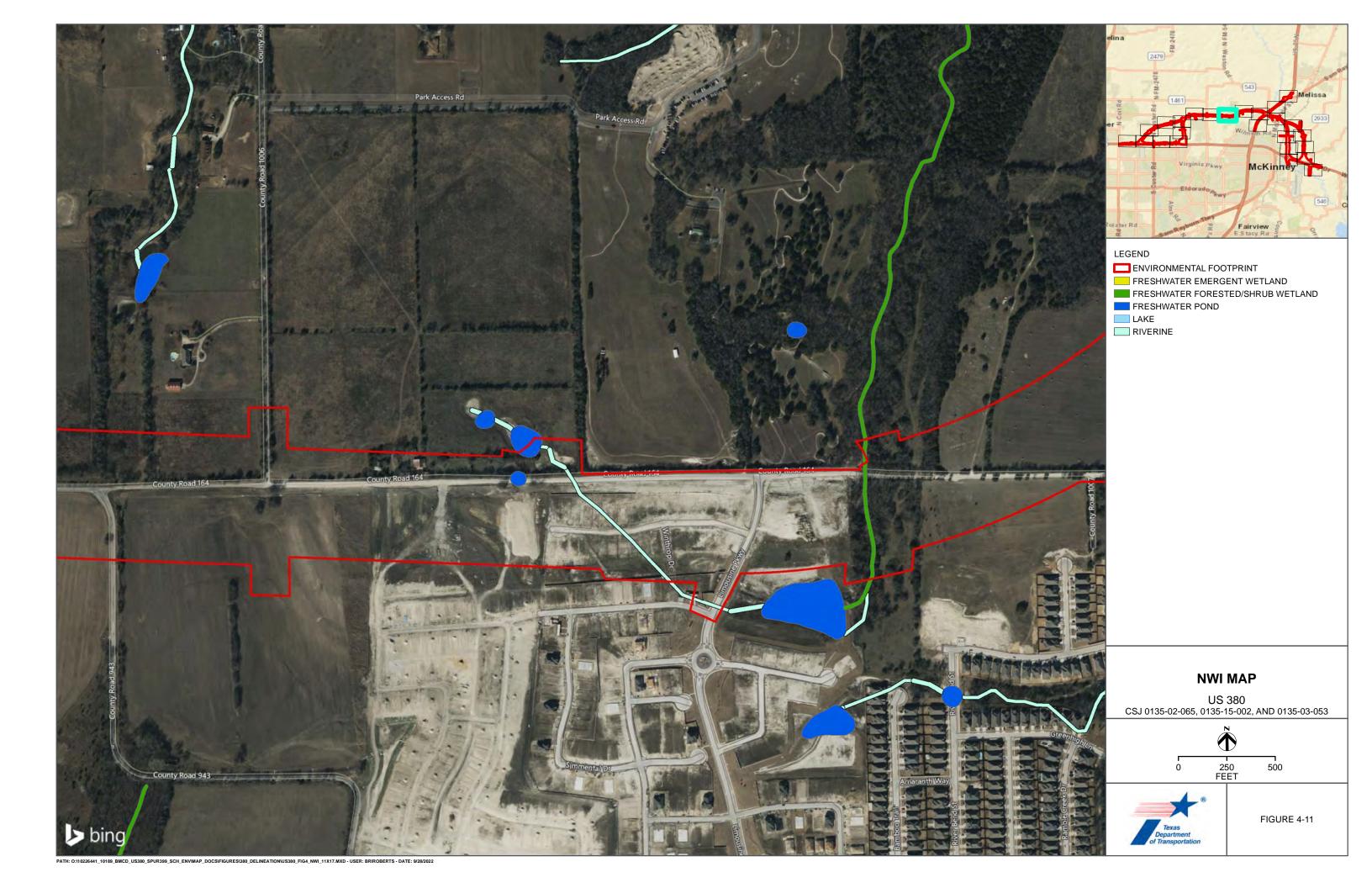


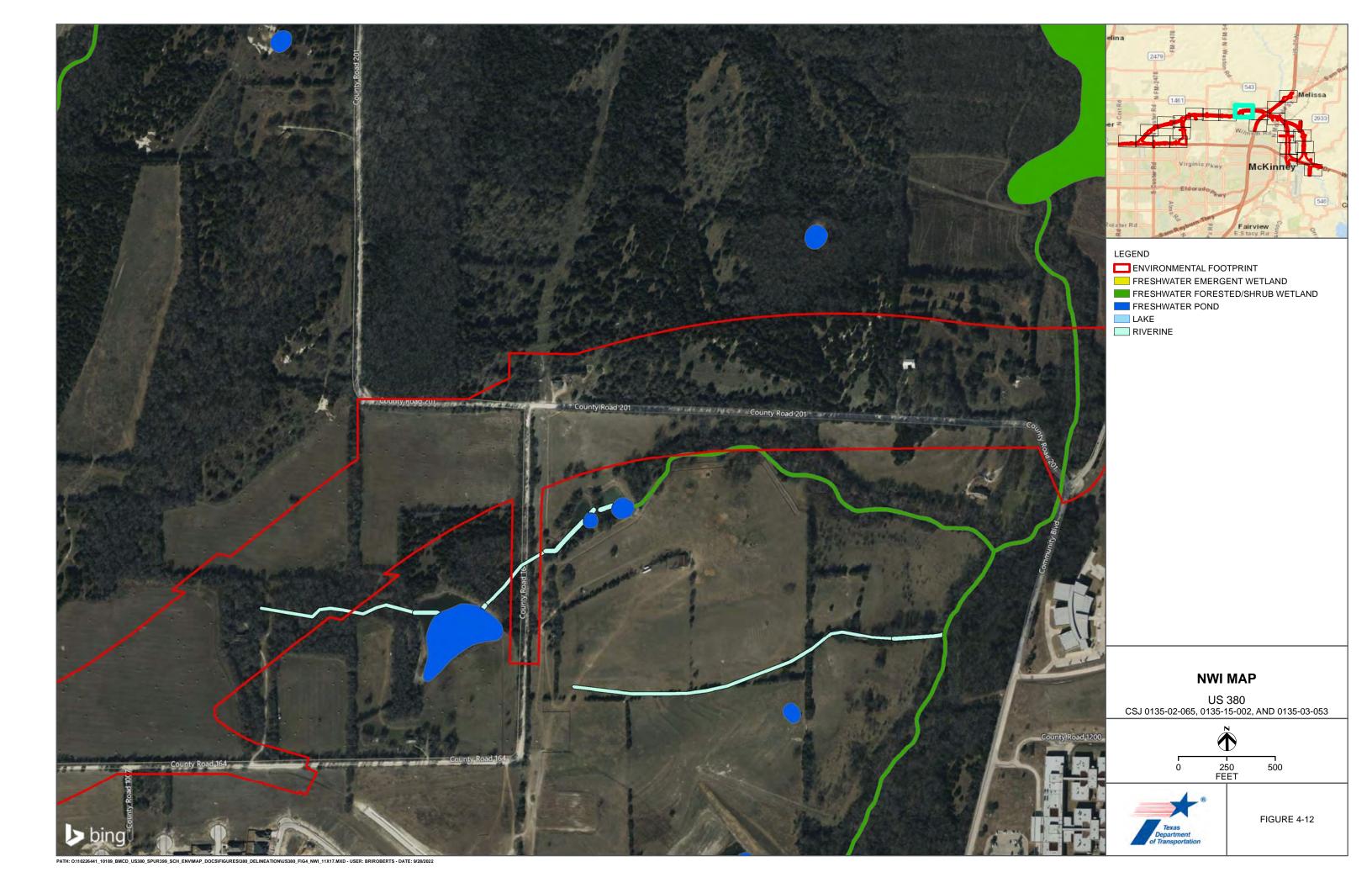


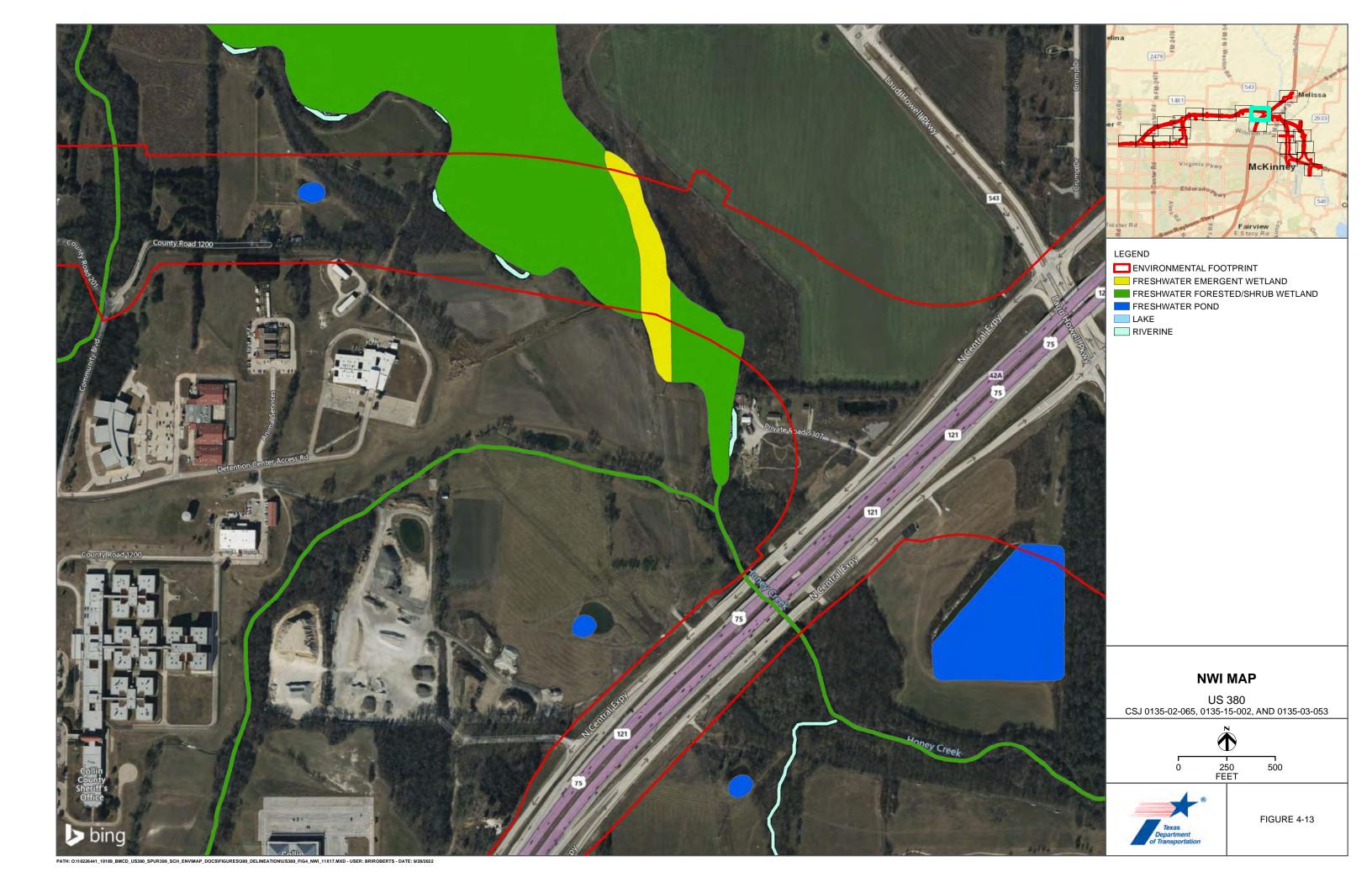


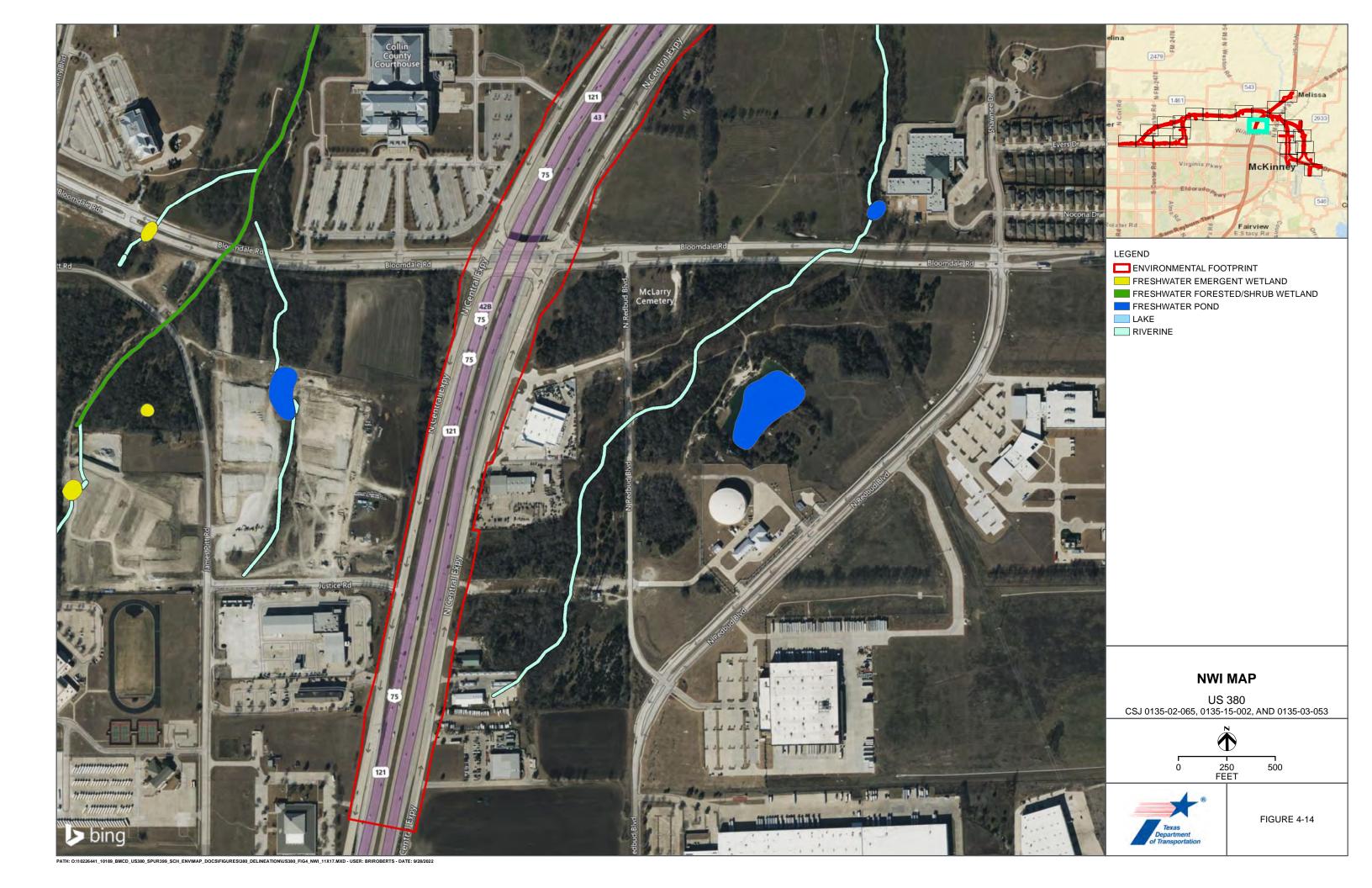


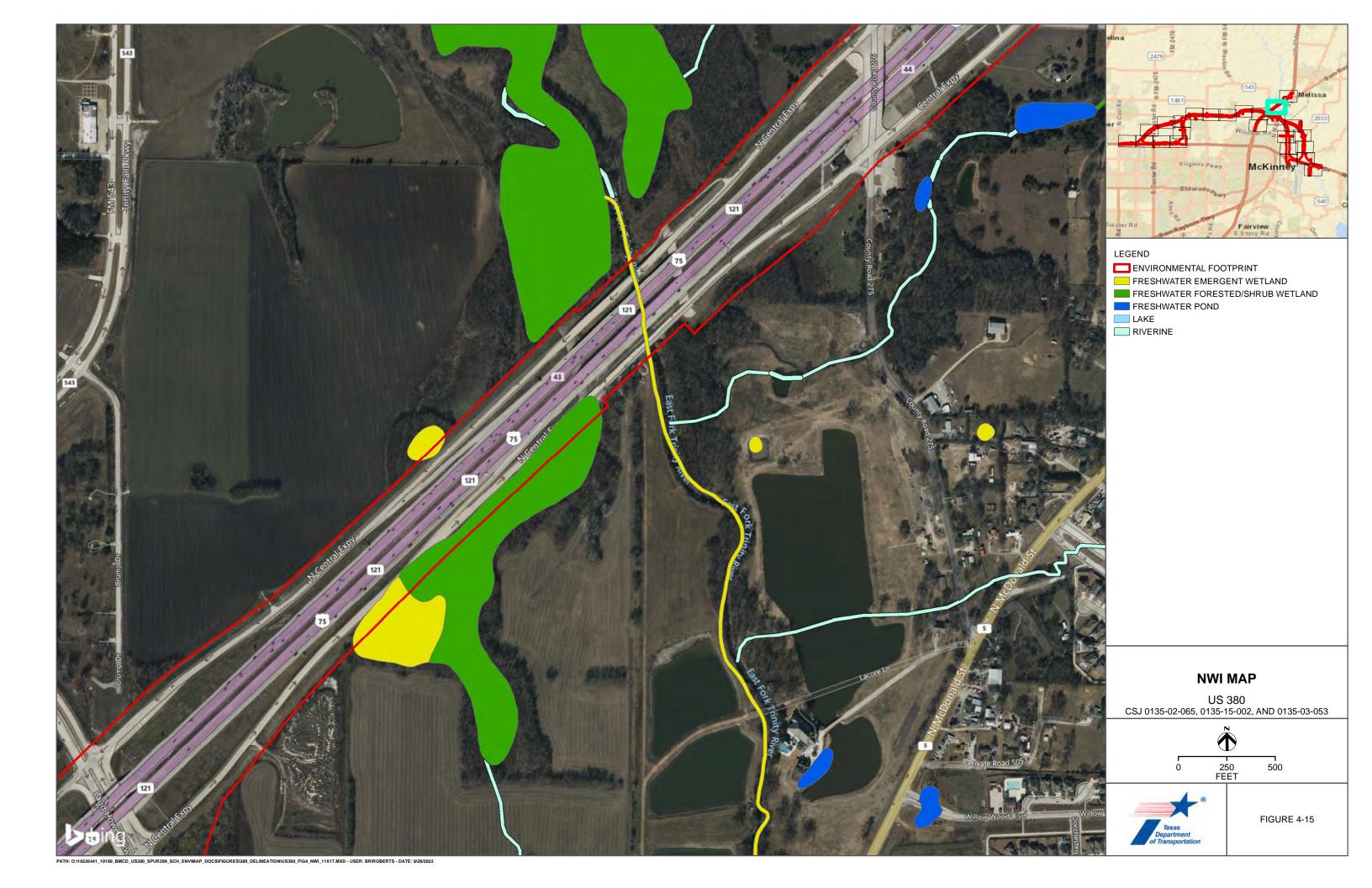


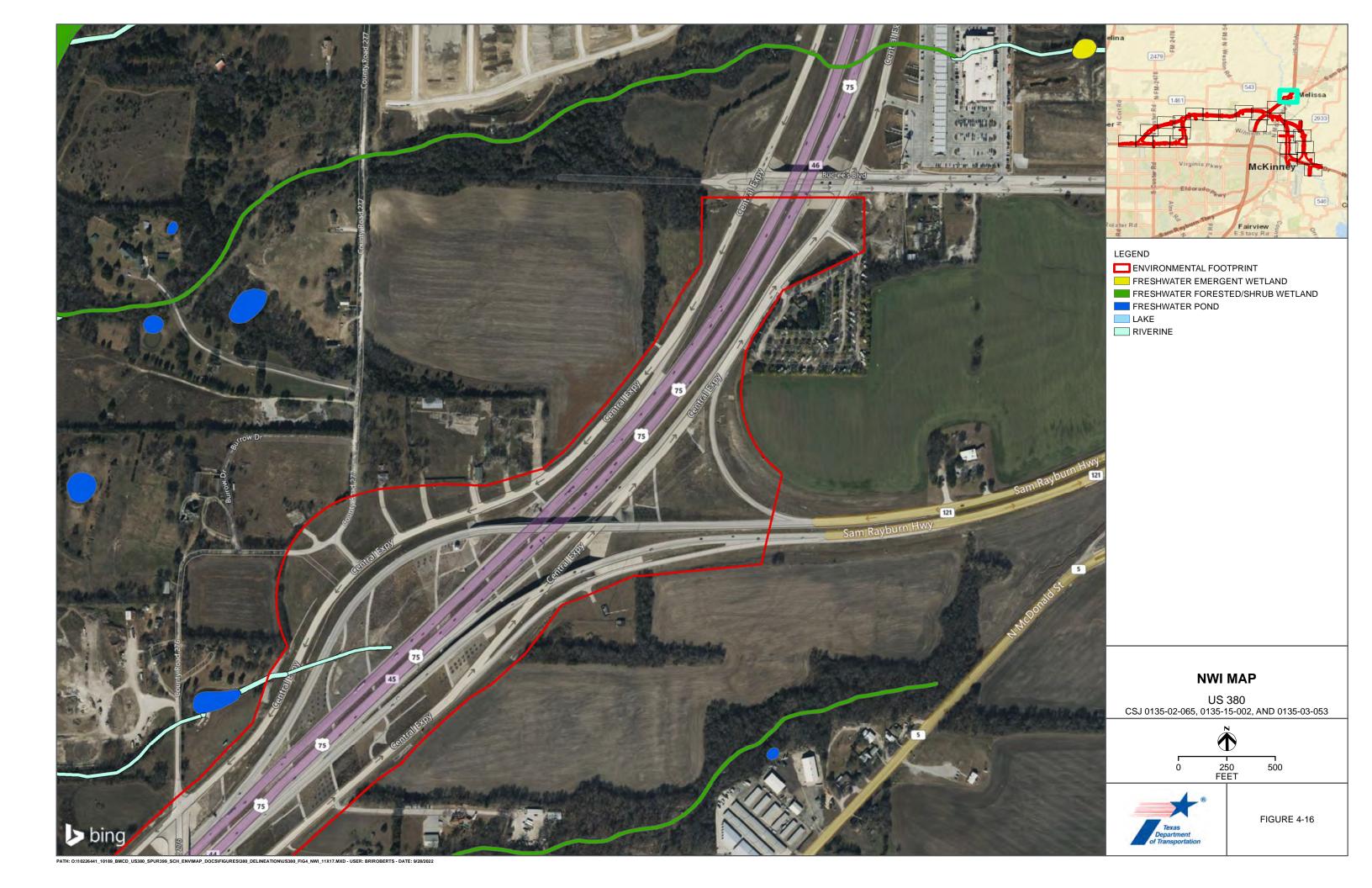


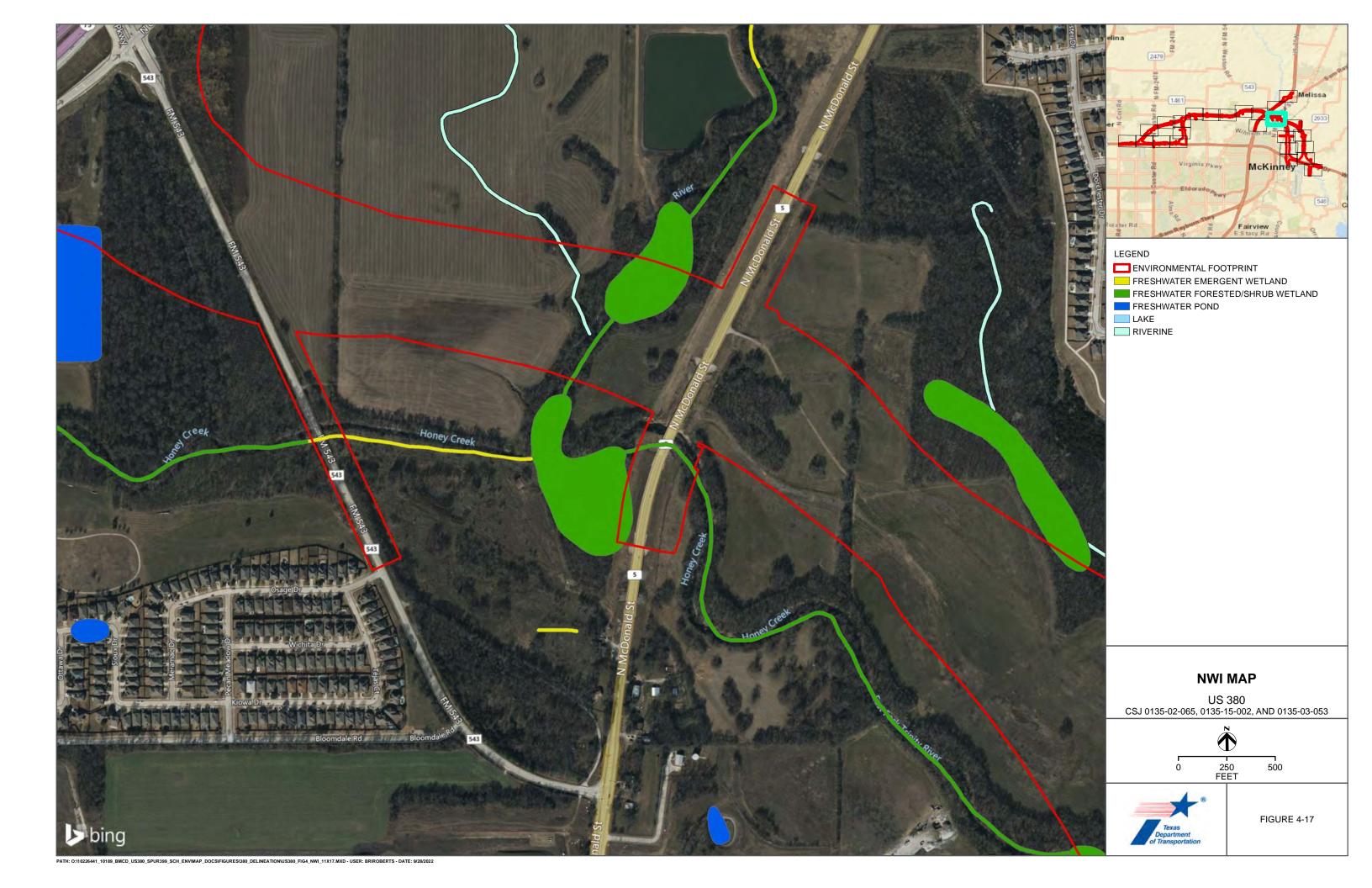


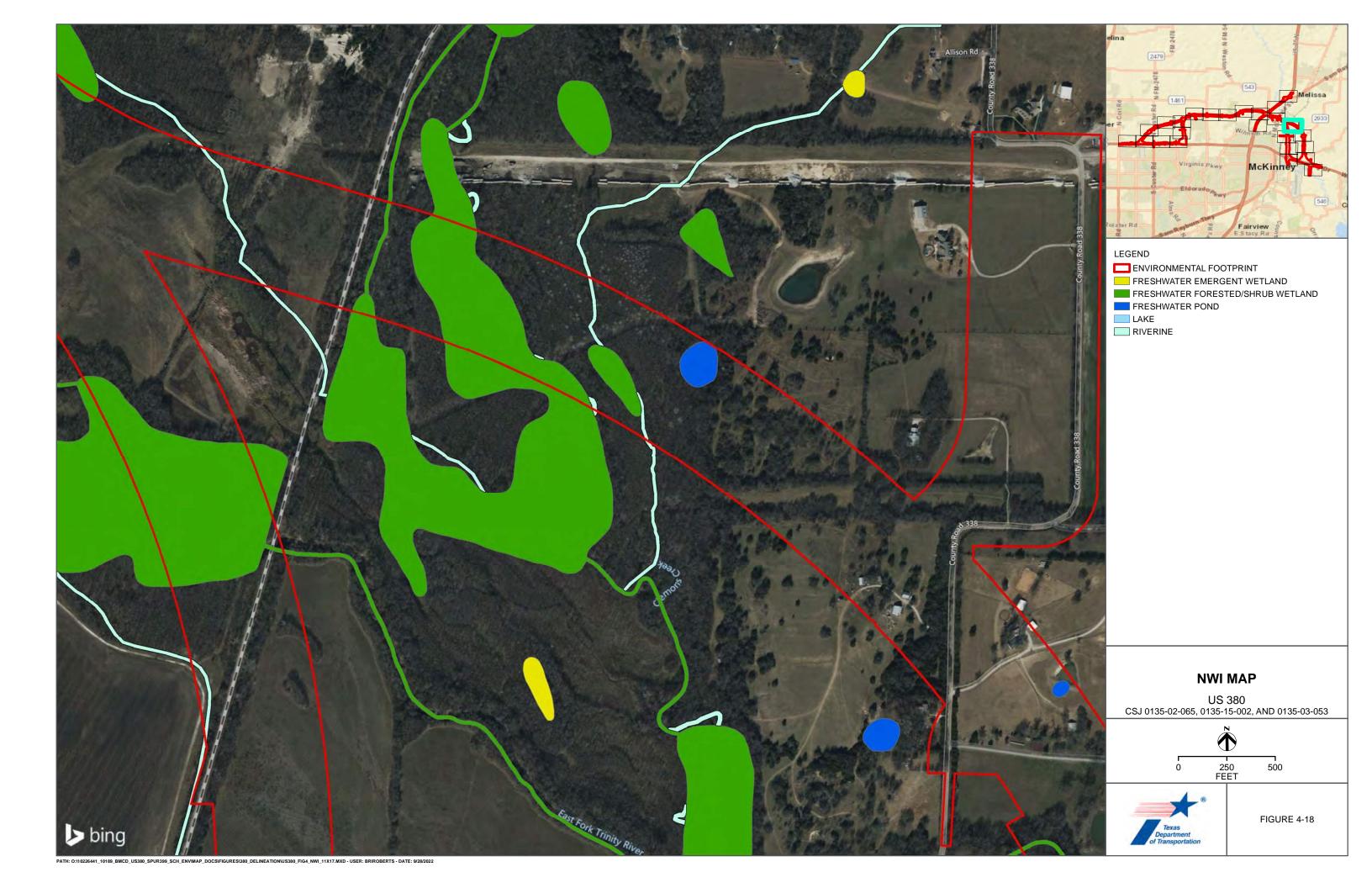


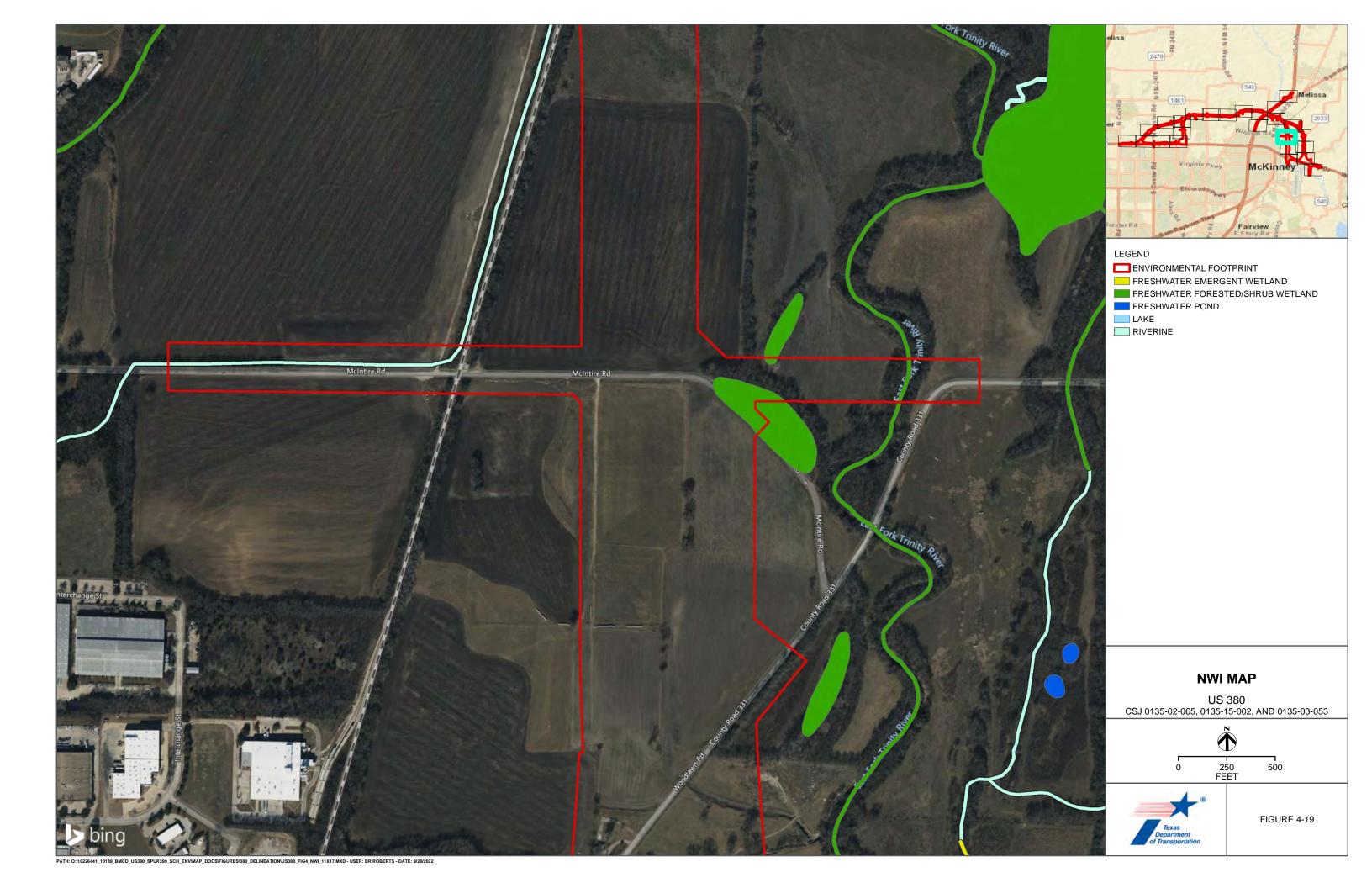


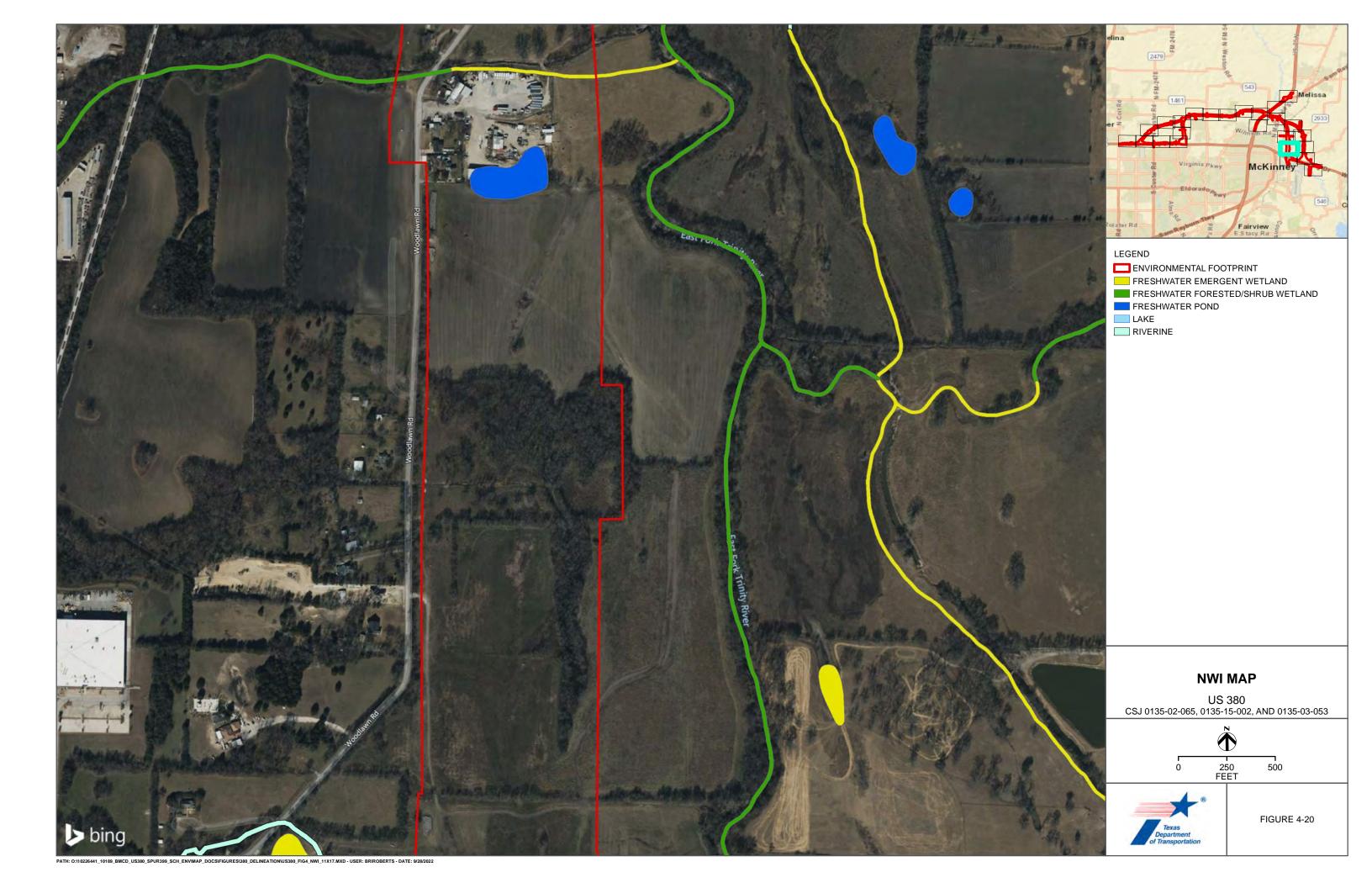


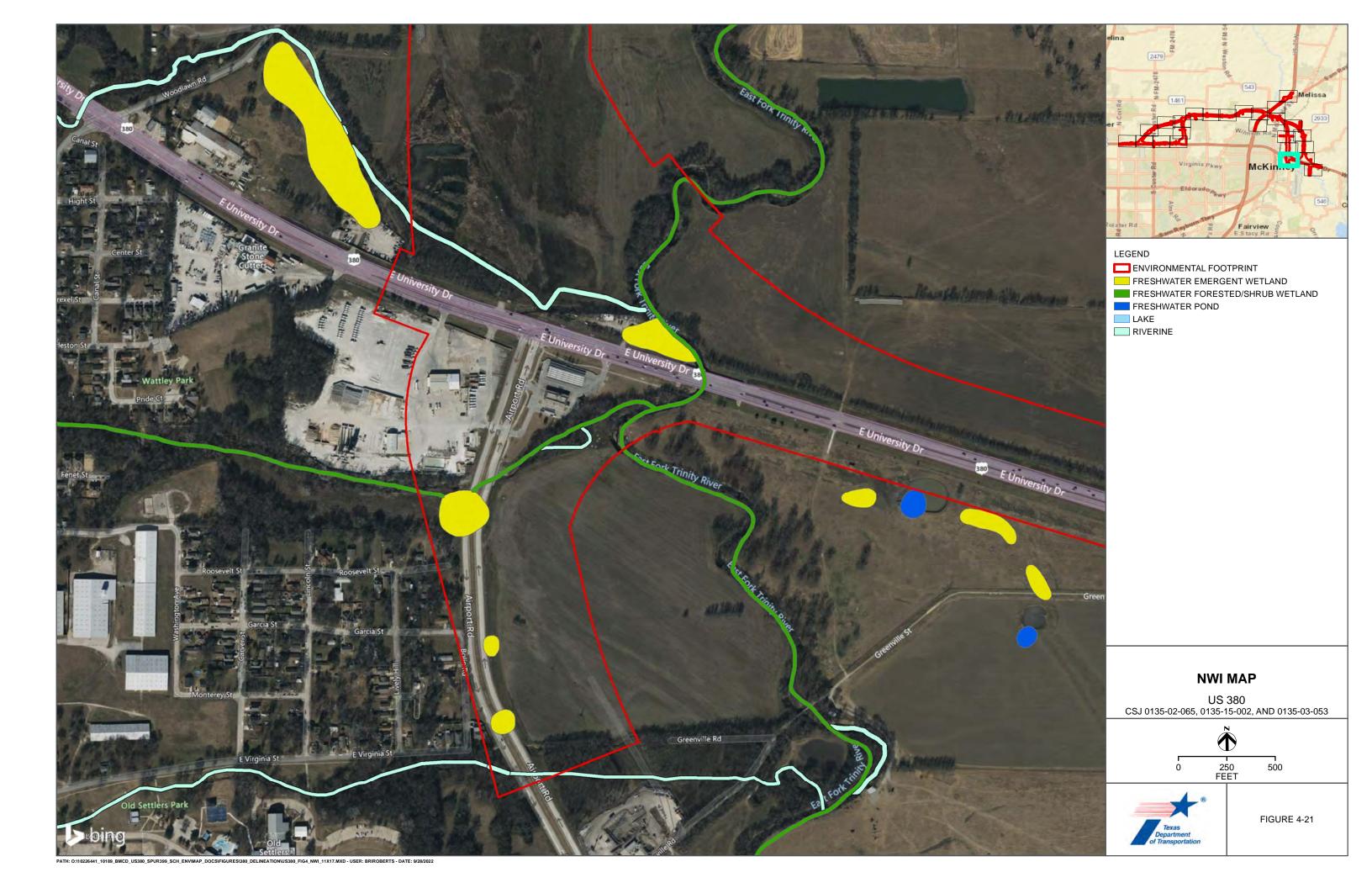


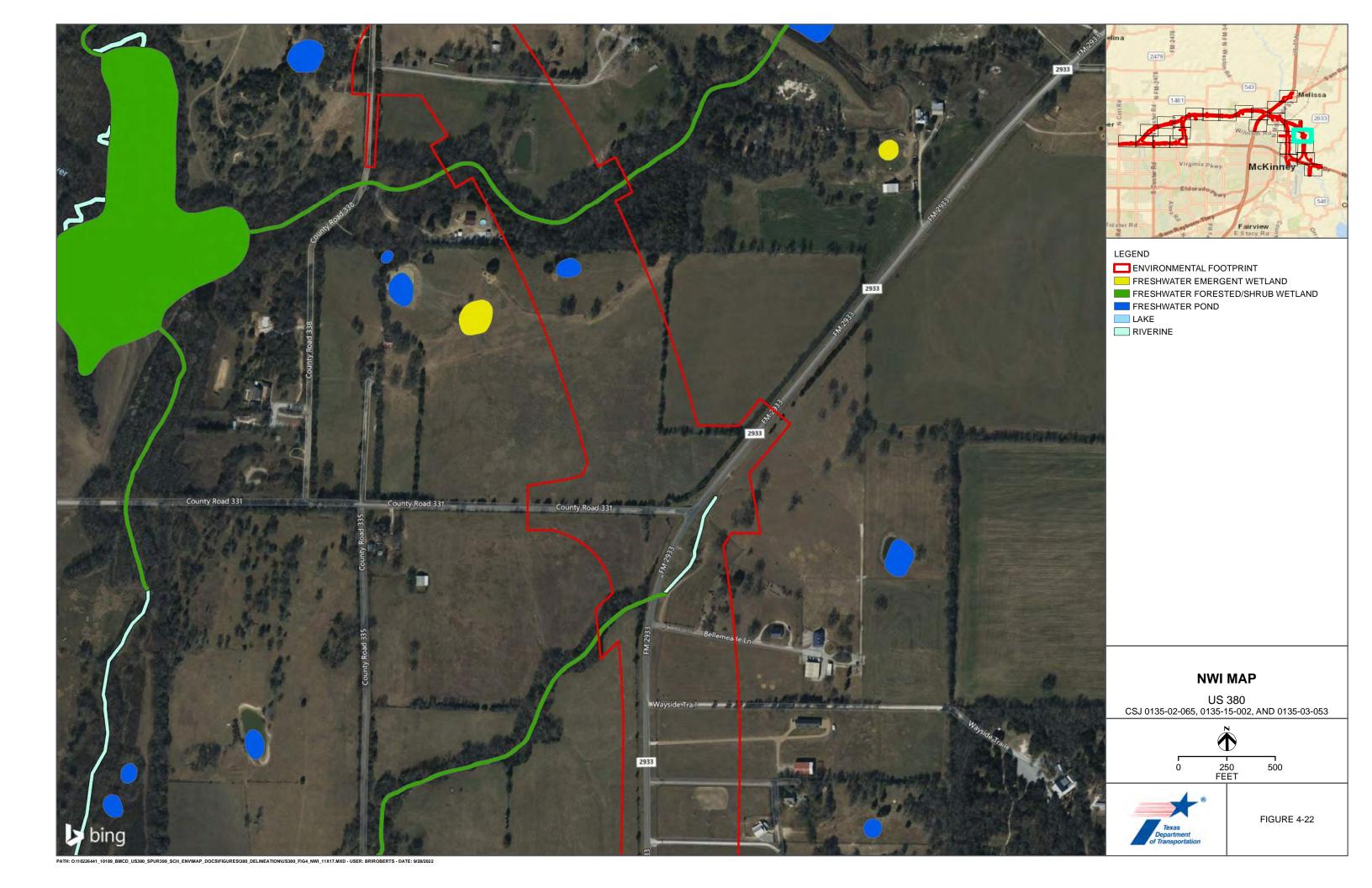




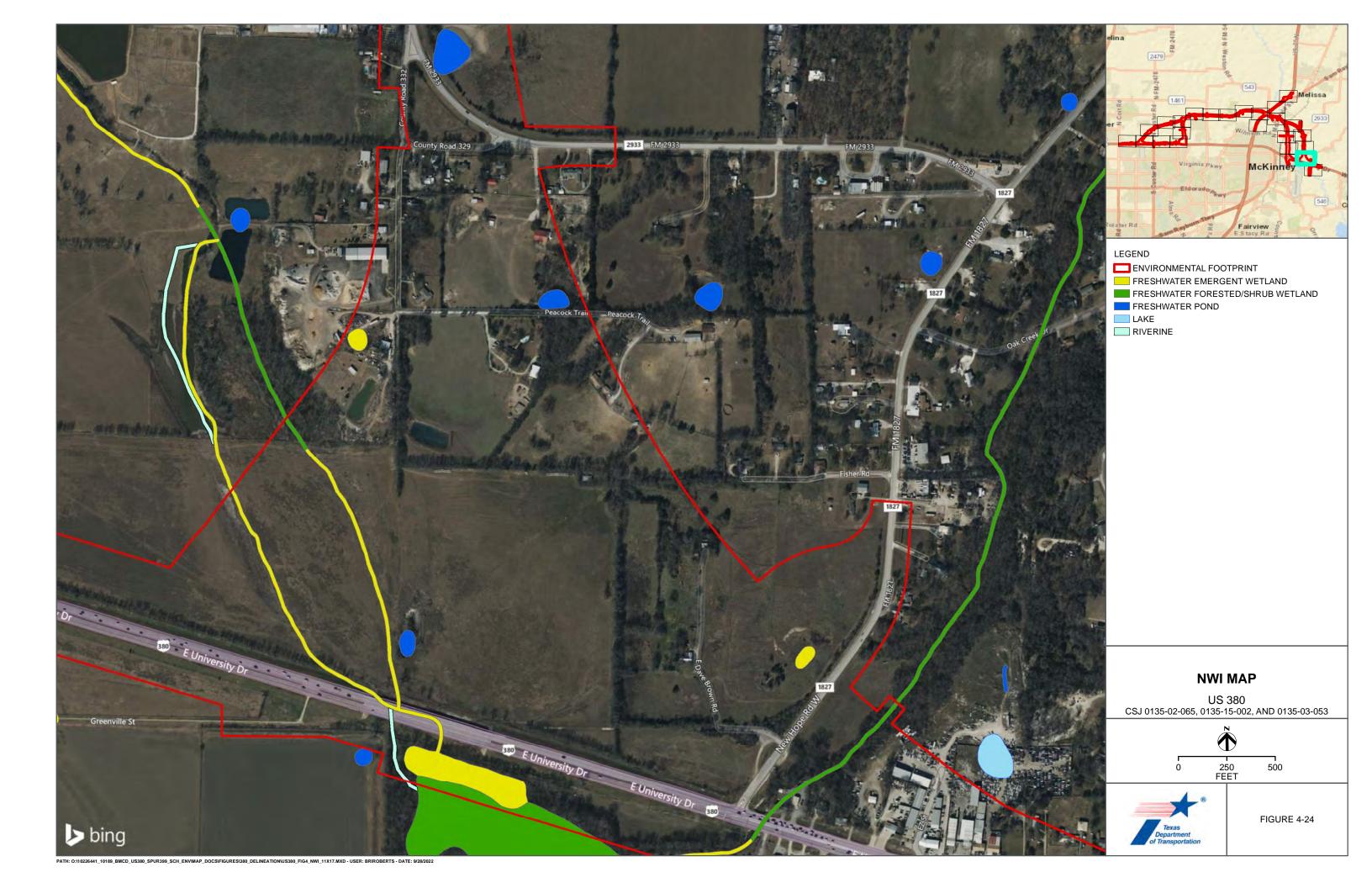






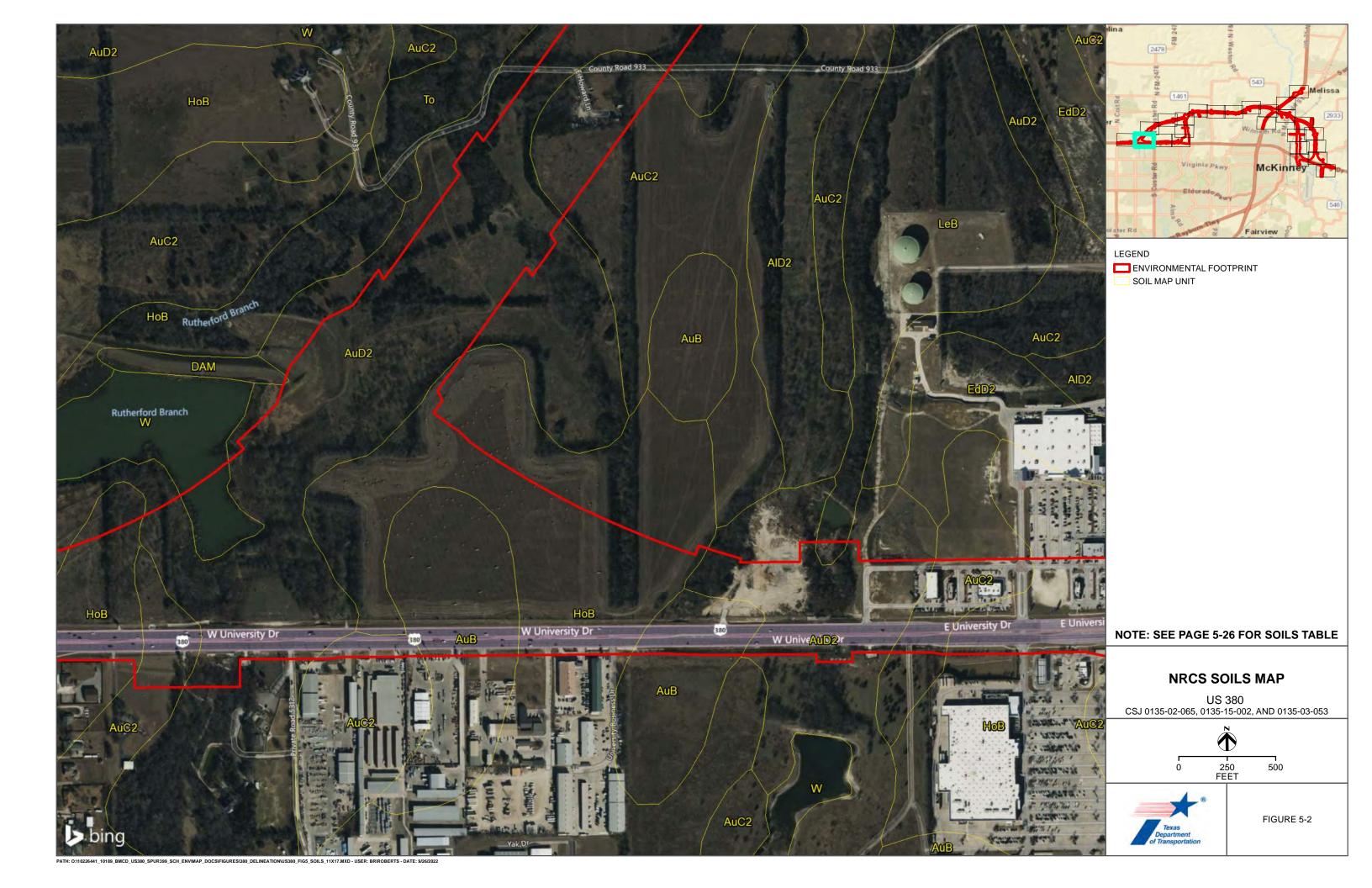


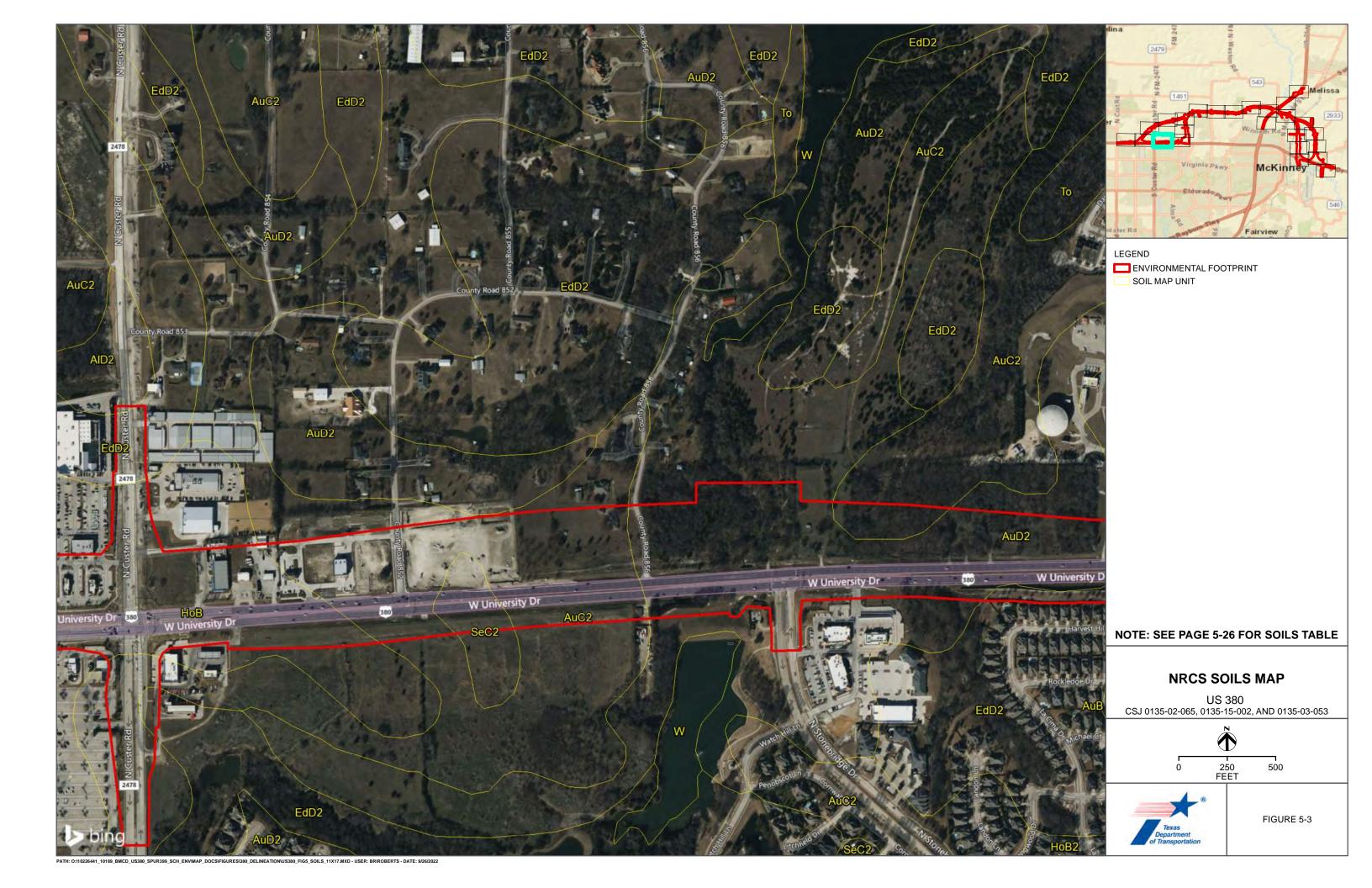










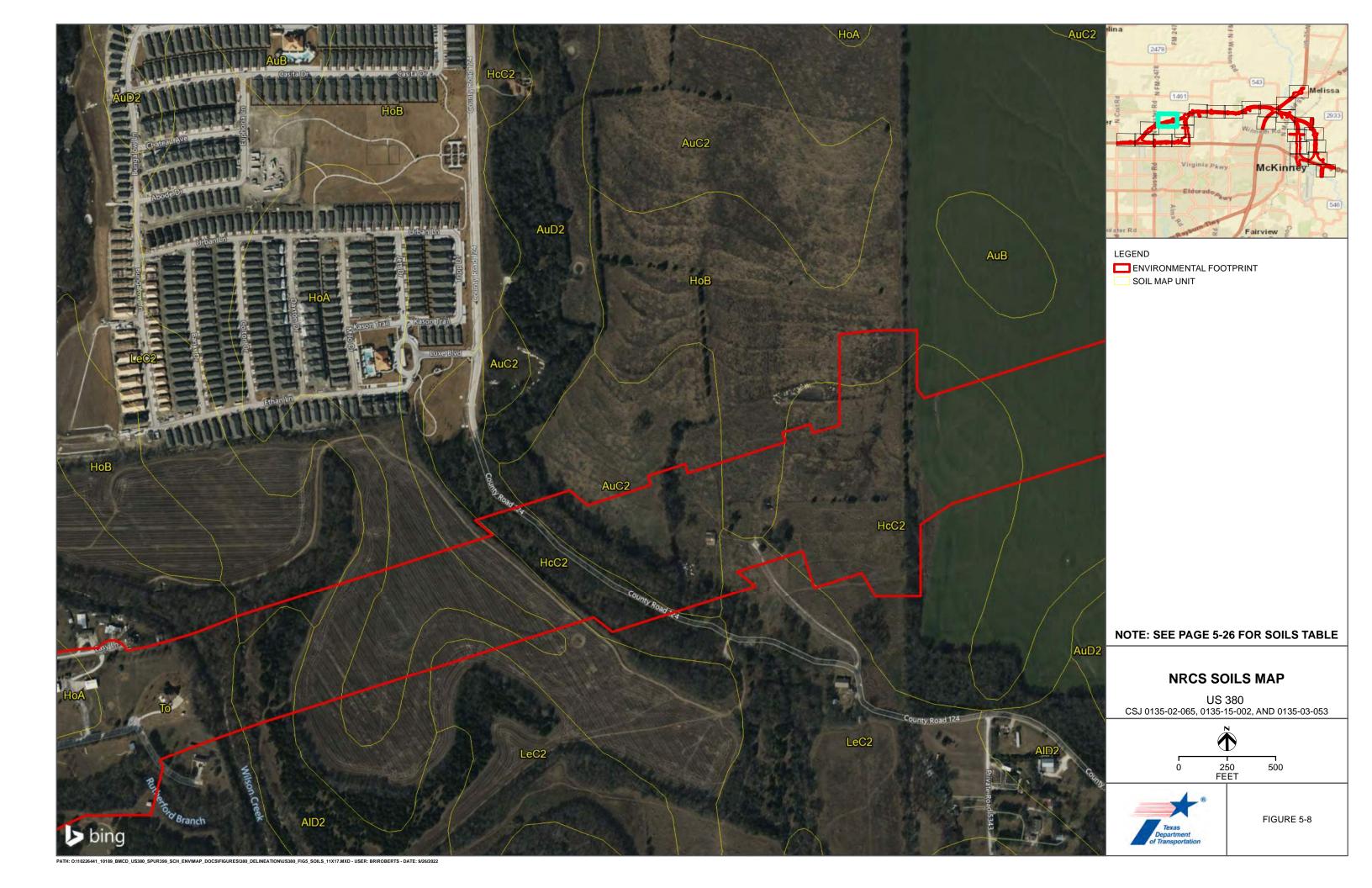


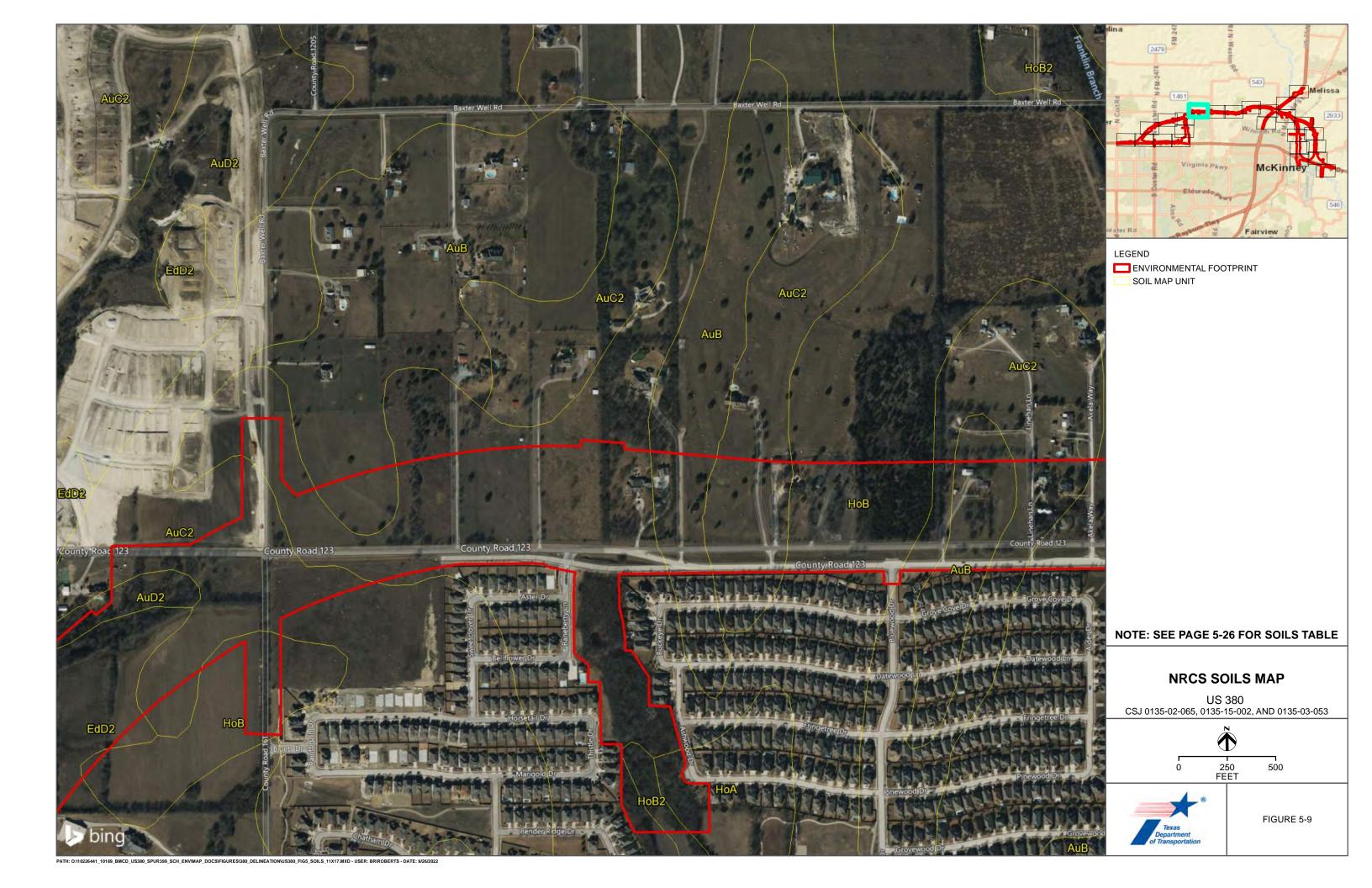






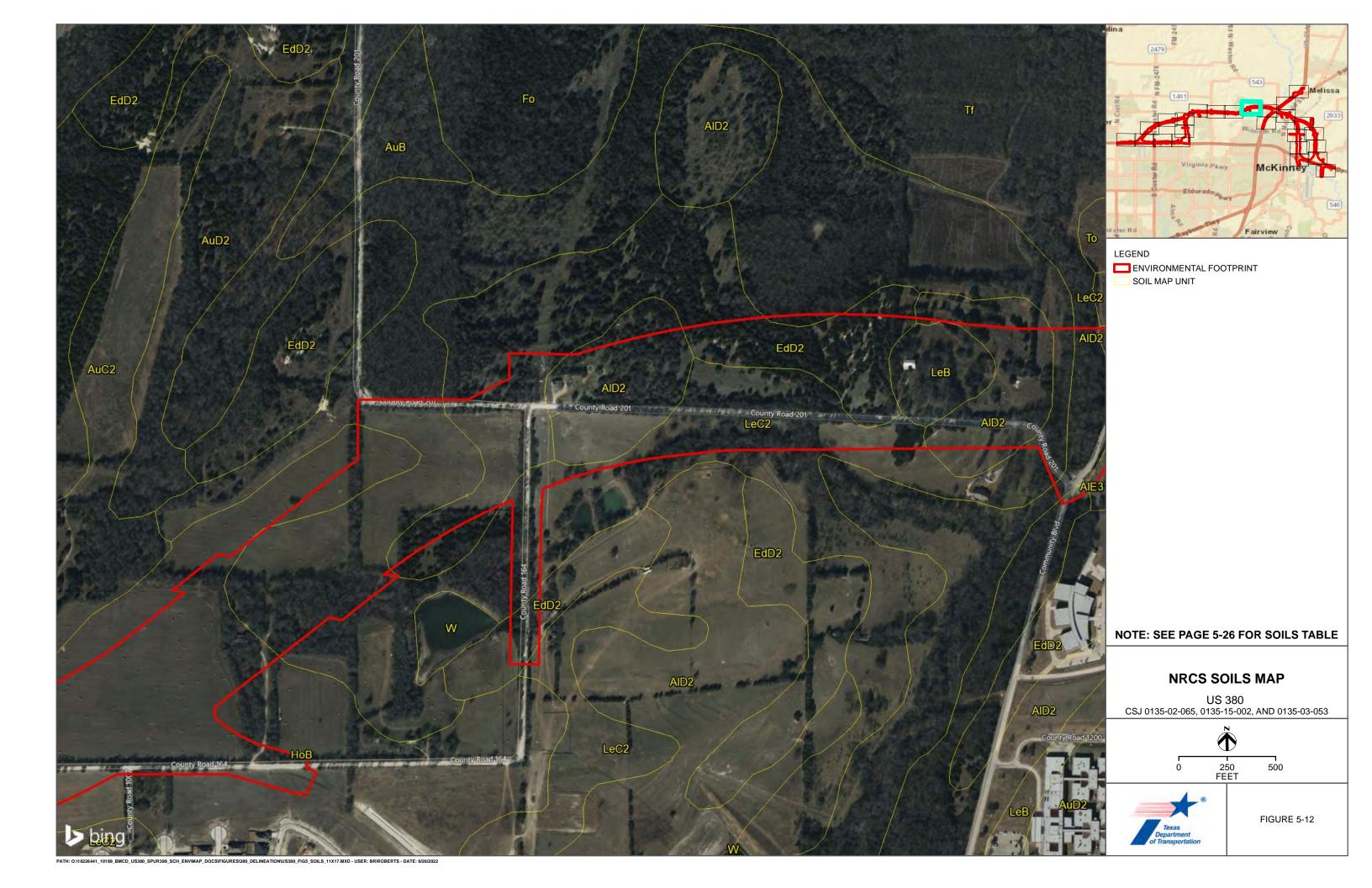














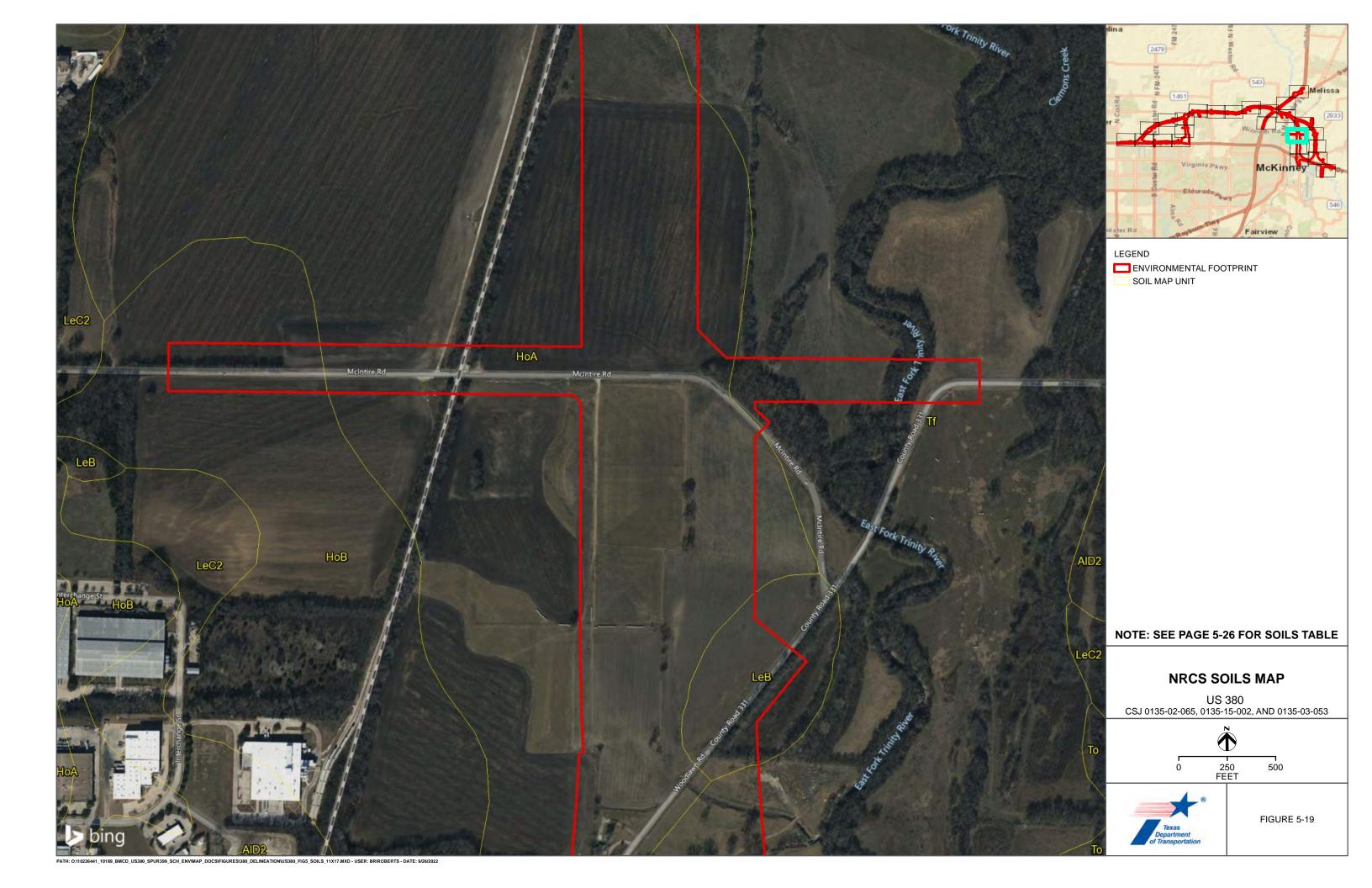
























Map Unit	Soil Description	Percent of Study Area
Tf	Tinn clay, 0 to 1 percent slopes, frequently flooded	21.91%
HoB	Houston Black clay, 1 to 3 percent slopes	17.45%
AID2	Altoga silty clay, 5 to 8 percent slopes, eroded	10.59%
То	Trinity clay, 0 to 1 percent slopes, occasionally flooded	10.09%
AuD2	Austin silty clay, 5 to 8 percent slopes, moderately eroded	7.88%
AuC2	Austin silty clay, 2 to 5 percent slopes, eroded	7.78%
LeC2	Lewisville silty clay, 3 to 5 percent slopes, eroded	5.97%
HoA	Houston Black clay, 0 to 1 percent slopes	5.05%
EdD2	Eddy gravelly clay loam, 3 to 8 percent slopes, eroded	3.21%
AuB	Austin silty clay, 1 to 3 percent slopes	2.54%
BcB	Burleson clay, 1 to 3 percent slopes	2.19%
HcC2	Heiden clay, 3 to 5 percent slopes, eroded	1.45%
HoB2	Houston Black clay, 2 to 4 percent slopes, eroded	1.30%
LeB	Lewisville silty clay, 1 to 3 percent slopes	1.26%
Fo	Frio clay loam, occasionally flooded	0.49%
BcA	Burleson clay, 0 to 1 percent slopes	0.32%
SeC2	Stephen-Eddy complex, 2 to 5 percent slopes	0.24%
W	Water	0.10%
AlE3	Altoga silty clay, 8 to 12 percent slopes, severely ero ded	0.09%
GP	Gravel pits and quarries	0.09%



NRCS SOILS MAP

US 380 CSJ 0135-02-065, 0135-15-002, AND 0135-03-053

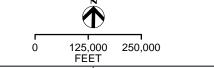
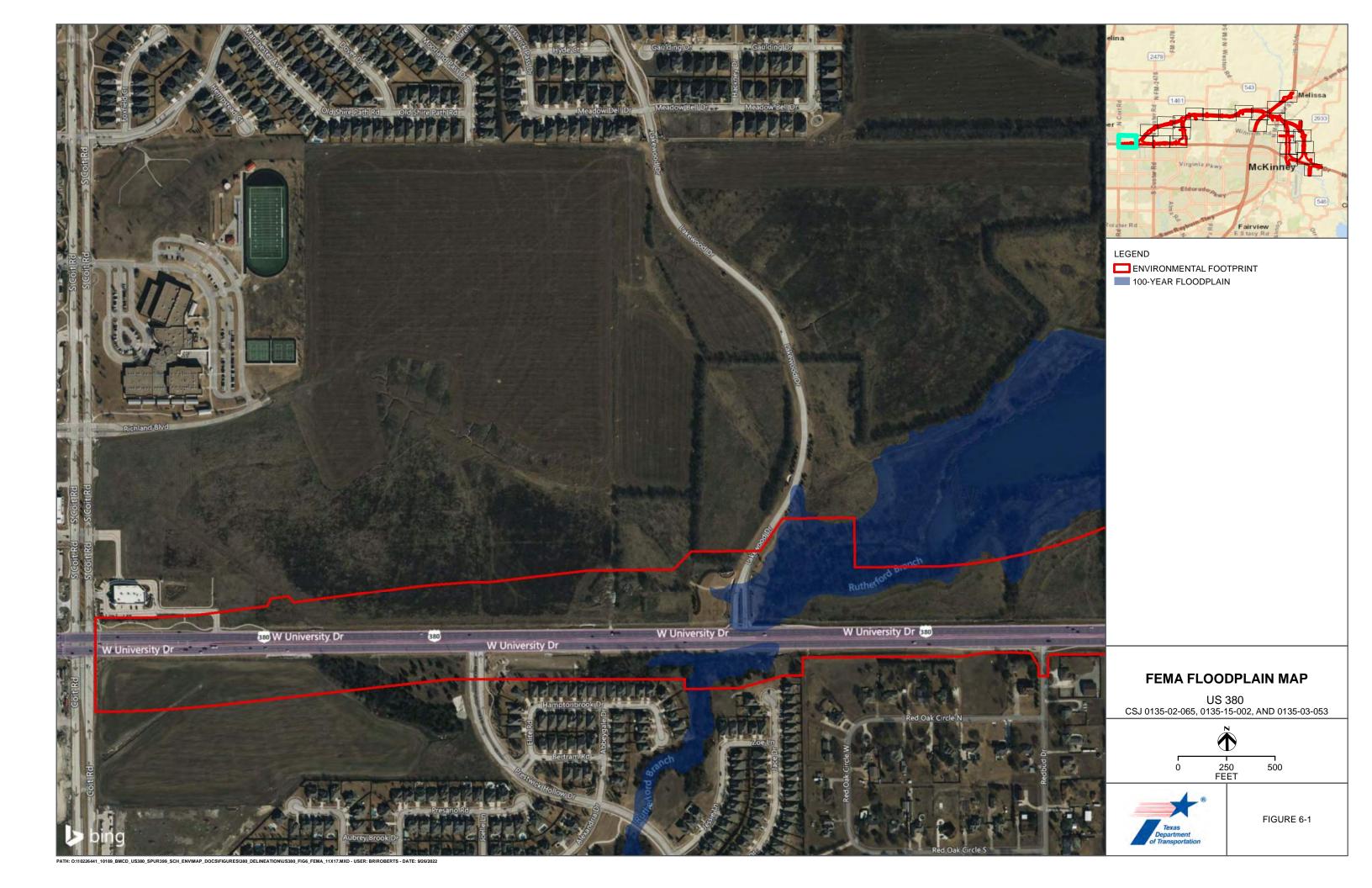
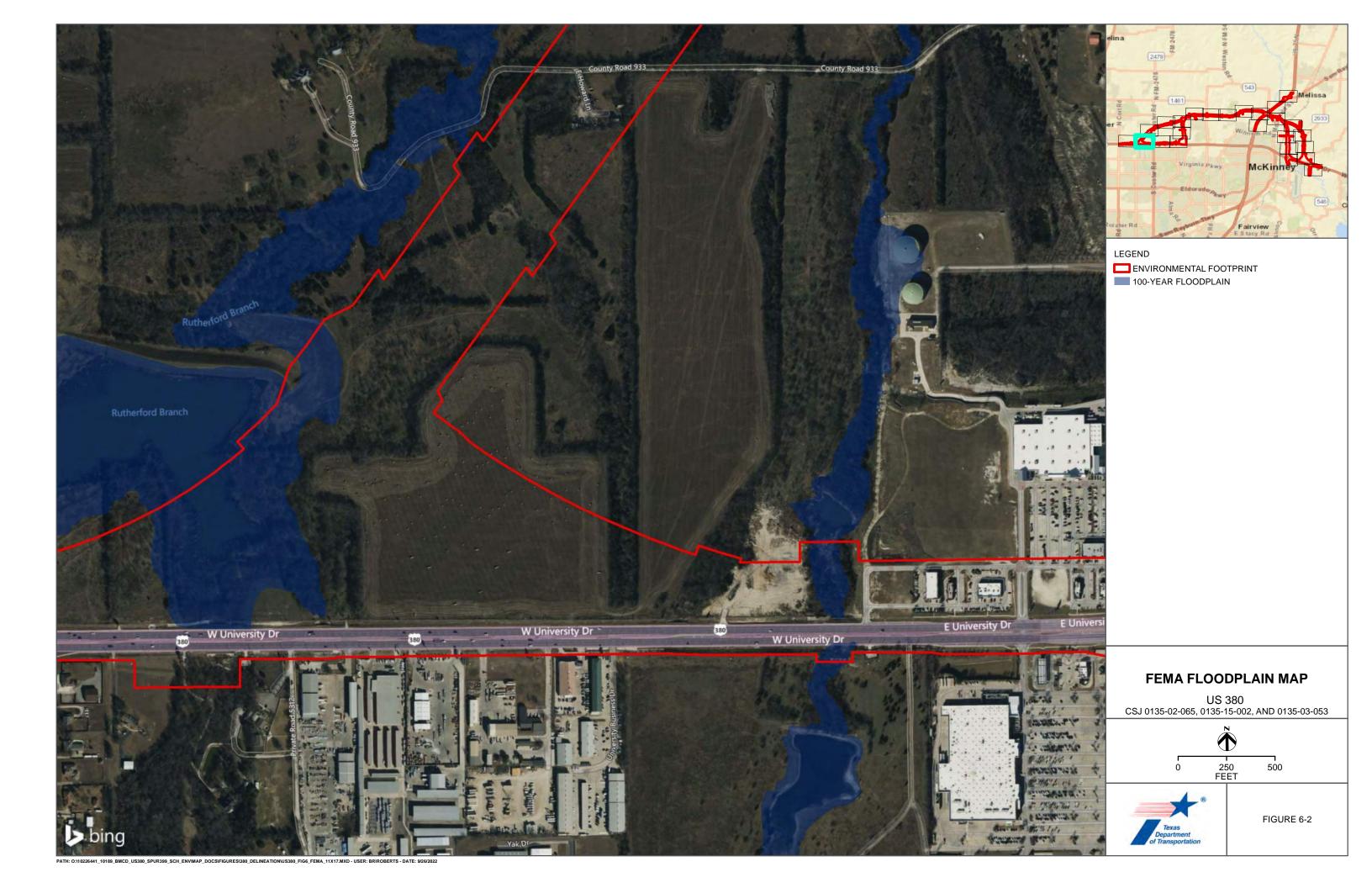


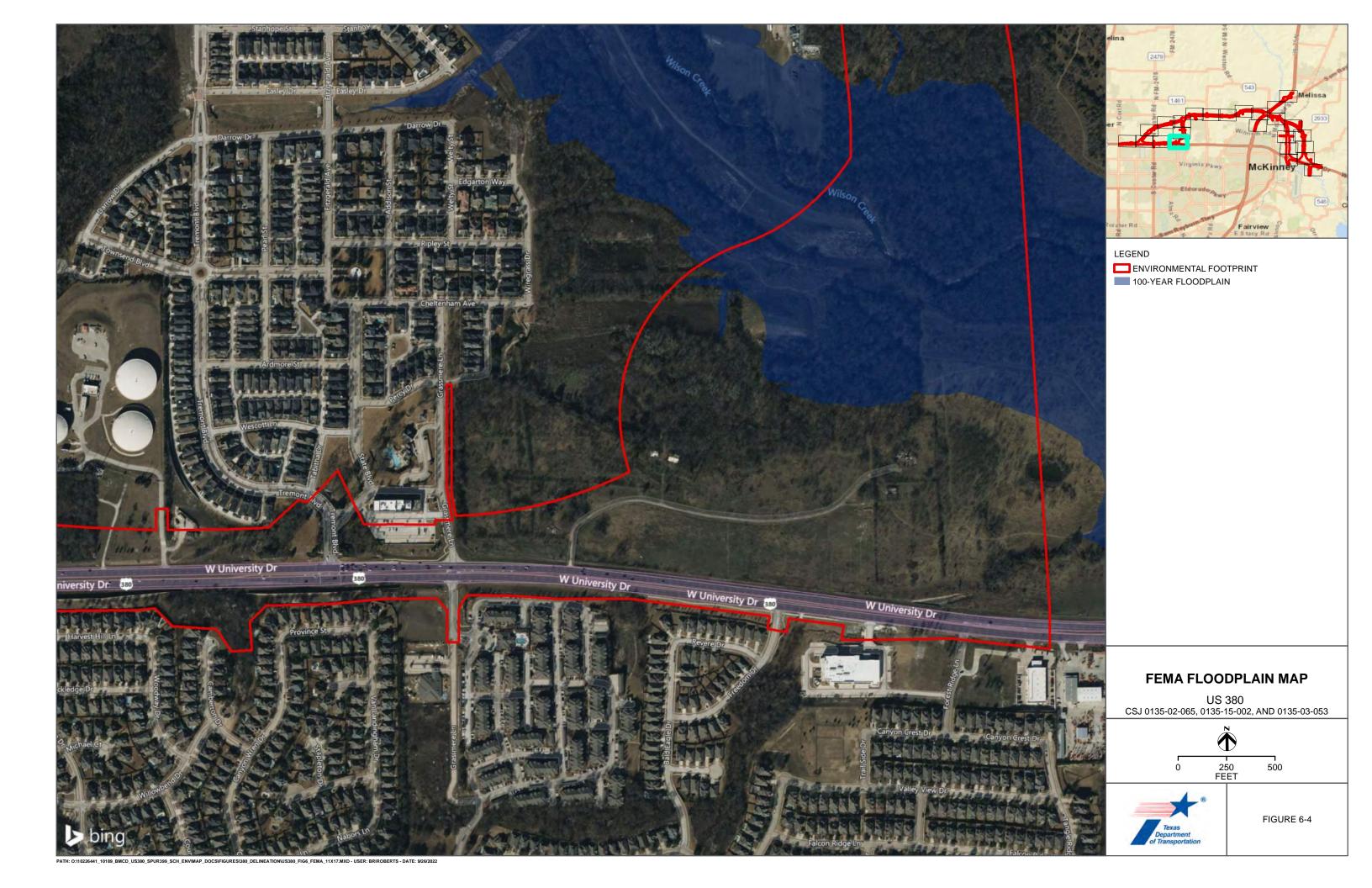


FIGURE 5-26





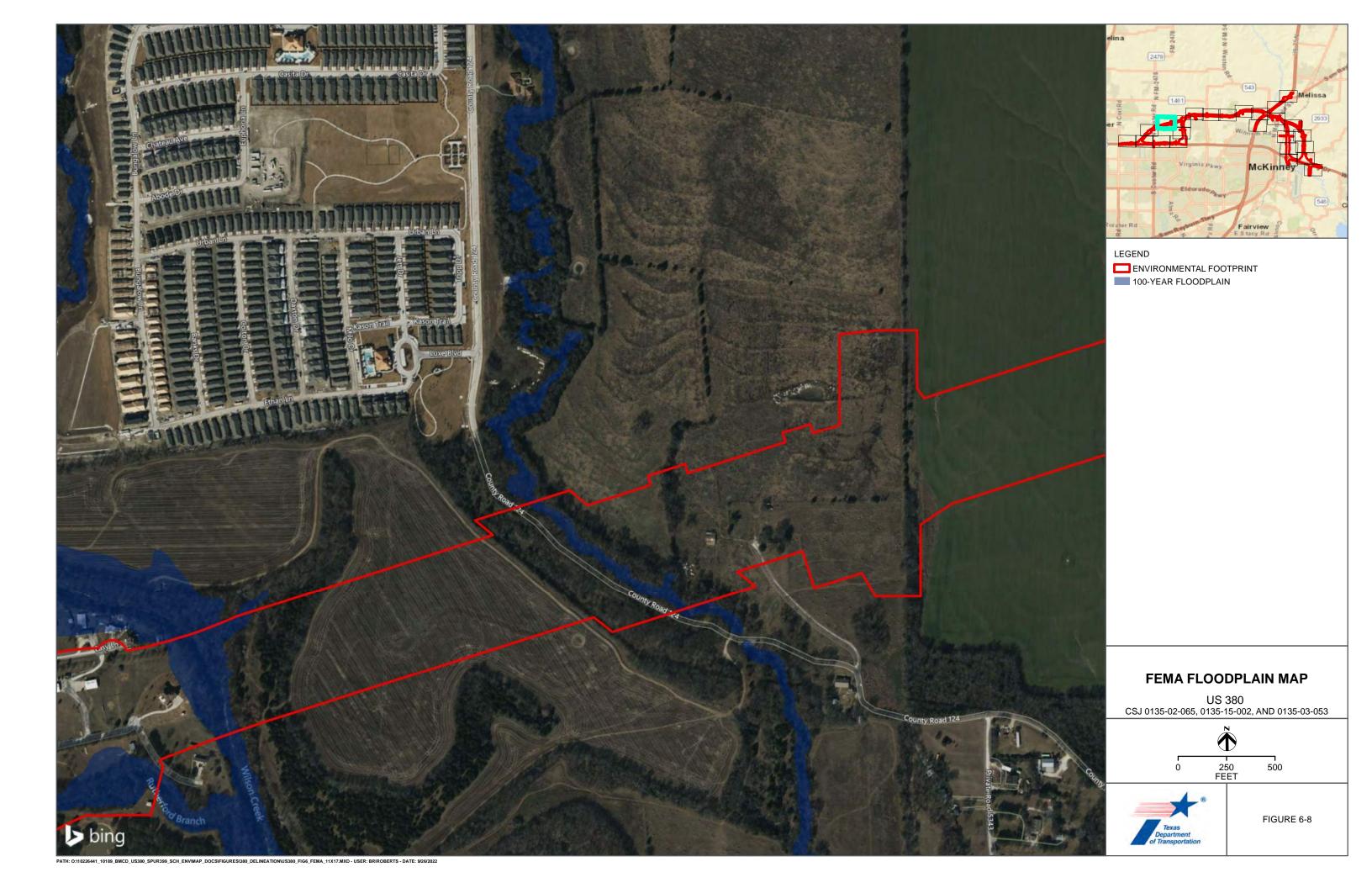










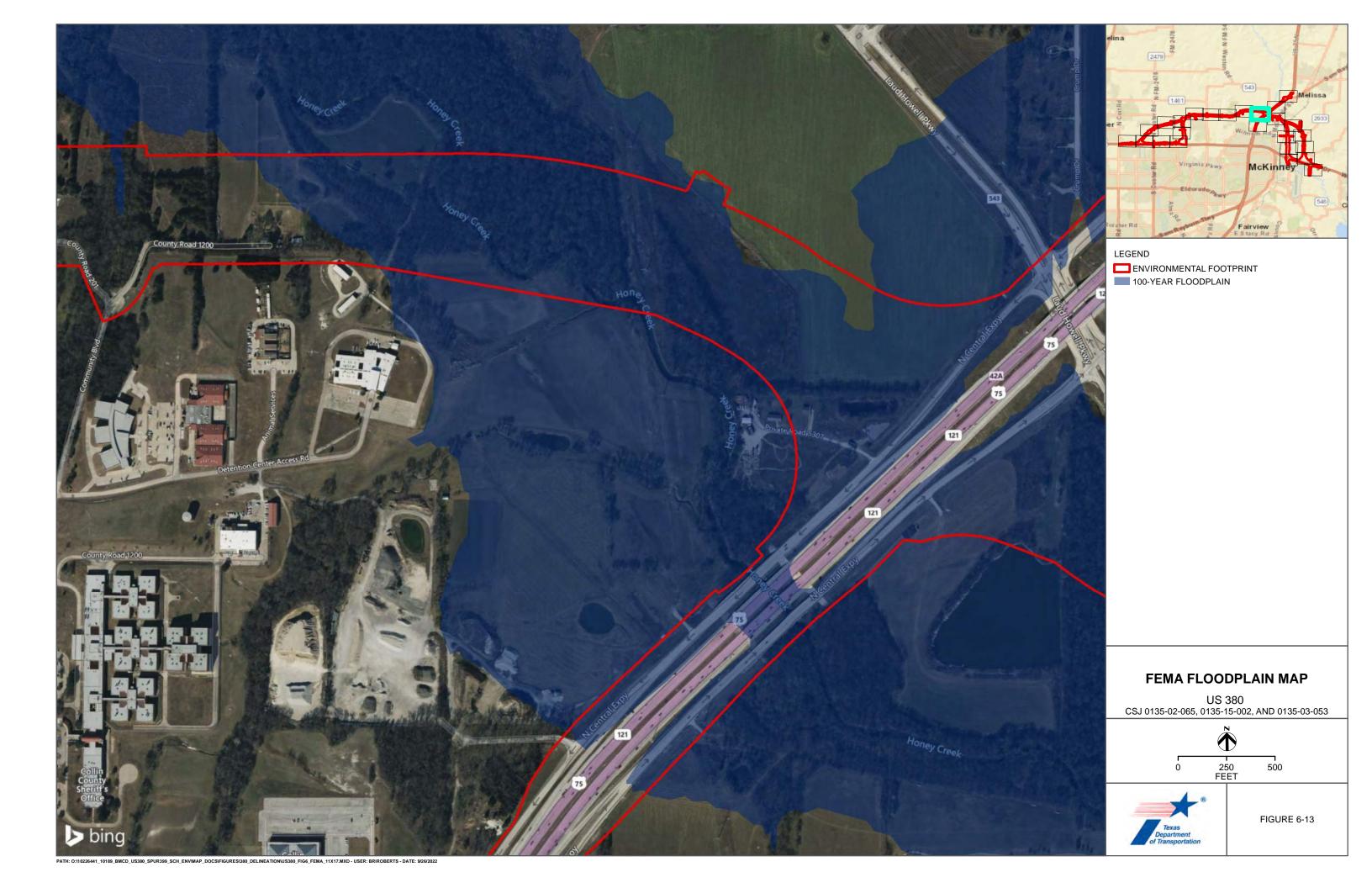




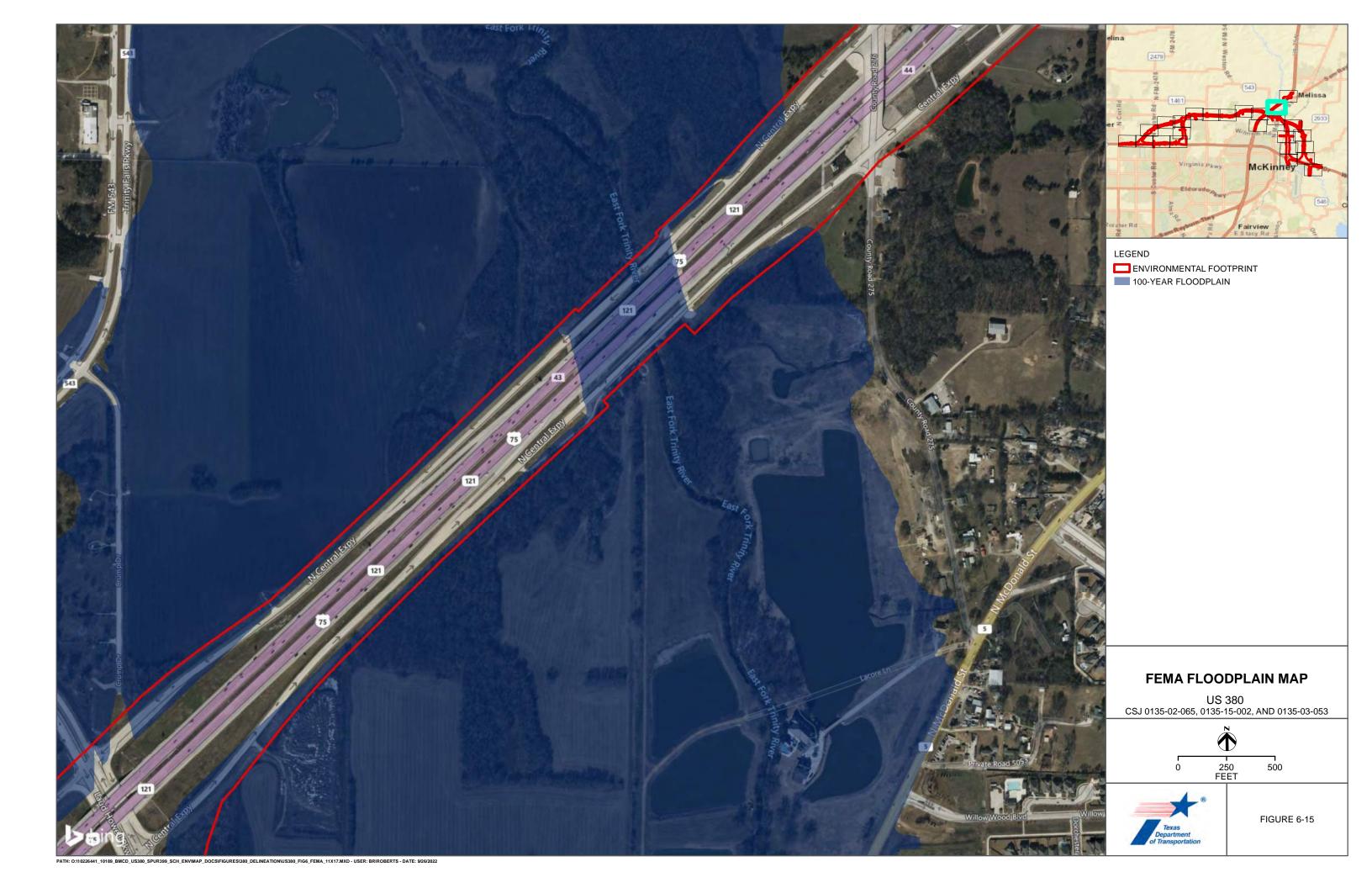




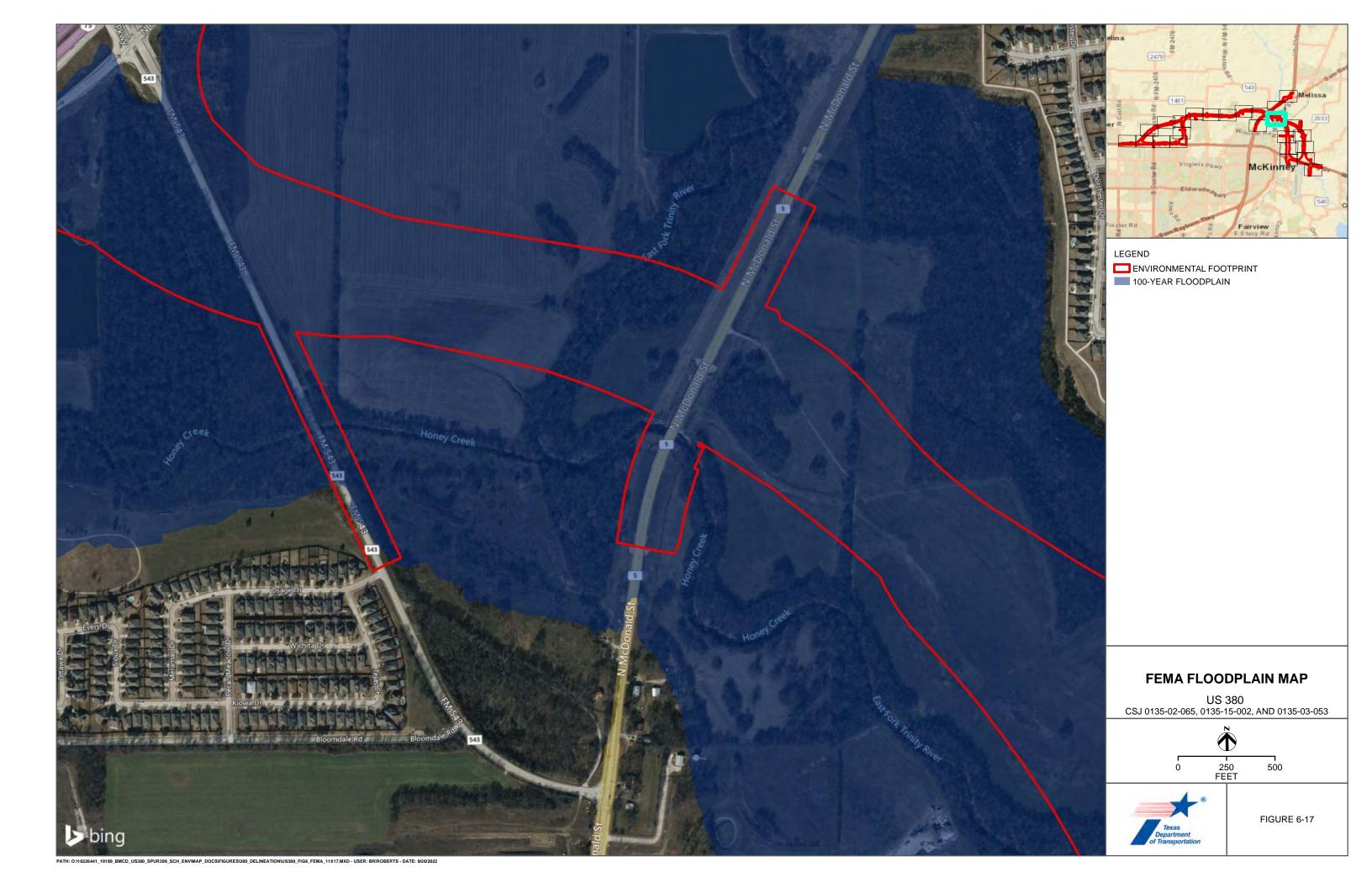


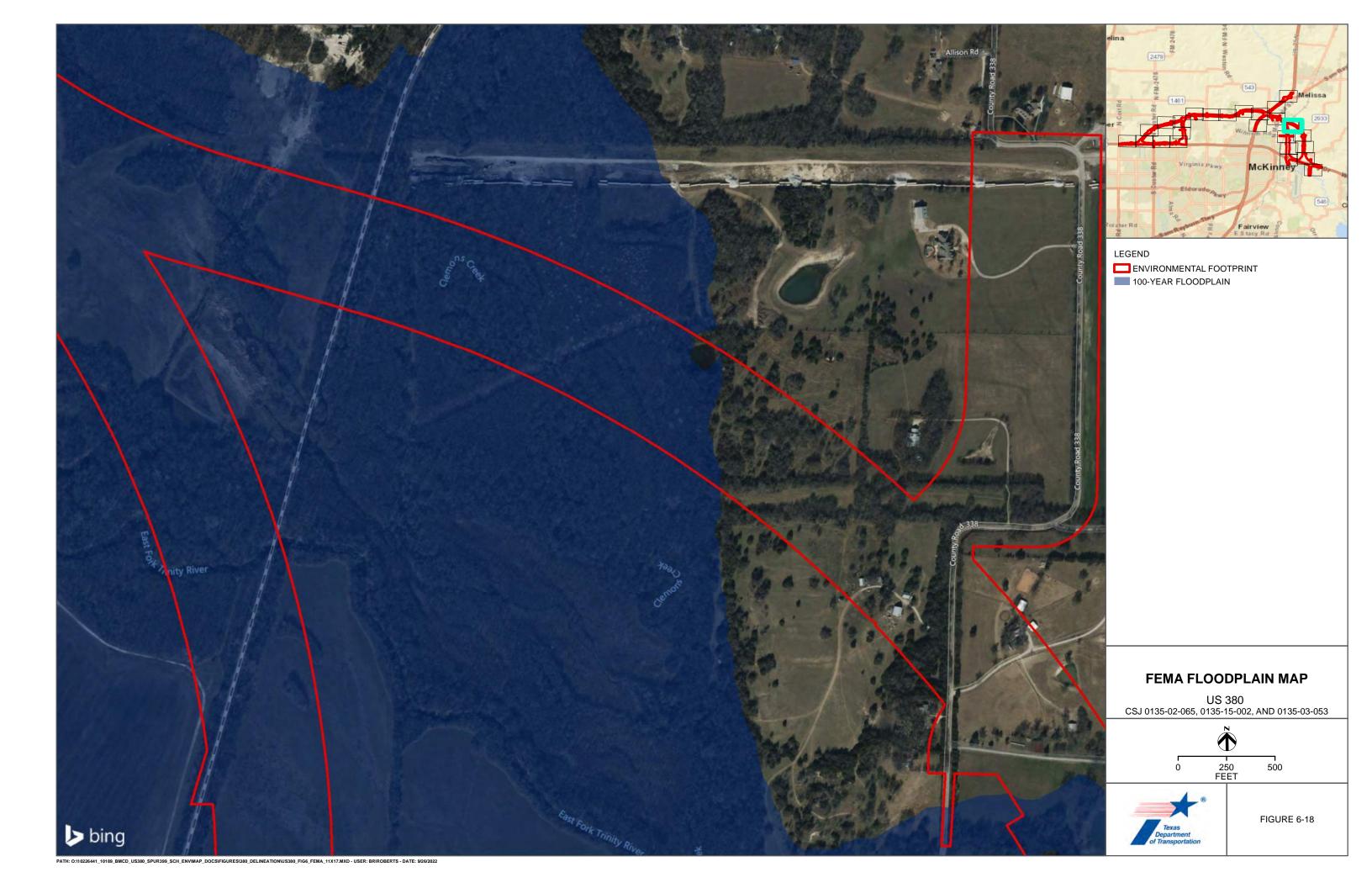




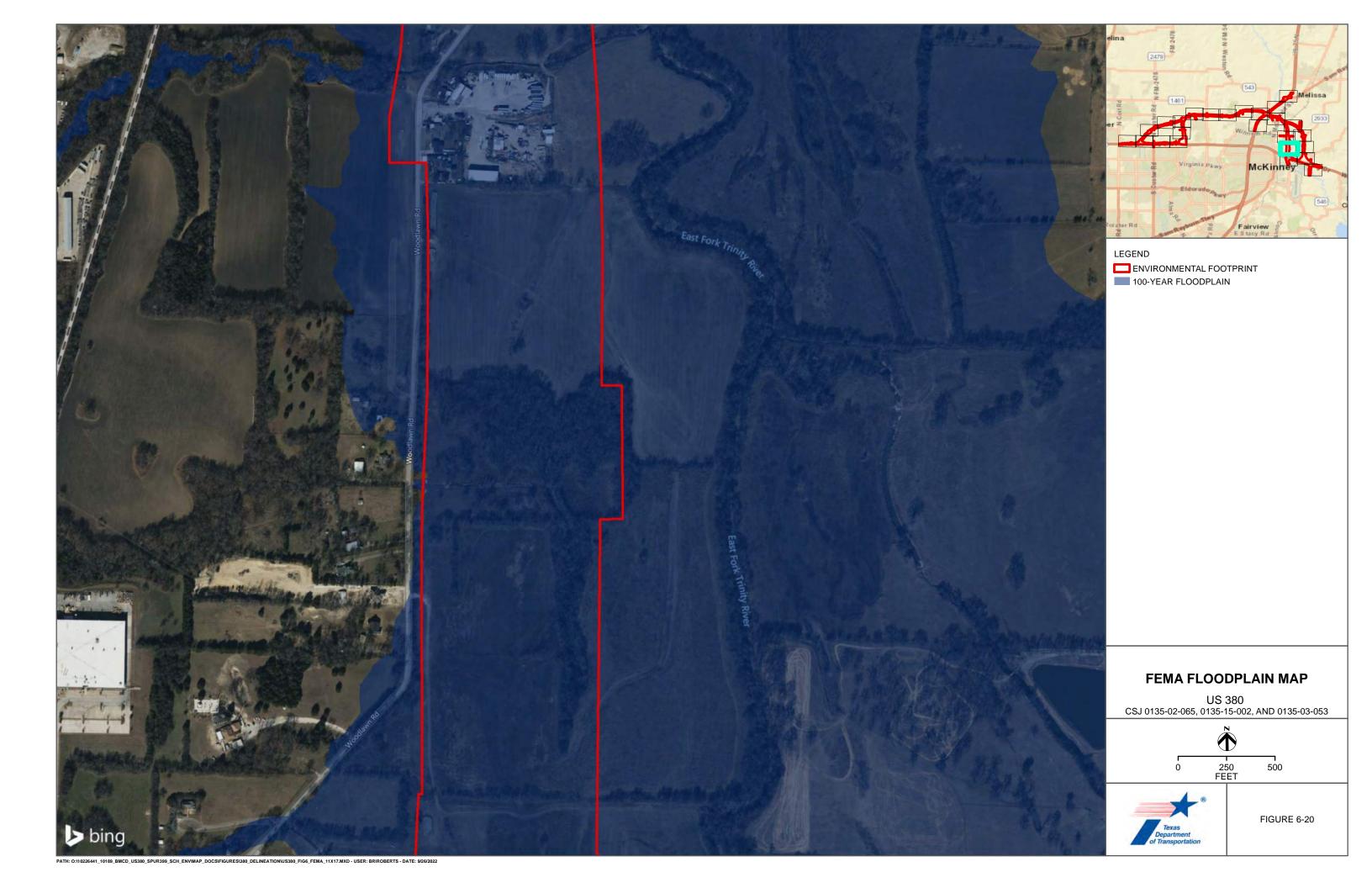




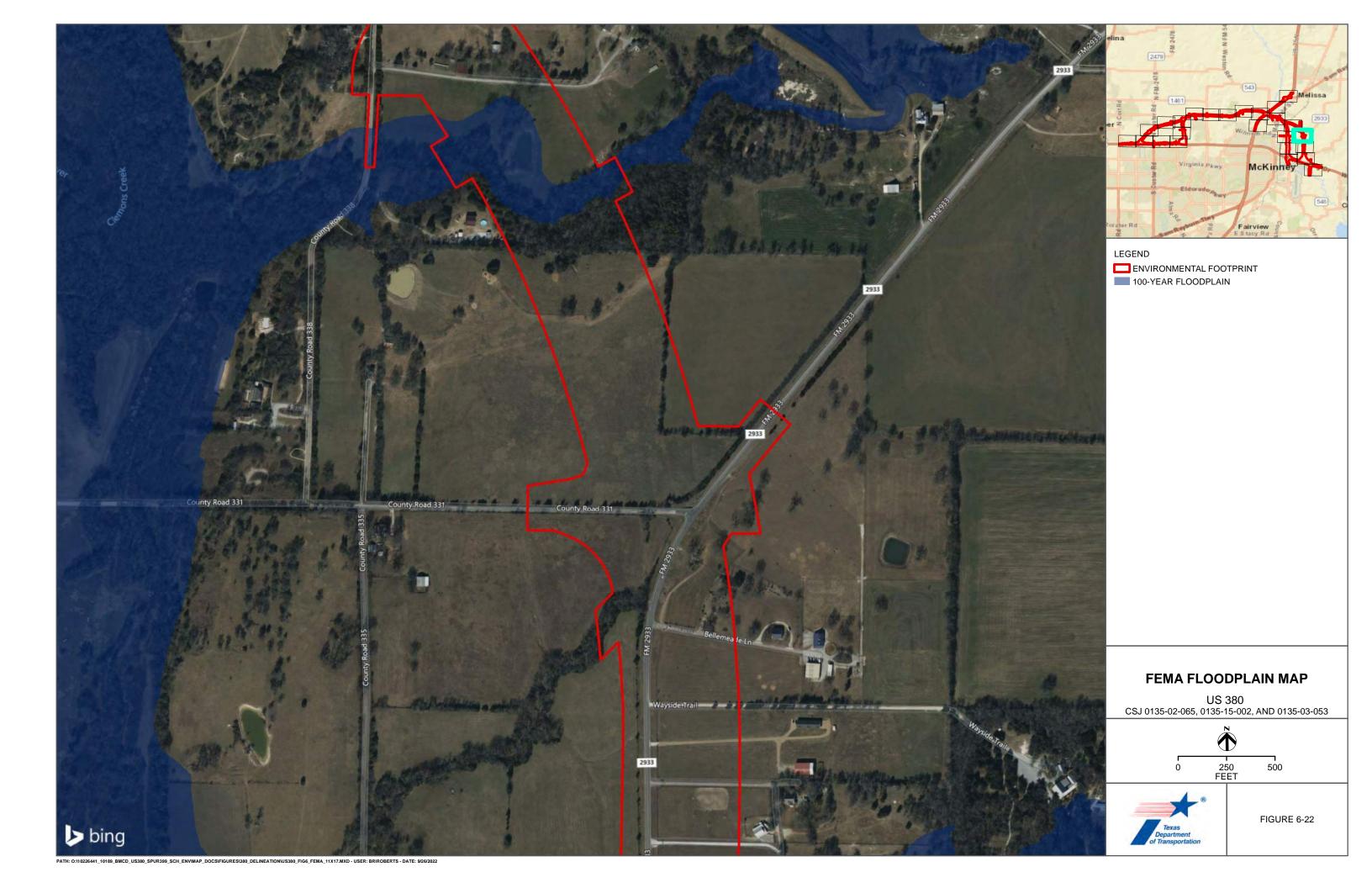


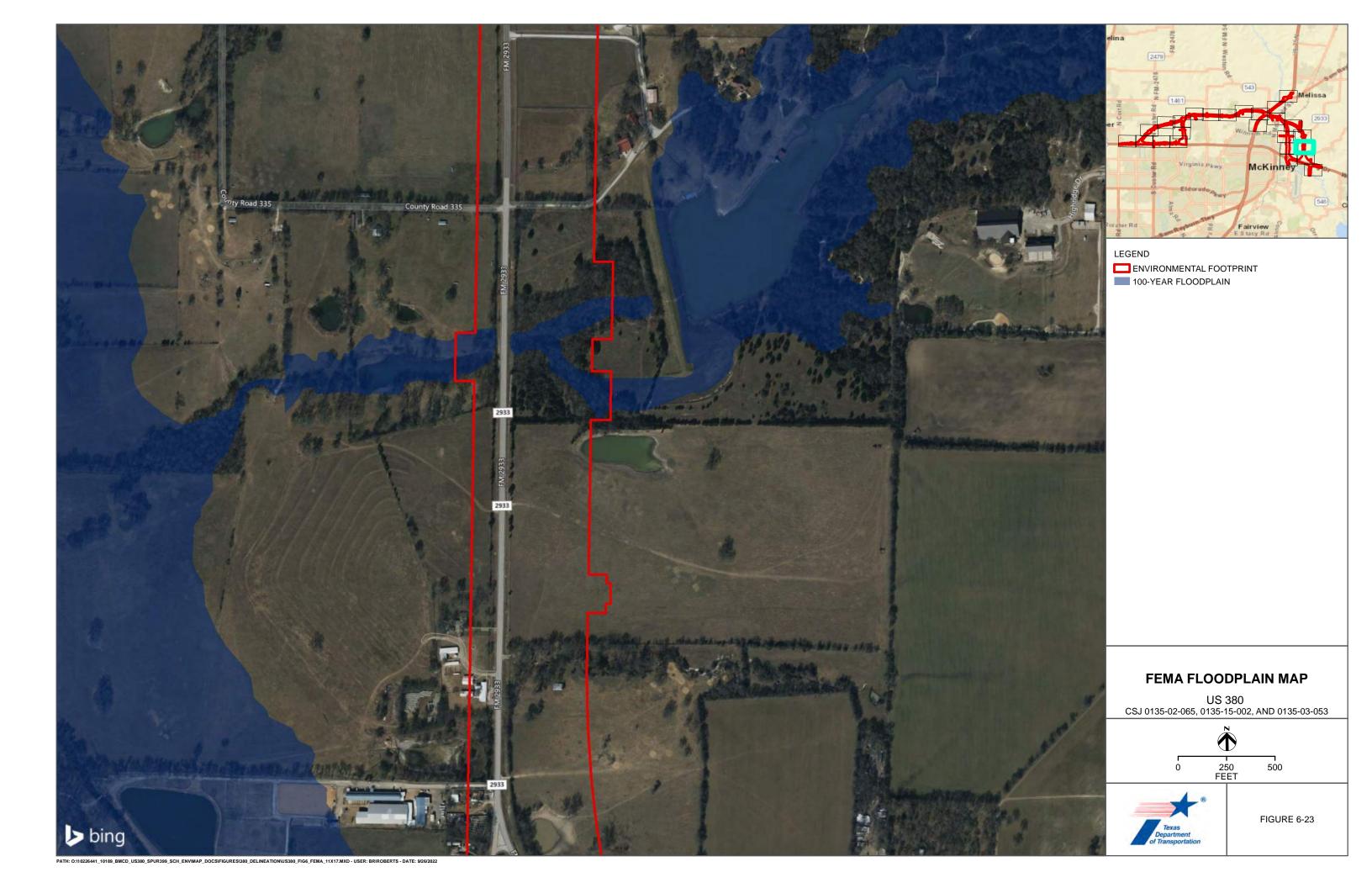


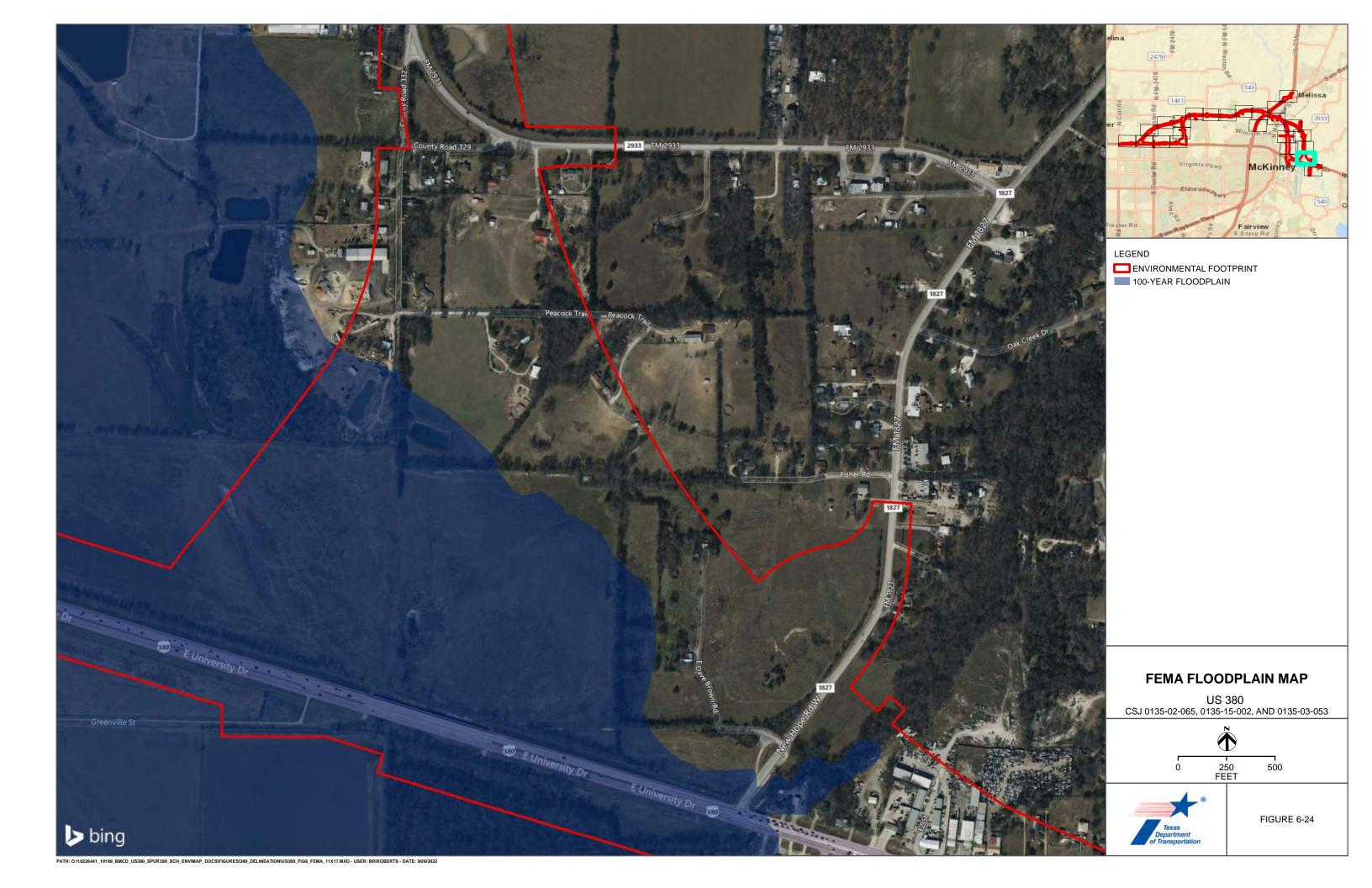




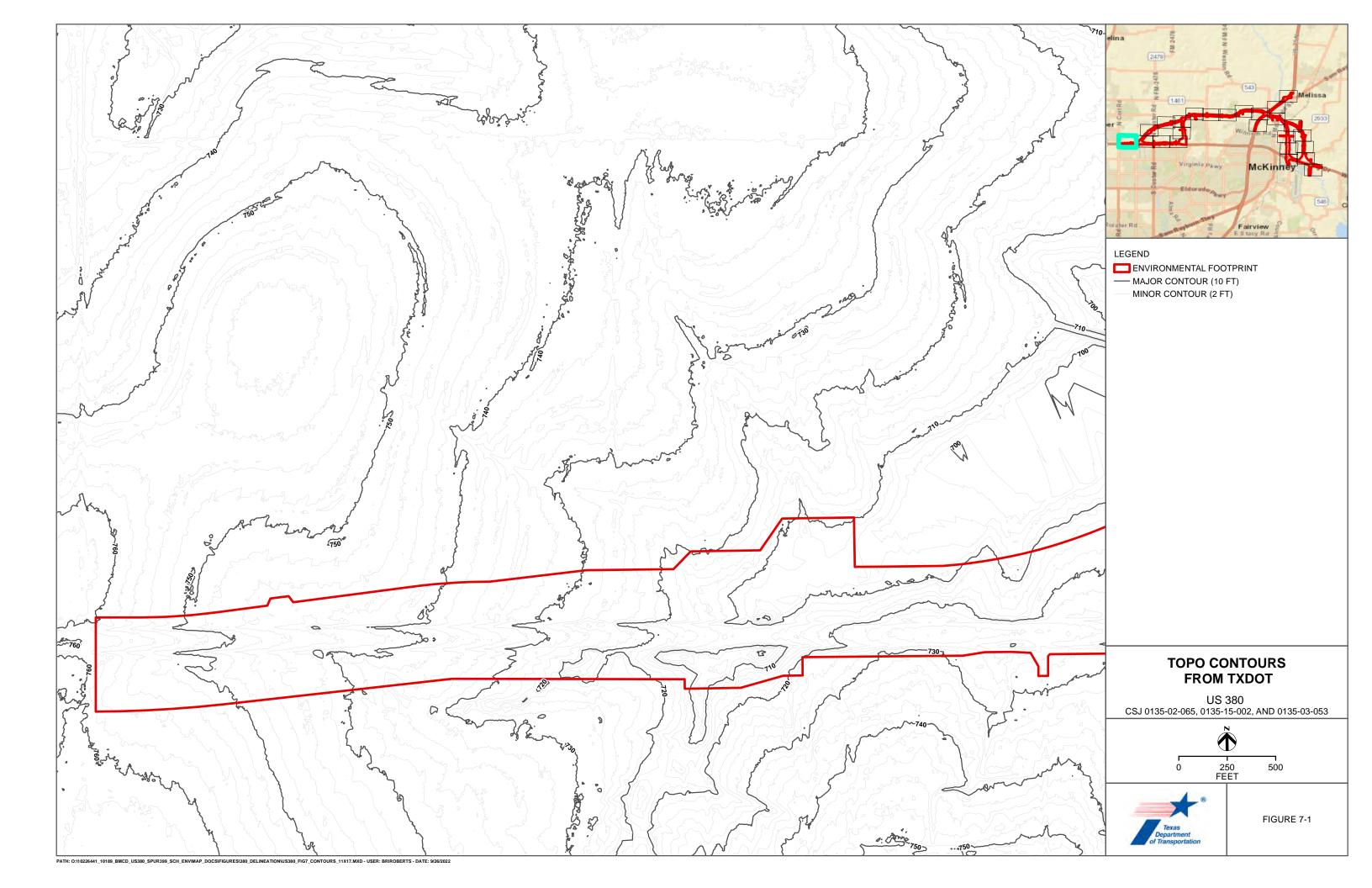


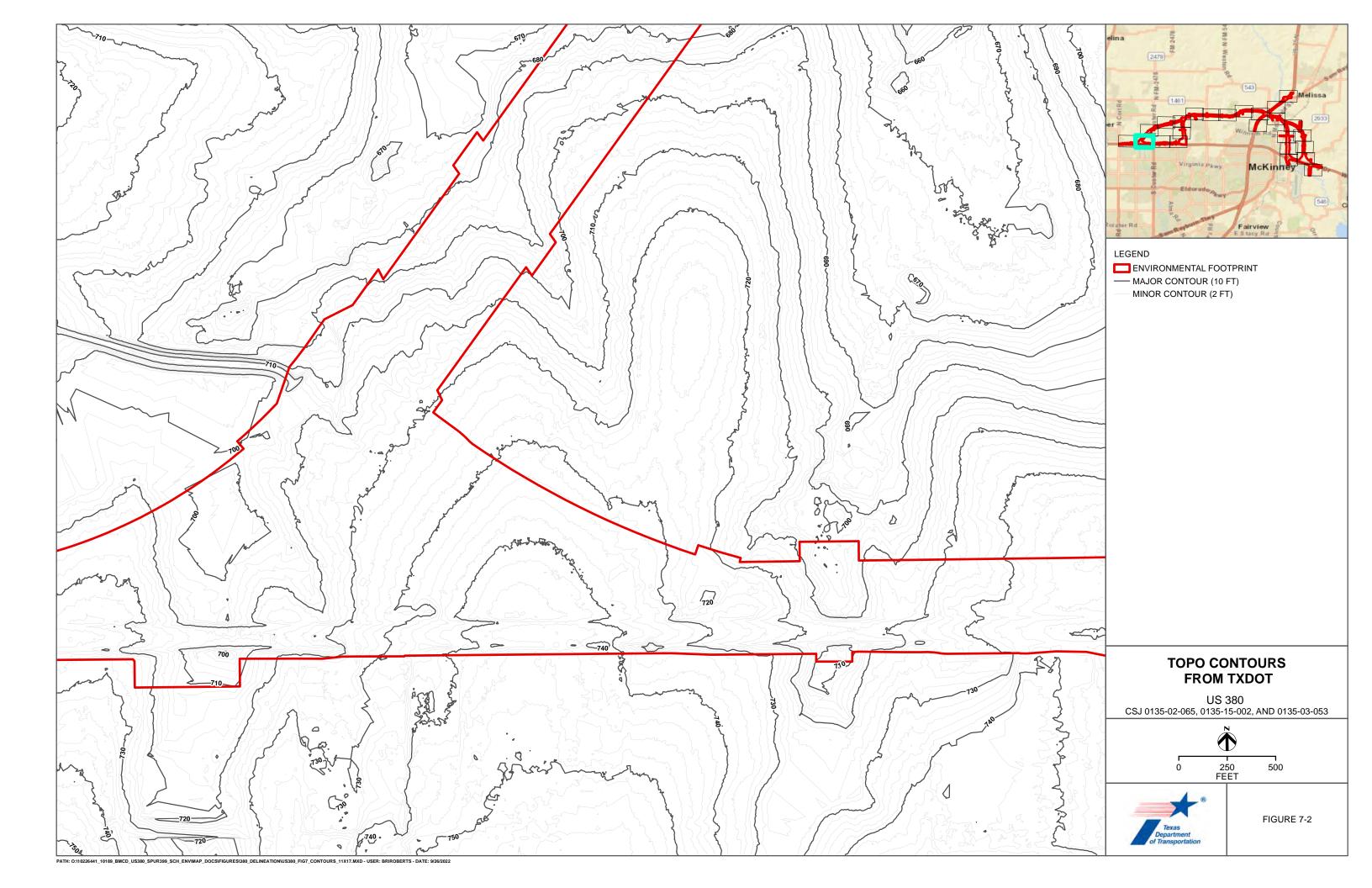


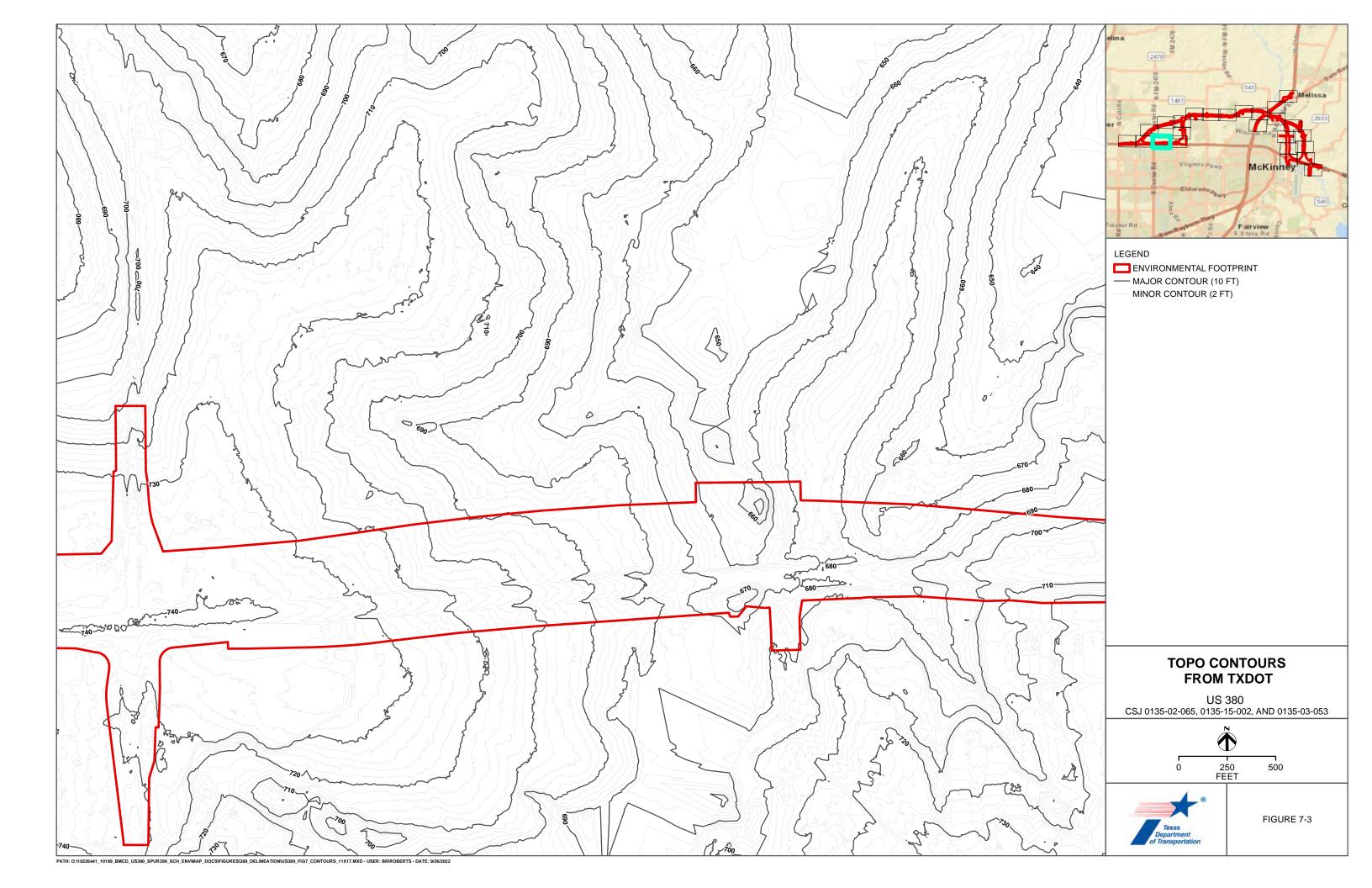


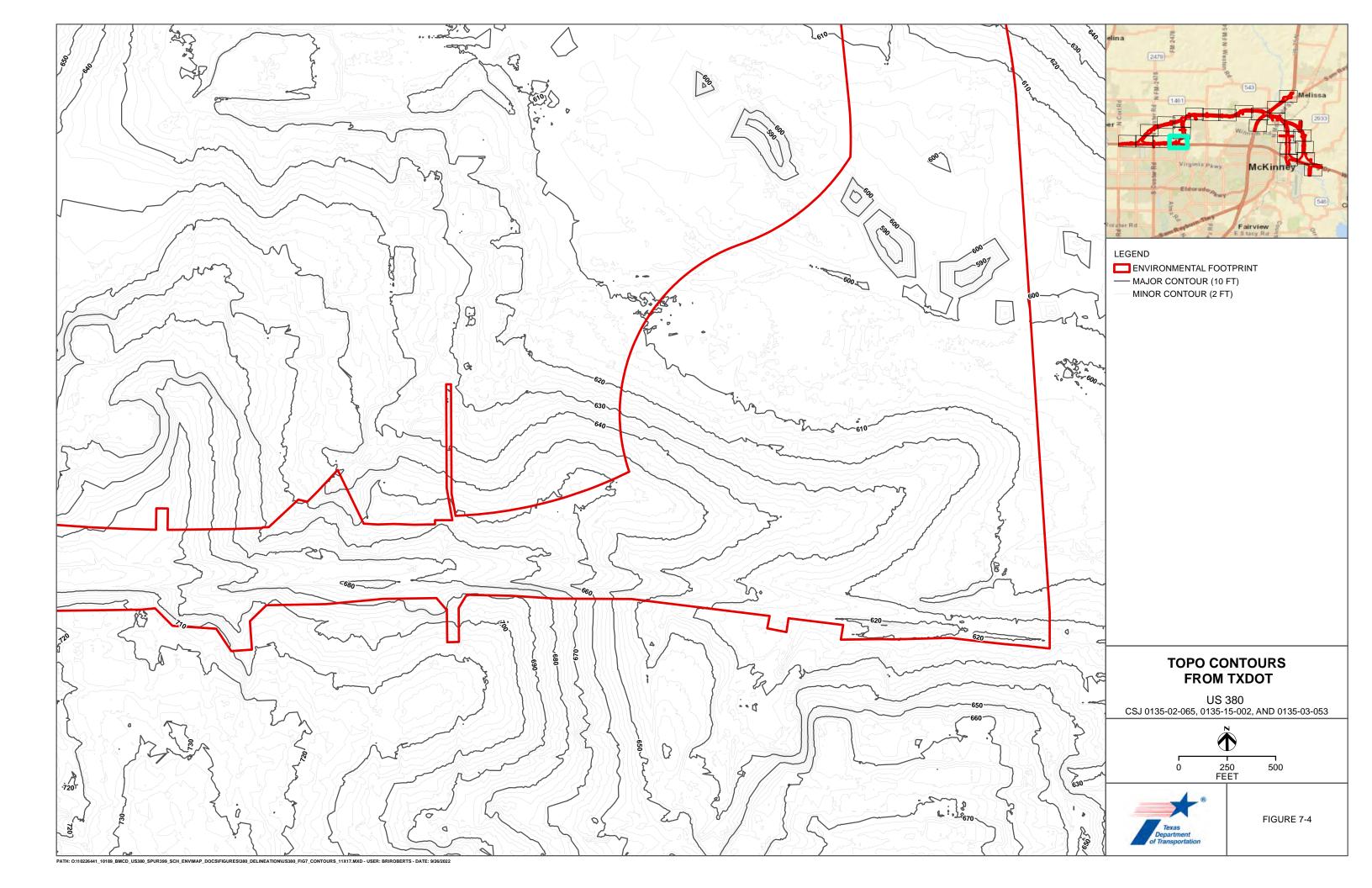


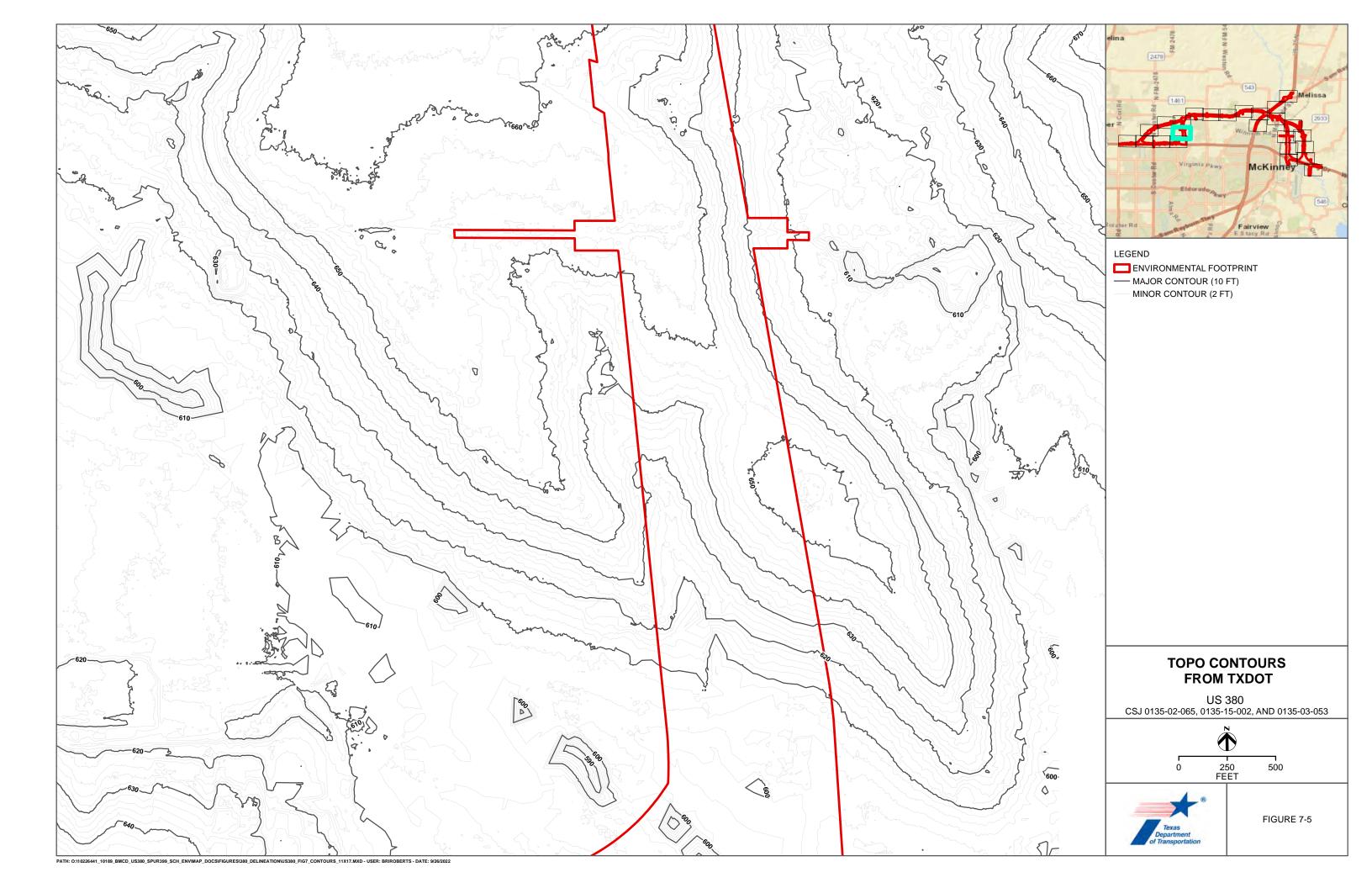


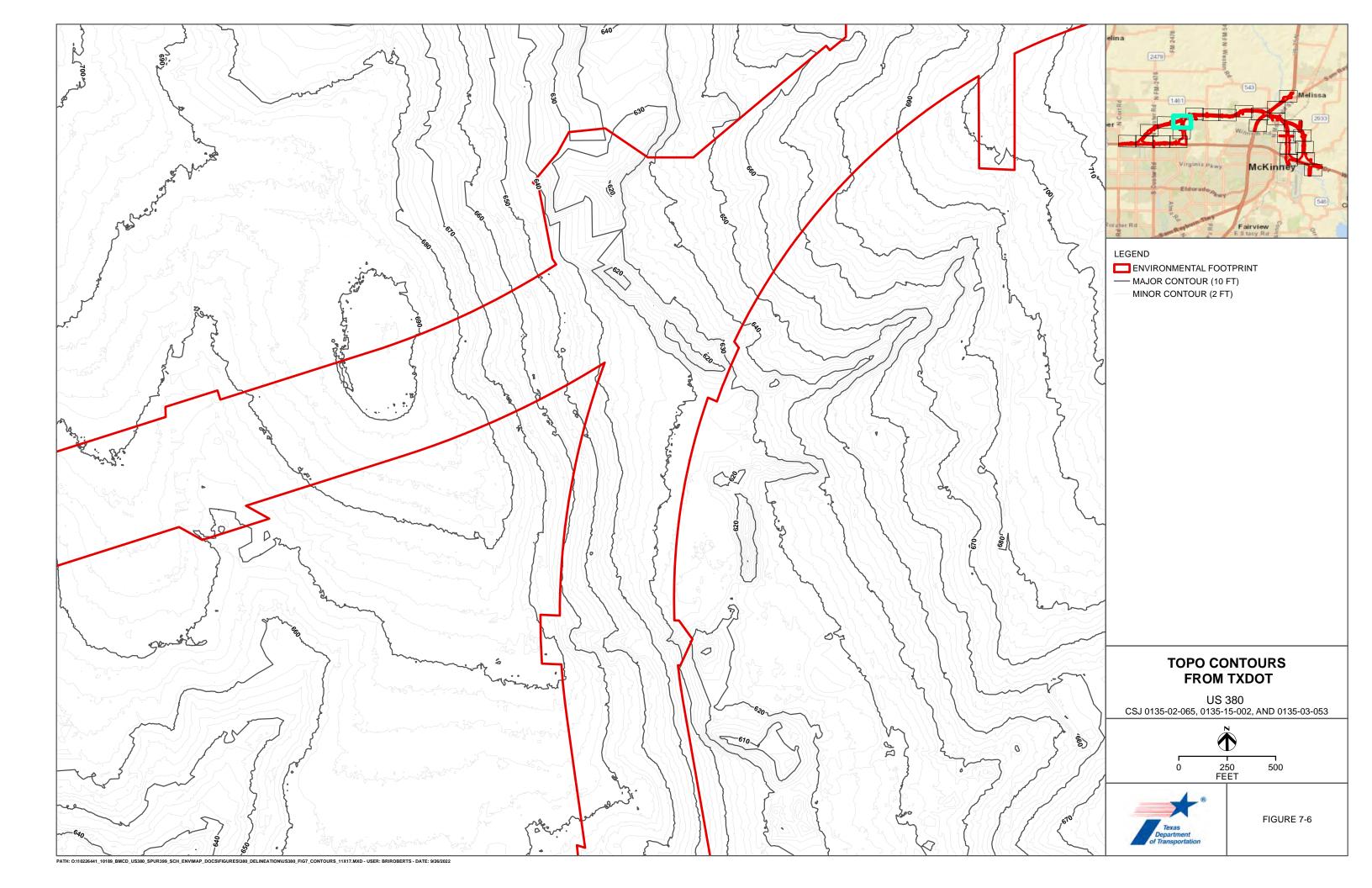


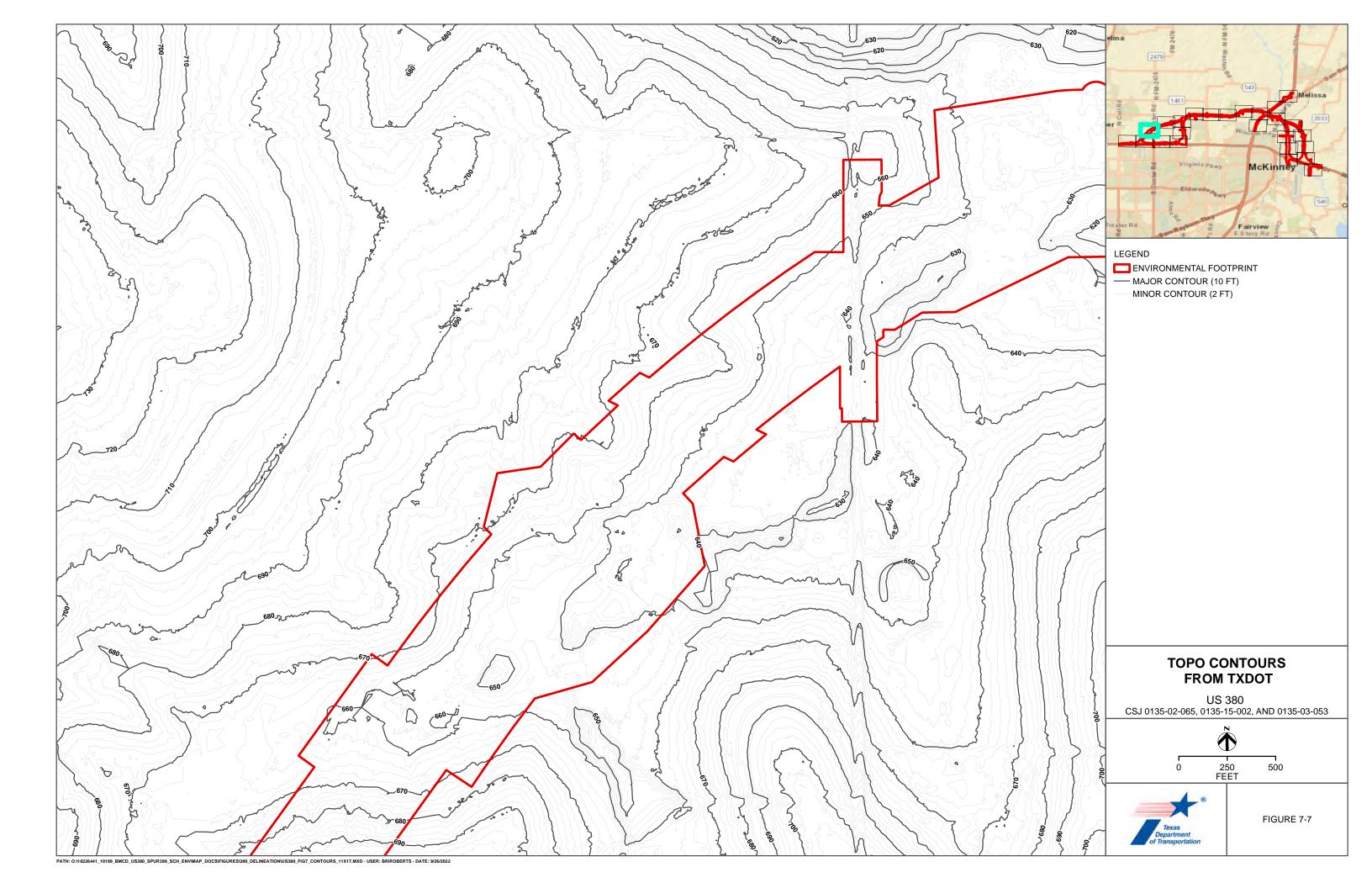


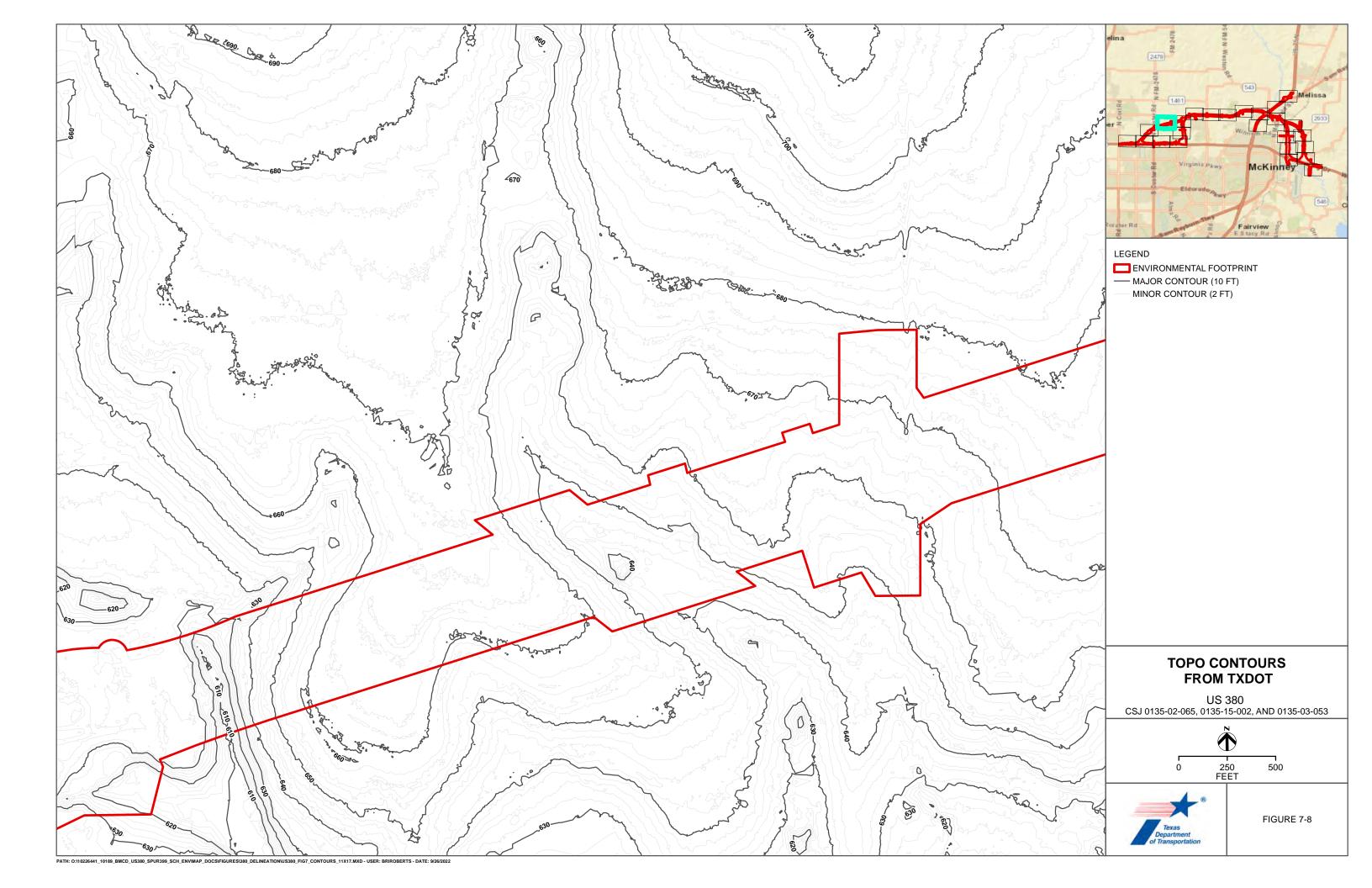


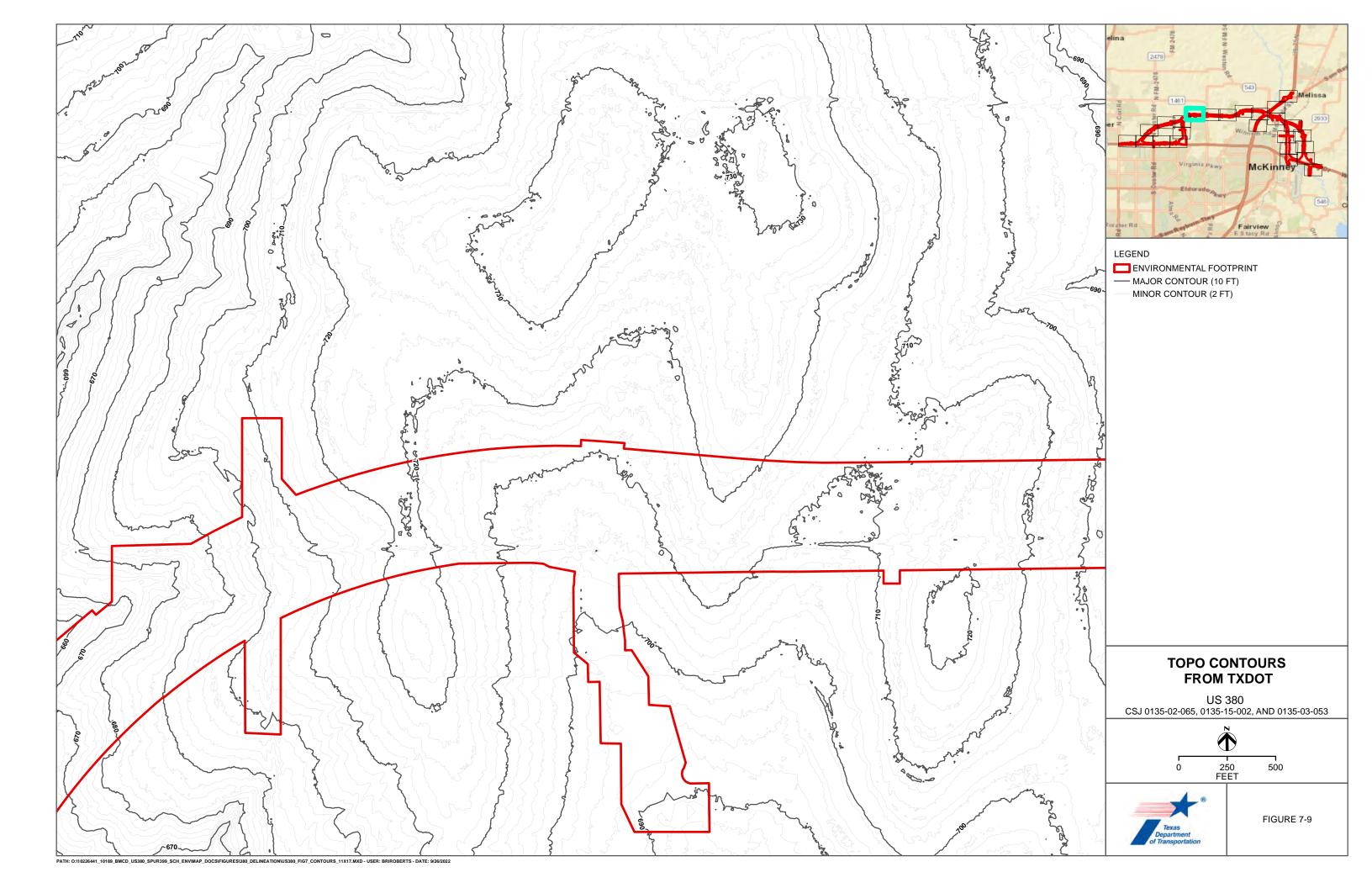


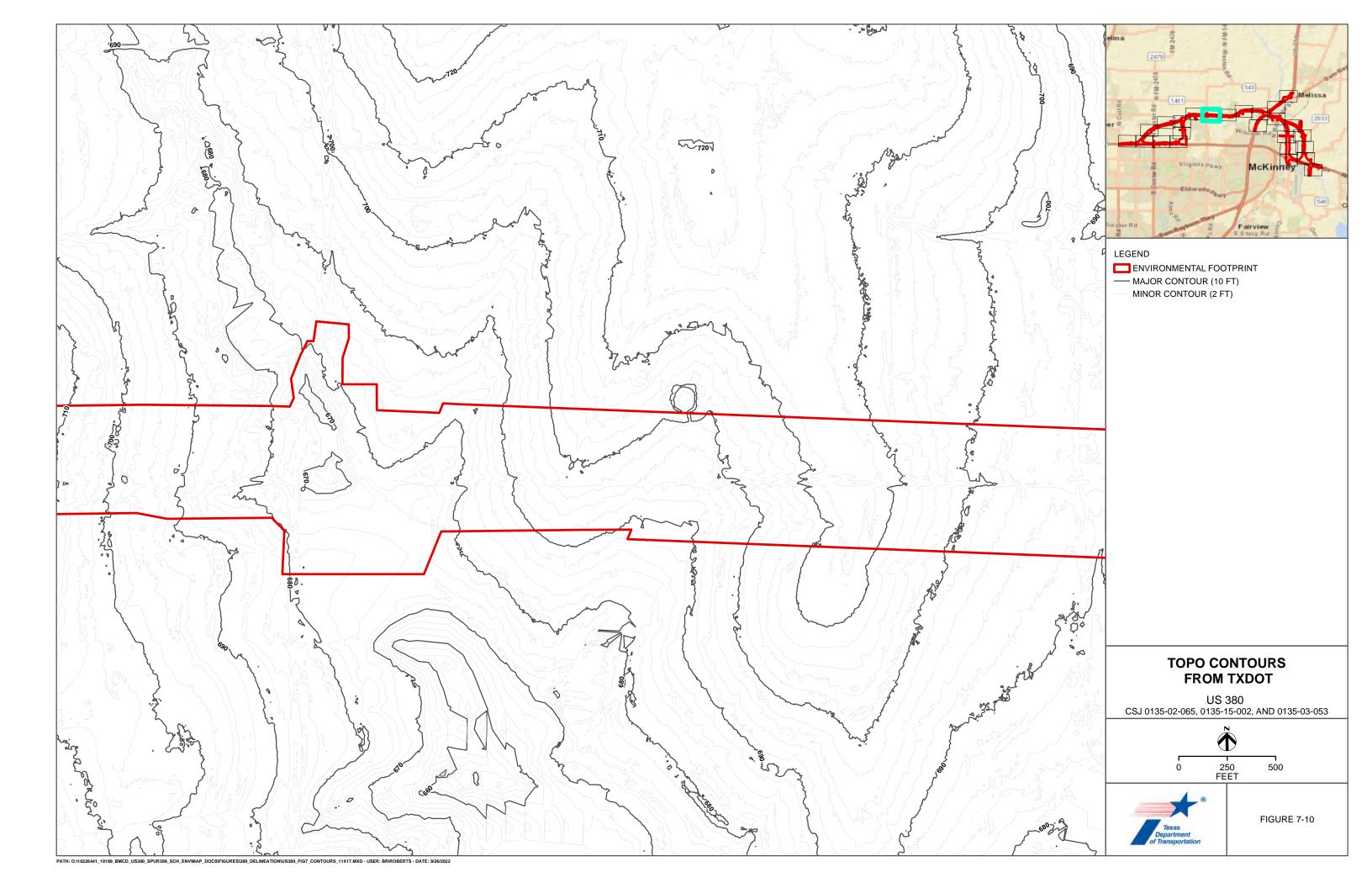


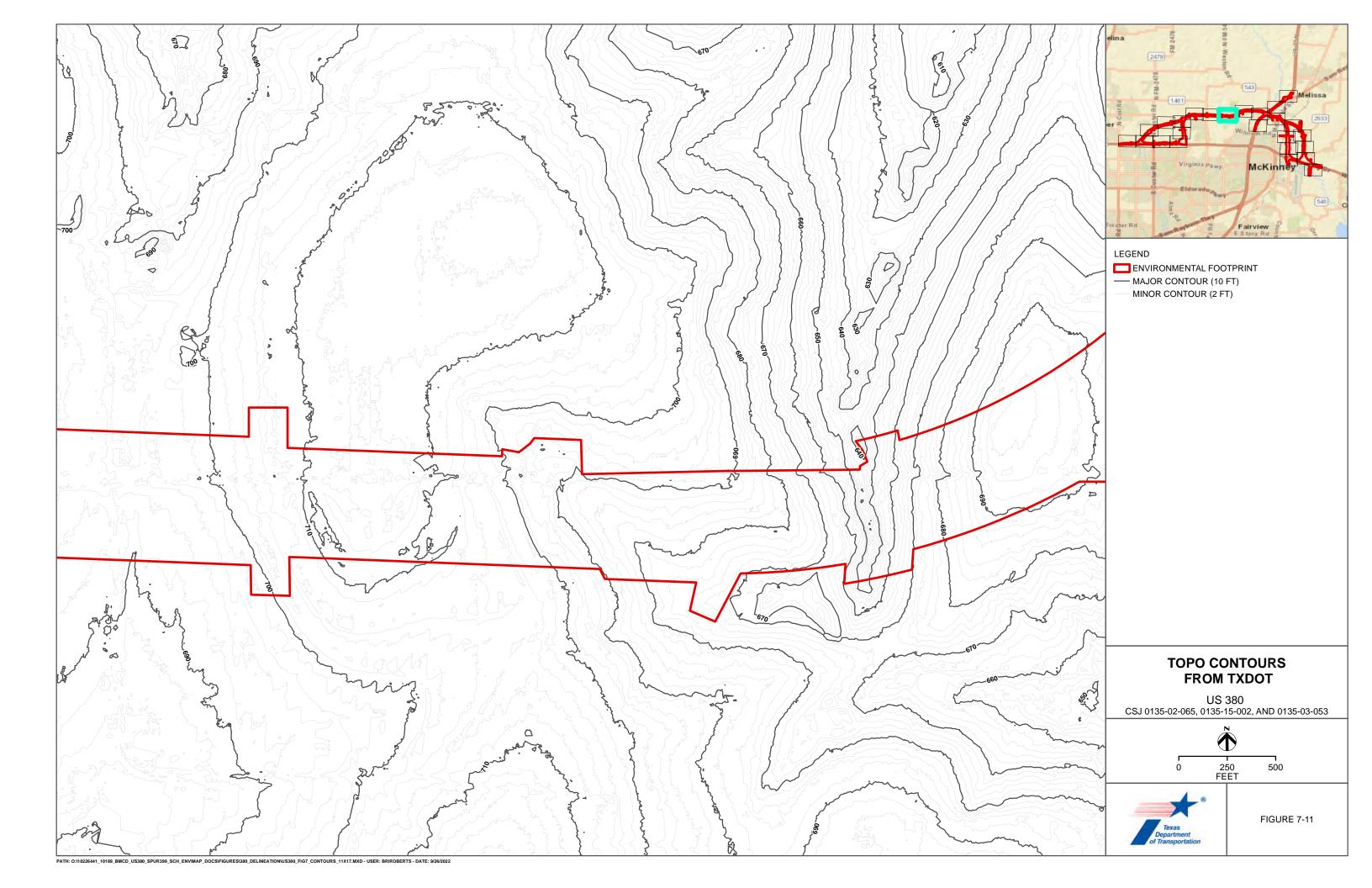


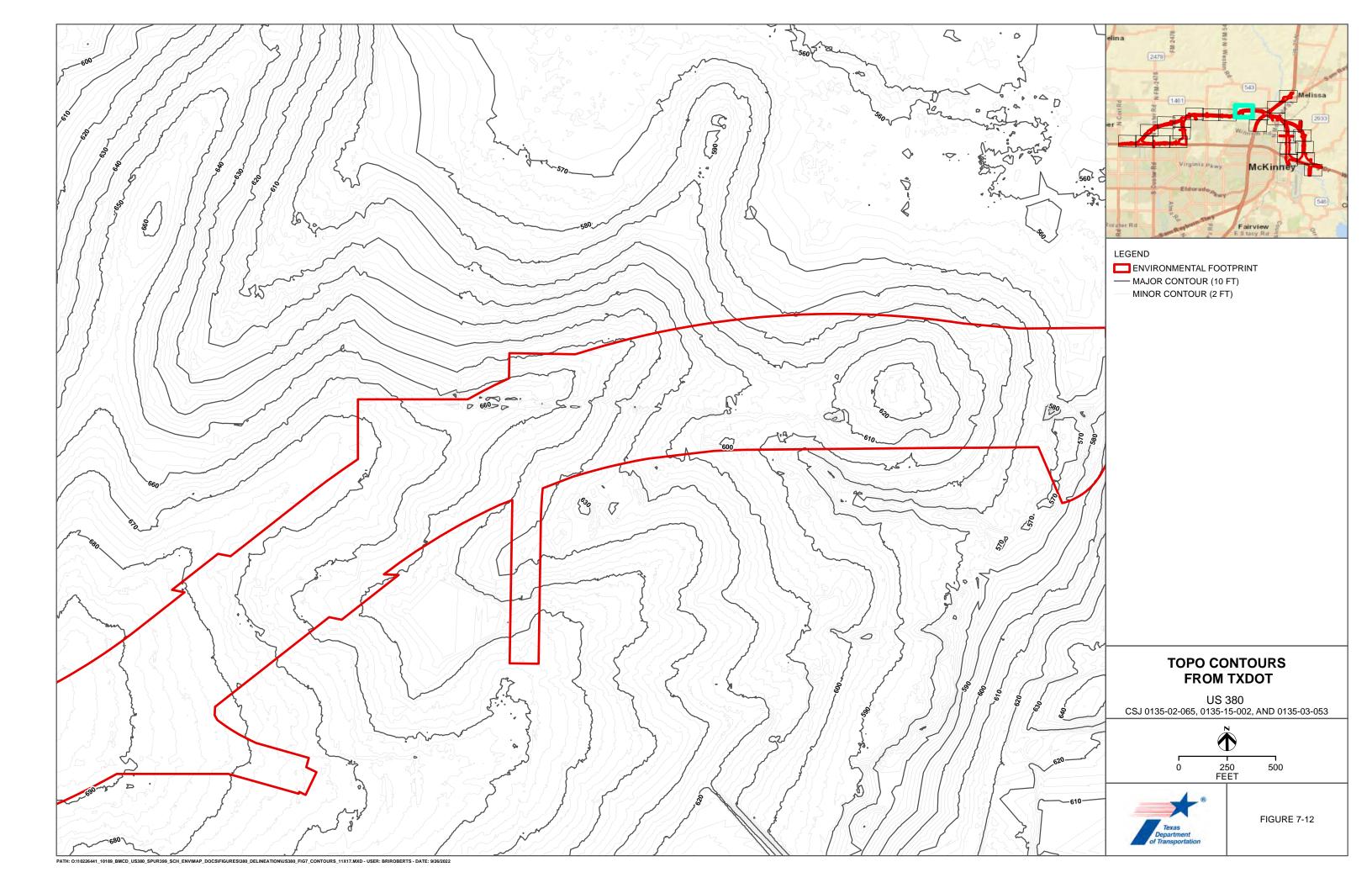


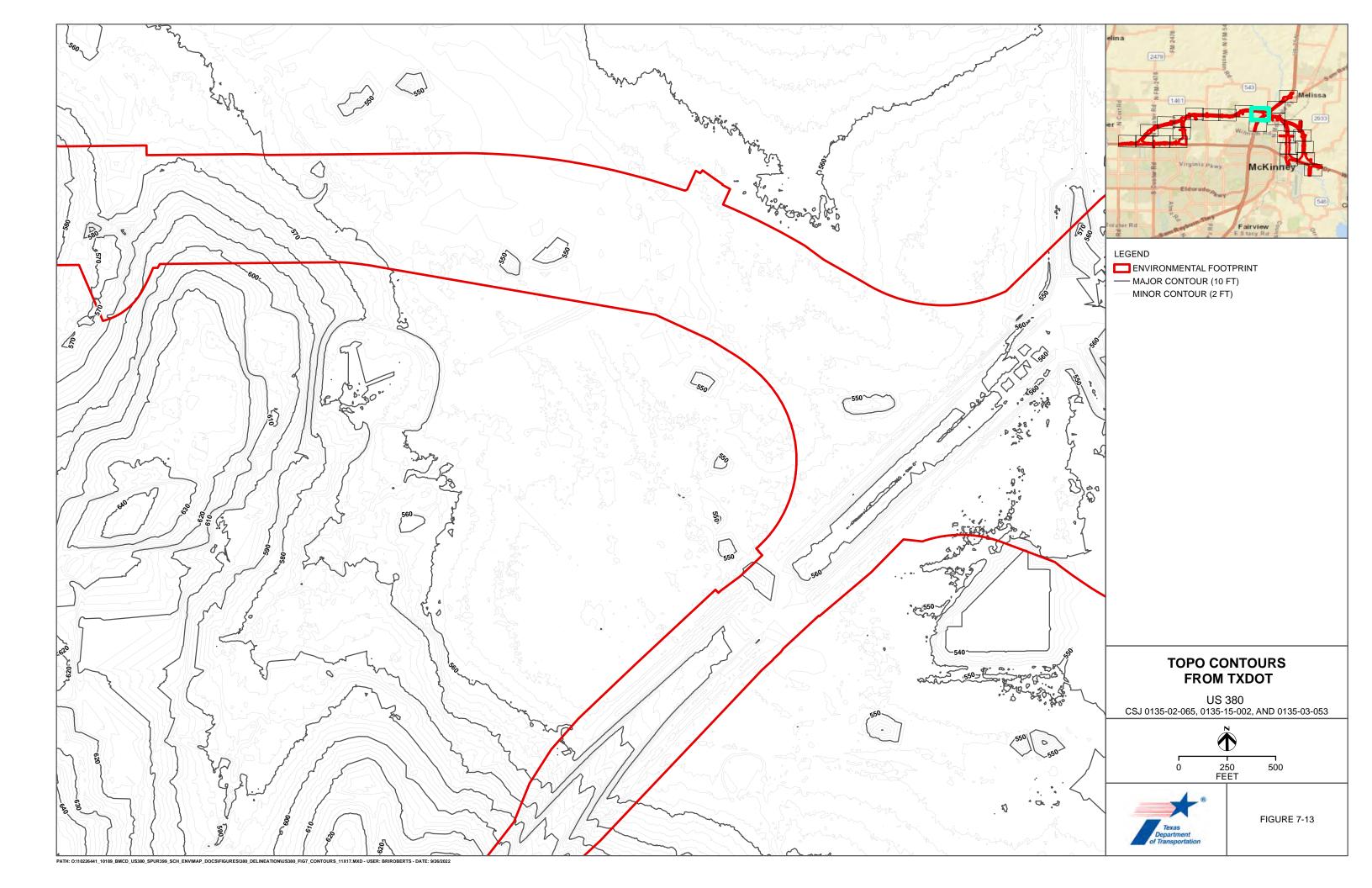


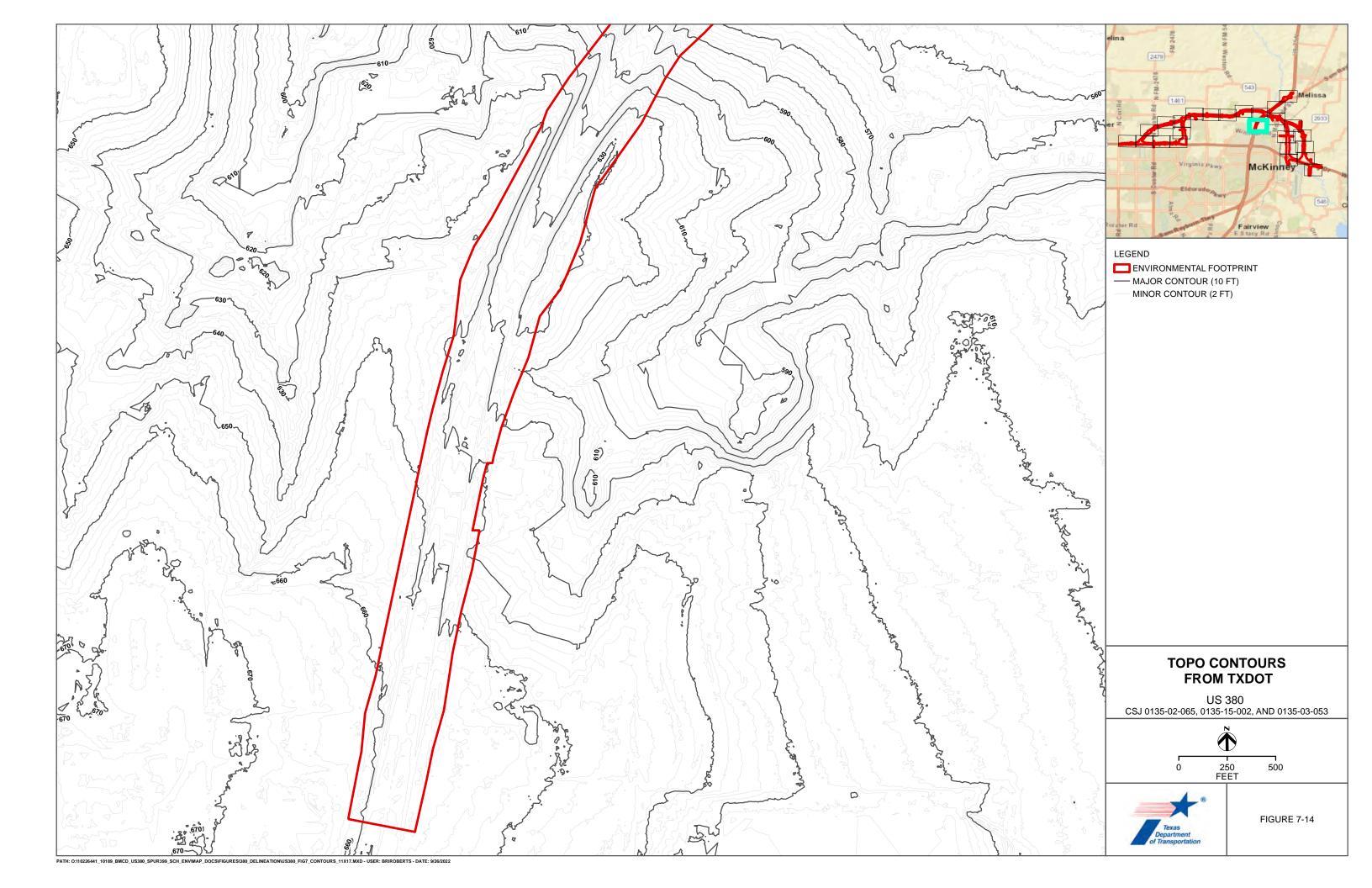


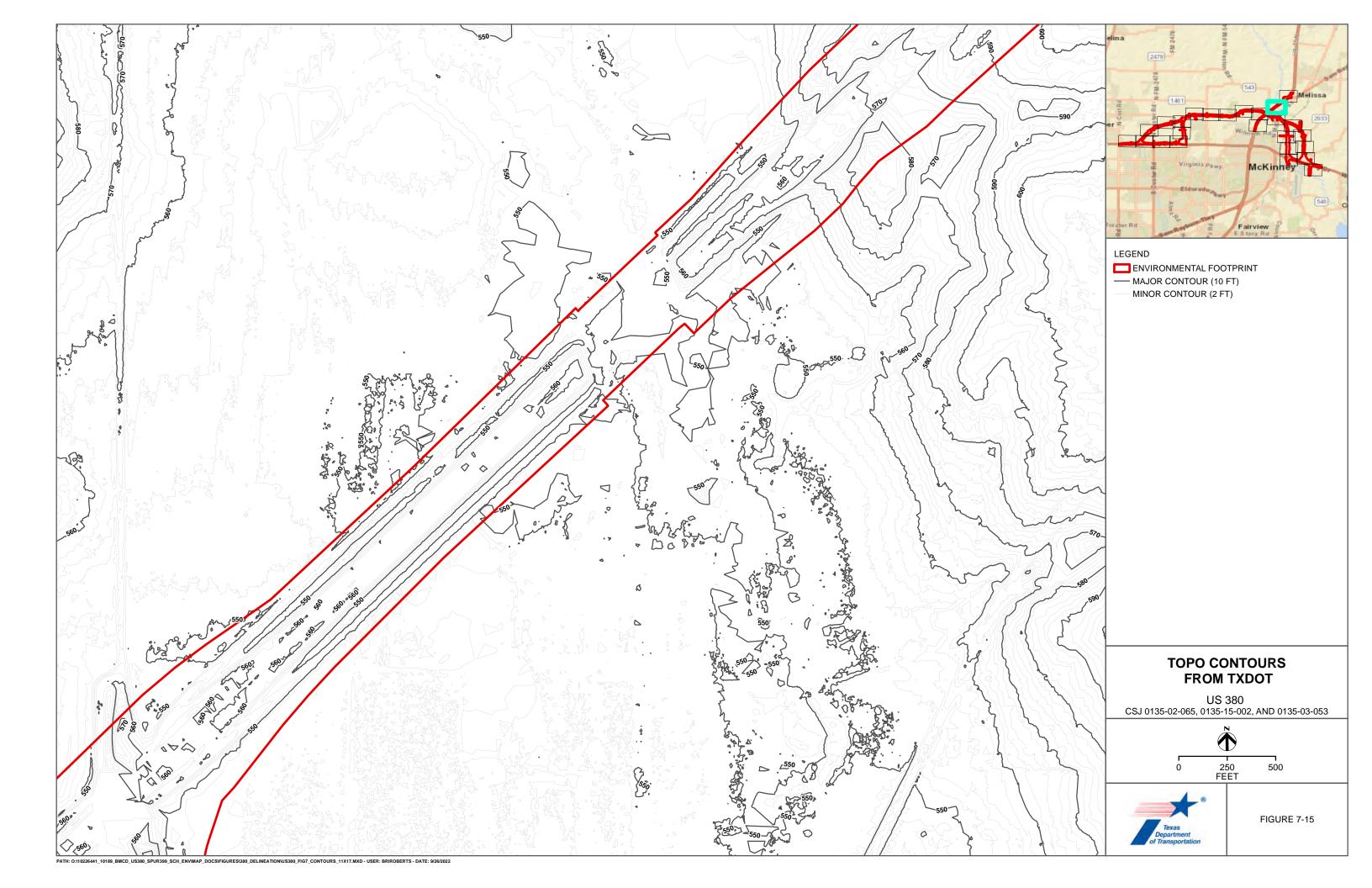


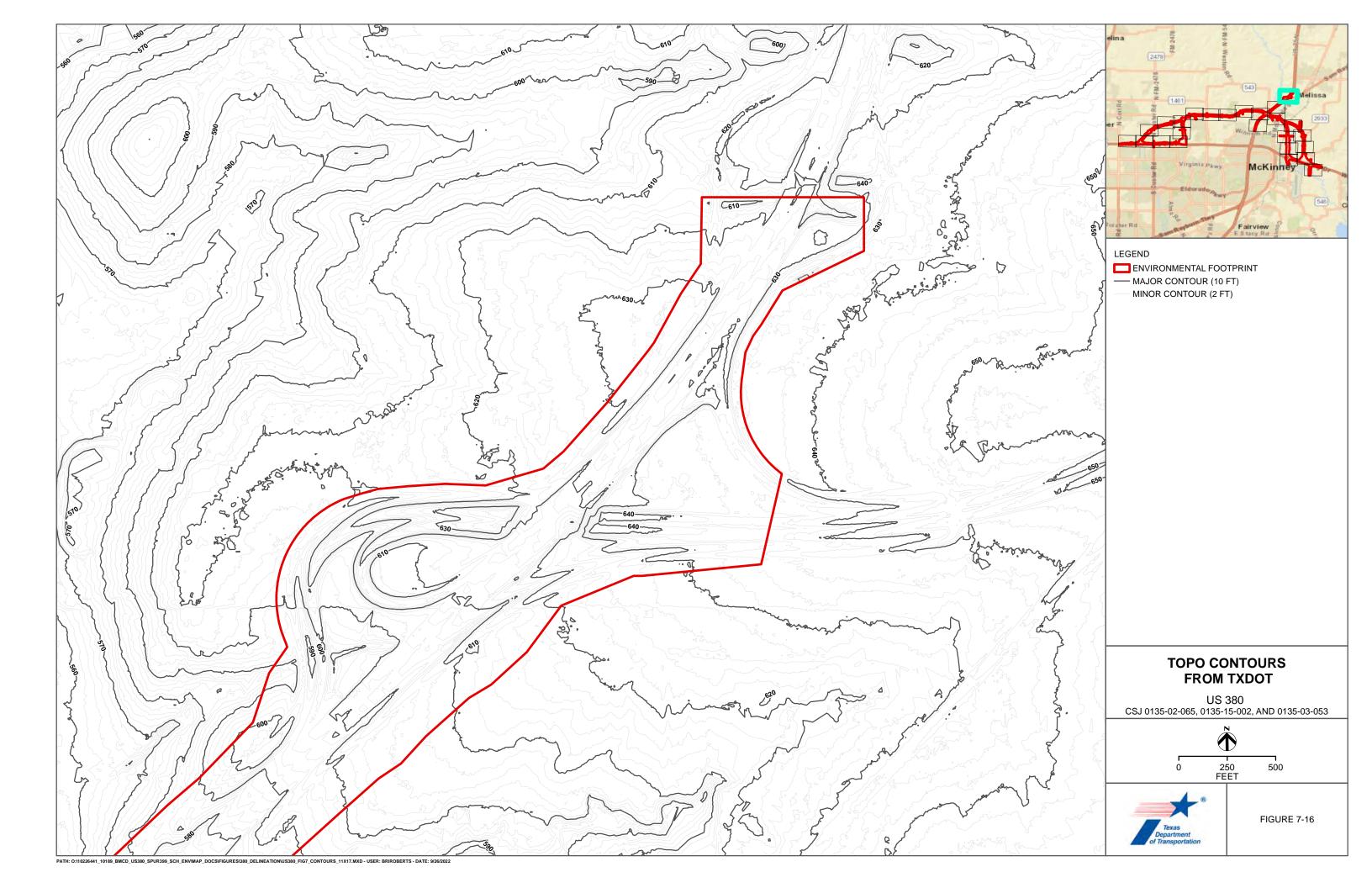


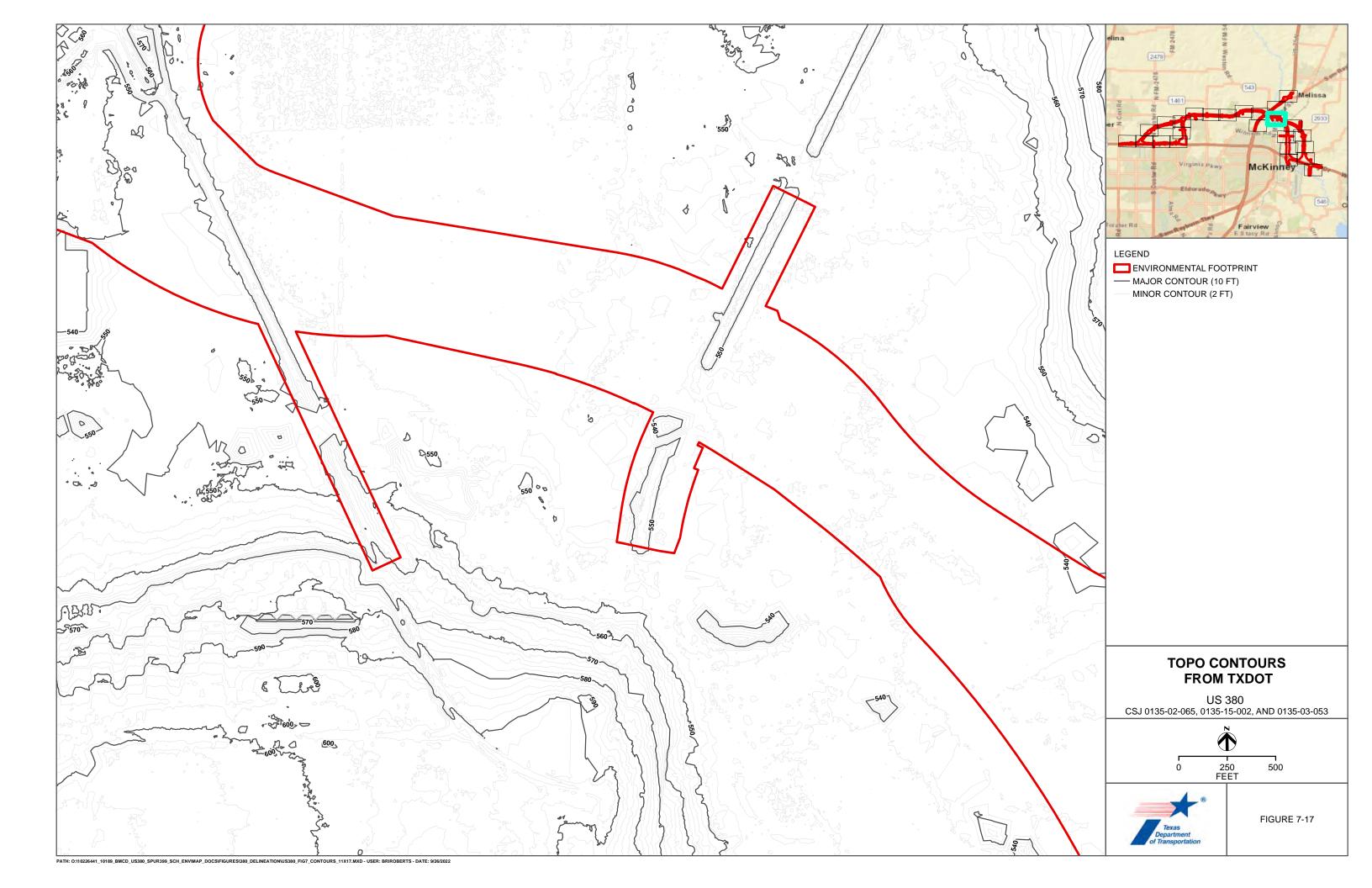


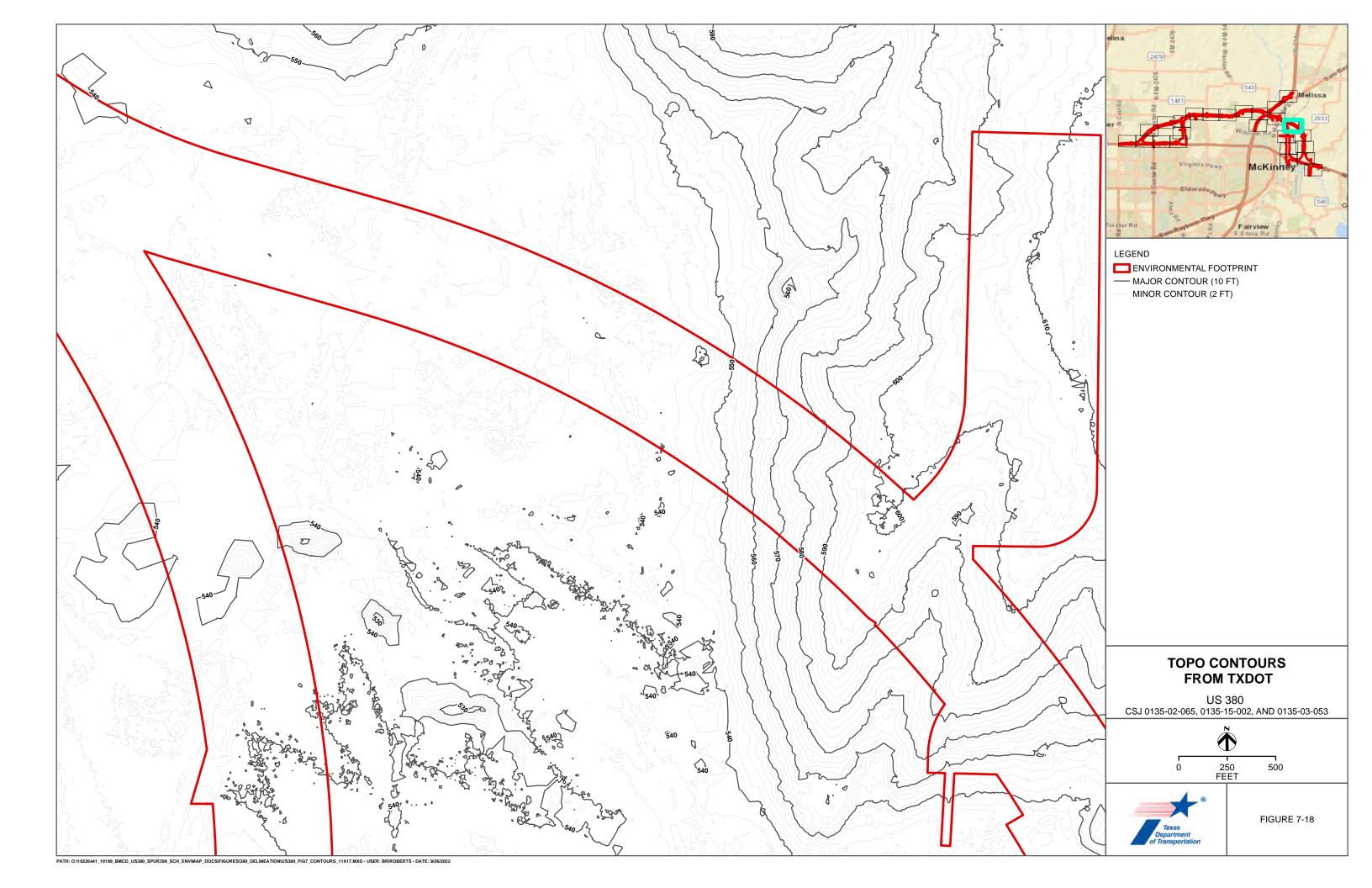


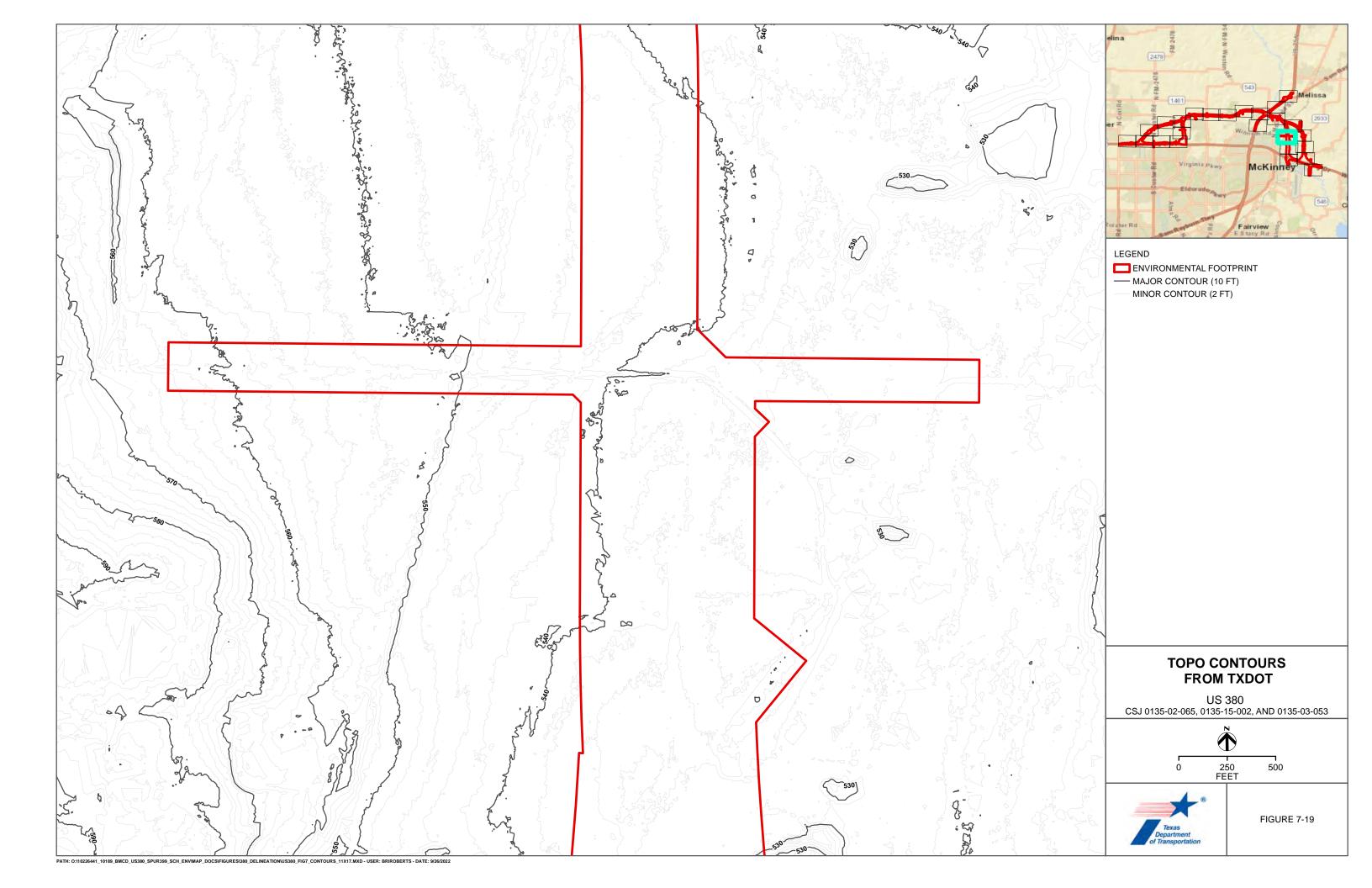


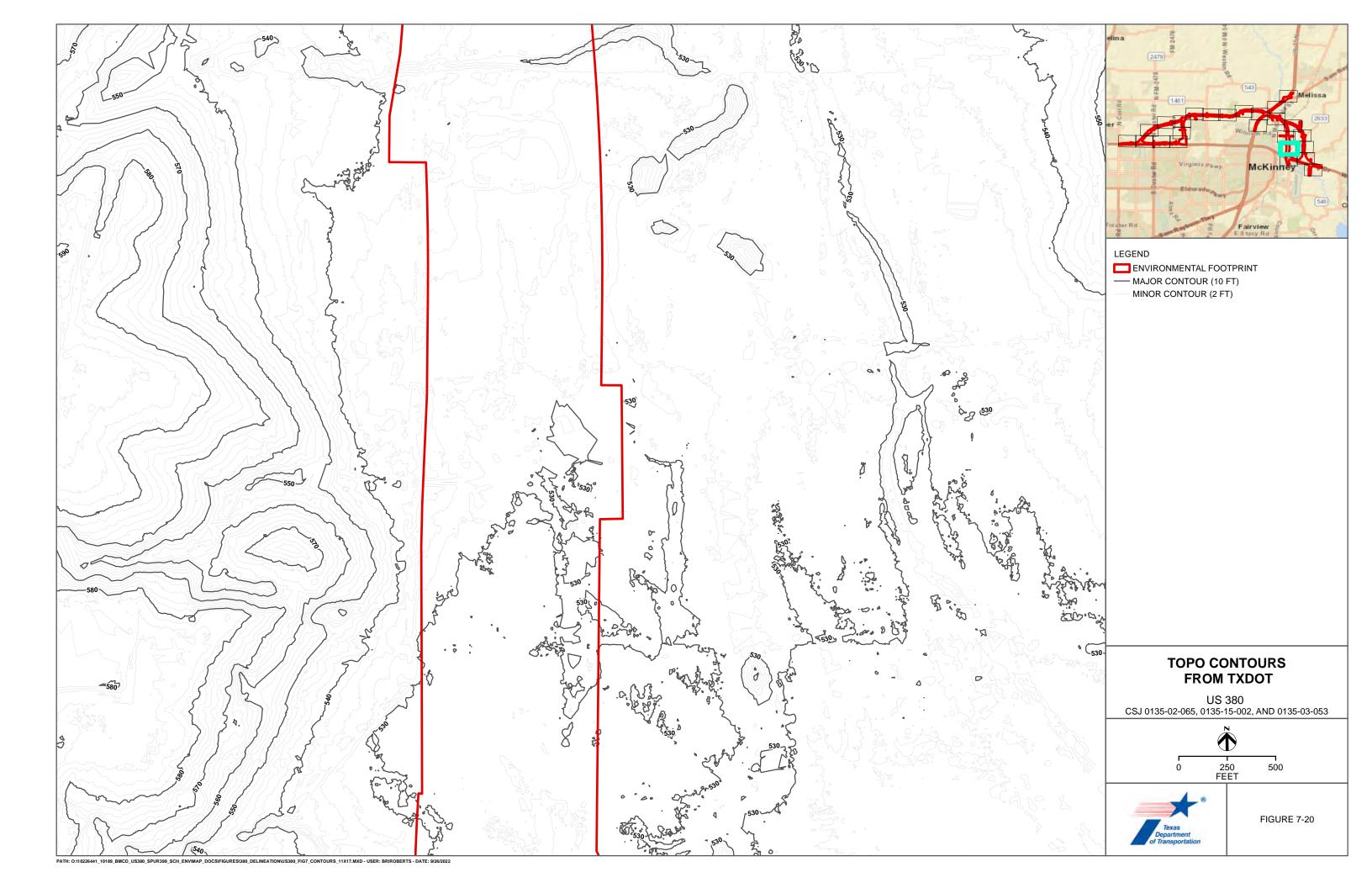


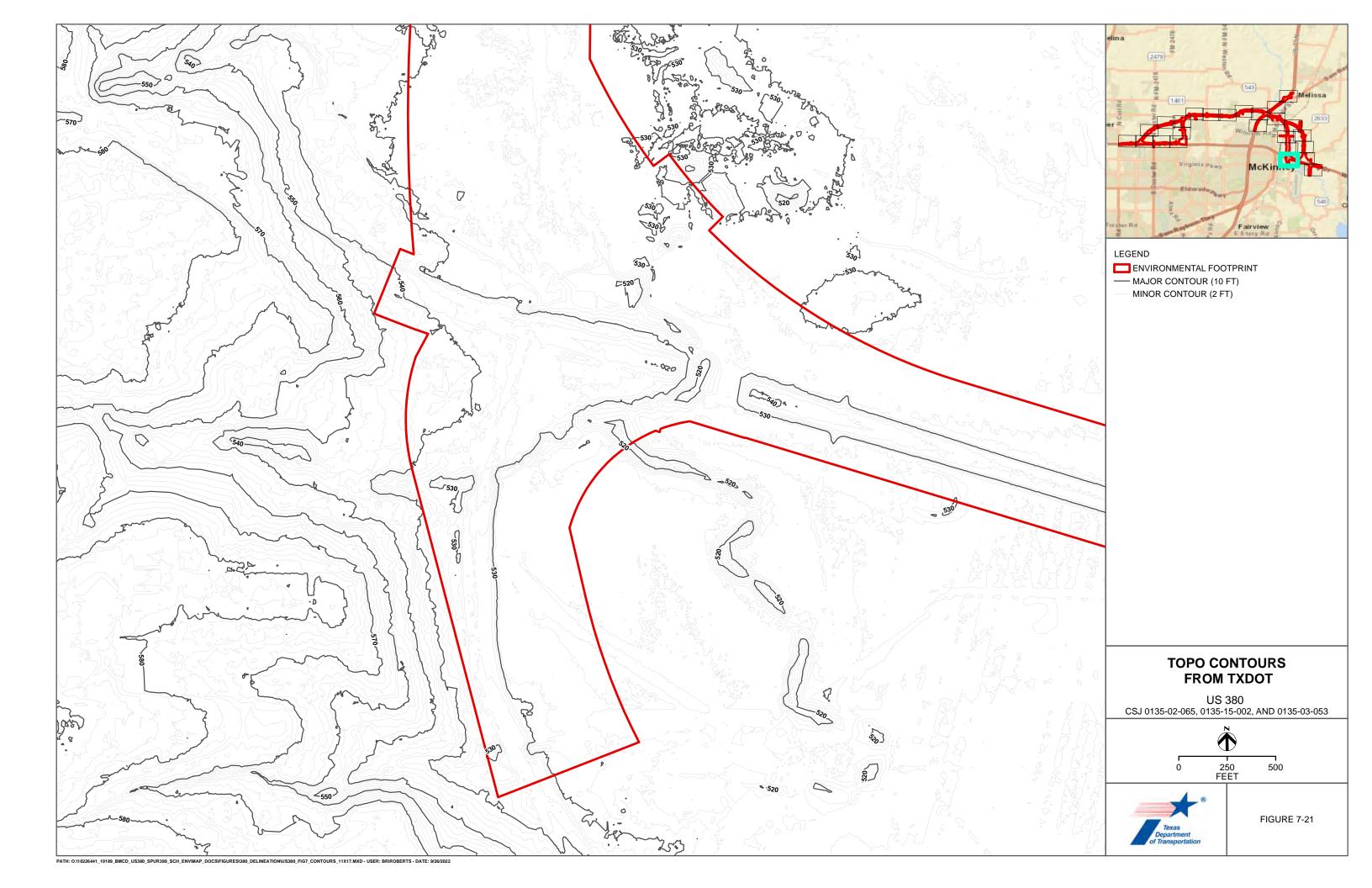


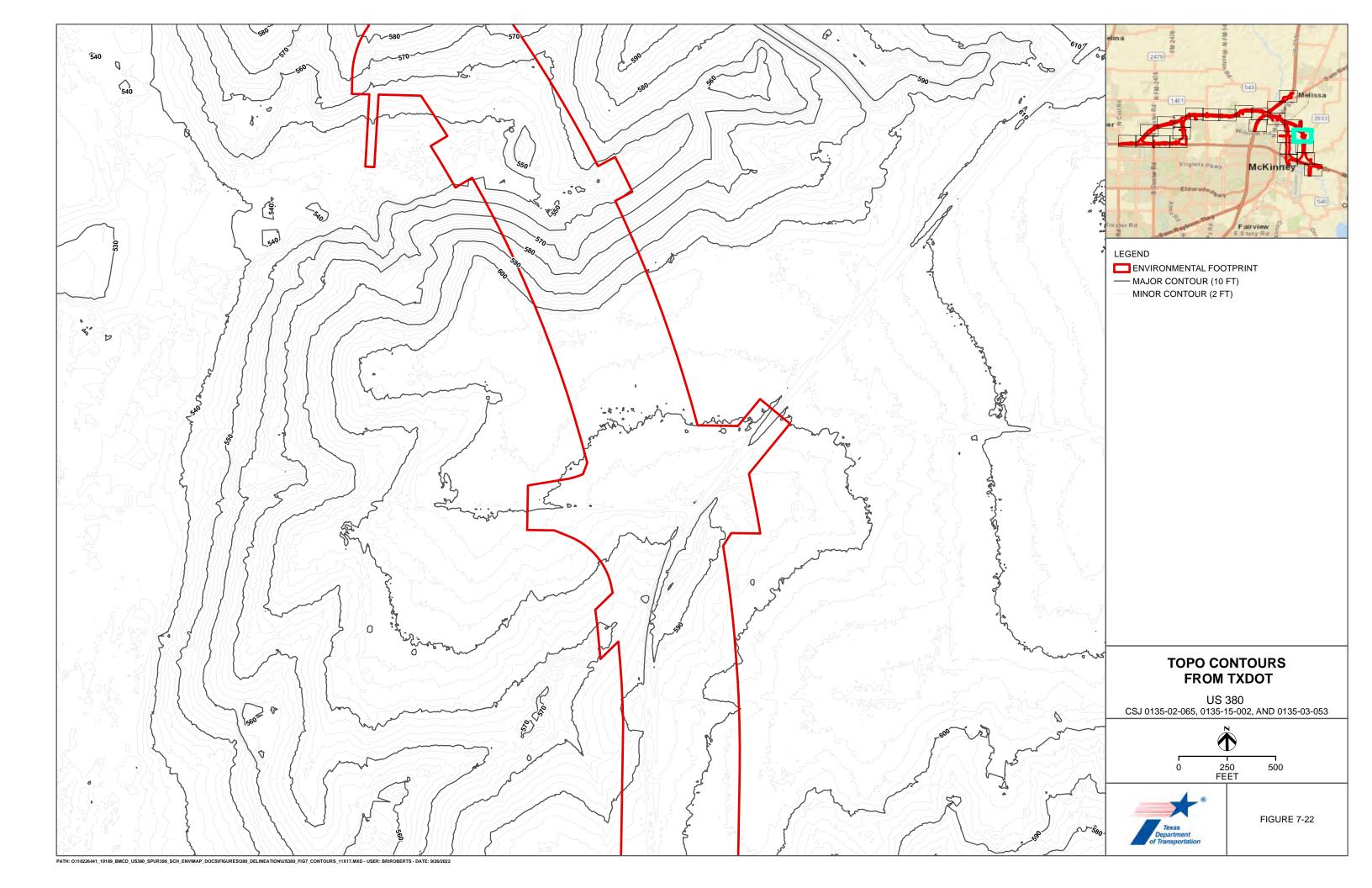


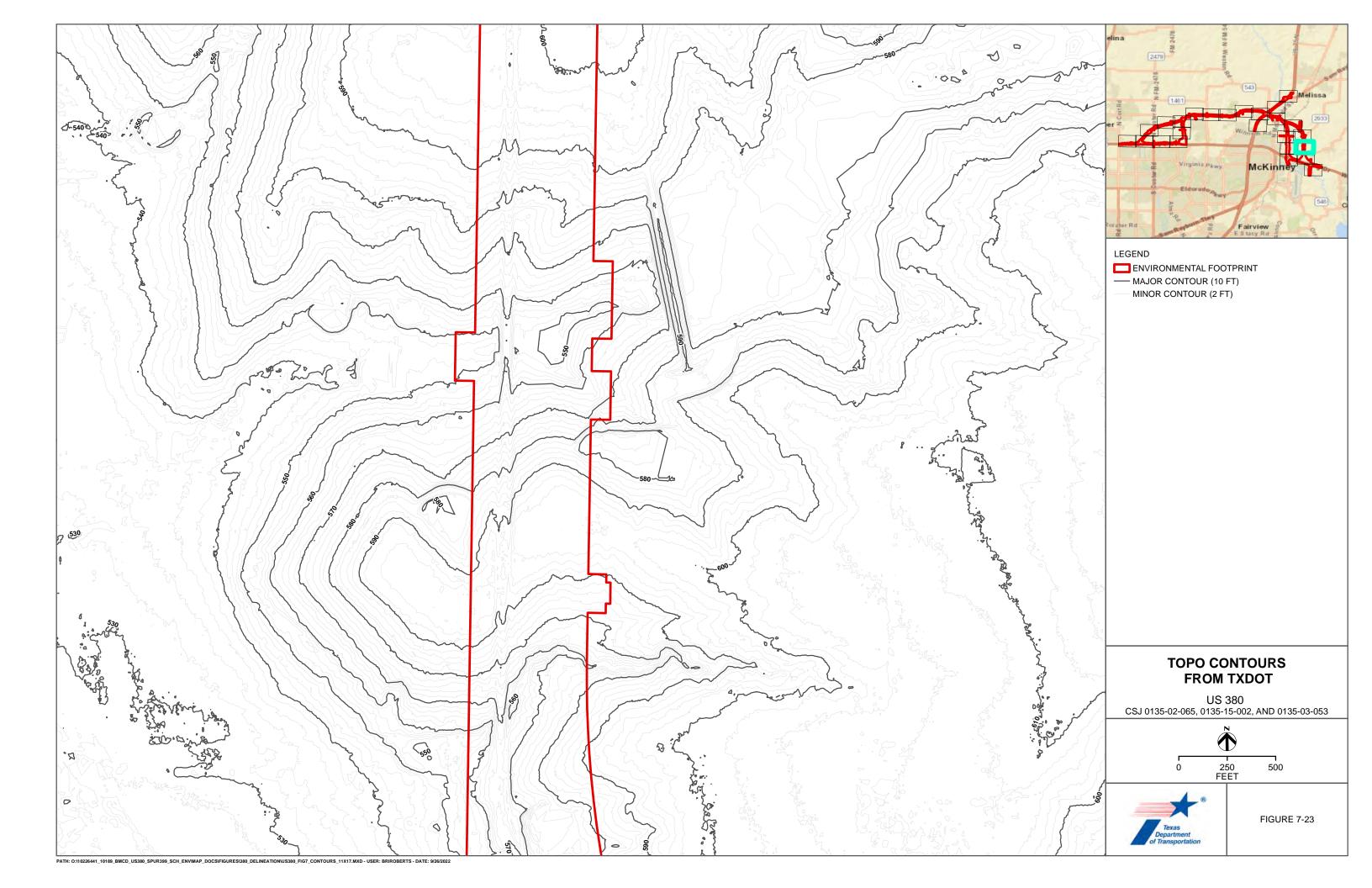


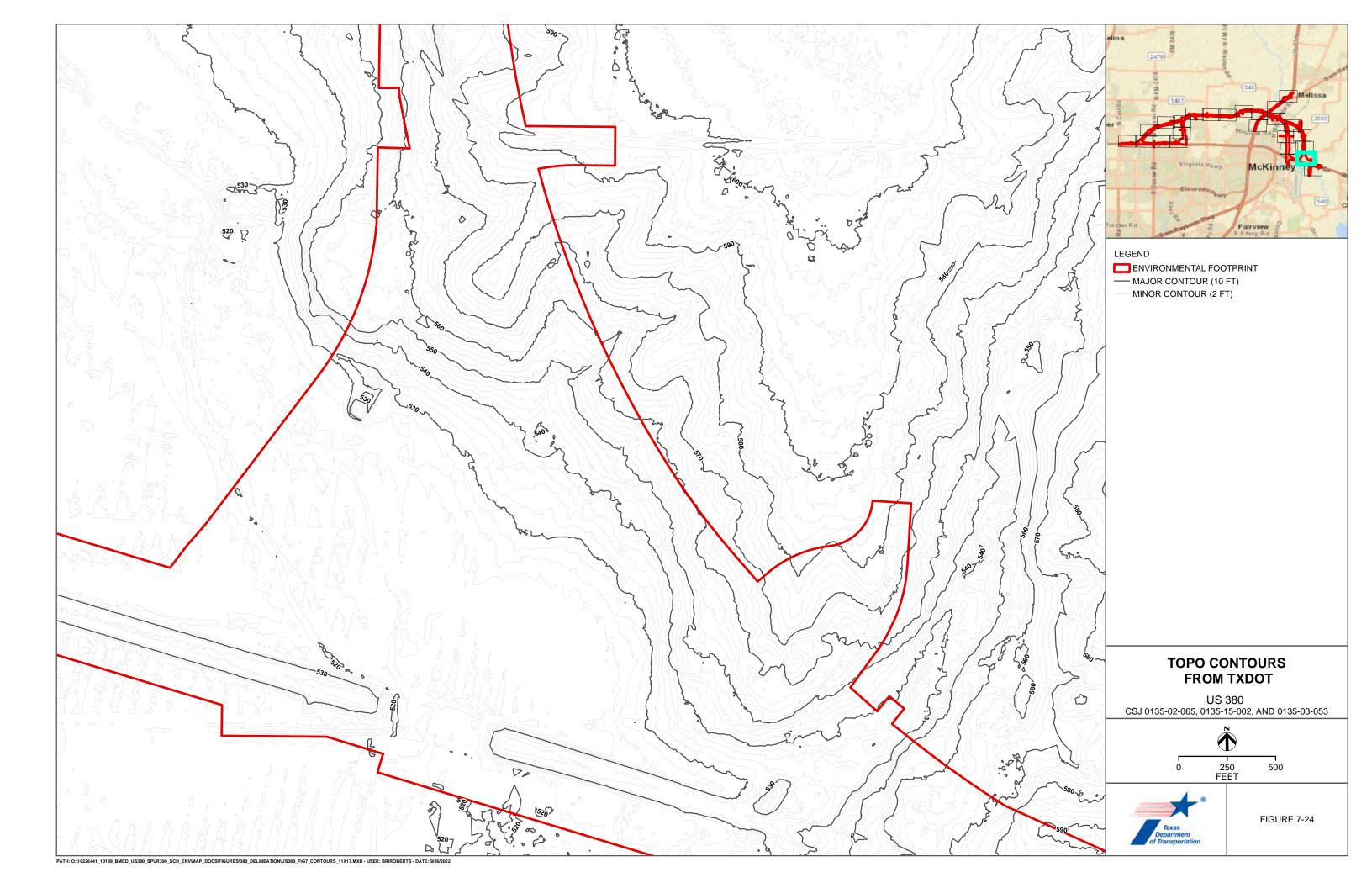


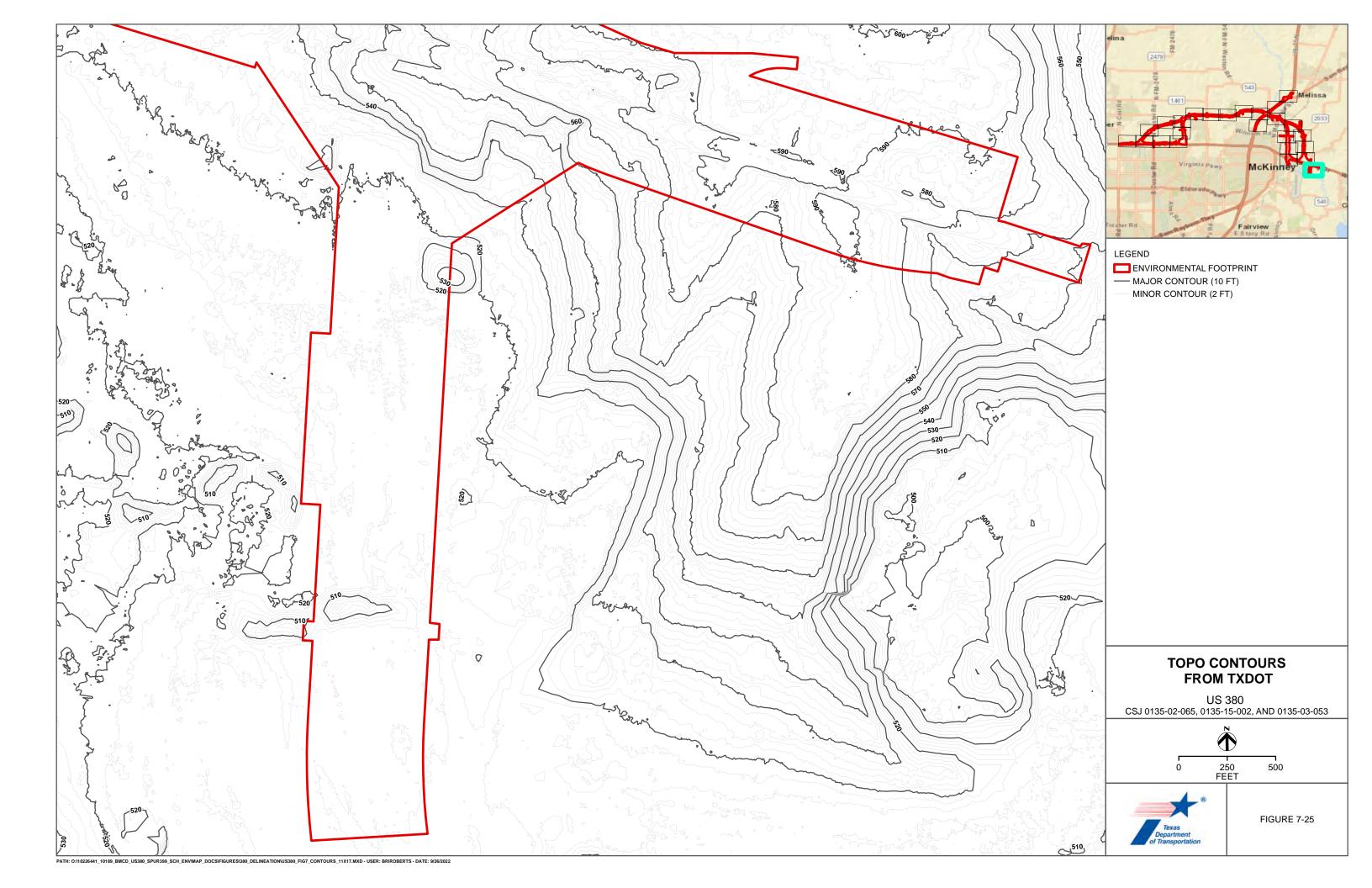


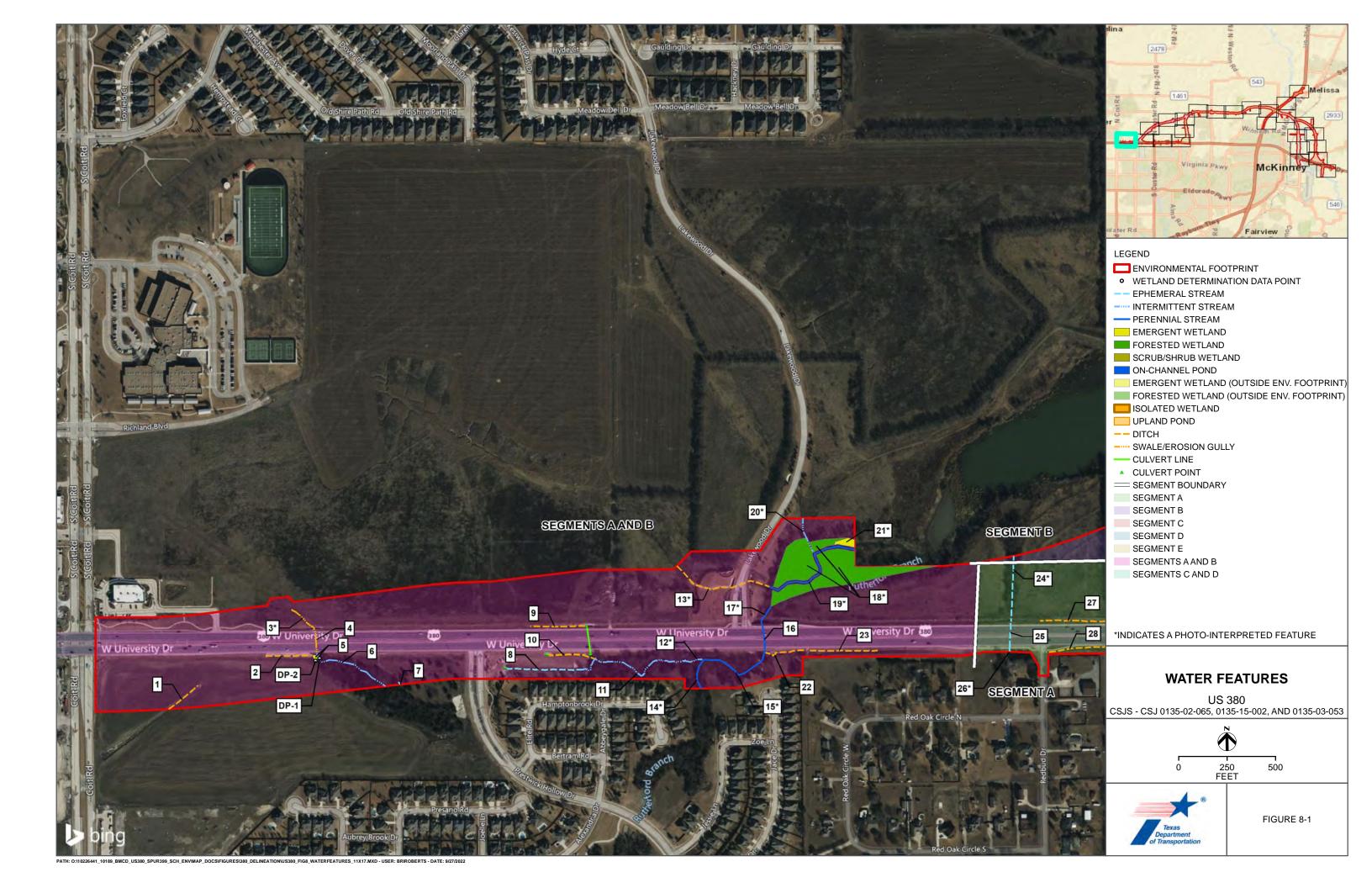


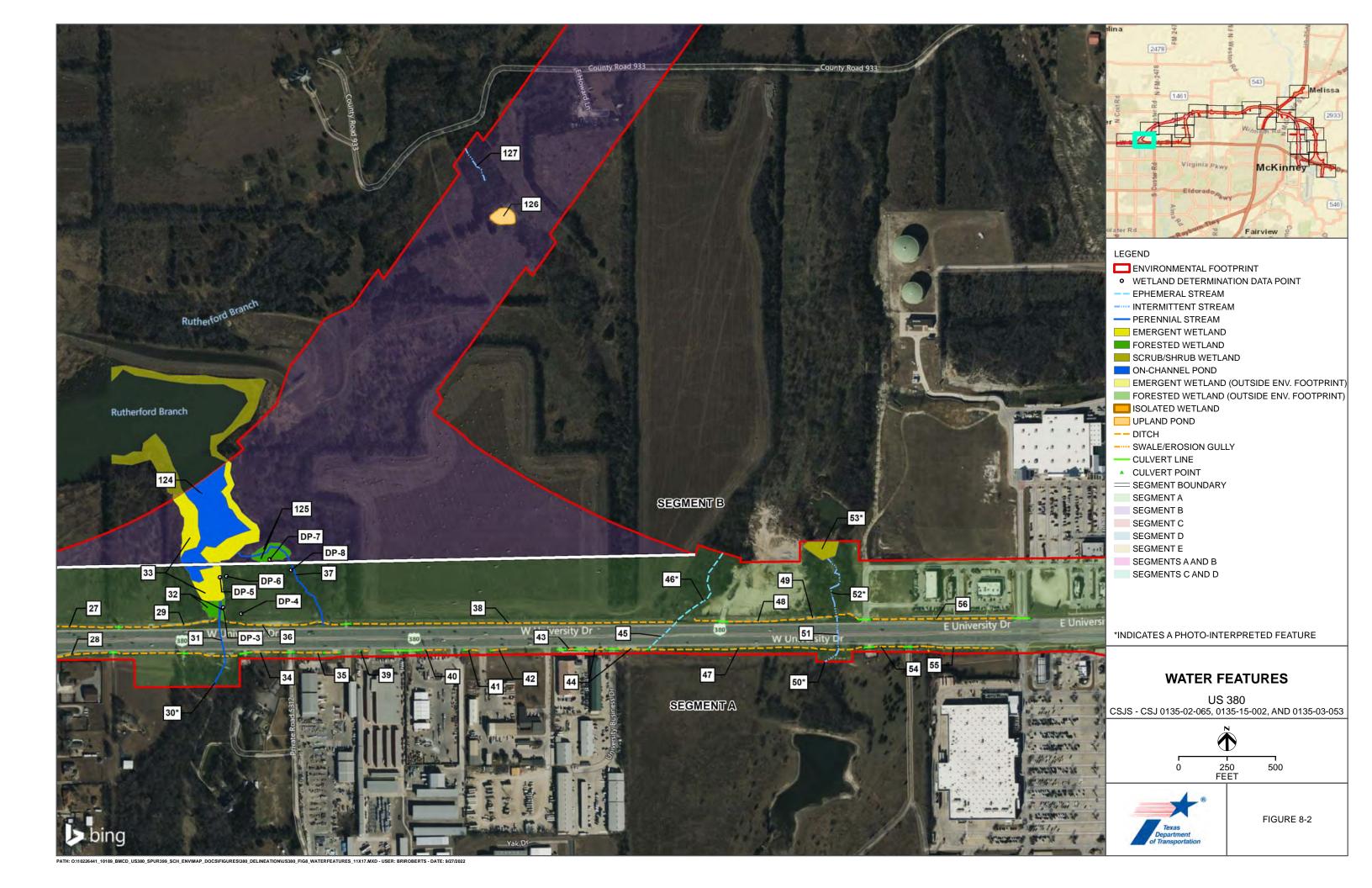










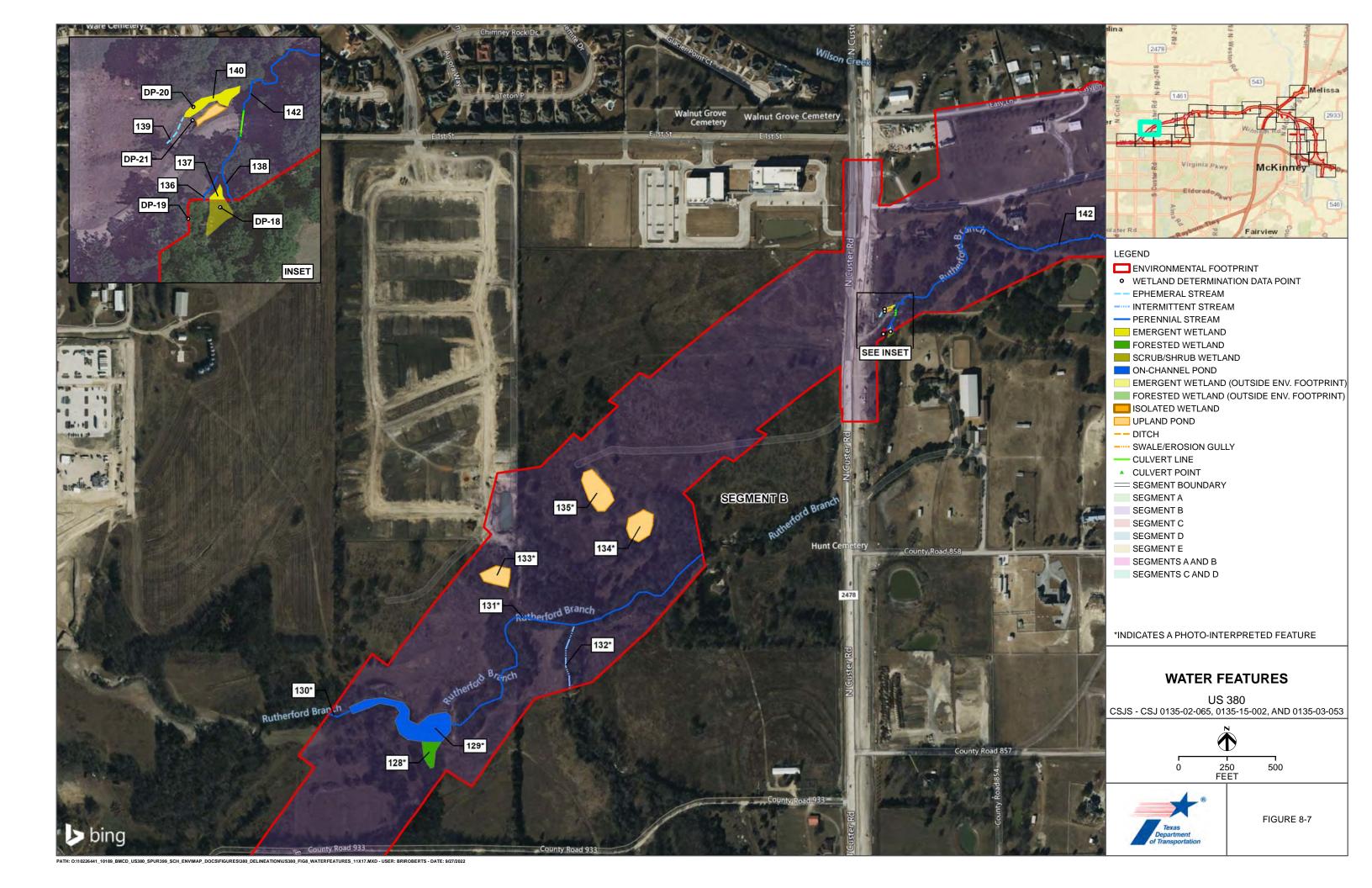


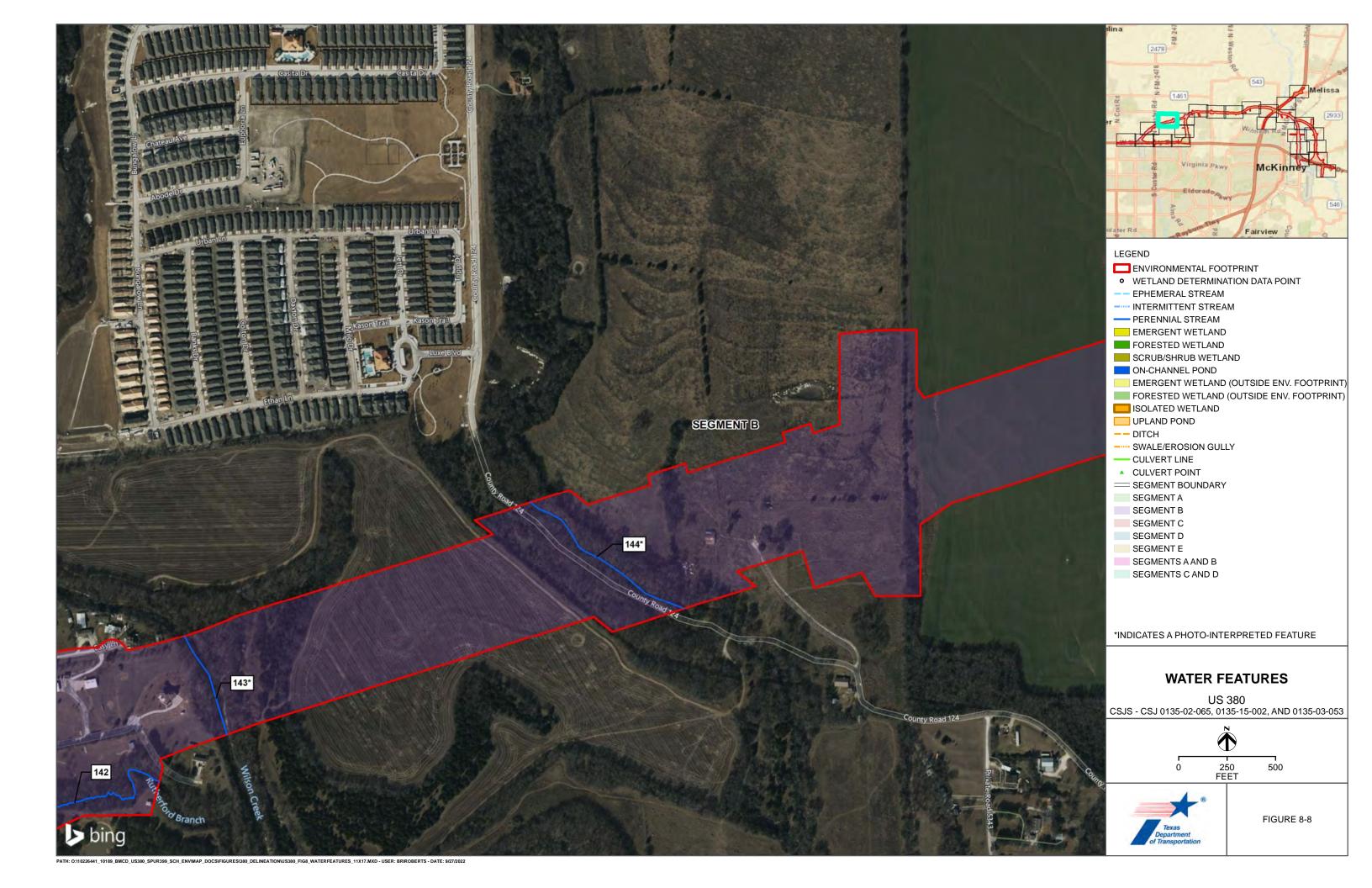




















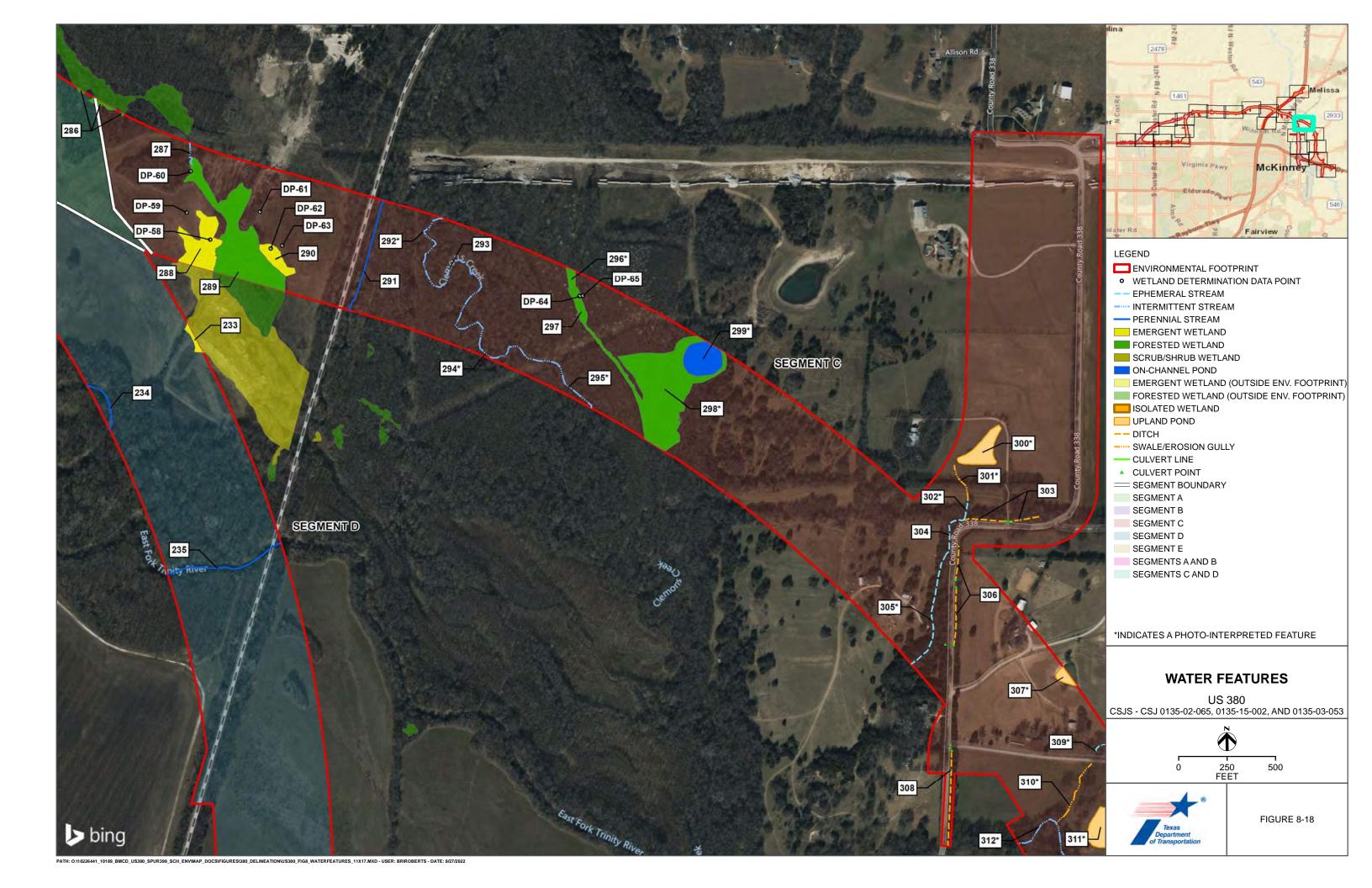


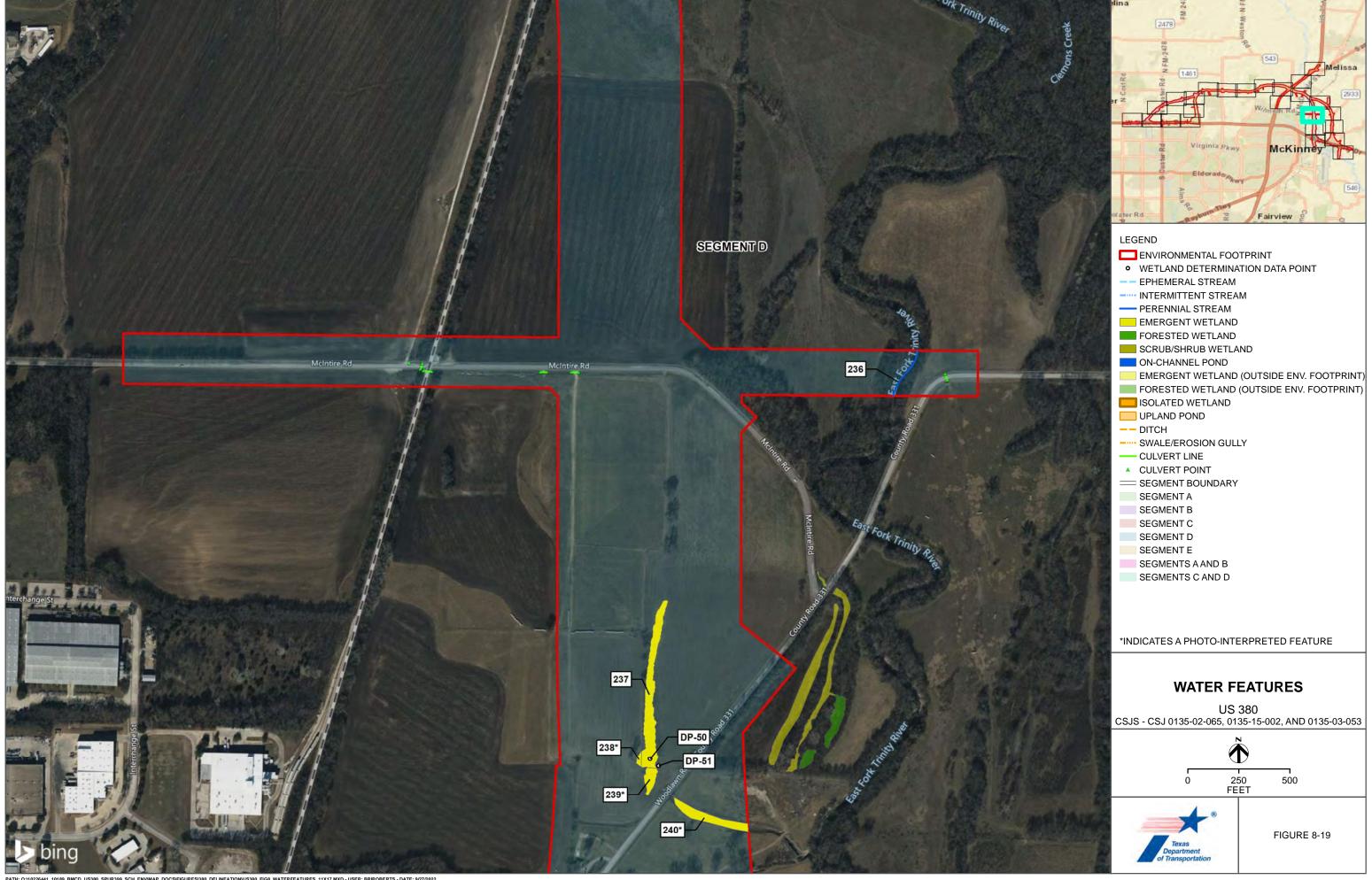


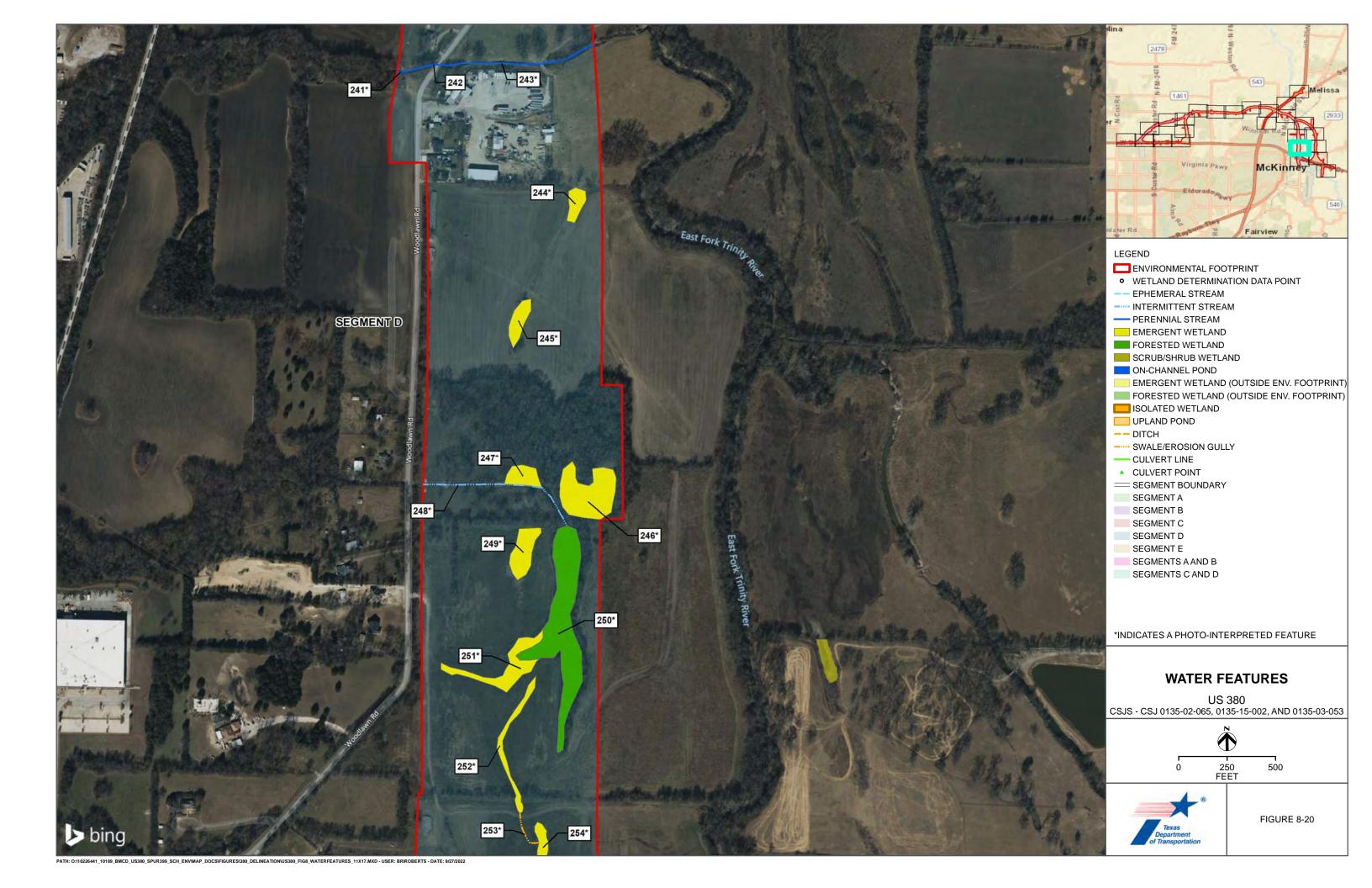


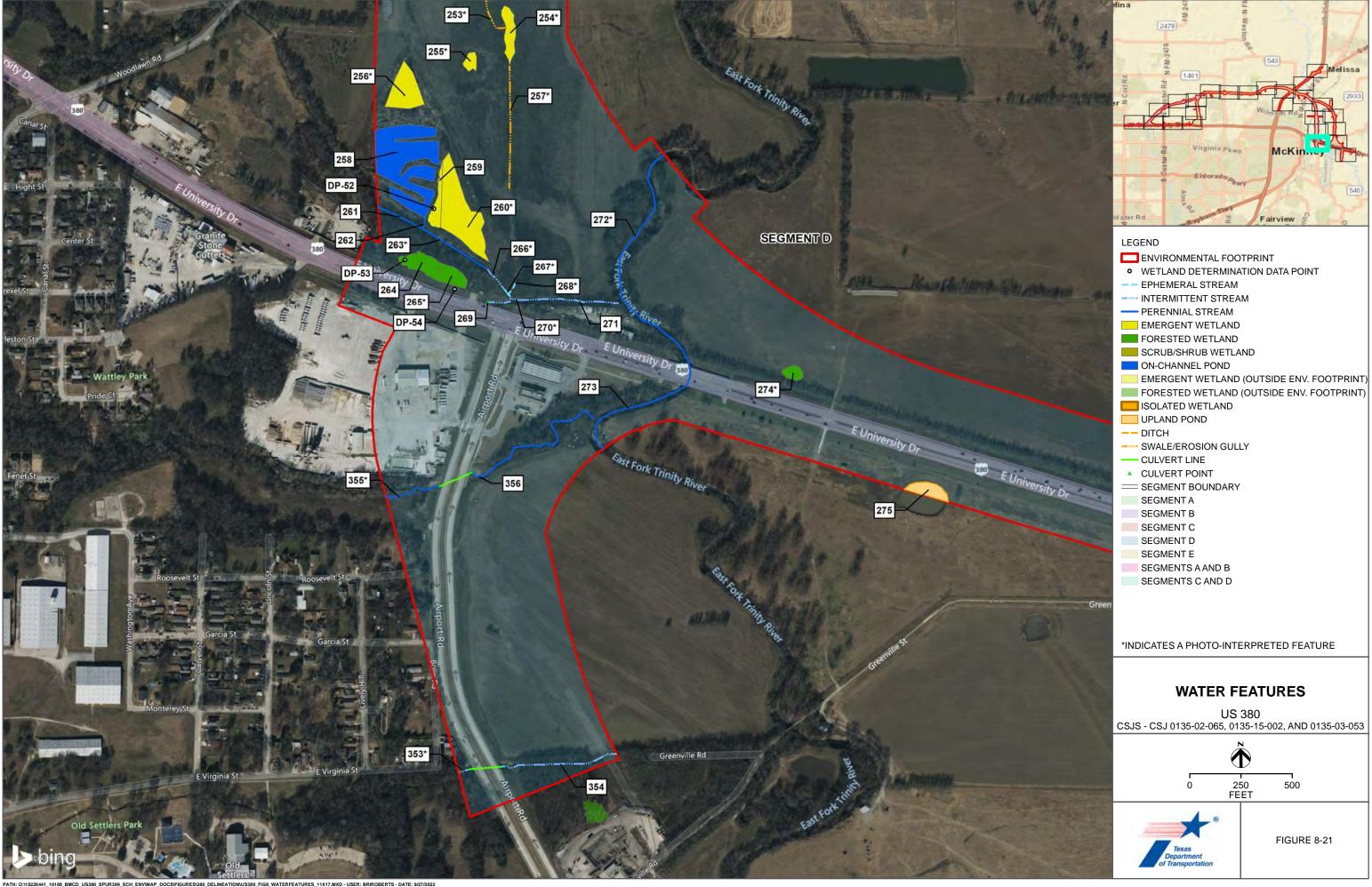


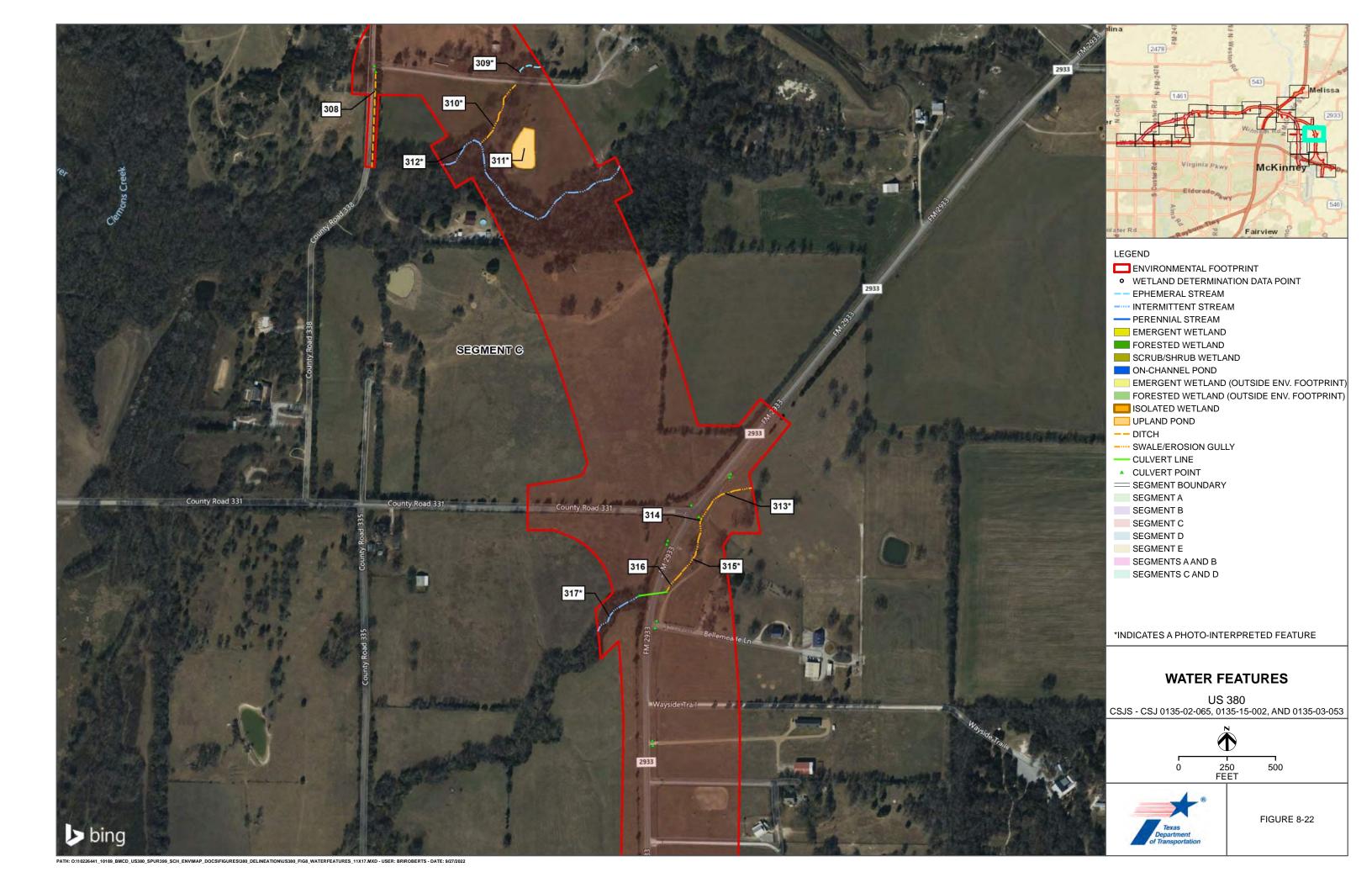


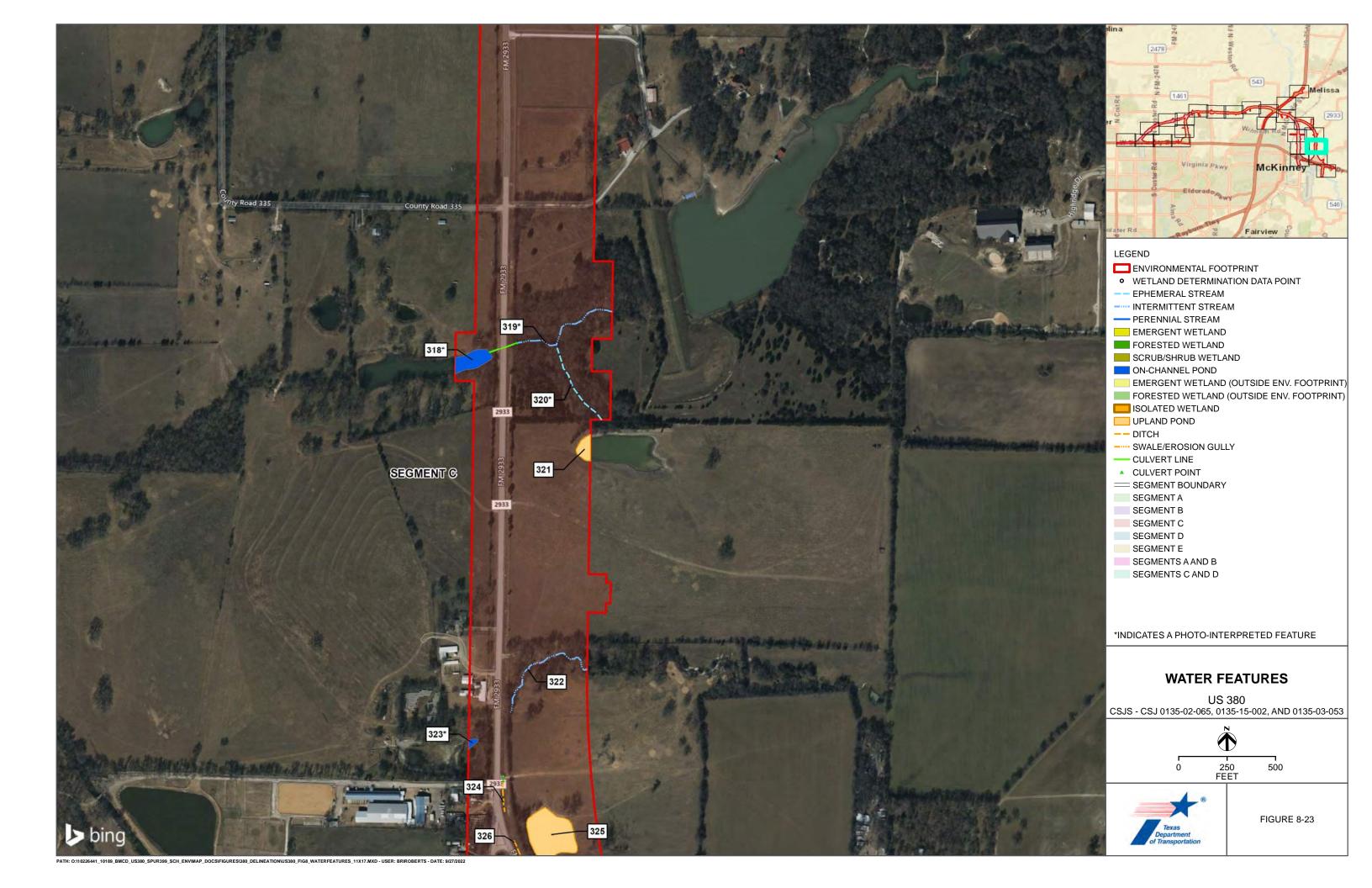


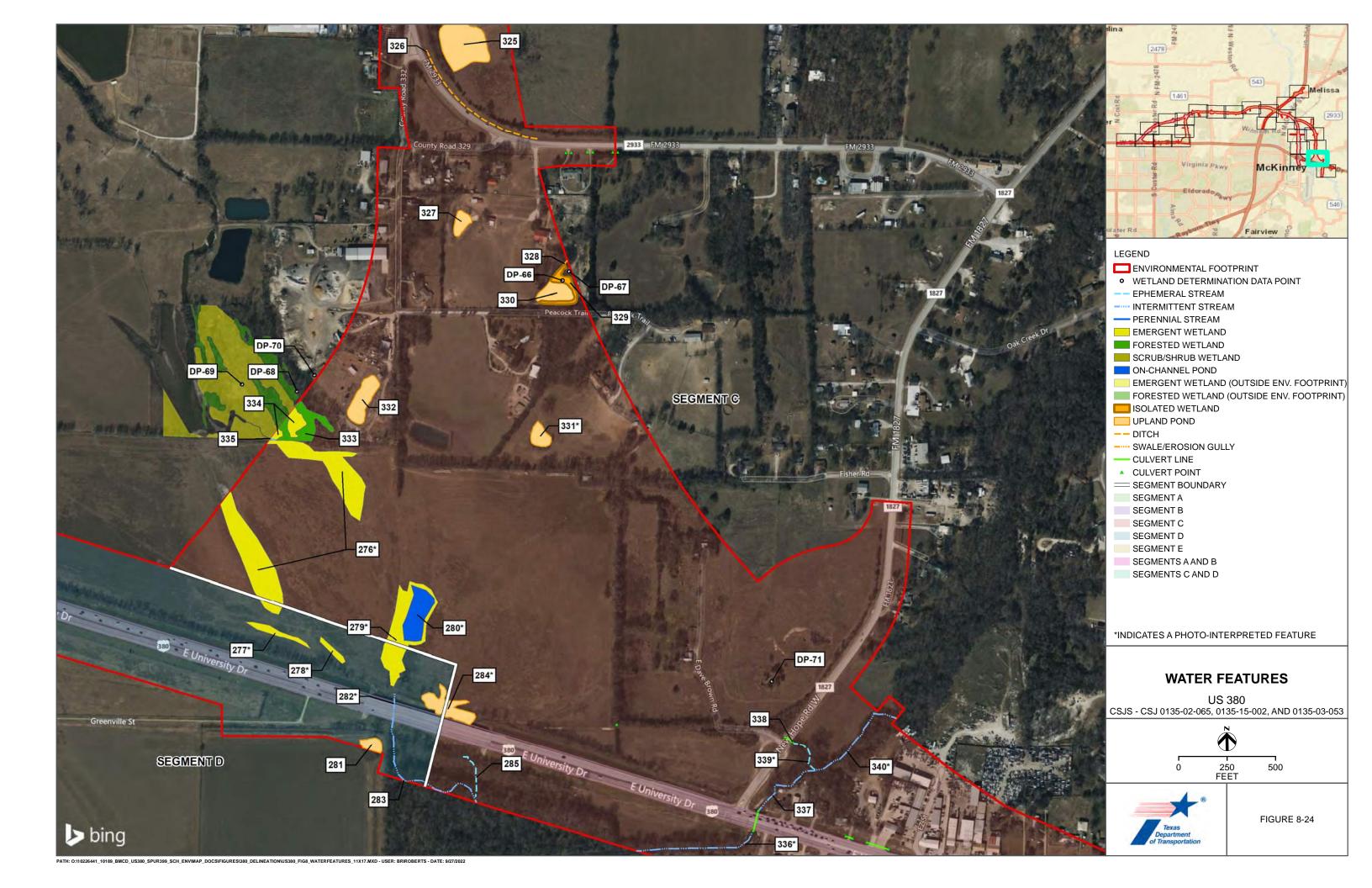


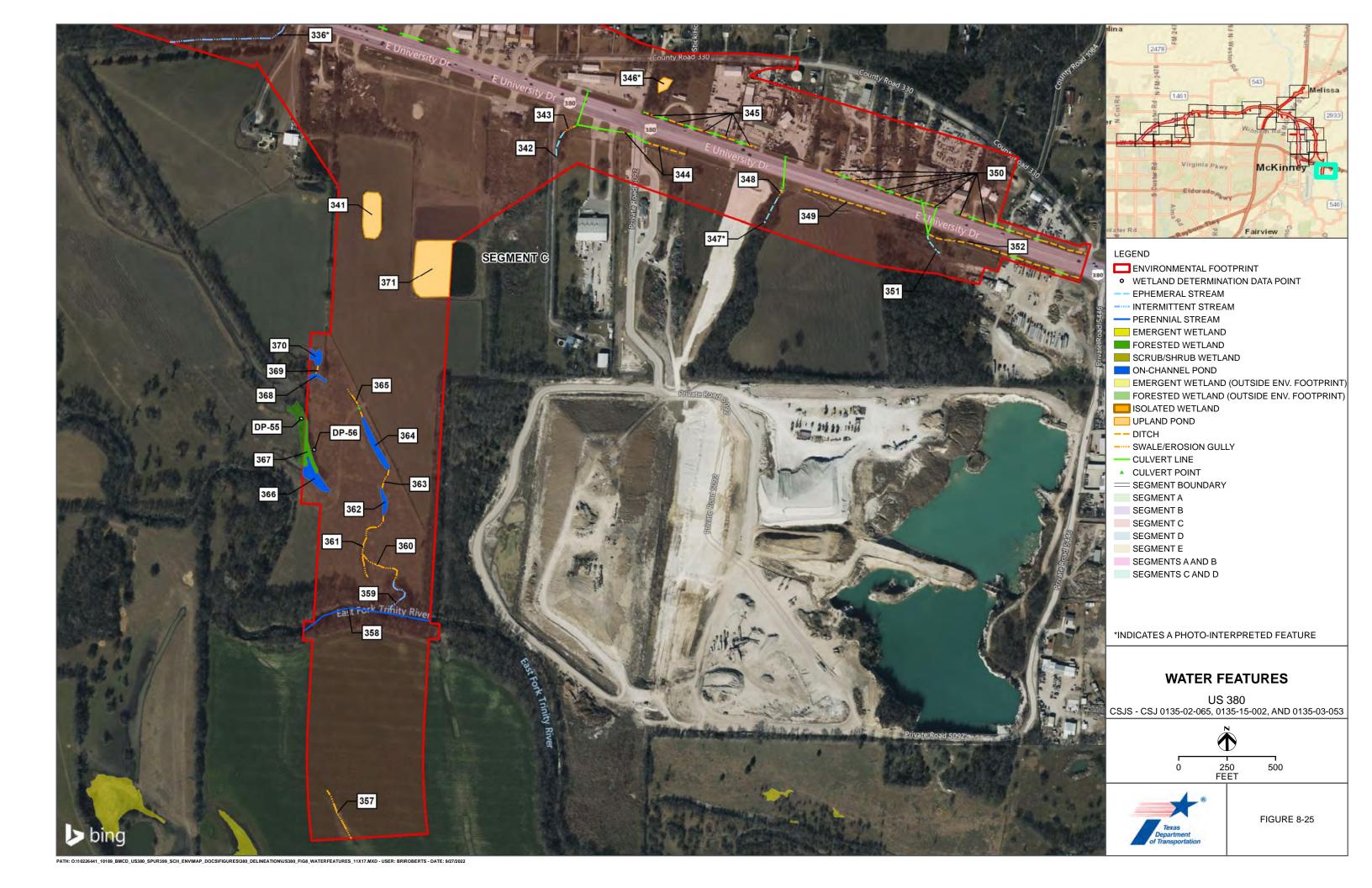












Attachment 2 -	Wetland	Determination	Data Forms	and Stream	Data Forms
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Project/Site: US 380		City/Cou	nty: McKinney	/Collin County	Sampling	g Date: 08/18/2	021
Applicant/Owner: TxDOT				State: TX	Sampling	Point: DP-1	
Investigator(s): Kathryn Burton, Kelsea Hiebert		Section,	Township, Ra	nge: N/A			
Landform (hillslope, terrace, etc.): Fringe		Local re	lief (concave,	convex, none): none		Slope (%):	0
Subregion (LRR):	n Lat: 33.2	218447		Long: <u>-96.763579</u>		Datum: NAD	2 83
Soil Map Unit Name: Houston Black clay, 2 to 4 percent slop	oes, eroded			NWI class	sification: PE	M	
Are climatic / hydrologic conditions on the site typical for this	s time of yea	ar? Yes	No	(If no, explain i	n Remarks.)		
Are Vegetation, Soil, or Hydrologys	ignificantly	disturbed	d? Are "	'Normal Circumstance	s" present?	Yes <u>√</u> No	o
Are Vegetation, Soil, or Hydrology r	naturally pro	blematic	? (If ne	eeded, explain any ans	wers in Rem	arks.)	
SUMMARY OF FINDINGS – Attach site map	showing	sampl	ling point l	ocations, transed	cts, impor	tant features	s, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks: Yes ✓ N Yes ✓ N N	0		the Sampled		√ No		
Located within Emergent Wetland Wate 6. Precipitation the day before delineating		ire 5 a	and abuttii	ng Intermittent	Stream V	Vater Feat	ure
VEGETATION – Use scientific names of plan	ts.						
Tree Stratum (Plot size: 30' 1. Salix nigra 2	10	Specie yes		Number of Dominan That Are OBL, FAC' (excluding FAC-):	t Species	3	(A)
3				Total Number of Do		4	(B)
4							(-)
		= Total (Cover	Percent of Dominan That Are OBL, FAC		75.0%	(A/B)
Sapling/Shrub Stratum (Plot size: 15' 1. Salix nigra	10	yes	FACW	Prevalence Index v	vorksheet:		
1. <u>Salix riigra</u> 2				Total % Cover of	of:	Multiply by:	_
3					x ′		_
4				FACW species 20			
	10	= Total (Cover			3 = 0	_
Herb Stratum (Plot size: 5'				FACU species 20		4 = 80	_
1. Typha latifolia	75 20	yes	OBL			5 = 0	
2. Cynodon dactylon		yes	<u>FACU</u>	Column Totals: 115	(A)	195	_ (B)
3				Prevalence Inc	dex = B/A =	1.7	_
4				Hydrophytic Veget	ation Indicat	tors:	
5 6				1 - Rapid Test f	or Hydrophyti	ic Vegetation	
7				✓ 2 - Dominance *	Test is >50%		
8.				√ 3 - Prevalence I	Index is ≤3.0 ¹		
9.				4 - Morphologic	al Adaptation	s ¹ (Provide sup	porting
10				Problematic Hyd		separate sheet)	: _~ \
Woody Vine Stratum (Plot size: 30')		= Total (Cover	¹ Indicators of hydric			
1				be present, unless of			nust
2				Hydrophytic Vegetation	Voc. ✓	No	
% Bare Ground in Herb Stratum 5.0				Present?	Yes	No	
Remarks:							

	cription: (Describe	e to the depi				or contiri	m the absence	or indicators.)
Depth (inches)	Matrix Color (moist)	%	Color (moist)	ox Feature %	es Type ¹	Loc ²	Texture	Remarks
1-2	10YR3/1	95	Color (molot)				loamy clay	Romano
	10YR7/4	5					loamy clay	Likely fill material
2-8	10YR3/2	84	7.5Y4/6	1		PL	loamy clay	
2-0			7.514/0				• ———	Likely fill meeterial
	10YR7/4	15	· · · · · · · · · · · · · · · · ·				loamy clay	Likely fill material
8-12	10YR3/1	32	7.5Y4/6	3	C	PL	loamy clay	
	2.5Y6/3	60		_			loamy clay	Likely fill material
	2.5Y6/8	5					loamy clay	
	· -			_				
	Concentration, D=De					d Sand G		cation: PL=Pore Lining, M=Matrix.
-	Indicators: (Appli	cable to all						for Problematic Hydric Soils ³ :
Histoso	` '				latrix (S4)			Muck (A9) (LRR I, J)
	pipedon (A2) listic (A3)			Redox (S d Matrix (Prairie Redox (A16) (LRR F, G, H) Surface (S7) (LRR G)
	en Sulfide (A4)				ineral (F1)			Plains Depressions (F16)
	ed Layers (A5) (LRR	F)		-	fatrix (F2)		_	RR H outside of MLRA 72 & 73)
	uck (A9) (LRR F, G			ed Matrix			,	ced Vertic (F18)
	ed Below Dark Surfa		✓ Redox					arent Material (TF2)
	ark Surface (A12)	, ,			urface (F7)			Shallow Dark Surface (TF12)
	Mucky Mineral (S1)			Depressi			Other	(Explain in Remarks)
2.5 cm	Mucky Peat or Peat	(S2) (LRR 6	6, H) High Pl	ains Dep	ressions (F	16)	³ Indicators	of hydrophytic vegetation and
5 cm M	ucky Peat or Peat (S3) (LRR F)	(ML	RA 72 &	73 of LRR	H)		d hydrology must be present,
							unless	s disturbed or problematic.
	Layer (if present):							
Type:	- t \		<u></u>					V
	nches):						Hydric Soil	Present? Yes V No No
Remarks:								
HYDROLO	GY							
Wetland Hy	drology Indicators	s:						
Primary Indi	cators (minimum of	one required	l; check all that app	ly)			Seconda	ary Indicators (minimum of two required)
Surface	Water (A1)		Salt Crust	(B11)			Sur	face Soil Cracks (B6)
✓ High Wa	ater Table (A2)		Aquatic Ir		es (B13)			arsely Vegetated Concave Surface (B8)
✓ Saturati	ion (A3)		Hydrogen					inage Patterns (B10)
Water N	Marks (B1)				Table (C2)			dized Rhizospheres on Living Roots (C3)
	nt Deposits (B2)				eres on Livi	ng Roots	· 	where tilled)
	posits (B3)			not tilled		Ü	, ,	yfish Burrows (C8)
	at or Crust (B4)		,		ed Iron (C4	.)		uration Visible on Aerial Imagery (C9)
	posits (B5)		Thin Mucl			,		omorphic Position (D2)
	ion Visible on Aerial	I Imagery (B7						C-Neutral Test (D5)
	Stained Leaves (B9)	0 , (p.a				st-Heave Hummocks (D7) (LRR F)
							<u> </u>	(, (,
' 	,							
Water-S	rvations:	Yes 1	No ✓ Depth (in	iches):				
Water-S Field Obser Surface Wat	rvations: ter Present?		No _ ✓ Depth (ir			-		
Water-S Field Obser Surface Water Table	rvations: ter Present? Present?	Yes <u> </u>	No Depth (ir	iches): 6		Wet	land Hydrolog	v Present? Yes ✓ No
Water-S Field Obser Surface Wat Water Table Saturation F (includes ca	rvations: ter Present? Present? Present? pillary fringe)	Yes / I	No Depth (ir	nches): 6 nches): 2				y Present? Yes No
Water-S Field Obser Surface Wat Water Table Saturation F (includes ca	rvations: ter Present? Present?	Yes / I	No Depth (ir	nches): 6 nches): 2				y Present? Yes No
Water-S Field Obser Surface Wat Water Table Saturation F (includes ca Describe Re	rvations: ter Present? Present? Present? pillary fringe)	Yes / I	No Depth (ir	nches): 6 nches): 2				y Present? Yes <u>√</u> No
Water-S Field Obser Surface War Water Table Saturation F (includes ca Describe Re	rvations: ter Present? Present? Present? pillary fringe) ecorded Data (stream	Yes <u>√</u> ↑ Yes <u>√</u> ↑	No Depth (ir	photos, p	revious ins	pections)	, if available:	
Water-S Field Obser Surface War Water Table Saturation F (includes ca Describe Re	rvations: ter Present? Present? Present? pillary fringe)	Yes <u>√</u> ↑ Yes <u>√</u> ↑	No Depth (ir	photos, p	revious ins	pections)	, if available:	

Project/Site: US 380		City/Cou	inty: Collin Co	unty	Sampling	Date: 08/18	/2021
Applicant/Owner: TxDOT				State: TX	Sampling	Point: DP-2	
Investigator(s): Kelsea Hiebert, Kathryn Burton		Section,	Township, Ra	inge: N/A			
Landform (hillslope, terrace, etc.): Hill slope		Local re	elief (concave,	convex, none): convex		Slope (%): <u>3</u>
Subregion (LRR):	Region Lat: 33.2	218417		Long: <u>-96.763653</u>		_ Datum: N/	AD 83
Soil Map Unit Name: Houston Black clay, 2 to 4 percent				NWI classific	cation: UPI	L	
Are climatic / hydrologic conditions on the site typical for	r this time of yea						
Are Vegetation, Soil, or Hydrology				"Normal Circumstances"		res ✓	No
Are Vegetation, Soil, or Hydrology				eeded, explain any answe			
SUMMARY OF FINDINGS – Attach site ma							es, etc
Lhidranhidia Varadatian Bassada	No. V						
	No ✓ No ✓		s the Sampled			,	
	No ✓	W	rithin a Wetla	nd? Yes	No _	✓	
Remarks:	<u> </u>						
Located on hill slope adjacent to Em	ergent We	tland	Water Fe	ature 5. Precipita	ition the	day bef	ore
delineation.	J			•		,	
VEGETATION – Use scientific names of p	lante						
VEGETATION – Ose scientific fiames of p	Absolute	Domin	ant Indicator	Dominance Test work	sheet:		
Tree Stratum (Plot size: 30'			s? Status	Number of Dominant S			
1		-		That Are OBL, FACW,	or FAC	0	(4)
2				(excluding FAC-):	-	0	_ (A)
3				Total Number of Domir		1	(B)
4				Species Across All Stra	ııa. <u> </u>	·	_ (D)
5	0			Percent of Dominant S That Are OBL, FACW,	pecies	0.0%	(A/R)
Sapling/Shrub Stratum (Plot size: 15'	<u> </u>	= 101a1	Covei				_ (^(D)
1				Prevalence Index wor			
2				Total % Cover of:		Multiply by:	
3				OBL species 0 FACW species 0		= 0	
4						= 0	
Herb Stratum (Plot size: 5'	0	= Total	Cover	FACU species 75			
1. Solidago altissima	60	yes	FACU		x 5		<u> </u>
2. Sorghum halepense	10	no	FACU	Column Totals: 80	(A)	325	(B)
3. Chamaesyce maculata	5	no	<u>FACU</u>	Describers a la dec	. D/A	4 1	
4. Croton glandulosus	5	no	<u>UPL</u>	Prevalence Index Hydrophytic Vegetati			
5				1 - Rapid Test for			
6				2 - Dominance Tes		o vogotanon	
7				3 - Prevalence Ind	ex is ≤3.0 ¹		
8				4 - Morphological			
9 10				data in Remark		•	•
10.	00.0	= Total	Cover	Problematic Hydro	phytic Vege	etation (Expl	ain)
Woody Vine Stratum (Plot size: 30')	<u></u>			¹ Indicators of hydric so be present, unless dist			must
2				Hydrophytic			
	0	= Total	Cover	Vegetation	_	Na ✓	
% Bare Ground in Herb Stratum 20.0				Present? Ye	es	No	
Remarks:							

SUIL							Sampling Point:
Profile Desc	ription: (Describe	to the depth	needed to document the i	ndicator	or confirm	n the absence	of indicators.)
Depth	Matrix (accid)		Redox Features		1 2	T t	Describe
(inches) 0-4	Color (moist) 10YR3/1	_ <u>%</u> 80	Color (moist) %	Type ¹	Loc ²	<u>Texture</u> Clay	Remarks
• • • • • • • • • • • • • • • • • • •	10YR7/6	- 55				Sandy Clay	Likely fill material.
	10YR7/1	_ 				Sandy Clay	Likely fill material.
4-7	10YR7/8	- 10				Sandy Clay	Likely fill material.
	10YR3/1	20					Likely III Material.
						Clay Sandy Clay	Likely fill meterial
7.40	10YR7/4	_ 5					Likely fill material.
7-12	10YR2/1	97				Clay	
	5Y8/1	_ 3				Sandy Clay	Likely fill material.
- , .			educed Matrix, CS=Covered		d Sand Gr		cation: PL=Pore Lining, M=Matrix.
_		cable to all LR	Rs, unless otherwise not				for Problematic Hydric Soils ³ :
Histosol			Sandy Gleyed Ma				Muck (A9) (LRR I, J)
	ipedon (A2)		Sandy Redox (S5				Prairie Redox (A16) (LRR F, G, H)
Black His	` '		Stripped Matrix (S				Surface (S7) (LRR G)
	n Sulfide (A4)	- \	Loamy Mucky Mir			_	Plains Depressions (F16)
	Layers (A5) (LRR ck (A9) (LRR F, G,		Loamy Gleyed Ma Depleted Matrix (I				RR H outside of MLRA 72 & 73) ed Vertic (F18)
	l Below Dark Surfac	,	Redox Dark Surfa	,			arent Material (TF2)
	rk Surface (A12)	50 (711)	Depleted Dark Su				Shallow Dark Surface (TF12)
	ucky Mineral (S1)		Redox Depression				(Explain in Remarks)
	lucky Peat or Peat	(S2) (LRR G , F			16)	3Indicators	of hydrophytic vegetation and
	cky Peat or Peat (S		(MLRA 72 & 7				d hydrology must be present,
						unless	disturbed or problematic.
Restrictive L	.ayer (if present):						
Type:			_				J
Depth (inc	:hes):		_			Hydric Soil	Present? Yes No
Remarks:							
HYDROLO	GY						
	Irology Indicators:	:					
_	ators (minimum of o		heck all that apply)			Seconda	ary Indicators (minimum of two required)
Surface	Water (A1)		Salt Crust (B11)			Surf	face Soil Cracks (B6)
High Wa	ter Table (A2)		Aquatic Invertebrate	s (B13)		Spa	rsely Vegetated Concave Surface (B8)
Saturation	n (A3)		Hydrogen Sulfide Od	dor (C1)		Drai	inage Patterns (B10)
Water M	arks (B1)		Dry-Season Water T	able (C2)		Oxio	dized Rhizospheres on Living Roots (C3)
Sedimen	t Deposits (B2)		Oxidized Rhizosphe	res on Livi	ng Roots	(C3) (w	/here tilled)
Drift Dep	osits (B3)		(where not tilled)			Cray	yfish Burrows (C8)
Algal Ma	t or Crust (B4)		Presence of Reduce	d Iron (C4	.)	Satu	uration Visible on Aerial Imagery (C9)
_	osits (B5)		Thin Muck Surface (Geo	omorphic Position (D2)
	on Visible on Aerial	Imagery (B7)	Other (Explain in Re			FAC	C-Neutral Test (D5)
	ained Leaves (B9)			,			st-Heave Hummocks (D7) (LRR F)
Field Observ	ations:						
Surface Wate	er Present?	Yes No	✓ Depth (inches):				
Water Table			✓ Depth (inches):				
Saturation Pr			✓ Depth (inches):		l l	and Hydrolog	y Present? Yes No
(includes cap	illary fringe)						<u> </u>
Describe Red	corded Data (stream	n gauge, monit	oring well, aerial photos, pr	evious ins	pections),	ıt available:	
Remarks:							

Project/Site: US 380	(City/County	: Collin Cou	unty	Sampling Date: 08/17/2021
Applicant/Owner: TxDOT				State: TX	Sampling Point: DP-3
Investigator(s): Kelsea Hiebert, Kathryn Burton		Section, To	ownship, Ra	inge: N/A	
Landform (hillslope, terrace, etc.): Fringe		Local relie	f (concave,	convex, none): concave	Slope (%): 2
Subregion (LRR): _J - Southwestern Prairies Cotton and Forage Region	Lat: 33.2	19037		_ Long: <u>-96.748344</u>	Datum: NAD 83
Soil Map Unit Name: Austin silty clay, 5 to 8 percent slopes,	moderately	eroded		NWI classification	ation: PFO
Are climatic / hydrologic conditions on the site typical for this	time of yea	ar? Yes	√ No_	(If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology si	gnificantly of	disturbed?	Are '	"Normal Circumstances" p	oresent? Yes <u>√</u> No
Are Vegetation, Soil, or Hydrology na	aturally prol	blematic?		eeded, explain any answer	
SUMMARY OF FINDINGS - Attach site map s	showing	samplir	g point l	ocations, transects	, important features, etc.
Hydrophytic Vegetation Present? Yes ✓ No	`				
Hydric Soil Present? Yes ✓ No.)		ne Sampled	_	
Wetland Hydrology Present? Yes ✓ No		with	nin a Wetlar	nd? Yes <u>√</u>	No
Remarks:					
Located within Forested Wetland Water	Featur	e 32 ar	nd abutti	ing Perennial Stre	am Water Feature
31. Light precipitation during delineation					
VEGETATION – Use scientific names of plant	·e				
VEGETATION – Ose scientific fiames of plant	Absolute	Dominan	t Indicator	Dominance Test works	shoot:
	% Cover	Species?	Status	Number of Dominant Sp	
1. Salix nigra	50	yes	FACW	That Are OBL, FACW, o	or FAC
2				(excluding FAC-):	<u>2</u> (A)
3				Total Number of Domina	
4		ī		Species Across All Strat	ta: <u>2</u> (B)
5				Percent of Dominant Sp	
Sapling/Shrub Stratum (Plot size: 15')	50	= Total Co	ver	That Are OBL, FACW, o	or FAC: 100.0% (A/B)
1. Fraxinus pennsylvanica	15	yes	FAC	Prevalence Index work	ksheet:
2.				Total % Cover of:	Multiply by:
3.					x 1 = 0
4.					x = 0
	15	= Total Co	ver		x 3 = 0
Herb Stratum (Plot size: 5'				FACU species	
1					x = 0 (B)
2				Column Totals:	(A) <u>0</u> (B)
3				Prevalence Index	= B/A = 0.0
4				Hydrophytic Vegetation	n Indicators:
5 6				1 - Rapid Test for H	
7				✓ 2 - Dominance Test	
8				3 - Prevalence Inde	
9.				4 - Morphological A	Adaptations ¹ (Provide supporting s or on a separate sheet)
10.					ohytic Vegetation ¹ (Explain)
		= Total Co			
Woody Vine Stratum (Plot size: 30' 1				'Indicators of hydric soil be present, unless distu	l and wetland hydrology must urbed or problematic.
2.				Hydrophytic	
	0			Vegetation	✓ Na
% Bare Ground in Herb Stratum 100.0	_ _			Present? Yes	s No
Remarks:					

SOIL

Sampling Point: DP-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redo	x Featur	es	. 2	_	
(inches) 0-5	Color (moist) 10YR5/2	<u>%</u> 90	Color (moist) 2.5Y6/8	<u>%</u> 10	Type ¹ C	Loc ²	<u>Texture</u>	Remarks
							Clay	
5-8	10YR5/1	95	5YR4/6	5	_ <u>C</u>	PL	Clay	
8-11	10YR5/2	50	10YR5/6	20	_ <u>C</u>	M/PL	Clay	
	2.5Y8/1	30					Clay	
				_		·		
				_				
			=Reduced Matrix, C			d Sand G	rains. ² Location	on: PL=Pore Lining, M=Matrix.
-		licable to all	LRRs, unless other					Problematic Hydric Soils ³ :
Histosol	` '		Sandy					k (A9) (LRR I, J)
	oipedon (A2) stic (A3)			Redox (S d Matrix (irie Redox (A16) (LRR F, G, H) ace (S7) (LRR G)
	en Sulfide (A4)				lineral (F1)			s Depressions (F16)
	d Layers (A5) (LRF	R F)			//atrix (F2)		_	outside of MLRA 72 & 73)
	ıck (A9) (LRR F, G			ed Matrix	` '		Reduced	Vertic (F18)
	d Below Dark Surfa	ace (A11)			face (F6)			nt Material (TF2)
	ark Surface (A12) /lucky Mineral (S1)		Deplete Redox		Surface (F7)			ow Dark Surface (TF12) plain in Remarks)
	Mucky Peat or Pea				ressions (F	16)		hydrophytic vegetation and
	icky Peat or Peat (· · · —		73 of LRR	,		rdrology must be present,
							unless dis	turbed or problematic.
	Layer (if present)							
Type:	-1 N						Hardela Call Day	√ N-
Depth (in	cnes):						Hydric Soil Pre	esent? Yes No
Remarks:	201.2							
Gravei w	rithin the mat	Irix.						
HYDROLO	GY							
Wetland Hy	drology Indicator	s:						
Primary India	cators (minimum o	f one require	d; check all that app	ly)			Secondary I	ndicators (minimum of two required)
	Water (A1)		Salt Crust					Soil Cracks (B6)
/	ater Table (A2)		Aquatic Ir					y Vegetated Concave Surface (B8)
✓ Saturation	, ,		Hydrogen		, ,			e Patterns (B10)
	larks (B1)				Table (C2)	ina Pooto		d Rhizospheres on Living Roots (C3)
/	nt Deposits (B2) posits (B3)			not tilled	eres on Livi	ing Roots		re tilled) in Burrows (C8)
	at or Crust (B4)				ced Iron (C4	!)	,	on Visible on Aerial Imagery (C9)
_	posits (B5)		Thin Mucl		•	,	,	rphic Position (D2)
✓ Inundati	on Visible on Aeria	al Imagery (B	7) Other (Ex	plain in R	Remarks)		✓ FAC-Ne	eutral Test (D5)
Water-S	tained Leaves (B9)					Frost-H	eave Hummocks (D7) (LRR F)
Field Obser	vations:							
Surface Wat	er Present?	,	No <u>✓</u> Depth (ir			_		
Water Table			No Depth (ir			-		
Saturation P (includes car		Yes <u>√</u>	No Depth (ir	iches): <u> </u>		_ Wetl	land Hydrology Pi	resent? Yes No
		ım gauge, mo	onitoring well, aerial	photos, p	revious ins	pections),	if available:	
Remarks:								
Inundation	on visible on	aerial im	agery 02/200	1, 12/	2015, 1	/2018,	and 04/2016	6. Saturation on aerial
imagery	12/2009, 03/	<mark>/2015, 0</mark> 1	1/2017, 06/20	19, an	d 11/20	20.		
-								

Project/Site: US 380	(City/Cou	ınty: Collin Cou	ınty	Sampling	Date: 08/17/2	:021
Applicant/Owner: TxDOT				State: TX			
Investigator(s): Kelsea Hiebert, Wyatt Wolfenkoehler, Kathry	n Burton	Section,	Township, Rai	nge: N/A			
Landform (hillslope, terrace, etc.): Hillslope		Local re	elief (concave,	convex, none): convex	(Slope (%):	1
Subregion (LRR): J - Southwestern Prairies Cotton and Forage Region				Long: <u>-96.748049</u>			
Soil Map Unit Name: Austin silty clay, 5 to 8 percent slopes, r				NWI class	ification: UPI	-	
Are climatic / hydrologic conditions on the site typical for this							
Are Vegetation, Soil, or Hydrology signature.	gnificantly o	disturbe	d? Are "	Normal Circumstances	" present?	∕es <u>√</u> No	0
Are Vegetation, Soil, or Hydrology na	aturally prol	blematio	? (If ne	eded, explain any ansv	wers in Rema	ırks.)	
SUMMARY OF FINDINGS – Attach site map s				ocations, transec	ts, import	ant feature	s, etc.
Hydrophytic Vegetation Present? Yes No	√ <u></u>	Is	s the Sampled	Area			
Hydric Soil Present? Yes No		W	vithin a Wetlar	nd? Yes	No _	\checkmark	
Wetland Hydrology Present? Yes No Remarks:							
	oont to	Eoro	atad Matl	and Water Feet	uro 22		
Located within unimproved pasture adja	iceni io	rore	sied wella	and water reat	ure 32.		
VEGETATION – Use scientific names of plant	s.						
Troe Stretum (Plot size: 30'			ant Indicator	Dominance Test wo			
			es? Status	Number of Dominant			
1 2				That Are OBL, FACV (excluding FAC-):	V, 01 FAC	1	(A)
3				Total Number of Don	ninant		
4				Species Across All S		4	(B)
5.				Percent of Dominant	Snacias		
	0	= Total	Cover	That Are OBL, FACV	V, or FAC:	25.0%	(A/B)
Sapling/Shrub Stratum (Plot size: 15'				Prevalence Index w	orkshoot:		
1. Salix nigra				Total % Cover of		Multiply by:	
2						= 0	
3				FACW species 5			
4	5	T-1-1	0	FAC species 0			
Herb Stratum (Plot size: 5'	5	= 10tai	Cover	FACU species 100	x 4	= 400	_
1. Sorghum halepense	50	yes	FACU	UPL species	x 5	= 0	_
2. Solidago altissima	25	yes	FACU	Column Totals: 105	(A)	410	_ (B)
3. Cynodon dactylon	20	yes	FACU	Daniel a carlo d	D/A	3 Q	+
4. Euphorbia marginata	5	no	FACU	Prevalence Ind			
5				1 - Rapid Test fo			
6				2 - Dominance T		vogotation	
7				3 - Prevalence Ir			
8				4 - Morphologica		s ¹ (Provide sup	porting
9				data in Rema	rks or on a se	eparate sheet)	
10		= Total		Problematic Hyd	rophytic Veg	etation ¹ (Explai	in)
Woody Vine Stratum (Plot size: 30') 1				¹ Indicators of hydric s be present, unless di			nust
2				Hydrophytic			
	_	= Total	Cover	Vegetation	V	Na ✓	
% Bare Ground in Herb Stratum 0.0				Present?	Yes	NO	
Remarks:							

Profile Desc	ription: (Describ	e to the depth ne	eded to docui	nent the i	ndicator	or confirm	the absence of indicators.)	
Depth	Matrix			x Feature				
(inches)	Color (moist)		color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-12	10YR6/2	40						
0-12	10YR4/1	30		_				
0-12	10YR7/6	30						
				-				
				- <u></u>				
	oncentration, D=De					d Sand Gra	ains. ² Location: PL=Pore	e Lining, M=Matrix.
Hydric Soil I	ndicators: (Appl	icable to all LRR	s, unless othe	rwise not	ed.)		Indicators for Problemat	ic Hydric Soils ³ :
Histosol	` '		Sandy 0				1 cm Muck (A9) (LRR	
	pipedon (A2)		Sandy I				Coast Prairie Redox (
Black His	stic (A3) n Sulfide (A4)			d Matrix (S Mucky Mir	,		Dark Surface (S7) (LI High Plains Depression	
	l Layers (A5) (LRF	? F)		Gleyed Ma			(LRR H outside of	
	ck (A9) (LRR F, G			d Matrix (I			Reduced Vertic (F18)	
	Below Dark Surfa		Redox	Dark Surfa	ace (F6)		Red Parent Material (TF2)
	rk Surface (A12)				ırface (F7)		Very Shallow Dark Su	* *
	lucky Mineral (S1)			Depressio	, ,	4.0\	Other (Explain in Rem	
	lucky Peat or Pea cky Peat or Peat (_		essions (F 73 of LRR		³ Indicators of hydrophytic wetland hydrology mu	_
5 cm wu	cky real of real (33) (LKK F)	(IVIL	NA 12 0	73 OI LKK	П)	unless disturbed or pr	
Restrictive L	ayer (if present):							
Type:								,
Depth (inc	ches):						Hydric Soil Present? Ye	es No
Remarks:								
								
HYDROLO								
	drology Indicator							
	ators (minimum of	one required; che						ninimum of two required)
	Water (A1)		Salt Crust				Surface Soil Cracks	
_	ter Table (A2)		Aquatic In					Concave Surface (B8)
Saturatio			Hydrogen				Drainage Patterns (
	arks (B1)		Dry-Seaso		, ,	an Deete (.	eres on Living Roots (C3)
	t Deposits (B2) osits (B3)		Oxidized F	knizospne not tilled)		ng Roots (C3) (where tilled) Crayfish Burrows (0	201
	t or Crust (B4)		Presence			1)		n Aerial Imagery (C9)
_	osits (B5)		Thin Muck			7)	Geomorphic Position	
	on Visible on Aeria	I Imagery (B7)	Other (Ex				FAC-Neutral Test (` '
	tained Leaves (B9						Frost-Heave Humm	
Field Observ	/ations:							
Surface Water	er Present?	Yes No _	✓ Depth (in	ches):				
Water Table	Present?	Yes No _	✓ Depth (in	ches):				
Saturation Pr	esent?	Yes No _	✓ Depth (in	ches):		Wetla	nd Hydrology Present? Y	es No <u>√</u>
(includes cap								
Describe Red	corded Data (strea	m gauge, monitor	ing weil, aerial	pnotos, pr	evious ins	pections), i	r available:	
Daw								
Remarks:								

Project/Site: US 380	c	City/County	Collin Cou	ınty	Sampling Date: <u>08/17/20</u>)21
Applicant/Owner: TxDOT				State: TX	Sampling Point: DP-5	
Investigator(s): Kelsea Hiebert, Kathryn Burton		Section, To	wnship, Rar	nge: N/A		
Landform (hillslope, terrace, etc.): Pond Fringe	ا	Local relief	(concave, c	convex, none): concave	Slope (%): 1	1
Subregion (LRR):	n Lat: 33.2	19469		Long: <u>-96.748387</u>	Datum: NAD 8	83
Soil Map Unit Name: Austin silty clay, 5 to 8 percent slopes,	moderately e	eroded		NWI classific	ation: PEM	~
Are climatic / hydrologic conditions on the site typical for this	s time of yea	r? Yes	√ No	(If no, explain in R	emarks.)	
Are Vegetation, Soil, or Hydrologys	ignificantly c	disturbed?	Are "	Normal Circumstances" p	oresent? Yes <u>√</u> No _	
Are Vegetation, Soil, or Hydrologyn	aturally prob	olematic?	(If ne	eded, explain any answe	rs in Remarks.)	
SUMMARY OF FINDINGS - Attach site map	showing	samplin	g point lo	ocations, transects	, important features,	, etc.
,			<u> </u>	·	· ·	
Hydrophytic Vegetation Present? Yes ✓ N Hydric Soil Present? Yes ✓ N			e Sampled	,	,	
Wetland Hydrology Present? Yes ✓ N		with	in a Wetlan	ıd? Yes <u>√</u>	No	
Remarks:						
Located within Emergent Wetland Water	er Featu	re 33. \	Water F	eature 33 is a frir	nge wetland to Por	nd
water feature 124.						
VEGETATION – Use scientific names of plan	ts.					
	Absolute	Dominant	Indicator	Dominance Test work	sheet:	
Tree Stratum (Plot size: 30'	% Cover			Number of Dominant Sp		
1. Salix nigra 2. Fraxinus pennsylvanica	10	yes	FACV	That Are OBL, FACW, (excluding FAC-):		(A)
	• ——		FAC 🔽			()
3				Total Number of Domini Species Across All Stra	•	(B)
5				Percent of Dominant Sp		+
		= Total Cov	/er	That Are OBL, FACW, of		(A/B)
Sapling/Shrub Stratum (Plot size: 15'				Prevalence Index worl	ksheet:	
1				Total % Cover of:		
2					x 1 = 90	
4.					x 2 = 20	
-	0 :	= Total Cov	/er		x 3 = 30	
Herb Stratum (Plot size: 5' 1 Persicaria hydropiperoides	90	V/00		FACU species 0	$x 4 = \frac{0}{0}$ $x 5 = \frac{0}{0}$	
			OBL 🔽	UPL species 0 Column Totals: 110		(B)
2						(D)
4.				Prevalence Index		
5				Hydrophytic Vegetation 1 - Rapid Test for H		
6				✓ 2 - Dominance Tes		
7				✓ 3 - Prevalence Inde		
8					Adaptations ¹ (Provide suppo	orting
9				data in Remarks	s or on a separate sheet)	
10		= Total Cov	/Or	Problematic Hydrop	phytic Vegetation ¹ (Explain))
Woody Vine Stratum (Plot size: 30' 1.			/EI	¹ Indicators of hydric soil be present, unless distu	l and wetland hydrology muurbed or problematic.	ıst
2				Hydrophytic		
40.0	0 =	= Total Cov	/er	Vegetation	√ No	
% Bare Ground in Herb Stratum 10.0 Remarks:				Present? Yes	s No	
Remarks:						

Profile Desc	cription: (Describe	to the dep				or confirn	n the absence of in	dicators.)
Depth	Matrix			x Feature				
(inches)	Color (moist)		Color (moist)	%	Type'	Loc ²	<u>Texture</u>	Remarks
0-6	10YR2/1	40	2.5YR4/6	5	c 🔽	PL 🔻	Clay Loam	
0-6	10YR4/2	55						
6-12	5YR2.5/1	70	7.5YR4/6	30	C	M/PL	Clay Loam	
	-							
l								
	-							
			Reduced Matrix, C			ed Sand G		n: PL=Pore Lining, M=Matrix.
_		cable to all	LRRs, unless othe					Problematic Hydric Soils ³ :
Histosol	` '		Sandy				1 cm Muck	
	pipedon (A2)		Sandy					ie Redox (A16) (LRR F, G, H)
_	istic (A3)			d Matrix (ce (S7) (LRR G)
	en Sulfide (A4)	- \			ineral (F1)			Depressions (F16)
	d Layers (A5) (LRR uck (A9) (LRR F, G ,	,		d Matrix	Matrix (F2)		Reduced Ve	outside of MLRA 72 & 73)
	d Below Dark Surfa			Dark Surf				Material (TF2)
	ark Surface (A12)	00 (7111)			urface (F7)			w Dark Surface (TF12)
	Mucky Mineral (S1)		✓ Redox					ain in Remarks)
	Mucky Peat or Peat	(S2) (LRR (•	, ,	16)		drophytic vegetation and
	ucky Peat or Peat (. , .	· · · —		73 of LRR	,		Irology must be present,
								urbed or problematic.
Restrictive	Layer (if present):							
Type:								/
Depth (in	ches):						Hydric Soil Pres	sent? Yes No
Remarks:								
HYDROLO	ocv							
_	drology Indicators							
Primary Indi	cators (minimum of	one required	d; check all that appl				-	dicators (minimum of two required)
	Water (A1)		Salt Crust					Soil Cracks (B6)
✓ High Wa	ater Table (A2)		Aquatic In	vertebrat	es (B13)			Vegetated Concave Surface (B8)
Saturati	on (A3)		Hydrogen	Sulfide C	Odor (C1)		Drainage	Patterns (B10)
Water M	1arks (B1)		Dry-Seaso	on Water	Table (C2)		Oxidized	Rhizospheres on Living Roots (C3)
Sedime	nt Deposits (B2)		Oxidized F	Rhizosph	eres on Liv	ing Roots	(C3) (where	tilled)
✓ Drift De	posits (B3)		(where	not tilled	l)		Crayfish	Burrows (C8)
Algal Ma	at or Crust (B4)		Presence	of Reduc	ed Iron (C4	1)	✓ Saturatio	n Visible on Aerial Imagery (C9)
Iron Dep	posits (B5)		Thin Muck	Surface	(C7)		✓ Geomorp	phic Position (D2)
✓ Inundati	ion Visible on Aerial	Imagery (B	7) Other (Ex	olain in R	emarks)		✓ FAC-Neu	ıtral Test (D5)
Water-S	Stained Leaves (B9)						Frost-Hea	ave Hummocks (D7) (LRR F)
Field Obser	vations:							
Surface Wat	er Present?	Yes	No ✓ Depth (in	ches):				
Water Table	Dresent?	Vac 🗸	No <u>✓</u> Depth (in No Depth (in	chee). 8		_		
							land Hydralamy Dra	esent? Yes No
Saturation P	resent? pillary fringe)	res	No 🗸 Depth (in	cnes):		_ vveti	and Hydrology Pre	esent? res No
		m gauge, mo	onitoring well, aerial	photos, p	revious ins	pections),	if available:	
Remarks:								
Inundation	on visible on	aerial im	agery 02/200	1, 12/	2015. 1	/2018.	and 04/2016.	Saturation on aerial
			/2017, 06/20					

Project/Site: US 380		City/Count	ty: Collin Co	unty	Sampling Date: 08/17/	/2021
Applicant/Owner: TxDOT				State: TX	Sampling Point: DP-6	
Investigator(s): Kelsea Hiebert, Wyatt Wolfenkoehler, Kat	hryn Burton	Section, T	ownship, Ra	nge: N/A		
Landform (hillslope, terrace, etc.): Berm		Local relie	ef (concave,	convex, none): convex	Slope (%)): <u>1</u>
Subregion (LRR): J - Southwestern Prairies Cotton and Forage Reg	gion Lat: 33.2	219475		Long: <u>-96.748285</u>	Datum: NA	AD 83
Soil Map Unit Name: Austin silty clay, 5 to 8 percent slope	s, moderately	eroded		NWI classific	cation: UPL	•
Are climatic / hydrologic conditions on the site typical for t	his time of yea	ar? Yes_	√ No_	(If no, explain in R	temarks.)	
Are Vegetation, Soil, or Hydrology	significantly	disturbed?	? Are '	"Normal Circumstances" p	oresent? Yes ✓ N	No
Are Vegetation, Soil, or Hydrology				eeded, explain any answe		
SUMMARY OF FINDINGS – Attach site map						es etc
					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Hydrophytic Vegetation Present? Yes		Is t	the Sampled	I Area		
Hydric Soil Present? Yes Wetland Hydrology Present? Yes	_	wit	thin a Wetlar	nd? Yes	No <u>√</u>	
Remarks:	140					
Located adjacent to Emergent Wetlan	d Water	Featur	o 33			
Located adjacent to Emergent Wellan	u vvatei	Catur	C 33.			
VEGETATION – Use scientific names of pla						
Tree Stratum (Plot size: 30'	Absolute % Cover		nt Indicator Status	Dominance Test work		
1. Ulmus alata	30	yes	FACU	Number of Dominant S That Are OBL, FACW,		
2. Ulmus americana	20	yes	FAC	(excluding FAC-):	4	_ (A)
3. Gleditsia triacanthos	20	yes	FACU	Total Number of Domir	_	
4				Species Across All Stra	ata: <u>6</u>	_ (B)
5				Percent of Dominant S		#
Sapling/Shrub Stratum (Plot size: 15'	70	= Total C	over	That Are OBL, FACW,	or FAC: <u>66.7%</u>	_ (A/B)
1. Ilex vomitoria	15	yes	FAC	Prevalence Index wor	ksheet:	
2. Fraxinus pennsylvanica	15	yes	FAC	Total % Cover of:		
3.					x 1 = 0	
4				*	x 2 = 0	
Hart Otation (Blatte's 5'	30	= Total Co	over		x 3 = 180 x 4 = 200	
Herb Stratum (Plot size: 5' 1. Cardiospermum halicacabum	10	yes	FAC		$x = \frac{1}{2}$ $x = \frac{1}{2}$	
2					(A) 380	— (B)
3.					, ,	(- <i>)</i>
4.				Prevalence Index		
5				Hydrophytic Vegetation		
6				1 - Rapid Test for I	Hydrophytic Vegetation	
7				3 - Prevalence Ind		
8				1 	ex is ≥3.0 Adaptations¹ (Provide su	nnorting
9					s or on a separate sheet	
10				Problematic Hydro	phytic Vegetation ¹ (Expla	ain)
Woody Vine Stratum (Plot size: 30'		= Total Co	over	¹ Indicators of hydric so be present, unless dist	il and wetland hydrology urbed or problematic.	must
1					<u> </u>	
2	0	= Total C	over	Hydrophytic Vegetation	✓	
% Bare Ground in Herb Stratum 90.0		- Total O	0 1 01	Present? Ye	es No	
Remarks:						

		confirm the absence of indicators.)
Depth Matrix	Redox Features	
	Color (moist)	_oc² Texture Remarks
0-16 10YR4/2 100		Silty Clay
¹ Type: C=Concentration, D=Depletion, RM=Rec		
Hydric Soil Indicators: (Applicable to all LRF		Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Gleyed Matrix (S4)	1 cm Muck (A9) (LRR I, J)
Histic Epipedon (A2)	Sandy Redox (S5)	Coast Prairie Redox (A16) (LRR F, G, H)
Black Histic (A3)	Stripped Matrix (S6)	Dark Surface (S7) (LRR G)
Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1)	High Plains Depressions (F16)
Stratified Layers (A5) (LRR F) 1 cm Muck (A9) (LRR F, G, H)	Loamy Gleyed Matrix (F2)Depleted Matrix (F3)	(LRR H outside of MLRA 72 & 73) Reduced Vertic (F18)
Depleted Below Dark Surface (A11)	Redox Dark Surface (F6)	Reduced Vertic (F16) Red Parent Material (TF2)
Thick Dark Surface (A12)	Depleted Dark Surface (F7)	Very Shallow Dark Surface (TF12)
Sandy Mucky Mineral (S1)	Redox Depressions (F8)	Other (Explain in Remarks)
2.5 cm Mucky Peat or Peat (S2) (LRR G, H		
5 cm Mucky Peat or Peat (S3) (LRR F)	(MLRA 72 & 73 of LRR H)	wetland hydrology must be present,
		unless disturbed or problematic.
Restrictive Layer (if present):		
Type:	_	
Depth (inches):	_	Hydric Soil Present? Yes No
Remarks:		
HYDROLOGY		
Wetland Hydrology Indicators:		
monaria riyarology maloatoro.		
Primary Indicators (minimum of one required; ch	eck all that apply)	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one required; ch		
Primary Indicators (minimum of one required; ch Surface Water (A1)	Salt Crust (B11)	Surface Soil Cracks (B6)
Primary Indicators (minimum of one required; ch		
Primary Indicators (minimum of one required; ch Surface Water (A1) High Water Table (A2)	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	Surface Soil Cracks (B6)Sparsely Vegetated Concave Surface (B8)Drainage Patterns (B10)
Primary Indicators (minimum of one required; ch Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	 Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) 	 Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3)
Primary Indicators (minimum of one required; ch Surface Water (A1) High Water Table (A2) Saturation (A3)	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	 Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3)
Primary Indicators (minimum of one required; ch Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	 Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living (where not tilled) 	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)
Primary Indicators (minimum of one required; ch — Surface Water (A1) — High Water Table (A2) — Saturation (A3) — Water Marks (B1) — Sediment Deposits (B2) — Drift Deposits (B3) — Algal Mat or Crust (B4)	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living (where not tilled) Presence of Reduced Iron (C4)	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Primary Indicators (minimum of one required; ch Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living (where not tilled) Presence of Reduced Iron (C4) Thin Muck Surface (C7)	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Primary Indicators (minimum of one required; check of the control	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living (where not tilled) Presence of Reduced Iron (C4)	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
Primary Indicators (minimum of one required; ch Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living (where not tilled) Presence of Reduced Iron (C4) Thin Muck Surface (C7)	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Primary Indicators (minimum of one required; ch Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations:	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
Primary Indicators (minimum of one required; check of the content	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
Primary Indicators (minimum of one required; check of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes No	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
Primary Indicators (minimum of one required; check of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes No Saturation Present?	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
Primary Indicators (minimum of one required; check of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes No	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F) Wetland Hydrology Present? Yes No✓
Primary Indicators (minimum of one required; check of Surface Water (A1) — High Water Table (A2) — Saturation (A3) — Water Marks (B1) — Sediment Deposits (B2) — Drift Deposits (B3) — Algal Mat or Crust (B4) — Iron Deposits (B5) — Inundation Visible on Aerial Imagery (B7) — Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes No No Saturation Present? Yes No No (includes capillary fringe)	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F) Wetland Hydrology Present? Yes No✓
Primary Indicators (minimum of one required; check of Surface Water (A1) — High Water Table (A2) — Saturation (A3) — Water Marks (B1) — Sediment Deposits (B2) — Drift Deposits (B3) — Algal Mat or Crust (B4) — Iron Deposits (B5) — Inundation Visible on Aerial Imagery (B7) — Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes No No Saturation Present? Yes No No (includes capillary fringe)	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F) Wetland Hydrology Present? Yes No✓
Primary Indicators (minimum of one required; check of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes No Water Table Present? Yes No Saturation Present? Yes No (includes capillary fringe) Describe Recorded Data (stream gauge, monitor)	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F) Wetland Hydrology Present? Yes No✓
Primary Indicators (minimum of one required; check of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes No Water Table Present? Yes No Saturation Present? Yes No (includes capillary fringe) Describe Recorded Data (stream gauge, monitor)	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F) Wetland Hydrology Present? Yes No✓

Project/Site: US 380		City/Cou	nty: Collin Co	unty	Sampling Date: 12/22/2020
Applicant/Owner: TxDOT				State: TX	Sampling Point: DP-7
Investigator(s): Kelsea Hiebert, Mike Kenan		Section,	Township, Ra	nge: N/A	
Landform (hillslope, terrace, etc.): Depression		Local re	lief (concave,	convex, none): concave	Slope (%): 2
Subregion (LRR): J - Southwestern Prairies Cotton and Forage Region	on Lat: 33.2	219708		Long: <u>-96.747548</u>	Datum: NAD 83
Soil Map Unit Name: Austin silty clay, 5 to 8 percent slopes	, moderately	eroded		NWI classific	cation: PFO
Are climatic / hydrologic conditions on the site typical for thi	is time of yea	ar? Yes	√ No	(If no, explain in F	Remarks.)
Are Vegetation, Soil, or Hydrology					present? Yes ✓ No
Are Vegetation, Soil, or Hydrology				eeded, explain any answe	ers in Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing	sampl	ing point l	ocations, transects	s, important features, etc
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks: Yes ✓ N Yes ✓ N	lo		the Sampled		No
Located within Forested Wetland Water Water Feature 37. Area was inundated				eature 125 abuts	Perennial Stream
VEGETATION – Use scientific names of plar	nts.				
Tree Stratum (Plot size: 30' 1. Salix nigra	40	Species yes		Dominance Test work Number of Dominant S That Are OBL, FACW, (excluding FAC-):	Species
2				Total Number of Domir Species Across All Stra	•
5				Percent of Dominant S	- , ,
Sapling/Shrub Stratum (Plot size: 15')	40	= Total (Cover	That Are OBL, FACW,	
1				Prevalence Index wor	ksheet:
2.				Total % Cover of:	
3					x 1 = 40
4				FACW species 50	
	0	= Total (Cover		$x 3 = \frac{0}{0}$
Herb Stratum (Plot size: 5' 1. Persicaria hydropiperoides	40	yes	OBL	· · · · · · · · · · · · · · · · · · ·	x = 0 $x = 0$ $x = 0$
Persicaria hydropiperoides 2				Column Totals: 90	
3.				Prevalence Index	
4				Hydrophytic Vegetati	·
5					Hydrophytic Vegetation
6		-		✓ 2 - Dominance Tes	
7		-		✓ 3 - Prevalence Ind	
8					Adaptations ¹ (Provide supporting
9				data in Remark	s or on a separate sheet)
10				Problematic Hydro	phytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size: 30') 1.		= Total (¹ Indicators of hydric so be present, unless dist	il and wetland hydrology must urbed or problematic.
2	0	= Total 0		Hydrophytic Vegetation Present? Ye	es No
% Bare Ground in Herb Stratum 60.0 Remarks:				1.000.11.	

Depth	cription: (Describe t		Redo	x Feature	s .			
(inches)	Color (moist)	<u></u> % (Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks
					-			
						-		
				-				
				-		-		
				-				
	oncentration, D=Depl					ed Sand G		on: PL=Pore Lining, M=Matrix.
-	Indicators: (Applica	able to all LRF	Rs, unless other	rwise not	ed.)			r Problematic Hydric Soils ³ :
Histosol				Gleyed Ma				ck (A9) (LRR I, J)
	pipedon (A2)			Redox (S5				airie Redox (A16) (LRR F, G, H)
	istic (A3)			d Matrix (S				face (S7) (LRR G)
	en Sulfide (A4)	Λ.		Mucky Mir			_	ns Depressions (F16)
	d Layers (A5) (LRR F			Gleyed Ma			`	H outside of MLRA 72 & 73)
	uck (A9) (LRR F, G, F d Below Dark Surface			d Matrix (I Dark Surfa				Vertic (F18) ent Material (TF2)
	ark Surface (A12)	; (A11)		d Dark Su		١		llow Dark Surface (TF12)
	Mucky Mineral (S1)			Depressio		,		plain in Remarks)
		S2) (LRR G. H				16)		hydrophytic vegetation and
2.5 cm Mucky Peat or Peat (S2) (LRR G, H) High Plains Depressions (F16) 5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H)								ydrology must be present,
5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H)								sturbed or problematic.
Restrictive	Layer (if present):							
Type:			_					
Depth (in	ches):						Hydric Soil Pr	esent? Yes No
Remarks:	,						-	
	المنافعة الم	a tan inah	Cail aanan	مميد ما	t	turata.	d to color A	and the same
_	•				100 Sa	alurale	a to color. As	ssumed hydric from
strong ny	ydrology and h	iyaropnyti	c vegetatio	n.				
IYDROLO	GY							
Wetland Hv	drology Indicators:							
_	cators (minimum of or	ne required: ch	eck all that appl	v)			Secondary	Indicators (minimum of two required)
/	Water (A1)	io regairea, or	Salt Crust					e Soil Cracks (B6)
	ater Table (A2)			,	c (P12)			ely Vegetated Concave Surface (B8)
✓ Saturati			Aquatic In		, ,			ge Patterns (B10)
	` ,		Dry-Seaso					ge Fatterns (B10) ed Rhizospheres on Living Roots (C3
	Marks (B1) nt Deposits (B2)							
			Oxidized F			ing Roots		ere tilled)
	posits (B3)			not tilled)		4)	,	sh Burrows (C8)
_	at or Crust (B4)		✓ Presence			4)	,	tion Visible on Aerial Imagery (C9)
	posits (B5)	(5-)	Thin Muck					orphic Position (D2)
/	on Visible on Aerial Ir	magery (B7)	Other (Exp	olain in Re	emarks)			eutral Test (D5)
	Stained Leaves (B9)						Frost-F	Heave Hummocks (D7) (LRR F)
Field Obser		,		6				
Surface Wat			Depth (in			_		
Water Table	Present? Ye		Depth (in			_		,
Saturation P	resent? Ye	es <u>√</u> No _	Depth (in	ches): <u>0</u>		Wet	land Hydrology P	Present? Yes <u>√</u> No
(includes ca	pillary fringe)						Manager I.	
Describe Re	corded Data (stream	gauge, monito	rıng well, aerial į	pnotos, pr	evious ins	spections),	ır available:	
Remarks:								
								ration on aerial imagery
12/2000	03/2015 01/2	017 06/2	010 and 1	1/2020) Radi	uced in	on present w	vithin standing water.

Project/Site: US 380	(City/Cou	nty: Collin Co	unty	_ Sampling Date: 08/17/2021	
Applicant/Owner: TxDOT				State: TX	_ Sampling Point: DP-8	
Investigator(s): Kelsea Hiebert, Wyatt Wolfenkoehler, Kath	ryn Burton	Section,	Township, Ra	ange: N/A		
Landform (hillslope, terrace, etc.): Hill slope		Local re	elief (concave,	convex, none): convex	Slope (%): 2	
Subregion (LRR): J - Southwestern Prairies Cotton and Forage Region						
Soil Map Unit Name: Austin silty clay, 5 to 8 percent slopes,	moderately	eroded		NWI classifi	ication: UPL	
Are climatic / hydrologic conditions on the site typical for thi						
Are Vegetation, Soil, or Hydrologys					present? Yes <u>✓</u> No	
Are Vegetation, Soil, or Hydrology ı				eeded, explain any answ		
SUMMARY OF FINDINGS – Attach site map						tc.
Hydrophytic Vegetation Present? Yes ✓	lo.					
Hydrophytic Vegetation Present? Yes ✓ N Hydric Soil Present? Yes ✓ N	lo		the Sample			
Wetland Hydrology Present? Yes N	lo 🗸	W	ithin a Wetla	nd? Yes	No <u>√</u>	
Remarks:						
Located on a hill slope adjacent to Fore	ested W	etland	d Water F	eature 125 and F	Perennial Stream	
Water Feature 37.						
VEGETATION – Use scientific names of plan	nte.					
VEGETATION – Use scientific fiames of plan	Absolute	Domina	ant Indicator	Dominance Test wor	kohooti	
<u>Tree Stratum</u> (Plot size: 30'			s? Status	Number of Dominant S		
1. Diospyros virginiana	40	yes	FAC	That Are OBL, FACW,	, or FAC	
2. Ulmus americana	20	yes	<u>FAC</u>	(excluding FAC-):	<u>3</u> (A))
3. Celtis laevigata	20	yes	FAC	Total Number of Domi	4	
4. Salix nigra	10	no	<u>FACW</u>	Species Across All Str	rata: <u>4</u> (B)	1
5				Percent of Dominant S		
Sapling/Shrub Stratum (Plot size: 15')	90	= Total (Cover	That Are OBL, FACW,	, or FAC: <u>75.0%</u> (A/E	B)
1				Prevalence Index wo	rksheet:	
2.				Total % Cover of:	Multiply by:	
3				OBL species 0	x 1 = 0	
4.					x 2 = <u>20</u>	
	0	= Total (Cover		x 3 = 240	
Herb Stratum (Plot size: 5'					x 4 = 40	
1					x 5 = 0	
2				Column Totals: 100	(A) <u>300</u> (B	3)
3				Prevalence Inde	x = B/A = 3.0	
4				Hydrophytic Vegetat		
5				1 - Rapid Test for	Hydrophytic Vegetation	
6				✓ 2 - Dominance Te	est is >50%	
7				3 - Prevalence Inc	dex is ≤3.0 ¹	
9.					Adaptations ¹ (Provide supporting	ng
10.					ks or on a separate sheet) ophytic Vegetation ¹ (Explain)	
		= Total (Cover	Problematic Hydro	opriyiic vegetation (Explain)	
Woody Vine Stratum (Plot size: 30' 1. Smilax bona-nox	10	yes	FACU	¹ Indicators of hydric so be present, unless dis	oil and wetland hydrology must turbed or problematic.	
2.				Hydrophytic		
% Bare Ground in Herb Stratum 100.0		= Total (Cover	Vegetation	es No	
Remarks:				1		

Profile Des	cription: (Describ	e to the de	pth needed to docu	ment the	indicator	or confir	m the absence of i	ndicators.)
Depth	Matrix			ox Feature			_	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	_Loc ²	Texture	Remarks
0-8	10YR3/2	60	7.5YR4/6	10	C	PL	silty clay	
0-8	10YR4/2	30						
8-12	10YR3/2	70	7.5YR4/6	5	С	PL		
8-12	10YR4/2	25						
								_
1Typo: C-C	oncontration D-D	onlotion PA	- /I=Reduced Matrix, C	- Covere	nd or Coate	d Sand (Grains ² Locatio	on: PL=Pore Lining, M=Matrix.
			II LRRs, unless other			a Sana C		Problematic Hydric Soils ³ :
Histosol			Sandy					(A9) (LRR I, J)
l —	pipedon (A2)			Redox (S				irie Redox (A16) (LRR F, G, H)
Black Histic (A3) Stripped Matrix (S6)								ace (S7) (LRR G)
	en Sulfide (A4)				ineral (F1)		_	s Depressions (F16)
	d Layers (A5) (LR				fatrix (F2)		,	l outside of MLRA 72 & 73)
	uck (A9) (LRR F, (d Below Dark Surf		Deplet ✓ Redox	ed Matrix			Reduced \	/ertic (F18) nt Material (TF2)
	ark Surface (A12)	ace (ATT)			urface (F6)			ow Dark Surface (TF12)
	Mucky Mineral (S1))		Depression				plain in Remarks)
	Mucky Peat or Pea		G, H) High P	lains Dep	ressions (F	16)		ydrophytic vegetation and
5 cm Mi	ucky Peat or Peat	(S3) (LRR F	(M	LRA 72 &	73 of LRR	H)		drology must be present,
Destriction	I (if						unless dis	turbed or problematic.
	Layer (if present)							
1 —	choc):						Hydric Soil Pre	esent? Yes No
Remarks:	ches):						Hydric Soil Fre	sent? resno
Remarks.								
HYDROLO	GY							
Wetland Hy	drology Indicator	's:						
Primary Indi	cators (minimum c	f one require	ed; check all that app	oly)			Secondary I	ndicators (minimum of two required)
Surface	Water (A1)		Salt Crus	t (B11)				Soil Cracks (B6)
1 — ·	ater Table (A2)		Aquatic II					y Vegetated Concave Surface (B8)
Saturati			Hydroger				<u> </u>	e Patterns (B10)
Water N			Dry-Seas				· 	d Rhizospheres on Living Roots (C3)
	nt Deposits (B2)		Oxidized			ing Roots		re tilled) n Burrows (C8)
	posits (B3) at or Crust (B4)		Presence	not tilled	•	1)		on Visible on Aerial Imagery (C9)
Iron De			Thin Muc			+)		rphic Position (D2)
l —	ion Visible on Aeria	al Imagery (I						eutral Test (D5)
	Stained Leaves (B9				,			eave Hummocks (D7) (LRR F)
Field Obser	vations:							
Surface Wat	ter Present?	Yes	No <u></u> ✓ Depth (ii	nches):				
Water Table	Present?		No <u>✓</u> Depth (ii					,
Saturation P	resent?	Yes	No <u>√</u> Depth (ii	nches):		We	tland Hydrology Pr	resent? Yes No
	pillary fringe)		anitaring wall carial	nhotoo n	raviava ina	nactions) if available:	
Describe Re	ecorded Data (Sirea	am gauge, n	nonitoring well, aerial	priotos, p	revious iris	pections), ii avaliable.	
Remarks:								
	Nation or act	uration :	vicible on multi	inlesses	ore of m	occet :	oorial images	,
INO ITIUITO	เสแบบ ปี ริสโป	uraliON V	risible on multi	ihie ye	a15 01 f6	SUCIIL 8	aenai imagery	y.

Project/Site: US 380		City/County	Collin Co	unty	Sampling Dat	e: 08/18/2021
Applicant/Owner: TxDOT				State: TX	Sampling Poir	nt: DP-9
Investigator(s): Kathryn Burton, Kelsea Hiebert		Section, To	wnship, Ra	inge: N/A		
Landform (hillslope, terrace, etc.): Floodplain		Local relief	(concave,	convex, none): none		Slope (%): 0
Subregion (LRR):	gion Lat: 33.2	218659		Long: <u>-96.722699</u>	D	atum: NAD 83
Soil Map Unit Name: Austin silty clay, 5 to 8 percent slope	es, moderately			NWI classific	cation: PEM	
Are climatic / hydrologic conditions on the site typical for	this time of yea	ar? Yes				
Are Vegetation, Soil, or Hydrology				"Normal Circumstances" p		✓ No
Are Vegetation, Soil, or Hydrology				eeded, explain any answe		
SUMMARY OF FINDINGS – Attach site ma			g point l	ocations, transects	, important	features, etc
Hydrophytic Vegetation Present? Yes✓	No					
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes ✓ Yes ✓			e Sampled		,	
_	No	with	in a Wetlaı	nd? Yes <u>√</u>	No	
Remarks:		ı ı				
Located within Emergent Wetland Wa	ater Featu	ire 61 ai	nd abut	ting Perennial Str	ream Wate	er Feature
62.				· ·		
VEGETATION – Use scientific names of pla	ante					
TEGETATION OSC SCIONANIC NAMES OF PIC	Absolute	Dominant	Indicator	Dominance Test work	sheet:	
Tree Stratum (Plot size: 30'	% Cover	Species?	Status	Number of Dominant S		
1. Ulmus americana	5	yes	FAC	That Are OBL, FACW,	or FAC	(4)
2				(excluding FAC-):	4	(A)
3				Total Number of Domin		(D)
4		-		Species Across All Stra	ıta: <u>+</u>	(B)
5		Tatal Ca		Percent of Dominant S		.0% (A/B)
Sapling/Shrub Stratum (Plot size: 15'	<u> </u>	= Total Cov	/er	That Are OBL, FACW,	01 FAC. 100	(A/B)
1. Ulmus americana	5	yes	FAC	Prevalence Index wor		
2				Total % Cover of:		ltiply by:
3					x 1 = 8	
4				FACW species 10 10	$x = \frac{2}{2}$	
Herb Stratum (Plot size: 5')	5	= Total Cov	/er	FACU species 0		
1. Typha latifolia	50	yes	OBL	· -	x 5 = (<u> </u>
2. Eleocharis palustris	20	ves	OBL	Column Totals: 100		130 (B)
3. Pluchea odorata	10	no	FACW			()
4. Ludwigia peploides	10	no	OBL	Prevalence Index		
5				Hydrophytic Vegetation		
6				1 - Rapid Test for H ✓ 2 - Dominance Tes		getation
7				✓ 2 - Dominance Tes		
8				4 - Morphological A		rovide supporting
9				data in Remarks	s or on a separ	ate sheet)
10				Problematic Hydro	phytic Vegetati	on ¹ (Explain)
Woody Vine Stratum (Plot size: 30')	90.0	= Total Cov	/er	¹ Indicators of hydric soi	il and wetland h	nydroloav must
1				be present, unless distr		
2.				Hydrophytic		
	_	= Total Cov	/er	Vegetation	✓	
% Bare Ground in Herb Stratum 10.0				Present? Ye	s No)
Remarks:						
I .						

SOIL

Sampling Point: DP-9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix			dox Feature		. 2		
(inches)	Color (moist)		Color (moist)	%	Type'	Loc ²	Texture	Remarks
0-2	10YR5/1	80					Loam	
0-2	2.5Y4/1	20					Loam	
2-9	10YR4/1	30					Loam	
2-9	10YR5/2	55	7.5YR4/6	10	С	M/PL	Loam	
2-9	10YR7/2	5					Loam	Likely fill material.
9-12	2.5Y5/1	75	7.5YR4/6	20	С	M/PL	Loam	
9-12	2.5Y6/2	5					Loam	
¹Type: C=C	concentration, D=D	enletion RM	1=Reduced Matrix	CS=Covere	ed or Coate	ed Sand G	rains ² l c	ocation: PL=Pore Lining, M=Matrix.
	Indicators: (App					oa oana o		s for Problematic Hydric Soils ³ :
Histoso	I (A1)		Sand	ly Gleyed M	atrix (S4)		1 cm	Muck (A9) (LRR I, J)
Histic E	pipedon (A2)		Sand	ly Redox (S	5)		Coast	t Prairie Redox (A16) (LRR F, G, H)
	istic (A3)			ped Matrix (Surface (S7) (LRR G)
	en Sulfide (A4)	. ='		ny Mucky Mi			_	Plains Depressions (F16)
	d Layers (A5) (LR I uck (A9) (LRR F, C	,	,	ny Gleyed M eted Matrix				RR H outside of MLRA 72 & 73) ced Vertic (F18)
	d Below Dark Surf			ox Dark Surf	` ,			Parent Material (TF2)
	ark Surface (A12)	()	· 	eted Dark S	, ,)		Shallow Dark Surface (TF12)
Sandy I	Mucky Mineral (S1))	Redo	x Depression	ons (F8)		Other	(Explain in Remarks)
· · · · · · · · · · · · · · · · · · ·	Mucky Peat or Pea	, , ,	· · · —	Plains Depr				s of hydrophytic vegetation and
5 cm M	ucky Peat or Peat	(S3) (LRR F) (MLRA 72 &	73 of LRR	R H)		nd hydrology must be present, s disturbed or problematic.
Restrictive	Layer (if present)	:					unies	s disturbed of problematic.
Type:								_
Depth (ir	iches):						Hydric Soi	il Present? Yes No
Remarks:								
	nd fill within	matriy						
Gravera	ind iii widiiii	maun.						
HYDROLC								
_	drology Indicator							
	cators (minimum o	f one require					Second	dary Indicators (minimum of two required)
· · · · · · · · · · · · · · · · · · ·	Water (A1)			ust (B11)			·	rface Soil Cracks (B6)
/	ater Table (A2)			Invertebrate			/	arsely Vegetated Concave Surface (B8)
✓ Saturati	, ,			en Sulfide C			·	ainage Patterns (B10)
	Marks (B1) nt Deposits (B2)			ason Water d Rhizosphe				idized Rhizospheres on Living Roots (C3) where tilled)
	posits (B3)			re not tilled		ing Roots	. ,	ayfish Burrows (C8)
	at or Crust (B4)			ce of Reduc		4)	/	turation Visible on Aerial Imagery (C9)
_	posits (B5)			uck Surface	,	.,		comorphic Position (D2)
	ion Visible on Aeria	al Imagery (E		Explain in R				C-Neutral Test (D5)
	Stained Leaves (B9						Fro	ost-Heave Hummocks (D7) (LRR F)
Field Obse	rvations:							
Surface Wa	ter Present?	Yes <u>√</u>	No Depth	(inches): <u>3</u>		_		
Water Table	Present?		No <u>✓</u> Depth			_		
	pillary fringe)		No Depth					gy Present? Yes No
Describe Re	ecorded Data (strea	am gauge, m	ionitoring well, aer	al photos, p	revious ins	spections),	ıt available:	
Dom:								
Remarks:		_4:	Halla .	I too	01	10005	07/0000	10/0000 10/0010 01/0010
				_	•			,12/2009, 10/2013, 04/2016, al on 08/2021.

Project/Site: US 380	C	City/County	Collin Cou	inty	Sampling Date: 08/18/2021
Applicant/Owner: TxDOT				State: TX	Sampling Point: DP-10
Investigator(s): Kathryn Burton, Kelsea Hiebert	8	Section, To	wnship, Rar	nge: N/A	
Landform (hillslope, terrace, etc.): Hillslope	ا	Local relief	(concave, c	convex, none): convex	Slope (%): 4
Subregion (LRR): <u>J - Southwestern Prairies Cotton and Forage Region</u>	Lat: 33.2	18664		Long: <u>-9696.722784</u>	Datum: NAD 83
Soil Map Unit Name: Austin silty clay, 5 to 8 percent slopes, r	moderately e			NWI classifica	ation: UPL
Are climatic / hydrologic conditions on the site typical for this	time of yea	r? Yes	√ No	(If no, explain in Re	emarks.)
Are Vegetation, Soil, or Hydrology si	gnificantly d	listurbed?	Are "	Normal Circumstances" pr	resent? Yes <u>√</u> No
Are Vegetation, Soil, or Hydrology na	aturally prob	olematic?	(If ne	eded, explain any answer	s in Remarks.)
SUMMARY OF FINDINGS - Attach site map s	howing	samplin	g point lo	ocations, transects,	important features, etc.
Hadrada Ca Variation Process					
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No			e Sampled		1
Wetland Hydrology Present? Yes No		with	in a Wetlan	d? Yes	No <u> </u>
Remarks:					
Located on maintained hill slope adjace	nt to En	nergent	Wetlan	d Water Feature	61.
, ,					
VEGETATION – Use scientific names of plant	S.				
		Dominant	Indicator	Dominance Test works	sheet:
, <u> </u>	% Cover			Number of Dominant Sp	
1				That Are OBL, FACW, o (excluding FAC-):	or FAC 1 (A)
2					
3				Total Number of Domina Species Across All Strat	•
4. 5.					
		= Total Cov		Percent of Dominant Sp That Are OBL, FACW, o	
Sapling/Shrub Stratum (Plot size: 15'				Prevalence Index work	rsheet:
1				Total % Cover of:	
2					x 1 = 0
3				-	x 2 = 0
4	0	- Total Cov			x 3 = 240
Herb Stratum (Plot size: 5'		- 10181 001	701	FACU species 20	x 4 = 80
1. Stenotaphrum secundatum	80	yes	FAC	UPL species 0	x 5 = <u>0</u>
2. Cynodon dactylon		yes	<u>FACU</u>	Column Totals: 100	(A) <u>320</u> (B)
3				Prevalence Index	= B/A = 3.2
4				Hydrophytic Vegetatio	
5				1 - Rapid Test for H	ydrophytic Vegetation
6				2 - Dominance Test	is >50%
7 8				3 - Prevalence Inde	
9.				4 - Morphological A	daptations ¹ (Provide supporting or on a separate sheet)
10.					hytic Vegetation ¹ (Explain)
	100.0	= Total Cov	/er		
Woody Vine Stratum (Plot size: 30') 1				'Indicators of hydric soil be present, unless distu	and wetland hydrology must rbed or problematic.
2.				Hydrophytic	
	0 =	= Total Cov	/er	Vegetation	✓
% Bare Ground in Herb Stratum 0.0				Present? Yes	S No
Remarks:					

Profile Des	scription: (Describe	to the de				or confir	m the absence	of indicators.)
Depth (inches)	Matrix Color (moist)	%	Color (moist)	ox Feature %	Type ¹	Loc ²	Texture	Remarks
0-10	10YR4/2	100	(IIIUISI)		<u>i ype</u>		Clay	Nemans
10-12	10YR4/2	77	10YR5/8	3		M/PL	Clay	
10-12			10113/6			IVI/FL	· 	
	10YR2/1	10					Clay	
	2.5Y7/4	10					Loam Clay	Likely fill material
	_	_						
	_							
¹ Type: C=0	Concentration, D=De	oletion, RM	1=Reduced Matrix, C	S=Covere	d or Coate	ed Sand G	Frains. ² Loc	cation: PL=Pore Lining, M=Matrix.
	I Indicators: (Applie							for Problematic Hydric Soils ³ :
Histoso	ol (A1)		Sandy	Gleyed M	atrix (S4)		1 cm N	Muck (A9) (LRR I, J)
	Epipedon (A2)		Redox (S				Prairie Redox (A16) (LRR F, G, H)	
	Histic (A3)			ed Matrix (,			Surface (S7) (LRR G)
	gen Sulfide (A4)			Mucky Mi	, ,			Plains Depressions (F16)
	ed Layers (A5) (LRR			Gleyed M			`	RR H outside of MLRA 72 & 73)
	fluck (A9) (LRR F, G, ed Below Dark Surfac			ed Matrix (Dark Surf	. ,			ed Vertic (F18) arent Material (TF2)
	Dark Surface (A12)	<i>(</i> A11)			urface (F7))		Shallow Dark Surface (TF12)
	Mucky Mineral (S1)			Depression				(Explain in Remarks)
	Mucky Peat or Peat	(S2) (LRR			essions (F	16)		of hydrophytic vegetation and
5 cm M	lucky Peat or Peat (S	3) (LRR F) (M	LRA 72 &	73 of LRR	? H)		d hydrology must be present,
							unless	disturbed or problematic.
	Layer (if present):							
Type:								5 10 V
	nches):						Hydric Soil	Present? Yes No
Remarks:								
HYDROLO	OGY							
Wetland H	ydrology Indicators	:						
Primary Ind	licators (minimum of	one require	ed; check all that app	oly)			Seconda	ary Indicators (minimum of two required)
Surface	e Water (A1)		Salt Crus	t (B11)			Sur	face Soil Cracks (B6)
High W	/ater Table (A2)		Aquatic II	nvertebrate	es (B13)		Spa	rsely Vegetated Concave Surface (B8)
Saturat	tion (A3)		Hydroger	n Sulfide C	dor (C1)		Dra	inage Patterns (B10)
Water I	Marks (B1)		Dry-Seas	on Water	Table (C2)		Oxio	dized Rhizospheres on Living Roots (C3)
Sedime	ent Deposits (B2)		Oxidized	Rhizosphe	eres on Liv	ing Roots	(C3) (w	vhere tilled)
Drift De	eposits (B3)		(where	not tilled)		Cra	yfish Burrows (C8)
Algal M	Mat or Crust (B4)		Presence	of Reduc	ed Iron (C4	4)	Sati	uration Visible on Aerial Imagery (C9)
Iron De	eposits (B5)		Thin Muc	k Surface	(C7)		Geo	omorphic Position (D2)
Inunda	tion Visible on Aerial	Imagery (E	37) Other (Ex	cplain in R	emarks)		FAC	C-Neutral Test (D5)
Water-	Stained Leaves (B9)						Fros	st-Heave Hummocks (D7) (LRR F)
Field Obse								
Surface Wa			No V Depth (ii					
Water Table	e Present?	res	No V Depth (ii	nches):		_		,
Saturation I		/es	No ✓ Depth (ii	nches):		Wet	land Hydrolog	y Present? Yes No _✓
	apillary fringe) ecorded Data (strean	n gauge, m	nonitoring well, aerial	photos n	revious ins	pections)	. if available:	
2000110011		. 95590, 11	g won, aonai	F0.00, P			,	
Remarks:								
. tomanto.								
l								

Project/Site: US 380	(City/County	: Collin Cou	unty	Sampling Date: 11/11/2020		
Applicant/Owner: TXDOT				State: TX	Sampling Point: DP-11		
Investigator(s): Kelsea Hiebert, Mike Keenan	;	Section, To	wnship, Rai	nge: N/A			
Landform (hillslope, terrace, etc.): Depression		Local relief	(concave,	convex, none): concave	Slope (%): 2		
Subregion (LRR):	Lat: 33.2	20227		Long: <u>-96.720164</u>	Datum: NAD 83		
Soil Map Unit Name: Austin silty clay, 2 to 5 percent slopes, 6	eroded			NWI classific	ation: PFO		
Are climatic / hydrologic conditions on the site typical for this	time of year	ar? Yes	,				
Are Vegetation, Soil, or Hydrology si	gnificantly of	disturbed?	Are "	'Normal Circumstances" p	oresent? Yes <u>√</u> No		
Are Vegetation, Soil, or Hydrology na	aturally prol	blematic?	(If ne	eeded, explain any answe	rs in Remarks.)		
SUMMARY OF FINDINGS – Attach site map s	showing	samplin	g point le	ocations, transects	, important features, etc.		
			<u> </u>		<u> </u>		
Hydrophytic Vegetation Present? Yes ✓ No Hydric Soil Present? Yes ✓ No		Is th	e Sampled				
Wetland Hydrology Present? Yes ✓ No.		with	in a Wetlan	ıd? Yes <u>√</u>	No		
Remarks:	- 						
Located within Forested Wetland Water	· Featur	e 69. H	ydrologi	ically connected t	o Ephemeral Stream		
Water Feature 70.			, 0	,	•		
VEGETATION – Use scientific names of plant	s.						
[Absolute	Dominant	Indicator	Dominance Test work	sheet:		
		Species?		Number of Dominant Sp	pecies		
1. Salix nigra		yes		That Are OBL, FACW, (excluding FAC-):	or FAC 3 (A)		
2							
3				Total Number of Domini Species Across All Stra			
4				Species Across Air Stra	<u>_</u>		
5		= Total Cov		Percent of Dominant Sp That Are OBL, FACW, of			
Sapling/Shrub Stratum (Plot size: 15'		= 10tai 00	VCI		(**-/		
1. Salix nigra	10	yes	FACW	Prevalence Index worl			
2				Total % Cover of:			
3					x 1 = 0 x 2 = 150		
4				*	x 3 = 15		
Herb Stratum (Plot size: 5'	10	= Total Cov	ver		x = 0		
Herb Stratum (Plot size: 5 1. Chasmanthium sessiliflorum	5	ves	FAC		x 5 = 0		
2					(A) 165 (B)		
3							
4.				Prevalence Index	· · · · · · · · · · · · · · · · · · ·		
5				Hydrophytic Vegetation			
6				1 - Rapid Test for F✓ 2 - Dominance Tes			
7				✓ 3 - Prevalence Inde			
8					Adaptations ¹ (Provide supporting		
9				data in Remarks	s or on a separate sheet)		
10				Problematic Hydror	phytic Vegetation ¹ (Explain)		
Woody Vine Stratum (Plot size: 30')	5.0	= Total Cov	/er	¹ Indicators of hydric soi	I and wetland hydrology must		
1				be present, unless distu	irbed or problematic.		
2.				Hydrophytic			
	0	= Total Cov	/er	Vegetation	√ No.		
% Bare Ground in Herb Stratum 95.0				Present? Yes	s No		
Remarks:							

Depth	cription: (Describe Matrix	to the dep		ox Feature		or comm	in the absence of h	nuicators.)
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks
0-10	10YR4/1	75	10YR4/6	5	С	M	Loamy clay	
			2.5Y3/1	15	D	M	Loamy clay	
			10YR3/6	5		M	Loamy clay	
10-14	2.5Y4/1	93	10YR4/6	2	С	М	Loamy clay	
			10YR3/6	2	С	М	Loamy clay	
-			2.5Y3/1	3		M	Loamy clay	
								_
¹Type: C=C	Concentration, D=Dep	letion, RM	=Reduced Matrix, C	S=Covere	ed or Coate	d Sand C	Grains. ² Locatio	n: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Applic	able to al	LRRs, unless other	rwise no	ted.)		Indicators for	Problematic Hydric Soils ³ :
Histoso	, ,			Gleyed M				(A9) (LRR I, J)
	Histic Epipedon (A2) Sandy Redox (S5)							rie Redox (A16) (LRR F, G, H)
Black Histic (A3) Stripped Matrix (S6)								ce (S7) (LRR G)
	en Sulfide (A4)				ineral (F1)			s Depressions (F16)
	d Layers (A5) (LRR I	,		•	latrix (F2)		`	outside of MLRA 72 & 73)
· · · · · · · · · · · · · · · · · · ·	uck (A9) (LRR F, G, I	•		ed Matrix	. ,		Reduced V	,
-	ed Below Dark Surfac	e (A11)		Dark Surf	ace (F6) urface (F7)			t Material (TF2)
	ark Surface (A12) Mucky Mineral (S1)			Depression				ow Dark Surface (TF12) Ilain in Remarks)
		S2) (I RR				16)		ydrophytic vegetation and
2.5 cm Mucky Peat or Peat (S2) (LRR G, H) High Plains Depressions (F16) 5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H)								drology must be present,
0 0111 101	dony i car or i car (or) (L ICIT)	(1012	-NA 12 G	70 OI LINI	•••		urbed or problematic.
Restrictive	Layer (if present):							
Type:								1
Depth (in	nches):						Hydric Soil Pre	sent? Yes No
Remarks:								
HYDROLO	GY							
Wetland Hy	drology Indicators:							
Primary Indi	cators (minimum of o	ne require	d; check all that app	ly)			Secondary Ir	ndicators (minimum of two required)
Surface	Water (A1)		Salt Crust	t (B11)			Surface	Soil Cracks (B6)
High W	ater Table (A2)		Aquatic Ir		es (B13)		✓ Sparsely	/ Vegetated Concave Surface (B8)
	ion (A3)		Hydrogen					e Patterns (B10)
	Marks (B1)				Table (C2)		_	d Rhizospheres on Living Roots (C3)
	nt Deposits (B2)				eres on Liv	ina Roots	·	e tilled)
	posits (B3)			not tilled				Burrows (C8)
/	at or Crust (B4)				, ed Iron (C	I)		on Visible on Aerial Imagery (C9)
	posits (B5)		Thin Mucl			')		phic Position (D2)
	ion Visible on Aerial I	magery (F						utral Test (D5)
/	Stained Leaves (B9)	magery (L	Other (Ex	piaiii iii K	emaiks)		·	eave Hummocks (D7) (LRR F)
Field Obser	, ,						1103(110	cave Hummooks (B7) (ERRT)
		00	No Donth (in	ochoc):				
			No Depth (in					
Water Table			No Depth (ir					<i>.</i>
Saturation F	Present? Y pillary fringe)	es <u></u> ✓	No Depth (ir	nches): 2		_ Wet	land Hydrology Pr	esent? Yes No
	ecorded Data (stream	gauge, m	onitoring well, aerial	photos, p	revious ins	pections)	, if available:	
Remarks:								
Saturation	on visible on G	oogle	Earth aerial in	nagery	04/201	6, 03/	2018, 06/201	9, and 11/2020.
i								

Project/Site: US 380		City/Cour	nty: Collin Cou	unty	_ Sampling D	ate: 9/22/20	21
Applicant/Owner: TxDOT				State: TX	_ Sampling P	oint: DP-12	
Investigator(s): Kelsea Hiebert and Wyatt Wolfenkoehler		Section,	Township, Ra	inge: <u>n/a</u>			
Landform (hillslope, terrace, etc.): Terrace		Local rel	ief (concave,	convex, none): none		_ Slope (%):	0
Subregion (LRR): J - Southwestern Prairies Cotton and Forage Re	egion Lat: 33.2	219596		_ Long: <u>-96.719455</u>		Datum: NAI	O 27
Soil Map Unit Name: LeB—Lewisville silty clay, 1 to 3 per	cent slopes			NWI classif	ication: UPL		
Are climatic / hydrologic conditions on the site typical for	this time of yea	ar? Yes	No	(If no, explain in	Remarks.)		
Are Vegetation, Soil, or Hydrology	_ significantly	disturbed	l? Are '	"Normal Circumstances"	present? Ye	s_ √ _ N	0
Are Vegetation, Soil, or Hydrology	_naturally pro	blematic'	? (If ne	eeded, explain any answ	ers in Remark	s.)	
SUMMARY OF FINDINGS - Attach site ma	p showing	sampl	ing point l	ocations, transect	s, importa	nt feature	s, etc.
Hydrophytic Vegetation Present? Yes✓	No						
Hydric Soil Present? Yes			the Sampled			/	
Wetland Hydrology Present? Yes		W	ithin a Wetlar	nd? Yes	No	<u> </u>	
Remarks:							
Located in upland area adjacent to Fo	orested W	etland	d Water F	eature 69.			
,							
VEGETATION – Use scientific names of pla	ants						
VEGETATION 03c 3cicitatio names of pa	Absolute	Domina	ant Indicator	Dominance Test wor	ksheet:		
Tree Stratum (Plot size: 30'			s? Status	Number of Dominant			
1. Carya illinoinensis	50	yes	<u>FAC</u>	That Are OBL, FACW			
2. Fraxinus pennsylvanica	30	yes		(excluding FAC-):			(A)
3. Ulmus americana	10	no	<u>FAC</u>	Total Number of Domi	6		(D)
4				Species Across All Str	ata:		(B)
Sapling/Shrub Stratum (Plot size: 15')	90	= Total C	Cover	Percent of Dominant S		3.3%	(A (D)
1. Ulmus americana	10	yes	FAC	That Are OBL, FACW	, or FAC:	3.070	(A/B)
2. Celtis laevigata	10	yes	FAC	Prevalence Index wo	rksheet:		
3				Total % Cover of:		<u>fultiply by:</u>	
4.					x 1 =		_
5.				FACW species 0 120	x 2 =	360	_
	20	= Total C	Cover	FAC Species	x 3 =	40	_
Herb Stratum (Plot size: 5'	10		E40	FACU species 10 0	x 4 =	0	-
1. Elymus virginicus		yes	FAC	UPL species 0 Column Totals: 130	x 5 =	400	_ (D)
2				Column Totals:	(A)		(B)
3				Prevalence Inde	x = B/A = 3	1	_
4. 5.				Hydrophytic Vegetat	ion Indicator	s:	
6				1 - Rapid Test for		/egetation	
7				✓ 2 - Dominance Tell	est is >50%		
8.				3 - Prevalence Inc			
9.				4 - Morphological data in Remar			
10.				Problematic Hydr	•	,	
	10.0	= Total C	Cover	- ·			,
Woody Vine Stratum (Plot size: 30'	40		= 4 0 1 1	¹ Indicators of hydric so be present, unless dis	oil and wetland	d hydrology r Nematic	nust
1. Parthenocissus quinquefolia	10	yes	FACU_		- Carboa or proc	, orridato.	
2	10			Hydrophytic Vegetation	/		
% Bare Ground in Herb Stratum 90.0	10	= Total C	Cover		es N	No	
Remarks:				1			
I .							

		to the depth ne				or confire	n the absence of indi	cators.)	
Depth (inches)	Matrix Color (moist)	% C	Redo olor (moist)	x Feature:	s Type ¹	Loc ²	Texture	Remarks	
0-12	10YR 3/2	100	olor (moist)	70	1,00		Clay loam	romano	
	10111 0/2						<u> </u>		
		<u> </u>							
		·		- 					
							<u> </u>		
		<u> </u>							
	oncentration, D=Dep					ed Sand G		PL=Pore Lining, M	
Hydric Soil	Indicators: (Applic	able to all LRRs	s, unless othe	rwise not	ed.)		Indicators for Pro	oblematic Hydric	Soils ³ :
Histosol	` '		Sandy (1 cm Muck (A		
	pipedon (A2)		Sandy F					Redox (A16) (LRR	F, G, H)
	istic (A3)			d Matrix (S			Dark Surface		
	en Sulfide (A4)	E)		Mucky Mir Gleyed Ma			High Plains D	epressions (F16) utside of MLRA 72	£ 73\
	d Layers (A5) (LRR I uck (A9) (LRR F, G , I			d Matrix (I	, ,		Reduced Vert		G 13)
	d Below Dark Surfac			Dark Surfa	,		Red Parent M	` '	
	ark Surface (A12)	,		d Dark Su	. ,)		Dark Surface (TF1	2)
Sandy N	Mucky Mineral (S1)		Redox I	Depressio	ns (F8)		Other (Explain	n in Remarks)	
	2.5 cm Mucky Peat or Peat (S2) (LRR G, H) High Plains Depression 5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of					16)		ophytic vegetation	
5 cm Mu	5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of L					H)		logy must be prese	ent,
Destriction I	Restrictive Layer (if present):						unless disturb	ed or problematic.	
_									
								40 V	🗸
	ches):						Hydric Soil Preser	nt? Yes	No
Remarks:									
HYDROLO	GY								
Wetland Hy	drology Indicators:								
Primary India	cators (minimum of c	ne required; che	ck all that appl	y)			Secondary India	cators (minimum of	two required)
Surface	Water (A1)		Salt Crust	(B11)			Surface So	il Cracks (B6)	
High Wa	ater Table (A2)		Aquatic In	vertebrate	s (B13)		Sparsely V	egetated Concave	Surface (B8)
Saturation	on (A3)		Hydrogen	Sulfide O	dor (C1)		Drainage P	atterns (B10)	
Water M	larks (B1)		Dry-Seaso	on Water T	Table (C2)		Oxidized R	hizospheres on Liv	ing Roots (C3)
Sedimer	nt Deposits (B2)		Oxidized F	Rhizosphe	res on Liv	ing Roots	(C3) (where ti	lled)	
Drift Dep			(where	not tilled)			Crayfish Bu	urrows (C8)	
	at or Crust (B4)		Presence			4)		Visible on Aerial Im	agery (C9)
Iron Dep			Thin Muck		,			c Position (D2)	
	on Visible on Aerial	lmagery (B7)	Other (Exp	olain in Re	emarks)		FAC-Neutra		
	stained Leaves (B9)						Frost-Heav	e Hummocks (D7)	(LRR F)
Field Obser			,						
Surface Wat		es No							
Water Table	Present? Y	'es No _ <u>'</u>	Depth (in	ches):		_			,
Saturation P		'es No	Depth (in	ches):		Wet	land Hydrology Prese	ent? Yes	No <u>✓</u>
(includes car Describe Re	oillary fringe) corded Data (stream	gauge monitori	ng well aerial	photos pr	evious ins	pections)	if available		
Poscibe ive	SOIGGE DAIG (SIIGAII	i gaago, moniton	ng won, achai	ριισίου, μι	CVIOUS IIIS	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	, ii avaiiabio.		
Remarks:									
. tomano.									

Project/Site: US 380		City/Count	ty: Collin Cou	unty	_ Sampling Da	ate: 08/18/2021	l
Applicant/Owner: TxDOT				State: TX	_ Sampling Po	oint: DP-13	
Investigator(s): Kelsea Hiebert, Kathryn Burton		Section, T	ownship, Ra	nge: N/A			
Landform (hillslope, terrace, etc.): Depression		Local relie	ef (concave,	convex, none): concave	;	Slope (%): 1	
Subregion (LRR): J - Southwestern Prairies Cotton and Forage Re	gion Lat: 33.2	218616		Long: <u>-96.714433</u>		Datum: NAD 83	3
Soil Map Unit Name: Austin silty clay, 5 to 8 percent slope	es, moderately	eroded		NWI classification: PFO			
Are climatic / hydrologic conditions on the site typical for t	his time of yea	ar? Yes_	✓ No_	(If no, explain in I	Remarks.)		
Are Vegetation, Soil, or Hydrology	_ significantly	disturbed?	? Are "	'Normal Circumstances"	present? Yes	s No	✓
Are Vegetation, Soil, or Hydrology				eeded, explain any answ			
SUMMARY OF FINDINGS – Attach site ma	p showing	sampli	ng point l	ocations, transect	s, importan	it features, e	etc.
Hydrophytic Vegetation Present? Yes✓	No						
Hydric Soil Present? Yes ✓	No		the Sampled thin a Wetlar		/ No		
Wetland Hydrology Present? Yes✓		WIL	iiiii a vvetiai	iu! Tes	NO		
	n flui a maa d	Lerss	tod \\/otl	and Matar Fact	OO O	lucerto on d	
Located within an anthropogenically in concrete retention walls at borders. P							
		JII LIIE C	ay beloi	le dell'Ileation. H	eavily uist	uibeu soii	<u>S.</u>
VEGETATION – Use scientific names of pla	ants.						
Tree Stratum (Plot size: 30'	Absolute % Cover		nt Indicator Status	Dominance Test wor			
1. Ulmus americana	50	yes	FAC	Number of Dominant S That Are OBL, FACW,			
2. Salix nigra	10	no	FACW	(excluding FAC-):		(A	۹)
3. Populus deltoides	10	no	FAC	Total Number of Domi	nant		
4. Carya illinoinensis	10	no	FAC	Species Across All Str		(B	3)
5				Percent of Dominant S	Species		+
0 1 0 1 0 1 1 1 1 1 1 1 1 1	80	= Total C	over	That Are OBL, FACW,		.7% (A	\/B)
Sapling/Shrub Stratum (Plot size: 15') 1. Carya illinoinensis	10	V00	FAC	Prevalence Index wo	rksheet:		
		yes	FAC	Total % Cover of:	Mı	ultiply by:	
2				OBL species 0	x 1 =	0	
3		-	_	FACW species 10	x 2 =	20	
	10	= Total Co	over	II	x 3 =		
Herb Stratum (Plot size: 5'		- rotar o	3701		x 4 =		
1					x 5 =		
2				Column Totals: 120	(A)	380 ((B)
3				Prevalence Inde	x = B/A = 3.2) -	+
4				Hydrophytic Vegetat			
5				1 - Rapid Test for			
6				✓ 2 - Dominance Te	est is >50%		
7				3 - Prevalence Inc	dex is ≤3.0 ¹		
8 9				4 - Morphological			ting
10.				data in Remark		,	
10.		= Total Co	over	Problematic Hydro	ophytic Vegeta	tion (Explain)	
Woody Vine Stratum (Plot size: 30')				¹ Indicators of hydric so			st
1. Toxicodendron radicans	30	yes	<u>FACU</u>	be present, unless dis	turbed or probl	ematic.	
2				Hydrophytic	,		
% Bare Ground in Herb Stratum 100.0	30	= Total Co	over	Vegetation Present? Yes	es N	o	
Remarks:							

Profile Desc	cription: (Describe	to the depth	needed to docui	nent the	ndicator	or confirm	the absence	of indicators.)
Depth	Matrix			x Feature				
(inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks
0-16	2.5Y6/4	70					Silty Clay	Likely fill material
0-16	10YR5/2	30						
				-			-	
							•	
	oncentration, D=De					d Sand Gr		cation: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Appli	cable to all LR	Rs, unless othe	rwise not	ed.)		Indicators	for Problematic Hydric Soils ³ :
Histosol	` '		Sandy (-	. ,			Muck (A9) (LRR I, J)
	pipedon (A2)			Redox (S5				Prairie Redox (A16) (LRR F, G, H)
	istic (A3)		Stripped	•	,			Surface (S7) (LRR G)
	en Sulfide (A4) d Layers (A5) (LRR	E)		Mucky Mii Gleyed Mi			_	Plains Depressions (F16) RR H outside of MLRA 72 & 73)
	uck (A9) (LRR F, G ,			d Matrix (`	eed Vertic (F18)
	d Below Dark Surfa			Dark Surfa				arent Material (TF2)
Thick Da	ark Surface (A12)				ırface (F7)			Shallow Dark Surface (TF12)
	Mucky Mineral (S1)			Depressio				(Explain in Remarks)
	Mucky Peat or Peat				essions (F	•		of hydrophytic vegetation and
5 cm IVIU	ucky Peat or Peat (S	53) (LRR F)	(IVIL	RA /2 &	73 of LRR	H)		d hydrology must be present, s disturbed or problematic.
Restrictive	Layer (if present):						unicoo	disturbed of problematic.
Type:								
	ches):		_				Hydric Soil	Present? Yes No
Remarks:	, <u> </u>						1 -	
Matrix is	composed of	maiority f	ill material	Signifi	cant hy	drolog	v within w	etland, hydrophytic
	•			_		_	•	nt disturbance.
					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		4.14.1000.1	
HYDROLO								
_	drology Indicators cators (minimum of		and all that and)			Cocondo	and ladicators (minimum of two required)
/	•	one requirea; c						ary Indicators (minimum of two required)
✓ Surface	, ,		Salt Crust		o (P12)			face Soil Cracks (B6) ursely Vegetated Concave Surface (B8)
Saturation	ater Table (A2)		Aquatic In Hydrogen				/	inage Patterns (B10)
	larks (B1)		Dry-Seaso					dized Rhizospheres on Living Roots (C3)
	nt Deposits (B2)		Oxidized F			na Roots		where tilled)
	posits (B3)			not tilled)				yfish Burrows (C8)
	at or Crust (B4)		Presence			!)		uration Visible on Aerial Imagery (C9)
_	posits (B5)		Thin Muck	Surface ((C7)		,	omorphic Position (D2)
Inundati	on Visible on Aerial	Imagery (B7)	Other (Exp	olain in Re	emarks)		FAC	C-Neutral Test (D5)
Water-S	stained Leaves (B9)						Fros	st-Heave Hummocks (D7) (LRR F)
Field Obser				4				
Surface Wat			Depth (in			_		
Water Table			✓ Depth (in					/
Saturation P	resent?	Yes <u>√</u> No	Depth (in	ches): <u></u>		Wetl	and Hydrolog	y Present? Yes <u>√</u> No
(includes cap Describe Re	oillary fringe) corded Data (strear	n gauge, monit	oring well, aerial	photos, pr	evious ins	pections).	if available:	
	2000 (00000	J 90, 11101111		,, pi		,,,		
Remarks:								
	d anthropode	nically ma	de denress	ion wit	h influe	nce fro	m culvert	s. Inundated during
	on. Historic a	-	•				in ourvoit	o. manadoa adimg
Jonneali	on. matoric a	Chai imay	ory orlows t	,,oava		2000.		

Investigator(s): Kelsea Hiebert, Kathryn Burton, Wyatt Wolfenkoehler Section, Township, Range: N/A Landform (hillslope, terrace, etc.): Berm Local relief (concave, convex, none): convex Slope (%): 4 Subregion (LRR): J - Southwestern Prairies Cotton and Forage Region Lat: 33.218742 Long: -96.715130 Datum: NAD 83 Soil Map Unit Name: Austin silty clay, 5 to 8 percent slopes, moderately eroded NWI classification: UPL Are climatic / hydrologic conditions on the site typical for this time of year? Yes Vogetation Soil Vogetation Soil Vogetation Soil Vogetation Nogetation Nogetati	Project/Site: US 380	(City/Coun	ty: Collin Cou	unty	_ Sampling Date: 08	/18/2021
Landorm (hillslope, terrace, etc.): Berm Local relief (concave, convex, none): convex Slope (%): 4 Subregion (LRR): 3-Stathwestern France Coron and Forago Ragon Lat: 33.216742 Long	Applicant/Owner: TxDOT				_ Sampling Point: DF	P-14	
Solid Map Unit Name; Austin sity clay, 5 to 8 percent slopes, moderately eroded Name Austin sity clay, 5 to 8 percent slopes, moderately eroded Name Na	Investigator(s): Kelsea Hiebert, Kathryn Burton, Wyatt	Wolfenkoehler	Section, T	Γownship, Ra	nge: N/A		
No Casalidacion: OPTL	Landform (hillslope, terrace, etc.): Berm		Local reli	ef (concave,	convex, none): convex	Slope	(%): <u>4</u>
No Casalidacion: OPTL	Subregion (LRR): J - Southwestern Prairies Cotton and Forage	Region Lat: 33.2	218742		Long: <u>-96.715130</u>	Datum:	NAD 83
Are climatic / hydrologic conditions on the site typical for this time of year? Yes	Soil Map Unit Name: Austin silty clay, 5 to 8 percent slo	pes, moderately	eroded		NWI classif	ication: UPL	
Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No No New Vegetation Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No Welland Hydrology Present? Yes No Welland Water Feature 80. Soils previously disturbed. VEGETATION – Use scientific names of plants. Tee Stratum (Plot size: 30°) Absolute Secure Species? Status Norman (Plot size: 30°) Absolute Secure							
SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No	,						No
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present?							
Wetland Hydrology Present? Yes					ocations, transect	s, important feat	ures, etc.
Wetland Hydrology Present? Yes	Hydrophytic Vegetation Present? Yes ✓	No		41 0 1 1	1.4		
Wetland Hydrology Present? Yes	Hydric Soil Present? Yes	No <u></u>		-		No. ✓	
VEGETATION - Use scientific names of plants.	Wetland Hydrology Present? Yes	_ No <u>√</u>	VVII	umi a vvenai	id: Tes		
VEGETATION - Use scientific names of plants. Species 30'	Remarks:						
Tees Stratum (Plot size: 30'	,		vvale	i i eature	e ou. Julis previo	usiy disturbed	-
1. Carya illinoinensis 2. Ulmus americana 40	T 0: (5) : 30'				Dominance Test wor	ksheet:	
2 Ulmus americana 40							
3. Celtis laevigata 20						, or FAC	(A)
4						inant	
Sapling/Shrub Stratum (Plot size: 15') 100			,,,,			_	(B)
Sapling/Shrub Stratum (Plot size: 15' 10					Parcent of Dominant 9	Species	
1. Celtis laevigata 2.			= Total C	over			(A/B)
Total % Cover of: Multiply by: Comparison Multiply by: Multiply by:)			Prevalence Index wo	rkshoot:	
Column Totals: 10 10 10 10 10 10 10 1				_ FAC			oV:
4.							
Herb Stratum (Plot size: 5'					1		
Herb Stratum (Plot size: 5'	4		- Total C	over			
1	Herb Stratum (Plot size: 5'		= Total C	ovei	FACU species 10	x 4 = 40	
3.					UPL species 0	x 5 = <u>0</u>	
4	2				Column Totals: 120	(A) <u>370</u>	(B)
Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 10	3				Prevalence Inde	ex = B/A = 3.1	+
5							
7							on
8					✓ 2 - Dominance Te	est is >50%	
9					3 - Prevalence Inc	dex is ≤3.0 ¹	
10							
Woody Vine Stratum (Plot size: 30' 1. Toxicodendron radicans 10 yes FACU 1						•	,
Woody Vine Stratum (Plot size: 30' 1. Toxicodendron radicans 10 yes FACU 1Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 2. Hydrophytic Vegetation Present? Yes No No No No No Present?	10			over	Problematic Hydro	ophytic Vegetation (E	xplain)
2							
% Bare Ground in Herb Stratum 100.0	"		yes	FACU		Tarboa or problemation	•
% Bare Ground in Herb Stratum 100.0 Present? Yes No No	2		_ Total O			./	
	% Bare Ground in Herb Stratum 100.0		= rotal C	ovei	_	es No	_
					1		

Profile Desc	ription: (Describe	to the depth r	needed to docur	nent the i	indicator	or confirn	n the absence	of indicators.)
Depth	Matrix			x Feature			_	
(inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-16	2.5Y6/4	70		-			Silty Clay	Likely fill material.
0-16	10YR5/2	30						
				-	·			
1T C. C.		alatian DM Da	duna d Matrice Of				: 21	
	oncentration, D=Deplicators: (Applic					a Sana G		cation: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :
_		Cable to all LNI						•
Histosol	oipedon (A2)		Sandy (Redox (S5				Muck (A9) (LRR I, J) Prairie Redox (A16) (LRR F, G, H)
Black Hi				d Matrix (S				Surface (S7) (LRR G)
	n Sulfide (A4)			Mucky Mir				Plains Depressions (F16)
	Layers (A5) (LRR	F)		Gleyed Ma			-	RR H outside of MLRA 72 & 73)
1 cm Mu	1 cm Muck (A9) (LRR F, G, H) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Redox Dark Surface (F6)							ed Vertic (F18)
							Red P	arent Material (TF2)
	, ,				, ,			Shallow Dark Surface (TF12)
	fucky Mineral (S1)	(00) (100 0 11		Depressio		4.0\		(Explain in Remarks)
	Mucky Peat or Peat		. —		essions (F	•		of hydrophytic vegetation and
5 cm iviu	_ 5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H)							d hydrology must be present, sidisturbed or problematic.
Restrictive I	_ayer (if present):						T T T T T T T T T T T T T T T T T T T	disturbed of problematic.
Type:	zayer (ii present).							
	ches):		_				Hydric Soil	Present? Yes No ✓
	Jiles)		_				Tiyane 3011	Tresent: resNo
Remarks:								
Highly di	sturbed soils,	but no inc	dication from	n hydr	ology t	nat wo	uld be hyd	lric.
HYDROLO	GY							
Wetland Hvo	drology Indicators							
_	cators (minimum of		neck all that appl	v)			Seconda	ary Indicators (minimum of two required)
	Water (A1)	ono roquirou, or	Salt Crust	·- · · · ·			·	face Soil Cracks (B6)
	iter Table (A2)		Aquatic In		s (B13)			rsely Vegetated Concave Surface (B8)
Saturation	` '		Hydrogen		. ,			inage Patterns (B10)
	arks (B1)		Dry-Seaso					dized Rhizospheres on Living Roots (C3)
	nt Deposits (B2)		Oxidized F		, ,	ing Roots		/here tilled)
	posits (B3)			not tilled)		g . tooto		yfish Burrows (C8)
	at or Crust (B4)		Presence	,		!)		uration Visible on Aerial Imagery (C9)
_	oosits (B5)		Thin Muck			,	·	omorphic Position (D2)
	on Visible on Aerial	Imagery (B7)	Other (Ex					C-Neutral Test (D5)
	tained Leaves (B9)	3 , ()			st-Heave Hummocks (D7) (LRR F)			
Field Observ								
Surface Water		res No	✓ Depth (in	ches):				
Water Table			Depth (in					
Saturation Pr			✓ Depth (in				and Hydrolog	y Present? Yes No
(includes cap	oillary fringe)	100 INU _	Debiii (III	ones)		_ ***	ana nyanolog	y 11030111: 163 NO
	corded Data (stream	n gauge, monito	oring well, aerial	photos, pr	evious ins	pections),	if available:	
Remarks:								

Project/Site: US 380		City/Coun	ty: Collin Co	in County Sa		ng Date: 09/10	3/2020
Applicant/Owner: TxDOT				State: TX	_ Samplii	ng Point: DP-	15
Investigator(s): Michael Keenan and Ethan Eichler		Section, T	Гownship, Ra	nge: <u>n/a</u>			
Landform (hillslope, terrace, etc.): floodplain		Local reli	ef (concave,	convex, none): concave	3	Slope (%	%): <u>2-3</u>
Subregion (LRR): J - Southwestern Prairies Cotton and Forag				Long: <u>-96.706321</u>			
Soil Map Unit Name: To - Trinity clay, 0 to 1 percent s	slopes, occasionall	y flooded		NWI classification: PFO			
Are climatic / hydrologic conditions on the site typical			,				
Are Vegetation, Soil, or Hydrology				"Normal Circumstances"			No
Are Vegetation, Soil, or Hydrology				eeded, explain any answ			
SUMMARY OF FINDINGS – Attach site							res etc
		Jampii	ng ponit i	oodiioiio, transcot	<u> </u>	Tunt routu	
	No	Is	the Sampled	l Area			
	No	wit	thin a Wetla	nd? Yes <u> </u>	<u>/</u>	o	
Remarks:	110						
Located within Water Feature 99. I	Reguer activi	ity dam	amed the	stream to form	wetlan	Ч	
Located within water realtire 99. I	Deaver activi	ity uaii	iiiieu iiie	Sucam to form	wellan	u.	
VEGETATION – Use scientific names of	plants.						
Tree Stratum (Plot size: 30')	Absolute		nt Indicator	Dominance Test wor	ksheet:		
1. Ulmus americana	35	yes	? Status FAC	Number of Dominant S That Are OBL, FACW			
2. Ulmus crassifolia	3	no	FAC	(excluding FAC-):	, OI FAC	5	(A)
3.				Total Number of Domi	inant		
4				Species Across All St		5	(B)
	00	= Total C	over	Percent of Dominant S	Snecies		
Sapling/Shrub Stratum (Plot size: 15'	_)			That Are OBL, FACW		100	(A/B)
1. Ulmus americana	35	yes	FAC	Prevalence Index wo	rksheet:		
2. Ulmus crassifolia	15	yes	FAC	Total % Cover of:			
Salix nigra Catalpa bignonioides	<u>15</u> 10	yes no	_ <u>FACW</u> UPL	OBL species			
		110	_ UFL	FACW species			
5	75	- Total C		FAC species	>	3 = 0	
Herb Stratum (Plot size: 5'	7.5	= Total C	ovei	FACU species			
1. Iva annua	5	yes	FAC	UPL species	x	(5 = <u>0</u>	
2				Column Totals: 0	(/	A) 0	(B)
3				Prevalence Inde	w - B/A -	. 0	
4				Hydrophytic Vegetat			
5				1 - Rapid Test for			ı
6				✓ 2 - Dominance Te			
7				3 - Prevalence Inc			
8				4 - Morphological	Adaptatio	ons¹ (Provide s	
9				data in Remar		•	,
10	5	- Total C	over	Problematic Hydr	ophytic Ve	egetation¹ (Exp	olain)
Woody Vine Stratum (Plot size: 30')		ovei	¹ Indicators of hydric so be present, unless dis	oil and we	tland hydrolog	y must
1						problematic.	
2				Hydrophytic Vegetation	,		
% Bare Ground in Herb Stratum 95	0	= rotal C	over	Present? Y	es	No	_
Remarks:				I			

SOIL

Sampling Point: DP-15

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redo	x Features	3			
(inches)	Color (moist)	%C	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks
								
								_
	ncentration, D=Depl					d Sand Gra		n: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators: (Applica	ble to all LRR	s, unless other	wise note	ed.)		Indicators for	Problematic Hydric Soils ³ :
Histosol	(A1)		Sandy G	Sleyed Ma	trix (S4)		1 cm Muck	(A9) (LRR I, J)
-	ipedon (A2)			edox (S5)				rie Redox (A16) (LRR F, G, H)
Black His				Matrix (S	,			ce (S7) (LRR G)
	n Sulfide (A4)			/lucky Min			_	s Depressions (F16)
	Layers (A5) (LRR F			Sleyed Ma			`	outside of MLRA 72 & 73)
	ck (A9) (LRR F, G, H			d Matrix (F			Reduced V	` '
	Below Dark Surface rk Surface (A12)	: (A11)		ark Surfa	rface (F7)			t Material (TF2) ow Dark Surface (TF12)
	ucky Mineral (S1)			epressior	, ,			lain in Remarks)
-	lucky Peat or Peat (S	S2) (LRR G. H)			ssions (F	16)		ydrophytic vegetation and
	cky Peat or Peat (S3		_		3 of LRR			drology must be present,
		, (,	`			,		urbed or problematic.
Restrictive L	ayer (if present):							•
Type:								
Depth (inc	hes): -	_					Hydric Soil Pre	sent? Yes ✓ No
Remarks:	, -							
	م مامومینام م	saura ad by	dria					
100 wet t	o describe, as	ssumed ny	anc.					
HYDROLOG	ΒY							
Wetland Hvd	Irology Indicators:							
_	ators (minimum of or	ne required: che	eck all that apply	/)			Secondary Ir	ndicators (minimum of two required)
✓ Surface \		io roganoa, one	Salt Crust					Soil Cracks (B6)
	ter Table (A2)		Aquatic Inv		c (B12)			Vegetated Concave Surface (B8)
✓ Saturatio			Hydrogen					e Patterns (B10)
	` '				` '		_	
Water Ma	t Deposits (B2)		Dry-Seaso Oxidized R			ing Poots (d Rhizospheres on Living Roots (C3) e tilled)
				not tilled)	es on Livi	ing Roots (· ·
-	osits (B3) t or Crust (B4)		Presence of	,	d Iron (C4	1)		Burrows (C8) on Visible on Aerial Imagery (C9)
	osits (B5)		Thin Muck			+)		phic Position (D2)
	อรแร (ธร) on Visible on Aerial In	nagery (P7)	Other (Exp	,	,		,	utral Test (D5)
· 	ained Leaves (B9)	nagery (b7)	Other (Exp	iaiii iii Ke	marks)			eave Hummocks (D7) (LRR F)
Field Observ								eave Huminocks (DT) (ERR F)
		No. / No.	Depth (inc	hos). 2-2	24			
Surface Water	riesent? Ye	;5 <u>▼</u> N0 _	Depth (inc	леs): <u></u>		-		
Water Table I			✓ Depth (inc					√
Saturation Pr		es <u> </u> No _	Depth (inc	thes): _0		_ Wetla	and Hydrology Pr	esent? Yes No
(includes cap Describe Rec	orded Data (stream	gauge, monitor	ing well, aerial r	hotos, pre	evious insi	pections). i	f available:	
	(====(=================================	5 5 , 2 5	J , , , , , , , , , , , ,	,				
Remarks:								
nomano.								

Project/Site: US 380		City/Cou	unty: Collin Co	unty	Sampling	Date: 09/15/2	2020
Applicant/Owner: TXDOT	State: TX	Sampling	Point: DP-16				
Investigator(s): Kelsea Hiebert, Ethan Eichler		Section	, Township, Ra	inge: N/A			
Landform (hillslope, terrace, etc.): Depression		Local re	elief (concave,	convex, none): concave		Slope (%)	: 2
Subregion (LRR): J - Southwestern Prairies Cotton and Forage Region	on Lat: 33.2	223581		Long: <u>-96.704035</u>		_ Datum: NA	D 83
Soil Map Unit Name: Trinity clay, 0 to 1 percent slopes, occ	asionally floo	oded		NWI classifi	cation: PEN	Л	
Are climatic / hydrologic conditions on the site typical for th							
Are Vegetation, Soil, or Hydrology	significantly	disturbe	ed? Are	"Normal Circumstances"	present? Y	'es N	lo <u>√</u>
Are Vegetation, Soil, or Hydrology	naturally pro	blemati	c? (If ne	eeded, explain any answe	ers in Rema	rks.)	
SUMMARY OF FINDINGS – Attach site map	showing	samp	oling point l	ocations, transects	s, importa	ant feature	es, etc.
Hydrophytic Vegetation Present? Yes ↑	No		s the Sampled	d Area			
Hydric Soil Present? Yes ↑			within a Wetla		/ No_		
Wetland Hydrology Present? Yes✓_ N Remarks:	No						
	or Footu	ıro 10	no Likoly a	anthronogonically	, orooto	d due te	
Located within Emergent Wetland Wat netted matting within soil profile at 6 in		ile ic	9. LIKEIY a	anunopogenicany	/ Created	u uue to	
VEGETATION – Use scientific names of plan							
Tree Stratum (Plot size: 30'	Absolute % Cover		nant Indicator es? Status	Dominance Test worl			
1				Number of Dominant S That Are OBL, FACW,			
2.				(excluding FAC-):	<u>:</u>	3	(A)
3.				Total Number of Domi	nant		
4				Species Across All Stra	ata:	3	(B)
5				Percent of Dominant S			+
Sapling/Shrub Stratum (Plot size: 15'	0	= Total	Cover	That Are OBL, FACW,	or FAC:	100.0%	(A/B)
O-lin minus	15	yes	FACW	Prevalence Index wo	rksheet:		
				Total % Cover of:		Multiply by:	
2 3				OBL species 80	x 1	= 80	_
4				FACW species 15	x 2	= 30	_
		= Total	Cover		x 3		_
Herb Stratum (Plot size: 5'	<u> </u>			FACU species 0	x 4	= 0	_
1. Eleocharis obtusa	60	yes	OBL_			= 0	
2. Iva annua	30	yes	FAC	Column Totals: 145	(A)	260	(B)
3. Typha angustifolia		no	OBL_	Prevalence Index	κ = B/A = ´	1.8	+
4. Xanthium strumarium	10	no	FAC	Hydrophytic Vegetati			
5. Phyla nodiflora		no	FAC	1 - Rapid Test for			
6				✓ 2 - Dominance Te	st is >50%		
7				✓ 3 - Prevalence Ind	ex is ≤3.0 ¹		
8 9				4 - Morphological	Adaptations	1 (Provide sur	porting
10				data in Remark			
10.	130.0			Problematic Hydro	phytic Vege	etation (Expla	ain)
Woody Vine Stratum (Plot size: 30') 1.				¹ Indicators of hydric so be present, unless dist			must
2.				Hydrophytic			
200	0	= Total	Cover	Vegetation Present? Ye	es 🗸	No	
% Bare Ground in Herb Stratum -30.0				rieseitt 16			
Remarks:							

Depth (inches)	Matrix Color (moist)		educed Matrix, CS=Covered or Coated Sand (Rs, unless otherwise noted.) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Depleted Matrix (F3)		_Loc ²	Texture Silty Clay	Remarks Too saturated to color.	
Hydric Soil Histosol Histic E Black Hi Hydroge Stratified 1 cm Mu Deplete Thick Da Sandy M 2.5 cm M Restrictive	Indicators: (Applications) (A1) (A2) (A3) (A3) (A4) (A4) (A4) (A4) (A4) (A4) (A4) (A4	able to all LRF F) H) e (A11) S2) (LRR G, H	Rs, unless other Sandy Sandy Strippe Loamy Loamy Peplete Redox Redox High Pl	unless otherwise noted.) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2)				cation: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ : Muck (A9) (LRR I, J) Prairie Redox (A16) (LRR F, G, H) Surface (S7) (LRR G) Plains Depressions (F16) RR H outside of MLRA 72 & 73) sed Vertic (F18) arent Material (TF2) Shallow Dark Surface (TF12) (Explain in Remarks) of hydrophytic vegetation and d hydrology must be present, d disturbed or problematic.
Type: Ne			_					,
Depth (in	ches): <u>6</u>		-				Hydric Soil	Present? Yes ✓ No
Netted massumed	l hydric.	on aerial i	magery on	01/201	17. Toc	wet to	describe	and likley disturbed, ∎
_	drology Indicators:							
Surface High Wa Saturation Water M Sedimen Drift Dep Algal Ma Iron Dep Inundati	arks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial I tained Leaves (B9)		Salt Crust Aquatic In Hydrogen Dry-Seasc Oxidized I (where Presence	(B11) avertebrate Sulfide Oc on Water T Rhizosphe not tilled) of Reduce c Surface (dor (C1) Table (C2) Tes on Livind Iron (C4) C7)	•	Surf Spa Drai Oxio (C3)	face Soil Cracks (B6) face Soil Cracks (B6) frisely Vegetated Concave Surface (B8) frinage Patterns (B10) frinage Patterns (B10) frinage Patterns (B10) frinage Patterns (C3) fringe Patterns (C3) frinage Patterns (C3) frinage Patterns (C3) fri
Surface Wat Water Table Saturation P (includes cap	er Present? Y Present? Y resent? Y oillary fringe)	es	Depth (in Depth (in Depth (in	nches): 2 nches): 0	avious ins			y Present? Yes No
Remarks:	on visible on G							11/2020.

Project/Site: US 380		City/Cour	nty: Collin Co	Sampling Date: 9/22/2021			
Applicant/Owner: TxDOT				State: TX	Samplin	g Point: DP-1	7
Investigator(s): Kelsea Hiebert and Wyatt Wolfenkoehler		Section,	Township, Ra	inge: n/a			
Landform (hillslope, terrace, etc.): hillslope		Local rel	ief (concave,	convex, none): none		Slope (%	s): <u>1</u>
Subregion (LRR): J - Southwestern Prairies Cotton and Forage Reg	ion Lat: 33.2	223593		Long: <u>-96.704935</u>		Datum: N	AD 27
Soil Map Unit Name: LeB—Lewisville silty clay, 1 to 3 percentage	ent slopes			NWI classi	fication: UF	PL	
Are climatic / hydrologic conditions on the site typical for the	nis time of yea	ar? Yes					
Are Vegetation, Soil, or Hydrology				"Normal Circumstances			No
Are Vegetation, Soil, or Hydrology				eeded, explain any ansv			
SUMMARY OF FINDINGS – Attach site map							es, etc
Hydrophytic Vegetation Present? Yes	No <u>√</u>	le	the Sampled	ΙΛιοο			
Hydric Soil Present? Yes	No <u>√</u>		ithin a Wetla		No	✓	
Wetland Hydrology Present? Yes	No <u>√</u>						
Remarks: Located adjacent to Emergent Wetlan	d Water	Egatur	ro 100 an	d Forested Wet	land \//	ater Feat	ıra 00
Located adjacent to Emergent Wettan	u vval e i	i C atui	e 109 an	id i orested vvet	iaiiu vva	alei i eall	ii C 33.
VEGETATION – Use scientific names of pla	nte						
VEGETATION – Ose scientific flames of pla	Absolute	Domina	ınt Indicator	Dominance Test wo	rksheet:		
<u>Tree Stratum</u> (Plot size: 30'	% Cover	Species	Status	Number of Dominant	Species		
1				That Are OBL, FACW (excluding FAC-):	/, or FAC	0	_ (A)
2							_ (/\)
3				Total Number of Dom Species Across All St		1	(B)
4	0		`over				_ (-)
Sapling/Shrub Stratum (Plot size: 15')		- Total C	ovei	Percent of Dominant That Are OBL, FACW		0.0%	_ (A/B)
1				Prevalence Index w	orkobooti		
2				Total % Cover of		Multiply by:	
3						1 = ⁰	
4	_	-			X	2 = 0	
5	0	- Total C	`ovor	FAC species 10	Х	3 = 30	
Herb Stratum (Plot size: 5'		= Total C	ovei	FACU species 90	x	4 = 360	
1. Sorghum halepense		yes	<u>FACU</u>	UPL species 0		5 = 0	
2. Iva annua	10	no	<u>FAC</u>	Column Totals: 100	(A	390	(B)
3				Prevalence Inde	ex = B/A =	3.9	
4				Hydrophytic Vegeta			
5				1 - Rapid Test fo	r Hydrophyt	tic Vegetation	
6				2 - Dominance T	est is >50%		
8.				3 - Prevalence In	ıdex is ≤3.0	1	
9.				4 - Morphologica data in Rema			
10				Problematic Hyd		•	,
	100.0	= Total C	Cover	-			,
Woody Vine Stratum (Plot size: 30') 1.				¹ Indicators of hydric s be present, unless di	oil and wet sturbed or p	land hydrology problematic.	/ must
2.				Hydrophytic			
	0	= Total C	Cover	Vegetation	V 0.0	No ✓	
% Bare Ground in Herb Stratum 0.0				Present?	Yes	NO	
Remarks:							

Profile Desc	ription: (Describe	to the depth n	eeded to docur	nent the i	ndicator	or confirm	n the absence	of indicators.)					
Depth	Matrix			x Feature:	- 1								
(inches)	Color (moist)		Color (moist)	%	Type'	Loc ²	Texture	Remarks					
0-1	10YR 3/1	_ 100					Clay	Gravel within matrix					
-	·												
	-						<u> </u>						
¹ Type: C=Co	oncentration, D=De	pletion, RM=Red	duced Matrix, CS	S=Covered	d or Coate	d Sand Gr	rains. ² Lo	cation: PL=Pore Lining, M=Matrix.					
Hydric Soil I	ndicators: (Appli	cable to all LRF	Rs, unless othe	rwise note	ed.)		Indicators	for Problematic Hydric Soils ³ :					
Histosol	(A1)		Sandy (Gleyed Ma	trix (S4)		1 cm l	Muck (A9) (LRR I, J)					
Histic Ep	pipedon (A2)		Sandy F	Redox (S5)		Coast Prairie Redox (A16) (LRR F, G, H)						
Black His				d Matrix (S				Surface (S7) (LRR G)					
	n Sulfide (A4)	-		Mucky Mir			_	Plains Depressions (F16)					
	Layers (A5) (LRR			Gleyed Ma d Matrix (I			•	RR H outside of MLRA 72 & 73) sed Vertic (F18)					
	ick (A9) (LRR F, G, d Below Dark Surfa			Dark Surfa	,			arent Material (TF2)					
	ark Surface (A12)	55 (7111)		d Dark Su	` '			Shallow Dark Surface (TF12)					
	lucky Mineral (S1)		Redox I			(Explain in Remarks)							
	 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) 5 cm Mucky Peat or Peat (S3) (LRR F) MLRA 72 & 73 of LRR H 							of hydrophytic vegetation and					
5 cm Mu								,					
Restrictive Layer (if present):							unless	disturbed or problematic.					
	_ayer (if present):												
Type: 1	ches): plastic erosic	on control notting	_					- · · · · · · · · · · · · · · · · · · ·					
	ches): plastic erosic	on control netting	<u>_</u>				Hydric Soil	Present? Yes No					
Remarks:					_								
Man mad	de restrictive	layer at 1 ii	nch to cont	rol hills	slope e	rosion.							
HYDROLO	GY												
Wetland Hyd	drology Indicators	:											
Primary India	ators (minimum of	one required; ch	eck all that appl	y)			Seconda	ary Indicators (minimum of two required)					
Surface	Water (A1)		Salt Crust	(B11)			Sur	face Soil Cracks (B6)					
High Wa	ter Table (A2)		Aquatic In	vertebrate	s (B13)		Spa	arsely Vegetated Concave Surface (B8)					
Saturation	on (A3)		Hydrogen	Sulfide O	dor (C1)		Dra	inage Patterns (B10)					
Water M	arks (B1)		Dry-Seaso	on Water T	able (C2)		Oxi	dized Rhizospheres on Living Roots (C3)					
Sedimer	nt Deposits (B2)		Oxidized F	Rhizosphe	res on Livi	ng Roots	(C3) (v	vhere tilled)					
Drift Dep	oosits (B3)			not tilled)			Cra	yfish Burrows (C8)					
_	t or Crust (B4)		Presence		•	ł)	Sat	uration Visible on Aerial Imagery (C9)					
	osits (B5)		Thin Muck	,				omorphic Position (D2)					
	on Visible on Aerial	Imagery (B7)	Other (Exp	olain in Re	marks)			C-Neutral Test (D5)					
	tained Leaves (B9)						Fro	st-Heave Hummocks (D7) (LRR F)					
Field Observ			,										
Surface Water			✓ Depth (in										
Water Table			✓ Depth (in					1					
Saturation Pr		Yes No _	✓ Depth (in	ches):		_ Wetl	and Hydrolog	y Present? Yes No _✓					
(includes cap Describe Red	corded Data (strear	n gauge, monito	ring well. aerial	photos, pr	evious ins	l pections).	if available:						
		J J.,oc	J, 20.101	,, pi		, /,							
Remarks:													

Project/Site: US 380		City/Cour	nty: Collin Co	unty	Sampling	Sampling Date: 07/09/2021	
Applicant/Owner: TxDOT				State: TX	Sampling	Point: DP-18	
Investigator(s): Kelsea D. Hiebert and Wyatt Wolfenkoehler		Section,	Township, Ra	nge: N/A			
Landform (hillslope, terrace, etc.): Floodplain		Local rel	ief (concave,	convex, none): concave	;	Slope (%):	1
Subregion (LRR):	on Lat: 33.2			Long: <u>-96.732052</u>		Datum:	
Soil Map Unit Name: Trinity clay, 0 to 1 percent slopes, occ	casionally flo	oded		NWI classifi	cation: PEM	1	
Are climatic / hydrologic conditions on the site typical for th	is time of yea	ar? Yes_	√ No_	(If no, explain in I	Remarks.)		
Are Vegetation, Soil, or Hydrology	significantly	disturbed	l? Are '	'Normal Circumstances"	present? Y	es <u>√</u> N	0
Are Vegetation, Soil, or Hydrology	naturally pro	blematic	? (If ne	eeded, explain any answ	ers in Rema	rks.)	
SUMMARY OF FINDINGS - Attach site map	showing	sampli	ing point l	ocations, transect	s, importa	ant feature	s, etc.
Hydrophytic Vegetation Present? Yes ✓	No	la	the Sampled	I Area			
Hydric Soil Present? Yes <u>✓</u> N	No		ithin a Wetlar		/ No _		
Wetland Hydrology Present? Yes✓_ N Remarks:	No						
	or Footu	ma 407	7 lagatad	امام المعاملة المناطنية	hannala	of Duthou	af a rad
Located within Emergent Wetland Wat Branch, Perennial Stream Water Feat							iora
		aliu Fe	elellillal C	olieani vvalei re	aluie 13	0.	
VEGETATION – Use scientific names of plan	nts.						
Tree Stratum (Plot size: 30')			nt Indicator Status	Dominance Test wor			
1				Number of Dominant S That Are OBL, FACW,	•		
2.				(excluding FAC-):		1	(A)
3.				Total Number of Domi	nant		
4.				Species Across All Str		2	(B)
451	0	= Total C	Cover	Percent of Dominant S	Species		
Sapling/Shrub Stratum (Plot size: 15')				That Are OBL, FACW,	or FAC:	50	(A/B)
1				Prevalence Index wo	rksheet:		
2.				Total % Cover of:		Multiply by:	
3 4		-		OBL species 0	x 1	= 0	
5				FACW species 70	x 2	= 140	_
	0	= Total C	Cover	FAC species 0			_
Herb Stratum (Plot size: 5'					x 4		_
1. Phyla lanceolata	50	yes	_ FACW			= 0	
2. Sorghum halepense	_ 20	no	FACU	Column Totals: 100	(A)	260	(B)
3. Echinochloa colona		no	_ FACW_	Prevalence Inde	$x = B/A = \frac{2}{3}$	2.6	
4				Hydrophytic Vegetat	ion Indicato	rs:	
5				1 - Rapid Test for	Hydrophytic	Vegetation	
6				2 - Dominance Te	st is >50%		
7 8			_	✓ 3 - Prevalence Inc.	dex is ≤3.0¹		
9.				4 - Morphological			
10.				data in Remarl Problematic Hydro			
		= Total C					
Woody Vine Stratum (Plot size: 30')				¹ Indicators of hydric so be present, unless dis			must
1. Toxicodendron radicans		yes	FACU_			bicinatic.	
2				Hydrophytic Vegetation	,		
% Bare Ground in Herb Stratum	10	= Total C	cover		es	No	
Remarks:				1			

Soll Sampling Point: DP-18

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)	1
Depth Matrix Redox Features	
	Remarks
0-3 10YR 4/1 30 7.5YR 4/6 3 C M/PL Sandy Clay	
10YR 5/2 67 Sandy Clay	
3-7 10YR 4/1 50 Sandy Clay	
10YR 5/2 50 Sandy Clay	
7-12 10YR 4/1 13 7.5YR 4/6 10 C M/PL Sandy Clay	
10YR 5/2 77 Sandy Clay	_
	_
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore	e Lining, M=Matrix
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problemat	
Lagrangian	I, J)
Histic Epipedon (A2) Sandy Redox (S5) Coast Prairie Redox (A2)	
Black Histic (A3) Stripped Matrix (S6) Dark Surface (S7) (LI	
Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) High Plains Depression	
Stratified Layers (A5) (LRR F) Loamy Gleyed Matrix (F2) (LRR H outside of	f MLRA 72 & 73)
1 cm Muck (A9) (LRR F, G, H) ✓ Depleted Matrix (F3) — Reduced Vertic (F18)	
Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Red Parent Material (TF2)
Thick Dark Surface (A12) Depleted Dark Surface (F7) Very Shallow Dark Su	
Sandy Mucky Mineral (S1) Redox Depressions (F8) Other (Explain in Rem	
2.5 cm Mucky Peat or Peat (S2) (LRR G, H) High Plains Depressions (F16) ³ Indicators of hydrophytic	_
5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) wetland hydrology mu	
unless disturbed or pr Restrictive Layer (if present):	obiematic.
Type:	
	es No
Remarks:	
Gravel within matrix from 0-7 inches.	
Graver within matrix norm 0-7 inches.	
HYDROLOGY	
Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (n	ninimum of two required)
Surface Water (A1) Salt Crust (B11) Surface Soil Cracks	
	d Concave Surface (B8)
Saturation (A3) Hydrogen Sulfide Odor (C1) Drainage Patterns ((B10)
Water Marks (B1) Dry-Season Water Table (C2) Oxidized Rhizosphe	eres on Living Roots (C3)
Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) (where tilled)	
<u>✓</u> Drift Deposits (B3) (where not tilled) Crayfish Burrows (0	C8)
Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Saturation Visible of	on Aerial Imagery (C9)
Iron Deposits (B5) Thin Muck Surface (C7) Geomorphic Position	on (D2)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) FAC-Neutral Test (I	D5)
Water-Stained Leaves (B9) Frost-Heave Humm	nocks (D7) (LRR F)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes No Depth (inches):	,
Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Y	es No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
and the state of t	
Remarks:	
Drift deposits of dead vegetation across the wetland likely from overland flow when Rutheford Branch is inundational control of the control o	ated at a higher level.
Dead bivalves located along the edges of the wetland boundary adjacent to Rutheford Branch. Saturation on a	erial imagery 12/2015

Project/Site: US 380		City/Cou	unty: _	Collin Co	unty	Sampling I	Date: 07/09/2	:021
Applicant/Owner: TxDOT					State: TX	Sampling F	Point: DP-19	
Investigator(s): Kelsea D. Hiebert and Wyatt Wolfenkoehler		Section	, Tow	nship, Ra	nge: N/A			
Landform (hillslope, terrace, etc.): Hillslope		Local re	elief (d	concave,	convex, none): convex		Slope (%):	5
Subregion (LRR): J - Southwestern Prairies Cotton and Forage Region	on Lat: 33.2	233775			Long: <u>-96.732177</u>		Datum:	
Soil Map Unit Name: Trinity clay, 0 to 1 percent slopes, occa	asionally floc	ded			NWI classific	ation: UPL		
Are climatic / hydrologic conditions on the site typical for thi	s time of yea	ar? Yes						
Are Vegetation, Soil, or Hydrologys					"Normal Circumstances" p		es <u>√</u> N	0
Are Vegetation, Soil, or Hydrology r	naturally pro	blemati	ic?	(If ne	eeded, explain any answe	rs in Remar	·ks.)	
SUMMARY OF FINDINGS – Attach site map				•			ŕ	s, etc.
Hydrophytic Vegetation Present? Yes N	lo.							
Hydrophytic Vegetation Present? Yes N Hydric Soil Present? Yes N	lo √			Sampled			/	
Wetland Hydrology Present? Yes N		V	within	a Wetlar	nd? Yes	No _	<u> </u>	
Remarks:		<u> </u>						
Located on a hillslope adjacent to Eme	rgent W	etlan	id W	ater F	eature 137 and F	erennia	l Stream	
Water Feature 136, a braided channel	of Ruthe	erford	d Bra	anch.				
VEGETATION – Use scientific names of plan	nte.							
VEGETATION – Ose scientific flames of plan	Absolute	Domin	oont l	ndicator	Dominance Test work	rohooti		
Tree Stratum (Plot size: 30'	% Cover				Number of Dominant S			
1. Ulmus americana	70	yes	<u>F</u>	FAC	That Are OBL, FACW,	or FAC		
2					(excluding FAC-):	_2	<u>'</u>	(A)
3				<u> </u>	Total Number of Domin)	(5)
4					Species Across All Stra	ıta: <u>-</u>	3	(B)
Sapling/Shrub Stratum (Plot size: 15')	70	= Total	Cove	r	Percent of Dominant Sp	pecies	67	(A /D)
1					That Are OBL, FACW,	or FAC: _C		(A/B)
2					Prevalence Index wor			
3					Total % Cover of:		Multiply by:	
4					OBL species			
5					FACW species			
Herb Stratum (Plot size: 5'	0	= Total	Cove	r	FAC species FACU species		_	_
Herb Stratum (Plot size: 5' 1. Stenotaphrum secundatum	30	yes	F	AC	·		_ 0	_
2. Cynodon Dactylon	60	ves		ACU	Column Totals: 0			
3.								
4					Prevalence Index			_
5					Hydrophytic Vegetation			
6					1 - Rapid Test for F ✓ 2 - Dominance Tes		vegetation	
7					3 - Prevalence Inde			
8					4 - Morphological A		(Provide sup	portina
9					data in Remarks	s or on a se	parate sheet)	
10					Problematic Hydro	phytic Vege	tation ¹ (Expla	in)
Woody Vine Stratum (Plot size: 30')		= Total			¹ Indicators of hydric soi be present, unless distu			nust
1					' '			
2					Hydrophytic Vegetation	/		
% Bare Ground in Herb Stratum 10	0			Γ	Present? Ye	s	No	
Remarks:					1			

Depth (inches)	Motrice	·		x Feature		J. CO	the absence	,
	Matrix Color (moist)	% Co	olor (moist)	ox Feature: %	Type ¹	Loc ²	Texture	Remarks
0-10	10YR 4/1	100		,,,	.,,,,,		Sandy Clay	Likely Fill material
	_							
	_	·						
				_				
-	-							
		· 						
	_	·						
		<u> </u>						
¹ Type: C=C	Concentration, D=Dep	letion, RM=Redu	uced Matrix, C	S=Covered	or Coate	d Sand Gr	ains. ² Loc	cation: PL=Pore Lining, M=Matrix.
Hydric Soil	I Indicators: (Applic	able to all LRRs	, unless othe	rwise note	ed.)			for Problematic Hydric Soils ³ :
Histoso	ol (A1)		Sandy	Gleyed Ma	trix (S4)		1 cm N	Muck (A9) (LRR I, J)
Histic E	Epipedon (A2)			Redox (S5				Prairie Redox (A16) (LRR F, G, H)
Black F	Histic (A3)		Strippe	d Matrix (S	6)		Dark S	surface (S7) (LRR G)
	gen Sulfide (A4)			Mucky Mir			_	lains Depressions (F16)
' '	ed Layers (A5) (LRR I	*		Gleyed Ma	. ,		`	R H outside of MLRA 72 & 73)
	fluck (A9) (LRR F, G,			ed Matrix (I				ed Vertic (F18)
	ed Below Dark Surfac	e (A11)		Dark Surfa				arent Material (TF2)
	Dark Surface (A12) Mucky Mineral (S1)			ed Dark Su Depressio				hallow Dark Surface (TF12) (Explain in Remarks)
	• ' '	S2) (I RR G H)				16)		of hydrophytic vegetation and
2.5 cm Mucky Peat or Peat (S2) (LRR G, H) High Plains Depressions (F16) 5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H)								d hydrology must be present,
		s) (=::::)	(/		disturbed or problematic.
Restrictive	Layer (if present):							·
Type: The	hicker fill material							,
Depth (ir	nches): 10						Hydric Soil	Present? Yes No
Remarks:							,	
HYDROLO	201/							
	JGY							
	ydrology Indicators:							
Wetland Hy			ck all that app	ly)			Seconda	ary Indicators (minimum of two required)
Wetland Hy Primary Indi	ydrology Indicators:		ck all that app					ary Indicators (minimum of two required) ace Soil Cracks (B6)
Wetland Hy Primary Indi Surface	ydrology Indicators: licators (minimum of c			(B11)	s (B13)		Surf	•
Wetland Hy Primary Indi Surface High W	ydrology Indicators: licators (minimum of c e Water (A1)		Salt Crust	(B11) vertebrate	, ,		Surf Spa	ace Soil Cracks (B6)
Wetland Hy Primary Ind Surface High W Saturat	ydrology Indicators: licators (minimum of c e Water (A1) /ater Table (A2)		Salt Crust Aquatic In	(B11) evertebrate Sulfide Od	lor (C1)		Surf Spa Drai	ace Soil Cracks (B6) rsely Vegetated Concave Surface (B8)
Wetland Hy Primary Indi Surface High W Saturat Water N	ydrology Indicators: dicators (minimum of control of co		Salt Crust Aquatic In Hydrogen	(B11) evertebrate Sulfide Oc on Water T	lor (C1) able (C2)	ng Roots (Surf Spa Drai Oxid	ace Soil Cracks (B6) rsely Vegetated Concave Surface (B8) nage Patterns (B10)
Wetland Hy Primary Indi Surface High W Saturat Water N Sedime	ydrology Indicators: dicators (minimum of content of co		Salt Crust Aquatic In Hydrogen Dry-Seaso Oxidized I	(B11) evertebrate Sulfide Oc on Water T	lor (C1) able (C2)	ng Roots (Surf Spa Drai Oxic (C3) (w	ace Soil Cracks (B6) rsely Vegetated Concave Surface (B8) nage Patterns (B10) dized Rhizospheres on Living Roots (C3)
Wetland Hy Primary Indi Surface High W Saturat Water N Sedime	ydrology Indicators: dicators (minimum of content of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2)		Salt Crust Aquatic In Hydrogen Dry-Seaso Oxidized I	t (B11) evertebrate Sulfide Ocon Water T Rhizosphe not tilled)	lor (C1) able (C2) res on Livi		Surf Spa Drai Oxic C3) (w C7	ace Soil Cracks (B6) rsely Vegetated Concave Surface (B8) nage Patterns (B10) dized Rhizospheres on Living Roots (C3) where tilled)
Wetland Hy Primary Indi Surface High W Saturat Water N Sedime Drift De	ydrology Indicators: dicators (minimum of content of the Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3)		Salt Crust Aquatic In Hydrogen Dry-Seasc Oxidized F	(B11) Evertebrate Sulfide Oco On Water T Rhizosphe not tilled) of Reduce	lor (C1) able (C2) res on Livi		Surf Spa Drai Oxio C3) (w Cray Satu	ace Soil Cracks (B6) rsely Vegetated Concave Surface (B8) nage Patterns (B10) dized Rhizospheres on Living Roots (C3) where tilled) rfish Burrows (C8)
Wetland Hy Primary Ind Surface High W Saturat Water N Sedime Drift De	ydrology Indicators: dicators (minimum of content of the Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Vat or Crust (B4)	ne required; che	Salt Crust Aquatic In Hydrogen Dry-Seasc Oxidized I (where Presence	(B11) Evertebrate Sulfide Ocon Water T Rhizosphe not tilled) of Reduce C Surface (lor (C1) able (C2) res on Livi d Iron (C4		Surf Spa Drai Oxio C3) (w Cray Satu	ace Soil Cracks (B6) rsely Vegetated Concave Surface (B8) nage Patterns (B10) dized Rhizospheres on Living Roots (C3) rhere tilled) rfish Burrows (C8) uration Visible on Aerial Imagery (C9)
Wetland Hy Primary Ind Surface High W Saturat Water N Sedime Drift De Algal M Iron De	ydrology Indicators: dicators (minimum of of the Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5)	ne required; che	Salt Crust Aquatic In Hydrogen Dry-Seaso Oxidized I (where Presence Thin Muck	(B11) Evertebrate Sulfide Ocon Water T Rhizosphe not tilled) of Reduce C Surface (lor (C1) able (C2) res on Livi d Iron (C4		Surf Spa Oxio Cray Satu Geo FAC	ace Soil Cracks (B6) rsely Vegetated Concave Surface (B8) nage Patterns (B10) dized Rhizospheres on Living Roots (C3) rhere tilled) rfish Burrows (C8) uration Visible on Aerial Imagery (C9) morphic Position (D2)
Wetland Hy Primary Ind Surface High W Saturat Water N Sedime Drift De Algal M Iron De	ydrology Indicators: dicators (minimum of of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) //at or Crust (B4) eposits (B5) tion Visible on Aerial I Stained Leaves (B9)	ne required; che	Salt Crust Aquatic In Hydrogen Dry-Seaso Oxidized I (where Presence Thin Muck	(B11) Evertebrate Sulfide Ocon Water T Rhizosphe not tilled) of Reduce C Surface (lor (C1) able (C2) res on Livi d Iron (C4		Surf Spa Oxio Cray Satu Geo FAC	ace Soil Cracks (B6) rsely Vegetated Concave Surface (B8) nage Patterns (B10) dized Rhizospheres on Living Roots (C3) rhere tilled) rfish Burrows (C8) uration Visible on Aerial Imagery (C9) morphic Position (D2) c-Neutral Test (D5)
Wetland Hy Primary Indi Surface High W Saturat Water N Sedime Drift De Algal M Iron De Inundat Water-S	ydrology Indicators: dicators (minimum of of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) //at or Crust (B4) eposits (B5) tion Visible on Aerial I Stained Leaves (B9)	ne required; che	Salt Crust Aquatic In Hydrogen Dry-Seasc Oxidized I (where Presence Thin Muck Other (Ex	wertebrate Sulfide Oc on Water T Rhizosphe not tilled) of Reduce Surface (plain in Re	lor (C1) able (C2) es on Livi d Iron (C4 C7) marks)	·)	Surf Spa Oxio Cray Satu Geo FAC	ace Soil Cracks (B6) rsely Vegetated Concave Surface (B8) nage Patterns (B10) dized Rhizospheres on Living Roots (C3) rhere tilled) rfish Burrows (C8) uration Visible on Aerial Imagery (C9) morphic Position (D2) c-Neutral Test (D5)
Wetland Hy Primary Ind Surface High W Saturat Water N Sedime Drift De Algal M Iron De Inundat Water-S Field Obse	ydrology Indicators: dicators (minimum of of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) //at or Crust (B4) eposits (B5) tion Visible on Aerial I Stained Leaves (B9) ervations: ater Present?	magery (B7)	Salt Crust Aquatic In Hydrogen Dry-Seasc Oxidized I (where Presence Thin Muck Other (Ex	r (B11) avertebrate Sulfide Oc on Water T Rhizosphe not tilled) of Reduce of Surface (plain in Re	lor (C1) able (C2) es on Livi d Iron (C4 C7) marks)		Surf Spa Oxio Cray Satu Geo FAC	ace Soil Cracks (B6) rsely Vegetated Concave Surface (B8) nage Patterns (B10) dized Rhizospheres on Living Roots (C3) rhere tilled) rfish Burrows (C8) uration Visible on Aerial Imagery (C9) morphic Position (D2) c-Neutral Test (D5)
Wetland Hy Primary Ind Surface High W Saturat Water N Sedime Drift De Algal M Iron De Inundat Water-S Field Obse Surface Water Table	ydrology Indicators: dicators (minimum of of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) tion Visible on Aerial I Stained Leaves (B9) ervations: ater Present? Y	magery (B7)	Salt Crust Aquatic In Hydrogen Dry-Sease Oxidized F (where Presence Thin Muck Other (Exp	wertebrate Sulfide Ocon Water T Rhizosphe not tilled) of Reduce Surface (plain in Re	lor (C1) able (C2) es on Livi d Iron (C4 C7) marks)		Surf Spa Spa Drai Oxio C3) (w Cray Satu Geo FAC	ace Soil Cracks (B6) rsely Vegetated Concave Surface (B8) nage Patterns (B10) dized Rhizospheres on Living Roots (C3) rhere tilled) rfish Burrows (C8) uration Visible on Aerial Imagery (C9) morphic Position (D2) c-Neutral Test (D5) st-Heave Hummocks (D7) (LRR F)
Wetland Hy Primary Ind Surface High W Saturat Water N Sedime Drift De Algal M Iron De Inundat Water-S Field Obse Surface Wa Water Table Saturation F (includes ca	ydrology Indicators: dicators (minimum of of the Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) tion Visible on Aerial I Stained Leaves (B9) ervations: ater Present? Present? Present? Apillary fringe)	magery (B7) es No es No es No	Salt Crust Aquatic In Hydrogen Dry-Seasc Oxidized F (where Presence Thin Muck Other (Exp	wertebrate Sulfide Ocon Water T Rhizosphe not tilled) of Reduce Surface (plain in Re aches): aches): aches):	lor (C1) able (C2) es on Livi d Iron (C4 C7) marks)		Surf Spa Drai Oxio C3) (w Cray Satu Geo FAC Fros	ace Soil Cracks (B6) rsely Vegetated Concave Surface (B8) nage Patterns (B10) dized Rhizospheres on Living Roots (C3) rhere tilled) rfish Burrows (C8) uration Visible on Aerial Imagery (C9) morphic Position (D2) c-Neutral Test (D5)
Wetland Hy Primary Ind Surface High W Saturat Water N Sedime Drift De Algal M Iron De Inundat Water-S Field Obse Surface Wa Water Table Saturation F (includes ca	ydrology Indicators: dicators (minimum of of the Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) tion Visible on Aerial I Stained Leaves (B9) ervations: ater Present? Present? Y Present? Y	magery (B7) es No es No es No	Salt Crust Aquatic In Hydrogen Dry-Seasc Oxidized F (where Presence Thin Muck Other (Exp	wertebrate Sulfide Ocon Water T Rhizosphe not tilled) of Reduce Surface (plain in Re aches): aches): aches):	lor (C1) able (C2) es on Livi d Iron (C4 C7) marks)		Surf Spa Drai Oxio C3) (w Cray Satu Geo FAC Fros	ace Soil Cracks (B6) rsely Vegetated Concave Surface (B8) nage Patterns (B10) dized Rhizospheres on Living Roots (C3) rhere tilled) rfish Burrows (C8) uration Visible on Aerial Imagery (C9) morphic Position (D2) c-Neutral Test (D5) st-Heave Hummocks (D7) (LRR F)
Wetland Hy Primary Ind Surface High W Saturat Water N Sedime Drift De Algal M Iron De Inundat Water-S Field Obse Surface Wa Water Table Saturation F (includes ca	ydrology Indicators: dicators (minimum of of the Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) tion Visible on Aerial I Stained Leaves (B9) ervations: ater Present? Present? Present? Apillary fringe)	magery (B7) es No es No es No	Salt Crust Aquatic In Hydrogen Dry-Seasc Oxidized F (where Presence Thin Muck Other (Exp	wertebrate Sulfide Ocon Water T Rhizosphe not tilled) of Reduce Surface (plain in Re aches): aches): aches):	lor (C1) able (C2) es on Livi d Iron (C4 C7) marks)		Surf Spa Drai Oxio C3) (w Cray Satu Geo FAC Fros	ace Soil Cracks (B6) rsely Vegetated Concave Surface (B8) nage Patterns (B10) dized Rhizospheres on Living Roots (C3) rhere tilled) rfish Burrows (C8) uration Visible on Aerial Imagery (C9) morphic Position (D2) c-Neutral Test (D5) st-Heave Hummocks (D7) (LRR F)
Wetland Hy Primary Ind Surface High W Saturat Water N Sedime Drift De Algal M Iron De Inundat Water-S Field Obse Surface Wa Water Table Saturation F (includes ca	ydrology Indicators: dicators (minimum of of the Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) tion Visible on Aerial I Stained Leaves (B9) ervations: ater Present? Present? Present? Apillary fringe)	magery (B7) es No es No es No	Salt Crust Aquatic In Hydrogen Dry-Seasc Oxidized F (where Presence Thin Muck Other (Exp	wertebrate Sulfide Ocon Water T Rhizosphe not tilled) of Reduce Surface (plain in Re aches): aches): aches):	lor (C1) able (C2) es on Livi d Iron (C4 C7) marks)		Surf Spa Drai Oxio C3) (w Cray Satu Geo FAC Fros	ace Soil Cracks (B6) rsely Vegetated Concave Surface (B8) nage Patterns (B10) dized Rhizospheres on Living Roots (C3) rhere tilled) rfish Burrows (C8) uration Visible on Aerial Imagery (C9) morphic Position (D2) c-Neutral Test (D5) st-Heave Hummocks (D7) (LRR F)
Wetland Hy Primary Indi Surface High W Saturat Water M Sedime Drift De Algal M Iron De Inundat Water-S Field Obse Surface Wa Water Table Saturation F (includes ca	ydrology Indicators: dicators (minimum of of the Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) tion Visible on Aerial I Stained Leaves (B9) ervations: ater Present? Present? Present? Apillary fringe)	magery (B7) es No es No es No	Salt Crust Aquatic In Hydrogen Dry-Seasc Oxidized F (where Presence Thin Muck Other (Exp	wertebrate Sulfide Ocon Water T Rhizosphe not tilled) of Reduce Surface (plain in Re aches): aches): aches):	lor (C1) able (C2) es on Livi d Iron (C4 C7) marks)		Surf Spa Drai Oxio C3) (w Cray Satu Geo FAC Fros	ace Soil Cracks (B6) rsely Vegetated Concave Surface (B8) nage Patterns (B10) dized Rhizospheres on Living Roots (C3) rhere tilled) rfish Burrows (C8) uration Visible on Aerial Imagery (C9) morphic Position (D2) c-Neutral Test (D5) st-Heave Hummocks (D7) (LRR F)

Project/Site: US 380		City/Cou	ınty։ <u>Collin Co</u> ւ	unty	_ Sampling [Date: 07/09/2	2021
Applicant/Owner: TxDOT				State: TX	_ Sampling F	Point: DP-20	ı
Investigator(s): Kelsea D. Hiebert and Wyatt Wolfenkoehle	er	Section,	, Township, Ra	nge: N/A			
Landform (hillslope, terrace, etc.): Depression		Local re	elief (concave,	convex, none): concave)	_ Slope (%)): <u>1</u>
Subregion (LRR): J - Southwestern Prairies Cotton and Forage Reg	gion Lat: 33.2	234133		Long: <u>-96.732146</u>		Datum:	
Soil Map Unit Name: _Trinity clay, 0 to 1 percent slopes, o	ccasionally flo	oded		NWI classif	ication: PEM		
Are climatic / hydrologic conditions on the site typical for t	this time of yea	ar? Yes					
Are Vegetation, Soil, or Hydrology				"Normal Circumstances"		es ✓ N	10
Are Vegetation, Soil, or Hydrology				eeded, explain any answ			
SUMMARY OF FINDINGS – Attach site ma							es, etc.
		<u>.</u>		·	•		
Hydrophytic Vegetation Present? Yes		ls	s the Sampled		_		
Hydric Soil Present? Wetland Hydrology Present? Yes ✓ Yes ✓	No	v	vithin a Wetlar	nd? Yes <u>v</u>	No		
Remarks:							
Located within Emergent Wetland Wa	ater Featu	ıre 14	0 Adiace	nt to Perennial S	Stream W	ater Fea	ature
142, a reach of Rutherford Branch.	itor i outo		o. / tajaco	in to i oroninai e	ra oani vv	4101 1 00	itui o
VEGETATION – Use scientific names of pla		Domin	ant Indicator	Deminence Test was	lrahaat.		
<u>Tree Stratum</u> (Plot size: 30'	Absolute % Cover		es? Status	Dominance Test wor Number of Dominant S			
1				That Are OBL, FACW	, or FAC		
2				(excluding FAC-):			_ (A)
3				Total Number of Domi			
4		-		Species Across All Str	ata: <u>2</u>	!	_ (B)
Sapling/Shrub Stratum (Plot size: 15')	0	= Total	Cover	Percent of Dominant S		:O	(A /D)
1				That Are OBL, FACW	, or FAC: <u>3</u>	60	_ (A/B)
2.				Prevalence Index wo			
3.				Total % Cover of:		Multiply by:	
4				1	x 1 =		
5				FACW species FAC species	x2= x3=		
Herb Stratum (Plot size: 5'	0	= Total	Cover	FACU species 30			
1. Eleocharis palustris	70	yes	OBL	*		_	_
2. Cynodon dactylon	30	ves	FACU	Column Totals: 100			— (B)
3							_ (/
4.				Prevalence Inde	· ·		
5				Hydrophytic Vegetat			
6				1 - Rapid Test for 2 - Dominance Te		Vegetation	
7		-		✓ 3 - Prevalence Inc			
8				4 - Morphological		(Provide sur	nnortina
9				data in Remark			
10				Problematic Hydro	ophytic Veget	tation ¹ (Expla	ain)
Woody Vine Stratum (Plot size: 30')	100	= Total	Cover	¹ Indicators of hydric so	oil and wetlan	d hydrology	must
1				be present, unless dis			
2				Hydrophytic			
	0	= Total	Cover	Vegetation Present? Y	es √	No	
% Bare Ground in Herb Stratum				Tresent:			
romano.							

Profile Desc	cription: (Descri	be to the de	pth needed to docu	ment the	indicator	or confirm	n the absence of indicators.)	
Depth	Matrix		Red	ox Feature				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remai	rks
0-8	10YR 5/2	45	7.5YR 4/6	15	C	M/PL	Sandy Clay	
	2.5Y 2.5/1	40					Sandy Clay	
8-16	10YR 4/1	45	7.5YR 4/6	15	С	M/PL	Sandy Clay	
	10YR 6/4	40					Sandy Clay	
								_
				-				
				-		-		
1			· 				2.	
			M=Reduced Matrix, C			d Sand G		
-		olicable to a	I LRRs, unless othe				Indicators for Problematic Hyd	aric Solis":
Histosol	pipedon (A2)		Sandy	Redox (S			1 cm Muck (A9) (LRR I, J) Coast Prairie Redox (A16) (IRREGH)
	istic (A3)			ed Matrix (Dark Surface (S7) (LRR G)	
	en Sulfide (A4)			,	ineral (F1)		High Plains Depressions (F1	
Stratified	d Layers (A5) (LR	R F)	Loamy	Gleyed M	fatrix (F2)		(LRR H outside of MLR	A 72 & 73)
	uck (A9) (LRR F, C			ed Matrix	` '		Reduced Vertic (F18)	
	d Below Dark Surf			Dark Surf	, ,		Red Parent Material (TF2)	(TE40)
	ark Surface (A12) Mucky Mineral (S1		✓ Redox		urface (F7)		Very Shallow Dark SurfaceOther (Explain in Remarks)	(1112)
	Mucky Peat or Pea			•	ressions (F	16)	³ Indicators of hydrophytic vegeta	ation and
	ucky Peat or Peat				73 of LRR		wetland hydrology must be p	
							unless disturbed or problem	atic.
Restrictive	Layer (if present)):						
Type:								/
' `	ches):						Hydric Soil Present? Yes	No
Remarks:								
Gravel la	ayer at 8 incl	hes.						
HYDROLO	GY							
Wetland Hy	drology Indicato	rs:						
_			ed; check all that app	oly)			Secondary Indicators (minimu	m of two required)
Surface	Water (A1)	•	Salt Crus	t (B11)			Surface Soil Cracks (B6)	•
	ater Table (A2)		Aquatic II		es (B13)		Sparsely Vegetated Cond	cave Surface (B8)
✓ Saturation	on (A3)			Sulfide C			Drainage Patterns (B10)	
Water M	1arks (B1)		Dry-Seas	on Water	Table (C2)		Oxidized Rhizospheres or	n Living Roots (C3)
Sedime	nt Deposits (B2)		Oxidized	Rhizosph	eres on Liv	ing Roots	(C3) (where tilled)	
l —	posits (B3)			not tilled			Crayfish Burrows (C8)	
	at or Crust (B4)				ed Iron (C	1)	Saturation Visible on Aeri	
Iron Der	` '		Thin Muc		, ,		✓ Geomorphic Position (D2)
	on Visible on Aeri		37) Other (Ex	cplain in R	emarks)		FAC-Neutral Test (D5)	(DZ) (I DD F)
	Stained Leaves (BS	9)				1	Frost-Heave Hummocks ((D7) (LRR F)
Field Obser		Vaa	No J Donth (i	ooboo\.				
Surface Wat			No ✓ Depth (iii			-		
Water Table			No Depth (ii			- \\\\	and Hydrology Present? Yes	No
Saturation P (includes cap		res_▼	Deptn (II	icries):		vveti	and right order resent? Tes	NO
		am gauge, n	nonitoring well, aerial	photos, p	revious ins	pections),	if available:	
Remarks:								
l								

Project/Site: US 380		City/Cou	unty:	Collin Cou	unty	Sampling	Date: 07/09/	2021
Applicant/Owner: TxDOT					State: TX	Sampling	Point: DP-21	
Investigator(s): Kelsea D. Hiebert and Wyatt Wolfenkoehler		Section,	, Tow	nship, Ra	nge: N/A			
Landform (hillslope, terrace, etc.): Hillslope		Local re	elief (concave,	convex, none): convex		Slope (%)): <u>2</u>
Subregion (LRR): J - Southwestern Prairies Cotton and Forage Region					Long: <u>-96.732149</u>			
Soil Map Unit Name: Trinity clay, 0 to 1 percent slopes, occa	asionally floo	oded						
Are climatic / hydrologic conditions on the site typical for this				,				
Are Vegetation, Soil, or Hydrologys					"Normal Circumstances"		es ✓ N	No
Are Vegetation, Soil, or Hydrology r					eeded, explain any answe			
SUMMARY OF FINDINGS – Attach site map								es, etc.
Hydrophytic Vegetation Present? Yes N						<u> </u>		
Hydric Soil Present? Yes ✓ N				Sampled		Na	./	
Wetland Hydrology Present? Yes N	lo <u> </u>	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	within	a Wetlar	10? Yes	No _		
Remarks:								
Located adjacent to Emergent Wetland	l Water l	Featu	ıre '	140 an	d Upland Pond V	Vater F€	eature 14	1.
VEGETATION – Use scientific names of plan	ıts.							
	Absolute	Domin	nant I	ndicator	Dominance Test wor	ksheet:		
Tree Stratum (Plot size: 30'	% Cover	Specie	es?	Status	Number of Dominant S	Species		
1		-			That Are OBL, FACW, (excluding FAC-):	or FAC	0	(A)
2						_	-	_ (^)
3					Total Number of Domin Species Across All Stra		1	(B)
4						_	<u> </u>	_ (D)
Sapling/Shrub Stratum (Plot size: 15')	0	= rotar	Cove	r	Percent of Dominant S That Are OBL, FACW,	pecies or FAC:	0	(A/B)
1						·-		_ (/ 4 _ /
2					Prevalence Index wo		Marileo Iralia	
3		-			Total % Cover of:		Multiply by:	
4					OBL species			
5					FAC species			
Herb Stratum (Plot size: 5'	0	= Total	Cove	r	FACU species			
1. Cynodon Dactylon	90	yes	F	FACU			= 0	
2. Cenchrus ciliaris	10	no		JPL	Column Totals: 0			
3					December of large	D/A		
4					Prevalence Index Hydrophytic Vegetati			_
5		-			1 - Rapid Test for			
6					2 - Dominance Te		vegetation	
7					3 - Prevalence Ind			
8					4 - Morphological		1 (Provide su	pporting
9					data in Remark	s or on a se	eparate sheet)
10		= Total			Problematic Hydro	phytic Vege	etation ¹ (Expla	ain)
Woody Vine Stratum (Plot size: 30') 1.				ľ	¹ Indicators of hydric so be present, unless dist			must
2.					Hydrophytic			
	0	= Total	Cove	r	Vegetation		🗸	
% Bare Ground in Herb Stratum 10					Present? Ye	es	No	
Remarks:								

Texture Remarks Clay Clay ins. Clay 2Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils³: 1 cm Muck (A9) (LRR I, J) Coast Prairie Redox (A16) (LRR F, G, H) Dark Surface (S7) (LRR G) High Plains Depressions (F16) (LRR H outside of MLRA 72 & 73) Reduced Vertic (F18) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Indicators of hydrophytic vegetation and				
ins. ² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ : 1 cm Muck (A9) (LRR I, J) Coast Prairie Redox (A16) (LRR F, G, H) Dark Surface (S7) (LRR G) High Plains Depressions (F16) (LRR H outside of MLRA 72 & 73) Reduced Vertic (F18) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks)				
ins. ² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ : 1 cm Muck (A9) (LRR I, J) Coast Prairie Redox (A16) (LRR F, G, H) Dark Surface (S7) (LRR G) High Plains Depressions (F16) (LRR H outside of MLRA 72 & 73) Reduced Vertic (F18) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks)				
ins. 2Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils3: 1 cm Muck (A9) (LRR I, J) Coast Prairie Redox (A16) (LRR F, G, H) Dark Surface (S7) (LRR G) High Plains Depressions (F16) (LRR H outside of MLRA 72 & 73) Reduced Vertic (F18) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks)				
Indicators for Problematic Hydric Soils³: 1 cm Muck (A9) (LRR I, J) Coast Prairie Redox (A16) (LRR F, G, H) Dark Surface (S7) (LRR G) High Plains Depressions (F16)				
Indicators for Problematic Hydric Soils³: 1 cm Muck (A9) (LRR I, J) Coast Prairie Redox (A16) (LRR F, G, H) Dark Surface (S7) (LRR G) High Plains Depressions (F16)				
Indicators for Problematic Hydric Soils³: 1 cm Muck (A9) (LRR I, J) Coast Prairie Redox (A16) (LRR F, G, H) Dark Surface (S7) (LRR G) High Plains Depressions (F16)				
Indicators for Problematic Hydric Soils³: 1 cm Muck (A9) (LRR I, J) Coast Prairie Redox (A16) (LRR F, G, H) Dark Surface (S7) (LRR G) High Plains Depressions (F16)				
Indicators for Problematic Hydric Soils³: 1 cm Muck (A9) (LRR I, J) Coast Prairie Redox (A16) (LRR F, G, H) Dark Surface (S7) (LRR G) High Plains Depressions (F16)				
Indicators for Problematic Hydric Soils³: 1 cm Muck (A9) (LRR I, J) Coast Prairie Redox (A16) (LRR F, G, H) Dark Surface (S7) (LRR G) High Plains Depressions (F16)				
Indicators for Problematic Hydric Soils³: 1 cm Muck (A9) (LRR I, J) Coast Prairie Redox (A16) (LRR F, G, H) Dark Surface (S7) (LRR G) High Plains Depressions (F16)				
Indicators for Problematic Hydric Soils³: 1 cm Muck (A9) (LRR I, J) Coast Prairie Redox (A16) (LRR F, G, H) Dark Surface (S7) (LRR G) High Plains Depressions (F16)				
1 cm Muck (A9) (LRR I, J) Coast Prairie Redox (A16) (LRR F, G, H) Dark Surface (S7) (LRR G) High Plains Depressions (F16)				
 Coast Prairie Redox (A16) (LRR F, G, H) Dark Surface (S7) (LRR G) High Plains Depressions (F16) (LRR H outside of MLRA 72 & 73) Reduced Vertic (F18) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 				
 Dark Surface (S7) (LRR G) High Plains Depressions (F16) (LRR H outside of MLRA 72 & 73) Reduced Vertic (F18) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 				
 High Plains Depressions (F16) (LRR H outside of MLRA 72 & 73) Reduced Vertic (F18) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 				
(LRR H outside of MLRA 72 & 73) Reduced Vertic (F18) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks)				
 Reduced Vertic (F18) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 				
Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks)				
Very Shallow Dark Surface (TF12)Other (Explain in Remarks)				
Other (Explain in Remarks)				
wetland hydrology must be present,				
unless disturbed or problematic.				
./				
Hydric Soil Present? Yes No				
x (3/1 or 3/2) needed to qualify for redox				
2% redox for matrix 3/1.				
Connecting Indicators (minimum of two required				
Secondary Indicators (minimum of two required)				
Surface Soil Cracks (B6)				
Sparsely Vegetated Concave Surface (B8)				
Drainage Patterns (B10)				
Oxidized Rhizospheres on Living Roots (C:				
(where tilled)				
Crayfish Burrows (C8)				
Saturation Visible on Aerial Imagery (C9)				
Geomorphic Position (D2)				
FAC-Neutral Test (D5)				
FAC-Neutral Test (D5)				
FAC-Neutral Test (D5)				
FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)				
FAC-Neutral Test (D5)				
FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F) and Hydrology Present? Yes No				
FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)				
FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F) and Hydrology Present? Yes No				
FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F) and Hydrology Present? Yes No				

Project/Site: US 380	(City/Cour	nty: Collin Cou	unty	Sampling Date: 08/17	7/2021
Applicant/Owner: TxDOT				State: TX	Sampling Point: DP-2	.2
Investigator(s): Kelsea Hiebert, Kathryn Burton	;	Section, ⁻	Township, Ra	nge: N/A		
Landform (hillslope, terrace, etc.): Depression		Local reli	ief (concave,	convex, none): concave	Slope (%	هٰ): <u>2</u>
Subregion (LRR): J - Southwestern Prairies Cotton and Forage Reg	gion Lat: 33.2	249844		Long: <u>-96.644082</u>	Datum: N	
Soil Map Unit Name: Lewisville Silty Clay, 3 to 5 percent s	lopes, eroded			NWI classific	cation: PFO	•
Are climatic / hydrologic conditions on the site typical for the	his time of yea	ar? Yes_	No	✓ (If no, explain in F	Remarks.)	
Are Vegetation, Soil, or Hydrology	significantly	disturbed	? Are "	'Normal Circumstances"	present? Yes <u>√</u>	No
Are Vegetation, Soil, or Hydrology						
SUMMARY OF FINDINGS - Attach site map	showing	sampli	ing point l	ocations, transects	s, important featur	es, etc.
Hydrophytic Vegetation Present? Yes✓	No					
Hydric Soil Present? Yes ✓	No		the Sampled		/No	
Wetland Hydrology Present? Yes <u>✓</u>		W I	ithin a Wetlar	id? Yes <u>v</u>	NO	
Remarks:						
Located within Forested Wetland Wat	er Featur	e 170.	. Light pre	ecipitation during	j delineation.	
VEGETATION – Use scientific names of pla	nts.					
VIOLITATION COCCONING Hamos of pla	Absolute	Domina	nt Indicator	Dominance Test work	ksheet:	
Tree Stratum (Plot size: 30'			Status	Number of Dominant S		
1. Fraxinus pennsylvanica		yes	<u>FAC</u>	That Are OBL, FACW,	•	(4)
2. Salix nigra		yes		(excluding FAC-):	4	(A)
3. Populus deltoides	20	yes	<u>FAC</u>	Total Number of Domir	4	(D)
4				Species Across All Stra	ata: <u>4</u>	(B)
5				Percent of Dominant S		(A /D)
Sapling/Shrub Stratum (Plot size: 15'	80	= Total C	Cover	That Are OBL, FACW,	or FAC: 100.070	(A/B)
1. Fraxinus pennsylvanica	10	yes	FAC	Prevalence Index wor	rksheet:	
2.				Total % Cover of:		
3					x 1 = 0	
4					x 2 = 40	
F	10	= Total C	Cover		x 3 = 210	
Herb Stratum (Plot size: 5'				FACU species		
1				Column Totals: 90	x = 0	(B)
2				Column Totals:	(A) <u>200</u>	` ` /
3				Prevalence Index	x = B/A = 2.8	+
4. 5.				Hydrophytic Vegetati	on Indicators:	
6.					Hydrophytic Vegetation	
7				✓ 2 - Dominance Test		
8.			_	✓ 3 - Prevalence Ind		
9.				4 - Morphological	Adaptations ¹ (Provide successions or on a separate sheet	upporting
10.					ophytic Vegetation ¹ (Exp	•
	0.0	= Total C	Cover			
Woody Vine Stratum (Plot size: 30')				'Indicators of hydric so be present, unless dist	oil and wetland hydrology turbed or problematic.	y must
1				Hydrophytic		
	0			Vegetation	✓	
% Bare Ground in Herb Stratum 100.0				Present? Ye	es No	<u>. </u>
Remarks:						
I .						

Profile Des	cription: (Describe	to the depth ne	eded to docu	ment the i	ndicator	or confirm	n the absence of in	dicators.)
Depth	Matrix			ox Features		. 2		
(inches)	Color (moist)		olor (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 - 16	10YR3/1		′R5/8					
	10YR 4/2							
	· -							
1- 0.0							2	
	Concentration, D=Deployment Indicators: (Applicators)					d Sand Gr		n: PL=Pore Lining, M=Matrix. Problematic Hydric Soils ³ :
Histoso		cable to all LNNs	s, unless offices Sandy				1 cm Muck	•
	pipedon (A2)			Redox (S5				ie Redox (A16) (LRR F, G, H)
	listic (A3)			d Matrix (S				ce (S7) (LRR G)
Hydroge	en Sulfide (A4)		Loamy	Mucky Mir	neral (F1)			Depressions (F16)
	d Layers (A5) (LRR			Gleyed Ma			•	outside of MLRA 72 & 73)
·	uck (A9) (LRR F, G,	•		ed Matrix (F			Reduced Ve	` ,
	ed Below Dark Surfact Park Surface (A12)	ce (A11)		Dark Surfa ed Dark Su	` '			Material (TF2) w Dark Surface (TF12)
	Mucky Mineral (S1)			Depression	, ,		✓ Other (Expl	
2.5 cm	Mucky Peat or Peat	(S2) (LRR G, H)	High Pl		. ,	16)		drophytic vegetation and
5 cm M	ucky Peat or Peat (S	3) (LRR F)	(ML	RA 72 & 7	3 of LRR	H)		Irology must be present,
5	1 (1)						unless distu	urbed or problematic.
	Layer (if present):							
	-1						Unadala Call Day	sent? Yes ✓ No
	nches):	_					Hydric Soil Pres	sent? Yes No
Remarks:	441	. 4	.1 . 4 :	4:	4: 4 -		- ^ · · · · l l-	
			aetermina	tion, es	timate	s above	e. Assumea r	nydric soils based on
	on and hydrol	ogy.						+
HYDROLO)GY							
Wetland Hy	drology Indicators	:						
Primary Indi	cators (minimum of	one required; che	eck all that app	ly)			Secondary In	dicators (minimum of two required)
✓ Surface	Water (A1)		Salt Crust					Soil Cracks (B6)
	ater Table (A2)		Aquatic Ir					Vegetated Concave Surface (B8)
✓ Saturati			Hydrogen					Patterns (B10)
	Marks (B1)			on Water T		an Danta		Rhizospheres on Living Roots (C3)
✓ Drift De	nt Deposits (B2)		Oxidized	not tilled)	res on Liv	ing Roots		Burrows (C8)
	at or Crust (B4)		Presence		d Iron (C4	1)	_ ·	n Visible on Aerial Imagery (C9)
_	posits (B5)			k Surface (7)		phic Position (D2)
	ion Visible on Aerial	Imagery (B7)		plain in Re			,	utral Test (D5)
	Stained Leaves (B9)	3 , (,			,			ave Hummocks (D7) (LRR F)
Field Obser	rvations:							
Surface Wa	ter Present?	∕es <u> </u>	Depth (ir	nches): <u>6</u>		_		
Water Table	Present?	/es No	✓ Depth (ir	nches):		_		,
Saturation P	Present?	res ✓ No	Depth (ir	nches): 0		Wetla	and Hydrology Pre	esent? Yes No
	pillary fringe) ecorded Data (strean				avious ins	nections)	if available:	
Describe Ke	Corueu Data (Stream	i gauge, moniton	ing well, aelial	priotos, pri	cvious IIIS	peciioi is),	ıı avallabit.	
Remarks:								
	activity within	Forested \	lational D	aceivos	runoff	from r	roadway Sati	iration and periol
			cualiu. K	eceives	iuiioii	11110111	oauway. Sall	uration and aerial
imagery	present on 03	0/2005.						

Project/Site: US 380	C	ity/Coun	nty: Collin Cou	ollin County Sampling Date: 08		
Applicant/Owner: TxDOT				State: TX	_ Sampling Point: DP-	23
Investigator(s): Kelsea Hiebert, Kathryn Burton	S	ection, 7	Township, Rai	nge: N/A		
				convex, none): convex	Slope (%): 2
Subregion (LRR): J - Southwestern Prairies Cotton and Fo						
Soil Map Unit Name: Lewisville Silty Clay, 3 to 5 pe	rcent slopes, eroded			NWI classifi	cation: UPL	~
Are climatic / hydrologic conditions on the site typic						
Are Vegetation, Soil, or Hydrology				"Normal Circumstances"		No
Are Vegetation, Soil, or Hydrology				eded, explain any answ		
SUMMARY OF FINDINGS – Attach sit						ıres, etc.
	No <u> </u>					•
	No <u>✓</u>		the Sampled			
	No ✓	WI	thin a Wetlar	nd? Yes	No <u>√</u>	
Remarks:						
Located adjacent to Forested We		eature	e 170. Lig	ht precipitation o	during delineatio	on.
VEGETATION – Use scientific names						
Tree Stratum (Plot size: 30'	Absolute % Cover		nt Indicator ? Status	Dominance Test wor		
1. Quercus muehlenbergii		yes	FAC	Number of Dominant S That Are OBL, FACW,		
2. Ulmus americana	20	yes	FAC	(excluding FAC-):	2	(A)
3. Juniperus virginiana	20	yes	UPL	Total Number of Domi	nant	
4. Ulmus crassifolia	10	no	FAC	Species Across All Str	ata: 6	(B)
5				Percent of Dominant S	Species	+
Capling/Chruh Ctratum (Diataire, 15)	90 =	: Total C	Cover	That Are OBL, FACW,	or FAC: 33.3%	(A/B)
Sapling/Shrub Stratum (Plot size: 15')			Prevalence Index wo	rksheet:	
1				Total % Cover of:	Multiply by:	<u>:</u>
2				OBL species 0	x 1 = 0	
3 4				FACW species 0	x 2 = 0	
T	0 =	: Total C	Cover		x 3 = 210	
Herb Stratum (Plot size: 5'		· rotar o	.0101		x 4 = <u>160</u>	
1					x 5 = 100	
2				Column Totals: 130	(A) <u>470</u>	(B)
3				Prevalence Inde	x = B/A = 3.6	+
4				Hydrophytic Vegetat		
5					Hydrophytic Vegetation	า
6				2 - Dominance Te		
7				3 - Prevalence Inc	dex is ≤3.0 ¹	
8					Adaptations ¹ (Provide s	
9		: Total C	:over		ks or on a separate she	•
Woody Vine Stratum (Plot size: 30')	· rotar o	.0101	Problematic Hydro	ophytic Vegetation ¹ (Exp	plain)
1. Toxicodendron radicans		yes	FACU		oil and wetland hydrolog	gy must
2. Smilax bona-nox	10	yes	FACU	be present, unless dis	turbed or problematic.	
3. Parthenocissus quinquefolia	10	yes	<u>FACU</u>	Hydrophytic	-	
% Bare Ground in Herb Stratum 100.0	40 =	Total C	cover	Vegetation Present? Yes	es No	
Remarks:						_

SOIL

Sampling Point: DP-23

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix				x Features							
(inches)	Color (moist)	%	Colo	r (moist)	%	Type ¹	Loc ²	Texture	Remarks			
0-6	10YR4/2	100						silty clay				
	_		_					<u> </u>				
								 -				
_		_			_	_	_					
									_			
¹ Type: C=C	oncentration, D=De	epletion RM	=Reduce	d Matrix. CS	=Covered	l or Coate	ed Sand G	rains. ² l oca	ation: PL=Pore Lining, M=Matrix.			
	Indicators: (Appli								or Problematic Hydric Soils ³ :			
Histosol			,		Sleyed Ma	•			uck (A9) (LRR I, J)			
	oipedon (A2)		-		Redox (S5)	. ,			rairie Redox (A16) (LRR F, G, H)			
	stic (A3)		-		Matrix (S				urface (S7) (LRR G)			
	en Sulfide (A4)		-		Mucky Min				ains Depressions (F16)			
	d Layers (A5) (LRR	F)	-		Gleyed Ma				R H outside of MLRA 72 & 73)			
	ıck (A9) (LRR F, G		_	Deplete	d Matrix (F	=3)		Reduce	d Vertic (F18)			
	d Below Dark Surfa	ice (A11)	-		Oark Surfa				rent Material (TF2)			
	ark Surface (A12)		-			ırface (F7)			allow Dark Surface (TF12)			
	Mucky Mineral (S1)				Depression				Explain in Remarks)			
	Mucky Peat or Peat		3, H) _			essions (F	,		f hydrophytic vegetation and			
5 cm Mu	ucky Peat or Peat (S3) (LRR F)		(ML	RA 72 & 7	73 of LRR	(H)		hydrology must be present,			
Destrict 1								unless o	disturbed or problematic.			
	Layer (if present):											
Type: Ro									./			
Depth (in	ches): <u>6</u>							Hydric Soil F	Present? Yes No			
Remarks:												
Gravel in	matrix.											
2.2.79111												
HYDROLO	GY											
Wetland Hy	drology Indicators	s:										
Primary India	cators (minimum of	one required	d; check	all that apply	()			Secondar	y Indicators (minimum of two required)			
Surface	Water (A1)			Salt Crust	(B11)			Surface Soil Cracks (B6)				
_	ater Table (A2)			Aquatic Inv	. ,	s (B13)			sely Vegetated Concave Surface (B8)			
Saturation				Hydrogen					age Patterns (B10)			
	larks (B1)			Dry-Seaso				·	zed Rhizospheres on Living Roots (C3)			
	nt Deposits (B2)			Oxidized R					nere tilled)			
	posits (B3)				not tilled)		9 1.000		ish Burrows (C8)			
	at or Crust (B4)			Presence	,		1)	,	ation Visible on Aerial Imagery (C9)			
_	oosits (B5)			Thin Muck			T)		norphic Position (D2)			
	` ,	l Imagery (D							Neutral Test (D5)			
	on Visible on Aeria			Other (Exp	naiii iii Ke	marks)			-Heave Hummocks (D7) (LRR F)			
	tained Leaves (B9)						1	Frost	-neave numinocks (D/) (LKK F)			
Field Obser		.,	. /	5								
Surface Wat		Yes										
Water Table		Yes							/			
Saturation P		Yes	No <u></u> ✓	_ Depth (ind	ches):		Wetl	land Hydrology	Present? Yes No			
(includes cap	oillary fringe) corded Data (strea	m dalide mo	nitoring	well serial r	hotos pr	avious inc	nections)	if available:				
Peseupe Re	ooraca Data (Strea	iii gauge, iiil	, intolling	won, acriai þ	ποιος, μι	CVIOUS IIIS	,pecilo115),	avaliable.				
Remarks:												

Project/Site: US 380	(City/Count	y: Collin Cou	unty	Sampling Da	ate: 9/22/20	21
Applicant/Owner: TxDOT				State: TX	Sampling Po	oint: DP-24	
Investigator(s): Kelsea Hiebert and Wyatt Wolfenkoehler	;	Section, T	ownship, Ra	nge: <u>n/a</u>			
Landform (hillslope, terrace, etc.): Linear depression		Local relie	ef (concave,	convex, none): concave		Slope (%):	1
Subregion (LRR):	n Lat: 33.2	249773		Long: <u>-96.643759</u>		Datum: NAD) 27
Soil Map Unit Name: LeB—Lewisville silty clay, 1 to 3 percent	nt slopes			NWI classific	ation: PEM		
Are climatic / hydrologic conditions on the site typical for this	s time of yea	ar? Yes_	✓ No	(If no, explain in R	emarks.)		
Are Vegetation, Soil, or Hydrologys	significantly of	disturbed?	Are "	Normal Circumstances" p	resent? Yes	s <u> </u>	o c
Are Vegetation, Soil, or Hydrologyn	naturally prol	blematic?	(If ne	eded, explain any answe	rs in Remark	s.)	
SUMMARY OF FINDINGS - Attach site map	showing	samplii	ng point le	ocations, transects	, importar	nt feature:	s, etc.
				<u> </u>	<u> </u>		
Hydrophytic Vegetation Present? Yes ✓ N Hydric Soil Present? Yes ✓ N			he Sampled		,		
Wetland Hydrology Present? Yes ✓ N		wit	hin a Wetlar	nd? Yes <u>√</u>	No		
Remarks:		I					
Located within Emergent Wetland Water	er Featu	re 171					
VEGETATION – Use scientific names of plan	ts						
	Absolute	Dominar	nt Indicator	Dominance Test work	sheet:		
Tree Stratum (Plot size: 30')	% Cover			Number of Dominant S			
1				That Are OBL, FACW, (excluding FAC-):	or FAC 4		(A)
2							(八)
3				Total Number of Domin Species Across All Stra	1		(B)
4	0						(2)
Sapling/Shrub Stratum (Plot size: 15')		= Total Ct	ovei	Percent of Dominant Sp That Are OBL, FACW, of		0.0%	(A/B)
1. Salix nigra	15	yes	FACW				
2				Prevalence Index wor		برادنما برامندا	
3		-		Total % Cover of: OBL species 35	x 1 =	ultiply by: 35	_
4				FACW species 15			_
5	45			FAC species 40	x 3 =	120	_
Herb Stratum (Plot size: 5'	15	= Total Co	over	FACU species 0	x 4 =	0	_
1. Xanthium strumarium	30	yes	FAC		x 5 =	0	_
2. Eleocharis palustris	20	yes	OBL	Column Totals: 90		185	_ (B)
3. Sagittaria lancifolia	15	yes	OBL		5.0 2.1	ı	+
4. Iva annua	10	no	FAC	Prevalence Index			
5				Hydrophytic Vegetation 1 - Rapid Test for H			
6				✓ 2 - Dominance Tes		egetation	
7				✓ 3 - Prevalence Inde			
8				4 - Morphological A		Provide sup	portina
9				data in Remarks			3
10				Problematic Hydro	phytic Vegeta	ation¹ (Explai	n)
Woody Vine Stratum (Plot size: 30'		= Total Co	over	¹ Indicators of hydric soi be present, unless distu	l and wetland urbed or prob	l hydrology n lematic.	nust
12.				Hydrophytic			
	0	= Total Co	over	Vegetation Present? Yes	s /	lo	
% Bare Ground in Herb Stratum 25.0 Remarks:				100			

Depth	scription: (Describe Matrix			ox Featur				
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks
0-4	10YR 4/1	70	7.5YR 4/6	30	С	M/PL	Silty Clay	
4-12	10YR 4/1	93	7.5YR 4/6	7		M/PL	Silty Clay	
							·	
	_							
							·	
1Turno: C-(Concentration D-Day	olotion DM	L-Raduand Matrix C	S_Cover	od or Coots		21 000	tion: DL_Doro Lining M_Motrix
	Concentration, D=Deptil Indicators: (Applie					ed Sand G		tion: PL=Pore Lining, M=Matrix. or Problematic Hydric Soils ³ :
Histoso		Jubio to ui			latrix (S4)			ick (A9) (LRR I, J)
	Epipedon (A2)			Redox (S				rairie Redox (A16) (LRR F, G, H)
	Histic (A3)			d Matrix (rface (S7) (LRR G)
	gen Sulfide (A4)				ineral (F1)			ins Depressions (F16)
	ed Layers (A5) (LRR	F)		-	fatrix (F2)		_	H outside of MLRA 72 & 73)
	Muck (A9) (LRR F, G ,		✓ Deplete	ed Matrix	(F3)		Reduced	d Vertic (F18)
Deplet	ed Below Dark Surfac	ce (A11)	Redox	Dark Surf	face (F6)		Red Par	ent Material (TF2)
	Dark Surface (A12)				urface (F7))		allow Dark Surface (TF12)
	Mucky Mineral (S1)			Depression				xplain in Remarks)
	Mucky Peat or Peat				ressions (F			f hydrophytic vegetation and
5 cm N	Mucky Peat or Peat (S	(LRR F) (ML	-RA /2 &	73 of LRR	(H)		hydrology must be present,
Restrictive	Layer (if present):						uniess a	listurbed or problematic.
Type:								
· · ·	nches):						Hydric Soil P	resent? Yes No
Remarks:	1101100).						Tiyano com t	100 HO
itemarks.								
HYDROL	OGY							
Wetland H	ydrology Indicators	:						
Primary Inc	dicators (minimum of	one require	ed; check all that app	ly)			Secondary	/ Indicators (minimum of two required)
Surfac	e Water (A1)		Salt Crust	t (B11)			Surfac	ce Soil Cracks (B6)
High W	Vater Table (A2)		Aquatic Ir	vertebrat	es (B13)		Spars	ely Vegetated Concave Surface (B8)
✓ Satura	tion (A3)		Hydrogen				Draina	age Patterns (B10)
Water	Marks (B1)		Dry-Seas	on Water	Table (C2)		Oxidiz	zed Rhizospheres on Living Roots (C3)
Sedime	ent Deposits (B2)		Oxidized	Rhizosph	eres on Liv	ing Roots	(C3) (wh	ere tilled)
Drift Do	eposits (B3)		(where	not tilled	1)		Crayfi	sh Burrows (C8)
Algal N	Mat or Crust (B4)		Presence	of Reduc	ed Iron (C4	4)	✓ Satura	ation Visible on Aerial Imagery (C9)
Iron De	eposits (B5)		Thin Mucl				,	norphic Position (D2)
	tion Visible on Aerial	Imagery (E						Neutral Test (D5)
	Stained Leaves (B9)	5 7 (, `		,			Heave Hummocks (D7) (LRR F)
Field Obse	ervations:							. , , , ,
Surface Wa	ater Present?	r'es	No ✓ Depth (in	nches):				
Water Tabl			No ✓ Depth (ir					
Saturation			No Depth (ir				land Hydrology	Present? Yes No
Describe R	ecorded Data (stream						, if available:	
Google	aerials show	saturat	tion 3/2018, 1	1/201	8, 12/2	019		
Remarks:								
Connec	ts and flows to	pond t	to the east.					
		•						

Project/Site: US 380	(City/Count	y: Collin Cou	ınty	Sampling Date: 9/22/2021		
Applicant/Owner: TxDOT				State: TX	Sampling Point: DP-25		
Investigator(s): Kelsea Hiebert and Wyatt Wolfenkoehler		Section, T	ownship, Rai	nge: _n/a			
Landform (hillslope, terrace, etc.): Hillslope		Local relie	ef (concave, o	convex, none): none	Slope (%): 1		
Subregion (LRR):	n Lat: 33.2	49681		Long:96.643816 Datum: NAD 27			
Soil Map Unit Name: LeB—Lewisville silty clay, 1 to 3 percent	nt slopes			NWI classifica	ation: UPL		
Are climatic / hydrologic conditions on the site typical for this	s time of yea	ar? Yes_	√ No _	(If no, explain in Re	emarks.)		
Are Vegetation, Soil, or Hydrologys	ignificantly o	disturbed?	Are "	Normal Circumstances" pr	resent? Yes <u>√</u> No		
Are Vegetation, Soil, or Hydrologyn	aturally prob	olematic?	(If ne	eded, explain any answer	s in Remarks.)		
SUMMARY OF FINDINGS - Attach site map	showing	sampliı	ng point le	ocations, transects,	important features, etc.		
Hydrophytic Vegetation Present? Yes N	· 🗸			_			
Hydric Soil Present? Yes N			he Sampled		No <u>√</u> _		
Wetland Hydrology Present? Yes N		Wit	hin a Wetlan	id? fes	NO <u>¥</u>		
Remarks:							
Located on a hillslope adjacent to Eme	rgent W	etland	Water F	eature 171.			
VEGETATION – Use scientific names of plan	ts.						
201	Absolute		t Indicator	Dominance Test works	sheet:		
Tree Stratum (Plot size: 30') 1. Juniperus virginiana	% Cover 20		Status UPL	Number of Dominant Sp			
2. Maclura pomifera		yes		That Are OBL, FACW, o (excluding FAC-):	0 (A)		
3				Total Number of Domina			
4				Species Across All Strat	5		
		= Total Co	over	Percent of Dominant Sp	ecies		
Sapling/Shrub Stratum (Plot size: 15'				That Are OBL, FACW, o			
1. Gleditsia triacanthos				Prevalence Index work	sheet:		
2				Total % Cover of:			
3					x 1 = 0		
4					x 2 = 0		
5	5	= Total Co	over	FAC species 0	x 3 = 0		
Herb Stratum (Plot size: 5'		. 010. 00		FACU species 80	x 4 = 320		
1. Cynodon dactylon	50	yes	<u>FACU</u>	UPL species	X 5 =		
2				Column Totals: 100	(A) 420 (B)		
3				Prevalence Index	= B/A = 4.2		
4				Hydrophytic Vegetatio			
5				1 - Rapid Test for H	ydrophytic Vegetation		
6				2 - Dominance Test	is >50%		
8				3 - Prevalence Inde			
9.				4 - Morphological A	daptations ¹ (Provide supporting or on a separate sheet)		
10.					ohytic Vegetation ¹ (Explain)		
201	50.0	= Total Co	over				
Woody Vine Stratum (Plot size: 30' 1. Smilax bona-nox	5	V00	EACH	Indicators of hydric soil be present, unless distu	and wetland hydrology must rbed or problematic.		
2		yes	<u>FACU</u>	•			
2	5 .	– Total Co		Hydrophytic Vegetation	1		
% Bare Ground in Herb Stratum 50.0				Present? Yes	S No		
Remarks:							

Profile Des	cription: (Describ	e to the depth ne	eded to docu	ment the i	ndicator	or confirn	n the absence	e of indicators.)
Depth	Matrix		Redo	x Feature				
(inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks Remarks
0-12	10YR 4/2	100		_			silty clay	limestone gravel throughout
l ———								
				_				
I								
				-				
	oncentration, D=De					d Sand G		cation: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Appli	icable to all LRR	s, unless othe	rwise not	ed.)		Indicators	s for Problematic Hydric Soils ³ :
Histoso	` '		Sandy					Muck (A9) (LRR I, J)
	pipedon (A2)			Redox (S5				Prairie Redox (A16) (LRR F, G, H)
	istic (A3)			d Matrix (S				Surface (S7) (LRR G)
	en Sulfide (A4)			Mucky Mir				Plains Depressions (F16)
	d Layers (A5) (LRR uck (A9) (LRR F, G	,		Gleyed Ma ed Matrix (l			,	RR H outside of MLRA 72 & 73) ced Vertic (F18)
	d Below Dark Surfa	. ,		Dark Surfa				Parent Material (TF2)
	ark Surface (A12)	(7111)		ed Dark Su	, ,			Shallow Dark Surface (TF12)
	Mucky Mineral (S1)			Depressio	. ,			(Explain in Remarks)
	Mucky Peat or Peat			ains Depre		16)		s of hydrophytic vegetation and
5 cm M	ucky Peat or Peat (S3) (LRR F)	(ML	RA 72 & 7	73 of LRR	H)	wetlan	nd hydrology must be present,
							unless	s disturbed or problematic.
Restrictive	Layer (if present):							
Type:								/
Depth (in	iches):						Hydric Soi	I Present? Yes No
Remarks:								
HYDROLO	GY							
Wetland Hy	drology Indicators	S:						
Primary Indi	cators (minimum of	one required; che	eck all that app	ly)			Second	ary Indicators (minimum of two required)
Surface	Water (A1)		Salt Crust	(B11)			Sur	face Soil Cracks (B6)
High Wa	ater Table (A2)		Aquatic In	vertebrate	s (B13)		Spa	arsely Vegetated Concave Surface (B8)
Saturati	on (A3)		Hydrogen	Sulfide O	dor (C1)		Dra	ninage Patterns (B10)
Water N	/larks (B1)		Dry-Seaso	on Water T	Table (C2)		Oxi	dized Rhizospheres on Living Roots (C3)
Sedime	nt Deposits (B2)		Oxidized	Rhizosphe	res on Livi	ing Roots	(C3) (v	where tilled)
Drift De	posits (B3)		(where	not tilled)			Cra	ayfish Burrows (C8)
Algal M	at or Crust (B4)		Presence	of Reduce	ed Iron (C4	!)	Sat	curation Visible on Aerial Imagery (C9)
Iron De	posits (B5)		Thin Mucl	Surface ((C7)		Ge	omorphic Position (D2)
Inundat	ion Visible on Aeria	I Imagery (B7)	Other (Ex	plain in Re	emarks)		FA	C-Neutral Test (D5)
Water-S	Stained Leaves (B9))					Fro	st-Heave Hummocks (D7) (LRR F)
Field Obser	rvations:							
Surface Wat	ter Present?	Yes No _	✓ Depth (in	ches):		_		
Water Table		Yes No _						
Saturation F		Yes No _	,			l l	and Hydrolog	gy Present? Yes No
(includes ca	pillary fringe)							
Describe Re	ecorded Data (strea	m gauge, monitor	ing well, aerial	photos, pr	evious ins	pections),	if available:	
Remarks:								

Project/Site: US 380	(City/Cou	nty: Collin Co	unty	Sampling Date: 08/24/2020		
Applicant/Owner: TXDOT				State: TX	Sampling Point: DP-26		
Investigator(s): Kelsea Hiebert, Mike Keenan, Ethan Eichler	;	Section,	Township, Ra	nge: N/A			
Landform (hillslope, terrace, etc.): Depression		Local re	lief (concave,	convex, none): concave	Slo	ope (%): 3	
Subregion (LRR): J - Southwestern Prairies Cotton and Forage Region	n Lat: 33.2	252764		Long: <u>-96.631415</u>	Date	um: NAD 83	
Soil Map Unit Name: Trinity clay, 0 to 1 percent slopes, occa	sionally floo	ded		NWI classific	cation: PFO		
Are climatic / hydrologic conditions on the site typical for this							
Are Vegetation, Soil, or Hydrologys	ignificantly	disturbed	d? Are '	'Normal Circumstances"	present? Yes	✓ No	
Are Vegetation, Soil, or Hydrologyn	aturally pro	blematic	:? (If ne	eeded, explain any answe	ers in Remarks.)		
SUMMARY OF FINDINGS - Attach site map	showing	sampl	ling point l	ocations, transects	s, important fo	eatures, etc.	
Hydrophytic Vegetation Present? Yes N	0						
Hydric Soil Present? Yes <u>✓</u> N	0		the Sampled vithin a Wetlar		/ No		
Wetland Hydrology Present? Yes✓ N Remarks:	0		Titili a Wettai	103		_	
Located within Forested Wetland Wate	r Featur	<u>~</u> 178	Hydrolo	nically connected	to Foreste	d Wetland	
Water Feature 179 through culvert to the			•	•		u vvelianu	
				on population ob			
VEGETATION – Use scientific names of plan				· · · · ·			
<u>Tree Stratum</u> (Plot size: 30'	Absolute % Cover		ant Indicator s? Status	Dominance Test work Number of Dominant S			
1. Fraxinus pennsylvanica	45	yes	FAC	That Are OBL, FACW,	or FAC		
2. Ulmus americana	45	yes	FAC	(excluding FAC-):	3	(A)	
3				Total Number of Domin	_		
4				Species Across All Stra	ata: <u>5</u>	(B)	
5				Percent of Dominant S			
Sapling/Shrub Stratum (Plot size: 15')	90	= Total (Cover	That Are OBL, FACW,	or FAC: 60.0%	(A/B)	
1. Ulmus americana	15	yes	FAC	Prevalence Index wo	rksheet:		
2. Morus alba	2	no	FACU	Total % Cover of:		oly by:	
3.					x 1 = 0		
4.				FACW species 0			
	17	= Total C	Cover		x 3 = 315		
Herb Stratum (Plot size: 5' 1. Toxicodendron radicans	10		EACH	FACU species 22 UPL species 0	x 4 = 88		
		yes	FACU_	Column Totals: 127			
2.				Column Totals. 127	(A)		
3				Prevalence Index	c = B/A = 3.2	+	
5				Hydrophytic Vegetati	on Indicators:		
6.				1 - Rapid Test for		etation	
7.				✓ 2 - Dominance Tell			
8.				3 - Prevalence Ind			
9				4 - Morphological data in Remark	Adaptations" (Pro is or on a separati		
10				Problematic Hydro		,	
Manda Vina Chartura (Blat sina 30'	10.0	= Total (Cover				
Woody Vine Stratum (Plot size: 30') 1 Toxicodendron radicans	10	VAS	FACU	¹ Indicators of hydric so be present, unless dist			
Toxicogengron radicans Z.		<u> </u>	17100	Hydrophytic			
		= Total (Cover	Vegetation	✓		
% Bare Ground in Herb Stratum 90.0				Present? Ye	esNo		
Remarks:		_					

Profile Desc	cription: (Describe	to the dep	th needed to docu	ment the	indicator	or confiri	m the absence of i	ndicators.)
Depth	Matrix		Red	ox Feature	es			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks
0-10	10YR3/1	100	-				Clay	
10-16	10YR4/1	95	7.5YR6/8	5	С	M	Clay	
	-							
			-					
							. <u> </u>	
							. <u> </u>	
			-	_				
1 0 0							21	
			=Reduced Matrix, C			ed Sand G		n: PL=Pore Lining, M=Matrix.
_		cable to all	LRRs, unless other					Problematic Hydric Soils ³ :
Histosol	` '		Sandy	Redox (S				(A9) (LRR I, J) rie Redox (A16) (LRR F, G, H)
	pipedon (A2) istic (A3)			ed Matrix (ice (S7) (LRR G)
	en Sulfide (A4)			Mucky Mi	,			s Depressions (F16)
	d Layers (A5) (LRR	F)		Gleyed M			_	outside of MLRA 72 & 73)
	uck (A9) (LRR F, G			ed Matrix	, ,		Reduced V	,
	d Below Dark Surfa	ce (A11)	Redox	Dark Surf	ace (F6)		Red Paren	t Material (TF2)
	ark Surface (A12)				urface (F7))		ow Dark Surface (TF12)
	Mucky Mineral (S1)			Depression	. ,			plain in Remarks)
	Mucky Peat or Peat	. , .			essions (F			ydrophytic vegetation and
5 cm ivit	ucky Peat or Peat (53) (LRR F)	(IVI)	LKA /2 &	73 of LRR	(H)		drology must be present, urbed or problematic.
Restrictive	Layer (if present):						uniess dist	urbed of problematic.
Type:	Layer (ii present).							
, , <u> </u>	ches):						Hydric Soil Pre	sent? Yes ✓ No
	Ciles).						Hydric 30ii Fre	sent: lesNo
Remarks:								
HYDROLO	GY							
Wetland Hy	drology Indicators):						
_			d; check all that app	olv)			Secondary Ir	ndicators (minimum of two required)
	Water (A1)		Salt Crus					Soil Cracks (B6)
	ater Table (A2)		Aquatic Ir		es (B13)			y Vegetated Concave Surface (B8)
Saturation	. ,		Hydroger		, ,			e Patterns (B10)
Water M			Dry-Seas					d Rhizospheres on Living Roots (C3)
	nt Deposits (B2)		Oxidized				· 	e tilled)
	posits (B3)		·	not tilled			` ,	Burrows (C8)
	at or Crust (B4)		Presence		,	4)		on Visible on Aerial Imagery (C9)
Iron Dep			Thin Muc			,	,	phic Position (D2)
-	on Visible on Aeria	Imagery (B					· 	utral Test (D5)
	stained Leaves (B9)		, `		,			eave Hummocks (D7) (LRR F)
Field Obser	vations:							. , , , ,
Surface Wat	er Present?	Yes	No ✓ Depth (ir	nches):				
Water Table			No ✓ Depth (in					
Saturation P			No ✓ Depth (in				land Hydrology Pr	esent? Yes No
(includes car	oillary fringe)							
		m gauge, m	onitoring well, aerial	photos, p	revious ins	pections)	, if available:	
Remarks:								
Linear de	epression vis	ible in a	erial imagery.					
	•		5 7					

State: TX Sampling Point: DP-27
Solid Map Unit Name: Trinity clay, 0 to 1 percent slopes, occasionally flooded Lat. 33.25469 Long: -96.631137 Datum: NAD 83
Debregion (LRR): 1- Southwestern Prairies Cotton and Forage Region Lat: 33.252469 Long: -96.631137 Datum: NAD 83 NAD 83 Long: -96.631137 Datum: NAD 83
No College No
No College No
re climatic / hydrologic conditions on the site typical for this time of year? Yes
re Vegetation, Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present?
Summary OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Hydric Soil Present? Wetland Hydrology Present? Wetland Hydrology Present? Wetland Hydrology Present? Yes \(\frac{1}{\text{V}} \) No within a Wetland? Yes \(\frac{1}{\text{V}} \) No within a Wetland? Water Feature 179. Hydrologically connected to Forested Wetland Water Feature 179. Hydrologically connected to Forested Wetland Water Feature 178 through culvert to the northwest. Wood duck population observed during ### Species
Hydric Soil Present? Wetland Hydrology Present? Remarks: Located within Forested Wetland Water Feature 179. Hydrologically connected to Forested Wetland Water Feature 178 through culvert to the northwest. Wood duck population observed during **Tege Stratum** (Plot size: 30'
Hydric Soil Present? Wetland Hydrology Present? Remarks: Located within Forested Wetland Water Feature 179. Hydrologically connected to Forested Wetland Water Feature 178 through culvert to the northwest. Wood duck population observed during **Tege Stratum** (Plot size: 30'
Remarks: Located within Forested Wetland Water Feature 179. Hydrologically connected to Forested Wetland Water Feature 178 through culvert to the northwest. Wood duck population observed during //EGETATION – Use scientific names of plants. Tree Stratum (Plot size: 30')
Located within Forested Wetland Water Feature 179. Hydrologically connected to Forested Wetland Water Feature 178 through culvert to the northwest. Wood duck population observed during **Tree Stratum** (Plot size: 30')
Water Feature 178 through culvert to the northwest. Wood duck population observed during ### Water Feature 178 through culvert to the northwest. Wood duck population observed during #### Water Feature 178 through culvert to the northwest. Wood duck population observed during ###################################
Absolute Species Status
Absolute Dominant Indicator Species? Status Sta
Tree Stratum (Plot size: 30') % Cover 1 Species? Status Yes FAC FAC FAC (excluding FAC-): Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): Multiply by: 2. Ulmus americana 45 yes FAC 3.
1. Fraxinus pennsylvanica 45 yes FAC That Are OBL, FACW, or FAC (excluding FAC-): 3 (A) 2. Ulmus americana 45 yes FAC That Are OBL, FACW, or FAC (excluding FAC-): 3 (A) 3
2. Ulmus americana 45
4
4
Sapling/Shrub Stratum (Plot size: 15') 1. Ulmus americana 15 Ves FAC 2 Norus alba 2 No FACU
Sapling/Shrub Stratum (Plot size: 15') 7 Prevalence Index worksheet: (%5) 1. Ulmus americana 15 Ves FAC Total % Cover of: Multiply by: 2. Morus alba 2 NO FACU OBL species 0 x 1 = 0 3. 4
1. Ulmus americana 15
2. Morus alba 2 no FACU Total % Cover of: Multiply by: OBL species 0 x 1 = 0 3. 4. FACW species 0 x 2 = 0 FACW species 0 x 2 = 0 Herb Stratum (Plot size: 5') 10 yes FACU FACU species 22 x 4 = 88 1. Toxicodendron radicans 2. Toxicodendron radicans 3. Section 10 yes FACU 2. Species 10 yes FACU 3. Section 127 yes FACU 403 (B) Toxicodendron Totals: 127 yes FACU 403 (B)
3
17
Herb Stratum (Plot size: 5'
1. Toxicodendron radicans 10 yes FACU UPL species 0 x 5 = 0 Column Totals: 127 (A) 403 (B) 3
2 Column Totals: 127
3
$I \qquad \text{Prevalence index} = B/A = 3.2$
4. Hydrophytic Vegetation Indicators:
5
7 2 - Dominance Test is >50%
8. a 3 - Prevalence Index is \$3.0
9 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
10 Problematic Hydrophytic Vegetation ¹ (Explain)
10.0 = Total Cover
Woody Vine Stratum (Plot size: 30') 1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Toxicodendriff addicans
2 Hydrophytic vegetation Total Cover Vegetation
% Bare Ground in Herb Stratum 90.0 Present? Yes No
Remarks:

Profile Desc	cription: (Describe	to the dep	th needed to docu	ment the	indicator	or confiri	m the absence of i	ndicators.)
Depth	Matrix		Red	ox Feature	es			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks
0-10	10YR3/1	100	-				Clay	
10-16	10YR4/1	95	7.5YR6/8	5	С	M	Clay	
	-							
			-					
							. <u> </u>	
							. <u> </u>	
			-	_				
1 0 0							21	
			=Reduced Matrix, C			ed Sand G		n: PL=Pore Lining, M=Matrix.
_		cable to all	LRRs, unless other					Problematic Hydric Soils ³ :
Histosol	` '		Sandy	Redox (S				(A9) (LRR I, J) rie Redox (A16) (LRR F, G, H)
	pipedon (A2) istic (A3)			ed Matrix (ice (S7) (LRR G)
	en Sulfide (A4)			Mucky Mi	,			s Depressions (F16)
	d Layers (A5) (LRR	F)		Gleyed M			_	outside of MLRA 72 & 73)
	uck (A9) (LRR F, G			ed Matrix	, ,		Reduced V	,
	d Below Dark Surfa	ce (A11)	Redox	Dark Surf	ace (F6)		Red Paren	t Material (TF2)
	ark Surface (A12)				urface (F7))		ow Dark Surface (TF12)
	Mucky Mineral (S1)			Depression	. ,			plain in Remarks)
	Mucky Peat or Peat	. , .			essions (F			ydrophytic vegetation and
5 cm ivit	ucky Peat or Peat (53) (LRR F)	(IVI)	LKA /2 &	73 of LRR	(H)		drology must be present, urbed or problematic.
Restrictive	Layer (if present):						uniess dist	urbed of problematic.
Type:	Layer (ii present).							
, , <u> </u>	ches):						Hydric Soil Pre	sent? Yes ✓ No
	Ciles).						Hydric 30ii Fre	sent: lesNo
Remarks:								
HYDROLO	GY							
Wetland Hy	drology Indicators):						
_			d; check all that app	olv)			Secondary Ir	ndicators (minimum of two required)
	Water (A1)		Salt Crus					Soil Cracks (B6)
	ater Table (A2)		Aquatic Ir		es (B13)			y Vegetated Concave Surface (B8)
Saturation	. ,		Hydroger		, ,			e Patterns (B10)
Water M			Dry-Seas					d Rhizospheres on Living Roots (C3)
	nt Deposits (B2)		Oxidized				· 	e tilled)
	posits (B3)		·	not tilled			` ,	Burrows (C8)
	at or Crust (B4)		Presence		,	4)		on Visible on Aerial Imagery (C9)
Iron Dep			Thin Muc			,	,	phic Position (D2)
-	on Visible on Aeria	Imagery (B					· 	utral Test (D5)
	stained Leaves (B9)		, `		,			eave Hummocks (D7) (LRR F)
Field Obser	vations:							. , , , ,
Surface Wat	er Present?	Yes	No ✓ Depth (ir	nches):				
Water Table			No ✓ Depth (in					
Saturation P			No ✓ Depth (in				land Hydrology Pr	esent? Yes No
(includes car	oillary fringe)							
		m gauge, m	onitoring well, aerial	photos, p	revious ins	pections)	, if available:	
Remarks:								
Linear de	epression vis	ible in a	erial imagery.					
	•		5 7					

Project/Site: US 380		City/Cou	unty: Collin C	nty Sampling Date: 08/24			2020
Applicant/Owner: TXDOT				State: TX	Sampling	Point: DP-28	
Investigator(s): Kelsea Hiebert, Mike Keenan, Ethan Eichler		Section,	, Township, R	tange: N/A			
Landform (hillslope, terrace, etc.): Terrace		Local re	elief (concave	, convex, none): none		Slope (%):	0
Subregion (LRR): J - Southwestern Prairies Cotton and Forage Region	n Lat: 33.2	252366		Long: <u>-96.631616</u>		_ Datum: NA	D 83
Soil Map Unit Name: Lewisville silty clay, 3 to 5 percent slop	es, eroded			NWI class	ification: UPL	-	
Are climatic / hydrologic conditions on the site typical for thi	s time of yea	ar? Yes	s_ √ _ No	(If no, explain ir	n Remarks.)		
Are Vegetation, Soil, or Hydrologys				e "Normal Circumstances		′es <u> </u>	lo
Are Vegetation, Soil, or Hydrology r				needed, explain any ans			
SUMMARY OF FINDINGS – Attach site map							s, etc.
Hydrophytic Vegetation Present? Yes N	lo 🗸		a tha Cample	ad Area			
Hydric Soil Present? Yes N			s the Sample vithin a Wetl		No _	1	
Wetland Hydrology Present? Yes N	lo <u> </u>		vitiliii a vveti	and: 165			
Remarks:							
Located adjacent to Forested Wetlands						•	
Pond Water Feature 177. Area was pre	eviously	distu	rbed/mov	wed on aerial ima	agery 09/	2019.	
VEGETATION – Use scientific names of plan	its.						
	Absolute	Domin	ant Indicator	Dominance Test wo	rksheet:		
Tree Stratum (Plot size: 30'			es? Status	- Number of Dominant	Species		
1. Ulmus americana	40	yes		That Are OBL, FACV		3	(A)
2. Fraxinus pennsylvanica			FAC	(excluding FAC-):			(A)
3				Total Number of Dor Species Across All S		6	(B)
4				- Species Across Air S	ıraıa		·
5		= Total	Cover	 Percent of Dominant That Are OBL, FACV 		50.0%	(A/B)
Sapling/Shrub Stratum (Plot size: 15'	<u> </u>	= 10(a)	Cover	That Are OBE, I ACV	v, or i Ac		(٨/٥)
1. Celtis laevigata	10	yes	FAC	Prevalence Index w			
2				Total % Cover o		Multiply by:	
3						= 0	
4				FACW species 0 FAC species 90			
Heath Chapture (Diet siese 5'	10	= Total	Cover	FACU species 15			_
Herb Stratum (Plot size: 5') 1. Toxicodendron radicans	5	VAS	FACU			= 0	_
2.				Column Totals: 105			(B)
3.				_			_ (=)
4.				Prevalence Ind	-		
5.				Hydrophytic Vegeta			
6.				1 - Rapid Test fo		Vegetation	
7				2 - Dominance 1			
8				3 - Prevalence II		.1 (Danish a a	
9				- 4 - Morphologica - data in Rema		eparate sheet)	
10				Problematic Hyd	Irophytic Vege	etation ¹ (Expla	ıin)
Woody Vine Stratum (Plot size: 30')	5.0	= Total	Cover	¹ Indicators of hydric	soil and wetla	nd hydrology i	muet
1. Parthenocissus quinquefolia	5	yes	FACU	be present, unless d			inast
2. Toxicodendron radicans	5	yes	FACU	Hydrophytic			
	10	= Total		Vegetation	.,	🗸	
% Bare Ground in Herb Stratum 95.0				Present?	Yes	No	
Remarks:							

Profile Des Depth	Matrix		Rad	ox Features				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	e Remarks
0-12	10YR3/2	100					Clay	
	-							
								
	· -						-	
1			and an and Marketin C		0 1 -	-1.01.0	2	2) and the Discontinuous Manager
	Concentration, D=De Indicators: (Appl	•				d Sand G		² Location: PL=Pore Lining, M=Matrix. ors for Problematic Hydric Soils ³ :
-		icable to all Li						•
Histoso	` '			Gleyed Matr	rix (S4)			m Muck (A9) (LRR I, J)
	pipedon (A2)			Redox (S5)	• • • • • • • • • • • • • • • • • • • •			ast Prairie Redox (A16) (LRR F, G, H)
	listic (A3)			ed Matrix (S6				rk Surface (S7) (LRR G)
	en Sulfide (A4) ed Layers (A5) (LRF) E)		Mucky Mine Gleyed Mat			_	gh Plains Depressions (F16) (LRR H outside of MLRA 72 & 73)
	uck (A9) (LRR F, G			ed Matrix (F3				duced Vertic (F18)
	ed Below Dark Surfa			Dark Surfac	,			duced vertic (F16) d Parent Material (TF2)
	ark Surface (A12)	(7111)		ed Dark Surf	. ,			ry Shallow Dark Surface (TF12)
	Mucky Mineral (S1)			Depressions				ner (Explain in Remarks)
	Mucky Peat or Pea			lains Depres	. ,	16)		cors of hydrophytic vegetation and
	ucky Peat or Peat (LRA 72 & 73				tland hydrology must be present,
							unl	ess disturbed or problematic.
Postrictivo	Layer (if present):							
Kestrictive	Layer (ii present).							
	Layer (ii present).							,
Туре:			_				Hydric S	Soil Present? Yes No _ ✓
Type: Depth (ir			_				Hydric S	Soil Present? Yes No
Туре:			<u> </u>				Hydric S	Soil Present? Yes No✓
Type: Depth (ir							Hydric S	Soil Present? Yes No✓
Type: Depth (ir			_				Hydric S	Soil Present? Yes No _✓
Type: Depth (ir	nches):						Hydric S	Soil Present? Yes No _✓
Type:	onches):						Hydric S	Soil Present? Yes No✓
Type: Depth (ir Remarks: HYDROLO Wetland Hy	OGY vdrology Indicators	3:		olv)				
Type: Depth (ir Remarks: HYDROLO Wetland Hy Primary Indi	OGY vdrology Indicators	3:	check all that app	• •			Seco	ondary Indicators (minimum of two required
Type: Depth (ir Remarks: HYDROLO Wetland Hy Primary Indi Surface	OGY vdrology Indicators icators (minimum of	3:	check all that app	st (B11)	(R13)		<u>Seco</u>	ondary Indicators (minimum of two required Surface Soil Cracks (B6)
Type: Depth (ir Remarks: HYDROLO Wetland Hy Primary Indi Surface High W	OGY vdrology Indicators icators (minimum of Water (A1) ater Table (A2)	3:	check all that app Salt Crus Aquatic I	et (B11) nvertebrates			Seco	ondary Indicators (minimum of two required Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8)
Type: Depth (ir Remarks: HYDROLO Wetland Hy Primary Indi Surface High W Saturat	OGY vdrology Indicators icators (minimum of Water (A1) ater Table (A2) ion (A3)	3:	check all that app Salt Crus Aquatic I Hydroger	it (B11) nvertebrates n Sulfide Odd	or (C1)		Seco 3 1	ondary Indicators (minimum of two required Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10)
Type: Depth (ir Remarks: HYDROLO Wetland Hy Primary Indi Surface High W Saturat Water M	OGY vidrology Indicators icators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1)	3:	check all that app Salt Crus Aquatic I Hydroger Dry-Seas	ot (B11) nvertebrates n Sulfide Odd son Water Ta	or (C1) able (C2)		Seco 3 1	ondary Indicators (minimum of two required Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C
Type: Depth (in Remarks: HYDROLO Wetland Hy Primary Indi Surface High W Saturat Water M Sedime	orches):	3:	check all that app Salt Crus Aquatic I Hydroger Dry-Seas Oxidized	nvertebrates n Sulfide Odd on Water Ta Rhizosphere	or (C1) able (C2)	ng Roots	Seco 3 1 (C3)	ondary Indicators (minimum of two required Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C (where tilled)
Type: Depth (in Remarks: HYDROLO Wetland Hy Primary Indi Surface High W Saturat Water M Sedime Drift De	orches):	3:	check all that app Salt Crus Aquatic II Hydroger Dry-Seas Oxidized (where	ot (B11) nvertebrates n Sulfide Odd son Water Ta Rhizosphere not tilled)	or (C1) able (C2) es on Livi		Seco 	ondary Indicators (minimum of two required Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C (where tilled) Crayfish Burrows (C8)
Type:	OGY Idrology Indicators icators (minimum of a Water (A1) ater Table (A2) ion (A3) Marks (B1) Int Deposits (B2) Into Deposits (B3) Into Crust (B4)	3:	check all that app Salt Crus Aquatic I Hydroger Dry-Seas Oxidized (where	ot (B11) nvertebrates n Sulfide Odd son Water Ta Rhizosphere not tilled) e of Reduced	or (C1) able (C2) es on Livi		Seco — 3 — 1 — (C3)	ondary Indicators (minimum of two required Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Type:	OGY vdrology Indicators icators (minimum of e Water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) at or Crust (B4) posits (B5)	s: one required;	check all that app Salt Crus Aquatic I Hydroger Dry-Seas Oxidized (where Presence	et (B11) envertebrates en Sulfide Odd son Water Ta Rhizosphere enot tilled) e of Reduced ek Surface (C	or (C1) able (C2) es on Livi I Iron (C4		Seco	ondary Indicators (minimum of two required Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Type: Depth (ir Remarks: HYDROLO Wetland Hy Primary Indi Surface High W Saturat Water N Sedime Drift De Algal M Iron De Inundat	OGY vdrology Indicators icators (minimum of water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) at or Crust (B4) posits (B5) ion Visible on Aeria	one required;	check all that app Salt Crus Aquatic I Hydroger Dry-Seas Oxidized (where	et (B11) envertebrates en Sulfide Odd son Water Ta Rhizosphere enot tilled) e of Reduced ek Surface (C	or (C1) able (C2) es on Livi I Iron (C4		Seco S [(C3)	ondary Indicators (minimum of two required Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
Type:	orches):	one required;	check all that app Salt Crus Aquatic I Hydroger Dry-Seas Oxidized (where Presence	et (B11) envertebrates en Sulfide Odd son Water Ta Rhizosphere enot tilled) e of Reduced ek Surface (C	or (C1) able (C2) es on Livi I Iron (C4		Seco S [(C3)	ondary Indicators (minimum of two required Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Type: Depth (ir Remarks: HYDROLO Wetland Hy Primary Indi Surface High W Saturat Water N Sedime Drift De Algal M Iron De Inundat	orches):	s: one required;	check all that app Salt Crus Aquatic II Hydroger Dry-Seas Oxidized (where Presence Thin Muc	ot (B11) Invertebrates In Sulfide Odd Ison Water Ta Rhizosphere Inot tilled) Iso of Reduced Isk Surface (Complain in Rem	or (C1) able (C2) es on Livi I Iron (C4 e7) narks)	.)	Seco S [(C3)	ondary Indicators (minimum of two required Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
Type:	orches):	s: one required;	check all that app Salt Crus Aquatic I Hydroger Dry-Seas Oxidized (where Presence	ot (B11) Invertebrates In Sulfide Odd Ison Water Ta Rhizosphere Inot tilled) Iso of Reduced Isk Surface (Complain in Rem	or (C1) able (C2) es on Livi I Iron (C4 e7) narks)	.)	Seco S [(C3)	ondary Indicators (minimum of two required Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
Type:	OGY vdrology Indicators icators (minimum of e Water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) at or Crust (B4) posits (B5) ion Visible on Aeria Stained Leaves (B9 rvations: ter Present?	s: one required; I Imagery (B7)	check all that app Salt Crus Aquatic II Hydroger Dry-Seas Oxidized (where Presence Thin Muc	ot (B11) Invertebrates In Sulfide Odd Ison Water Ta Rhizosphere In not tilled) It of Reduced It surface (Cooperation in Rem Inches):	or (C1) able (C2) as on Livi l Iron (C4 arr) narks)		Seco S [(C3)	ondary Indicators (minimum of two required Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
Type:	OGY Idrology Indicators icators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) at or Crust (B4) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aeria Stained Leaves (B9 rvations: ter Present?	s: one required; I Imagery (B7) Yes No	check all that app Salt Crus Aquatic I Hydroger Dry-Seas Oxidized (where Presence Thin Muc Other (Ex	st (B11) nvertebrates n Sulfide Odd son Water Ta Rhizosphere not tilled) e of Reduced ck Surface (C kplain in Rem nches):	or (C1) suble (C2) subset on Livi l Iron (C4 subset of C4		Seco 	ondary Indicators (minimum of two required Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
Type:	orches):	s: one required; I Imagery (B7) Yes No Yes No	check all that app Salt Crus Aquatic I Hydroger Dry-Seas Oxidized (where Presence Thin Muc Other (Ex	st (B11) nvertebrates n Sulfide Odd son Water Ta Rhizosphere not tilled) e of Reduced ck Surface (C kplain in Rem nches): nches):	or (C1) suble (C2) subset on Livi l Iron (C4 subset of C4	Wetl	Seco	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
Type:	OGY vdrology Indicators icators (minimum of water (A1) ater Table (A2) ion (A3) Marks (B1) ant Deposits (B2) eposits (B3) at or Crust (B4) posits (B5) ion Visible on Aeria Stained Leaves (B9 rvations: ter Present? Present?	s: one required; I Imagery (B7) Yes No Yes No	check all that app Salt Crus Aquatic I Hydroger Dry-Seas Oxidized (where Presence Thin Muc Other (Ex	st (B11) nvertebrates n Sulfide Odd son Water Ta Rhizosphere not tilled) e of Reduced ck Surface (C kplain in Rem nches): nches):	or (C1) suble (C2) subset on Livi l Iron (C4 subset of C4	Wetl	Seco	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
Type:	orches):	s: one required; I Imagery (B7) Yes No Yes No	check all that app Salt Crus Aquatic I Hydroger Dry-Seas Oxidized (where Presence Thin Muc Other (Ex	st (B11) nvertebrates n Sulfide Odd son Water Ta Rhizosphere not tilled) e of Reduced ck Surface (C kplain in Rem nches): nches):	or (C1) suble (C2) subset on Livi l Iron (C4 subset of C4	Wetl	Seco	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
Type:	orches):	s: one required; I Imagery (B7) Yes No Yes No	check all that app Salt Crus Aquatic I Hydroger Dry-Seas Oxidized (where Presence Thin Muc Other (Ex	st (B11) nvertebrates n Sulfide Odd son Water Ta Rhizosphere not tilled) e of Reduced ck Surface (C kplain in Rem nches): nches):	or (C1) suble (C2) subset on Livi l Iron (C4 subset of C4	Wetl	Seco	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
Type:	orches):	s: one required; I Imagery (B7) Yes No Yes No	check all that app Salt Crus Aquatic I Hydroger Dry-Seas Oxidized (where Presence Thin Muc Other (Ex	st (B11) nvertebrates n Sulfide Odd son Water Ta Rhizosphere not tilled) e of Reduced ck Surface (C kplain in Rem nches): nches):	or (C1) suble (C2) subset on Livi l Iron (C4 subset of C4	Wetl	Seco	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)

Project/Site: US 380		City/Cour	nty: Collin Cou	unty	Sampling Date: 03/12/2020		
Applicant/Owner: TxDOT				State: TX	Sampling F	mpling Point: DP-29	
Investigator(s): Mike Keenan and Ethan Eichler		Section,	Township, Ra	nge: N/A			
Landform (hillslope, terrace, etc.): Depression		Local rel	lief (concave,	convex, none): concave		_ Slope (%)	: 0-1
Subregion (LRR): J - Southwestern Prairies Cotton and Forage Regi	on Lat: 33.2	250832		Long: <u>-96.629414</u> Datum: <u>NAD 83</u>			
Soil Map Unit Name: Trinity clay, 0 to 1 percent slopes, occ	asionally floo	ded		NWI classific	ation: PEM		
Are climatic / hydrologic conditions on the site typical for th	is time of yea		,				
Are Vegetation, Soil, or Hydrology				"Normal Circumstances" p		es ✓ N	lo
Are Vegetation, Soil, or Hydrology				eeded, explain any answe			
SUMMARY OF FINDINGS – Attach site map				•		ŕ	s, etc.
Hydrophytic Vegetation Present? Yes _ ✓ _ ↑	No	lo	the Sampled	LAron			
Hydric Soil Present? Yes <u>✓</u> ١			ithin a Wetlar		, No		
Wetland Hydrology Present? Yes ↑	No						
Remarks:							
Located within Emergent Wetland Wat	ter Featu	re 180	0.				
VEGETATION – Use scientific names of plan	nts.						
001	Absolute		ant Indicator	Dominance Test work	sheet:		
Tree Stratum (Plot size: 30'			s? Status	Number of Dominant S	•		
1				That Are OBL, FACW, (excluding FAC-):			(A)
2							(' ')
3 4				Total Number of Domin Species Across All Stra	•		(B)
5							,
	0			Percent of Dominant Sp That Are OBL, FACW,		00.0%	(A/B)
Sapling/Shrub Stratum (Plot size: 15')				Prevalence Index wor	kohooti		
1				Total % Cover of:		Multiply by:	
2						26	
3				FACW species 5			
4	0		Cover	FAC species 1	x 3 =	3	
Herb Stratum (Plot size: 5'		= 10(a) (Jovei	FACU species 0	x 4 =	0	_
1. Eleocharis palustris	15	yes	OBL_			0	
2. Eleocharis obtusa	10	yes	OBL	Column Totals: 32	(A)	39	(B)
3. Carex vulpinoidea	5	no	<u>FACW</u>	Prevalence Index	– Β/Δ – 1	.2	
4. Rumex crispus		no	FAC	Hydrophytic Vegetation			
5. Hydrocotyl ranunculoides	_ 1	no	OBL_	1 - Rapid Test for I			
6				✓ 2 - Dominance Tes	t is >50%		
7				✓ 3 - Prevalence Inde	ex is ≤3.0 ¹		
8 9				4 - Morphological A			
10.				data in Remarks			
10.	32.0	= Total C	Cover	Problematic Hydro	onytic veget	ation (Expia	ain)
Woody Vine Stratum (Plot size: 30') 1.				¹ Indicators of hydric soi be present, unless distu	l and wetlan urbed or prol	d hydrology blematic.	must
2.				Hydrophytic			
	0	= Total C	Cover	Vegetation	s	Na	
% Bare Ground in Herb Stratum 68.0				Present? Ye	s	No	
Remarks:							

Soll Sampling Point: DP-29

Profile Desc	cription: (Describe	e to the depth	needed to docu	ıment the	indicator	or confirr	n the absence of i	ndicators.)
Depth	Matrix			ox Feature	es .			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks
0-6	10YR4/1	90 5	5YR 5/8	10	C	PL	Silty Clay Loam	
					<u> </u>			
				_				
								_
¹Type: C=C	oncentration, D=De	nletion RM-R	Reduced Matrix C	S-Covere	d or Coate	d Sand G	rains ² Locatio	n: PL=Pore Lining, M=Matrix.
	Indicators: (Appli					o oana o		Problematic Hydric Soils ³ :
Histosol			Sandy					(A9) (LRR I, J)
l —	pipedon (A2)			Redox (S				rie Redox (A16) (LRR F, G, H)
	istic (A3)			ed Matrix (Dark Surfa	ice (S7) (LRR G)
	en Sulfide (A4)			Mucky Mi			High Plain	s Depressions (F16)
	d Layers (A5) (LRR			Gleyed M			•	outside of MLRA 72 & 73)
	uck (A9) (LRR F, G,			ed Matrix (Reduced \	* *
	d Below Dark Surfa ark Surface (A12)	ce (A11)		Dark Surfaced Dark Su				nt Material (TF2) ow Dark Surface (TF12)
	Mucky Mineral (S1)			Depression)		olain in Remarks)
-	Mucky Peat or Peat	(S2) (LRR G .		lains Depr	. ,	16)		ydrophytic vegetation and
	ucky Peat or Peat (LRA 72 &				drology must be present,
							unless dist	curbed or problematic.
Restrictive	Layer (if present):							
Type:								/
Depth (in	ches):		<u>—</u>				Hydric Soil Pre	sent? Yes No
Remarks:							•	
HYDROLO	GY							
	drology Indicators	·•						
_	cators (minimum of		chack all that any	alva)			Secondary	ndicators (minimum of two required)
✓ Surface	•	one required,						•
	ater Table (A2)		Salt Crus		oo (D12)		/	Soil Cracks (B6) y Vegetated Concave Surface (B8)
Saturati	` '			n Sulfide O	, ,			e Patterns (B10)
Water M				son Water				d Rhizospheres on Living Roots (C3)
	nt Deposits (B2)		Oxidized					e tilled)
	posits (B3)			not tilled		ing recots		Burrows (C8)
	at or Crust (B4)			of Reduc		4)		on Visible on Aerial Imagery (C9)
Iron Dep			Thin Muc		,	•,		phic Position (D2)
-	on Visible on Aerial	Imagery (B7)					/	eutral Test (D5)
	stained Leaves (B9)				,			eave Hummocks (D7) (LRR F)
Field Obser	vations:							. , , , ,
Surface Wat	er Present?	Yes ✓ No	o Depth (i	nches): 0-	.3			
Water Table			o V Depth (i			_		
Saturation P			o ✓ Depth (i				land Hvdrologv Pr	esent? Yes No
(includes cap	oillary fringe)							
Describe Re	corded Data (strear	m gauge, mon	itoring well, aeria	l photos, p	revious ins	pections),	, if available:	
Remarks:								
ı								

Project/Site: US 380	(City/Co	unty:	Collin Cou	unty	Samplin	g Date: 07/22/	2021
Applicant/Owner: TxDOT					State: TX	Sampling	g Point: DP-30)
Investigator(s): Mike Keenan and Wyatt Wolfenkoehler		Section	n, Tov	vnship, Ra	nge: N/A			
Landform (hillslope, terrace, etc.): Hillslope		Local r	elief	(concave,	convex, none): none		Slope (%)	: <u>0-1</u>
Subregion (LRR):	n Lat: 33.2	49800			Long: <u>-96.629170</u>		Datum: NA	ND 83
Soil Map Unit Name: Lewisville silty clay, 3 to 5 percent slop	es, eroded				NWI class	ification: UF	PL	
Are climatic / hydrologic conditions on the site typical for this	s time of yea	ar? Ye	s1	/ No	(If no, explain ir	Remarks.)		
Are Vegetation, Soil, or Hydrologys	significantly of	disturb	ed?	Are "	'Normal Circumstances	s" present?	Yes <u>✓</u> N	No
Are Vegetation, Soil, or Hydrology r	naturally prol	blemati	ic?	(If ne	eded, explain any ans	wers in Rem	arks.)	
SUMMARY OF FINDINGS – Attach site map	showing	samp	oling	g point le	ocations, transec	ts, impor	tant feature	es, etc.
Hydrophytic Vegetation Present? Yes N	lo 🗸							
Hydric Soil Present? Yes ✓ N				e Sampled n a Wetlar		No	1	
Wetland Hydrology Present? Yes N	lo <u> </u>		** 16111	ii a wellai	10: 103_			
Remarks:								
Located adjacent to Emergent Wetland	l Water l	Featı	ure	180.				
VEGETATION – Use scientific names of plan	ts.							
-	Absolute			Indicator	Dominance Test wo	orksheet:		
<u>Tree Stratum</u> (Plot size: <u>30'</u>)	% Cover				Number of Dominant			
1					That Are OBL, FACV (excluding FAC-):	V, or FAC	0	(A)
2								. ()
3					Total Number of Dor Species Across All S		2	(B)
4. 5.								- ()
·-	0				Percent of Dominant That Are OBL, FACV		0.0%	(A/B)
Sapling/Shrub Stratum (Plot size: 15'					Prevalence Index w			
1					Total % Cover o		Multiply by:	
2							$1 = \frac{0}{1}$	
3					FACW species 0			
4	0	Tata				x :		
Herb Stratum (Plot size: 5'		= rota	I COV	er	FACU species 100		4 = 400	
1. Schedonorus arundinaceus	50	yes		FACU	UPL species 0	x	5 = 0	
2. Cynodon dactylon	50	yes		FACU	Column Totals: 100	(A)	400	(B)
3					Prevalence Ind	ex - R/A -	4.0	
4					Hydrophytic Vegeta			_
5					1 - Rapid Test for			
6					2 - Dominance 1		•	
7					3 - Prevalence I	ndex is ≤3.0	1	
8					4 - Morphologica			
9							separate sheet	•
10.	100.0	= Total	L Cov	er	Problematic Hyd	Irophytic Ve	getation (Expla	aın)
Woody Vine Stratum (Plot size: 30') 1				.	¹ Indicators of hydric be present, unless d			must
2.					Hydrophytic			
	0	= Total	l Cov	er	Vegetation	W = =	N . ✓	
% Bare Ground in Herb Stratum 0.0					Present?	Yes	NO	
Remarks:								

Profile Desc	ription: (Describe	e to the dept	th needed to docu	ment the	indicator	or confir	m the absence of indicators.)	
Depth	Matrix			x Feature				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	_Loc ²	· ——	emarks
0-4	10YR3/1	100					Silty Clay	
4-12	10YR 3/1	80	10YR 5/8	10	С	M	Clay	
	10YR 6/4	10			- · · · · · · · · · · · · · · · · · · ·			
	101110/1						· 	
-	-						· 	
					- · · · · · · · · · · · · · · · · · · ·			
			Reduced Matrix, C			ed Sand G		
Hydric Soil	Indicators: (Appli	cable to all	LRRs, unless othe	rwise no	ted.)		Indicators for Problematic	: Hydric Soils³:
Histosol	(A1)		Sandy				1 cm Muck (A9) (LRR I	
	pipedon (A2)			Redox (S			Coast Prairie Redox (A	, ,
Black Hi				d Matrix (,		Dark Surface (S7) (LR	•
	n Sulfide (A4)				neral (F1)		High Plains Depression	
	Layers (A5) (LRR				latrix (F2)		(LRR H outside of	MLRA 72 & 73)
	ick (A9) (LRR F, G,		✓ Deplete	ed Matrix			Reduced Vertic (F18)Red Parent Material (T	E2)
-	d Below Dark Surfa ark Surface (A12)	Ce (ATT)			ace (F6) urface (F7	`	Very Shallow Dark Surf	•
	fucky Mineral (S1)			Depression		,	Other (Explain in Rema	, ,
-	Aucky Peat or Peat	(S2) (LRR 6			essions (F	16)	³ Indicators of hydrophytic ve	
	icky Peat or Peat (\$				73 of LRF	•	wetland hydrology must	•
	·	, , ,	`			,	unless disturbed or pro	
Restrictive I	_ayer (if present):							-
Type:								,
Depth (inc	ches):						Hydric Soil Present? Yes	s No
Remarks:								
HYDROLO	GY							
Wetland Hyd	drology Indicators	s:						
Primary India	cators (minimum of	one required	l; check all that app	ly)			Secondary Indicators (mi	nimum of two required)
Surface	Water (A1)		Salt Crust	(B11)			Surface Soil Cracks	(B6)
	iter Table (A2)		Aquatic In	. ,	es (B13)			Concave Surface (B8)
Saturation	, ,		Hydrogen		, ,		Drainage Patterns (E	
	arks (B1)		Dry-Seas		, ,)	- · · · · · · · · · · · · · · · · · · ·	res on Living Roots (C3)
	nt Deposits (B2)		Oxidized		, ,		 ·	3
	posits (B3)			not tilled		9	Crayfish Burrows (Ca	8)
	at or Crust (B4)		Presence		,	4)	Saturation Visible on	,
Iron Dep	, ,		Thin Mucl		,	,	Geomorphic Position	
-	on Visible on Aerial	Imagery (B7					FAC-Neutral Test (D	
·	tained Leaves (B9)	• • •	, (=	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,		Frost-Heave Hummo	,
Field Obser								
Surface Water		Yes 1	No 🗸 Depth (in	iches):				
Water Table			No V Depth (in					
			No <u>✓</u> Depth (in				land Hydrology Present? Ye	s No √
Saturation Pi (includes cap		162 [vo <u>v</u> Deptn (Ir	iches):		wet	iana nyurulogy Fresent? 19	5 NU
		m gauge, mo	nitoring well, aerial	photos, p	revious ins	spections)	, if available:	
Remarks:								

Project/Site: US 380		City/Co	ounty: C	Collin Co	unty	Sampling Date: 01/07/2020
Applicant/Owner: TxDOT					State: TX	Sampling Point: DP-31
Investigator(s): Mike Keenan and Ethan Eichler		Section	n, Town	ship, Ra	inge: N/A	
Landform (hillslope, terrace, etc.): Floodplain		Local r	relief (c	oncave,	convex, none): concave	Slope (%): 1
Subregion (LRR): J - Southwestern Prairies Cotton and Forage Region	n Lat: 33.2	251257	•		Long: <u>-96.625680</u>	Datum: NAD 83
Soil Map Unit Name: Tinn clay, 0 to 1 percent slopes, freque					NWI classific	ation: PEM
Are climatic / hydrologic conditions on the site typical for thi	s time of ye	ar? Ye	es 🗸	No	(If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrologys	significantly	disturb	ed?	Are '	"Normal Circumstances" p	present? Yes No
Are Vegetation, Soil, or Hydrology r	naturally pro	blemat	tic?		eeded, explain any answe	
SUMMARY OF FINDINGS – Attach site map	showing	samp	pling	point l	ocations, transects	, important features, etc
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Yes ✓ N Yes ✓ N N Remarks:	lo			Sampled a Wetlar		No
Located within Emergent Wetland Wate 182, Honey Creek.	er Featu	ire 18	85 ac	ljacen	it to Perennial Str	eam Water Feature
VEGETATION – Use scientific names of plan	ts.					
201	Absolute		inant In		Dominance Test work	sheet:
Tree Stratum (Plot size: 30'	% Cover			<u>status</u>	Number of Dominant S	
1					That Are OBL, FACW, (excluding FAC-):	3 (A)
3.					Total Number of Domin	ant
4					Species Across All Stra	•
5.					Percent of Dominant Sp	necies ±
0 11 101 1 01 1 1 1 1 1 1 1 1 1 1	0	= Tota	al Cover		That Are OBL, FACW,	
Sapling/Shrub Stratum (Plot size: 15'	1	no			Prevalence Index wor	ksheet:
Sambucus nigra Ulmus crassifolia	- '	no no		AC AC	Total % Cover of:	
				<u> </u>	OBL species 20	x 1 = 20
3					FACW species 40	x 2 = 80
4	2	- Total	I Cover		FAC species 42	x 3 = 126
Herb Stratum (Plot size: 5'		= 101a	ii Covei		FACU species 0	x 4 = 0
1. Carex vulpinoidea	40	yes	<u>F.</u>	<u>ACW</u>		x 5 = 0
2. Xantium strumarium	25	yes	<u>F.</u>	AC	Column Totals: 102	(A) <u>226</u> (B)
3. Alisma triviale	20	yes		BL	Prevalence Index	- B/∆ - 2.2
4. Cardiospermum halicacabum	15	no		AC	Hydrophytic Vegetation	
5					1 - Rapid Test for H	
6					✓ 2 - Dominance Tes	
7					√ 3 - Prevalence Inde	
8						Adaptations ¹ (Provide supporting
9						s or on a separate sheet)
10	100.0	_ Total	l Cover		Problematic Hydro	phytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size: 30')					¹ Indicators of hydric soi be present, unless distu	l and wetland hydrology must urbed or problematic.
2.					Hydrophytic	
	0			_	Vegetation Present? Ye	s No
% Bare Ground in Herb Stratum 0.0 Remarks:					riesent: Te	3 NU
. Containe.						

SOIL

Sampling Point: DP-31

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix			Redox Feature				
(inches)	Color (moist)	%	Color (moist		Type'	Loc ²	<u>Texture</u>	Remarks
0-16	10YR 3/1	98	7.5YR 4/6	2	_ <u>C</u>	M	Clay	
					_	·		
							· -	
								_
								-
					_	·	·	_
			-				· -	
¹ Type: C=C	oncentration, D=De	pletion, RM	=Reduced Matrix	k, CS=Covere	ed or Coate	ed Sand G	rains. ² Loca	tion: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Appli	cable to al	l LRRs, unless o	therwise no	ted.)		Indicators for	or Problematic Hydric Soils ³ :
Histosol	(A1)		Sar	ndy Gleyed M	latrix (S4)		1 cm Mu	ıck (A9) (LRR I, J)
Histic E _l	pipedon (A2)		Sar	ndy Redox (S	5)		Coast Pi	rairie Redox (A16) (LRR F, G, H)
Black H	stic (A3)		Stri	pped Matrix ((S6)		Dark Su	rface (S7) (LRR G)
	en Sulfide (A4)			my Mucky M			High Pla	nins Depressions (F16)
	d Layers (A5) (LRR			my Gleyed M			,	H outside of MLRA 72 & 73)
	ıck (A9) (LRR F, G ,			oleted Matrix				d Vertic (F18)
	d Below Dark Surfa	ce (A11)		dox Dark Surf	. ,			rent Material (TF2)
	ark Surface (A12)			oleted Dark S)		allow Dark Surface (TF12)
	Mucky Mineral (S1) Mucky Peat or Peat	(S2) (LDD		dox Depression h Plains Dep		-1 <i>G</i> \		explain in Remarks) f hydrophytic vegetation and
	ucky Peat of Peat (S	. , .	· · · — ·	(MLRA 72 &	•	,		hydrology must be present,
5 6111 1010	icky i eat of i eat (c) (LIXIX I	1	(WILIXA 12 &	73 OI LIKI	(11)		listurbed or problematic.
Restrictive	Layer (if present):						1	notario di problemate.
Type:								
Depth (in							Hydric Soil P	Present? Yes Vo No
							Tiyano oon i	resent: resno
Remarks:								
HYDROLO	CV							
_	drology Indicators							
Primary India	cators (minimum of	one require	ed; check all that	apply)				y Indicators (minimum of two required)
_	Water (A1)		_	rust (B11)				ce Soil Cracks (B6)
High Wa	ater Table (A2)		Aquat	ic Invertebrat	es (B13)		Spars	sely Vegetated Concave Surface (B8)
Saturati	on (A3)		Hydro	gen Sulfide C	Odor (C1)		Draina	age Patterns (B10)
Water M	larks (B1)		Dry-S	eason Water	Table (C2))	Oxidiz	zed Rhizospheres on Living Roots (C3)
Sedime	nt Deposits (B2)		Oxidiz	ed Rhizosph	eres on Liv	ing Roots	(C3) (wh	ere tilled)
Drift De	posits (B3)		(wh	ere not tilled	I)			ish Burrows (C8)
_	at or Crust (B4)			nce of Reduc		4)	,	ation Visible on Aerial Imagery (C9)
	oosits (B5)			/luck Surface	(C7)			norphic Position (D2)
✓ Inundati	on Visible on Aerial	Imagery (E	37) Other	(Explain in R	emarks)		✓ FAC-1	Neutral Test (D5)
Water-S	tained Leaves (B9)						Frost-	Heave Hummocks (D7) (LRR F)
Field Obser	vations:		_					
Surface Wat			No V Dept	h (inches):				
Water Table	Present?	Yes	No <u>✓</u> Dept	h (inches):				,
Saturation P	resent?	Yes	No ✓ Dept	h (inches):		Wet	land Hydrology	Present? Yes No
(includes cap	oillary fringe)	-						
Describe Re	corded Data (strear	n gauge, m	onitoring well, as	rial photos, p	revious ins	spections),	, if available:	
Remarks:								
Inundatio	on visible on a	aerial in	nagery 04/2	016 and	01/201	7. Satu	uration visib	le on aerial imagery
	03/2015, 12/							3 ,
, _000,	33,2313, 12	_5 15, 6		-,				

Project/Site: US 380		City/Cour	nty: Collin Co	unty	Sampling	Date: 01/07/	2020
Applicant/Owner: TxDOT				State: TX	Sampling I	Point: DP-32	2
Investigator(s): Mike Keenan and Ethan Eichler		Section,	Township, Ra	nge: N/A			
Landform (hillslope, terrace, etc.): Floodplain		Local rel	lief (concave,	convex, none): concave		Slope (%)): <u>1</u>
Subregion (LRR): J - Southwestern Prairies Cotton and Forage				Long: <u>-96.625317</u>			
Soil Map Unit Name: Tinn clay, 0 to 1 percent slopes, fr	equently flooded			NWI classific	cation: UPL		
Are climatic / hydrologic conditions on the site typical fo			,				
Are Vegetation, Soil, or Hydrology				"Normal Circumstances" p		es ✓ N	No
Are Vegetation, Soil, or Hydrology				eeded, explain any answe			
SUMMARY OF FINDINGS – Attach site m							es, etc.
Hydrophytic Vegetation Present? Yes ✓	_ No	Τ.	41-2	14			
	No ✓		the Sampled ithin a Wetlan		No _	1	
	_ No <u></u> ✓	W	illilli a Wellai	id: fes	NO_		
Remarks:							
Located adjacent to Emergent Wetla	and Water	Featu	re 185.				
VEGETATION – Use scientific names of p	olants.						
<u> </u>	Absolute	Domina	ant Indicator	Dominance Test work	sheet:		
<u>Tree Stratum</u> (Plot size: 30'	· · · · · · · · · · · · · · · · · · ·	Species	s? Status	Number of Dominant S	pecies		
1. Fraxinus pennsylvanica	45	yes	_ FAC	That Are OBL, FACW, (excluding FAC-):		3	(A)
2. Celtis laevigata	35	yes	FAC		_		_ (A)
Ulmus americana Ulmus crassofolia	<u>5</u> 5			Total Number of Domir Species Across All Stra		5	(B)
		no	FAC FAC	Species Across Air otra		-	_ (D)
5	90	= Total 0	Cover	Percent of Dominant S That Are OBL, FACW,	pecies or FAC: (60.0%	(A/B)
Sapling/Shrub Stratum (Plot size: 15'		- Total C	50vei				_ (/////)
1. Sambucus nigra	20	yes	FAC	Prevalence Index wor			
2. Ulmus crassifolia	1	no	<u>FAC</u>	Total % Cover of:		Multiply by:	
3				OBL species 0		= 0	
4						= 333	
Herb Stratum (Plot size: 5'	21	= Total C	Cover	FACU species 10			_
1. Liriope muscari	5	yes	UPL		x 5		
2				Column Totals: 126			(B)
3.							` / +
4.				Prevalence Index	_		
5				Hydrophytic Vegetation			
6				1 - Rapid Test for I ✓ 2 - Dominance Tes		Vegetation	
7				3 - Prevalence Ind			
8				4 - Morphological /		1 (Provide su	nnortina
9				data in Remark			
10		-		Problematic Hydro	phytic Vege	tation ¹ (Expla	ain)
Woody Vine Stratum (Plot size: 30')	5.0	= Total C	Cover	¹ Indicators of hydric so	il and wetlar	nd hydrologv	must
1. Smilax bona-nox	10	yes	FACU	be present, unless dist	urbed or pro	blematic.	
2			 _	Hydrophytic			
		= Total C	Cover	Vegetation	✓	NI-	
% Bare Ground in Herb Stratum 95.0				Present? Ye	es	No	
Remarks:							

Profile Desc	ription: (Describe	to the depth ne	eded to docu	ment the i	ndicator	or confirn	n the absence of	f indicators.)	
Depth	Matrix		Redo	x Features	3				
(inches)	Color (moist)	<u>%</u> C	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-16	10YR 3/1	100					Clay		
	-						-		
				-					_
	oncentration, D=Dep					d Sand Gi		tion: PL=Pore Lining, M	
Hydric Soil	ndicators: (Applic	able to all LRRs	s, unless othe	rwise note	ed.)		Indicators fo	or Problematic Hydric	Soils³:
Histosol	(A1)		Sandy	Gleyed Ma	trix (S4)		1 cm Mu	ck (A9) (LRR I, J)	
	pipedon (A2)		Sandy l	Redox (S5))		Coast Pr	airie Redox (A16) (LRR	F, G, H)
Black Hi	, ,			d Matrix (S	,			face (S7) (LRR G)	
	n Sulfide (A4)	_,		Mucky Min			_	ins Depressions (F16)	
	Layers (A5) (LRR			Gleyed Ma			,	H outside of MLRA 72	2 & 73)
	ick (A9) (LRR F, G, d Below Dark Surfac			ed Matrix (F Dark Surfa	,			l Vertic (F18) ent Material (TF2)	
	ark Surface (A12)	Je (ATT)		ed Dark Su	, ,			allow Dark Surface (TF1	2)
	lucky Mineral (S1)			Depression	, ,			xplain in Remarks)	
	lucky Peat or Peat	(S2) (LRR G, H)		ains Depre	` '	16)		hydrophytic vegetation	and
	cky Peat or Peat (S		_	.RA 72 & 7				nydrology must be pres	
							unless di	isturbed or problematic.	
Restrictive I	ayer (if present):								
Type:									,
Depth (inc	ches):						Hydric Soil P	resent? Yes	No ✓
Remarks:									
HYDROLO									
_	drology Indicators								
Primary India	cators (minimum of	one required; che	ck all that app	y)			Secondary	Indicators (minimum o	f two required)
Surface	Water (A1)		Salt Crust	(B11)			Surfac	ce Soil Cracks (B6)	
High Wa	ter Table (A2)		Aquatic In	vertebrates	s (B13)		Sparse	ely Vegetated Concave	Surface (B8)
Saturation	on (A3)		Hydrogen	Sulfide Oc	lor (C1)		Draina	age Patterns (B10)	
Water M	arks (B1)		Dry-Seaso	on Water T	able (C2)		Oxidiz	ed Rhizospheres on Liv	ring Roots (C3)
Sedimer	nt Deposits (B2)		Oxidized I	Rhizospher	es on Livi	ing Roots	(C3) (who	ere tilled)	
Drift Dep	oosits (B3)		(where	not tilled)				sh Burrows (C8)	
Algal Ma	t or Crust (B4)		Presence	of Reduce	d Iron (C4	ł)		ation Visible on Aerial In	nagery (C9)
Iron Dep	osits (B5)		Thin Muck	Surface (C7)		✓ Geom	orphic Position (D2)	
Inundation	on Visible on Aerial	Imagery (B7)	Other (Ex	plain in Re	marks)		FAC-N	Neutral Test (D5)	
Water-S	tained Leaves (B9)						Frost-l	Heave Hummocks (D7)	(LRR F)
Field Obser	vations:								
Surface Water	er Present?	/es No	✓ Depth (in	ches):		_			
Water Table	Present?	/es No	✓ Depth (in	ches):		_			,
Saturation P	resent?	/es No	✓ Depth (in	ches):		Wetl	and Hydrology I	Present? Yes	
(includes cap	oillary fringe)						if evellels:		
Describe Re	corded Data (strean	ı gauge, monitori	ng well, aerial	pnotos, pre	evious ins	pections),	ıı available:		
Remarks:									

Project/Site: US 380	(City/Count	ty: Collin Cou	inty	Sampling Date: 08/17/2021		
Applicant/Owner: TxDOT				State: TX	Sampling Point: DP-33		
Investigator(s): Kathryn Burton, Kelsea Hiebert	;	Section, T	ownship, Rar	nge: N/A			
Landform (hillslope, terrace, etc.): Depression		Local relie	ef (concave, c	convex, none): concave	Slope (%): 2		
Subregion (LRR):						į	
Soil Map Unit Name: Austin Silty Clay, 2 to 5 percent slopes,							
Are climatic / hydrologic conditions on the site typical for this							
Are Vegetation, Soil, or Hydrologys	ignificantly of	disturbed?	? Are "I	Normal Circumstances" p	oresent? Yes <u>√</u> No		
Are Vegetation, Soil, or Hydrologyn	aturally prol	blematic?	(If ne	eded, explain any answe	rs in Remarks.)		
SUMMARY OF FINDINGS – Attach site map	showing	sampli	ng point lo	ocations, transects	, important features, e	etc.	
Hydrophytic Vegetation Present? Yes ✓ No	<u> </u>			_			
Hydric Soil Present? Yes ✓ No.	o		the Sampled thin a Wetlan		′ No		
Wetland Hydrology Present? Yes <u>✓</u> No		WIL	min a vvetian	id? fes_ <u>▼</u>	NO		
Remarks:							
Located within Emergent Wetland Water			adjacent	t to US 75 and in	close proximity to		
Perennial Stream Water Feature 192, F	loney C	reek.					
VEGETATION – Use scientific names of plant	ts.						
201	Absolute		nt Indicator	Dominance Test work	sheet:		
Tree Stratum (Plot size: 30' 1. Salix nigra	% Cover	yes	? Status FACW	Number of Dominant S			
1. Salix nigra 2. Fraxinus pennsylvanica	5			That Are OBL, FACW, (excluding FAC-):	6 (A	١)	
3				Total Number of Domin	nant		
4				Species Across All Stra)	
5.				Percent of Dominant S	necies	+	
451	25	= Total Co	over	That Are OBL, FACW,		/B)	
Sapling/Shrub Stratum (Plot size: 15'	E		EA C\A/	Prevalence Index wor	ksheet:		
Salix nigra Fraxinus pennsylvanica		yes	FACW FAC 🔽	Total % Cover of:			
Friaxinus perinsylvanica	. ———	yes	IAC		x 1 = 15		
4	· ——			·	x 2 = 110		
	10	= Total Co	over		x 3 = 120		
Herb Stratum (Plot size: 5'				· _	x 4 = 0		
1. Xanthium strumarium	30	yes	FAC		x = 0	- `	
Phyla lanceolata Ammannia coccinea	30 10	yes	FACW	Column Totals: 110	(A) <u> (I</u>	B)	
Armanna coccinea Eleocharis palustris	5	no	OBL OBL	Prevalence Index	= B/A = 2.2	+	
· ·		<u>no</u>	_ OBL	Hydrophytic Vegetation	on Indicators:		
5				1 - Rapid Test for I			
7				✓ 2 - Dominance Tes			
8.				✓ 3 - Prevalence Index			
9				4 - Morphological A	Adaptations ¹ (Provide support s or on a separate sheet)	ting	
10					phytic Vegetation ¹ (Explain)		
001	75.0	= Total Co	over				
Woody Vine Stratum (Plot size: 30') 1				be present, unless dist	il and wetland hydrology must urbed or problematic.	t	
2				Hydrophytic			
	0			Vegetation	√ Na		
% Bare Ground in Herb Stratum 25.0				Present? Ye	s No		
Remarks:							

Depth	Matrix		Red	ox Feature	es			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹ _	Loc ²	Texture	Remarks
0-4	10YR7/1	50	10YR6/8	10	C 🔽	M/PL	Sandy Clay	
	10YR4/1	40					Sandy Clay	
4-10	10YR3/2	70	5YR4/6	30	c 🔽	M/PL	Clay	
¹ Type: C=0	Concentration, D=De	pletion, RN		S=Covere	ed or Coate	ed Sand G	rains. ² Locatio	n: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Appli	cable to a	II LRRs, unless other	erwise no	ted.)		Indicators for	Problematic Hydric Soils ³ :
Black H Hydrog Stratifie 1 cm M Deplete Thick D Sandy 2.5 cm 5 cm M	Epipedon (A2) distic (A3) en Sulfide (A4) ed Layers (A5) (LRR luck (A9) (LRR F, G, ed Below Dark Surfac Park Surface (A12) Mucky Mineral (S1) Mucky Peat or Peat lucky Peat or Peat (S	(S2) (LRR	Sandy Strippe Loamy Loamy Deplet Redox Deplet Redox High F	ded Matrix Dark Surfed Dark S Depression	5) S6) ineral (F1) latrix (F2) (F3) ace (F6) urface (F7)	16)	Coast Prai Dark Surfa High Plain (LRR H Reduced \ Red Paren Very Shall Other (Exp	ric (A9) (LRR I, J) rie Redox (A16) (LRR F, G, H) rice (S7) (LRR G) s Depressions (F16) routside of MLRA 72 & 73) retric (F18) t Material (TF2) but Dark Surface (TF12) olain in Remarks) ydrophytic vegetation and drology must be present, urbed or problematic.
Restrictive	Layer (if present):							
Type:								
· · ·								./
· · ·	nches):						Hydric Soil Pre	sent? Yes No
Depth (ir	nches):						Hydric Soil Pre	sent? Yes No
Depth (ir Remarks:	OGY	::					Hydric Soil Pre	sent? Yes No
Depth (ir Remarks:	OGY vdrology Indicators		ed; check all that app	oly)				sent? Yes No
Depth (ir Remarks: IYDROLO Wetland Hy Primary Ind	OGY vdrology Indicators icators (minimum of						Secondary I	ndicators (minimum of two require
Depth (ir Remarks: IYDROLO Wetland Hy Primary Ind Surface	OGY vdrology Indicators		Salt Crus	st (B11)	es (B13)		Secondary II ✓ Surface	ndicators (minimum of two require Soil Cracks (B6)
Depth (ir Remarks: IYDROLO Wetland Hy Primary Ind Surface High W	OGY vdrology Indicators icators (minimum of Water (A1) later Table (A2)		Salt Crus	st (B11) nvertebrat			Secondary Ii ✓ Surface Sparsel	ndicators (minimum of two require Soil Cracks (B6) y Vegetated Concave Surface (B8
Depth (ir Remarks: IYDROLO Wetland Hy Primary Ind Surface High W Saturat	OGY vdrology Indicators icators (minimum of water (A1) later Table (A2) ion (A3)		Salt Crus Aquatic I Hydroger	st (B11) nvertebrat n Sulfide C	odor (C1)		Secondary II ✓ Surface — Sparsely — Drainag	ndicators (minimum of two require Soil Cracks (B6) y Vegetated Concave Surface (B8 e Patterns (B10)
Depth (ir Remarks: IYDROLC Wetland Hy Primary Ind Surface High W Saturat Water I	OGY vdrology Indicators icators (minimum of e Water (A1) rater Table (A2) ion (A3) Marks (B1)		Salt Crus Aquatic I Hydrogei Dry-Seas	st (B11) nvertebrat n Sulfide C son Water	odor (C1) Table (C2)	ing Roots	Secondary II ✓ Surface — Sparsely — Drainag — Oxidized	ndicators (minimum of two require Soil Cracks (B6) y Vegetated Concave Surface (B8 e Patterns (B10) d Rhizospheres on Living Roots (C
Depth (ir Remarks: IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime	OGY vorology Indicators icators (minimum of water (A1) vater Table (A2) ion (A3) Marks (B1) ent Deposits (B2)		Salt Crus Aquatic I Hydroger Dry-Seas Oxidized	at (B11) nvertebrat n Sulfide C son Water Rhizosph	odor (C1) Table (C2) eres on Liv	ing Roots	Secondary II ✓ Surface — Sparsel: — Drainag — Oxidizec (C3) (wher	ndicators (minimum of two require Soil Cracks (B6) y Vegetated Concave Surface (B8 e Patterns (B10) d Rhizospheres on Living Roots (C e tilled)
Depth (ir Remarks: IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De	OGY /drology Indicators icators (minimum of e Water (A1) /drater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3)		Salt Crus Aquatic I Hydroger Dry-Seas Oxidized (where	et (B11) nvertebrat n Sulfide Coon Water Rhizosphe	Odor (C1) Table (C2) eres on Liv		Secondary II ✓ Surface — Sparsely — Drainag — Oxidized (C3) (wher — Crayfish	ndicators (minimum of two require Soil Cracks (B6) y Vegetated Concave Surface (B8 e Patterns (B10) d Rhizospheres on Living Roots (C e tilled)
Depth (ir Remarks: IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water N Sedime Drift De Algal M	OGY vdrology Indicators icators (minimum of e Water (A1) later Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4)		Salt Crus Aquatic II Hydrogei Dry-Seas Oxidized (where	st (B11) nvertebrat n Sulfide C son Water Rhizosphe not tilled	Odor (C1) Table (C2) eres on Livi) ed Iron (C4		Secondary II ✓ Surface — Sparsely — Drainag — Oxidized (C3) (wher — Crayfish ✓ Saturati	ndicators (minimum of two require Soil Cracks (B6) y Vegetated Concave Surface (B8 e Patterns (B10) d Rhizospheres on Living Roots (Cetilled) Burrows (C8) on Visible on Aerial Imagery (C9)
Depth (ir Remarks: IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De	OGY vdrology Indicators icators (minimum of wwater (A1) later Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) eposits (B5)	one require	Salt Crus Aquatic II Hydrogei Dry-Seas Oxidized (where Presence	ot (B11) Invertebrate In Sulfide Coon Water Rhizosphe In not tilled In of Reduce Rhizose of Reduce In Sulface	Odor (C1) Table (C2) eres on Live) ed Iron (C4) (C7)		Secondary II ✓ Surface — Sparsely — Drainag — Oxidized (wher Crayfish ✓ Saturati ✓ Geomore	ndicators (minimum of two require Soil Cracks (B6) y Vegetated Concave Surface (B8 e Patterns (B10) d Rhizospheres on Living Roots (Ce tilled) n Burrows (C8) on Visible on Aerial Imagery (C9) phic Position (D2)
Depth (ir Remarks: IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Inundar	OGY vdrology Indicators icators (minimum of wwater (A1) later Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) eposits (B5) tion Visible on Aerial	one require	Salt Crus Aquatic II Hydrogei Dry-Seas Oxidized (where Presence	st (B11) nvertebrat n Sulfide C son Water Rhizosphe not tilled	Odor (C1) Table (C2) eres on Live) ed Iron (C4) (C7)		Secondary II ✓ Surface — Sparsely — Drainag — Oxidized (C3) (wher ✓ Crayfish ✓ Saturati ✓ Geomon ✓ FAC-Ne	ndicators (minimum of two require Soil Cracks (B6) y Vegetated Concave Surface (B8 e Patterns (B10) d Rhizospheres on Living Roots (Ce tilled) Burrows (C8) on Visible on Aerial Imagery (C9) phic Position (D2) utral Test (D5)
Depth (ir Remarks: IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Inundat Water-s	orches):	one require	Salt Crus Aquatic II Hydrogei Dry-Seas Oxidized (where Presence	ot (B11) Invertebrate In Sulfide Coon Water Rhizosphe In not tilled In of Reduce Rhizose of Reduce In Sulface	Odor (C1) Table (C2) eres on Live) ed Iron (C4) (C7)		Secondary II ✓ Surface — Sparsely — Drainag — Oxidized (C3) (wher ✓ Crayfish ✓ Saturati ✓ Geomon ✓ FAC-Ne	ndicators (minimum of two require Soil Cracks (B6) y Vegetated Concave Surface (B8 e Patterns (B10) d Rhizospheres on Living Roots (Cetilled) Burrows (C8) on Visible on Aerial Imagery (C9) phic Position (D2)
Depth (ir Remarks: IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water N Sedime Drift De Algal M Iron De Inundat Water-S Field Obse	OGY vdrology Indicators icators (minimum of e Water (A1) vlater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) eposits (B5) tion Visible on Aerial Stained Leaves (B9) rvations:	one require	Salt Crus Aquatic II Hydroger Dry-Seas Oxidized (where Presence Thin Muc	ot (B11) nvertebrat n Sulfide Coon Water Rhizosphe not tilled e of Reduce k Surface kplain in R	Odor (C1) Table (C2) eres on Livi) ed Iron (C4 (C7) emarks)	1)	Secondary II ✓ Surface — Sparsely — Drainag — Oxidized (C3) (wher ✓ Crayfish ✓ Saturati ✓ Geomon ✓ FAC-Ne	ndicators (minimum of two require Soil Cracks (B6) y Vegetated Concave Surface (B8 e Patterns (B10) d Rhizospheres on Living Roots (Ce tilled) Burrows (C8) on Visible on Aerial Imagery (C9) phic Position (D2) utral Test (D5)
Depth (ir Remarks: IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Inundat Water-S Field Obse Surface Wa	OGY vdrology Indicators icators (minimum of e Water (A1) fater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) eposits (B5) tion Visible on Aerial Stained Leaves (B9) rvations: iter Present?	one require Imagery (I	Salt Crus Aquatic II Hydrogei Dry-Seas Oxidized (where Presence Thin Muc B7) Other (Ex	ot (B11) nvertebrat n Sulfide Con Water Rhizosphe not tilled e of Reduce k Surface xplain in R	Odor (C1) Table (C2) eres on Livi) ed Iron (C4 (C7) emarks)	<u> </u>	Secondary II ✓ Surface — Sparsely — Drainag — Oxidized (C3) (wher ✓ Crayfish ✓ Saturati ✓ Geomon ✓ FAC-Ne	ndicators (minimum of two require Soil Cracks (B6) y Vegetated Concave Surface (B8 e Patterns (B10) d Rhizospheres on Living Roots (Ce tilled) Burrows (C8) on Visible on Aerial Imagery (C9) phic Position (D2) utral Test (D5)
Depth (ir Remarks: IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Inundat Water-S Field Obse Surface Wa	OGY vdrology Indicators icators (minimum of wwater (A1) later Table (A2) ion (A3) Warks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) eposits (B5) tion Visible on Aerial Stained Leaves (B9) rvations: ter Present?	one require Imagery (I Yes	Salt Crus Aquatic II Hydroger Dry-Seas Oxidized (where Presence Thin Muc B7) Other (Ex	ot (B11) nvertebrat n Sulfide Con Water Rhizosphe not tilled e of Reduce k Surface k plain in R	Odor (C1) Table (C2) eres on Liv) ed Iron (C4 (C7) emarks)	i)	Secondary II ✓ Surface — Sparsely — Drainag — Oxidized (wher ✓ Crayfish ✓ Saturati ✓ Geomor ✓ FAC-Ne — Frost-He	ndicators (minimum of two require Soil Cracks (B6) y Vegetated Concave Surface (B8 e Patterns (B10) d Rhizospheres on Living Roots (Cetilled) Burrows (C8) on Visible on Aerial Imagery (C9) phic Position (D2) utral Test (D5) eave Hummocks (D7) (LRR F)
Depth (ir Remarks: IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Inundat Water-S Field Obse Surface Wa Water Table Saturation F (includes ca	pody vdrology Indicators icators (minimum of wwater (A1) dater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) eposits (B5) tion Visible on Aerial Stained Leaves (B9) rvations: ter Present? epresent? epresent? epillary fringe)	one require Imagery (I Yes Yes Yes	Salt Crus Aquatic II Hydroger Dry-Seas Oxidized (where Presence Thin Muc B7) Other (Ex	ot (B11) nvertebrat n Sulfide Coon Water Rhizosphe not tilled e of Reduct k Surface kplain in R nches): nches): nches): nches):	Odor (C1) Table (C2) eres on Liv) ed Iron (C4 (C7) emarks)	L) Wetl	Secondary II Surface Sparsely Drainag Oxidized (C3) (wher Grayfish Saturati FAC-Ne Frost-He	ndicators (minimum of two require Soil Cracks (B6) y Vegetated Concave Surface (B8 e Patterns (B10) d Rhizospheres on Living Roots (Ce tilled) Burrows (C8) on Visible on Aerial Imagery (C9) phic Position (D2) utral Test (D5)
Depth (ir Remarks: IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Inundat Water-S Field Obse Surface Wa Water Table Saturation F (includes ca	pody vdrology Indicators icators (minimum of wwater (A1) dater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) eposits (B5) tion Visible on Aerial Stained Leaves (B9) rvations: ter Present? epresent? epresent? epillary fringe)	one require Imagery (I Yes Yes Yes	Salt Crus Aquatic II Hydroger Dry-Seas Oxidized (where Presence Thin Muc B7) Other (Ex	ot (B11) nvertebrat n Sulfide Coon Water Rhizosphe not tilled e of Reduct k Surface kplain in R nches): nches): nches): nches):	Odor (C1) Table (C2) eres on Liv) ed Iron (C4 (C7) emarks)	L) Wetl	Secondary II Surface Sparsely Drainag Oxidized (C3) (wher Grayfish Saturati FAC-Ne Frost-He	ndicators (minimum of two require Soil Cracks (B6) y Vegetated Concave Surface (B8 e Patterns (B10) d Rhizospheres on Living Roots (Cetilled) Burrows (C8) on Visible on Aerial Imagery (C9) phic Position (D2) utral Test (D5) eave Hummocks (D7) (LRR F)
Depth (ir Remarks: IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Algal M Iron De Inundat Water-S Field Obse Surface Wa Water Table Saturation F (includes ca Describe Re	pody vdrology Indicators icators (minimum of wwater (A1) dater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) eposits (B5) tion Visible on Aerial Stained Leaves (B9) rvations: ter Present? epresent? epresent? epillary fringe)	one require Imagery (I Yes Yes Yes	Salt Crus Aquatic II Hydroger Dry-Seas Oxidized (where Presence Thin Muc B7) Other (Ex	ot (B11) nvertebrat n Sulfide Coon Water Rhizosphe not tilled e of Reduct k Surface kplain in R nches): nches): nches): nches):	Odor (C1) Table (C2) eres on Liv) ed Iron (C4 (C7) emarks)	L) Wetl	Secondary II Surface Sparsely Drainag Oxidized (C3) (wher Grayfish Saturati FAC-Ne Frost-He	ndicators (minimum of two require Soil Cracks (B6) y Vegetated Concave Surface (B8 e Patterns (B10) d Rhizospheres on Living Roots (Cetilled) Burrows (C8) on Visible on Aerial Imagery (C9) phic Position (D2) utral Test (D5) eave Hummocks (D7) (LRR F)
Depth (ir Remarks: IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Inundat Water-S Field Obse Surface Wa Water Table Saturation F (includes ca Describe Re	pody vdrology Indicators icators (minimum of wwater (A1) dater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) eposits (B5) tion Visible on Aerial Stained Leaves (B9) rvations: ter Present? e Present? epillary fringe) ecorded Data (strear	one require Yes Yes Yes T gauge, n	Salt Crus Aquatic II Hydroger Dry-Seas Oxidized (where Presence Thin Muc B7) Other (Ex	ot (B11) nvertebrat n Sulfide Con Water Rhizosphe not tilled e of Reduct k Surface kplain in R nches): nches): I photos, p	Odor (C1) Table (C2) eres on Liv) ed Iron (C4 (C7) emarks)	Wetl	Secondary II Surface Sparsely Drainag Oxidized (C3) (wher Saturati FAC-Ne Frost-He and Hydrology Pr if available:	ndicators (minimum of two requires Soil Cracks (B6) y Vegetated Concave Surface (B8) e Patterns (B10) d Rhizospheres on Living Roots (Getilled) Burrows (C8) on Visible on Aerial Imagery (C9) phic Position (D2) utral Test (D5) eave Hummocks (D7) (LRR F)

Project/Site: US 380	(City/Cou	unty: <u>Collin Coι</u>	unty	Sampling Date: 08/17/	/2021
Applicant/Owner: TxDOT				State: TX	Sampling Point: DP-34	ļ
Investigator(s): Kelsea Hiebert, Kathryn Burton		Section	, Township, Ra	nge: N/A		
Landform (hillslope, terrace, etc.): Hillslope		Local re	elief (concave,	convex, none): convex	Slope (%)): <u>4</u>
Subregion (LRR): J - Southwestern Prairies Cotton and Forage Re	gion Lat: 33.2	244314		Long: <u>96.625139</u>	Datum: NA	√D 83
Soil Map Unit Name: Austin Silty Clay, 2 to 5 percent slop	es, eroded			NWI classific	cation: UPL	~
Are climatic / hydrologic conditions on the site typical for						
Are Vegetation, Soil, or Hydrology	significantly of	disturbe	ed? Are "	'Normal Circumstances" p	oresent? Yes ✓ N	٧o
Are Vegetation, Soil, or Hydrology				eeded, explain any answe		
SUMMARY OF FINDINGS – Attach site ma						es, etc.
	/					
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes	No	I:	s the Sampled			
Wetland Hydrology Present? Yes		v	within a Wetlar	nd? Yes	No	
Remarks:						
Located on maintained roadway hillsl 75. VEGETATION – Use scientific names of plants		ent to	o Emerger	nt Wetland Water	Feature 190 and	d US
VEGETATION OSC SCIENTING HARRIES OF PRO	Absolute	Domin	nant Indicator	Dominance Test work	rsheet:	
<u>Tree Stratum</u> (Plot size: <u>30'</u>) 1 2	% Cover	Specie	es? Status	Number of Dominant S That Are OBL, FACW, (excluding FAC-):	pecies	_ (A)
3				Total Number of Domir Species Across All Stra	4	_ (B)
5				Percent of Dominant S That Are OBL, FACW,		_ (A/B)
Sapling/Shrub Stratum (Plot size: 15'				Prevalence Index wor	ksheet:	
1				Total % Cover of:	Multiply by:	
2				OBL species 0	x 1 = 0	
4					x 2 = 0	
	•	= Total	Cover	· · · · · · · · · · · · · · · · · · ·	x 3 = 30	
Herb Stratum (Plot size: 5'	90				x 4 = 360	
1. Cynodon dactylon 2. Sorghum halepense	10	yes no	FACU▼ FAC ▼	·	x 5 = 0 (A) 390	— (B)
3				Column rotals	(A)	(D)
4				Prevalence Index	<u>- </u>	
5				Hydrophytic Vegetation		
6.					Hydrophytic Vegetation	
7				2 - Dominance Tes		
8				3 - Prevalence Ind	ex is ≤3.0° Adaptations¹ (Provide su _l	nnortina
9				data in Remark	s or on a separate sheet	pporting :)
10				Problematic Hydro	phytic Vegetation ¹ (Expla	ain)
Woody Vine Stratum (Plot size: 30') 1	· <u> </u>	= Total		¹ Indicators of hydric so be present, unless dist	il and wetland hydrology urbed or problematic.	must
2.				Hydrophytic		
% Bare Ground in Herb Stratum 0.0	0	= Total	Cover	Vegetation Present? Ye	es No	
Remarks:				•		

Profile Description:	(Describe	to the depth	needed to document the indicator	or confirm th	ne absence of indicators.)
Depth	Matrix		Redox Features		
	or (moist)	<u>%</u>	Color (moist) % Type ¹	Loc ²	Texture Remarks
0-4 10YR	13/2	100			
4-10 10YR	4/3	40			
4-10 10YR	2/2	60			
4-10 1011	10/2				
¹ Type: C=Concentra	tion, D=Dep	letion, RM=R	educed Matrix, CS=Covered or Coate	ed Sand Grair	ns. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicate	rs: (Applic	able to all Li	RRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
Histosol (A1)			Sandy Gleyed Matrix (S4)		1 cm Muck (A9) (LRR I, J)
Histic Epipedon	(A2)		Sandy Redox (S5)		Coast Prairie Redox (A16) (LRR F, G, H)
Black Histic (A3)			Stripped Matrix (S6)		Dark Surface (S7) (LRR G)
Hydrogen Sulfid	e (A4)		Loamy Mucky Mineral (F1)		High Plains Depressions (F16)
Stratified Layers	(A5) (LRR	F)	Loamy Gleyed Matrix (F2)		(LRR H outside of MLRA 72 & 73)
1 cm Muck (A9)			Depleted Matrix (F3)		Reduced Vertic (F18)
Depleted Below		e (A11)	Redox Dark Surface (F6)		Red Parent Material (TF2)
Thick Dark Surfa			Depleted Dark Surface (F7))	Very Shallow Dark Surface (TF12)
Sandy Mucky M		(00) (100 0	Redox Depressions (F8)	.40)	Other (Explain in Remarks)
2.5 cm Mucky P		. ,	,		³ Indicators of hydrophytic vegetation and
5 cm Mucky Pea	it of Peat (S	3) (LKK F)	(MLRA 72 & 73 of LRR	(П)	wetland hydrology must be present, unless disturbed or problematic.
Restrictive Layer (if	nrecent):				unless disturbed or problematic.
_					
Depth (inches):					Hydric Soil Present? Yes No
Remarks:					
HVDDOL OCV					
HYDROLOGY					
Wetland Hydrology					
Primary Indicators (n	ninimum of c	ne required;	check all that apply)		Secondary Indicators (minimum of two required)
Surface Water (A	A1)		Salt Crust (B11)		Surface Soil Cracks (B6)
High Water Tabl	e (A2)		Aquatic Invertebrates (B13)		Sparsely Vegetated Concave Surface (B8)
Saturation (A3)			Hydrogen Sulfide Odor (C1)		Drainage Patterns (B10)
Water Marks (B	1)		Dry-Season Water Table (C2))	Oxidized Rhizospheres on Living Roots (C3)
Sediment Depos	sits (B2)		Oxidized Rhizospheres on Liv	ring Roots (C3	3) (where tilled)
Drift Deposits (B	3)		(where not tilled)		Crayfish Burrows (C8)
Algal Mat or Cru	st (B4)		Presence of Reduced Iron (C4	4)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B	5)		Thin Muck Surface (C7)		Geomorphic Position (D2)
Inundation Visib	le on Aerial	Imagery (B7)	Other (Explain in Remarks)		FAC-Neutral Test (D5)
Water-Stained L	eaves (B9)				Frost-Heave Hummocks (D7) (LRR F)
Field Observations:					
Surface Water Prese	ent? Y	'es No	Depth (inches):		
Water Table Present			Depth (inches):		
Saturation Present?			Depth (inches):		d Hydrology Present? Yes No
(includes capillary fri			Bopan (moneo).	_	
	Jata (etroam	gauge, moni	toring well, aerial photos, previous ins	spections), if a	available:
	Jaia (Sireaii				
	Jaia (Sireair				
	Jaia (Sireair				
Describe Recorded [Jala (Sileali				

Project/Site: US 380		City/Cour	nty: Collin Cou	unty	Date: 03/12/	2020	
Applicant/Owner: TxDOT				State: TX	Sampling	Point: DP-35	
Investigator(s): Mike Keenan and Ethan Eichler		Section,	Township, Ra	nge: N/A			
Landform (hillslope, terrace, etc.): Terrace		Local rel	lief (concave,	convex, none): concave		Slope (%)	: 0-2
Subregion (LRR): J - Southwestern Prairies Cotton and Forage Reg	ion Lat: 33.2	246285		Long: <u>-96.626041</u>		_ Datum: NA	D 83
Soil Map Unit Name: Tinn clay, 0 to 1 percent slopes, frequ	uently flooded			NWI classific	cation: PE	М	
Are climatic / hydrologic conditions on the site typical for the			,				
Are Vegetation, Soil, or Hydrology	significantly	disturbed	d? Are '	"Normal Circumstances"	present? \	res <u>√</u> N	lo
Are Vegetation, Soil, or Hydrology				eeded, explain any answe			
SUMMARY OF FINDINGS – Attach site map				ocations, transects	s, import	ant feature	es, etc.
Hydrophytic Vegetation Present? Yes✓	No						
Hydric Soil Present? Yes ✓			the Sampled		No _		
Wetland Hydrology Present? Yes	No	W	itiiiii a vvetiai	iu: Tes_ <u>v</u>	NO_		
Remarks:							
Located within Emergent Wetland Wa	ter Featu	re 191	1 (portion	outside Study ar	·ea).		
VEGETATION – Use scientific names of pla	nts.						
7 0 (7) (7) (7)	Absolute		ant Indicator	Dominance Test work	sheet:		
Tree Stratum (Plot size: 30'			s? Status	Number of Dominant S			
1 2				That Are OBL, FACW, (excluding FAC-):	OI FAC	2	(A)
3.				Total Number of Domir	nant		
4.				Species Across All Stra		2	(B)
5				Percent of Dominant S	pecies		
	0			That Are OBL, FACW,		100.0%	(A/B)
Sapling/Shrub Stratum (Plot size: 15')				Prevalence Index wo	ksheet:		
1				Total % Cover of:		Multiply by:	_
2						= 25	
4.				FACW species 0			
	0	= Total C	Cover			= 0	
Herb Stratum (Plot size: 5')	20		ODI		x 4		
Eleocharis obtusa Eleocharis eleocharis		yes	OBL OBL	UPL species 0 Column Totals: 25	x 5		— (B)
		yes		Column Totals. 20	(A)		(D)
3 4				Prevalence Index	c = B/A =	1.0	_
5				Hydrophytic Vegetati			
6.				1 - Rapid Test for		c Vegetation	
7				✓ 2 - Dominance Tes			
8				✓ 3 - Prevalence Ind 4 - Morphological		o ¹ (Provide cu	nnorting
9				data in Remark			
10				Problematic Hydro	phytic Veg	etation ¹ (Expla	ain)
Woody Vine Stratum (Plot size: 30')	25.0	= Total C	Cover	¹ Indicators of hydric so	il and wetla	and hydrology	must
1				be present, unless dist	urbed or pr	oblematic.	
2.				Hydrophytic			
75.0	0	= Total C	Cover	Vegetation	s √	No	
% Bare Ground in Herb Stratum 75.0				i-rescrit!	.s	No	
Remarks:							

Soll Sampling Point: DP-35

Profile Des	cription: (Describe	e to the depth	needed to docu	ment the	indicator	or confirr	n the absence of	indicators.)
Depth	Matrix			ox Feature	es .			
(inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks
0-16	10YR5/1	90 7.	5YR 5/8	10	C	M/PL	Silty Clay Loam	
								
	-							
				_				
	-							
1- 0.0							. 21	DI D. III AAAA
	oncentration, D=De Indicators: (Appli					ed Sand G		on: PL=Pore Lining, M=Matrix. Problematic Hydric Soils ³ :
-		Cable to all LR						•
Histosol	pipedon (A2)		Sandy	Redox (S				k (A9) (LRR I, J) irie Redox (A16) (LRR F, G, H)
	istic (A3)			ed Matrix (ace (S7) (LRR G)
	en Sulfide (A4)			Mucky Mi	,			s Depressions (F16)
	d Layers (A5) (LRR	F)		Gleyed M			_	d outside of MLRA 72 & 73)
	uck (A9) (LRR F, G ,	,		ed Matrix	` ,		Reduced	•
	d Below Dark Surfa	ce (A11)		Dark Surf				nt Material (TF2)
	ark Surface (A12)				urface (F7))		low Dark Surface (TF12)
-	Mucky Mineral (S1)	(00) (100 0		Depression	` '			plain in Remarks)
	Mucky Peat or Peat				essions (F			nydrophytic vegetation and
5 CM IVII	ucky Peat or Peat (S	53) (LRR F)	(IVI	LKA /2 &	73 of LRR	(H)		drology must be present, turbed or problematic.
Restrictive	Layer (if present):						uniess dis	turbed of problematic.
Type:	Layor (ii procont):							
· · · ·	ches):		_				Hydric Soil Pre	esent? Yes No
Remarks:							Tiyano con Ti	765 <u> </u>
ixemans.								
HYDROLO	GY							
Wetland Hy	drology Indicators	5 :						
Primary Indi	cators (minimum of	one required; c	heck all that app	oly)			Secondary I	ndicators (minimum of two required)
✓ Surface	Water (A1)		Salt Crus	t (B11)			Surface	e Soil Cracks (B6)
	ater Table (A2)		Aquatic I		es (B13)		/	y Vegetated Concave Surface (B8)
Saturati	on (A3)			n Sulfide C	, ,		Drainag	ge Patterns (B10)
Water N					Table (C2)		Oxidize	d Rhizospheres on Living Roots (C3)
Sedime	nt Deposits (B2)		Oxidized	Rhizosphe	eres on Liv	ing Roots	(C3) (when	re tilled)
Drift De	posits (B3)			not tilled				n Burrows (C8)
Algal Ma	at or Crust (B4)		Presence	of Reduc	ed Iron (C4	1)	Saturat	ion Visible on Aerial Imagery (C9)
Iron De	posits (B5)		Thin Muc	k Surface	(C7)		Geomo	rphic Position (D2)
Inundati	ion Visible on Aerial	Imagery (B7)	Other (Ex	cplain in R	emarks)		✓ FAC-Ne	eutral Test (D5)
Water-S	Stained Leaves (B9)						Frost-H	eave Hummocks (D7) (LRR F)
Field Obser	vations:							
Surface Wat	ter Present?	Yes <u>√</u> No	Depth (i	nches): 0-	20	_		
Water Table			✓ Depth (i			_		_
Saturation P			✓ Depth (i				land Hydrology P	resent? Yes No
(includes ca	pillary fringe)							
Describe Re	ecorded Data (stream	m gauge, monit	oring well, aeria	photos, p	revious ins	pections),	if available:	
Remarks:								

Project/Site: US 380	(City/Cou	unty: Collin Co	ounty	Sampling	Date: 07/22/	2021
				State: TX	Sampling	Point: DP-36	3
Investigator(s): Mike Keenan and Wyatt Wolfenkoehler	:	Section	, Township, R	ange: N/A			
Landform (hillslope, terrace, etc.): Berm		Local re	elief (concave	, convex, none): concav	'e	Slope (%)): <u>0-1</u>
Subregion (LRR): J - Southwestern Prairies Cotton and Forage Region	Lat: 33.2	246061		Long: -96.626171		Datum: NA	AD 83
Soil Map Unit Name: Tinn clay, 0 to 1 percent slopes, freque	ntly flooded			NWI classi	fication: UP	'L	
Are climatic / hydrologic conditions on the site typical for this	time of yea	ar? Yes	s ✓ No	(If no, explain in	Remarks.)		
Are Vegetation, Soil, or Hydrologys				"Normal Circumstances		Yes <u>√</u> N	No
Are Vegetation, Soil, or Hydrologyn				needed, explain any ansv			
SUMMARY OF FINDINGS - Attach site map	showing	samp	ling point	locations, transec	ts, import	tant feature	es, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks: Yes No Yes No No No No No No Yes No No.	√ 		s the Sample within a Wetla		No _	✓_	
Located adjacent to Emergent Wetland		Featu	ıre 191 (p	ortion outside S	tudy area	a).	
VEGETATION – Use scientific names of plan							
<u>Tree Stratum</u> (Plot size: <u>30'</u>) 1 2	% Cover	Specie		Dominance Test wo Number of Dominant That Are OBL, FACW (excluding FAC-):	Species V, or FAC	0	_ (A)
3	·			Total Number of Dom Species Across All Si		1	_ (B)
5				Percent of Dominant That Are OBL, FACW	Species /, or FAC:	0.0%	_ (A/B)
Sapling/Shrub Stratum (Plot size: 15'				Prevalence Index w	orksheet:		
1				Total % Cover of		Multiply by:	
2						1 = 0	
3				FACW species 15			
4	0	- Total	Cover	FAC species 15	x 3	3 = 45	
Herb Stratum (Plot size: 5'		- Total	Cover	FACU species 70	x 4	4 = 280	
1. Schedonorus arundinaceus	65	yes	<u>FACU</u>	UPL species 0	x 5	5 = 0	
2. Phyla lanceolata	15	no	<u>FACW</u>	Column Totals: 100	(A)	355	(B)
3. Paspalum dilatatum	10	no	FAC	Prevalence Inde	ον - R/Δ -	3.6	
4. Iva annua	5	no	<u>FAC</u>	Hydrophytic Vegeta	-		
5. Sorghum halepense		no	<u>FACU</u>	1 - Rapid Test fo			
6				2 - Dominance T			
7				3 - Prevalence Ir			
8				4 - Morphologica	I Adaptation	s ¹ (Provide su	pporting
9						eparate sheet	,
10.		= Total		Problematic Hyd	rophytic Veg	getation' (Expla	ain)
Woody Vine Stratum (Plot size: 30') 1				¹ Indicators of hydric s be present, unless di			must
2				Hydrophytic			
	_	= Total		Vegetation Present?	Yes	No	
% Bare Ground in Herb Stratum 0.0 Remarks:							

Profile Des	cription: (Describe	to the depth	needed to docu	ıment the	indicator	or confir	m the absence o	of indicators.)	
Depth	Matrix			ox Feature					
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	_Loc ²	<u>Texture</u>	Remarks	
0-16	10YR3/1	85 5	YR 4/6	15	C	M/PL	Clay		
							· .		
									
							·		
				_			· .		
-						-	·		
							·		
	concentration, D=Dep					ed Sand G		ation: PL=Pore Lining, I	
-	Indicators: (Applic	cable to all LR						or Problematic Hydric	Soils*:
Histoso	` '		Sandy					uck (A9) (LRR I, J)	
	pipedon (A2)			Redox (S				rairie Redox (A16) (LRI	R F, G, H)
	istic (A3)			ed Matrix (urface (S7) (LRR G)	
	en Sulfide (A4)	- \		Mucky Mi Gleyed M	` ,		- -	ains Depressions (F16)	2 9 72\
	d Layers (A5) (LRR uck (A9) (LRR F, G,			ed Matrix (, ,		•	R H outside of MLRA 7 d Vertic (F18)	2 & 73)
	d Below Dark Surface		✓ Redox					rent Material (TF2)	
	ark Surface (A12)	(, , , ,		ed Dark S	. ,)		allow Dark Surface (TF	12)
	Mucky Mineral (S1)			Depression		,		Explain in Remarks)	,
2.5 cm	Mucky Peat or Peat	(S2) (LRR G , I	H) High P	lains Depr	essions (F	16)	³ Indicators o	f hydrophytic vegetation	n and
5 cm M	ucky Peat or Peat (S	3) (LRR F)	(M	LRA 72 &	73 of LRR	R H)	wetland	hydrology must be pres	sent,
							unless o	disturbed or problemation	
Restrictive	Layer (if present):								
Type:			_					/	
Depth (in	iches):		<u> </u>				Hydric Soil F	Present? Yes <u>*</u>	No
Remarks:							•		
HYDROLC	GY								
Wetland Hy	drology Indicators	:							
Primary Indi	cators (minimum of	one required; o	check all that app	oly)			Secondar	y Indicators (minimum o	of two required)
Surface	Water (A1)		Salt Crus	t (B11)			Surfa	ce Soil Cracks (B6)	
High W	ater Table (A2)		Aquatic I	nvertebrate	es (B13)		Spars	sely Vegetated Concave	Surface (B8)
Saturati	ion (A3)		Hydroger	n Sulfide C	dor (C1)		Drain	age Patterns (B10)	
Water N	/larks (B1)		Dry-Seas	on Water	Table (C2))	Oxidi:	zed Rhizospheres on Li	ving Roots (C3)
Sedime	nt Deposits (B2)		Oxidized	Rhizosphe	eres on Liv	ing Roots	(C3) (wh	nere tilled)	
Drift De	posits (B3)		(where	not tilled)		Crayf	ish Burrows (C8)	
Algal M	at or Crust (B4)		Presence	of Reduc	ed Iron (C	4)	Satur	ation Visible on Aerial I	magery (C9)
Iron De	posits (B5)		Thin Muc	k Surface	(C7)		Geon	norphic Position (D2)	
Inundat	ion Visible on Aerial	Imagery (B7)	Other (Ex	kplain in R	emarks)		FAC-	Neutral Test (D5)	
Water-S	Stained Leaves (B9)						Frost	-Heave Hummocks (D7) (LRR F)
Field Obser	rvations:								
Surface Wa	ter Present?	Yes No	Depth (ii	nches):					
Water Table	Present?	Yes No	Depth (ii	nches):					
Saturation F			✓ Depth (ii				land Hydrology	Present? Yes	_ No <u> </u>
	pillary fringe)			•					
Describe Re	ecorded Data (strean	n gauge, monit	oring well, aerial	photos, p	revious ins	spections)	, ıf available:		
Remarks:									

Project/Site: US 380	c	ity/County	: Collin Cou	ınty	_ Sampling Date:	08/17/2021
Applicant/Owner: TxDOT				State: TX	_ Sampling Point:	DP-37
Investigator(s): Kelsea Hiebert, Kathryn Burton	s	Section, To	wnship, Rar	nge: N/A		
Landform (hillslope, terrace, etc.): Depression	L	ocal relief	(concave, o	convex, none): none	Slc	ope (%): 0
Subregion (LRR): J - Southwestern Prairies Cotton and Forage Region	Lat: 33.25	50438		Long: <u>-96.619785</u>	Datu	um: NAD 83
Soil Map Unit Name: Trinity Clay, 0 to 1 percent slopes, occa	sionally floo	ded		NWI classifi	cation: PEM	~
Are climatic / hydrologic conditions on the site typical for this						
Are Vegetation, Soil, or Hydrology si	gnificantly d	isturbed?	Are "	Normal Circumstances"	present? Yes	✓ No
Are Vegetation, Soil, or Hydrology na	aturally prob	lematic?	(If ne	eded, explain any answe	ers in Remarks.)	
SUMMARY OF FINDINGS - Attach site map s	showing	samplin	g point lo	ocations, transects	s, important fe	eatures, etc.
Hydrophytic Vegetation Present? Yes✓ No.						
Hydric Soil Present? Yes ✓ No.)		e Sampled		/ No	
Wetland Hydrology Present? Yes ✓ No		With	in a Wetlan	id? Yes <u>v</u>	NO	_
Remarks:						
Located within Emergent Wetland Water				stormwater rund	off area betw	een two
culverts. Stormwater runoff area was co	onstructe	ed in 20)13.			
VEGETATION – Use scientific names of plant	s.					
201	Absolute			Dominance Test wor	ksheet:	
	% Cover			Number of Dominant S	•	
1				That Are OBL, FACW, (excluding FAC-):		(A)
2				Total Number of Domi	nant	
4				Species Across All Stra	4	(B)
5.				Percent of Dominant S	Species	
0 11 (0) 1 0 1 (0) 1 (0)	0 =	= Total Co	/er	That Are OBL, FACW,		(A/B)
Sapling/Shrub Stratum (Plot size: 15'				Prevalence Index wo	rksheet:	
1				Total % Cover of:	Multip	ly by:
2				OBL species 95	x 1 = 95	
4.				FACW species 0		
	0 =	= Total Cov	/er		x 3 = 0	
Herb Stratum (Plot size: 5'					x 4 = 0	
1. Persicaria hydropiperoides	85	yes	OBL 🔽		x = 0	
2. Typha latifolia	10	no	OBL 💌	Column Totals: 95	(A) <u>95</u>	
3				Prevalence Index	x = B/A = 1.0	+
4				Hydrophytic Vegetati	on Indicators:	
5 6				✓ 1 - Rapid Test for		tation
7				✓ 2 - Dominance Te		
8.				✓ 3 - Prevalence Ind		
9				4 - Morphological data in Remark	Adaptations' (Prov	vide supporting e sheet)
10				Problematic Hydro	•	*
Weed Was Ottober (Bladeine 30'	95.0 =	= Total Cov	/er	Indicators of hydric so		
Woody Vine Stratum (Plot size: 30') 1				be present, unless dist		
2.				Hydrophytic		
	0 =			Vegetation	✓	
% Bare Ground in Herb Stratum 5.0				Present? Ye	es No _	
Remarks:						

SOIL

Sampling Point: DP-37

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix				x Feature				
(inches)	Color (moist)	%	Color (n	-	%	Type ¹	_Loc ²	<u>Texture</u>	<u>Remarks</u>
0-4	10YR3/1	95	10YR5/8	.	5	C 🔽	M	Loamy Clay	
					-				
	-		-		-				
		_							
		_	-		-				
	-								
¹ Type: C=C	oncentration, D=De	pletion, RM	I=Reduced N	/latrix, CS	S=Covered	d or Coate	d Sand Gr	ains. ² Loc	cation: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Appli	cable to al	l LRRs, unle	ess other	rwise not	ed.)		Indicators	for Problematic Hydric Soils ³ :
Histosol	(A1)			Sandy 0	Gleyed Ma	trix (S4)		1 cm N	Muck (A9) (LRR I, J)
Histic E	pipedon (A2)			Sandy F	Redox (S5)		Coast I	Prairie Redox (A16) (LRR F, G, H)
Black H	istic (A3)			Stripped	d Matrix (S	86)		Dark S	Surface (S7) (LRR G)
	en Sulfide (A4)				Mucky Mir				Plains Depressions (F16)
	d Layers (A5) (LRR				Gleyed Ma	. ,			RR H outside of MLRA 72 & 73)
	uck (A9) (LRR F, G ,		_		d Matrix (ed Vertic (F18)
	d Below Dark Surfa	ce (A11)	_ ✓		Dark Surfa				arent Material (TF2)
	ark Surface (A12)					rface (F7)			Shallow Dark Surface (TF12)
	Mucky Mineral (S1) Mucky Peat or Peat	(C2) (LDD	C II/		Depressio	ns (F8) essions (F	16)		(Explain in Remarks) of hydrophytic vegetation and
	ucky Peat or Peat (S			-		73 of LRR			d hydrology must be present,
5 6111 1010	icky i eat of i eat (c	oo) (LIXIX I)	(IVIL	NA 12 0	J OI LIKIK	11)		disturbed or problematic.
Restrictive	Layer (if present):								adictarion of problematic.
Type: Co									
Depth (in								Hydric Soil	Present? Yes No
	Ciles)							Tiyane 3011	Tresent: resNo
Remarks:									
Sedimer	it accumulatio	on likely	from ru	noff.					
HYDROLO	GY								
_	drology Indicators								
Primary Indi	cators (minimum of	one require			* *			/	ary Indicators (minimum of two required)
	Water (A1)		· · · · · · · · · · · · · · · · · · ·	alt Crust	, ,				face Soil Cracks (B6)
	ater Table (A2)				vertebrate				rsely Vegetated Concave Surface (B8)
Saturati	` ,				Sulfide O				inage Patterns (B10)
	1arks (B1)					able (C2)		·	dized Rhizospheres on Living Roots (C3)
	nt Deposits (B2)		c			res on Livi	ing Roots	. ,	here tilled)
	posits (B3)				not tilled)			,	yfish Burrows (C8)
_	at or Crust (B4)		· · · · · · · · · · · · · · · · · · ·			ed Iron (C4	!)	,	uration Visible on Aerial Imagery (C9)
/	posits (B5)		· · · · · · · · · · · · · · · · · · ·		Surface (omorphic Position (D2)
✓ Inundati	on Visible on Aerial	Imagery (E	37) C	ther (Exp	olain in Re	marks)		✓ FAC	C-Neutral Test (D5)
Water-S	Stained Leaves (B9)							Fros	st-Heave Hummocks (D7) (LRR F)
Field Obser		-							
Surface Wat	er Present?	Yes	No <u>√</u> I	Depth (in	ches):		_		
Water Table	Present?	Yes	No <u>√</u> I	Depth (in	ches):		_		,
Saturation P	resent?	Yes	No <u></u> ✓	Depth (in	ches):		Wetl	and Hydrology	y Present? Yes No
	pillary fringe)								
Describe Re	corded Data (strear	n gauge, m	onitoring we	II, aerial p	photos, pr	evious ins	pections),	if available:	
Remarks:								<u> </u>	
Inundation	on on aerial ir	magery	09/2019	and 1	2/2019	9. Satu	ration o	on aerial ir	magery 01/2017, 09/2017,
	and 11/2020								, ,
		-							

Project/Site: US 380	Ci	ity/County:	Collin Cou	ınty	Sampling Date: 08/17/2021
Applicant/Owner: TxDOT				State: TX	Sampling Point: DP-38
Investigator(s): Kelsea Hiebert, Kathryn Burton	S	ection, To	wnship, Rar	nge: N/A	
Landform (hillslope, terrace, etc.): Hillslope	L	ocal relief	(concave, c	convex, none): convex	Slope (%): 3
Subregion (LRR): _J - Southwestern Prairies Cotton and Forage Region	Lat: 33.25	0608		Long: <u>-96.619460</u>	Datum: NAD 83
Soil Map Unit Name: Trinity Clay - 0 to 1 percent slopes, occ	asionally floo	ded		NWI classific	ation: UPL
Are climatic / hydrologic conditions on the site typical for this					
Are Vegetation, Soil, or Hydrology si					oresent? Yes <u>√</u> No
Are Vegetation, Soil, or Hydrology na	aturally probl	lematic?		eded, explain any answe	
SUMMARY OF FINDINGS – Attach site map s			g point lo	ocations, transects	, important features, etc.
Hydrophytic Vegetation Present? Yes No	· 🗸				
Hydric Soil Present? Yes No	$\sqrt{}$		e Sampled		No √
Wetland Hydrology Present? Yes No	√	With	in a Wetlan	iu! Tes	
Remarks:					
Located on maintained roadway hillslop	e adjace	ent to E	mergen	nt Wetland Water	Feature 194.
VEGETATION – Use scientific names of plant	ts.				
	Absolute			Dominance Test work	sheet:
	% Cover			Number of Dominant Sp	
1				That Are OBL, FACW, (excluding FAC-):	or FAC 0 (A)
2					. ,
3				Total Number of Domin Species Across All Stra	4
5					
	0 =	: Total Cov	/er	Percent of Dominant Sp That Are OBL, FACW, of	
Sapling/Shrub Stratum (Plot size: 15')				Prevalence Index wor	kshoot:
1				Total % Cover of:	
2					x 1 = 0
3				FACW species 0	x 2 = 0
T	0 =	Total Cov	ver		x 3 = 0
Herb Stratum (Plot size: 5'					
1. Cynodon dactylon			FACUE		x = 0
2. Sorghum halepense			FACU	Column Totals: 100	(A) <u>400</u> (B)
3				Prevalence Index	= B/A = 4.0
4. 5.				Hydrophytic Vegetation	n Indicators:
6				1 - Rapid Test for H	
7.				2 - Dominance Tes	
8				3 - Prevalence Inde	
9				data in Remarks	daptations ¹ (Provide supporting s or on a separate sheet)
10					ohytic Vegetation¹ (Explain)
Woody Vine Stratum (Plot size: 30')	100.0 =	Total Cov	ver .	¹ Indicators of hydric soi	l and wetland hydrology must
1				be present, unless distu	
2.				Hydrophytic	
	0 =	Total Cov	ver .	Vegetation	s No
% Bare Ground in Herb Stratum 0.0 Remarks:				Present? Yes	> NU
Remarks.					

	ription: (Describe	to the depth				or confirn	n the absence of	indicators.)	
Depth (inches)	Matrix Color (moist)	%	Color (moist)	x Features %	Type ¹	Loc ²	Texture	Remarks	
0-4	10YR3/2	100	COIOI (IIIOISI)	70	Турс		Texture	Remarks	
4-10	10YR4/3	40							
4-10	10YR3/2	- 10 -					-		
4-10	1011(3/2								
	-								
¹ Type: C=Co	oncentration, D=De	nletion, RM=R	educed Matrix, C	S=Covered	d or Coate	d Sand G	rains ² Locati	on: PL=Pore Lining, M=Matrix.	
	ndicators: (Appli	•						Problematic Hydric Soils ³ :	
Histosol	(A1)		Sandy	Gleyed Ma	trix (S4)		1 cm Muc	k (A9) (LRR I, J)	
Histic Ep	pipedon (A2)		Sandy I	Redox (S5))		Coast Pra	nirie Redox (A16) (LRR F, G, H))
Black Hi	` '			d Matrix (S				ace (S7) (LRR G)	
	n Sulfide (A4)	-\		Mucky Min	, ,			ns Depressions (F16)	
	l Layers (A5) (LRR lck (A9) (LRR F, G ,			Gleyed Ma ed Matrix (F			`	H outside of MLRA 72 & 73) Vertic (F18)	
	d Below Dark Surfa			Dark Surfa				nt Material (TF2)	
	ark Surface (A12)	(* * * * *)		d Dark Su	, ,			low Dark Surface (TF12)	
Sandy M	lucky Mineral (S1)		Redox	Depression	ns (F8)			plain in Remarks)	
	lucky Peat or Peat			ains Depre				hydrophytic vegetation and	
5 cm Mu	cky Peat or Peat (S	83) (LRR F)	(ML	.RA 72 & 7	3 of LRR	H)		ydrology must be present,	
Restrictive I	_ayer (if present):						uniess dis	sturbed or problematic.	
_	ayer (ii present).								
,, <u> </u>	ches):						Hydric Soil Pro	esent? Yes No	✓
Remarks:							,		
									
HYDROLO									
_	drology Indicators								
-	ators (minimum of	one required;		•				Indicators (minimum of two req	<u>uired)</u>
	Water (A1)		Salt Crust					e Soil Cracks (B6)	(= -)
	iter Table (A2)		Aquatic In		. ,			ly Vegetated Concave Surface	(B8)
Saturatio			Hydrogen		, ,			ge Patterns (B10)	·- (CO)
	arks (B1)		Dry-Seaso					ed Rhizospheres on Living Root	.s (C3)
	nt Deposits (B2) posits (B3)		Oxidized f	knizospnei not tilled)	res on Liv	ing Roots	. ,	re tilled) h Burrows (C8)	
	it or Crust (B4)		Presence	,	d Iron (C4	1)		iion Visible on Aerial Imagery (C	39)
_	osits (B5)		Thin Muck		•	• /		orphic Position (D2)	,,,
	on Visible on Aerial	Imagery (B7)	Other (Ex					eutral Test (D5)	
	tained Leaves (B9)	3 , (,			,			leave Hummocks (D7) (LRR F)
Field Observ	vations:								-
Surface Water	er Present?	Yes No	Depth (in	ches):					
Water Table			Depth (in						,
Saturation Pr	resent?	Yes No	o <u>✓</u> Depth (in	ches):		Wetl	and Hydrology P	resent? Yes No	✓
(includes cap	oillary fringe)						if available:		
Describe Red	corded Data (strear	n gauge, moni	toring well, aerial	pnotos, pre	evious ins	pections),	ır avallable:		
D									
Remarks:									

Project/Site: US 380		City/Coun	ty: Collin Co	unty	Sampling Date: 09/08	/2020
Applicant/Owner: TXDOT				State: TX	Sampling Point: DP-39	9
Investigator(s): Mike Keenan, Ethan Eichler		Section, T	Гownship, Ra	inge: N/A		
Landform (hillslope, terrace, etc.): Depression		Local reli	ef (concave,	convex, none): concave	Slope (%	s): <u>0-1</u>
Subregion (LRR): J - Southwestern Prairies Cotton and Forage F				Long: <u>-</u> 96.612942		
Soil Map Unit Name: Frio clay loam, occasionally floode	d			NWI classific	cation: PFO	
Are climatic / hydrologic conditions on the site typical fo						
Are Vegetation, Soil, or Hydrology				"Normal Circumstances"		No
Are Vegetation, Soil, or Hydrology				eeded, explain any answe		
SUMMARY OF FINDINGS – Attach site m						es, etc
,	No				· ·	
	No		the Sampled		<i>'</i>	
	No	Wit	thin a Wetla	nd? Yes <u>√</u>	No	
Remarks:						
Located within Forested Wetland Wa	ater Featur	e 200	(portion	outside Study are	ea).	
			.,	•	,	
VECETATION Lies esigntific names of n	lanta					
VEGETATION – Use scientific names of p		Domino	nt Indicator	Deminence Test werl	rah a atı	
Tree Stratum (Plot size: 30'	Absolute <u>% Cover</u>		nt Indicator Status	Dominance Test work Number of Dominant S		
1. Fraxinus pennsylvanica	40	yes	FAC	That Are OBL, FACW,	or FAC	
2. Celtis laevigata	35	yes	FAC	(excluding FAC-):	6	_ (A)
3. Ulmus americana	5	no	FAC	Total Number of Domir	_	
4				Species Across All Stra	ata: <u>7</u>	_ (B)
5				Percent of Dominant S		(A (D)
Sapling/Shrub Stratum (Plot size: 15')	80	= Total C	over	That Are OBL, FACW,	or FAC: 05.770	_ (A/B)
1. Ulmus crassifolia	20	yes	FAC	Prevalence Index wor	ksheet:	
2. Celtis laevigata	20	yes	FAC	Total % Cover of:		
3. Fraxinus pennsylvanica	10	yes	FAC		x 1 = 10	
4				•	x = 0	
5'	50	= Total C	over		x 3 = 390	
Herb Stratum (Plot size: 5' 1. Leersia oryzoides	10	V00	OBL	FACU species 5 UPL species 0	x = 4 = 20 x = 5 = 0	
Toxicodendron radicans		ves	FACU		(A) $\frac{3}{420}$	—— (B)
3				Column Totals.	(A)	(B)
4				Prevalence Index	·	_ •
5				Hydrophytic Vegetation		
6.				l '	Hydrophytic Vegetation	
7.				✓ 2 - Dominance Tes		
8				✓ 3 - Prevalence Ind		
9					Adaptations ¹ (Provide su s or on a separate shee	
10				Problematic Hydro	phytic Vegetation ¹ (Expl	lain)
Woody Vino Stratum (Plat size: 30'	15.0	= Total C	over	¹ Indicators of hydric so	il and wetland hydrology	, muet
Woody Vine Stratum (Plot size: 30'				be present, unless dist	urbed or problematic.	muət
1 2.		-		Hydrophytic		
	0	= Total C	over	Vegetation	✓	
% Bare Ground in Herb Stratum 85.0				Present? Ye	es No	
Remarks:						_

Profile Desc	cription: (Describ	e to the depth	needed to docu	ment the	indicator	or confirn	n the absence of	indicators.)
Depth	Matrix			ox Feature	1	. 2		
(inches)	Color (moist)	%	Color (moist)	%	Type'	Loc ²	<u>Texture</u>	Remarks
							Clay loam	
	-			_	·			
	-				·			
¹ Type: C=C	oncentration, D=De	epletion, RM=R	educed Matrix, C	S=Covere	d or Coate	ed Sand G	rains. ² Location	on: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Appl	icable to all LF	RRs, unless other	erwise not	ed.)		Indicators for	r Problematic Hydric Soils ³ :
Histosol	(A1)		Sandy	Gleyed Ma	atrix (S4)			k (A9) (LRR I, J)
	pipedon (A2)			Redox (S5				airie Redox (A16) (LRR F, G, H)
	istic (A3)			d Matrix (S				ace (S7) (LRR G)
	en Sulfide (A4)	. =\		Mucky Mir	, ,			ns Depressions (F16)
	d Layers (A5) (LRF uck (A9) (LRR F, G	,		Gleyed Matrix ((LRR I Reduced	H outside of MLRA 72 & 73)
	dck (A9) (LRR F, G d Below Dark Surfa			ed Matrix (Dark Surfa	,			nt Material (TF2)
-	ark Surface (A12)	(7111)		ed Dark Su	` ,)		llow Dark Surface (TF12)
·	Mucky Mineral (S1)			Depressio				plain in Remarks)
	Mucky Peat or Pea		H) High P	lains Depre	essions (F	16)		hydrophytic vegetation and
5 cm Mu	ucky Peat or Peat (S3) (LRR F)	(M I	LRA 72 &	73 of LRR	H)		ydrology must be present,
							unless dis	sturbed or problematic.
_	Layer (if present):							
Type:	-l\						United a Call Day	
	ches):		 				Hydric Soil Pro	esent? Yes No
Remarks:			e:					
Too satu	rated to des	cribe color	profile, but	assum	ed hyd	iric bas	sed on hydro	logy and vegetation.
HYDROLO	GY							
Wetland Hy	drology Indicator	s:						
Primary India	cators (minimum of	one required;	check all that app	ly)			Secondary	Indicators (minimum of two required)
✓ Surface	Water (A1)		Salt Crus	t (B11)			Surface	e Soil Cracks (B6)
High Wa	ater Table (A2)		Aquatic Ir	nvertebrate	es (B13)		Sparse	ly Vegetated Concave Surface (B8)
✓ Saturation	on (A3)		Hydroger	Sulfide O	dor (C1)		Drainag	ge Patterns (B10)
	1arks (B1)		Dry-Seas	on Water 7	Γable (C2)		Oxidize	ed Rhizospheres on Living Roots (C3)
	nt Deposits (B2)		Oxidized	•		ing Roots	. ,	re tilled)
	posits (B3)			not tilled)			,	h Burrows (C8)
_	at or Crust (B4)		Presence			4)		tion Visible on Aerial Imagery (C9)
l —	posits (B5)		Thin Muc					orphic Position (D2)
	on Visible on Aeria	• • • •	Other (Ex	plain in Re	emarks)			eutral Test (D5)
	Stained Leaves (B9))					Frost-H	Heave Hummocks (D7) (LRR F)
Field Obser			5 "	1-	5			
Surface Wat			Depth (ir			-		
Water Table		Yes No	Depth (ir	nches):				<i>.</i> /
Saturation P		Yes <u>✓</u> No	Depth (ir	nches): U		Wetl	land Hydrology P	resent? Yes No
(includes cap Describe Re	corded Data (strea	m gauge, moni	toring well, aerial	photos, pr	evious ins	pections).	if available:	
	(2.2.02	5 5 7	3 7 222 140	/ [/1		
Remarks:								
	n surroundir	ng and with	nin Foreste	d Wetla	nd Wa	ter Fes	ature 200 on	aerial imagery 03/2015.
Jataratic	, i sairearian	ig and will	1 0103101	a vvotia	iia vva	1 00	1.GIO 200 0II	achai inagery 00/2010.

Project/Site: US 380	c	ity/County	: Collin Cou	inty	Sampling Date: 09/08/2020
Applicant/Owner: TxDOT				State: TX	Sampling Point: DP-40
Investigator(s): Mike Keenan and Ethan Eichler	S	Section, To	wnship, Rar	nge: N/A	
Landform (hillslope, terrace, etc.): Depression	L	ocal relief	(concave, c	convex, none): concave	Slope (%): 1-2
Subregion (LRR): J - Southwestern Prairies Cotton and Forage Region	Lat: 33.25	57154		Long: <u>-96.611818</u>	Datum: NAD 83
Soil Map Unit Name: Frio clay loam, occasionally flooded				NWI classifica	ation: PFO
Are climatic / hydrologic conditions on the site typical for this	time of year	r? Yes	✓ No	(If no, explain in Re	emarks.)
Are Vegetation, Soil, or Hydrologysi	ignificantly d	isturbed?	Are "	Normal Circumstances" p	resent? Yes <u>√</u> No
Are Vegetation, Soil, or Hydrologyn	aturally prob	lematic?	(If ne	eded, explain any answer	s in Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing	samplin	g point lo	ocations, transects,	important features, etc.
Hydrophytic Vegetation Present? Yes ✓ No	0	lo th	a Camplad	Area	
Hydric Soil Present? Yes <u>✓</u> No	o		ie Sampled iin a Wetlan	_	No
Wetland Hydrology Present? Yes✓ No	o	With	iii a vvetiaii	100 <u>-</u>	
Remarks:					
Located within Forested Wetland Water Feature 201 (connected to Intermittent Stream Water Feature 204 a					
Connected to intermittent offeath water i cattle 204 a	and referm	iai Oticaii	ii vvater i e	ature 200, the Last ron	C Trinity Parent.
VEGETATION – Use scientific names of plant	ts				
VEGETATION 636 Solentino hames of plant		Dominant	Indicator	Dominance Test works	sheet:
Tree Stratum (Plot size: 30')	% Cover			Number of Dominant Sp	
1. Fraxinus pennsylvanica	70	yes	FAC	That Are OBL, FACW, o	or FAC
2. Celtis laevigata	20	yes	FAC	(excluding FAC-):	<u>4</u> (A)
3. Ulmus crassifolia	5	no	FAC	Total Number of Domina	
4				Species Across All Strat	ta: <u>6</u> (B)
5	·			Percent of Dominant Sp	
Sapling/Shrub Stratum (Plot size: 15'	95 =	= Total Co	ver	That Are OBL, FACW, o	or FAC: <u>66.7%</u> (A/B)
O-lti- Iit-	15	yes	FAC	Prevalence Index work	sheet:
''			170	Total % Cover of:	Multiply by:
2				OBL species 0	x 1 = 0
4				FACW species 0	x 2 = 0
T	15 =	= Total Co	ver		x 3 = 345
Herb Stratum (Plot size: 5'					x 4 = <u>40</u>
1. Toxicodendron radicans	5	yes	FACU	· -	x 5 = 0
2				Column Totals: 125	(A) <u>385</u> (B)
3				Prevalence Index	= B/A = 3.1
4				Hydrophytic Vegetatio	
5				1 - Rapid Test for H	ydrophytic Vegetation
6				✓ 2 - Dominance Test	is >50%
7				3 - Prevalence Inde	x is ≤3.0 ¹
8					daptations ¹ (Provide supporting
9					or on a separate sheet)
10.		= Total Co	ver	Problematic Hydrop	hytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size: 30'		- Total Go			and wetland hydrology must
1. Vitis riparia		yes	FAC	be present, unless distu	rbed or problematic.
2. Smilax bona-nox	5	yes	<u>FACU</u>	Hydrophytic	,
% Bare Ground in Herb Stratum 95.0	10 =	= Total Co	ver	Vegetation Present? Yes	√ No
Remarks:					<u> </u>

Depth	Matrix		Red	ox Feature	es		n the absence of	,
(inches)	Color (moist)	%	Color (moist)	<u> %</u>	Type ¹	Loc ²	Texture	Remarks
0-16	10YR 3/2	85	5YR 5/8	10	С	M	Clay Loam	
			2.5Y 6/4	5	D	PL	Clay Loam	
				_		M/PL		
						141/1 =		
	-							
Type: C=C	Concentration, D=Dep	pletion, RM	=Reduced Matrix, C	S=Covere	d or Coate	d Sand G	rains. ² Locat	ion: PL=Pore Lining, M=Matrix.
	Indicators: (Applic							r Problematic Hydric Soils ³ :
Histoso	l (A1)		Sandy	Gleyed M	atrix (S4)		1 cm Mu	ck (A9) (LRR I, J)
Histic E	pipedon (A2)			Redox (S			Coast Pr	airie Redox (A16) (LRR F, G, H)
	listic (A3)			ed Matrix (,			face (S7) (LRR G)
	en Sulfide (A4)	=,		Mucky Mi	, ,			ns Depressions (F16)
	ed Layers (A5) (LRR			Gleyed Med Matrix			•	H outside of MLRA 72 & 73)
	uck (A9) (LRR F, G, ed Below Dark Surfac			Dark Surf	` '			Vertic (F18) ent Material (TF2)
	Park Surface (A12)	50 (7111)			urface (F7)			allow Dark Surface (TF12)
	Mucky Mineral (S1)			Depression	, ,			xplain in Remarks)
	Mucky Peat or Peat	(S2) (LRR		•	essions (F	16)		hydrophytic vegetation and
5 cm M	ucky Peat or Peat (S	3) (LRR F)	(M	LRA 72 &	73 of LRR	H)	wetland h	nydrology must be present,
							unless di	sturbed or problematic.
Restrictive	Layer (if present):							
Type:								,
								√
	nches):						Hydric Soil P	resent? Yes No
Depth (ir Remarks:	nches):						Hydric Soil P	resent? Yes No
	nches):						Hydric Soil P	resent? Yes <u>√</u> No
	nches):						Hydric Soil P	resent? Yes <u> </u>
Remarks:							Hydric Soil Pr	resent? Yes <u> </u>
Remarks:	OGY	-					Hydric Soil Pr	resent? Yes <u> </u>
Remarks: YDROLO Wetland Hy	OGY /drology Indicators		d: check all that apr	olv)				
YDROLO Wetland Hy	OGY /drology Indicators icators (minimum of d						Secondary	Indicators (minimum of two required
YDROLO Wetland Hy Primary Ind Surface	OGY /drology Indicators icators (minimum of o		Salt Crus	st (B11)	as (R13)		Secondary Surface	Indicators (minimum of two required
YDROLO Wetland Hy Primary Ind Surface High W	OGY /drology Indicators icators (minimum of o water (A1) fater Table (A2)		Salt Crus	it (B11) nvertebrate	, ,		Secondary Surfac	Indicators (minimum of two required be Soil Cracks (B6) ely Vegetated Concave Surface (B8)
YDROLO Wetland Hy Primary Ind Surface High W Saturat	ogy Idrology Indicators Ideators (minimum of		Salt Crus Aquatic Ii Hydroger	st (B11) nvertebrate n Sulfide C	dor (C1)		Secondary Surfac Sparse Draina	Indicators (minimum of two required the Soil Cracks (B6) ally Vegetated Concave Surface (B8) toge Patterns (B10)
YDROLO Wetland Hy Primary Ind Surface High W Saturat Water I	OGY /drology Indicators icators (minimum of of the Water (A1) ater Table (A2) ion (A3) Marks (B1)		Salt Crus Aquatic II Hydroger Dry-Seas	ot (B11) nvertebrate n Sulfide Coon Water	odor (C1) Table (C2)	ing Roots	Secondary Surfac Sparse Draina Oxidiz	Indicators (minimum of two required the Soil Cracks (B6) the Soil Cracks (B8) the Patterns (B10) the Rhizospheres on Living Roots (C
YDROLO Wetland Hy Primary Ind Surface High W Saturat Water N Sedime	ody odrology Indicators icators (minimum of of water (A1) fater Table (A2) ion (A3) Marks (B1) ent Deposits (B2)		Salt Crus Aquatic II Hydroger Dry-Seas Oxidized	ot (B11) nvertebrate n Sulfide C son Water Rhizosphe	odor (C1) Table (C2) eres on Liv	ing Roots	Secondary Surface Sparse Draina Oxidiz (C3)	Indicators (minimum of two required the Soil Cracks (B6) ally Vegetated Concave Surface (B8) age Patterns (B10) and Rhizospheres on Living Roots (Cere tilled)
YDROLO Wetland Hy Primary Ind Surface VHigh W VSaturat Water I Sedime Unift De	ody Indicators (minimum of of ode water (A1) Indicator Table (A2) Indicator (A3)		Salt Crus Aquatic Ii Hydroger Dry-Seas Oxidized (where	nvertebrate n Sulfide C son Water Rhizosphe not tilled	odor (C1) Table (C2) eres on Liv		Secondary Surface Sparse Draina Oxidiz (C3) (whe	Indicators (minimum of two required by Soil Cracks (B6) aly Vegetated Concave Surface (B8) age Patterns (B10) and Rhizospheres on Living Roots (Cere tilled) as Burrows (C8)
YDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M	orgy Indicators Indicators (minimum of		Salt Crus Aquatic li Hydroger Dry-Seas Oxidized (where	ot (B11) Invertebrate In Sulfide Coon Water Rhizosphe Inot tilled Inot Reduc	odor (C1) Table (C2) eres on Liv) ed Iron (C4		Secondary Surface Sparse Draina Oxidiz (C3) (whe	Indicators (minimum of two required be Soil Cracks (B6) ely Vegetated Concave Surface (B8) age Patterns (B10) ed Rhizospheres on Living Roots (Cere tilled) sh Burrows (C8) ation Visible on Aerial Imagery (C9)
YDROLO Wetland Hy Primary Ind Surface V High W V Saturat V Water I Sedime V Algal M Iron De	order of the control	one require	Salt Crus Aquatic II Hydroger Dry-Seas Oxidized (where Presence Thin Muc	ot (B11) Invertebrate In Sulfide Coon Water Rhizosphe In not tilled In of Reduce Rhizose	odor (C1) Table (C2) eres on Liv) ed Iron (C4 (C7)		Secondary Surface Sparse Draina Oxidiz (C3) (whe Satura Geom	Indicators (minimum of two required the Soil Cracks (B6) and Patterns (B10) and Rhizospheres on Living Roots (Capere tilled) and Burrows (C8) attion Visible on Aerial Imagery (C9) orphic Position (D2)
YDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Algal M Iron De Inundat	ydrology Indicators icators (minimum of of et Water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) eposits (B5) ition Visible on Aerial	one require	Salt Crus Aquatic II Hydroger Dry-Seas Oxidized (where Presence Thin Muc	ot (B11) Invertebrate In Sulfide Coon Water Rhizosphe Inot tilled Inot Reduc	odor (C1) Table (C2) eres on Liv) ed Iron (C4 (C7)		Secondary Surface Sparse Draina Oxidiz (C3) (whe Satura Geom FAC-N	Indicators (minimum of two required the Soil Cracks (B6) along Patterns (B10) and Rhizospheres on Living Roots (Capre tilled) ash Burrows (C8) attion Visible on Aerial Imagery (C9) orphic Position (D2) along two required the second street (D5)
YDROLO Wetland Hy Primary Ind Surface High W Saturat Water N Sedime Drift De Algal M Iron De Inundat Water-S	ydrology Indicators icators (minimum of of water (A1) later Table (A2) ion (A3) warks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) posits (B5) ition Visible on Aerial Stained Leaves (B9)	one require	Salt Crus Aquatic II Hydroger Dry-Seas Oxidized (where Presence Thin Muc	ot (B11) Invertebrate In Sulfide Coon Water Rhizosphe In not tilled In of Reduce Rhizose	odor (C1) Table (C2) eres on Liv) ed Iron (C4 (C7)		Secondary Surface Sparse Draina Oxidiz (C3) (whe Satura Geom FAC-N	Indicators (minimum of two required the Soil Cracks (B6) and Patterns (B10) and Rhizospheres on Living Roots (Capere tilled) and Burrows (C8) attion Visible on Aerial Imagery (C9) orphic Position (D2)
YDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Inundar Water-S Field Obse	ydrology Indicators icators (minimum of of the Water (A1) stater Table (A2) sion (A3) warks (B1) ent Deposits (B2) eposits (B3) state or Crust (B4) eposits (B5) stained Leaves (B9) rvations:	one require	Salt Crus Aquatic II Hydroger Dry-Seas Oxidized (where Presence Thin Muc	ot (B11) Invertebrate In Sulfide Coon Water Rhizosphe In not tilled In of Reduce Reverse Surface Replain in R	odor (C1) Table (C2) eres on Liv) ed Iron (C4 (C7)		Secondary Surface Sparse Draina Oxidiz (C3) (whe Satura Geom FAC-N	Indicators (minimum of two required the Soil Cracks (B6) along Patterns (B10) and Rhizospheres on Living Roots (Capre tilled) ash Burrows (C8) attion Visible on Aerial Imagery (C9) orphic Position (D2) along two required the second street (D5)
YDROLO Wetland Hy Primary Ind Surface V High W V Saturat V Water I Sedime V Drift De Inundat Water-S Field Obse	order processors (Marks	one require	Salt Crus Aquatic II Hydroger Dry-Seas Oxidized (where Presence Thin Muc	ot (B11) nvertebrate Sulfide Con Water Rhizosphe not tilled of Reduce k Surface xplain in R	odor (C1) Table (C2) eres on Liv) ed Iron (C4 (C7) emarks)		Secondary Surface Sparse Draina Oxidiz (C3) (whe Satura Geom FAC-N	Indicators (minimum of two required the Soil Cracks (B6) along Patterns (B10) and Rhizospheres on Living Roots (Capre tilled) ash Burrows (C8) attion Visible on Aerial Imagery (C9) torphic Position (D2) along the solution (D5)
YDROLO Wetland Hy Primary Ind Surface High W Saturat Water N Sedime Iron De Inundat Water-S Field Obse Surface Wa	order of the control	one require Imagery (E Yes	Salt Crus Aquatic II Hydroger Dry-Seas Oxidized (where Presence Thin Muc Other (Ex	ot (B11) Invertebrate In Sulfide Coon Water Rhizosphe In not tilled In Grand t	odor (C1) Table (C2) eres on Liv) ed Iron (C4 (C7) emarks)	÷)	Secondary Surface Sparse Draina Oxidiz (C3) (whe Satura Geom FAC-N Frost-I	Indicators (minimum of two required the Soil Cracks (B6) and Patterns (B10) and Patterns (B10) and Patterns (B10) and Patterns (Capre tilled) and Patterns (C8) and Patterns (C8) and Patterns (C8) and Patterns (C9) and Patterns (C9) and Patterns (D5) and Patterns (
YDROLO Wetland Hy Primary Ind Surface High W Saturat Water N Sedime Iron De Inundat Water-S Field Obse Surface Water Table Saturation F	pogy Idrology Indicators	one require Imagery (E Yes	Salt Crus Aquatic II Hydroger Dry-Seas Oxidized (where Presence Thin Muc	ot (B11) Invertebrate In Sulfide Coon Water Rhizosphe In not tilled In Grand t	odor (C1) Table (C2) eres on Liv) ed Iron (C4 (C7) emarks)	÷)	Secondary Surface Sparse Draina Oxidiz (C3) (whe Satura Geom FAC-N Frost-I	Indicators (minimum of two required the Soil Cracks (B6) along Patterns (B10) and Rhizospheres on Living Roots (Core tilled) ash Burrows (C8) attion Visible on Aerial Imagery (C9) torphic Position (D2) along the solution (D5)
YDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Iron De Inundar Water-S Field Obse Surface Wa Water Table Saturation Fincludes ca	order of the control	Imagery (E	Salt Crus Aquatic II Hydroger Dry-Seas Oxidized (where Presence Thin Muc Other (Ex	t (B11) nvertebrate n Sulfide C son Water Rhizosphe not tilled e of Reduc k Surface k plain in R nches):	odor (C1) Table (C2) eres on Liv) ed Iron (C4 (C7) emarks)		Secondary Surface Sparse Draina Oxidiz (C3) (whe Satura Geom FAC-N Frost-I	Indicators (minimum of two required the Soil Cracks (B6) only Vegetated Concave Surface (B8) age Patterns (B10) on the Rhizospheres on Living Roots (Capre tilled) on the Burrows (C8) on the Visible on Aerial Imagery (C9) or phic Position (D2) deutral Test (D5) on the Position (D7) (LRR F)
YDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Iron De Inundar Water-S Field Obse Surface Wa Water Table Saturation Fincludes ca	pogy Idrology Indicators	Imagery (E	Salt Crus Aquatic II Hydroger Dry-Seas Oxidized (where Presence Thin Muc Other (Ex	t (B11) nvertebrate n Sulfide C son Water Rhizosphe not tilled e of Reduc k Surface k plain in R nches):	odor (C1) Table (C2) eres on Liv) ed Iron (C4 (C7) emarks)		Secondary Surface Sparse Draina Oxidiz (C3) (whe Satura Geom FAC-N Frost-I	Indicators (minimum of two required the Soil Cracks (B6) only Vegetated Concave Surface (B8) and Patterns (B10) on the Rhizospheres on Living Roots (Capere tilled) on Aerial Imagery (C9) or phic Position (D2) deutral Test (D5) on Heave Hummocks (D7) (LRR F)
YDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Iron De Inundar Water-S Field Obse Surface Wa Water Table Saturation Fincludes ca	pogy Idrology Indicators	Imagery (E	Salt Crus Aquatic II Hydroger Dry-Seas Oxidized (where Presence Thin Muc Other (Ex	t (B11) nvertebrate n Sulfide C son Water Rhizosphe not tilled e of Reduc k Surface k plain in R nches):	odor (C1) Table (C2) eres on Liv) ed Iron (C4 (C7) emarks)		Secondary Surface Sparse Draina Oxidiz (C3) (whe Satura Geom FAC-N Frost-I	Indicators (minimum of two required the Soil Cracks (B6) only Vegetated Concave Surface (B8) and Patterns (B10) on the Rhizospheres on Living Roots (Capere tilled) on Aerial Imagery (C9) or phic Position (D2) deutral Test (D5) on Heave Hummocks (D7) (LRR F)

Project/Site: US 380	c	City/Count	ty: Collin Cou	unty	Sampling Date: 09/08/2020
Applicant/Owner: TxDOT				State: TX	Sampling Point: DP-41
Investigator(s): Mike Keenan and Ethan Eichler	\$	Section, T	ownship, Rar	nge: N/A	
Landform (hillslope, terrace, etc.): Oxbow Depression	ا	Local relie	ef (concave, o	convex, none): concave	Slope (%): <u>0-2</u>
Subregion (LRR): J - Southwestern Prairies Cotton and Forage Region	Lat: 33.2	57474		Long: <u>-96.611378</u>	Datum: NAD 83
Soil Map Unit Name: Frio clay loam, occasionally flooded				NWI classifica	ation: PFO
Are climatic / hydrologic conditions on the site typical for this	time of yea	r? Yes_	✓ No_	(If no, explain in Re	emarks.)
Are Vegetation, Soil, or Hydrology si					resent? Yes ✓ No
Are Vegetation, Soil, or Hydrology na				eded, explain any answer	s in Remarks.)
SUMMARY OF FINDINGS – Attach site map s				•	ŕ
Hydrophytic Vegetation Present? Yes ✓ No)	la 4	de a Camanda d	A	
Hydric Soil Present? Yes <u>✓</u> No			the Sampled thin a Wetlan	_	No
Wetland Hydrology Present? Yes <u>✓</u> No		Wit	illii a vvetiai	iu: 165 <u>V</u>	_ 10
Remarks:					
Located within Forested Wetland Water Feature 202 hydrologically connected to Intermittent Stream Water					
Try are legically serminents to micromittent outsain trater	r dataro E	o i and i	oronniai ou	cam vvator i cataro 200	, and Last I shit I minty raver.
VEGETATION – Use scientific names of plant	s.				
	Absolute	Dominar	nt Indicator	Dominance Test works	sheet:
	% Cover			Number of Dominant Sp	
1. Fraxinus pennsylvanica		yes		That Are OBL, FACW, o (excluding FAC-):	r FAC 3 (A)
2				,	
3				Total Number of Domina Species Across All Strat	•
4 5					
J	35	= Total Co	over	Percent of Dominant Sp That Are OBL, FACW, o	— — — — — — — — — — — — — — — — — — —
Sapling/Shrub Stratum (Plot size: 15'					
1				Prevalence Index work Total % Cover of:	
2					x 1 = 55
3					x 2 = 20
4	0	T-1-1-0			x 3 = 135
Herb Stratum (Plot size: 5'	0 :	= rotar Co	over		x 4 = 0
1. Persicaria hydropiperoides	35	yes	OBL	UPL species 0	x 5 = 0
2. Ludwigia peploides	20	yes	OBL	Column Totals: 110	(A) <u>210</u> (B)
3. Phyla lanceolata	10	no	FACW	Prevalence Index	- B/Δ - 1.9
4. Cardiospermum halicacabum	5	no	<u>FAC</u>	Hydrophytic Vegetatio	
5. Echinochloa crus-galli		no	FAC	1 - Rapid Test for H	
6				✓ 2 - Dominance Test	
7				√ 3 - Prevalence Inde:	x is ≤3.0 ¹
8					daptations ¹ (Provide supporting
9 10					or on a separate sheet)
10.		= Total Co	over	Problematic Hydrop	hytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size: 30') 1				¹ Indicators of hydric soil be present, unless distu	and wetland hydrology must rbed or problematic.
2.				Hydrophytic	
	0 :			Vegetation	√ No
% Bare Ground in Herb Stratum 25.0				Present? Yes	. No
Remarks:					
Large number of dead trees due to inun	dation.				

Profile Desc	cription: (Describe	e to the dept	h needed to docu	ment the	indicator	or confir	m the absence of ir	ndicators.)
Depth	Matrix			x Feature	-	. ?	- .	ъ .
(inches)	Color (moist)		Color (moist)	%	Type'	Loc ²	<u>Texture</u>	Remarks
0-16	10YR 3/1	90	7.5YR 5/8	10	C	M/PL	Clay Loam	
						PL		
				_	C	M/PL		
					-			
				_				
1Type: C-C	oncentration D-De	nletion RM-	Reduced Matrix, C	S-Covere	d or Coate	d Sand C	trains ² Location	n: PL=Pore Lining, M=Matrix.
			LRRs, unless othe			u Sanu G		Problematic Hydric Soils ³ :
Histosol			Sandy					(A9) (LRR I, J)
	pipedon (A2)			Redox (S				ie Redox (A16) (LRR F, G, H)
Black Hi	istic (A3)		Strippe	d Matrix (S6)		Dark Surface	ce (S7) (LRR G)
	en Sulfide (A4)				neral (F1)		_	Depressions (F16)
	d Layers (A5) (LRR			Gleyed M			,	outside of MLRA 72 & 73)
	uck (A9) (LRR F, G d Below Dark Surfa		✓ Redox	ed Matrix (Dark Surf			Reduced V	enic (F18) t Material (TF2)
	ark Surface (A12)	(7 (7 (7)			urface (F7)			ow Dark Surface (TF12)
	Mucky Mineral (S1)			Depression				lain in Remarks)
	Mucky Peat or Peat	. , ,	· · —		essions (F		•	drophytic vegetation and
5 cm Mu	ucky Peat or Peat (S3) (LRR F)	(ML	.RA 72 &	73 of LRR	H)		drology must be present, urbed or problematic.
Restrictive	Layer (if present):						uniess disti	arbed of problematic.
Type:								
, , <u> </u>	ches):						Hydric Soil Pres	sent? Yes Vo No
Remarks:								
HYDROLO	GY							
	drology Indicators	s:						
_			; check all that app	ly)			Secondary In	dicators (minimum of two required)
✓ Surface			Salt Crust					Soil Cracks (B6)
	ater Table (A2)		Aquatic In		es (B13)			Vegetated Concave Surface (B8)
✓ Saturation	on (A3)		Hydrogen				Drainage	e Patterns (B10)
Water M	larks (B1)		Dry-Seaso	on Water	Table (C2)		Oxidized	Rhizospheres on Living Roots (C3)
	nt Deposits (B2)		Oxidized I	Rhizosphe	eres on Livi	ng Roots	(C3) (where	e tilled)
	posits (B3)			not tilled				Burrows (C8)
_	at or Crust (B4)		Presence		•	.)		on Visible on Aerial Imagery (C9)
-	posits (B5)	/D=	Thin Muck		` '			ohic Position (D2) utral Test (D5)
	on Visible on Aeria Stained Leaves (B9)) Other (Ex	piain in Re	emarks)			atrai Test (D5) ave Hummocks (D7) (LRR F)
Field Obser	· ,	1				1		ave Hullimocks (DT) (ERR F)
Surface Wat		Yes V	No Depth (in	ches). 0-	18			
Water Table			No Depth (in			_		
Saturation P			No Depth (in			- Wet	land Hydrology Pre	esent? Yes No
(includes car	pillary fringe)							
Describe Re	corded Data (strea	m gauge, mo	nitoring well, aerial	photos, p	revious ins	pections)	, if available:	
Remarks:								

Project/Site: US 380	(City/Count	y: Collin Cou	unty	Sampling Date	e: 08/17/2021
Applicant/Owner: TxDOT				State: TX	Sampling Poin	t: DP-42
Investigator(s): Kelsea Hiebert, Kathryn Burton		Section, T	ownship, Ra	nge: N/A		
Landform (hillslope, terrace, etc.): Hillslope		Local relie	ef (concave,	convex, none): convex	<u> </u>	Slope (%): <u>4</u>
Subregion (LRR): J - Southwestern Prairies Cotton and Forage Regio	n Lat: 33.2	56383		Long: <u>-9-96.611543</u>	Da	atum: NAD 83
Soil Map Unit Name: Tinn Clay, 0 to 1 percent slopes, freque	ently flooded			NWI classific	ation: UPL	~
Are climatic / hydrologic conditions on the site typical for this	s time of yea		,			
Are Vegetation, Soil, or Hydrologys				"Normal Circumstances" p		✓ No
Are Vegetation, Soil, or Hydrologyn				eeded, explain any answe		
SUMMARY OF FINDINGS – Attach site map					•	
				<u>-</u>	•	·
Hydrophytic Vegetation Present? Yes N Hydric Soil Present? Yes N			he Sampled		,	
Wetland Hydrology Present? Yes N		wit	hin a Wetlar	nd? Yes	No <u>√</u>	_
Remarks:		l				
Located on maintained roadway hillslop	oe adjac	ent to	Forested	l Wetlands Water	Feature 2	00, Water
Feature 201, and Water Feature 202.	,					•
VEGETATION – Use scientific names of plan	te					
VEGETATION – Ose scientific fiames of plan	Absolute	Dominan	nt Indicator	Dominance Test work	shoot.	
Tree Stratum (Plot size: 30')	% Cover			Number of Dominant S		
1				That Are OBL, FACW,	or FAC	(4)
2				(excluding FAC-):		(A)
3				Total Number of Domin		(B)
4				Species Across All Stra	la. <u>'</u>	(b)
5	0			Percent of Dominant Sp That Are OBL, FACW,	Decies	(A/B)
Sapling/Shrub Stratum (Plot size: 15')	<u> </u>	= Total G	ovei			(A/D)
1				Prevalence Index wor		
2			_	Total % Cover of:		iply by:
3			_	OBL species 0 FACW species 0	x 1 = 0	
4				1	$x = \frac{1}{2}$	
Herb Stratum (Plot size: 5'	0	= Total Co	over			
1. Cynodon dactylon	90	yes	FACU		x 5 = 0	
2. Sorghum halepense		no	FACU	Column Totals: 100		
3					D/A 4.0	
4				Prevalence Index Hydrophytic Vegetation	·	
5			_	1 - Rapid Test for H		retation
6				2 - Dominance Tes	-	jotation
7				3 - Prevalence Inde		
8				4 - Morphological A	Adaptations ¹ (Pr	
9				data in Remarks		•
10	100.0	- Total Co	over	Problematic Hydro	ohytic Vegetatio	n' (Explain)
Woody Vine Stratum (Plot size: 30') 1			3461	¹ Indicators of hydric soi be present, unless distu		
2.				Hydrophytic		
	0	= Total Co	over	Vegetation	s No	\checkmark
% Bare Ground in Herb Stratum 0.0				Present? Ye	» NO	
Remarks:						

Profile Desc	cription: (Descri	be to the depth n	eeded to document the indicator or co	onfirm the absence	of indicators.)
Depth	Matrix Color (moist)		Redox Features Color (moist) % Type ¹ Lo	oc² Texture	Damada
(inches) 0-4	10YR3/2		Color (moist) % Type ¹ Lo	oc rexture	Remarks
4-10					
	10YR4/3	$-\frac{40}{30}$			
4-10	10YR3/2	60			
	-				
	-				
	-				
			duced Matrix, CS=Covered or Coated Sa		cation: PL=Pore Lining, M=Matrix.
-		licable to all LRR	s, unless otherwise noted.)		for Problematic Hydric Soils ³ :
Histosol	` '		Sandy Gleyed Matrix (S4)		Muck (A9) (LRR I, J)
	pipedon (A2)		Sandy Redox (S5)		Prairie Redox (A16) (LRR F, G, H)
	istic (A3) en Sulfide (A4)		Stripped Matrix (S6)Loamy Mucky Mineral (F1)		Surface (S7) (LRR G) Plains Depressions (F16)
	d Layers (A5) (LR	R F)	Loamy Gleyed Matrix (F2)		RR H outside of MLRA 72 & 73)
	uck (A9) (LRR F, (Depleted Matrix (F3)	,	ced Vertic (F18)
	d Below Dark Surf		Redox Dark Surface (F6)	Red P	arent Material (TF2)
	ark Surface (A12)		Depleted Dark Surface (F7)		Shallow Dark Surface (TF12)
	Mucky Mineral (S1		Redox Depressions (F8)		(Explain in Remarks)
		at (S2) (LRR G, H)			of hydrophytic vegetation and
5 CIII IVIC	ucky Peat or Peat	(53) (LRK F)	(MLRA 72 & 73 of LRR H)		d hydrology must be present, s disturbed or problematic.
Restrictive	Layer (if present)):		dilloso	s distance of problematic.
					_
	ches):		•	Hydric Soil	Present? Yes No
Remarks:					
HYDROLO					
-	drology Indicator				
-	•	of one required; ch			ary Indicators (minimum of two required)
	Water (A1)		Salt Crust (B11)		face Soil Cracks (B6)
	ater Table (A2)		Aquatic Invertebrates (B13)		arsely Vegetated Concave Surface (B8)
Saturati			Hydrogen Sulfide Odor (C1)		inage Patterns (B10)
	flarks (B1)		Dry-Season Water Table (C2)		dized Rhizospheres on Living Roots (C3)
	nt Deposits (B2)		Oxidized Rhizospheres on Living F	, , , , , ,	vhere tilled)
	posits (B3)		(where not tilled)		yfish Burrows (C8)
_	at or Crust (B4)		Presence of Reduced Iron (C4)		uration Visible on Aerial Imagery (C9)
	oosits (B5) on Visible on Aeri	ol Imagary (P7)	Thin Muck Surface (C7)		omorphic Position (D2) C-Neutral Test (D5)
	Stained Leaves (B	3 , (,	Other (Explain in Remarks)		st-Heave Hummocks (D7) (LRR F)
Field Obser	•	<i>3)</i>		110	Stricave Hammooks (D7) (EKKT)
Surface Wat		Yes No	✓ Depth (inches):		
Water Table			Depth (inches):		
Saturation P			Depth (inches):	Wotland Hydrolog	y Present? Yes No _ ✓
(includes cap		165 100 _	Deptil (iliches).	Wetland Hydrolog	y resent: res No
		am gauge, monito	ring well, aerial photos, previous inspect	ions), if available:	
Remarks:					

Project/Site: US 380		City/County	: Collin Co	unty	Sampling D)ate: <u>9/22/20</u>	021
Applicant/Owner: TxDOT				State: TX	Sampling F	oint: DP-43	·
Investigator(s): Kelsea Hiebert and Wyatt Wolfenkoehler		Section, To	wnship, Ra	nge: <u>n/a</u>			
Landform (hillslope, terrace, etc.): Floodplain		Local relief	(concave,	convex, none): concave		_ Slope (%)	: 3
Subregion (LRR):	gion Lat: 33.2	257553		Long: <u>-96.607981</u>		Datum: NA	D 27
Soil Map Unit Name: LeB—Lewisville silty clay, 1 to 3 perc	cent slopes			NWI classifi	cation: PFO		
Are climatic / hydrologic conditions on the site typical for t							
Are Vegetation, Soil, or Hydrology				"Normal Circumstances"		es ✓ N	10
Are Vegetation, Soil, or Hydrology				eeded, explain any answe			
SUMMARY OF FINDINGS – Attach site map							es. etc
			3				
Hydrophytic Vegetation Present? Yes Yes		Is th	e Sampled	l Area			
	No	with	in a Wetlaı	nd? Yes <u>√</u>	No		
Remarks:	NO						
Located within Forested Wetland Wat	ar Faatur	م 207 م	Nater E	eature 207 flows	into Inte	rmittant	
Stream Water Feature 206 then to the							
		31 10 11	atti i ti		St i Oik	- I I I I I I I I I I I I I I I I I I I	
VEGETATION – Use scientific names of pla	ints.						
Tree Stratum (Plot size: 30'	Absolute % Cover	Dominant Species?		Dominance Test worl			
1. Salix nigra		yes		Number of Dominant S That Are OBL, FACW,			
2.				(excluding FAC-):	4		(A)
3.				Total Number of Domir	nant		
4.				Species Across All Stra	1		_ (B)
451	50	= Total Cov	/er	Percent of Dominant S	pecies ,	22.22/	
Sapling/Shrub Stratum (Plot size: 15'	10	1400		That Are OBL, FACW,	or FAC: 10	00.0%	_ (A/B)
Salix nigra Acer negundo	10 10	yes yes	FACW FAC	Prevalence Index wo	ksheet:		
			170	Total % Cover of:		Multiply by:	
3 4					x 1 =		_
5					x 2 =		
		= Total Cov	/er		x 3 =		_
Herb Stratum (Plot size: 5'					x 4 =		_
1. Ludwigia linearis		yes	OBL	UPL species 0	x 5 =	= <u>0</u> 155	
2				Column Totals: 75	(A)	100	(B)
3				Prevalence Index	$x = B/A = \frac{2}{A}$.1	+
4				Hydrophytic Vegetati			
5				1 - Rapid Test for	Hydrophytic '	Vegetation	
6			-	✓ 2 - Dominance Test	st is >50%		
8.				✓ 3 - Prevalence Ind	ex is ≤3.0 ¹		
9.				4 - Morphological / data in Remark	Adaptations ¹	(Provide sur	pporting
10.				Problematic Hydro			•
		= Total Cov	/er				
Woody Vine Stratum (Plot size: 30'				¹ Indicators of hydric so be present, unless dist			must
1		-					
2				Hydrophytic Vegetation	,		
% Bare Ground in Herb Stratum 95.0	0	= Total Cov	/er		esl	No	
Remarks:							

Profile Desc	ription: (Describe	e to the de	pth needed to docu	ument the	indicator	or confirr	n the absence	of indicators.)
Depth	Matrix			lox Feature				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-4	10YR 4/2	70	10YR 5/8	10	_ <u>C</u>	M/PL	Clay	
0-4	10YR 4/1	20						
9-8	10YR 4/2	60	10YR 5/8	20	С	M/PL	Clay	
9-8	10YR 4/1	20						
					_		-	
					_			
	-		-		_			
	-							
					_			
			1=Reduced Matrix, C			ed Sand G		ation: PL=Pore Lining, M=Matrix.
Hydric Soil I	Indicators: (Appli	cable to al	I LRRs, unless oth	erwise no	ted.)		Indicators	for Problematic Hydric Soils ³ :
Histosol	(A1)		Sandy					uck (A9) (LRR I, J)
	pipedon (A2)			Redox (S				Prairie Redox (A16) (LRR F, G, H)
Black Hi				ed Matrix (urface (S7) (LRR G)
	n Sulfide (A4)	=,			ineral (F1)		_	ains Depressions (F16)
	d Layers (A5) (LRR			Gleyed Matrix			`	R H outside of MLRA 72 & 73)
	ick (A9) (LRR F, G d Below Dark Surfa			ed Matrix Dark Surf	. ,			ed Vertic (F18) rent Material (TF2)
-	ark Surface (A12)	icc (ATT)			urface (F7)		nallow Dark Surface (TF12)
	fucky Mineral (S1)			Depressi		,		Explain in Remarks)
	Aucky Peat or Peat	(S2) (LRR			ressions (F	16)		of hydrophytic vegetation and
	icky Peat or Peat (. , .			73 of LRF			l hydrology must be present,
							unless	disturbed or problematic.
Restrictive I	_ayer (if present):							
Type:								./
Depth (inc	ches):						Hydric Soil	Present? Yes No
Remarks:							•	
HYDROLO	GY							
	drology Indicators							
_			ed; check all that app	alv)			Soconda	ry Indicators (minimum of two required)
✓ Surface		one require					·	
			Salt Crus		oo (D12)			ace Soil Cracks (B6)
Saturation	iter Table (A2)			nvertebrat	. ,			sely Vegetated Concave Surface (B8) nage Patterns (B10)
	arks (B1)			n Sulfide C	Table (C2)			
					eres on Liv			ized Rhizospheres on Living Roots (C3)
	nt Deposits (B2)		· · · · · · · · · · · · · · · · · · ·			ing Roots	. ,	here tilled) fish Burrows (C8)
-	oosits (B3) at or Crust (B4)		,	not tilled	•	4)		ration Visible on Aerial Imagery (C9)
Algai wa	, ,		Thin Mud		ed Iron (C	+)		morphic Position (D2)
	` '	I Imaganı (I					 -	-Neutral Test (D5)
	on Visible on Aeria tained Leaves (B9)		Other (E.	хріані ін К	emarks)			t-Heave Hummocks (D7) (LRR F)
Field Observ	, ,	'					1103	rrieave ridillillocks (DT) (EKKT)
Surface Water		Vac 🗸	No Depth (i	nches). 1	2-24			
	Procest?	Voc /	No Depth (i	nchas)		-		
Water Table			No Depth (i				land Hudralam	Present? Yes No
Saturation Proceed (includes cape		res_▼	NO Depth (i	ncnes): <u> </u>		vvet	iana nyarology	Present? Yes No
Describe Red	corded Data (strea		nonitoring well, aeria					
Saturation	on visible on	Google	e aerials 11/2	2018, 3	/2018,	12/201	19, 11/202	0
Remarks:								

Project/Site: US 380	(City/County	: Collin Cou	unty	Sampling Date: 9/22/2021		
Applicant/Owner: TxDOT				State: TX	Sampling Point: DP-44		
Investigator(s): Kelsea Hiebert and Wyatt Wolfenkoehler	§	Section, To	wnship, Rai	nge: <u>n/a</u>			
Landform (hillslope, terrace, etc.): hillslope		Local relief	(concave,	convex, none): concave		_ Slope (%):	4
Subregion (LRR):	n Lat: 33.2	57588		Long: <u>-96.608038</u>		Datum: NAD) 27
Soil Map Unit Name: LeB—Lewisville silty clay, 1 to 3 percent	nt slopes			NWI classific	ation: UPL		
Are climatic / hydrologic conditions on the site typical for this	s time of yea	r? Yes	✓ No _	(If no, explain in R	emarks.)		
Are Vegetation, Soil, or Hydrologys	ignificantly o	disturbed?	Are "	'Normal Circumstances" p	resent? Ye	es <u>√</u> No	o
Are Vegetation, Soil, or Hydrologyn	aturally prob	olematic?	(If ne	eded, explain any answer	rs in Remari	ks.)	
SUMMARY OF FINDINGS - Attach site map	showing	samplin	g point le	ocations, transects	, importa	int feature:	s, etc.
Hydrophytic Vegetation Present? Yes N	· 🗸						
Hydric Soil Present? Yes N			e Sampled		No_	./	
Wetland Hydrology Present? Yes N	_	With	in a Wetlan	10? Yes	NO		
Remarks:		•					
Located adjacent to Forested Wetland	Water F	eature	207 and	I US 75.			
VEGETATION – Use scientific names of plan	ts.						
	Absolute	Dominant		Dominance Test work	sheet:		
Tree Stratum (Plot size: 30'	% Cover			Number of Dominant Sp			
1				That Are OBL, FACW, (excluding FAC-):	or FAC 1		(A)
2							()
3				Total Number of Domina Species Across All Stra	2	2	(B)
7.		= Total Co					,
Sapling/Shrub Stratum (Plot size: 15'	-	- 10tai 00		Percent of Dominant Sp That Are OBL, FACW, of		60.0%	(A/B)
1				Prevalence Index worl	rehoot:		
2				Total % Cover of:		Multiply by:	
3						= 0	
4				FACW species 0			_
5	0	= Total Co		FAC species 60	x 3 =	₌ 180	_
Herb Stratum (Plot size: 5'	<u> </u>	= Total Co	/ei	FACU species 25	x 4 =	= 100	_
1. Ambrosia trifida	50	yes	FAC	UPL species 10	x 5 =	= 50	_
2. Cynodon dactylon	25	yes	FACU	Column Totals: 95	(A)	330	_ (B)
3. Rapistrum rugosum	10	no	<u>UPL</u>	Prevalence Index	3	.5	+
4. Panicum dichotomiflorum	10	no	FAC	Hydrophytic Vegetation			
5				1 - Rapid Test for H			
6				2 - Dominance Tes		vogotation	
7				3 - Prevalence Inde			
8				4 - Morphological A		(Provide sup	porting
9				data in Remarks		,	_
10		= Total Co		Problematic Hydrop	hytic Veget	tation¹ (Explai	n)
Woody Vine Stratum (Plot size: 30') 1			/ei	¹ Indicators of hydric soil be present, unless distu	and wetlan	nd hydrology n blematic.	nust
2				Hydrophytic			
	0 :	= Total Co	/er	Vegetation	S	No.	
% Bare Ground in Herb Stratum 5.0				Present? Yes	<u>' </u>	INO	
Remarks:							

	cription: (Describe	to the depth				or confirm	n the absence of i	ndicators.)				
Depth (inches)	ches) Color (moist) %		Color (moist)	x Feature %	Type ¹	Loc ²	Texture	Remarks				
0-12	10YR 2/1	40		-								
0-12	10YR 3/1	40		_			 -					
				-	· ——							
0-12	2.5 YR 7/8	_ 20		-		-						
				-								
				_								
	ioncentration, D=Deplication Indicators: (Applie					ed Sand G		n: PL=Pore Lining, M=Matrix. Problematic Hydric Soils ³ :				
-		cable to all Lr						•				
Histoso	pipedon (A2)		Sandy Sandy					(A9) (LRR I, J) rie Redox (A16) (LRR F, G, H)				
	istic (A3)			d Matrix (S				ce (S7) (LRR G)				
	en Sulfide (A4)			Mucky Mi	,			s Depressions (F16)				
	d Layers (A5) (LRR	F)		Gleyed M			-	outside of MLRA 72 & 73)				
	uck (A9) (LRR F, G ,			ed Matrix (,		Reduced V	` '				
	d Below Dark Surfac	ce (A11)		Dark Surfa	` ,			t Material (TF2)				
	ark Surface (A12)				urface (F7))		ow Dark Surface (TF12)				
	Mucky Mineral (S1) Mucky Peat or Peat	(S2) (I DD G		Depressio	ns (F8) essions (F	(16)		lain in Remarks)				
	ucky Peat or Peat (S	. ,			73 of LRR		³ Indicators of hydrophytic vegetation and wetland hydrology must be present,					
0 0111 1111	uony i our or i our (e) (= 1111)	(,		urbed or problematic.				
Restrictive	Layer (if present):							·				
Type:								,				
Depth (in	iches):						Hydric Soil Pre	sent? Yes No				
Remarks:												
Fill dirt o	n roadway en	nhankmer	nt									
i iii dii c o	iii roddway on	i ibai ilai ilai	10.									
HYDROLO)GY											
	drology Indicators	•										
_	cators (minimum of		rheck all that ann	lv)			Secondary Ir	ndicators (minimum of two required)				
	Water (A1)	one required, t	Salt Crust				-	Soil Cracks (B6)				
	ater Table (A2)		Aquatic Ir		e (B13)			Vegetated Concave Surface (B8)				
Saturati	` '		Hydrogen		, ,			e Patterns (B10)				
	//arks (B1)		Dry-Seas				_	d Rhizospheres on Living Roots (C3)				
	nt Deposits (B2)		Oxidized					e tilled)				
	posits (B3)			not tilled)		3		Burrows (C8)				
	at or Crust (B4)		Presence			4)		on Visible on Aerial Imagery (C9)				
	posits (B5)		Thin Mucl		•	,		phic Position (D2)				
	ion Visible on Aerial	Imagery (B7)	Other (Ex					utral Test (D5)				
	Stained Leaves (B9)				•			eave Hummocks (D7) (LRR F)				
Field Obser												
Surface Wat	ter Present?	Yes No	Depth (in	ches):								
Water Table			Depth (in									
Saturation F			✓ Depth (ir				land Hydrology Pr	esent? Yes No				
(includes ca	pillary fringe)											
Describe Re	ecorded Data (stream	n gauge, moni	toring well, aerial	photos, pr	evious ins	spections),	if available:					
Remarks:												

Project/Site: US 380	C	ity/County	: Collin Cou	ınty	Sampling Date: 08/16/2021			
Applicant/Owner: TxDOT				State: TX	Sampling Point: DP-45			
Investigator(s): Kelsea Hiebert and Wyatt Wolfenkoehler	S	Section, To	wnship, Rar	nge: N/A				
Landform (hillslope, terrace, etc.): Depression	L	ocal relie	f (concave, c	convex, none): concave	Slope (%): 1			
Subregion (LRR): J - Southwestern Prairies Cotton and Forage Region	Lat: 33.26	69597		Long: <u>-96.596228</u>	Datum: NAD 83			
Soil Map Unit Name: Lewisville Silty Clay, 3 to 5 percent slop	es, eroded			NWI classific	cation: PEM			
Are climatic / hydrologic conditions on the site typical for this								
Are Vegetation, Soil, or Hydrology si	gnificantly d	isturbed?	Are "	Normal Circumstances" p	oresent? Yes <u>√</u> No			
Are Vegetation, Soil, or Hydrology na	aturally prob	lematic?	(If ne	eded, explain any answe	rs in Remarks.)			
SUMMARY OF FINDINGS – Attach site map s	showing	samplin	g point lo	ocations, transects	, important features, etc.			
Hydrophytic Vegetation Present? Yes ✓ No.)	Is th	ne Sampled	Area				
Hydric Soil Present? Yes No			in a Wetlan		′ No			
Wetland Hydrology Present? Yes ✓ No Remarks:	<u> </u>							
Located within Emergent Wetland Wate	r Foatur	~ 210	Light pr	ecipitation during	a delineation Area			
was a roadway with stream channel price			Light pi	ecipitation during	j delineation. Area			
		2010.			+			
VEGETATION – Use scientific names of plant			1 12 /					
Tree Stratum (Plot size: 30'	Absolute % Cover		Indicator Status	Dominance Test work Number of Dominant S				
1				That Are OBL, FACW,	or FAC			
2				(excluding FAC-):	<u>3</u> (A)			
3				Total Number of Domin				
4				Species Across All Stra	ata: <u>3</u> (B)			
5				Percent of Dominant S	pecies ±			
0 11 10 10 10 11 11 11	0 =	= Total Co	ver	That Are OBL, FACW,				
Sapling/Shrub Stratum (Plot size: 15'	_			Prevalence Index wor	ksheet			
1. Salix nigra		yes	FACV		Multiply by:			
2					x = 45			
3				· —	x 2 = 10			
4		-			x 3 = 0			
Herb Stratum (Plot size: 5'	5 =	= Total Co	ver		x 4 = 0			
1. Eleocharis palustris	30	yes	OBL 💌	UPL species 0	x 5 = 0			
2. Typha latifolia	15	yes	OBL 💌	Column Totals: 50	(A) <u>55</u> (B)			
3.				December on to do	D/A 11			
4				Prevalence Index				
5				Hydrophytic Vegetation				
6				✓ 1 - Rapid Test for I✓ 2 - Dominance Test				
7				✓ 2 - Dominance Tes				
8					ex is ≤3.0 Adaptations¹ (Provide supporting			
9				data in Remark	s or on a separate sheet)			
10				Problematic Hydro	phytic Vegetation ¹ (Explain)			
Woody Vine Stratum (Plot size: 30')	45.0 =	Total Co	ver	¹ Indicators of hydric soi	il and wetland hydrology must			
1				be present, unless distr				
2.				Hydrophytic				
	0 =			Vegetation	s No			
% Bare Ground in Herb Stratum 55.0				Present? Ye	s No			
Remarks:	_							
Bare ground likely due to hog disturband	ce. Dea	d Salix	nigra sa	aplings within we	tland.			

Profile Desc	ription: (Describe	to the dep	th needed to docum	ent the	indicator of	or confirn	n the absence	of indicators.)
Depth Matrix Redox Features								•
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-4	2.5Y5/2	70	10YR4/6	5	C 🔽	PL 🔻	silty clay	gravel in matrix
0-4	2.5Y8/3	15					silty clay	
0-4	10YR2/1	10					silty clay	
4-6	2.5Y5/2	50	10YR4/6	10	С	M/PL	silty clay	
4-6	2.5Y8/3	15					silty clay	
4-6	10YR2/1	25					silty clay	
6-11	5Y5/1	40					silty clay	no gravel
6-11	2.5Y4/1	60						
		letion, RM=	Reduced Matrix, CS	=Covere	ed or Coate	d Sand G	rains. ² Loc	cation: PL=Pore Lining, M=Matrix.
			LRRs, unless other					for Problematic Hydric Soils ³ :
Histosol	(A1)		Sandy G	leyed M	atrix (S4)		1 cm N	Muck (A9) (LRR I, J)
Histic Ep	ipedon (A2)		Sandy R	edox (S	5)		Coast	Prairie Redox (A16) (LRR F, G, H)
Black His	stic (A3)		Stripped	Matrix (S6)		Dark S	Surface (S7) (LRR G)
	n Sulfide (A4)				ineral (F1)		High F	Plains Depressions (F16)
	Layers (A5) (LRR I			•	latrix (F2)		(LR	RR H outside of MLRA 72 & 73)
	ck (A9) (LRR F, G ,		✓ Depleted		. ,			ed Vertic (F18)
	Below Dark Surfac	e (A11)	Redox D					arent Material (TF2)
	rk Surface (A12)				urface (F7)			Shallow Dark Surface (TF12)
	ucky Mineral (S1)	(CO) (LDD 4	Redox D	•	. ,	1.0)		(Explain in Remarks)
	lucky Peat or Peat (cky Peat or Peat (S				essions (F			of hydrophytic vegetation and dhydrology must be present,
3 cm wa	cky i eat of i eat (S	5) (LIXIX I)	(MILI	\A 12 Q	73 OI LIKIK	11)		s disturbed or problematic.
Restrictive L	ayer (if present):							·
Type:								,
Depth (inc	ches):						Hydric Soil	Present? Yes No
Remarks:							•	
Disturbed	d soils likely fr	rom roa	dway removal	prior	to 2016	i.		
	-		-					
HYDROLO	GY							
Wetland Hyd	Irology Indicators:							
			d; check all that apply	')			Seconda	ary Indicators (minimum of two required)
Surface \	Water (A1)		Salt Crust ((B11)			Suri	face Soil Cracks (B6)
	ter Table (A2)		Aquatic Inv		es (B13)			rsely Vegetated Concave Surface (B8)
Saturation	on (A3)		Hydrogen S					inage Patterns (B10)
	arks (B1)		Dry-Season					dized Rhizospheres on Living Roots (C3)
	t Deposits (B2)		Oxidized R			ng Roots		vhere tilled)
	osits (B3)		(where n					yfish Burrows (C8)
Algal Ma	t or Crust (B4)		Presence of	f Reduc	ed Iron (C4)	✓ Sati	uration Visible on Aerial Imagery (C9)
	osits (B5)		Thin Muck	Surface	(C7)		√ Geo	omorphic Position (D2)
	on Visible on Aerial	Imagery (B					√ FAC	C-Neutral Test (D5)
	ained Leaves (B9)	0 , (, `		,		Fros	st-Heave Hummocks (D7) (LRR F)
Field Observ	ations:							
Surface Water	er Present? Y	'es	No 🖌 Depth (inc	:hes):		_		
Water Table	Present? Y	∕es <u>√</u>	No Depth (inc	hes): 10)	_		,
Saturation Pr (includes cap	illary fringe)		No _ ✓ Depth (inc					y Present? Yes No
			nitoring well, aerial p n aerial image		revious ins	pections),	ıı avallable:	
Remarks:	and mund	auon oi	i aciiai iiiiaye	ıy.				
	n within previ	ioue etr	aam channel r	rior t	2016	Satura	ation within	n wetland in 11/2020.
munuallo	ii widiii piev	เบนอ อเก	Jani Ghannei þ	יוטו ונ	<i>J</i> 2010.	Jatura	auon wiulii	i wedalid iii i i/2020.

Project/Site: US 380	0	City/Count	ty: <u>Collin Coι</u>	unty	Sampling Date: 08/16/2	:021	
Applicant/Owner: TxDOT				State: TX	Sampling Point: DP-46		
Investigator(s): Kelsea Hiebert and Wyatt Wolfenkoehler	5	Section, T	ownship, Ra	nge: N/A			
Landform (hillslope, terrace, etc.): Hillslope		Local relie	ef (concave,	convex, none): concave	Slope (%):	5	
Subregion (LRR): <u>J - Southwestern Prairies Cotton and Forage Region</u>	Lat: 33.2	69501		Long: <u>-96.596272</u>	Datum: NAD	83	
Soil Map Unit Name: Lewisville Silty Clay, 3 to 5 percent slop	es, eroded			NWI classific	ation: UPL	~	
Are climatic / hydrologic conditions on the site typical for this	time of yea	r? Yes_	✓ No_	(If no, explain in R	emarks.)		
Are Vegetation, Soil, or Hydrology si	gnificantly o	disturbed?	? Are "	'Normal Circumstances" p	resent? Yes <u>√</u> No)	
Are Vegetation, Soil, or Hydrology na	aturally prob	olematic?	(If ne	eded, explain any answer	rs in Remarks.)		
SUMMARY OF FINDINGS - Attach site map s	showing	sampli	ng point le	ocations, transects	, important features	s, etc.	
				, in the second	•		
Hydrophytic Vegetation Present? Yes No No No No			the Sampled				
Wetland Hydrology Present? Yes No	_	wit	thin a Wetlar	nd? Yes	No <u> </u>		
Remarks:							
Located adjacent to Emergent Wetland	Water F	eatur	e 219. Ar	rea was a roadwa	y with stream		
channel prior to 04/2016.							
VEGETATION – Use scientific names of plant	's						
VEGETATION OSC SCIONATIO NATICES OF Plants		Dominar	nt Indicator	Dominance Test work	sheet:		
Tree Stratum (Plot size: 30'			? Status	Number of Dominant Sp			
1				That Are OBL, FACW, (excluding FAC-):	or FAC 0	(A)	
2						(八)	
3				Total Number of Domina Species Across All Stra	•	(B)	
4						(5)	
5		= Total C		Percent of Dominant Sp That Are OBL, FACW, of		(A/B)	
Sapling/Shrub Stratum (Plot size: 15'		· otal					
1				Prevalence Index worl			
2				Total % Cover of: OBL species 0			
3					x = 0		
4				· ·	x 3 = 0		
Herb Stratum (Plot size: 5'	0 :	= Total Co	over	FACU species 100		_	
1. Cynodon dactylum	80	yes	FACU		x 5 = 0	_	
2. Sorghum halepense	20	yes	FACU		(A) 400	_ (B)	
3				December of the december of	D/A 4.0		
4				Prevalence Index Hydrophytic Vegetation	·		
5				1 - Rapid Test for H			
6				2 - Dominance Tes			
7				3 - Prevalence Inde			
8					Adaptations ¹ (Provide supp	oortina	
9				data in Remarks	s or on a separate sheet)	3	
10				Problematic Hydrop	ohytic Vegetation ¹ (Explain	n)	
Woody Vine Stratum (Plot size: 30') 1	100.0		over	¹ Indicators of hydric soil be present, unless distu	l and wetland hydrology m irbed or problematic.	ıust	
2.				Hydrophytic			
	0 :	= Total Co	over	Vegetation	✓		
% Bare Ground in Herb Stratum 0.0				Present? Yes	s No		
Remarks:							

SOIL

Sampling Point: DP-46

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix			ox Feature				
(inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks
0-2	10YR3/1	_ 50		_			Clay	
	10YR8/2	50		_			Clay	
2-6	10YR2/2	65	5YR4/6	5	С	M/PL	Clay	
	10YR8/2	30					Clay	
6-12	10YR2/2	95	5YR4/6	5	c 🔻	M/PL	Clay	_
	-							
				_				
				-				
1= 0.0							2, 2, 3, 5,	
			=Reduced Matrix, C LRRs, unless other			d Sand Gr		=Pore Lining, M=Matrix. ematic Hydric Soils ³ :
Histosol		icable to all		Gleyed M			1 cm Muck (A9)	•
	pipedon (A2)			Redox (S				dox (A16) (LRR F, G, H)
Black Hi				d Matrix (Dark Surface (S	
	n Sulfide (A4)				ineral (F1)		High Plains Dep	, ,
	d Layers (A5) (LRF				latrix (F2)		(LRR H outs	ide of MLRA 72 & 73)
	ick (A9) (LRR F, G			ed Matrix			Reduced Vertic	
	d Below Dark Surfa	ace (A11)	✓ Redox		ace (F6) urface (F7)		Red Parent Mate	
	ark Surface (A12) Iucky Mineral (S1)			Depression			Other (Explain in	rk Surface (TF12) Remarks)
-	Aucky Peat or Pea				essions (F	16)	³ Indicators of hydrop	•
	icky Peat or Peat (73 of LRR			y must be present,
							unless disturbed	or problematic.
Restrictive I	_ayer (if present):							
Type:								1
Depth (inc	ches):		<u></u>				Hydric Soil Present?	Yes No
Remarks:								
Disturbed	d by previous	s roadwa	ay removal.					
HYDROLO	GY							
	drology Indicator	s:						
_								
Surface		0110 1090110	ed: check all that app	lv)			Secondary Indicate	ors (minimum of two required)
	Water (711)		d; check all that app Salt Crust	•			-	ors (minimum of two required)
	iter Table (A2)		Salt Crust	(B11)	es (B13)		Surface Soil C	Cracks (B6)
_	iter Table (A2) on (A3)		Salt Crust	(B11) vertebrat			Surface Soil C	Cracks (B6) etated Concave Surface (B8)
Saturation			Salt Crust Aquatic Ir Hydrogen	(B11) vertebrat Sulfide C			Surface Soil C Sparsely Vege Drainage Patt	Cracks (B6) etated Concave Surface (B8)
Saturation Water M	on (A3)		Salt Crusi Aquatic Ir Hydrogen Dry-Seas	(B11) evertebrate Sulfide Con Water	dor (C1)	ng Roots (Surface Soil C Sparsely Vege Drainage Patt Oxidized Rhiz	cracks (B6) etated Concave Surface (B8) erns (B10) ospheres on Living Roots (C3)
Saturation Water M Sedimer	on (A3) arks (B1)		Salt Crust Aquatic Ir Hydrogen Dry-Sease Oxidized	(B11) evertebrate Sulfide Con Water	odor (C1) Table (C2) eres on Livi	ng Roots (Surface Soil C Sparsely Vege Drainage Patt Oxidized Rhiz	Cracks (B6) etated Concave Surface (B8) erns (B10) ospheres on Living Roots (C3) d)
Saturation Water M Sedimer Drift Dep	on (A3) arks (B1) nt Deposits (B2)		Salt Crust Aquatic Ir Hydrogen Dry-Sease Oxidized (where	(B11) evertebrate Sulfide Con Water Rhizosphe not tilled	odor (C1) Table (C2) eres on Livi		Surface Soil C Sparsely Vege Drainage Patt Oxidized Rhiz (C3) (where tille Crayfish Burro	Cracks (B6) etated Concave Surface (B8) erns (B10) ospheres on Living Roots (C3) d)
Saturation Water M Sedimer Drift Dep Algal Ma	on (A3) larks (B1) at Deposits (B2) posits (B3)		Salt Crust Aquatic Ir Hydrogen Dry-Sease Oxidized (where	(B11) Evertebrate Sulfide Con Water Rhizosphe not tilled of Reduce	Odor (C1) Table (C2) eres on Livi) ed Iron (C4		Surface Soil C Sparsely Vege Drainage Patt Oxidized Rhiz (C3) (where tille Crayfish Burro	cracks (B6) etated Concave Surface (B8) erns (B10) ospheres on Living Roots (C3) d) ows (C8) ible on Aerial Imagery (C9)
Saturation Water M Sedimer Drift Dep Algal Ma Iron Dep Inundation	on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria		Salt Crust Aquatic Ir Hydrogen Dry-Sease Oxidized (where Presence Thin Mucl	(B11) Exertebrate Sulfide Con Water Rhizospho not tilled of Reduce Surface	Odor (C1) Table (C2) eres on Livi) ed Iron (C4 (C7)		Surface Soil C Sparsely Vege Drainage Patt Oxidized Rhiz (C3) (where tille Crayfish Burro Saturation Vis Geomorphic F FAC-Neutral	cracks (B6) etated Concave Surface (B8) erns (B10) ospheres on Living Roots (C3) d) ows (C8) ible on Aerial Imagery (C9) Position (D2) Fest (D5)
Saturation Water M Sedimer Drift Dep Algal Ma Iron Dep Inundation Water-S	on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria tained Leaves (B9		Salt Crust Aquatic Ir Hydrogen Dry-Sease Oxidized (where Presence Thin Mucl	(B11) Exertebrate Sulfide Con Water Rhizospho not tilled of Reduce Surface	Odor (C1) Table (C2) eres on Livi) ed Iron (C4 (C7)		Surface Soil C Sparsely Vege Drainage Patt Oxidized Rhiz (C3) (where tille Crayfish Burro Saturation Vis Geomorphic F FAC-Neutral	cracks (B6) etated Concave Surface (B8) erns (B10) ospheres on Living Roots (C3) d) ows (C8) ible on Aerial Imagery (C9) Position (D2)
Saturation Water M Sedimer Drift Dep Algal Ma Iron Dep Inundation Water-S	on (A3) larks (B1) nt Deposits (B2) loosits (B3) at or Crust (B4) loosits (B5) on Visible on Aeria tained Leaves (B9) vations:)	Salt Crusi Aquatic Ir Hydrogen Dry-Seasi Oxidized (where Presence Thin Mucl	e (B11) avertebrate Sulfide Con Water Rhizosphe not tilled of Reduce Surface plain in R	odor (C1) Table (C2) eres on Livi) ed Iron (C4 (C7) emarks))	Surface Soil C Sparsely Vege Drainage Patt Oxidized Rhiz (C3) (where tille Crayfish Burro Saturation Vis Geomorphic F FAC-Neutral	cracks (B6) etated Concave Surface (B8) erns (B10) ospheres on Living Roots (C3) d) ows (C8) ible on Aerial Imagery (C9) Position (D2) Fest (D5)
Saturation Water M Sedimer Drift Dep Algal Ma Iron Dep Inundation Water-S Field Observ Surface Water	on (A3) larks (B1) nt Deposits (B2) loosits (B3) at or Crust (B4) loosits (B5) on Visible on Aeria tained Leaves (B9) vations: er Present?) Yes	Salt Crust Aquatic Ir Hydrogen Dry-Sease Oxidized (where Presence Thin Mucl 37) Other (Ex	e (B11) avertebrate Sulfide Con Water Rhizospho not tilled of Reduce Surface plain in R	odor (C1) Table (C2) eres on Livi) ed Iron (C4 (C7) emarks)	_	Surface Soil C Sparsely Vege Drainage Patt Oxidized Rhiz (C3) (where tille Crayfish Burro Saturation Vis Geomorphic F FAC-Neutral	cracks (B6) etated Concave Surface (B8) erns (B10) ospheres on Living Roots (C3) d) ows (C8) ible on Aerial Imagery (C9) Position (D2) Fest (D5)
Saturation Water M Sedimer Drift Dep Algal Mater Iron Dep Inundation Water-S Field Observ Surface Water Water Table	on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria tained Leaves (B9) vations: er Present? Present?	Yes Yes	Salt Crust Aquatic Ir Hydrogen Dry-Sease Oxidized (where Presence Thin Mucl Other (Ex	e (B11) avertebrate Sulfide Con Water Rhizosphe not tilled of Reduce Surface plain in R	odor (C1) Table (C2) eres on Livi) ed Iron (C4 (C7) emarks)		Surface Soil C Sparsely Vege Drainage Patt Oxidized Rhiz (C3) (where tille Crayfish Burro Saturation Vis Geomorphic F FAC-Neutral T Frost-Heave H	Cracks (B6) etated Concave Surface (B8) erns (B10) ospheres on Living Roots (C3) d) ows (C8) ible on Aerial Imagery (C9) Position (D2) Test (D5) Hummocks (D7) (LRR F)
Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatio Water-S Field Observ Surface Water Saturation Pri	on (A3) larks (B1) nt Deposits (B2) loosits (B3) at or Crust (B4) loosits (B5) on Visible on Aeria tained Leaves (B9) vations: er Present? Present?	Yes Yes	Salt Crust Aquatic Ir Hydrogen Dry-Sease Oxidized (where Presence Thin Mucl 37) Other (Ex	e (B11) avertebrate Sulfide Con Water Rhizosphe not tilled of Reduce Surface plain in R	odor (C1) Table (C2) eres on Livi) ed Iron (C4 (C7) emarks)		Surface Soil C Sparsely Vege Drainage Patt Oxidized Rhiz (C3) (where tille Crayfish Burro Saturation Vis Geomorphic F FAC-Neutral T Frost-Heave H	cracks (B6) etated Concave Surface (B8) erns (B10) ospheres on Living Roots (C3) d) ows (C8) ible on Aerial Imagery (C9) Position (D2) Fest (D5)
Saturation Water M Sedimer Drift Dep Algal Ma Iron Dep Inundation Water-S Field Observ Surface Water Water Table Saturation Pr (includes cap	on (A3) larks (B1) nt Deposits (B2) losits (B3) at or Crust (B4) losits (B5) on Visible on Aeria latined Leaves (B9) vations: er Present? Present? resent?	Yes Yes Yes	Salt Crust Aquatic Ir Hydrogen Dry-Sease Oxidized (where Presence Thin Mucl Other (Ex	e (B11) avertebrate Sulfide Con Water Rhizosphe not tilled of Reduce Surface plain in R aches): aches): aches):	Odor (C1) Table (C2) eres on Livi) ed Iron (C4 (C7) emarks)	— — — Wetla	Surface Soil C Sparsely Vege Drainage Patt Oxidized Rhiz (C3) (where tille Crayfish Burro Saturation Vis Geomorphic F FAC-Neutral T Frost-Heave H	Cracks (B6) etated Concave Surface (B8) erns (B10) ospheres on Living Roots (C3) d) ows (C8) ible on Aerial Imagery (C9) Position (D2) Test (D5) Hummocks (D7) (LRR F)
Saturation Water M Sedimer Drift Dep Algal Ma Iron Dep Inundation Water-S Field Observ Surface Water Water Table Saturation Pr (includes cap	on (A3) larks (B1) nt Deposits (B2) losits (B3) at or Crust (B4) losits (B5) on Visible on Aeria latined Leaves (B9) vations: er Present? Present? resent?	Yes Yes Yes	Salt Crust Aquatic Ir Hydrogen Dry-Sease Oxidized (where Presence Thin Mucl Other (Ex	e (B11) avertebrate Sulfide Con Water Rhizosphe not tilled of Reduce Surface plain in R aches): aches): aches):	Odor (C1) Table (C2) eres on Livi) ed Iron (C4 (C7) emarks)	— — — Wetla	Surface Soil C Sparsely Vege Drainage Patt Oxidized Rhiz (C3) (where tille Crayfish Burro Saturation Vis Geomorphic F FAC-Neutral T Frost-Heave H	Cracks (B6) etated Concave Surface (B8) erns (B10) ospheres on Living Roots (C3) d) ows (C8) ible on Aerial Imagery (C9) Position (D2) Test (D5) Hummocks (D7) (LRR F)
Saturation Water M Sedimer Drift Dep Algal Ma Iron Dep Inundation Water-S Field Observ Surface Water Water Table Saturation Pr (includes cap	on (A3) larks (B1) nt Deposits (B2) losits (B3) at or Crust (B4) losits (B5) on Visible on Aeria latined Leaves (B9) vations: er Present? Present? resent?	Yes Yes Yes	Salt Crust Aquatic Ir Hydrogen Dry-Sease Oxidized (where Presence Thin Mucl Other (Ex	e (B11) avertebrate Sulfide Con Water Rhizosphe not tilled of Reduce Surface plain in R aches): aches): aches):	Odor (C1) Table (C2) eres on Livi) ed Iron (C4 (C7) emarks)	— — — Wetla	Surface Soil C Sparsely Vege Drainage Patt Oxidized Rhiz (C3) (where tille Crayfish Burro Saturation Vis Geomorphic F FAC-Neutral T Frost-Heave H	Cracks (B6) etated Concave Surface (B8) erns (B10) ospheres on Living Roots (C3) d) ows (C8) ible on Aerial Imagery (C9) Position (D2) Test (D5) Hummocks (D7) (LRR F)
Saturation Water M Sedimer Drift Dep Algal Ma Iron Dep Inundation Water-S Field Observ Surface Water Water Table Saturation Profincludes cap Describe Recommendation Remarks:	on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria tained Leaves (B9) vations: er Present? Present? resent? present? corded Data (strea	Yes Yes Yes m gauge, m	Salt Crust Aquatic Ir Hydrogen Dry-Sease Oxidized (where Presence Thin Mucl Other (Ex No ✓ Depth (ir No ✓ Depth (ir No ✓ Depth (ir onitoring well, aerial	ivertebrate Sulfide Con Water Rhizospho of Reduce Surface plain in Ruches):	odor (C1) Table (C2) eres on Livi) ed Iron (C4 (C7) emarks)	Wetla	Surface Soil C Sparsely Vege Drainage Patt Oxidized Rhiz (C3) (where tille Crayfish Burro Saturation Vis Geomorphic F FAC-Neutral T Frost-Heave H	Cracks (B6) etated Concave Surface (B8) erns (B10) ospheres on Living Roots (C3) d) ows (C8) ible on Aerial Imagery (C9) Position (D2) Test (D5) Hummocks (D7) (LRR F)
Saturation Water M Sedimer Drift Dep Algal Ma Iron Dep Inundation Water-S Field Observ Surface Water Water Table Saturation Profincludes cap Describe Recommendation Remarks:	on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria tained Leaves (B9) vations: er Present? Present? resent? present? corded Data (strea	Yes Yes Yes m gauge, m	Salt Crust Aquatic Ir Hydrogen Dry-Sease Oxidized (where Presence Thin Mucl Other (Ex	ivertebrate Sulfide Con Water Rhizospho of Reduce Surface plain in Ruches):	odor (C1) Table (C2) eres on Livi) ed Iron (C4 (C7) emarks)	Wetla	Surface Soil C Sparsely Vege Drainage Patt Oxidized Rhiz (C3) (where tille Crayfish Burro Saturation Vis Geomorphic F FAC-Neutral T Frost-Heave H	Cracks (B6) etated Concave Surface (B8) erns (B10) ospheres on Living Roots (C3) d) ows (C8) ible on Aerial Imagery (C9) Position (D2) Test (D5) Hummocks (D7) (LRR F)

Project/Site: US 380	(City/Coun	nty: Collin Cou	unty	_ Sampling	mpling Date: 08/25/2020	
Applicant/Owner: TXDOT				State: TX	Sampling	Point: DP-47	
Investigator(s): Kelsea Hiebert, Mike Keenan, Ethan Eichle	er	Section, 7	Гownship, Ra	nge: N/A			
Landform (hillslope, terrace, etc.): Depression		Local reli	ef (concave,	convex, none): concave	ı	Slope (%)	: 2
Subregion (LRR): J - Southwestern Prairies Cotton and Forage Reg	ion Lat: 33.2	248843		Long:96.618035		Datum: NA	D 83
Soil Map Unit Name: Trinity clay, 0 to 1 percent slopes, oc	casionally floc	oded		NWI classifi	cation: PEN	1	
Are climatic / hydrologic conditions on the site typical for the							
Are Vegetation, Soil, or Hydrology				"Normal Circumstances"		es ✓ N	lo
Are Vegetation, Soil, or Hydrology				eeded, explain any answe	ers in Rema	rks.)	
SUMMARY OF FINDINGS – Attach site map				ocations, transects	s, importa	ant feature	s, etc.
Hydrophytic Vegetation Present? Yes✓	No	la la	the Sampled	I Area			
Hydric Soil Present? Yes <u>✓</u>	No		thin a Wetlar		/ No_		
Wetland Hydrology Present? Yes <u>✓</u>	No						
Remarks:		004					
Located within Emergent Wetland Wa			•				ature
222. Influenced by roadway removal v	isible on	aeriai	ımagery	between 10/201	3 and 1	1/2014.	
VEGETATION – Use scientific names of pla	nts.						
7 0 (5) (7) (7)	Absolute		nt Indicator	Dominance Test wor	ksheet:		
Tree Stratum (Plot size: 30'			Status EACW	Number of Dominant S			
1. Salix nigra				That Are OBL, FACW, (excluding FAC-):		3	(A)
2.							, ,
3 4				Total Number of Domii Species Across All Stra		4	(B)
5				·	_		. ()
		= Total C	over	Percent of Dominant S That Are OBL, FACW,		75.0%	(A/B)
Sapling/Shrub Stratum (Plot size: 15'							. , ,
1. Fraxinus pennsylvanica	5	yes	<u>FAC</u>	Prevalence Index wo Total % Cover of:		Multiply by	
2					x 1	Multiply by: _ 25	_
3				FACW species 10			_
4						= 60	
Herb Stratum (Plot size: 5')	5	= Total C	over		x 4		
1. Cynodon dactylon	50	yes	FACU	UPL species 10	x 5	= 50	
2. Typha angustifolia	25	yes	OBL	Column Totals: 120	(A)	375	(B)
3. Paspalum notatum	10	no	FAC		D/A '	3 1	+
4. Verbena halei	10	no	UPL	Prevalence Index			_
5. Ambrosia psilostachya	5	no	FACU	Hydrophytic Vegetati			
6. Phyla nodiflora	5	no	FAC	1 - Rapid Test for ✓ 2 - Dominance Te		vegetation	
7				3 - Prevalence Ind			
8				4 - Morphological		1 (Provide sur	norting
9				data in Remark			
10				Problematic Hydro	ophytic Vege	etation ¹ (Expla	ain)
Woody Vine Stratum (Plot size: 30'	105.0			¹ Indicators of hydric so be present, unless dist			must
1				•			
2	0			Hydrophytic Vegetation	1		
% Bare Ground in Herb Stratum5.0					es	No	
Remarks:				.1			
İ							

	cription: (Describe	to the dep				or confir	m the absence of in	ndicators.)
Depth (inches)	(inches) Color (moist) %		Color (moist)	ox Feature %	es Type ¹	Loc ²	- Texture	Remarks
0-16	10YR2/1	30	10YR5/8	10	C Type	PL	Clay	I/GIIIQIN3
0.10	101112/1		2.5Y6/1			-	Oldy	,
			2.5 (0 / 1	60	_ D	M	- 	
						-	. <u> </u>	
					_			
				_	_			
-							- 	_
							<u> </u>	,
 								
	Concentration, D=Dep					ed Sand G		n: PL=Pore Lining, M=Matrix.
-	Indicators: (Applic	able to all						Problematic Hydric Soils ³ :
Histoso	` '		Sandy					(A9) (LRR I, J) rie Redox (A16) (LRR F, G, H)
	pipedon (A2) listic (A3)			Redox (Sad Matrix (ce (S7) (LRR G)
	en Sulfide (A4)				ineral (F1)			s Depressions (F16)
	ed Layers (A5) (LRR I	F)			latrix (F2)			outside of MLRA 72 & 73)
	uck (A9) (LRR F, G, 1	,		ed Matrix			Reduced V	,
	ed Below Dark Surfac		✓ Redox		` '			t Material (TF2)
	ark Surface (A12)				urface (F7)		ow Dark Surface (TF12)
	Mucky Mineral (S1)			Depression				lain in Remarks)
	Mucky Peat or Peat (ydrophytic vegetation and
5 cm M	ucky Peat or Peat (S	3) (LRR F)	(ML	73 of LRF	R H)		drology must be present,	
Postrictivo	Layer (if present):						uniess dist	urbed or problematic.
	Layer (ii present).							
	nches):						Hydric Soil Pre	sent? Yes ✓ No
Remarks:			<u> </u>				Tryunc 3011 Te	Sent: 165 140
Remarks:								
HYDROLO	OGY							
Wetland Hy	/drology Indicators:							
Primary Indi	icators (minimum of c	ne require	d; check all that app	ly)			Secondary Ir	ndicators (minimum of two required)
Surface	Water (A1)		Salt Crust	t (B11)			Surface	Soil Cracks (B6)
✓ High W	ater Table (A2)		Aquatic In	vertebrate	es (B13)		Sparsely	Vegetated Concave Surface (B8)
✓ Saturat	ion (A3)		Hydrogen	Sulfide C	dor (C1)		Drainage	e Patterns (B10)
Water N	Marks (B1)		Dry-Seaso	on Water	Table (C2))	Oxidized	d Rhizospheres on Living Roots (C3)
Sedime	ent Deposits (B2)		Oxidized	Rhizosphe	eres on Liv	ing Roots	s (C3) (where	e tilled)
Drift De	eposits (B3)		(where	not tilled)		Crayfish	Burrows (C8)
Algal M	lat or Crust (B4)		Presence	of Reduc	ed Iron (C	4)	✓ Saturation	on Visible on Aerial Imagery (C9)
Iron De	posits (B5)		Thin Mucl	k Surface	(C7)		✓ Geomor	phic Position (D2)
✓ Inundat	tion Visible on Aerial	Imagery (B	7) Other (Ex	plain in R	emarks)		✓ FAC-Ne	utral Test (D5)
Water-S	Stained Leaves (B9)						Frost-He	eave Hummocks (D7) (LRR F)
Field Obse	rvations:		_					
Surface Wa	ter Present? Y	'es	No 🗹 Depth (in	nches):				
Water Table	e Present? Y	′es <u>√</u>	No Depth (in	nches): 10)			,
Saturation F		′es <u>√</u>	No Depth (in	nches): 2		Wet	tland Hydrology Pr	esent? Yes No
(includes ca	pillary fringe)	0.001.00	nitoring wall ==='-1	nhoto:	rovious	nootic = c\	if available:	
	ecorded Data (stream	ı gauge, mo	onitoring well, aerial	pnotos, p	revious ins	spections)	ı, ır available:	
	Earth aerials							
Remarks:	_			_	_		00/55/5	
			-			_		9/2019, and 11/2020.
Standing	g water located	d within	Emergent W	etland	Water	Featur	re 221.	

Project/Site: US 380		City/Cou	nty: Collin Coւ	unty	_ Sampling D	npling Date: 08/25/2020		
Applicant/Owner: TXDOT				State: TX	_ Sampling P	Sampling Point: DP-48		
Investigator(s): Kelsea Hiebert, Mike Keenan, Ethan Eich	ler	Section,	Township, Ra	nge: N/A				
Landform (hillslope, terrace, etc.): Depression		Local re	elief (concave,	convex, none): concave	;	_ Slope (%):	2	
Subregion (LRR): J - Southwestern Prairies Cotton and Forage Re	egion Lat: 33.2			Long: -96.618182 Datum: NAD 83			D 83	
Soil Map Unit Name: Trinity clay, 0 to 1 percent slopes, o	ccasionally floc	oded		NWI classif	cation: PFO			
Are climatic / hydrologic conditions on the site typical for	this time of yea	ar? Yes	√ No	(If no, explain in	Remarks.)			
Are Vegetation, Soil, or Hydrology				'Normal Circumstances"		es_ <mark>✓</mark> N	o	
Are Vegetation, Soil, or Hydrology	_ naturally pro	blematic	:? (If ne	eded, explain any answ	ers in Remark	s.)		
SUMMARY OF FINDINGS – Attach site ma	p showing	samp	ling point l	ocations, transect	s, importa	nt feature	s, etc.	
Hydrophytic Vegetation Present? Yes✓	No							
Hydric Soil Present? Yes ✓	No		s the Sampled rithin a Wetlar		/ No			
Wetland Hydrology Present? Yes <u>√</u>	No	W	illilli a wellal	iur res	NO			
Remarks:						_		
Located within Forested Wetland Wa			•	•	etland W	ater Fea	ture	
221. Area was a roadway in 1952 tha	it was rem	noved	and rerou	ited by 1972.				
VEGETATION – Use scientific names of pla	ants.							
Tue Otation (Blatein 30'	Absolute		ant Indicator	Dominance Test wor	ksheet:			
Tree Stratum (Plot size: 30'	<u>% Cover</u> 40		s? Status	Number of Dominant S				
Ulmus americana Salix nigra	30	yes	FAC	That Are OBL, FACW, (excluding FAC-):	or FAC		(A)	
3. Ulmus crassifolia	<u>30</u>	yes	FACW				()	
	10	no	FAC	Total Number of Domi Species Across All Str	_		(B)	
4. Celtis laevigata	10	no no	FAC FAC	Opecies Across Air off	ata		`	
5. Fraxinus pennsylvanica				Percent of Dominant S That Are OBL, FACW		00.0%	+ (A/B)	
Sapling/Shrub Stratum (Plot size: 15'	100	= Total	Cover	That Are OBL, FACW	OFFAC.	-	(A/D)	
1. Fraxinus pennsylvanica	20	yes	FAC	Prevalence Index wo	rksheet:			
2. Ulmus americana	20	yes	FAC	Total % Cover of:	N	fultiply by:	_	
3.				· · · · · · · · · · · · · · · · · · ·	x 1 =	·	_	
4.				FACW species 30			_	
	40	= Total (Cover	FAC species 140		420	_	
Herb Stratum (Plot size: 5'				·	x 4 =		_	
1. Sagittaria lancifolia	20	yes	OBL_		x 5 =		_	
2. Cardiospermum halicacabum	20	yes	FAC	Column Totals: 190	(A)	500	(B)	
3. Phyla nodiflora	5	no	FAC	Prevalence Inde	x = B/A = 2.	6	+	
4				Hydrophytic Vegetat				
5				1 - Rapid Test for				
6				✓ 2 - Dominance Te		vogotation		
7				✓ 3 - Prevalence Inc				
8				4 - Morphological		(Provide sun	norting	
9				data in Remark	ks or on a sep	arate sheet)	porting	
10				Problematic Hydro	ophytic Veget	ation¹ (Expla	in)	
Woody Vine Stratum (Plot size: 30')	45.0	= Total (Cover	¹ Indicators of hydric so	nil and wetland	d hydrology r	must	
1				be present, unless dis			iidot	
2.				Hydrophytic				
	0			Vegetation	. ✓ .	Na.		
% Bare Ground in Herb Stratum 55.0				Present? Y	es 1	No		
Remarks:								

Profile Desc	cription: (Describ	e to the dep	th needed to docu	ment the	indicator	or confir	m the absence of i	ndicators.)
Depth	Matrix		Redo	ox Feature	es		-	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	_Loc ²	<u>Texture</u>	Remarks
0-10	10YR3/1	90	10YR5/8	10	С	M	Clay	
10-16	10YR3/1	80	10YR5/8	20	С	М	Clay	
				_	_			
						-		
								
							<u> </u>	
1Type: C-C	oncentration D-D	enletion PM	=Reduced Matrix, C	S-Covere	ad or Coate	nd Sand G	Prains ² Locatio	n: PL=Pore Lining, M=Matrix.
			LRRs, unless othe			u Sanu C		Problematic Hydric Soils ³ :
Histosol		ioubio to un	Sandy					(A9) (LRR I, J)
l —	pipedon (A2)			Redox (S				rie Redox (A16) (LRR F, G, H)
	istic (A3)			d Matrix (ce (S7) (LRR G)
	en Sulfide (A4)			,	ineral (F1)			s Depressions (F16)
Stratified	d Layers (A5) (LRF	R F)	Loamy	Gleyed M	latrix (F2)		(LRR H	outside of MLRA 72 & 73)
	uck (A9) (LRR F, G			ed Matrix	. ,		Reduced V	, ,
· - ·	d Below Dark Surfa	ace (A11)	✓ Redox		, ,			t Material (TF2)
	ark Surface (A12)			ed Dark S Depressio	urface (F7))		ow Dark Surface (TF12)
	Mucky Mineral (S1) Mucky Peat or Pea			•	ressions (F	16)		lain in Remarks) ydrophytic vegetation and
	ucky Peat or Peat (73 of LRR			drology must be present,
	,	(======)	(/		urbed or problematic.
Restrictive	Layer (if present):	:						·
Type:								,
Depth (in	ches):						Hydric Soil Pre	sent? Yes No
Remarks:								
Concrete	helow soil v	within the	e majority of V	Vater F	eature	222		
Control	DCIOW SOIL	within the	on that on the state of the sta	vatori	catarc			
	OV							
HYDROLO								
_	drology Indicator							
	•	f one require	d; check all that app				· · · · · · · · · · · · · · · · · · ·	ndicators (minimum of two required)
	Water (A1)		Salt Crust				/	Soil Cracks (B6)
	ater Table (A2)		Aquatic Ir		, ,			Vegetated Concave Surface (B8)
Saturati			Hydrogen					e Patterns (B10)
	larks (B1)				Table (C2)			d Rhizospheres on Living Roots (C3)
	nt Deposits (B2)		Oxidized			ing Roots	, ,	e tilled)
	posits (B3)		,	not tilled	•	4.		Burrows (C8)
	at or Crust (B4)				ed Iron (C4	4)	,	on Visible on Aerial Imagery (C9)
Iron Der	` '		Thin Mucl					phic Position (D2)
	on Visible on Aeria		7) Other (Ex	plain in R	emarks)			utral Test (D5)
	tained Leaves (B9)					Frost-He	eave Hummocks (D7) (LRR F)
Field Obser		V	No. of Booth Co	-1				
Surface Wat			No ✓ Depth (ir					
Water Table			No Depth (ir					· · · · · · · · · · · · · · · · · · ·
Saturation P (includes cap		Yes	No _ / Depth (ir	nches):		_ Wet	tland Hydrology Pr	esent? Yes V No No
		ım gauge, m	onitoring well, aerial	photos, p	revious ins	pections)	, if available:	
	,	5 5 /	3 ,			,		
Remarks:								

Project/Site: US 380	(City/Cour	nty: Collin Cou	unty	Sampling Date: 08/16/2021
Applicant/Owner: TxDOT				State: TX	Sampling Point: DP-49
Investigator(s): Kelsea Hiebert and Wyatt Wolfenkoehler	·	Section,	Township, Ra	nge: N/A	
Landform (hillslope, terrace, etc.): Hillslope		Local rel	lief (concave,	convex, none): convex	Slope (%): <u>3</u>
Subregion (LRR): J - Southwestern Prairies Cotton and Forage R	tegion Lat: 33.2	248580		Long: <u>-96.617639</u>	Datum: NAD 83
Soil Map Unit Name: Trinity Clay, 0 to 1 percent slopes,	occasionally floo			NWI classifi	cation: UPL
Are climatic / hydrologic conditions on the site typical for	this time of yea	ar? Yes	✓ No_	(If no, explain in F	Remarks.)
Are Vegetation, Soil, or Hydrology	significantly	disturbed	d? Are "	'Normal Circumstances"	present? Yes <u>√</u> No
Are Vegetation, Soil, or Hydrology	naturally pro	blematic	? (If ne	eeded, explain any answe	ers in Remarks.)
SUMMARY OF FINDINGS - Attach site ma	ap showing	sampl	ing point l	ocations, transects	s, important features, etc.
Hydrophytic Vegetation Present? Yes	No ✓	le	the Sampled	I Aroa	
Hydric Soil Present? Yes	No <u>√</u>		ithin a Wetlar		No <u>√</u> _
Wetland Hydrology Present? Yes	No <u>√</u>				··· <u></u>
Remarks:			004		
Located adjacent to Emergent Wetla	nd Water	Featu	re 221 an	d Forested Wetla	and Water Feature
222.					
VEGETATION – Use scientific names of p	lants.				
Tree Stratum (Plot size: 30')	Absolute		ant Indicator	Dominance Test wor	
1			s? Status	Number of Dominant S That Are OBL, FACW,	•
2				(excluding FAC-):	<u>0</u> (A)
3.				Total Number of Domi	nant
4.				Species Across All Str	
5				Percent of Dominant S	pecies
Ocalica (Oharb Otariora (District 15)	0	= Total C	Cover	That Are OBL, FACW,	
Sapling/Shrub Stratum (Plot size: 15'				Prevalence Index wo	rksheet:
1				Total % Cover of:	Multiply by:
2 3				OBL species 0	x 1 = 0
4				FACW species 0	x 2 = 0
	_	= Total C	Cover		x 3 = 0
Herb Stratum (Plot size: 5'					
1. Cynodon dactylon	70	yes	FACUT		x 5 = 0
2. Sorghum halepense		yes	FACU	Column Totals: 100	(A) <u>400</u> (B)
3				Prevalence Index	c = B/A = 4.0
4				Hydrophytic Vegetati	on Indicators:
5				1 - Rapid Test for	Hydrophytic Vegetation
6				2 - Dominance Te	
8				3 - Prevalence Inc	
9				4 - Morphological	Adaptations ¹ (Provide supporting s or on a separate sheet)
10.					ophytic Vegetation ¹ (Explain)
	100.0				
Woody Vine Stratum (Plot size: 30')				'Indicators of hydric so be present, unless dist	oil and wetland hydrology must turbed or problematic.
2				Hydrophytic	
	0			Vegetation	No.
% Bare Ground in Herb Stratum 0.0				Present? Ye	es No
Remarks:					

Profile Desc	cription: (Describe	e to the depth n	eeded to docu	ment the i	indicator	or confirm	n the absence	of indicators.)
Depth	Matrix			x Feature				
(inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks
0-7	10YR3/2	40		_			Clay	Gravel in matrix
0-7	10YR6/6	30						
0-7	10YR8/1	30		_				
	101110/1			_			-	
					. ———			
l								
				_				
					. ———			
1		- 					. 2.	
	ioncentration, D=De Indicators: (Appli					d Sand G		cation: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :
-		Cable to all LKF						•
Histosol	pipedon (A2)			Gleyed Ma Redox (S5				Muck (A9) (LRR I, J) Prairie Redox (A16) (LRR F, G, H)
	istic (A3)			d Matrix (S	•			Surface (S7) (LRR G)
	en Sulfide (A4)			Mucky Mir	,			Plains Depressions (F16)
	d Layers (A5) (LRR	F)		Gleyed Ma				RR H outside of MLRA 72 & 73)
	uck (A9) (LRR F, G	,		ed Matrix (•	red Vertic (F18)
	d Below Dark Surfa			Dark Surfa				arent Material (TF2)
	ark Surface (A12)	, ,			ırface (F7)			Shallow Dark Surface (TF12)
Sandy N	Mucky Mineral (S1)		Redox	Depressio	ns (F8)		Other	(Explain in Remarks)
2.5 cm l	Mucky Peat or Peat	(S2) (LRR G, H)) High Pl	ains Depre	essions (F	16)	³ Indicators	of hydrophytic vegetation and
5 cm Mu	ucky Peat or Peat (S3) (LRR F)	(ML	RA 72 & 7	73 of LRR	H)	wetlan	d hydrology must be present,
							unless	disturbed or problematic.
	Layer (if present):							
Type: Gr			-					1
Depth (in	iches): /		=				Hydric Soil	Present? Yes No*
Remarks:								
HYDROLO)GY							
Wetland Hv	drology Indicators	<u> </u>						
_	cators (minimum of		eck all that appl	lv)			Seconda	ary Indicators (minimum of two required)
	Water (A1)	<u> </u>	Salt Crust				· ·	face Soil Cracks (B6)
	ater Table (A2)		Aquatic In		e (B13)			rsely Vegetated Concave Surface (B8)
Saturati			Hydrogen		. ,			inage Patterns (B10)
	Marks (B1)		Dry-Seaso					dized Rhizospheres on Living Roots (C3)
	, ,		Oxidized F			ina Dooto		where tilled)
	nt Deposits (B2) posits (B3)			not tilled)		ing Roots	. , , , ,	yfish Burrows (C8)
			,	,		1)		
	at or Crust (B4)		Presence		,	+)		uration Visible on Aerial Imagery (C9)
-	posits (B5)	Jan a ma m . (DZ)	Thin Muck				·	omorphic Position (D2)
	ion Visible on Aeria	,	Other (Ex	piain in Re	emarks)			C-Neutral Test (D5)
	Stained Leaves (B9)					1	Fro:	st-Heave Hummocks (D7) (LRR F)
Field Obser		.,	1 5 11 11					
Surface Wat		Yes No _						
Water Table		Yes No _	,					./
Saturation P		Yes No _	✓ Depth (in	iches):		Wetl	land Hydrolog	y Present? Yes No _✓
	pillary fringe) ecorded Data (strea	m daude monito	ring well aerial	nhotos pr	evious ins	nections)	if available.	
2000IDC IVE	Journal Data (Stied	gaago, monto	g won, aonai	priotos, pr	CV1003 1113	pootions),	ii avaliabio.	
Domorles								
Remarks:								

Project/Site: US 380	(City/County	: Collin Cou	ınty	Sampling Date: <u>08/17/20</u>)21
Applicant/Owner: TxDOT				State: TX	Sampling Point: DP-50	
Investigator(s): Kelsea Hiebert, Kathryn Burton	;	Section, To	wnship, Ra	nge: N/A		
Landform (hillslope, terrace, etc.): depression		Local relief	(concave,	convex, none): concave	Slope (%): 1	1-2
Subregion (LRR):		21299		Long: <u>-96.599092</u>	Datum: NAD 8	83
Soil Map Unit Name: Houston Black Clay, 0 to 1 percent slop	es			NWI classifica	ation: PEM	~
Are climatic / hydrologic conditions on the site typical for this	time of yea	ar? Yes	✓ No _	(If no, explain in Re	emarks.)	
Are Vegetation, Soil, or Hydrology si	gnificantly	disturbed?	Are "	Normal Circumstances" p	resent? Yes <u>√</u> No	
Are Vegetation, Soil, or Hydrology na	aturally prol	blematic?	(If ne	eded, explain any answer	rs in Remarks.)	
SUMMARY OF FINDINGS - Attach site map s	showing	samplin	g point le	ocations, transects	, important features,	, etc.
		<u> </u>	<u> </u>		•	
Hydrophytic Vegetation Present? Yes _ ✓ No Hydric Soil Present? Yes _ ✓ No Mo			e Sampled			
Wetland Hydrology Present? Yes ✓ No		with	in a Wetlar	ıd? Yes <u>√</u>	No	
Remarks:		l				
Located within Emergent Wetland Wate	r Featu	re 237.				
VEGETATION – Use scientific names of plant	s					
	Absolute	Dominant	Indicator	Dominance Test works	sheet:	
Tree Stratum (Plot size: 30'	% Cover	Species?	Status	Number of Dominant Sp		
1				That Are OBL, FACW, of (excluding FAC-):		(A)
2				`		(A)
3				Total Number of Domina Species Across All Strat	_	(B)
4				Opecies Across Air Strai	((D)
5		= Total Co		Percent of Dominant Sp That Are OBL, FACW, of		(A/R)
Sapling/Shrub Stratum (Plot size: 15'		- Total Co	vei		((700)
1. Populus deltoides	5	yes	FAC	Prevalence Index work		
2				Total % Cover of:		
3				-	x 1 = 0 x 2 = 0	
4				· ·	$x = \frac{3}{210}$	
Herb Stratum (Plot size: 5'	5	= Total Cov	ver .		x 4 = 60	
Herb Stratum (Plot size: 5') 1 Xanthium strumarium	65	yes 	FAC	UPL species 0	x 5 = 0	
2. Phyla lanceolata	10	no	FACW			(B)
3. Euphorbia nutans	10	no	FACU			#
4. Solanum elaeagnifolium	5	no	FACU	Prevalence Index	· · · · · · · · · · · · · · · · · · ·	<u> </u>
5				Hydrophytic Vegetatio		
6				1 - Rapid Test for H✓ 2 - Dominance Test		
7				3 - Prevalence Inde		
8					adaptations¹ (Provide suppo	ortina
9					s or on a separate sheet)	Jilling
10				Problematic Hydrop	ohytic Vegetation ¹ (Explain))
Woody Vine Stratum (Plot size: 30')	90.0	= Total Cov	/er	¹ Indicators of hydric soil	and wetland hydrology mu	ust
1				be present, unless distu	rbed or problematic.	
2.				Hydrophytic		
	0	= Total Cov	/er	Vegetation	✓ N-	
% Bare Ground in Herb Stratum 10.0				Present? Yes	s No	
Remarks:						

SOIL

Sampling Point: DP-50

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Color (molest) 56. Color (molest) 76. Color (molest) 76. Color (molest) 76. Color	Depth	Matrix				Feature		. 2		
1-6 10YR2/2 90 Clay 10YR3/1 100 Clay 6-12 10YR3/1 100 Clay 6-12 10YR3/1 100 Clay	(inches)	Color (moist)				%	Type'	_Loc ²	Texture	Remarks
Type: C-Concentration, D-Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.				10YR4/	<u> </u>	1	C	М		
6-12 10YR3/1 100 Clay Type: Ca-Concentration, Da-Depletion, RMa-Reduced Matrix, CS=Covered or Coated Sand Grains.	1-6	10YR2/2	90						Clay	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coaled Sand Grains. Tucation: PL=Pore Lining, M=Matrix, Mydric Soil Indicators: (Applicable to all LRs, unless otherwise noted.) Histoso (A1) Histoso (A1) Sandy Gleyed Matrix (S4) Histoso (A3) Stripped Matrix (S6) Coast Prairie Radox (A16) (LRR F, G, H) Dark Surface (A13) Straffied Layers (A5) (LR F) Loarny Mucky Mineral (F1) Loarny Mucky Mineral (F1) High Plains Depressions (F16) (LRR H outside of MLR A7 2 & 73) Reduced Vertic (F18) Reduced Vert		10YR4/2	5	7.5YR5	/8	5	c 🔽	М	Clay	
Hydric Soll Indicators (Applicable to all LRRs, unless otherwise noted.) Histosci (A1) Histosci (A1) Histosci (A2) Black Histo (A3) Black Histo (A3) Black Histo (A3) Hydrogen Sulfide (A4) Loarny Mucky Mineral (F1) Redox Dark Surface (F2) Sandy Mucky Mineral (F1) Sandy Mucky Mineral (F1) Sandy Mucky Mineral (F1) Som Mucky Peat or Peat (S2) (LRR G, H) Depleted Dark Surface (F7) Som Mucky Peat or Peat (S2) (LRR G, H) High Plains Depressions (F16) (MLRA 72 & 73 of LRR H) Method Dark Surface (F1) Depth (inches): Gravel and debris throughout matrix. **Wetand Hydrology Indicators:** Gravel and debris throughout matrix. **Work of the Mineral (F1) Hydric Soil Present? Yes No Method Mineral (F1) No Method Mineral (F1) No Method Mineral (F1) Aguatic Inverterates (B13) Primary Indicators (minimum of two required) Method Mydrology Indicators: Method Mydrology Indicators: Method Mydrology Indicators (minimum of two required) My Surface Notic Tracks (B8) Drainage Patterns (B10) Drainage Patterns (B10) Drainage Patterns (B10) Drainage Patterns (B10)	6-12	10YR3/1	100						Clay	
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Hydric Soll Indicators (Applicable to all LRRs, unless otherwise noted.) Histosci (A1) Histosci (A1) Histosci (A2) Black Histo (A3) Black Histo (A3) Black Histo (A3) Hydrogen Sulfide (A4) Loarny Mucky Mineral (F1) Redox Dark Surface (F2) Sandy Mucky Mineral (F1) Sandy Mucky Mineral (F1) Sandy Mucky Mineral (F1) Som Mucky Peat or Peat (S2) (LRR G, H) Depleted Dark Surface (F7) Som Mucky Peat or Peat (S2) (LRR G, H) High Plains Depressions (F16) (MLRA 72 & 73 of LRR H) Method Dark Surface (F1) Depth (inches): Gravel and debris throughout matrix. **Wetand Hydrology Indicators:** Gravel and debris throughout matrix. **Work of the Mineral (F1) Hydric Soil Present? Yes No Method Mineral (F1) No Method Mineral (F1) No Method Mineral (F1) Aguatic Inverterates (B13) Primary Indicators (minimum of two required) Method Mydrology Indicators: Method Mydrology Indicators: Method Mydrology Indicators (minimum of two required) My Surface Notic Tracks (B8) Drainage Patterns (B10) Drainage Patterns (B10) Drainage Patterns (B10) Drainage Patterns (B10)				-			·			
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Hydric Soll Indicators (Applicable to all LRRs, unless otherwise noted.) Histosci (A1) Histosci (A1) Histosci (A2) Black Histic (A3) Black Histic (A3) Black Histic (A3) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A11) Redox Dark Surface (F7) Sandy Mucky Mineral (A11) Redox Dark Surface (F7) Sandy Mucky Mineral (A11) Redox Depressions (F16) Loamy Mucky Mineral (F1) Som Mucky Peat or Peat (S2) (LRR G, H) Depleted Dark Surface (F7) Som Mucky Peat or Peat (S2) (LRR G, H) Depleted Dark Surface (F7) Som Mucky Peat or Peat (S2) (LRR G, H) High Plains Depressions (F16) (MLRA 72 & 73 of LRR H) Wetland Hydrology Indicators: Gravel and debris throughout matrix. Wetland Hydrology Indicators (minimum of two required) Wetland Hydrology Indicators (minimum of two required) Hydric Soil Present? Yes No Wetland Hydrology Indicators (minimum of two required) Hydric Soil Cracks (B8) Surface Water (A1) Satt Crust (B11) High Water Table (A2) Aguati Inverberates (B13) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Water Marks (B1) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Jordicators (B4) Frost-Heave Hummocks (D7) (LRR F) Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Surface (Barral Hydrology Present? Yes No Depth (inches): Surface Water Present? Yes No Depth (inches): Surface Water Present? Yes No Depth (inches): Surface Water Present? Yes No Depth (inches): Surface Water Present? Yes No Depth (inches): Surface Water Present? Yes No Depth (inches): Surface Water Present? Yes No Depth (inches): Surface Water Present? Yes No Depth (inches): Surface Water Present? Yes No Depth (inches): Surface Water Present? Yes No Depth (inches):										
Histosol (A1) Histosol (A2) Histosol (A2) Histosol (A2) Histos Epipedon (A3) Loamy Mucky Mineral (F1) Loamy Mucky Mineral (F2) Loamy (Epiped Matrix (F2) Loapy (Epiped Matrix (F2) Loapy (Epipedon Matrix (F	¹ Type: C=C	oncentration, D=D	epletion, RN	<i>I</i> =Reduced	Matrix, CS=	=Covere	d or Coate	d Sand Gr	rains. ² Loc	cation: PL=Pore Lining, M=Matrix.
Histic Epipedon (A2) Sandy Redox (S5) Coast Prairie Redox (A16) (LRR F, G, H) Black Histic (A3) Stripped Matrix (S6) Dark Surface (S7) (LRR G) Hydrogen Sulfide (A4) Loarny Mucky Mineral (F1) High Plains Depressions (F16) (LRR H outside of MLRA 72 & 73) Pelpeted Matrix (F2) High Plains Depressions (F16) (LRR H outside of MLRA 72 & 73) Pelpeted Matrix (F2) Redox Dark Surface (F17) Pelpeted Dark Surface (F18) Pelpeted P	Hydric Soil	Indicators: (App	licable to a	II LRRs, un	ess otherv	vise not	ed.)		Indicators	for Problematic Hydric Soils ³ :
Black Histic (A3)		, ,		_	-	-	. ,			, , ,
Hydrogen Sulfide (A4)				_						
Staffiled Layers (A5) (LRR F) 1 cm Muck (A9) (LRR F, G, H) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Pepleted Below Dark Surface (A12) Sandy Mucky (A9) (LRR F, G, H) Depleted Below Dark Surface (A12) Sandy Mucky Mineral (S1) 2.5 cm Mucky Mineral (S1) 5 cm Mucky Peat or Peat (S2) (LRR G, H) 5 cm Mucky Peat or Peat (S2) (LRR G, H) Depth (MLRA 72 & 73 of LRR H) Some Mucky Peat or Peat (S2) (LRR G, H) Depth (Inches): Depth (Inches): Depth (Inches): Depth (Inches): Depth (Inches): Surface Water (A12) Aquatic Invertebrates (B13) Water Marks (B1) Derivation (A3) Water Marks (B1) Derivation (B2) Sediment Deposits (B2) Derivation (B3) Adjal Mat or Crust (B4) Derivation (B4) Deriv				_						
			R F)							. , ,
Depleted Below Dark Surface (A11)										
						,				` ,
2.5 cm Mucky Peat or Peat (S2) (LRR G, H) High Plains Depressions (F16)	Thick Da	ark Surface (A12)			Depleted	Dark Su	urface (F7)		Very S	shallow Dark Surface (TF12)
5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if present): Type:				_✓	_ Redox D	epressio	ns (F8)			` '
Restrictive Layer (if present): Type: Depth (inches): Depth (inches): Metland Hydrology Indicators: Primary Indicators (minimum of one required: check all that apply) Secondary Indicators (minimum of two required) Surface Water (A1) Sulface Water (A1) Sulface Water (A2) Aquatic Invertebrates (B13) Water Marks (B1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living Roots (C3) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Algal Mat or Crust (B4) Iron Deposits (B3) Were not tilled) Iron Deposits (B3) Water Sulface (B7) Thin Muck Surface (C7) Water Sulface (B8) Thin Muck Surface (C7) Water Sulface (C7) Water Sulface (C7) Sediment Deposits (B3) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F) Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): No No No No No No No No No N					_					
Restrictive Layer (if present): Type:	5 cm Mu	ucky Peat or Peat	(S3) (LRR F	-)	(MLR	A 72 &	73 of LRR	H)		
Type:	Restrictive	l aver (if present)							uniess	disturbed of problematic.
Pepth (inches):		Layer (ii present)	•							
Remarks: Gravel and debris throughout matrix. HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Salt Crust (B11) High Water Table (A2) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Water Marks (B1) Driy-Season Water Table (C2) Oxidized Rhizospheres on Living Roots (C3) Sediment Deposits (B2) Drift Deposits (B3) Mere not tilled) Iron Deposits (B5) Iron Deposits (B5) Thin Muck Surface (C7) Water-Stained Leaves (B9) Teld Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Remarks: Saturation on aerial imagery 03/1995, 12/2009, 03/2015, 12/2015, 04/2016, 01/2017, 11/2018,		rhes).							Hydric Soil	Present? Yes No
## Aguation Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Algal Mat or Crust (B4) Iron Deposits (B5) Algal Mat or Crust (B4) Iron Deposits (B5) Algal Mat or Crust (B6) Iron Deposits (B5) Algal Mat or Crust (B7) Algal Mat or Crust (B8) Algal Mat or Crust (B9) Iron Deposits (B5) Algal Mat or Crust (B4) Alg									Tiyano con	1100m: 100 NO
## A PUROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required: check all that apply) Secondary Indicators (minimum of two required)		والم وأسوام أمام		4						
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (minimum of two required) Surface Water (A1) Salt Crust (B11) ✓ Surface Soil Cracks (B6) High Water Table (A2) Aquatic Invertebrates (B13) Sparsely Vegetated Concave Surface (B8) Saturation (A3) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Water Marks (B1) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) (where titlled) Drift Deposits (B3) (where not tilled) Crayfish Burrows (C8) Algal Mat or Crust (B4) Presence of Reduced Iron (C4)	Gravei a	na debris in	rougnou	ı maırıx.						
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (minimum of two required) Surface Water (A1) Salt Crust (B11) ✓ Surface Soil Cracks (B6) High Water Table (A2) Aquatic Invertebrates (B13) Sparsely Vegetated Concave Surface (B8) Saturation (A3) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Water Marks (B1) Drainage Patterns (B10) Drainage Patterns (B10) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Drift Deposits (B3) (where not tilled) Crayfish Burrows (C8) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Saturation Visible on Aerial Imagery (C9) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) FAC-Neutral Test (D5) Water-Stained Leaves (B9) FAC-Neutral Test (D5) FAC-Neutral Test (D5) Water Table Present? Yes No Depth (inches):										
Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (minimum of two required) Surface Water (A1) Salt Crust (B11) Aquatic Invertebrates (B13) Saturation (A3) Hydrogen Sulfide Odor (C1) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inudation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Secondary Indicators (minimum of two required) ✓ Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) WaterSation Remarks (B10) Drainage Patterns (B10) Weter Relation (C2) Drainage Patterns (B10) Drainage Patterns (B10) Weter Relation Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Drainage Patterns (B10	HYDROLO	GY								
Surface Water (A1) Salt Crust (B11) Surface Soil Cracks (B6) High Water Table (A2) Aquatic Invertebrates (B13) Sparsely Vegetated Concave Surface (B8) Saturation (A3) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Water Marks (B1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living Roots (C3) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Drift Deposits (B3) (where not tilled) Crayfish Burrows (C8) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Saturation Visible on Aerial Imagery (C9) Inon Deposits (B5) Thin Muck Surface (C7) Geomorphic Position (D2) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) FAC-Neutral Test (D5) Water-Stained Leaves (B9) Frost-Heave Hummocks (D7) (LRR F) Field Observations: Surface Water Present? Yes No ✓ Depth (inches): Water Table Present? Yes No ✓ Depth (inches): Saturation Present? Y	Wetland Hy	drology Indicator	rs:							
Surface Water (A1) Salt Crust (B11) Surface Soil Cracks (B6) High Water Table (A2) Aquatic Invertebrates (B13) Sparsely Vegetated Concave Surface (B8) Saturation (A3) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Water Marks (B1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living Roots (C3) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Drift Deposits (B3) (where not tilled) Crayfish Burrows (C8) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Saturation Visible on Aerial Imagery (C9) Inon Deposits (B5) Thin Muck Surface (C7) Geomorphic Position (D2) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) FAC-Neutral Test (D5) Water-Stained Leaves (B9) Frost-Heave Hummocks (D7) (LRR F) Field Observations: Surface Water Present? Yes No ✓ Depth (inches): Water Table Present? Yes No ✓ Depth (inches): Saturation Present? Y	_			ed; check al	that apply)			Seconda	ary Indicators (minimum of two required)
High Water Table (A2)	Surface	Water (A1)		;	Salt Crust (I	B11)			/	
		` '		· · · · · · · · · · · · · · · · · · ·	,	,	es (B13)			` ,
Water Marks (B1)	_									
Drift Deposits (B3)	Water M	Marks (B1)			Dry-Season	Water 7	Table (C2)			
Algal Mat or Crust (B4)	Sedime	nt Deposits (B2)		(Oxidized Rh	nizosphe	res on Livi	ng Roots	(C3) (w	here tilled)
Iron Deposits (B5) Thin Muck Surface (C7) Geomorphic Position (D2) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F) Frost-Heave Hummocks (D7) (LRR F) Frost-Heave Hummocks (D7) (LRR F)	Drift De	posits (B3)			(where no	ot tilled)			Cray	yfish Burrows (C8)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) FAC-Neutral Test (D5) Water-Stained Leaves (B9) Frost-Heave Hummocks (D7) (LRR F) Field Observations: Surface Water Present? Yes No _ ✓ Depth (inches): Water Table Present? Yes No _ ✓ Depth (inches): Wetland Hydrology Present? Yes No _ ✓ Depth (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: Saturation on aerial imagery 03/1995, 12/2009, 03/2015, 12/2015, 04/2016, 01/2017, 11/2018,	Algal Ma	at or Crust (B4)			Presence of	f Reduce	ed Iron (C4)	✓ Satı	uration Visible on Aerial Imagery (C9)
	Iron Dep	posits (B5)			Thin Muck S	Surface	(C7)		✓ Geo	emorphic Position (D2)
Field Observations: Surface Water Present? Yes No _ ✓ Depth (inches): Water Table Present? Yes No _ ✓ Depth (inches): Saturation Present? Yes No _ ✓ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: Saturation on aerial imagery 03/1995, 12/2009, 03/2015, 12/2015, 04/2016, 01/2017, 11/2018,	Inundati	ion Visible on Aeria	al Imagery (B7) (Other (Expl	ain in Re	emarks)		FAC	C-Neutral Test (D5)
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Water Table Present? Yes No _ ✓ _ Depth (inches):	Field Obser	vations:								
Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: Saturation on aerial imagery 03/1995, 12/2009, 03/2015, 12/2015, 04/2016, 01/2017, 11/2018,	Surface Wat	ter Present?								
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: Saturation on aerial imagery 03/1995, 12/2009, 03/2015, 12/2015, 04/2016, 01/2017, 11/2018,	Water Table	Present?								
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: Saturation on aerial imagery 03/1995, 12/2009, 03/2015, 12/2015, 04/2016, 01/2017, 11/2018,			Yes	No <u>√</u>	Depth (incl	hes):		Wetl	and Hydrolog	y Present? Yes No
Remarks: Saturation on aerial imagery 03/1995, 12/2009, 03/2015, 12/2015, 04/2016, 01/2017, 11/2018,			am gauge n	nonitorina w	ell, aerial ni	hotos pr	evious ins	pections)	if available:	
Saturation on aerial imagery 03/1995, 12/2009, 03/2015, 12/2015, 04/2016, 01/2017, 11/2018,	2000/100 110	July Data (Strot	gaago, II		o, aonai pi	, pi	211000 1110	- 50000110),	available.	
Saturation on aerial imagery 03/1995, 12/2009, 03/2015, 12/2015, 04/2016, 01/2017, 11/2018,	Remarks:									
		on on carial i	maganı	02/4005	12/20	00 00		40100		
12/2019, and 11/2020	Saturation					11(1 11)	2/クハ4 <i>に</i>	10/00	15 NA/2004	16 01/9017 11/9010
l.	12/2010		0 ,	03/1995), 12/20	09, 0	3/2015,	12/20	15, 04/201	16, 01/2017, 11/2018,

Project/Site: US 380	(City/Count	y: Collin Cou	ınty	Sampling Date: 08/17/2021
Applicant/Owner: TxDOT				State: TX	Sampling Point: DP-51
Investigator(s): Kelsea Hiebert, Kathryn Burton		Section, To	ownship, Raı	nge: N/A	
Landform (hillslope, terrace, etc.): terrace		Local relie	f (concave, o	convex, none): convex	Slope (%): 1
Subregion (LRR):					
Soil Map Unit Name: Houston Black Clay, 0 to 1 percent slop	oes			NWI classific	cation: UPL
Are climatic / hydrologic conditions on the site typical for this					
Are Vegetation, Soil, or Hydrology si					oresent? Yes <u>√</u> No
Are Vegetation, Soil, or Hydrologyn	aturally prol	olematic?		eded, explain any answe	
SUMMARY OF FINDINGS - Attach site map	showing	samplir	ng point le	ocations, transects	, important features, etc.
Hydrophytic Vegetation Present? Yes No	o √	la 4	h a Camanda d	A	
Hydric Soil Present? Yes No	o <u> </u>		he Sampled hin a Wetlan		No ✓
Wetland Hydrology Present? Yes No	o <u> </u>	With	illi a vvetiai	iu: 165	
Remarks:					
Located within a mowed and maintaine	d pastui	re adja	cent to E	Emergent Wetlan	d Water Feature 237.
VEGETATION – Use scientific names of plant	ts.				
		Dominan	t Indicator	Dominance Test work	sheet:
Tree Stratum (Plot size: 30'	% Cover	Species?	Status	Number of Dominant S	pecies
1				That Are OBL, FACW, (excluding FAC-):	or FAC (A)
2					
3				Total Number of Domin Species Across All Stra	•
4 5					_
	0	= Total Co	over	Percent of Dominant S That Are OBL, FACW,	pecies —
Sapling/Shrub Stratum (Plot size: 15'				Prevalence Index wor	kshoot:
1				Total % Cover of:	
2					x 1 = 0
3	. ——				x 2 = 0
T	0	= Total Co	over		x 3 = 45
Herb Stratum (Plot size: 5'		. 0.0.			x 4 = 200
1. Eragrostis spectabillis	35	yes	UPL		x 5 = 175
2. Sorghum halepense	25 25	yes	FACU	Column Totals: 100	(A) <u>420</u> (B)
Cenchrus ciliaris Echinochloa crus-galli	10	yes	FACU FAC	Prevalence Index	= B/A = 4.2
- lya annua	5	no no	FAC	Hydrophytic Vegetation	on Indicators:
6			1710	1 - Rapid Test for I	· · · · · · · · · · · · · · · · · · ·
7				2 - Dominance Tes	
8.				3 - Prevalence Inde	
9				4 - Morphological A	Adaptations ¹ (Provide supporting s or on a separate sheet)
10					phytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size: 30')	100.0	= Total Co	over		il and wetland hydrology must
1				be present, unless disti	
2				Hydrophytic	
	0	= Total Co	over	Vegetation Present? Ye	es No
% Bare Ground in Herb Stratum 0.0 Remarks:				. 1000111: 16	
Itemans.					

Profile Desc	cription: (Describ	e to the dep	th needed to docu	ment the	indicator	or confirm	n the absence of in	dicators.)
Depth	Matrix			ox Feature				
(inches)	Color (moist)		Color (moist)	_ %	Type ¹	_Loc²	<u>Texture</u>	Remarks
0-3	10YR2/1	90	10YR5/8	_ 2	c 🔽	PL 🔻	Clay	
	10YR8/2	8					Sandy Clay	
3-6	10YR2/2	85					Clay	
	10YR7/3	5					Clay	
	10YR4/2	10					Clay	
6-12	10YR2/2	80		_			Clay	
	10YR8/2	5					Clay	
	10 11 (0/2 10 YR 4/2	- 3						
	10YR7/3	5					Clay	
		•	Reduced Matrix, CS			Sand Gra		: PL=Pore Lining, M=Matrix.
-		icable to all	LRRs, unless other		•			Problematic Hydric Soils ³ :
Histosol	pipedon (A2)			Gleyed M Redox (St	` '			(A9) (LRR I, J) e Redox (A16) (LRR F, G, H)
	istic (A3)			ed Matrix (e (S7) (LRR G)
	en Sulfide (A4)			Mucky Mi	,			Depressions (F16)
Stratified	d Layers (A5) (LRF	R F)	Loamy	Gleyed M	latrix (F2)		(LRR H	outside of MLRA 72 & 73)
	uck (A9) (LRR F, G			ed Matrix (. ,		Reduced Ve	• •
· - ·	d Below Dark Surfa	ace (A11)		Dark Surf	, ,			Material (TF2) w Dark Surface (TF12)
	ark Surface (A12) //ucky Mineral (S1)			Depressio	urface (F7) ons (F8)			ain in Remarks)
	Mucky Peat or Pea				essions (F	16)		drophytic vegetation and
	ucky Peat or Peat (. , .			73 of LRR			rology must be present,
							unless distu	rbed or problematic.
Restrictive	Layer (if present):	:						
Type:								
. `	ches):						Hydric Soil Pres	ent? Yes No
Remarks:								
HYDROLO	GY							
Wetland Hy	drology Indicator	s:						
Primary Indi	cators (minimum of	f one required	d; check all that app	oly)			Secondary Inc	dicators (minimum of two required)
Surface	Water (A1)		Salt Crus	t (B11)			Surface S	Soil Cracks (B6)
_	ater Table (A2)		Aquatic I	nvertebrate	es (B13)		Sparsely	Vegetated Concave Surface (B8)
Saturati	on (A3)		Hydroger	n Sulfide C	dor (C1)		_	Patterns (B10)
	larks (B1)		Dry-Seas					Rhizospheres on Living Roots (C3)
	nt Deposits (B2)		Oxidized			ing Roots	. ,	
	posits (B3)		`	not tilled	,	1	,	Burrows (C8)
_	at or Crust (B4)		Presence			+)	· 	n Visible on Aerial Imagery (C9)
Iron Dep	on Visible on Aeria	l Imagary (B	Thin Muc 7) Other (E)		, ,			hic Position (D2) tral Test (D5)
	Stained Leaves (B9) Other (E)	γριαπτιπτιν	emarks)			ave Hummocks (D7) (LRR F)
Field Obser		,						ave riammeone (27) (Little)
Surface Wat		Yes	No <u> </u>	nches):				
Water Table			No ✓ Depth (ii					
Saturation P			No ✓ Depth (ii			1	land Hydrology Pre	sent? Yes No
(includes cap	pillary fringe)							
Describe Re	corded Data (strea	ım gauge, mo	onitoring well, aerial	photos, p	revious ins	pections),	ıt available:	
Dorosal								
Remarks:			NO/400E 40/0	0000	00/0	045		
Saturation	on on aerial ii	magery ()3/1995, 12/2	2009, a	na 03/2	U15		

Project/Site: US 380	(City/Cou	ınty: Collin	County	Sampling Date: 11/11/2020
Applicant/Owner: TXDOT				State: TX	Sampling Point: DP-52
Investigator(s): Kelsea Hiebert, Mike Keenan, Ethan Eichler	;	Section,	, Township,	Range: N/A	
Landform (hillslope, terrace, etc.): Depression		Local re	elief (concav	ve, convex, none): concave	Slope (%): 2
Subregion (LRR): <u>J - Southwestern Prairies Cotton and Forage Region</u>	n Lat: 33.2	206011		Long: <u>-96.599865</u>	Datum: NAD 83
Soil Map Unit Name: Tinn clay, 0 to 1 percent slopes, freque	ently flooded			NWI classific	ation: PEM
Are climatic / hydrologic conditions on the site typical for this	s time of yea	ar? Yes	s_ √ _ N	o (If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrologys	ignificantly	disturbe	d? A	re "Normal Circumstances" p	oresent? Yes <u>√</u> No
Are Vegetation, Soil, or Hydrologyn	aturally pro	blematio	c? (I	f needed, explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing	samp	ling poin	nt locations, transects	, important features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks: Yes ✓ N Yes ✓ N N N	0		s the Samp vithin a We		No
Located within Emergent Wetland Water 262 and Water Feature 258.	er Featu	ire 25	9. Hydr	ologically connecte	d to Water Feature
VEGETATION – Use scientific names of plan					
<u>Tree Stratum</u> (Plot size: <u>30'</u>) 1) 2		Specie			pecies
3				Total Number of Domin Species Across All Stra	•
5.		-		Percent of Dominant Sp That Are OBL, FACW,	pecies +
Sapling/Shrub Stratum (Plot size: 15')	-	- rotar	00101		
1. Salix nigra	10	yes	FAC\	Prevalence Index wor Total % Cover of:	
2					x 1 = 100
3				· · · · · · · · · · · · · · · · · · ·	x 2 = 20
4	10	Total			x 3 = 0
Herb Stratum (Plot size: 5'		= Total	Cover		x 4 = 0
1. Leersia oryzoides	75	yes	OBL		x 5 = 0
2. Typha latifolia		yes	OBL	Column Totals: 110	(A) <u>120</u> (B)
3				Prevalence Index	= B/A = 1.1
4				Hydrophytic Vegetation	
5				1 - Rapid Test for H	Hydrophytic Vegetation
6				_ 2 - Dominance Tes	st is >50%
8.				— √ 3 - Prevalence Inde 1. The state of the state	
9				4 - Morphological A	Adaptations ¹ (Provide supporting s or on a separate sheet)
10					phytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size: 30')	100.0	= Total	Cover		il and wetland hydrology must
1					and or problematic.
% Bare Ground in Herb Stratum 0.0	0			Hydrophytic Vegetation Present? Ye	s No
Remarks:					

inches)	Matrix Color (moist)	%		dox Feature	Type ¹	Loc ²	Texture	Remarks
)-6	10YR 3/1	97	Color (moist) 2.5Y 5/6	<u>%</u> 3	C Type	M	Clay Loam	Remarks
	1011(3/1		2.01 0/0				Olay Loam	
					-		. <u></u> -	
						-		
					-			
								
					-			
	Concentration, D=De					ed Sand G		on: PL=Pore Lining, M=Matrix.
	Indicators: (Appl	icable to all						r Problematic Hydric Soils ³ :
_ Histoso	. ,			y Gleyed M				k (A9) (LRR I, J)
	pipedon (A2) listic (A3)			y Redox (Sa bed Matrix (airie Redox (A16) (LRR F, G, H) ace (S7) (LRR G)
	en Sulfide (A4)			y Mucky Mi				ns Depressions (F16)
	d Layers (A5) (LRF	R F)		y Gleyed M				H outside of MLRA 72 & 73)
_ 1 cm M	uck (A9) (LRR F, G	, H)	Deple	eted Matrix	(F3)		Reduced	Vertic (F18)
	ed Below Dark Surfa	ace (A11)		x Dark Surf				nt Material (TF2)
	ark Surface (A12)			eted Dark S)		llow Dark Surface (TF12)
	Mucky Mineral (S1)			x Depression	, ,	(4.0)		plain in Remarks)
	Mucky Peat or Pea ucky Peat or Peat (Plains Depr	•	,		hydrophytic vegetation and ydrology must be present,
_ 5 (111 101	ucky real of real (33) (LKK F)	(I	VILKA 12 O	73 01 LKF	ι п)		sturbed or problematic.
estrictive	Layer (if present):						1	
								_
	nches):						Hydric Soil Pr	esent? Yes No
Depth (ir	iciies)							
Depth (ir emarks:							11,4	
emarks:	·			et 6 inch	100		11,4.110 00.111	
emarks:	urated to dete			st 6 inch	ies.		11,4	
emarks: OO satu	ırated to dete			st 6 inch	ies.			
emarks: OO satu	ırated to dete			st 6 inch	ies.			
emarks: DO SATU	ırated to dete	ermine so		st 6 inch	ies.			
emarks: OO SATU OROLO etland Hy	urated to dete	ermine so	oil profile pa		ies.			
emarks: DO SATU DROLC etland Hy	urated to dete	ermine so	oil profile pas		ies.		Secondary	
DROLO etland Hy imary Indi	urated to dete	ermine so	oil profile pas d; check all that an Salt Cru	oply)			Secondary Surface	Indicators (minimum of two requires Soil Cracks (B6)
DROLC etland Hy imary Indi Surface High W	OGY rdrology Indicators cators (minimum of	ermine so	oil profile pas d; check all that an Salt Cru Aquatic	oply) ast (B11)	es (B13)		Secondary Surface Sparse	Indicators (minimum of two requires Soil Cracks (B6)
DROLC etland Hy imary Indi Surface High W Saturat	OGY rdrology Indicators cators (minimum of Water (A1) ater Table (A2)	ermine so	d; check all that and an analysis of the cruic of the cru	oply) lst (B11) Invertebrate	es (B13)		Secondary Surface Sparse Draina	Indicators (minimum of two require e Soil Cracks (B6) lly Vegetated Concave Surface (B8 ge Patterns (B10)
DROLO etland Hy imary Indi Surface High W Saturati Water N	OGY Idrology Indicators Cators (minimum of Water (A1) ater Table (A2) ion (A3)	ermine so	d; check all that and any and any and any and any and any and any any and any	oply) ist (B11) Invertebrati en Sulfide C	es (B13) Idor (C1) Table (C2)		Secondary Surface Sparse Drainae Oxidize	Indicators (minimum of two require e Soil Cracks (B6) lly Vegetated Concave Surface (B8 ge Patterns (B10)
DROLO etland Hy imary Indi Surface High W Saturati Water N Sedime	orated to determine the water (A1) ater Table (A2) ion (A3) Marks (B1)	ermine so	d; check all that and an	oply) ast (B11) Invertebrate en Sulfide C	es (B13) Idor (C1) Table (C2) eres on Liv		Secondary Surface Sparse Drainae Oxidize (C3) (whe	Indicators (minimum of two require e Soil Cracks (B6) ly Vegetated Concave Surface (B8 ge Patterns (B10) ed Rhizospheres on Living Roots (6
Permarks: OO SATU O	orated to determine the water (A1) atter Table (A2) ion (A3) Marks (B1) int Deposits (B2)	ermine so	d; check all that and an	oply) Ist (B11) Invertebrate en Sulfide C ason Water d Rhizosphe	es (B13) Idor (C1) Table (C2) Peres on Liv	ring Roots	Secondary Surface Sparse Drainae Oxidize (C3) (whe	Indicators (minimum of two require e Soil Cracks (B6) bly Vegetated Concave Surface (B8) ge Patterns (B10) ad Rhizospheres on Living Roots (Gre tilled)
Primary India Surface High W Saturat Water M Sedime Drift De Algal M	orated to determine the Water (A1) ater Table (A2) ion (A3) Marks (B1) and Deposits (B2) posits (B3)	ermine so	d; check all that ap Salt Cru Aquatic Hydroge Dry-Sea Oxidize (wher	oply) Invertebrate on Sulfide Conson Water d Rhizosphe on tilled	es (B13) dor (C1) Table (C2) eres on Liv) ed Iron (C	ring Roots	Secondary Surface Sparse Drainae Oxidize (C3) Crayfis ✓ Saturae	Indicators (minimum of two requires a Soil Cracks (B6) Ily Vegetated Concave Surface (B8) ge Patterns (B10) ad Rhizospheres on Living Roots (Core tilled) h Burrows (C8)
Primary Indi Surface High W Saturat Water N Sedime Drift De Algal M Iron De	order of the determinant of the	s:	d; check all that are Salt Cru Aquatic Hydroge Dry-Sea Oxidize (where Thin Mu	oply) Invertebrate	es (B13) odor (C1) Table (C2) eres on Liv) ed Iron (C-	ring Roots	Secondary Surface Sparse Draina Oxidize (whe Crayfis Satura Geome	Indicators (minimum of two required a Soil Cracks (B6) ally Vegetated Concave Surface (B8) ge Patterns (B10) and Rhizospheres on Living Roots (Gre tilled) h Burrows (C8) attention Visible on Aerial Imagery (C9)
DROLO etland Hy imary Indi Surface High W Saturat Water N Sedime Drift De Algal M Iron De Inundat	order of the determinant of the control of the cont	s: fone require	d; check all that are Salt Cru Aquatic Hydroge Dry-Sea Oxidize (where Thin Mu	oply) Invertebrate on Sulfide Cason Water of Rhizosphe on of tilled on Reduction Sulface of Reduction Sulface	es (B13) odor (C1) Table (C2) eres on Liv) ed Iron (C-	ring Roots	Secondary Surface Sparse Drainae Oxidize (C3) (whe Crayfis Saturae Geomo	Indicators (minimum of two requires e Soil Cracks (B6) Ily Vegetated Concave Surface (B8) ge Patterns (B10) ed Rhizospheres on Living Roots (Concave tilled) h Burrows (C8) tion Visible on Aerial Imagery (C9) orphic Position (D2)
Permarks: OO SATU Petland Hy Firmary Indi Surface High W Saturati Water N Sedime Drift De Algal M Iron De Inundat Water-S	rated to determine the water (A1) atter Table (A2) ion (A3) Marks (B1) attor Crust (B4) posits (B5) ion Visible on Aeria Stained Leaves (B9) revations:	s: fone require Il Imagery (B	d; check all that ap Salt Cru Aquatic Hydroge Dry-Sea Oxidize (wher Presence Thin Mu 7) Other (E	oply) Invertebrate en Sulfide Conson Water d Rhizosphe e not tilled de of Reductick Surface explain in Ri	es (B13) Idor (C1) Table (C2) eres on Liv) ed Iron (C- (C7) emarks)	ring Roots	Secondary Surface Sparse Drainae Oxidize (C3) (whe Crayfis Saturae Geomo	Indicators (minimum of two requires a Soil Cracks (B6) Ily Vegetated Concave Surface (B8) ge Patterns (B10) ed Rhizospheres on Living Roots (Concave tilled) h Burrows (C8) tion Visible on Aerial Imagery (C9) orphic Position (D2) eutral Test (D5)
Permarks: OO SATU Permary Indi Surface High W Saturat Water M Sedime Drift De Algal M Iron De Inundat Water-S Geld Observer	rated to determine the water (A1) atter Table (A2) ion (A3) Marks (B1) attor Crust (B4) posits (B5) ion Visible on Aeria Stained Leaves (B9) revations:	s: fone require Il Imagery (B)	d; check all that ap Salt Cru Aquatic Hydroge Dry-Sea Oxidizee (wher Presence Thin Mu 7) Other (B	oply) Invertebrate on Sulfide Cason Water of Reductick Surface explain in Receipt 1997.	es (B13) Idor (C1) Table (C2) eres on Liv) ed Iron (C- (C7) emarks)	ring Roots	Secondary Surface Sparse Drainae Oxidize (C3) (whe Crayfis Saturae Geomo	Indicators (minimum of two requires a Soil Cracks (B6) Ily Vegetated Concave Surface (B8) ge Patterns (B10) ed Rhizospheres on Living Roots (Concave tilled) h Burrows (C8) tion Visible on Aerial Imagery (C9) orphic Position (D2) eutral Test (D5)
Primary Indi Prima	rated to detection of the composition of the composition (B4) positis (B4) positis (B5) ion Visible on Aeria Stained Leaves (B9) rvations:	s: fone require Il Imagery (B)	d; check all that ap Salt Cru Aquatic Hydroge Dry-Sea Oxidize (wher Presence Thin Mu 7) Other (E	oply) Invertebrate on Sulfide Cason Water of Reductick Surface explain in Receipt 1997.	es (B13) Idor (C1) Table (C2) eres on Liv) ed Iron (C- (C7) emarks)	ring Roots	Secondary Surface Sparse Drainae Oxidize (C3) (whe Crayfis Saturae Geomo	Indicators (minimum of two requires a Soil Cracks (B6) Ily Vegetated Concave Surface (B8) ge Patterns (B10) ed Rhizospheres on Living Roots (Concave tilled) h Burrows (C8) tion Visible on Aerial Imagery (C9) orphic Position (D2) eutral Test (D5)
emarks: OO SATU /DROLO /etland Hy rimary Indi / Surface / High W / Saturati _ Water N _ Sedime _ Drift De _ Inundat _ Water-S ield Obsel urface Wa /ater Table aturation F	rated to determine the control of th	s: f one require I Imagery (B) Yes Yes	d; check all that ap Salt Cru Aquatic Hydroge Dry-Sea Oxidizee (wher Presence Thin Mu 7) Other (B	oply) Inst (B11) Invertebrate on Sulfide Conson Water d Rhizosphe on tilled the of Reduct click Surface Explain in R (inches): 0 (inches): 0	es (B13) Idor (C1) Table (C2) eres on Liv) ed Iron (C- (C7) emarks)	ring Roots 4)	Secondary Surface Sparse Drainae Oxidize (C3) (whe Crayfis Saturae Geomo	Indicators (minimum of two required as Soil Cracks (B6) ally Vegetated Concave Surface (B8) are Patterns (B10) and Rhizospheres on Living Roots (Fig. 1) are tilled) and the Burrows (C8) are tilled on Aerial Imagery (C9) are propried Position (D2) are trail Test (D5)
emarks: OO SATU /DROLO /etland Hy rimary Indi / Surface / High W / Saturat _ Water N _ Sedime _ Drift De _ Inundat _ Water-S ield Obsel urface Wa /ater Table aturation F ncludes ca	rated to detection of the composition of the composition (A3) at or Crust (B4) positis (B5) ion Visible on Aeria Stained Leaves (B9) resent? Present? Present? Present? Present? Present? Present? Present? Present? Present?	s: f one require Yes Yes Yes	d; check all that are salt Cru Aquatic Hydroge Oxidize (wher Thin Mu 7) — Other (B	poply) Invertebrate on Sulfide Cason Water d Rhizosphere not tilled the of Reduction Records and the control of	es (B13) Idor (C1) Table (C2) eres on Liv) ed Iron (C- (C7) emarks)	ring Roots 4) Wet	Secondary Surface Sparse Drainae Oxidize (C3) (whe Crayfis Saturae Geomo	Indicators (minimum of two requires a Soil Cracks (B6) Ily Vegetated Concave Surface (B8) ge Patterns (B10) ad Rhizospheres on Living Roots (Concave tilled) h Burrows (C8) tion Visible on Aerial Imagery (C9) orphic Position (D2) eutral Test (D5) Heave Hummocks (D7) (LRR F)
Primary Indi Prima	rated to determine the control of th	s: f one require Yes Yes Yes	d; check all that are salt Cru Aquatic Hydroge Oxidize (wher Thin Mu 7) — Other (B	poply) Invertebrate on Sulfide Cason Water d Rhizosphere not tilled the of Reduction Records and the control of	es (B13) Idor (C1) Table (C2) eres on Liv) ed Iron (C- (C7) emarks)	ring Roots 4) Wet	Secondary Surface Sparse Drainae Oxidize (C3) (whe Crayfis Saturae Geomo	Indicators (minimum of two requires a Soil Cracks (B6) Ily Vegetated Concave Surface (B8) ge Patterns (B10) ad Rhizospheres on Living Roots (Concave tilled) h Burrows (C8) tion Visible on Aerial Imagery (C9) orphic Position (D2) eutral Test (D5) Heave Hummocks (D7) (LRR F)
Properties of the control of the con	rated to detection of the composition of the composition (A3) at or Crust (B4) positis (B5) ion Visible on Aeria Stained Leaves (B9) resent? Present? Present? Present? Present? Present? Present? Present? Present? Present?	s: f one require Yes Yes Yes	d; check all that are salt Cru Aquatic Hydroge Oxidize (wher Thin Mu 7) — Other (B	poply) Invertebrate on Sulfide Cason Water d Rhizosphere not tilled the of Reduction Records and the control of	es (B13) Idor (C1) Table (C2) eres on Liv) ed Iron (C- (C7) emarks)	ring Roots 4) Wet	Secondary Surface Sparse Drainae Oxidize (C3) (whe Crayfis Saturae Geomo	Indicators (minimum of two required a Soil Cracks (B6) Ily Vegetated Concave Surface (B8) ge Patterns (B10) and Rhizospheres on Living Roots (Fre tilled) In Burrows (C8) Ition Visible on Aerial Imagery (C9) In Position (D2) Beave Hummocks (D7) (LRR F)
DROLO etland Hy imary Indi Surface High W Saturat Water N Sedime Drift De Inundat Water-Seld Obser urface Wa ater Table aturation Facilides ca	rated to determine the content of th	s: f one require Yes Yes Yes The solution of	d; check all that are a Salt Cru Aquatic Hydroge Oxidize (wher Presence Thin Mu 7) — Other (B	poply) Inst (B11) Invertebrate on Sulfide Conson Water d Rhizosphe e not tilled the of Reduct clack Surface Explain in R (inches): 0 (inches): 0 (inches): 0 al photos, p	es (B13) Idor (C1) Table (C2) eres on Liv ed Iron (C- (C7) emarks)	wet	Secondary Surface Sparse Drainae Oxidize (C3) (whe Crayfis Geomo FAC-N Frost-H	Indicators (minimum of two required as Soil Cracks (B6) ally Vegetated Concave Surface (B6) age Patterns (B10) and Rhizospheres on Living Roots (Fre tilled) be Burrows (C8) ation Visible on Aerial Imagery (C9) brightor Position (D2) and the surface of the surface (D5) and the surface of the surface (D5) and the surface of the surface (D5) and the surface (D5) are all the surface (D7) (LRR F)

Project/Site: US 380		City/Cour	nty: Collin Cou	unty	_ Sampling [Date: 11/11/2	2020
Applicant/Owner: TXDOT				State: TX	_ Sampling F	Point: DP-53	
Investigator(s): Kelsea Hiebert, Mike Keenan, Ethan Eichle	er	Section,	Township, Ra	nge: N/A			
Landform (hillslope, terrace, etc.): Depression		Local rel	ief (concave,	convex, none): concave	;	_ Slope (%):	2
Subregion (LRR): <u>J - Southwestern Prairies Cotton and Forage Reg</u>	gion Lat: 33.2	205318		Long: <u>-96.600344</u>		Datum: NA	D 83
Soil Map Unit Name: Tinn clay, 0 to 1 percent slopes, freq	uently flooded			NWI classifi	cation: PFO		
Are climatic / hydrologic conditions on the site typical for t	his time of yea	ar? Yes	√ No_	(If no, explain in I	Remarks.)		
Are Vegetation, Soil, or Hydrology				'Normal Circumstances"		es <u>√</u> N	lo
Are Vegetation, Soil, or Hydrology				eeded, explain any answ	ers in Remar	ks.)	
SUMMARY OF FINDINGS – Attach site maj	showing	sampl	ing point l	ocations, transects	s, importa	nt feature	s, etc.
Hydrophytic Vegetation Present? Yes✓	No						
Hydric Soil Present? Yes ✓	No		the Sampled		/ No		
Wetland Hydrology Present? Yes✓		WI	ithin a Wetlar	id? fes_v	NO		
Located within Forested Wetland Wat	er Featur	e 264.	. Hvdrolo	av influenced by	roadwa	/ runoff to	o the
south and man-made dirt mounds to t				g,,		,	
VECETATION . Her coientific names of pla	nto						
VEGETATION – Use scientific names of pla	Absolute	Domino	ınt Indicator	Dominance Test wor	kohooti		
<u>Tree Stratum</u> (Plot size: 30'			Status	Number of Dominant S			
1. Ulmus americana	20	yes	FAC	That Are OBL, FACW,	•		
2. Fraxinus pennsylvanica	20	yes	<u>FAC</u>	(excluding FAC-):	4		(A)
3. Celtis laevigata	10	no	<u>FAC</u>	Total Number of Domi			
4. Salix nigra	10	no	<u>FACW</u>	Species Across All Str	ata: <u>4</u>		(B)
5				Percent of Dominant S		00.0%	(A /D)
Sapling/Shrub Stratum (Plot size: 15')	60	= Total C	Cover	That Are OBL, FACW,	or FAC:	00.0%	(A/B)
1. Fraxinus pennsylvanica	10	yes	FAC	Prevalence Index wo	rksheet:		
2.				Total % Cover of:		Multiply by:	_
3.				l '	x 1 =		_
4.				FACW species 10			_
	10	= Total C	Cover		x 3 =		_
Herb Stratum (Plot size: 5'	45		0.01	·	x 4 =		_
1. Leersia oryzoides		yes	OBL_		x 5 =		
2				Column Totals: 85	(A)	213	
3				Prevalence Inde	x = B/A = 2	.5	+
4				Hydrophytic Vegetat	ion Indicator	rs:	
5				1 - Rapid Test for	Hydrophytic	Vegetation	
6				✓ 2 - Dominance Te	st is >50%		
8				✓ 3 - Prevalence Inc.	dex is ≤3.0 ¹		
9.				4 - Morphological data in Remark	Adaptations ¹	(Provide sup	porting
10				Problematic Hydro			
		= Total C					
Woody Vine Stratum (Plot size: 30') 1.				¹ Indicators of hydric so be present, unless dis			must
2				Hydrophytic			
0/ Bara Casumd in Hart Oursey 85.0	0		Cover	Vegetation Present? You	es 🗸	No	
% Bare Ground in Herb Stratum 85.0 Remarks:				1			
Tomano.							

Soll Sampling Point: DP-53

Depth	cription: (Describe to Matrix	o the depth he		x Features	uicator c	or commi	ii tile abselice t	of indicators.
(inches)	Color (moist)	<u>%</u> Co	olor (moist)		Type ¹	Loc ²	Texture	Remarks
							Clay	
	·							
-								
¹Tvpe: C=C	oncentration, D=Depl	etion. RM=Redu	ced Matrix. CS	S=Covered o	or Coate	d Sand Gr	rains. ² Loca	ation: PL=Pore Lining, M=Matrix.
	Indicators: (Applica							for Problematic Hydric Soils ³ :
Histosol			Sandy C					uck (A9) (LRR I, J)
	pipedon (A2)		Sandy F		()			Prairie Redox (A16) (LRR F, G, H)
	stic (A3)			Matrix (S6))			urface (S7) (LRR G)
	en Sulfide (A4)			Mucky Mine				ains Depressions (F16)
	d Layers (A5) (LRR F)		Gleyed Matr			_	R H outside of MLRA 72 & 73)
1 cm Mu	uck (A9) (LRR F, G, F	1)	Deplete	d Matrix (F3	3)		Reduce	ed Vertic (F18)
Depleted	d Below Dark Surface	e (A11)	Redox [Dark Surface	e (F6)		Red Pa	rent Material (TF2)
Thick Da	ark Surface (A12)			d Dark Surfa	, ,			nallow Dark Surface (TF12)
	lucky Mineral (S1)		Redox [•	. ,			Explain in Remarks)
	Mucky Peat or Peat (S	, , , , , ,	High Pla					of hydrophytic vegetation and
5 cm Mu	icky Peat or Peat (S3	(LRR F)	(ML	RA 72 & 73	of LRR	H)		hydrology must be present,
							unless o	disturbed or problematic.
Restrictive	Layer (if present):							
Type:								./
Depth (in	ches):						Hydric Soil F	Present? Yes No
Remarks:							•	
Too satu	rated to deterr	mine soil pi	ofile assi	ımed hv	/dric			
	idea to dotor.	со р.	oo, a.oo.	ouy				
HYDROLO	GY							
Wetland Hy	drology Indicators:							
Primary India	cators (minimum of or	ne required; che	ck all that apply	y)			Secondar	ry Indicators (minimum of two required)
✓ Surface	Water (A1)		Salt Crust	(B11)			Surfa	ace Soil Cracks (B6)
✓ High Wa	ater Table (A2)		Aquatic Inv	ertebrates ((B13)		Spars	sely Vegetated Concave Surface (B8)
✓ Saturation	on (A3)		Hydrogen	Sulfide Odo	r (C1)			nage Patterns (B10)
✓ Water N	larks (B1)		Dry-Seaso	n Water Tal	ble (C2)		Oxidi	zed Rhizospheres on Living Roots (C3)
	nt Deposits (B2)		Oxidized F			ng Roots		nere tilled)
	posits (B3)	•		not tilled)		Ü		fish Burrows (C8)
	at or Crust (B4)			of Reduced	Iron (C4	.)		ration Visible on Aerial Imagery (C9)
_	posits (B5)	•		Surface (C7		,		morphic Position (D2)
	on Visible on Aerial Ir	magery (B7)		lain in Rem			,	Neutral Test (D5)
/	tained Leaves (B9)	nagery (Dr)	Outlot (Exp	nam m reem	iarko)		·	-Heave Hummocks (D7) (LRR F)
Field Obser	. , ,					1	1 1031	(EIIII)
		es <u> </u>	Donth (i-	shoo). 0.5				
Surface Wat		,				-		
Water Table		es No				-		
Saturation P		es <u> </u>	Depth (inc	ches):		_ Wetl	and Hydrology	Present? Yes ✓ No
(includes car Describe Re	corded Data (stream	gauge, monitorii	ng well, aerial r	ohotos, prev	ious inst	nections)	if available:	
		J	.g, aonai	, piov		- 305110/,	3. 44010.	
Domorko								
Remarks:		00/0	044 00/0	ME 40'	0045		4/0047	
Saturation	n on aerial im	agery 03/2	v11, v3/20	J15, 12/	∠ ∪15,	and 0	1/201/	

Project/Site: US 380	Cit	y/County:	Collin Cou	inty	Sampling Date: 08/1	6/2021
Applicant/Owner: TxDOT				State: TX	Sampling Point: DP-	54
Investigator(s): Kelsea Hiebert and Wyatt Wolfenkoehler	Se	ection, Tov	wnship, Rar	nge: N/A		
Landform (hillslope, terrace, etc.): Embankment	Lo	ocal relief	(concave, c	convex, none): convex	Slope (%): <u>3</u>
Subregion (LRR): <u>J - Southwestern Prairies Cotton and Forage Region</u>	n Lat: 33.204	1927		Long: <u>-96.599567</u>	Datum: _	NAD 83
Soil Map Unit Name: Tinn Clay, 0 to 1 percent slopes, frequency				NWI classific	cation: UPL	
Are climatic / hydrologic conditions on the site typical for this	s time of year?	? Yes	/_ No	(If no, explain in R	temarks.)	
Are Vegetation, Soil, or Hydrologys	significantly dis	sturbed?	Are "	Normal Circumstances" ¡	oresent? Yes <u>√</u>	No
Are Vegetation, Soil, or Hydrology r	naturally proble	ematic?	(If ne	eded, explain any answe	rs in Remarks.)	
SUMMARY OF FINDINGS - Attach site map	showing s	amplin	g point lo	ocations, transects	s, important featu	ıres, etc.
Hydrophytic Vegetation Present? Yes N	o 🗸					
Hydric Soil Present? Yes ✓ N	0		e Sampled in a Wetlan		No √	
Wetland Hydrology Present? Yes N	o <u> </u>	With	ii a wellali	u: 165		
Remarks:						
Located adjacent to Forested Wetland		ature 2	264 and	Emergent Wetla	and Water Feat	ure
259 in maintained roadside right-of-way	y (ROW).					
VEGETATION – Use scientific names of plan	ts.					
Tree Stratum (Plot size: 30'			Indicator	Dominance Test work	sheet:	
	% Cover S			Number of Dominant S That Are OBL, FACW,		
1				(excluding FAC-):	0	(A)
3.				Total Number of Domir	nant	
4.				Species Across All Stra	4	(B)
5				Percent of Dominant S	pecies	
Sapling/Shrub Stratum (Plot size: 15'	0 =	Total Cov	er	That Are OBL, FACW,		(A/B)
				Prevalence Index wor	ksheet:	
1				Total % Cover of:	Multiply by	<u>: </u>
3.				OBL species 0	x 1 = <u>0</u>	
4				FACW species 0		
	0 =	Total Cov	er		x 3 = 0	
Herb Stratum (Plot size: 5')	400		E4011			
1. Cynodon dactylon			<u>FACU</u>	UPL species 0 Column Totals: 100		
2				Column Totals: 100	(A) <u>+00</u>	(B)
3				Prevalence Index	= B/A = 4.0	
5.				Hydrophytic Vegetation	on Indicators:	
6.				1 - Rapid Test for I		n
7				2 - Dominance Tes		
8.				3 - Prevalence Ind		
9				4 - Morphological /	Adaptations' (Provide s s or on a separate she	supporting et)
10				Problematic Hydro		
Manda Vina Oraclasa (Diataina 30'	100.0	Total Cov	er			
Woody Vine Stratum (Plot size: 30') 1				¹ Indicators of hydric so be present, unless dist		gy musi
2.				Hydrophytic		
	0 =			Vegetation	√ No.	
% Bare Ground in Herb Stratum 0.0				Present? Ye	s No*	_
Remarks:						

Profile Desc	ription: (Describ	be to the dep	oth needed to d	ocument the	indicator	or confirm	m the absence	of indicators.)
Depth	Matrix			Redox Feature				
(inches)	Color (moist)		Color (mois		Type ¹	Loc ²	Texture	Remarks
0-6	10YR3/1	60	5YR3/4	10	C	M/PL	Clay	Fill material in matrix
	10YR7/2	30						
6-14	10YR3/1	65						
	10YR7/2	35				-		
	10111172				-	-		
							·	
							· <u></u>	
¹ Type: C=Co	oncentration, D=D	epletion, RM	=Reduced Matri	x. CS=Covere	d or Coate	ed Sand G	rains. ² Loc	cation: PL=Pore Lining, M=Matrix.
	Indicators: (App							for Problematic Hydric Soils ³ :
Histosol				ndy Gleyed M				Muck (A9) (LRR I, J)
	oipedon (A2)			ndy Redox (S				Prairie Redox (A16) (LRR F, G, H)
Black Hi	stic (A3)		Str	ipped Matrix (S6)		Dark S	Surface (S7) (LRR G)
	en Sulfide (A4)			amy Mucky Mi			_ ~	Plains Depressions (F16)
	d Layers (A5) (LRI			amy Gleyed M			,	R H outside of MLRA 72 & 73)
	ıck (A9) (LRR F, C d Below Dark Surf			pleted Matrix (dox Dark Surf	. ,			ed Vertic (F18) arent Material (TF2)
	ark Surface (A12)	ace (ATT)		pleted Dark Sun	, ,	١		Shallow Dark Surface (TF12)
	lucky Mineral (S1))		dox Depressio		,		(Explain in Remarks)
	Mucky Peat or Pea			h Plains Depr	` '	16)		of hydrophytic vegetation and
5 cm Mu	icky Peat or Peat	(S3) (LRR F)		(MLRA 72 &	73 of LRF	R H)	wetlan	d hydrology must be present,
							unless	disturbed or problematic.
Restrictive I	Layer (if present)):						
Type:								
Depth (inc	ches):						Hydric Soil	Present? Yes No
Remarks:								
HYDROLO	GY							
	drology Indicator							
•	cators (minimum o		di abaali all that	annlu)			Casanda	ary Indicators (minimum of two required)
	•	n one require						•
	Water (A1) ater Table (A2)			Crust (B11) tic Invertebrate	oc (B13)			face Soil Cracks (B6) rsely Vegetated Concave Surface (B8)
Saturation				gen Sulfide C	. ,			inage Patterns (B10)
	larks (B1)			eason Water	, ,			dized Rhizospheres on Living Roots (C3)
	nt Deposits (B2)			zed Rhizosphe				where tilled)
	posits (B3)			ere not tilled				yfish Burrows (C8)
	at or Crust (B4)		•	nce of Reduc	,	4)		uration Visible on Aerial Imagery (C9)
	posits (B5)			Muck Surface		,		omorphic Position (D2)
	on Visible on Aeria	al Imagery (E		(Explain in R				C-Neutral Test (D5)
	tained Leaves (B9		, <u>—</u>	` .	,			st-Heave Hummocks (D7) (LRR F)
Field Obser	vations:							
Surface Water	er Present?	Yes	No <u>√</u> Depr	h (inches): _				
Water Table			No ✓ Dept					
Saturation P			No ✓ Dept				land Hydrolog	y Present? Yes No _✓
(includes cap	oillary fringe)							
	corded Data (stream		-	erial photos, p	revious ins	spections),	, if available:	
Saturation	on on 04/20	16 aeria	ı ımagery					
Remarks:								

Project/Site: US 380		City/Cou	ınty: Collin Co	unty	_ Sampling I	Date: 09/10/2	2020
Applicant/Owner: TxDOT				State: TX	Sampling f	Point: DP-55	
Investigator(s): Kelsea Hiebert, Michael Keenan, and Ethan	Eichler	Section,	, Township, Ra	inge: <u>n/a</u>			
Landform (hillslope, terrace, etc.): Slough		Local re	elief (concave,	convex, none): concave		Slope (%):	0-2
Subregion (LRR): <u>J - Southwestern Prairies Cotton and Forage Regi</u>	on Lat: 33.1	193183		Long:96.578266		Datum: NA	D 27
Soil Map Unit Name: Tf - Tinn clay, 0 to 1 percent slopes, fr	requently floo	oded		NWI classifi	cation: PFO		
Are climatic / hydrologic conditions on the site typical for th							
Are Vegetation, Soil, or Hydrology				"Normal Circumstances"		es ✓ N	0
Are Vegetation, Soil, or Hydrology				eeded, explain any answe	ers in Remar	rks.)	
SUMMARY OF FINDINGS – Attach site map				ocations, transects	s, importa	ant feature	s, etc.
Hydrophytic Vegetation Present? Yes ✓	No						
Hydric Soil Present? Yes <u>✓</u> N	No		s the Sampled vithin a Wetla		/ No		
Wetland Hydrology Present? Yes✓_ N Remarks:	No	•	vitilii a vvetia	iid: 165 <u>v</u>			
DP-55 located within Forested Wetland	l Water I	Faatu	re 367 D	P-55 located with	nin north	ern nortic	on of
Forested Wetland Water Feature 367 j							01
	•	ide oi	the otaa	y area. recent pr	Colpitati	011.	
VEGETATION – Use scientific names of plan	nts.						
Tree Stratum (Plot size: 30'	Absolute % Cover		ant Indicator ss? Status	Dominance Test worl			
1. Acer negundo		yes		Number of Dominant S That Are OBL, FACW,			
2. Fraxinus pennsylvanica			FAC	(excluding FAC-):	6	3	(A)
3.				Total Number of Domir	nant		
4				Species Across All Stra	ata: <u>6</u>	5	(B)
0 1 (0) 1 0 (1) (5)	85	= Total	Cover	Percent of Dominant S			
Sapling/Shrub Stratum (Plot size: 15') 1. Acer negundo	15	yes	FAC	That Are OBL, FACW,	or FAC: _1	100	(A/B)
2		<u> </u>	170	Prevalence Index wo	rksheet:		
3.				Total % Cover of:		Multiply by:	
4.		-		OBL species			
5.				FACW species			
	15	= Total	Cover	FAC species		_	_
Herb Stratum (Plot size: 5')	-		ODI	FACU species			_
Leersia oryzoides Persicaria hydropiperoides	<u>5</u> 	yes	OBL OBL	UPL species Column Totals: 0			
Vanthium atrumarium		yes	FAC	Column Totals.	(A)	<u> </u>	(D)
4.				Prevalence Index	c = B/A = 0)	
5				Hydrophytic Vegetati	on Indicato	rs:	
6.				1 - Rapid Test for		Vegetation	
7.				✓ 2 - Dominance Test			
8.				3 - Prevalence Ind		4	
9.				4 - Morphological data in Remark	Adaptations'	' (Provide sup	porting
10				Problematic Hydro			
201	15	= Total	Cover				
Woody Vine Stratum (Plot size: 30')				¹ Indicators of hydric so be present, unless dist			must
2				Hydrophytic			
0/ Para Crayand in Harb Charters 85	0	= Total	Cover	Vegetation Present? Ye	es 🗸	No	
% Bare Ground in Herb Stratum 85 Remarks:				1.000.101			
Tromaino.							

SOIL

Sampling Point: DP-55

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Color (moist)	lox Feature %	S Type ¹	Loc ²	Texture	Remarks
0-8	Color (moist)		Color (moist)		туре	LOC	rexture	TOO SATURATED TO COLOR
8-16	10YR 4/1	60	5YR 5/8	40			CLAY	TOO GATORATED TO GOLOR
0-10	10114/1	_ 60	31K 3/0	_ 40		IVI	CLAT	
	_							
				_				
					-	· 		
	oncentration, D=De					ed Sand G		cation: PL=Pore Lining, M=Matrix.
_	Indicators: (Appli	cable to all						for Problematic Hydric Soils ³ :
Histosol	(A1) pipedon (A2)			Gleyed Ma Redox (S5	. ,			Muck (A9) (LRR I, J) Prairie Redox (A16) (LRR F, G, H)
	istic (A3)			ed Matrix (S				Surface (S7) (LRR G)
	en Sulfide (A4)			/ Mucky Mi				Plains Depressions (F16)
	d Layers (A5) (LRR	F)		Gleyed M				RR H outside of MLRA 72 & 73)
	uck (A9) (LRR F, G ,	,		ted Matrix (,			ced Vertic (F18)
-	d Below Dark Surfa	ce (A11)		Dark Surfa				arent Material (TF2)
	ark Surface (A12)			ted Dark Su	•)		Shallow Dark Surface (TF12)
	Mucky Mineral (S1) Mucky Peat or Peat	(S2) (I RR		Depressio		16)		(Explain in Remarks) of hydrophytic vegetation and
	ucky Peat or Peat (ILRA 72 &	•	,		d hydrology must be present,
	`	, ,	`			,		s disturbed or problematic.
Restrictive	Layer (if present):							
Type: <u>-</u>			<u></u>					/
Depth (in	ches): <u>-</u>						Hydric Soil	Present? Yes No
HYDROLO	GY							
	drology Indicators	1.						
_	cators (minimum of		d: check all that ap	olv)			Seconda	ary Indicators (minimum of two required)
	Water (A1)		Salt Crus				·	face Soil Cracks (B6)
· 	ater Table (A2)			nvertebrate	es (B13)			arsely Vegetated Concave Surface (B8)
✓ Saturati			Hydroge	n Sulfide O	dor (C1)			inage Patterns (B10)
Water N	1arks (B1)		Dry-Seas	son Water	Table (C2)	Oxi	dized Rhizospheres on Living Roots (C3)
Sedime	nt Deposits (B2)		Oxidized	Rhizosphe	res on Liv	ing Roots	(C3) (v	vhere tilled)
	posits (B3)		(where	not tilled)				yfish Burrows (C8)
	at or Crust (B4)		Presence			4)		uration Visible on Aerial Imagery (C9)
	posits (B5)			ck Surface			,	omorphic Position (D2)
	on Visible on Aerial	Imagery (B	7) Other (E:	xplain in Re	emarks)			C-Neutral Test (D5)
<u> </u>	stained Leaves (B9)						Fro	st-Heave Hummocks (D7) (LRR F)
Field Obser		v /	No Depth (i	2-	4 inches			
Surface Wat			No Depth (i			-		
Water Table			No Depth (i			\	land Hudrala	y Present? Yes No
Saturation P (includes ca	resent? pillary fringe)	162▲	ino Deptn (i	ncnes):		vvet	ianu myurolog	y Fresent? Tes NO
Describe Re	corded Data (strear Earth Aerial		-	l photos, pr	evious in:	spections),	if available:	
Remarks:								
Recent r	recipitation.	Inundati	on and satur	ation or	03/20	15, 12	/2015. 01/	2017, 03/2018, 11/2018,
	019 aerial ph					, - ==,	-,,	,, -=,
50,2		۳۰۰۵ ک						

Project/Site: US 380	C	city/County	: Collin Cou	unty Sa	mpling Date: 06/8/2021
Applicant/Owner: TxDOT				State: TX Sa	mpling Point: DP-56
Investigator(s): Kelsea Hiebert and Wyatt Wolfenkoehler	S	Section, To	wnship, Ra	nge: n/a	
Landform (hillslope, terrace, etc.): floodplain	L	_ocal relie	f (concave,	convex, none): none	Slope (%): 0
Subregion (LRR):	n Lat: 33.19	92745		Long: <u>-96.578064</u>	Datum: NAD 27
Soil Map Unit Name: Tf-Tinn clay, 0 to 1 percent slopes, free	equently flood	ded		NWI classificatio	n: UPL
Are climatic / hydrologic conditions on the site typical for this					
Are Vegetation, Soil, or Hydrologys				'Normal Circumstances" pres	
Are Vegetation, Soil, or Hydrologyn				eeded, explain any answers ir	
SUMMARY OF FINDINGS – Attach site map				ocations, transects, ir	nportant features, etc.
Hydrophytic Vegetation Present? Yes N					
Hydric Soil Present? Yes N			ne Sampled		/
Wetland Hydrology Present? Yes N		with	nin a Wetlar	1d? Yes	No <u>√</u>
Remarks:		•			
DP-56 located adjacent to Forested We	etland W	ater Fe	eature 30	67. Recent heavy ra	ainfall event.
				-	
VEGETATION – Use scientific names of plan	te				
VEGETATION OSC SCIENTING Harnes of plan	Absolute	Dominant	Indicator	Dominance Test workshe	not-
Tree Stratum (Plot size: 30'	% Cover			Number of Dominant Spec	
1. Fraxinus pennsylvanica	15	yes	FAC	That Are OBL, FACW, or F	AC 1
2				(excluding FAC-):	(A)
3				Total Number of Dominant Species Across All Strata:	<u>2</u> (B)
4	45	Total Co.		'	
Sapling/Shrub Stratum (Plot size: 15')		= Total Co	ver	Percent of Dominant Speci That Are OBL, FACW, or F	
1					
2	- -			Prevalence Index worksh	
3				Total % Cover of: OBL species 0	
4	- -		·		$x = \frac{x}{0}$
5	0 =	= Total Co		FAC species 25	x 3 = 75
Herb Stratum (Plot size: 5')	=	= Total Co	vei	FACU species 90	$x = \frac{360}{0}$
1. Cynodon dactylon	90	yes	FACU	UPL species	x 5 = <u></u>
2. Ambrosia trifida		no	FAC	Column Totals: 115	
3. Paspalum dilatatum	5	no	FAC	Prevalence Index = E	B/A = 3.8
4				Hydrophytic Vegetation I	
5				1 - Rapid Test for Hyd	rophytic Vegetation
6				2 - Dominance Test is	
8.				3 - Prevalence Index is	
9.				4 - Morphological Adap	ptations ¹ (Provide supporting on a separate sheet)
10				Problematic Hydrophy	•
201	100.0 =	= Total Co	ver		
Woody Vine Stratum (Plot size: 30') 1				¹ Indicators of hydric soil an be present, unless disturbe	
2.				Hydrophytic	
	0 =			Vegetation Present? Yes	No
% Bare Ground in Herb Stratum 0.0 Remarks:				. 1000111: 165_	
Indinal va.					

Profile Desc	cription: (Describe	to the depth n	eeded to docui	ment the	indicator	or confirr	n the absence of in	dicators.)
Depth	Matrix			x Feature	S1		_	
(inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks
0-14	2.5YR 3/1	100					Silty Clay	
					· 			
							- <u></u> -	
				_				
					· 		- <u></u>	
1							21	Bl B liii MAAA
	oncentration, D=De					ed Sand G		: PL=Pore Lining, M=Matrix. roblematic Hydric Soils ³ :
_	Indicators: (Appli	cable to all LKK						•
Histosol			Sandy (1 cm Muck (A9) (LRR I, J) e Redox (A16) (LRR F, G, H)
-	pipedon (A2) istic (A3)			Redox (S5 d Matrix (S				e (S7) (LRR G)
	en Sulfide (A4)				neral (F1)			Depressions (F16)
	d Layers (A5) (LRR	F)		Gleyed M			-	outside of MLRA 72 & 73)
	uck (A9) (LRR F, G ,			d Matrix (Reduced Ve	,
	d Below Dark Surfa			Dark Surfa				Material (TF2)
Thick Da	ark Surface (A12)		Deplete	d Dark Su	urface (F7))	Very Shallov	w Dark Surface (TF12)
	Mucky Mineral (S1)			Depressio				ain in Remarks)
	Mucky Peat or Peat	. , ,			essions (F	,	•	drophytic vegetation and
5 cm Mu	ucky Peat or Peat (S	63) (LRR F)	(ML	.RA 72 &	73 of LRR	(H)		rology must be present,
Postriotivo I	Layer (if present):						uniess distu	rbed or problematic.
Type:	-l \						Unadala Call Dasa	N. ✓
	ches):		-				Hydric Soil Pres	ent? Yes No
Remarks:								
HYDROLO	GY							
Wetland Hy	drology Indicators	:						
_	cators (minimum of		eck all that anni	v)			Secondary Inc	dicators (minimum of two required)
	Water (A1)	one required, en	Salt Crust	•				Soil Cracks (B6)
	ater Table (A2)		Aquatic In		oc (B12)			Vegetated Concave Surface (B8)
Saturation	, ,		Hydrogen		. ,			Patterns (B10)
	larks (B1)		Dry-Seaso		, ,			Rhizospheres on Living Roots (C3)
	nt Deposits (B2)		Oxidized F		` '			, ,
	posits (B3)			not tilled)		ing ixoots		Burrows (C8)
	at or Crust (B4)		Presence	,		1)		n Visible on Aerial Imagery (C9)
Iron Dep	` '		Thin Muck		,	*)		hic Position (D2)
-	on Visible on Aerial	Imagery (B7)	Other (Exp					tral Test (D5)
·	stained Leaves (B9)	inagery (Dr)	Outlot (EX	Jiaiii iii ike	ornarko)			ave Hummocks (D7) (LRR F)
Field Obser							110011100	are riaminesia (27) (Entr)
Surface Wat		Yes No _	✓ Denth (in	ches).				
Water Table		Yes No _						
			,				land Hydrology P	sent? Yes No
Saturation P (includes car		Yes No _	v Deptn (in	cnes):		wet	iand mydrology Pre	Sent: Tes NO
	corded Data (strear	n gauge, monito	ring well, aerial	photos, pr	evious ins	pections),	, if available:	
Remarks:								

Project/Site: US 380	(City/Count	y: Collin Cou	ınty	Sampling Date: 8/26/2020
Applicant/Owner: TxDOT				State: TX	Sampling Point: DP-57
Investigator(s): Kelsea Hiebert and Ethan Eichler		Section, T			
Landform (hillslope, terrace, etc.): Depression		Local relie	ef (concave, o	convex, none): concave	Slope (%): 1
Subregion (LRR): J - Southwestern Prairies Cotton and Forage Region	on Lat: 33.2	43927		Long: <u>-96.603439</u>	Datum: NAD 27
Soil Map Unit Name: Tf—Tinn clay, 0 to 1 percent slopes, fi	requently floo	ded		NWI classifica	ation: PFO
Are climatic / hydrologic conditions on the site typical for th	is time of yea	ar? Yes_	√ No _	(If no, explain in Re	emarks.)
Are Vegetation, Soil, or Hydrology	significantly of	disturbed?	Are "	'Normal Circumstances" p	resent? Yes <u>√</u> No
Are Vegetation, Soil, or Hydrology	naturally prob	olematic?	(If ne	eded, explain any answer	s in Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing	sampliı	ng point lo	ocations, transects	, important features, etc.
Hydrophytic Vegetation Present? Yes _ ✓ _ N	No.				
Hydric Soil Present? Yes ✓			he Sampled		
Wetland Hydrology Present? Yes ✓		Wit	hin a Wetlan	id? Yes <u>V</u>	No
Remarks:					
DP-57 located within Forested Wetland Water Feature 2 Intermittent Stream Water Feature 287, Forested Wetlan and Water Feature 290.					
	-1-				
VEGETATION – Use scientific names of plan		Dominon	t Indicator	Dominance Test works	-h
<u>Tree Stratum</u> (Plot size: 30'	Absolute % Cover		t Indicator Status	Number of Dominant Sp	
1. Ulmus americana	40	yes	FAC	That Are OBL, FACW, of	or FAC _
2. Acer negundo	20	yes	FAC	(excluding FAC-):	<u>/</u> (A)
3. Fraxinus pennsylvanica	10	no	FAC	Total Number of Domina	0
4				Species Across All Strat	ta: 8 (B)
Conline/Chrush Stratum (Diet eine 15)	70	= Total Co	over	Percent of Dominant Sp	
Sapling/Shrub Stratum (Plot size: 15') 1. Ulmus americana	30	yes	FAC	That Are OBL, FACW, o	or FAC: 87.5% (A/B)
2. Celtis laevigata	15	yes	FAC	Prevalence Index work	sheet:
3				Total % Cover of:	
4				OBL species 0	$x 1 = \frac{0}{0}$
5.				FACW species 30	$x = \frac{60}{275}$
	45	= Total Co	over	FACUS pages 5	x 3 = 375
Herb Stratum (Plot size: 5'				FACO species	x 4 = 20
1. Eclipta prostrata		yes	FACW_	UPL species	x 5 =
2. Xanthium strumarium		yes	FAC	Column Totals: 160	(A) (B)
3. Pluchea odorata	10	yes	<u>FACW</u>	Prevalence Index	= B/A = 2.8
4				Hydrophytic Vegetatio	
5				1 - Rapid Test for H	lydrophytic Vegetation
6				✓ 2 - Dominance Test	t is >50%
7 8				✓ 3 - Prevalence Inde	x is ≤3.0 ¹
9					daptations ¹ (Provide supporting
10.					or on a separate sheet) Ohytic Vegetation ¹ (Explain)
		= Total Co	over	Floblematic Hydrop	Trylic vegetation (Explain)
Woody Vine Stratum (Plot size: 30'				¹ Indicators of hydric soil be present, unless distu	and wetland hydrology must
1. Toxicodendron radicans	5	yes	<u>FACU</u>	be present, unless dista	The of problematic.
2				Hydrophytic Vegetation	1
% Bare Ground in Herb Stratum 60.0	5 :	= Total Co	over	Present? Yes	s No
Remarks:				<u> </u>	

Profile Desc	cription: (Describe t	o the depth ne	eded to docu	ment the i	indicator	or confirm	the absence of	indicators.)
Depth	Matrix			ox Feature	1		_	_
(inches)	Color (moist)	<u></u> % C	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks
								_
				_				
·								
				_	·			
1Type: C-C	oncentration, D=Depl	etion PM-Ped	uced Matrix C	S-Covered	d or Coate	d Sand Gr	raine ² Locati	ion: PL=Pore Lining, M=Matrix.
	Indicators: (Applica					u Sanu Gi		r Problematic Hydric Soils ³ :
Histosol		ibio to an Errit	Sandy					ck (A9) (LRR I, J)
l —	pipedon (A2)			Redox (S5				airie Redox (A16) (LRR F, G, H)
	istic (A3)			d Matrix (S				face (S7) (LRR G)
	en Sulfide (A4)		Loamy	Mucky Mir	neral (F1)			ns Depressions (F16)
Stratifie	d Layers (A5) (LRR F	•		Gleyed Ma			(LRR	H outside of MLRA 72 & 73)
	uck (A9) (LRR F, G, F	•		ed Matrix (,			Vertic (F18)
	d Below Dark Surface	(A11)		Dark Surfa	` ,			ent Material (TF2)
·	ark Surface (A12)			ed Dark Su Depressio				ıllow Dark Surface (TF12) xplain in Remarks)
	Mucky Mineral (S1) Mucky Peat or Peat (S	S2) (I RR G H)		ains Depre	` '	16)		hydrophytic vegetation and
	ucky Peat or Peat (S3		_	RA 72 & 7				lydrology must be present,
	,	, (=====,	(,		sturbed or problematic.
Restrictive	Layer (if present):							·
Type:								,
Depth (in	ches):						Hydric Soil Pr	resent? Yes No
Remarks:								
Too satu	rated to descr	be profile	assumed	hydric	based	on hyd	drology and	vegetation
l oo oata	inated to decen	bo promo,	accamoa	ny ano	bacca	Oii iiy c	arology arra	vogotation.
	· CV							
HYDROLO								
_	drology Indicators:							
	cators (minimum of or	ne required; che						Indicators (minimum of two required)
	Water (A1)		Salt Crust					e Soil Cracks (B6)
	ater Table (A2)		Aquatic Ir		. ,			ely Vegetated Concave Surface (B8)
✓ Saturati			Hydrogen					ge Patterns (B10)
	flarks (B1)		Dry-Seas		, ,			ed Rhizospheres on Living Roots (C3)
	nt Deposits (B2)		Oxidized			ing Roots (ere tilled)
	posits (B3)			not tilled)		1)	,	sh Burrows (C8)
	at or Crust (B4)		Presence			+)	,	tion Visible on Aerial Imagery (C9) orphic Position (D2)
-	oosits (B5)	nagory (D7)	Thin Mucl		` '			orphic Position (D2) leutral Test (D5)
	on Visible on Aerial Ir Stained Leaves (B9)	nagery (D/)	Other (Ex	piaiii iii Ke	anaiks)			Heave Hummocks (D7) (LRR F)
Field Obser	. , ,						F1051-F	TOUVE HUMINIOUNS (DT) (LNN F)
Surface Wat		es No	✓ Donth /in	iches).				
		es No _ es No _				-		
Water Table		es <u> </u>				- \\	and Usednels 5	Present? Yes / No
Saturation P (includes cap		es <u>▼</u> No _	Depth (in	icnes): <u> </u>		_ wetla	and mydrology F	riesent? res NO
	corded Data (stream	gauge, monitor	ing well, aerial	photos, pr	evious ins	pections),	if available:	
Remarks:								
Located	adjacent to sta	andina wat	er within \	Nater F	eature	286. S	Saturation o	n aerial imagery 12/2019,
	01/2017, 03/2	_						
11/2010,	0112011,0012	.ooo, and t	55, 1555.					

Project/Site: US 380	(City/Co	unty: Collin Co	ounty	_ Sampling	Date: 08/26/2	2020
Applicant/Owner: TXDOT				State: TX	_ Sampling	Point: DP-58	
Investigator(s): Kelsea Hiebert, Ethan Eichler		Section	n, Township, R	ange: N/A			
Landform (hillslope, terrace, etc.): Floodplain		Local r	elief (concave,	, convex, none): none		Slope (%):	0
Subregion (LRR): J - Southwestern Prairies Cotton and Forage Region	n Lat: 33.2	239850		Long: <u>-96.600264</u>		Datum: NAI	D 83
Soil Map Unit Name: Tinn clay, 0 to 1 percent slopes, freque				NWI classif	ication: PE	M	
Are climatic / hydrologic conditions on the site typical for thi	s time of yea	ar? Ye					
Are Vegetation, Soil, or Hydrologys	significantly	disturbe	ed? Are	"Normal Circumstances"	present?	Yes <u>√</u> N	o
Are Vegetation, Soil, or Hydrology r	naturally pro	blemati	ic? (If n	needed, explain any answ	ers in Rema	arks.)	
SUMMARY OF FINDINGS – Attach site map	showing	samp	oling point	locations, transect	s, import	ant feature	s, etc.
Hydrophytic Vegetation Present? Yes N	lo		Is the Sample	d Aroa			
Hydric Soil Present? Yes <u>√</u> N	lo		within a Wetla		/_ No		
Wetland Hydrology Present? Yes N	lo						
Remarks:	 4		20		/ - 4	-4 000	
Located within Emergent Wetland Water F							
Adjacent to Forested Wetland Water Fo	eature 2	.09 a	na Emerg	eni welland wal	er reall	ire 290.	
VEGETATION – Use scientific names of plan	ts.						
Tree Stratum (Plot size: 30'	Absolute % Cover		nant Indicator es? Status	Dominance Test wor			
1				Number of Dominant That Are OBL, FACW			
2.				(excluding FAC-):	, 0 7.0	4	(A)
3.				Total Number of Dom	inant		
4				Species Across All St	rata:	4	(B)
5				Percent of Dominant S	Species		
Sapling/Shrub Stratum (Plot size: 15')	0	= Total	l Cover	That Are OBL, FACW	, or FAC:	100.0%	(A/B)
				Prevalence Index wo	rksheet:		
1				Total % Cover of:		Multiply by:	_
3.			 -		x 1		
4.				FACW species 0			
	0	= Total	Cover	FAC species 0			_
Herb Stratum (Plot size: 5'	0.0		0.51		x 4	_	_
1. Phyla nodiflora	30	yes	OBL OBL			$5 = \frac{0}{100}$	
Zizaniopsis miliacea Persicaria hydropiperoides	20	yes	OBL OBL	Column Totals: 100	(A)	100	(B)
Typha angustifolia	20	yes		Prevalence Inde	ex = B/A =	1.0	_
5				Hydrophytic Vegetat	ion Indicat	ors:	
6				✓ 1 - Rapid Test for		c Vegetation	
7.				✓ 2 - Dominance Te			
8.				✓ 3 - Prevalence Ind		4	
9.				4 - Morphological data in Remar			
10				Problematic Hydr			
20	100.0	= Total	Cover				
Woody Vine Stratum (Plot size: 30') 1.				¹ Indicators of hydric so be present, unless dis			must
2				Hydrophytic			
	0	= Total	Cover	Vegetation Present? Y	es ✓	No	
% Bare Ground in Herb Stratum 0.0 Remarks:				i resent:		MO	
nemars.							

Profile Desc	ription: (Describe	to the dep	th needed to docu	ment the	indicator	or confirm	n the absence of i	ndicators.)
Depth	Matrix			x Feature	es			-
(inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks
0-12	10YR3/1	87	5YR4/6	10	C		Silty clay	
			Gley25PB	3			Silty clay	
				_				
						-		
	-							
				_				
				_				
				-				
1							. 21	BL B. III MAN
			Reduced Matrix, C			ed Sand G		n: PL=Pore Lining, M=Matrix. Problematic Hydric Soils ³ :
_		cable to all	LRRs, unless othe					•
Histosol			Sandy					(A9) (LRR I, J) rie Redox (A16) (LRR F, G, H)
Black Hi	oipedon (A2)			Redox (Sa d Matrix (ce (S7) (LRR G)
	en Sulfide (A4)				ineral (F1)			Depressions (F16)
	d Layers (A5) (LRR	F)			latrix (F2)		-	outside of MLRA 72 & 73)
	ıck (A9) (LRR F, G ,			ed Matrix			Reduced V	,
	d Below Dark Surfac		✓ Redox					t Material (TF2)
Thick Da	ark Surface (A12)		Deplete	ed Dark S	urface (F7))		ow Dark Surface (TF12)
	lucky Mineral (S1)			Depression				lain in Remarks)
	Mucky Peat or Peat				essions (F			ydrophytic vegetation and
5 cm Mu	icky Peat or Peat (S	53) (LRR F)	(ML	.RA 72 &	73 of LRR	(H)		drology must be present,
Postriotivo I	Layer (if present):						uniess dist	urbed or problematic.
_								
Type:	-t \						United a Cold Box	sent? Yes ✓ No
	ches):						Hydric Soil Pre	sent? Yes No
Remarks:								
HYDROLO	GY							
	drology Indicators							
_			d; check all that app	lv)			Secondary Ir	ndicators (minimum of two required)
-	Water (A1)	one require	Salt Crust					Soil Cracks (B6)
	ater Table (A2)		Aquatic In		oc (B12)			Vegetated Concave Surface (B8)
✓ Saturation	, ,		Hydrogen		` ,			e Patterns (B10)
	larks (B1)		· · · · ·		Table (C2)			I Rhizospheres on Living Roots (C3)
	nt Deposits (B2)		Oxidized					e tilled)
	posits (B3)			not tilled		ing recots		Burrows (C8)
	at or Crust (B4)		Presence			1)	,	on Visible on Aerial Imagery (C9)
	oosits (B5)		Thin Mucl			*)		phic Position (D2)
-	on Visible on Aerial	Imagery (R						utral Test (D5)
·	tained Leaves (B9)	imagery (B	// Outlot (EX	piaiii iii i	omanoj			eave Hummocks (D7) (LRR F)
Field Obser								acro manimostic (21) (2mm)
Surface Water		Vac	No <u>✓</u> Depth (in	rches).				
Water Table			No <u>✓</u> Depth (ir					
			No Depth (ir No Depth (ir				and Hudroless Pe	esent? Yes / No
Saturation P (includes car		res_ <u>▼</u>	INO Deptn (in	icnes):		_ weti	iana nyarology Pro	esent? res NO
Describe Re	corded Data (stream	n gauge, m	onitoring well, aerial	photos, p	revious ins	pections),	if available:	
Remarks:								
	n visible on (Joonle I	- -arth aerial in	nades	04/201	6 09/2	017 03/2018	s, and 11/2020.
Jaidialio	AT VISIBIC OIT	Joogic I	_artir acriai III	lages	5-120 I	J, UJIZ	517, 00/2010	, and 172020.

Project/Site: US 380	c	City/Coun	nty: Collin Cou	unty	Sampling Date: 08/16/2021
Applicant/Owner: TxDOT				State: TX	Sampling Point: DP-59
Investigator(s): Kelsea Hiebert and Wyatt Wolfenkoehler		Section,	Гownship, Rar	nge: N/A	
Landform (hillslope, terrace, etc.): Floodplain	1	Local reli	ief (concave, d	convex, none): none	Slope (%): 0
Subregion (LRR): J - Southwestern Prairies Cotton and Forage Region	Lat: 33.2	240227		Long: <u>-96.600651</u>	Datum: NAD 83
Soil Map Unit Name: Tinn Clay, 0 to 1 percent slopes, freque				NWI classific	ation: UPL
Are climatic / hydrologic conditions on the site typical for this	time of yea				
Are Vegetation, Soil, or Hydrology si	gnificantly o	listurbed	? Are "	Normal Circumstances" p	resent? Yes <u>√</u> No
Are Vegetation, Soil, or Hydrology na	aturally prob	olematic?	(If ne	eded, explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS - Attach site map s	howing	sampli	ing point lo	ocations, transects	, important features, etc.
Hydrophytic Vegetation Present? Yes No	√				
Hydric Soil Present? Yes _ ✓ No			the Sampled thin a Wetlan		No √
Wetland Hydrology Present? Yes No		WI	tnin a wetian	id? fes	NO <u>\</u>
Remarks:					
Located within previously maintained ar	•		_		
233. Llocated near old railroad. Aerial s	hows in	undat	ion in 201	11 but none since	then.
VEGETATION – Use scientific names of plant	s.				
201			nt Indicator	Dominance Test work	sheet:
			? Status	Number of Dominant Sp	
1				That Are OBL, FACW, (excluding FAC-):	or FAC 1 (A)
2					ont ·
3 4				Total Number of Domini Species Across All Stra	•
5				Percent of Dominant Sp	
	0 :	= Total C	Cover	That Are OBL, FACW, of	
Sapling/Shrub Stratum (Plot size: 15')				Prevalence Index worl	kshoot:
1				Total % Cover of:	
2				·	x 1 = 0
3					x 2 = 20
4	0 :	- Total C	Covor	FAC species 65	x 3 = 195
Herb Stratum (Plot size: 5'		= Total C	ovei	FACU species 20	x 4 = <u>80</u>
1. Ambrosia trifida	60	yes	FAC	UPL species 5	x 5 = 25
2. Solidago altissima	20	yes	<u>FACU</u>	Column Totals: 100	(A) <u>320</u> (B)
3. Phyla lanceolata	10	no	<u>FACW</u>	Prevalence Index	$-R/\Delta - 3.2$
4. Cardiospermum halicacabum	5	no	FAC	Hydrophytic Vegetation	
5. Verbena halei	5	no	_ UPL	1 - Rapid Test for H	
6			<u> </u>	2 - Dominance Tes	
7				3 - Prevalence Inde	
8 9				4 - Morphological A	adaptations ¹ (Provide supporting
10					s or on a separate sheet)
	100.0			Problematic Hydror	ohytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size: 30') 1				¹ Indicators of hydric soil be present, unless distu	l and wetland hydrology must urbed or problematic.
2				Hydrophytic	
	0 .	= Total C	over	Vegetation Present? Yes	s No
% Bare Ground in Herb Stratum 0.0 Remarks:				riesent: 16:	, HU
Upland vegetation shows frequent mow	ıng.				

Soll Sampling Point: DP-59

Profile Desc	ription: (Describ	e to the de	oth needed to docu	ment the	indicator	or confirm	the absence of in	dicators.)
Depth	Matrix			ox Feature	1	. 2		
(inches)	Color (moist)	%	Color (moist)	%	Type'	Loc ²	<u>Texture</u>	Remarks
0-7	10YR3/1	_ 100				—	Clay	
7-12	10YR3/1	98	5YR3/4	2	C 🔻	PL 🔻	Clay	
	-							
	-			_				_
				_				
			=Reduced Matrix, C			d Sand Gr		n: PL=Pore Lining, M=Matrix.
-		icable to al	LRRs, unless other					Problematic Hydric Soils ³ :
Histosol	` '		Sandy				1 cm Muck	
Black Hi	pipedon (A2)			Redox (Sanda)				ie Redox (A16) (LRR F, G, H) ce (S7) (LRR G)
_	n Sulfide (A4)				ineral (F1)			Depressions (F16)
	l Layers (A5) (LRF	R F)		Gleyed M			_	outside of MLRA 72 & 73)
	ick (A9) (LRR F, G		Deplet	ed Matrix	(F3)		Reduced V	` '
	Below Dark Surfa	ace (A11)	✓ Redox		` '			Material (TF2)
	ark Surface (A12)				urface (F7)			w Dark Surface (TF12)
	lucky Mineral (S1) /lucky Peat or Pea			Depression	essions (F	16)		ain in Remarks) rdrophytic vegetation and
	icky Peat or Peat (73 of LRR			Irology must be present,
	· ·		,			,		urbed or problematic.
Restrictive I	_ayer (if present):							
Туре:								
Depth (inc	ches):						Hydric Soil Pres	sent? Yes No
Remarks:								
HYDROLO	GY							
	drology Indicators	s·						
_			d; check all that app	alv)			Secondary In	dicators (minimum of two required)
-	Water (A1)	r one require	Salt Crus					Soil Cracks (B6)
	iter Table (A2)			nvertebrat	es (B13)			Vegetated Concave Surface (B8)
Saturation				Sulfide C				Patterns (B10)
	arks (B1)				Table (C2)			Rhizospheres on Living Roots (C3)
Sedimer	nt Deposits (B2)		Oxidized	Rhizosphe	eres on Livi	ng Roots	(C3) (where	e tilled)
Drift Dep	oosits (B3)		(where	not tilled)		Crayfish	Burrows (C8)
Algal Ma	t or Crust (B4)				ed Iron (C4	.)	Saturatio	n Visible on Aerial Imagery (C9)
	osits (B5)			k Surface				phic Position (D2)
	on Visible on Aeria		7) Other (Ex	cplain in R	emarks)			utral Test (D5)
	tained Leaves (B9)					Frost-He	ave Hummocks (D7) (LRR F)
Field Observ		V	No. of Boath (
Surface Water			No ✓ Depth (ii			l l		
Water Table		Yes	,				and Hudnals P	esent? Yes No
Saturation Proceeds (includes cap		Yes	No <u>✓</u> Depth (ii	nches):		_ Weti	and Hydrology Pre	esent? Yes No
		ım gauge, m	onitoring well, aerial	photos, p	revious ins	pections),	if available:	
Remarks:								
Area sho	ws inundation	on on 03	/2011 aerial,	but nor	ne in at	least 1	0 different ae	erial photos in years
			frequently mo					

Project/Site: US 380		City/County	: Collin Co	unty	Sampling Date: 08/26/	2020
Applicant/Owner: TXDOT				State: TX	Sampling Point: DP-60)
Investigator(s): Kelsea Hiebert, Ethan Eichler		Section, To	wnship, Ra	inge: N/A		
Landform (hillslope, terrace, etc.): Depression		Local relief	(concave,	convex, none): concave	Slope (%)): <u>2</u>
Subregion (LRR): J - Southwestern Prairies Cotton and Forage Reg	gion Lat: 33.2	240820		Long:96.600559	Datum: NA	ND 83
Soil Map Unit Name: Tinn clay, 0 to 1 percent slopes, freq				NWI classific	ation: PFO	
Are climatic / hydrologic conditions on the site typical for t						
Are Vegetation, Soil, or Hydrology				"Normal Circumstances" p		No
Are Vegetation, Soil, or Hydrology				eeded, explain any answer		
SUMMARY OF FINDINGS – Attach site maj						es. etc.
		<u> </u>	<u> </u>	· · · · · · · · · · · · · · · · · · ·		
Hydrophytic Vegetation Present? Yes Vegetation Present?		Is th	e Sampled	l Area		
Hydric Soil Present? Yes Wetland Hydrology Present? Yes ✓		with	in a Wetlaı	nd? Yes <u>√</u>	No	
Remarks:	110					
Located within Forested Wetland Wat	er Featur	- 280 F	Serm Io	cated to the east	near Data Point	
DP-61. Adjacent to Emergent Wetland					near Data i Onit	
		Catare	.0 200,	200, and 200.		
VEGETATION – Use scientific names of pla	nts.					
Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?		Dominance Test works		
1. Ulmus americana	50	yes	FAC	Number of Dominant Sp That Are OBL, FACW, of		
2. Fraxinus pennsylvanica	30	yes	FAC	(excluding FAC-):	6	(A)
3. Salix nigra	20	yes	FACW	Total Number of Domina	ant	
4.				Species Across All Strat	^	_ (B)
5				Percent of Dominant Sp	pecies	+
	100	= Total Cov	/er	That Are OBL, FACW, o		(A/B)
Sapling/Shrub Stratum (Plot size: 15'	50		EAC	Prevalence Index work	ksheet:	
Fraxinus pennsylvanica Ulmus crassifolia	50 10	ves no	FAC FAC	Total % Cover of:		
			1 AC	OBL species 20	x 1 = 20	
3				FACW species 20	x 2 = 40	
T	60	= Total Cov	/er	FAC species 180	x 3 = <u>540</u>	
Herb Stratum (Plot size: 5'					x 4 = <u>0</u>	
1. Ambrosia trifida	30	yes	FAC		x 5 = 0	_
2. Zizaniopsis miliacea		yes	OBL	Column Totals: 220	(A) <u>600</u>	(B)
3. Iva annua	10	no	FAC	Prevalence Index	= B/A = 2.7	+
4				Hydrophytic Vegetatio	·	
5				1 - Rapid Test for H	Hydrophytic Vegetation	
6				✓ 2 - Dominance Test	t is >50%	
8.				✓ 3 - Prevalence Inde		
9.					daptations ¹ (Provide su s or on a separate sheet	
10.				Problematic Hydrop	•	,
	60.0	= Total Cov	/er	I .		,
Woody Vine Stratum (Plot size: 30')				¹ Indicators of hydric soil be present, unless distu	l and wetland hydrology	must
1					ibod of problematic.	
2				Hydrophytic Vegetation	/	
% Bare Ground in Herb Stratum 40.0	0	= Total Cov	/er	Present? Yes	s No	
Remarks:				ı		

Profile Desc	ription: (Describe	to the depth n	eeded to docui	nent the i	indicator	or confirm	n the absence of i	ndicators.)
Depth	Matrix			x Feature		. ,	_	
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks
							Clay	
	-							
				_				
	-			-				
1= 0.0							2, 2,	
	oncentration, D=Dep					ed Sand G		on: PL=Pore Lining, M=Matrix. Problematic Hydric Soils ³ :
-	Indicators: (Applic	able to all LRI						•
Histosol			Sandy ((A9) (LRR I, J)
Black His	oipedon (A2)			Redox (S5 d Matrix (S				irie Redox (A16) (LRR F, G, H) ace (S7) (LRR G)
	n Sulfide (A4)			Mucky Mir				s Depressions (F16)
-	Layers (A5) (LRR	F)		Gleyed Ma			-	l outside of MLRA 72 & 73)
	ick (A9) (LRR F, G ,			d Matrix (•	Vertic (F18)
	Below Dark Surfac			Dark Surfa				nt Material (TF2)
	ark Surface (A12)				urface (F7))		ow Dark Surface (TF12)
Sandy M	lucky Mineral (S1)		Redox	Depressio	ns (F8)			olain in Remarks)
	lucky Peat or Peat				essions (F			ydrophytic vegetation and
5 cm Mu	icky Peat or Peat (S	3) (LRR F)	(ML	RA 72 &	73 of LRR	R H)		drology must be present,
							unless dis	turbed or problematic.
	_ayer (if present):							
Type:								√
Depth (inc	ches):		_				Hydric Soil Pre	esent? Yes No
Remarks:								
Too satu	rated to desc	ribe profile	, assumed	hydric	based	on hy	drology and v	vegetation.
		·		•		•	0,	
HYDROLO	GY							
_	drology Indicators:							
	ators (minimum of o	one required; ch					-	ndicators (minimum of two required)
/	Water (A1)		Salt Crust					Soil Cracks (B6)
	ter Table (A2)		Aquatic In					y Vegetated Concave Surface (B8)
✓ Saturation			Hydrogen		, ,			e Patterns (B10)
	arks (B1)		Dry-Seaso					d Rhizospheres on Living Roots (C3)
	nt Deposits (B2)		Oxidized F			ing Roots		e tilled)
-	oosits (B3)		•	not tilled)			,	Burrows (C8)
_	it or Crust (B4)		Presence		,	4)		on Visible on Aerial Imagery (C9)
-	osits (B5)		Thin Muck					rphic Position (D2)
	on Visible on Aerial	Imagery (B7)	Other (Exp	olain in Re	emarks)			eutral Test (D5)
	tained Leaves (B9)						Frost-H	eave Hummocks (D7) (LRR F)
Field Observ			,					
Surface Water			✓ Depth (in			_		
Water Table			Depth (in			_		,
Saturation Pr		′es <u>√</u> No _	Depth (in	ches): 0		Wetl	land Hydrology Pı	resent? Yes No
(includes cap		acusa manita	ring wall parial	nhataa ni	ouiouo inc	nactiona)	if available:	
Describe Ked	corded Data (stream	ı yauye, monito	ning well, aerial	priotos, pr	evious ins	peciions),	, ii avaliable.	
D								
Remarks:		, .		_				
	•			Forest	ed We	tland V	Vater feature	289. Saturation on aerial
imagery (03/2018, 11/2	2018, and	11/2020.					

Project/Site: US 380	(City/Cour	nty: Collin Co	ounty	Sampling Date: 08/16/	2021
Applicant/Owner: TxDOT				State: TX	Sampling Point: DP-61	
Investigator(s): Kelsea Hiebert and Wyatt Wolfenkoehler		Section,	Township, Ra	ange: N/A		
Landform (hillslope, terrace, etc.): Maintained Pasture		Local rel	ief (concave,	convex, none): none	Slope (%):	: 0
Subregion (LRR): J - Southwestern Prairies Cotton and Forage Region						
Soil Map Unit Name: Frio Clay Loam, occasionally flooded				NWI classification	ation: UPL	•
Are climatic / hydrologic conditions on the site typical for th	is time of yea	ar? Yes				
Are Vegetation, Soil, or Hydrology	significantly	disturbed	l? Are	"Normal Circumstances" p	resent? Yes ✓ N	lo
Are Vegetation, Soil, or Hydrology				eeded, explain any answer		
SUMMARY OF FINDINGS – Attach site map						s etc
		Jampi	ing point		, important reature	-3, 010.
Hydrophytic Vegetation Present? Yes ↑		Is	the Sample	d Area		
Hydric Soil Present? Yes N		w	ithin a Wetla	nd? Yes	No <u>√</u>	
Wetland Hydrology Present? Yes N	NO <u>▼</u>					
Located within maintained area adjace	nt to For	raetad	Wetland	l Water Feature 28	80 Area located	near
old railroad.	iii to i oi	lesteu	vvellariu	i Water i Eature 20	33. Alea localeu	IICai
VEGETATION – Use scientific names of plan						
Tree Stratum (Plot size: 30'	Absolute % Cover		ant Indicator s? Status	Dominance Test works		
1				Number of Dominant Sp That Are OBL, FACW, of		
2				(excluding FAC-):	1	(A)
3				Total Number of Domina		
4				Species Across All Strat	ta: <u>1</u>	(B)
5				Percent of Dominant Sp	ecies	(4 (5)
Sapling/Shrub Stratum (Plot size: 15'	0	= Total (Cover	That Are OBL, FACW, o	or FAC: 100.0%	(A/B)
1				Prevalence Index work	sheet:	
2.				Total % Cover of:		
3					x 1 = 10	
4				· ·	x = 0 x = 3 = 270	
Herb Stratum (Plot size: 5'	0	= Total C	Cover	-	$x = \frac{1}{2}$	_
1. Iva annua	90	yes	FAC 💌		x = 5 = 0	_
2. Leersia oryzoides	10	no	OBL 💌			(B)
3.	_				2.0	
4				Prevalence Index	<u>-</u>	
5				Hydrophytic Vegetatio 1 - Rapid Test for H		
6				✓ 2 - Dominance Test		
7				3 - Prevalence Inde		
8				4 - Morphological A	daptations ¹ (Provide sup	
9					s or on a separate sheet)	
10.		= Total C	Cover	Problematic Hydrop	ohytic Vegetation ¹ (Expla	iin)
Woody Vine Stratum (Plot size: 30') 1				¹ Indicators of hydric soil be present, unless distu	and wetland hydrology in and wetland hydrology in and wetland hydrology.	must
2.				Hydrophytic		
0.0	0	= Total C	Cover	Vegetation Present? Yes	s No	
% Bare Ground in Herb Stratum 0.0 Remarks:				. rosont: Tes		

		e to the depth i				or confirm	n the absence of ir	ndicators.)	
Depth (inches)	Matrix	%	Color (moist)	x Feature %		Loc ²	Touturo	Domorlo	
0-12	Color (moist) 10YR3/1	100	Color (moist)		rype	LOC	<u>Texture</u> Clay	Remarks	
0-12	1011(3/1			-			Clay		
	· .								
-				_					
	· ·								
1Type: C-C	Concentration, D=De	nletion RM-Re	aduced Matrix C	S-Covere	d or Coate	ad Sand G	rains ² l ocation	n: PL=Pore Lining, M	-Matriy
	Indicators: (Appl					od Sand G		Problematic Hydric \$	
Histoso		ouble to all Elt	Sandy					(A9) (LRR I, J)	
l —	pipedon (A2)			Redox (S5				rie Redox (A16) (LRR	F G H)
	listic (A3)			d Matrix (S				ce (S7) (LRR G)	1, 0, 11)
	en Sulfide (A4)			Mucky Mi				Depressions (F16)	
	ed Layers (A5) (LRR	(F)		Gleyed M				outside of MLRA 72	& 73)
	uck (A9) (LRR F, G			ed Matrix (Reduced V		
Deplete	ed Below Dark Surfa	ice (A11)		Dark Surfa	, ,			t Material (TF2)	
	ark Surface (A12)			ed Dark Su)		ow Dark Surface (TF1	2)
-	Mucky Mineral (S1)			Depressio				lain in Remarks)	
	Mucky Peat or Peat			ains Depro . RA 72 & 1				ydrophytic vegetation	
5 cm IVI	ucky Peat or Peat (53) (LRR F)	(H)		drology must be prese urbed or problematic.	nt,			
Restrictive	Layer (if present):						uniess disti	urbed of problematic.	
Type:									
· · ·	nches):						Hydria Sail Bra	sent? Yes	No ✓
. `	iciles).		_				Hydric 30ii Fres	Sent: 165	NO
Remarks:									
HYDROLO	OGY								
Wetland Hy	/drology Indicators	3:							
_	icators (minimum of		heck all that app	ly)			Secondary Ir	ndicators (minimum of	two required)
	Water (A1)		Salt Crust					Soil Cracks (B6)	
	ater Table (A2)		Aquatic In		es (B13)			Vegetated Concave	Surface (B8)
_	ion (A3)		Hydrogen					e Patterns (B10)	(= 0)
	Marks (B1)		Dry-Seaso		, ,)	=	I Rhizospheres on Liv	ing Roots (C3)
	ent Deposits (B2)		Oxidized		, ,			e tilled)	
Drift De				not tilled)				Burrows (C8)	
	lat or Crust (B4)		Presence			4)		on Visible on Aerial Im	agery (C9)
_	posits (B5)		Thin Mucl			,		phic Position (D2)	J - 7 (/
	tion Visible on Aeria	I Imagery (B7)	Other (Ex					utral Test (D5)	
· 	Stained Leaves (B9)		`		,			eave Hummocks (D7)	(LRR F)
Field Obse									,
Surface Wa	ter Present?	Yes No	✓ Depth (in	ches):					
Water Table			Depth (in						
Saturation F			Depth (in				land Hydrology Pre	esent? Yes	No <u>✓</u>
	pillary fringe)	163 110	Deptil (iii			_	iana myarology i n		NO
	ecorded Data (strea	m gauge, monite	oring well, aerial	photos, pr	evious ins	spections),	, if available:		
Remarks:									
Since 20	012, possible	saturation	on aerial sl	hown c	nly on	04/201	16, but aerials	shown area f	requently
	maintained.				,		•		. ,

Project/Site: US 380		City/Co	unty: Collin (County	_ Sampling Date: 08/26/2020		
Applicant/Owner: TXDOT				State: TX	Sampling Point: DP-62		
Investigator(s): Kelsea Hiebert, Mike Keenan, Ethan Eichler		Section	n, Township,	Range: N/A			
Landform (hillslope, terrace, etc.): Depression		Local r	elief (concav	e, convex, none): concave	Slope (%): 1		
Subregion (LRR): J - Southwestern Prairies Cotton and Forage Region	n Lat: 33.2	239681		Long: <u>-96.599261</u>	Datum: NAD 83		
Soil Map Unit Name: Frio clay loam, occasionally flooded				NWI classific	cation: PEM		
Are climatic / hydrologic conditions on the site typical for this	s time of yea	ar? Yes	s <u> </u>	(If no, explain in R	Remarks.)		
Are Vegetation, Soil, or Hydrologys	ignificantly	disturbe	ed? Ai	re "Normal Circumstances" r	present? Yes <u>√</u> No		
Are Vegetation, Soil, or Hydrology n				needed, explain any answe			
SUMMARY OF FINDINGS – Attach site map	showing	samp	oling poin	t locations, transects	s, important features, etc.		
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks: Yes ✓ N Yes ✓ N N	0		Is the Samp		′ No		
Located within Emergent Wetland Water Feat			•		etland Water Feature		
VEGETATION – Use scientific names of plan							
VEGETATION GGC GGIGINIII Haines of plan	Absolute	Domir	nant Indicato	or Dominance Test work	 ksheet:		
Tree Stratum (Plot size: 30'			es? Status	Number of Dominant S	pecies		
1				_ That Are OBL, FACW, (excluding FAC-):	or FAC 4 (A)		
2				- `	、,		
3				_ Total Number of Domin Species Across All Stra	4		
4				- '			
	0	= Total	l Cover	 Percent of Dominant Sp That Are OBL, FACW, 			
Sapling/Shrub Stratum (Plot size: 15'				Prevalence Index wor	rkehoot:		
1. Fraxinus pennsylvanica		yes					
2. Salix nigra		yes	FACV	v	x 1 = 18		
3					x 2 = 10		
4	20	Tatal		· · · · · · · · · · · · · · · · · · ·	x 3 = 291		
Herb Stratum (Plot size: 5'	20	= Total	Cover		x 4 = 0		
1. Phyla nodiflora	50	yes	FAC	UPL species 0	x 5 = 0		
2. Iva annua	25	yes	FAC	Column Totals: 120	(A) <u>319</u> (B)		
3. Persicaria hydropiperoides	10	no	OBL	Prevalence Index	. D/A 2.7		
4. Zizaniopsis miliacea	8	no	OBL_	Hydrophytic Vegetation			
5. Rumex crispus	7	no	FAC	1 - Rapid Test for H			
6				2 - Dominance Tes			
7				_			
8					Adaptations ¹ (Provide supporting		
9		-			s or on a separate sheet)		
10	100.0	_ Total	L Cover	Problematic Hydro	phytic Vegetation ¹ (Explain)		
Woody Vine Stratum (Plot size: 30') 1)				¹ Indicators of hydric soi be present, unless distu	il and wetland hydrology must urbed or problematic.		
2.				Hydrophytic			
	0		Cover	Vegetation	AS NO		
% Bare Ground in Herb Stratum 0.0				Present? Ye	es No		
Remarks:							

Profile Desc	ription: (Describe	to the depti	n needed to docu	ıment the	indicator	or confirm	n the absence of	indicators.)
Depth	Matrix			ox Feature				
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-8	10YR3/1	75	7.5YR5/8	25	С	PL	Clay	
8-12	10YR3/1	100					Clay	
	-							
l ———				_				<u> </u>
				_				
				_				<u> </u>
¹ Type: C=Co	oncentration, D=Dep	oletion, RM=I	Reduced Matrix, C	S=Covere	ed or Coate	ed Sand G		ion: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Applic	able to all L	RRs, unless other	erwise no	ted.)		Indicators fo	r Problematic Hydric Soils ³ :
Histosol	(A1)		Sandy	Gleyed M	atrix (S4)		1 cm Mud	ck (A9) (LRR I, J)
Histic Ep	oipedon (A2)		Sandy	Redox (S	5)		Coast Pra	airie Redox (A16) (LRR F, G, H)
Black Hi	stic (A3)			ed Matrix (face (S7) (LRR G)
	n Sulfide (A4)				ineral (F1)		_	ns Depressions (F16)
	Layers (A5) (LRR			Gleyed M			`	H outside of MLRA 72 & 73)
	ick (A9) (LRR F, G,			ed Matrix				Vertic (F18)
-	d Below Dark Surface	æ (A11)	✓ Redox		. ,			ent Material (TF2) Ilow Dark Surface (TF12)
	ark Surface (A12) Mucky Mineral (S1)			Depression	urface (F7))		plain in Remarks)
	Aucky Peat or Peat	(S2) (I RR G			ressions (F	16)		hydrophytic vegetation and
	icky Peat or Peat (S				73 of LRR			ydrology must be present,
	, , , , , , , , , , , , , , , , , , , ,	-/(/	,			,		sturbed or problematic.
Restrictive I	_ayer (if present):							·
Type:								
Depth (inc	ches):						Hydric Soil Pr	resent? Yes ✓ No
Remarks:								
HYDROLO	GY							
Wetland Hyd	drology Indicators							
-	cators (minimum of		check all that app	oly)			Secondary	Indicators (minimum of two required)
_	Water (A1)		Salt Crus					e Soil Cracks (B6)
	iter Table (A2)			nvertebrat	es (B13)			ely Vegetated Concave Surface (B8)
Saturation				n Sulfide C				ge Patterns (B10)
	arks (B1)				Table (C2)			ed Rhizospheres on Living Roots (C3)
	nt Deposits (B2)		✓ Oxidized					ere tilled)
	posits (B3)		· · · · · · · · · · · · · · · · · · ·	not tilled		.550.0	. ,	sh Burrows (C8)
	at or Crust (B4)				ed Iron (C	4)	,	tion Visible on Aerial Imagery (C9)
	oosits (B5)		Thin Muc			.,		orphic Position (D2)
	on Visible on Aerial	Imagery (B7)					,	leutral Test (D5)
·	tained Leaves (B9)	imagory (Dr)	00. (2)	(piaiii iii i	omamoj		· · · · · · · · · · · · · · · · · · ·	Heave Hummocks (D7) (LRR F)
Field Obser							<u> </u>	
Surface Water		/es N	o 🗸 Depth (ii	nches).				
Water Table			o V Depth (ii					
							land Uselvelans F	Present? Yes Vo No
Saturation Pi (includes cap		es N	o Depth (ii	ncnes):		_ weti	iaiiu nyarology F	riesent? res NO
	corded Data (stream	n gauge, mor	nitoring well, aerial	photos, p	revious ins	pections),	if available:	
Remarks:								
	n and satura	tion vieih	le on Good	e Farth	aerial	imaneı	rv 09/2017	03/2018, 09/2019,
			ic on Googl	o Laiti	acriai	mage	1 y 00/2017,	00/2010, 00/2010,
12/2019,	and 11/2020							

Project/Site: US 380		City/Cour	nty: Collin Cou	unty	Sampling Date: 08/16/20	021
Applicant/Owner: TxDOT				State: TX	Sampling Point: DP-63	
Investigator(s): Kelsea Hiebert and Wyatt Wolfenkoehler		Section,	Township, Rar	nge: N/A		
Landform (hillslope, terrace, etc.): Floodplain		Local rel	ief (concave, d	convex, none): none	Slope (%): <u>(</u>	0
Subregion (LRR): _J - Southwestern Prairies Cotton and Forage Region	Lat: 33.2	39745		Long: <u>-96.599039</u>	Datum: NAD	83
Soil Map Unit Name: Frio Clay Loam, occasionally flooded				NWI classific	ation: UPL	~
Are climatic / hydrologic conditions on the site typical for this	time of yea	r? Yes	✓ No_	(If no, explain in R	emarks.)	
Are Vegetation, Soil, or Hydrology si	ignificantly of	disturbed	? Are "	'Normal Circumstances" p	oresent? Yes <u>√</u> No	
Are Vegetation, Soil, or Hydrology na	aturally prob	olematic		eded, explain any answe		
SUMMARY OF FINDINGS - Attach site map s	showing	sampli	ing point lo	ocations, transects	, important features	, etc.
Hydrophytic Vegetation Present? Yes ✓ No	2					
Hydric Soil Present? Yes No			the Sampled		/	
Wetland Hydrology Present? Yes No		WI	ithin a Wetlan	nd? Yes	No <u>√</u>	
Remarks:						
Located within previously maintained ar	ea adja	cent t	o Emerge	ent Wetland Wate	er Feature 290. Ar	ea
located near old railroad.						
VEGETATION – Use scientific names of plant	ts.					
р.ш		Domina	nt Indicator	Dominance Test work	sheet:	
<u>Tree Stratum</u> (Plot size: 30'	% Cover	Species	Status	Number of Dominant S	pecies	
1				That Are OBL, FACW, (excluding FAC-):		(A)
2						(八)
3				Total Number of Domin Species Across All Stra		(B)
4. 5.						(-)
	0	= Total C	Cover	Percent of Dominant Sport That Are OBL, FACW,		(A/B)
Sapling/Shrub Stratum (Plot size: 15')				Prevalence Index wor	kohooti	
1				Total % Cover of:		
2					x 1 = 10	-
3				· · · · · · · · · · · · · · · · · · ·	x 2 = 0	· -
4	0	= Total C	:over	FAC species 85	x 3 = 255	=
Herb Stratum (Plot size: 5'	·	- rotar c	70 (01	FACU species		-
1. Iva annua	85	yes	<u>FAC</u>		x 5 = 0	_
2. Leersia oryzoides	10	no	OBL_	Column Totals: 95	(A) <u>265</u>	(B)
3. Euphorbia bicolor	5	no	<u>NI</u>	Prevalence Index	= B/A = 2.8	+
4				Hydrophytic Vegetation	on Indicators:	
5 6				1 - Rapid Test for I		
7				✓ 2 - Dominance Tes		
8.				3 - Prevalence Inde		
9				4 - Morphological A	Adaptations ¹ (Provide suppo s or on a separate sheet)	orting
10					phytic Vegetation ¹ (Explain	1)
30'	100.0	= Total C	Cover			
Woody Vine Stratum (Plot size: 30') 1.				be present, unless distr	il and wetland hydrology mu urbed or problematic.	ust
2.				Hydrophytic		
	0			Vegetation Present? Ye	s No	
% Bare Ground in Herb Stratum 0.0 Remarks:				Present? Ye	s No	
Remarks.						

Soll Sampling Point: DP-63

Profile Desc	ription: (Describe	to the depth	needed to docur	nent the i	ndicator	or confir	m the absence of ir	ndicators.)
Depth	Matrix			x Feature				
(inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks
0-12	10YR3/1	100					Clay	
							·	_
							· 	
							·	
1Tupo: C-C	oncentration, D=De	plotion PM-Pa	aduand Matrix CS	-Covered	d or Coots	d Sond C	roino ² l continu	n: PL=Pore Lining, M=Matrix.
	Indicators: (Appli					d Sand G		Problematic Hydric Soils ³ :
Histosol		cable to all Er	Sandy C					(A9) (LRR I, J)
	pipedon (A2)			Redox (S5				rie Redox (A16) (LRR F, G, H)
Black Hi				Matrix (S				ce (S7) (LRR G)
	n Sulfide (A4)			Mucky Mir				s Depressions (F16)
	d Layers (A5) (LRR	F)		Gleyed Ma			(LRR H	outside of MLRA 72 & 73)
	ıck (A9) (LRR F, G ,		Deplete	d Matrix (I	F3)		Reduced V	/ertic (F18)
	d Below Dark Surfa	ce (A11)		Oark Surfa	` '			t Material (TF2)
	ark Surface (A12)				rface (F7)			ow Dark Surface (TF12)
	fucky Mineral (S1)	(00) (I DD 0 I		epressio	` ,	40)		lain in Remarks)
	Mucky Peat or Peat icky Peat or Peat (\$				essions (F 73 of LRR			ydrophytic vegetation and drology must be present,
5 CITI WIC	icky real of real (3	55) (LKK F)	(IVIL	KA 12 oci	3 OI LKK	П)		urbed or problematic.
Restrictive I	_ayer (if present):						dilicos dist	urbed of problematio.
Type:								
	ches):						Hydric Soil Pres	sent? Yes No ✓
Remarks:			_				11,4110 0011110	
Nemarks.								
HYDROLO	GY							
Wetland Hy	drology Indicators	:						
Primary India	cators (minimum of	one required; c	heck all that apply	/)			Secondary In	ndicators (minimum of two required)
Surface	Water (A1)		Salt Crust	(B11)			Surface	Soil Cracks (B6)
	iter Table (A2)		Aquatic Inv		s (B13)			/ Vegetated Concave Surface (B8)
Saturation			Hydrogen					e Patterns (B10)
	arks (B1)		Dry-Seaso					d Rhizospheres on Living Roots (C3)
Sedimer	nt Deposits (B2)		Oxidized R					e tilled)
	posits (B3)			ot tilled)		Ü		Burrows (C8)
Algal Ma	at or Crust (B4)		Presence	of Reduce	ed Iron (C4	!)	✓ Saturation	on Visible on Aerial Imagery (C9)
_	osits (B5)		Thin Muck		•			phic Position (D2)
Inundation	on Visible on Aerial	Imagery (B7)	Other (Exp	lain in Re	marks)		FAC-Ne	utral Test (D5)
Water-S	tained Leaves (B9)						Frost-He	eave Hummocks (D7) (LRR F)
Field Obser	vations:							
Surface Water	er Present?	Yes No	Depth (inc	ches):		_		
Water Table			✓ Depth (inc					_
Saturation P			Depth (inc				land Hydrology Pre	esent? Yes No
(includes cap	oillary fringe)							
Describe Re	corded Data (strear	n gauge, monit	oring well, aerial p	hotos, pr	evious ins	pections),	, if available:	
Remarks:								
Aerials s	how possible	saturation	on 04/201	6, 01/2	2017, a	nd 11/2	2020, but are	a is frequently mowed
and mair	ntained.							

Project/Site: US 380		City/Cou	nty: Collin Co	unty	_ Sampling Date: 08	/12/2021
Applicant/Owner: TxDOT				State: TX		
Investigator(s): Mike Keenan, Kelsea Hiebert, Kathryn Burto	on	Section,	Township, Ra	nge: N/A		
Landform (hillslope, terrace, etc.): Floodplain		Local re	lief (concave,	convex, none): none	Slope	(%): <u>0-1</u>
Subregion (LRR):	on Lat: 33.2	238946		Long: <u>-96.594037</u>		NAD 83
Soil Map Unit Name: Lewisville Silty Clay, 3 to 5 percent slo	pes, eroded			NWI classif	ication: PFO	~
Are climatic / hydrologic conditions on the site typical for th	is time of yea	ar? Yes	√ No	(If no, explain in	Remarks.)	
Are Vegetation, Soil, or Hydrology				"Normal Circumstances"		No
Are Vegetation, Soil, or Hydrology				eeded, explain any answ	ers in Remarks.)	
SUMMARY OF FINDINGS – Attach site map						ures, etc.
Hydrophytic Vegetation Present? Yes ✓	Jo.					
Hydric Soil Present? Yes ✓ N	10		the Sampled		/ No	
Wetland Hydrology Present? Yes <u>✓</u> N		W	ithin a Wetlar	na? res	✓ No	
Remarks:		•				
Located within Forested Wetland Wate	er Featur	e 297	. Water F	eature 297 is an	ı old stream ch	annel
and within close proximity to Perennial	Stream	Wate	r Feature	293, Clemons C	Creek.	
VEGETATION – Use scientific names of plar	nts.					
	Absolute	Domina	ant Indicator	Dominance Test wor	rksheet:	
Tree Stratum (Plot size: 30'			s? Status	Number of Dominant	Species	
1. Ulmus americana	65	yes	FAC	That Are OBL, FACW (excluding FAC-):	, or FAC 4	(A)
Salix nigra Fraxinus pennsylvanica	- 30 5	yes				(/\)
		no	<u>FAC</u>	Total Number of Dom Species Across All St		(B)
5.						(=)
0	100	= Total (Cover	Percent of Dominant S That Are OBL, FACW		(A/B)
Sapling/Shrub Stratum (Plot size: 15'						
1. Fraxinus pennsylvanica		yes	<u>FAC</u>	Prevalence Index wo		
2. Celtis laevigata	_ 5	yes	<u>FAC</u>	_	$x 1 = \frac{0}{x}$	<u>'y.</u>
3					x 2 = 60	
4	25	= Total (x 3 = 285	
Herb Stratum (Plot size: 5'		= 10(a) (Jovei		x 4 = 0	
1					x 5 = 0	
2				Column Totals: 125	(A) <u>345</u>	(B)
3		-		Prevalence Inde	ex = B/A = 2.8	
4				Hydrophytic Vegetat	· · · · · · · · · · · · · · · · · · ·	
5				1 - Rapid Test for		on
6				✓ 2 - Dominance Tell	est is >50%	
7 8				✓ 3 - Prevalence Inc.		
9.				4 - Morphological	l Adaptations ¹ (Providerks or on a separate sh	supporting
10				Problematic Hydr		
		= Total (Cover			
Woody Vine Stratum (Plot size: 30') 1.				'Indicators of hydric so be present, unless dis	oil and wetland hydrolo sturbed or problematic.	
2.				Hydrophytic		
		= Total C		Vegetation Present? Y	√ ′es No	
% Bare Ground in Herb Stratum 100.0 Remarks:				i-rescrit!	'es No	
Remarks.						

Profile Dese	cription: (Describe Matrix	e to the dep		ument the dox Feature		or confir	m the absence	e of indicators.)
(inches)	Color (moist)	%	Color (moist)	<u>oox reature</u> %	Type ¹	Loc ²	Texture	Remarks
0-16	10YR4/1	95	10YR5/4	5	C	M	clay	distinct redox color
					_	·		
							· ·	
					_		. <u>-</u>	
							· · ·	
1Tunor C. C	encontrotion D. Do	nletien DM	Dadwood Motrix		d or Coot		21 o	action. DL Dave Lining M Metrix
	oncentration, D=De Indicators: (Appli					ed Sand G		cation: PL=Pore Lining, M=Matrix. s for Problematic Hydric Soils ³ :
Histosol				y Gleyed M				Muck (A9) (LRR I, J)
	pipedon (A2)			y Redox (S				Prairie Redox (A16) (LRR F, G, H)
	istic (A3)			ed Matrix (Surface (S7) (LRR G)
Hydroge	en Sulfide (A4)			y Mucky M			High F	Plains Depressions (F16)
	d Layers (A5) (LRR			y Gleyed M			`	RR H outside of MLRA 72 & 73)
	uck (A9) (LRR F, G			eted Matrix				ced Vertic (F18)
	d Below Dark Surfa ark Surface (A12)	ice (ATT)		x Dark Surf eted Dark S		`	· 	arent Material (TF2) Shallow Dark Surface (TF12)
	Mucky Mineral (S1)			x Depression	•	,		(Explain in Remarks)
	Mucky Peat or Peat	(S2) (LRR (Plains Dep		16)		of hydrophytic vegetation and
5 cm Mi	ucky Peat or Peat (S3) (LRR F)		/ILRA 72 &				d hydrology must be present,
							unless	s disturbed or problematic.
Restrictive	Layer (if present):							
Type:								1
Depth (in	ches):						Hydric Soi	Present? Yes No
Remarks:								
HYDROLO	GY							
Wetland Hy	drology Indicators	s:						
Primary Indi	cators (minimum of	one required	d; check all that ap	ply)			Second	ary Indicators (minimum of two required)
Surface	Water (A1)		Salt Cru	st (B11)			Sur	face Soil Cracks (B6)
	ater Table (A2)		Aquatic	Invertebrat	es (B13)		Spa	arsely Vegetated Concave Surface (B8)
✓ Saturati	on (A3)		Hydroge	en Sulfide C	Odor (C1)		Dra	inage Patterns (B10)
Water N	/larks (B1)		Dry-Sea	son Water	Table (C2))	Oxi	dized Rhizospheres on Living Roots (C3)
/	nt Deposits (B2)		Oxidized	d Rhizosph	eres on Liv	ing Roots		vhere tilled)
	posits (B3)		•	e not tilled	•			yfish Burrows (C8)
_	at or Crust (B4)			e of Reduc	,	4)		uration Visible on Aerial Imagery (C9)
	posits (B5)			ck Surface			,	omorphic Position (D2)
	ion Visible on Aeria	0 , (7) Other (E	Explain in R	emarks)			C-Neutral Test (D5)
<u> </u>	Stained Leaves (B9))					Fro	st-Heave Hummocks (D7) (LRR F)
Field Obser		V	N	(' l)				
Surface Wat			No <u>✓</u> Depth			-		
Water Table			No Depth			_		- · · · · · ·
Saturation P	resent? pillary fringe)	Yes <u>▼</u>	No Depth	(inches): 1		Wet	land Hydrolog	y Present? Yes ✓ No
Describe Re	ecorded Data (strea	m gauge, mo	onitoring well, aeria	al photos, p	revious in	spections)	, if available:	
Inundati	on on 11/202	20 aeria	l imagery.					
Remarks:			- -					

Project/Site: US 380	(City/Cour	nty: Collin Cou	unty	Sampling Date: 08/12/2	2021
Applicant/Owner: TxDOT				State: TX	Sampling Point: DP-65	
Investigator(s): Mike Keenan, Kelsea Hiebert, Kathryn Bur	ton	Section,	Township, Ra	nge: N/A		
Landform (hillslope, terrace, etc.): Floodplain		Local rel	ief (concave,	convex, none): convex	Slope (%):	1-2
Subregion (LRR): J - Southwestern Prairies Cotton and Forage Reg	gion Lat: 33.2	238952		Long: <u>-96.593978</u>	Datum: NAD	83
Soil Map Unit Name: Lewisville Silty Clay, 3 to 5 percent s	lopes, eroded			NWI classific	ation: UPL	~
Are climatic / hydrologic conditions on the site typical for t	his time of yea	ar? Yes	No	(If no, explain in R	emarks.)	
Are Vegetation, Soil, or Hydrology	significantly	disturbed	l? Are '	"Normal Circumstances" p	oresent? Yes <u>√</u> No)
Are Vegetation, Soil, or Hydrology	naturally pro	blematic'	? (If ne	eeded, explain any answe	rs in Remarks.)	
SUMMARY OF FINDINGS - Attach site map	showing	sampl	ing point l	ocations, transects	, important features	s, etc.
Hydrophytic Vegetation Present? Yes	No. ✓					
Hydric Soil Present? Yes			the Sampled		/	
Wetland Hydrology Present? Yes		W	ithin a Wetlar	nd? Yes	No <u> </u>	
Remarks:		I				
Located adjacent to Forested Wetland	d Water F	eature	e 297.			
,						
VEGETATION – Use scientific names of pla	nte					
VEGETATION – Ose scientific flames of pla	Absolute	Domino	ant Indicator	Dominance Test work	choot	
Tree Stratum (Plot size: 30'			Status	Number of Dominant S		
1. Ulmus americana	80	yes	FAC	That Are OBL, FACW,	or FAC	
2. Fraxinus pennsylvanica	10	no	FAC	(excluding FAC-):	2	(A)
3. Maclura pomifera	5	no	FACU	Total Number of Domin	ant	
4. Juniperus virginiana	5	no	UPL	Species Across All Stra	ta: <u>4</u>	(B)
5				Percent of Dominant Sp		
Cooling/Chruh Stratum (Diot aiza: 15'	100	= Total C	Cover	That Are OBL, FACW,	or FAC: 50.0%	(A/B)
Sapling/Shrub Stratum (Plot size: 15') 1. Ulmus americana	10	yes	FAC	Prevalence Index wor	ksheet:	-
		<u> </u>	<u> 1 AC</u>	Total % Cover of:	Multiply by:	_
2				OBL species 0	x 1 = 0	_
3				FACW species 0	x 2 = 0	_
7.	10	= Total C	Cover		x 3 = 300	_
Herb Stratum (Plot size: 5'			,0101	FACU species 15	x 4 = 60	_
1. Toxicodendron radicans	5	yes	FACU	UPL species 5	x 5 = <u>25</u>	_
2				Column Totals: 120	(A) <u>385</u>	_ (B)
3				Prevalence Index	= B/A = 3.2	+
4				Hydrophytic Vegetation	<u>- </u>	
5				1 - Rapid Test for H		
6				2 - Dominance Tes	t is >50%	
7				3 - Prevalence Inde	ex is ≤3.0 ¹	
8				4 - Morphological A	Adaptations ¹ (Provide supp	porting
9 10.					s or on a separate sheet)	
10.		= Total C	Cover	Problematic Hydro	phytic Vegetation ¹ (Explain	n)
Woody Vine Stratum (Plot size: 30'		- rotar c	JOVCI		l and wetland hydrology m	nust
1. Smilax bona-nox	5	yes	<u>FACU</u>	be present, unless distu	irbed or problematic.	
2				Hydrophytic		
0/ Bara Carandia Hart Otarian 95.0	5	= Total C	Cover	Vegetation Present? Yes	s No	
% Bare Ground in Herb Stratum 95.0 Remarks:						
Tomano.						

SOIL

Sampling Point: DP-65

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix			x Features			<u> </u>			
(inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks		
0-16	10YR3/2	100					clay			
								_		
	oncentration, D=De					d Sand G		n: PL=Pore Lining, M=Matrix.		
-	Indicators: (Appl	icable to all LRR						Problematic Hydric Soils ³ :		
Histosol				Sleyed Ma				(A9) (LRR I, J)		
	oipedon (A2)			Redox (S5)				rie Redox (A16) (LRR F, G, H)		
	stic (A3) en Sulfide (A4)			l Matrix (S Mucky Min				ce (S7) (LRR G) s Depressions (F16)		
	d Layers (A5) (LRR	· F)		Sleyed Ma			-	outside of MLRA 72 & 73)		
	uck (A9) (LRR F, G			d Matrix (F	. ,		Reduced V	,		
	d Below Dark Surfa			Dark Surfa	,			t Material (TF2)		
	ark Surface (A12)	,			rface (F7)			ow Dark Surface (TF12)		
Sandy N	Mucky Mineral (S1)		Redox D	Depression	ns (F8)		Other (Exp	lain in Remarks)		
	Mucky Peat or Peat	. , , , , , , , , , , , , , , , , , , ,	High Pla	ins Depre	essions (F	16)	³ Indicators of hy	ydrophytic vegetation and		
5 cm Mu	icky Peat or Peat (S3) (LRR F)	(MLI	RA 72 & 7	3 of LRR	H)		drology must be present,		
							unless dist	urbed or problematic.		
Restrictive	Layer (if present):									
Type:			•					./		
Depth (in	ches):		-				Hydric Soil Pres	sent? Yes No		
Remarks:										
	CV									
HYDROLO										
Wetland Hy	drology Indicators	s:								
Primary India	cators (minimum of	one required; ch	eck all that apply	/)			Secondary In	ndicators (minimum of two required)		
	Water (A1)		Salt Crust	(B11)				Soil Cracks (B6)		
High Wa	ater Table (A2)		Aquatic Inv	ertebrate:	s (B13)		Sparsely	Vegetated Concave Surface (B8)		
Saturati	on (A3)		Hydrogen	Sulfide Od	dor (C1)		Drainage	e Patterns (B10)		
Water M	larks (B1)		Dry-Seaso	n Water T	able (C2)		Oxidized	Rhizospheres on Living Roots (C3)		
Sedime	nt Deposits (B2)		Oxidized R	hizosphei	res on Livi	ing Roots	(C3) (where	e tilled)		
Drift De	posits (B3)		(where r	ot tilled)				Burrows (C8)		
Algal Ma	at or Crust (B4)		Presence of	of Reduce	d Iron (C4	ł)	Saturation	on Visible on Aerial Imagery (C9)		
Iron Dep	oosits (B5)		Thin Muck	Surface (C7)		Geomor	phic Position (D2)		
Inundati	on Visible on Aeria	I Imagery (B7)	Other (Exp	lain in Re	marks)		FAC-Ne	utral Test (D5)		
Water-S	tained Leaves (B9))					Frost-He	eave Hummocks (D7) (LRR F)		
Field Obser										
Surface Wat		Yes No _								
Water Table	Present?	Yes No _	✓ Depth (inc	ches):		_		,		
Saturation P	resent?	Yes No _	✓ Depth (inc	ches):		Wetl	and Hydrology Pre	esent? Yes No		
(includes cap										
Describe Re	corded Data (strea	m gauge, monito	rıng weii, aerial p	onotos, pre	evious ins	pections),	ır available:			
Remarks:										

Project/Site: US 380	(City/Cour	nty: Collin C	County	Sampling Date: 09/14/2020	
Applicant/Owner: TXDOT				State: TX	_ Sampling Point: DP-66	
Investigator(s): Kelsea Hiebert, Ethan Eichler		Section, -	Township, F	Range: N/A		
				=	e Slope (%): 2	
Subregion (LRR):						
Soil Map Unit Name: Altoga silty clay, 5 to 8 percent slopes,				NWI classif	ication: PFO	
Are climatic / hydrologic conditions on the site typical for this			✓ No	(If no, explain in	Remarks.)	
Are Vegetation, Soil, or Hydrologys					'present? Yes <u>√</u> No	
Are Vegetation, Soil, or Hydrology r				needed, explain any answ		
SUMMARY OF FINDINGS – Attach site map						tc.
			<u> </u>	·	· · ·	
Hydrophytic Vegetation Present? Yes ✓ N Hydric Soil Present? Yes ✓ N	0	Is	the Sample			
Hydric Soil Present? Yes ✓ N Wetland Hydrology Present? Yes ✓ N		wi	ithin a Wetl	and? Yes	✓ No	
Remarks:	<u> </u>					
Located within Isolated Forested Wetla	nd Wate	er Fea	ture 329	Adjacent to Upl	and Pond Water	
Feature 330.	iia vvak	01 1 00	1010 020	7. Majacom to opi	and rona water	
VEGETATION – Use scientific names of plan						
Tree Stratum (Plot size: 30'	Absolute % Cover		int Indicator Status			
1. Maclura pomifera	20	yes	FACU	Number of Dominant 3That Are OBL, FACW		
2. Ulmus americana	20	yes	FAC	(excluding FAC-):	<u>3</u> (A)	,
3. Fraxinus pennsylvanica	20	yes	FAC	Total Number of Domi	inant	
4. Salix nigra	20	yes	FACW	Species Across All Str	rata: <u>4</u> (B)	
5. Carya illinoinensis	15	no	FAC	 Percent of Dominant S 	Species	
Conline/Chrush Ctratum (Diet aires, 15)	95	= Total C	Cover	That Are OBL, FACW	, or FAC: <u>75.0%</u> (A/E	В)
Sapling/Shrub Stratum (Plot size: 15'				Prevalence Index wo	 orksheet:	
1				Total % Cover of:	Multiply by:	
2				OBL species 0	x 1 = 0	
4				FACW species 20	x 2 = 40	
	0	= Total C	Cover		x 3 = 165	
Herb Stratum (Plot size: 5'					x 4 = <u>80</u>	
1				_ '	x 5 = 0	
2				_ Column Totals: 95	(A) <u>285</u> (B	5)
3				Prevalence Inde	ex = B/A = 3.0	+
4				Hydrophytic Vegetat		
5				1 - Rapid Test for	Hydrophytic Vegetation	
6				_	est is >50%	
7 8				- ✓ 3 - Prevalence Inc	dex is ≤3.0 ¹	
9.				4 - Morphological	Adaptations ¹ (Provide supporting	ng
10.					rks or on a separate sheet) rophytic Vegetation ¹ (Explain)	
		= Total C		- Problematic Hydr	opnytic vegetation (Explain)	
Woody Vine Stratum (Plot size: 30') 1.					oil and wetland hydrology must sturbed or problematic.	
2.				Hydrophytic		
	0			Vegetation	√ Nc	
% Bare Ground in Herb Stratum 100.0				Present? Y	'es No	
Remarks:						

SOIL Sampling Point: DP-66

Depth	Matrix	o uie ueptii Ne		nent the indicator or x Features	COMMINIT	iie anselice	or mulcators.
(inches)	Color (moist)	% C	Color (moist)	%Type ¹	Loc ²	Texture	Remarks
						Clay	
					 -		
							
1T C. C.		tion DM Dod	Lucard Matrice CC		C C	21 -	
	ncentration, D=Depi ndicators: (Applica			=Covered or Coated	Sand Grai		cation: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :
-		DIE 10 all LKK					•
Histosol (. ,			Gleyed Matrix (S4)			Muck (A9) (LRR I, J)
-	ipedon (A2)			Redox (S5)			Prairie Redox (A16) (LRR F, G, H) Surface (S7) (LRR G)
Black His	n Sulfide (A4)			Matrix (S6) Mucky Mineral (F1)			Plains Depressions (F16)
				Gleyed Matrix (F2)		_	RR H outside of MLRA 72 & 73)
	Layers (A5) (LRR F) ck (A9) (LRR F, G, H			d Matrix (F3)		`	ed Vertic (F18)
' '	Below Dark Surface	•		Park Surface (F6)			arent Material (TF2)
-	rk Surface (A12)	(/ () /		d Dark Surface (F7)			Shallow Dark Surface (TF12)
	ucky Mineral (S1)			Depressions (F8)			(Explain in Remarks)
-	lucky Peat or Peat (S	2) (LRR G, H)		ins Depressions (F16	5)		of hydrophytic vegetation and
	cky Peat or Peat (S3	, , , , , ,	-	RA 72 & 73 of LRR H			d hydrology must be present,
						unless	disturbed or problematic.
Restrictive L	ayer (if present):						
Type:							
	hes):					Hydric Soil	Present? Yes No
Remarks:							
	a dagariba agi	l profile o	saumad by	idria basad an	bydrol	oav ond	vocatation
100 wet t	o describe so	i prome, a	issumed my	/dric based on	Hydron	ogy and	vegetation.
HYDROLOG	ΞY						
Wetland Hyd	rology Indicators:						
Primary Indica	ators (minimum of or	e required; ch	eck all that apply	/)		Seconda	ary Indicators (minimum of two required)
✓ Surface \	Vater (A1)		Salt Crust	(B11)		Surf	face Soil Cracks (B6)
	er Table (A2)			vertebrates (B13)			rsely Vegetated Concave Surface (B8)
Saturatio	` '			Sulfide Odor (C1)			inage Patterns (B10)
Water Ma				n Water Table (C2)		· · · · · · · · · · · · · · · · · · ·	dized Rhizospheres on Living Roots (C3)
	t Deposits (B2)			hizospheres on Living	r Roots (C	·	where tilled)
	osits (B3)			not tilled)	y 110015 (O		yfish Burrows (C8)
			,	of Reduced Iron (C4)			uration Visible on Aerial Imagery (C9)
Algai wai	t or Crust (B4)		· 	Surface (C7)			omorphic Position (D2)
	on Visible on Aerial In	(DZ)					
' '		nagery (B7)	Other (Exp	lain in Remarks)			C-Neutral Test (D5)
	ained Leaves (B9)					Fros	st-Heave Hummocks (D7) (LRR F)
Field Observ		,		12			
Surface Wate				ches): 12			
Water Table F	Present? Ye	s No _	✓ Depth (inc	ches):			,
Saturation Pro		s No _	✓ Depth (inc	ches):	Wetlan	d Hydrolog	y Present? Yes _ ✓ No
(includes capi		rauge monitor	ing well parial r	hotos, previous inspe	octions) if	availabla:	
Describe Vec	orded Data (Stredth	yauye, momiloi	ing well, aelial þ	motos, previous irispe	, ouoi is j, 11	avaliabit.	
Remarks:							
	م در حاطانوارد	oogle Fee	الحاسبة		المامورة	1/2020	
		•		agery 03/2018			
Inundatio	n visible on G	oogle Ear	th aerial im	agery 11/2018	3 and 1	1/2020.	
manadio		0		5 7			

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: US 380	(City/County	: Collin Cou	ınty	Sampling Date: 08/17/2021
Applicant/Owner: TxDOT				State: TX	Sampling Point: DP-67
Investigator(s): Kelsea Hiebert, Kathryn Burton		Section, To	ownship, Rar	nge: N/A	
Landform (hillslope, terrace, etc.): Berm		Local relie	f (concave, d	convex, none): convex	Slope (%): 1
Subregion (LRR):	Lat: 33.2	06807		Long: <u>-96.581322</u>	Datum: NAD 83
Soil Map Unit Name: Altoga Silty Clay, 5 to 8 percent slopes,				NWI classific	ation: UPL
Are climatic / hydrologic conditions on the site typical for this	time of yea	ar? Yes	√ No _	(If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrologysi	ignificantly of	disturbed?	Are "	Normal Circumstances" p	oresent? Yes No✓
Are Vegetation, Soil, or Hydrologyn	aturally prob	olematic?	(If ne	eded, explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing	samplir	ng point lo	ocations, transects	, important features, etc.
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No			ne Sampled		No. of
Wetland Hydrology Present? Yes No Remarks:		With	nin a Wetlan	id? Yes	No
Located on berm adjacent to Isolated F Feature 330. Area was previously pond					•
VEGETATION – Use scientific names of plant			п арапс	30 ana mioa m 20	
VEGETATION – Ose scientific fiames of plant	Absolute	Dominon	t Indicator	Dominance Test work	chaoti
Tree Stratum (Plot size: 30'	% Cover			Number of Dominant S	
1				That Are OBL, FACW,	or FAC
2				(excluding FAC-):	<u>2</u> (A)
3				Total Number of Domin	
4				Species Across All Stra	ata: <u>3</u> (B)
5				Percent of Dominant Sp	
Sapling/Shrub Stratum (Plot size: 15')	0	= Total Co	ver	That Are OBL, FACW,	JI FAC: <u>60:170</u> (A/B)
1.				Prevalence Index wor	
2.			·	Total % Cover of:	
3.			·		x 1 = 0
4.					x 2 = 30
	0	= Total Co	ver		x 3 = <u>27</u>
Herb Stratum (Plot size: 5'				FACU species 5	x 4 = <u>20</u>
1. Paspalum urvillei	15	yes	FACW		x 5 = <u>15</u>
2. Ambrosia trifida	5	yes	FAC 💌	Column Totals: 32	(A) <u>92</u> (B)
3. Euphorbia nutans	5	yes	FACU	Prevalence Index	- P/A - 29
4. Eragrostis spectabillis	3	no	UPL 💌	Hydrophytic Vegetation	
5. Setaria parviflora	2	no	FAC 🔽	1 - Rapid Test for H	
6. Parthenium hysterophorus	2	no	FAC	✓ 2 - Dominance Tes	
7				3 - Prevalence Inde	
8					Adaptations ¹ (Provide supporting
9					s or on a separate sheet)
10				Problematic Hydro	phytic Vegetation ¹ (Explain)
30'	32.0	= Total Co	ver		
Woody Vine Stratum (Plot size: 30'				be present, unless distu	l and wetland hydrology must urbed or problematic.
1			·	Llysdrambystia	
	0 :	- Total Co	ver	Hydrophytic Vegetation	✓
% Bare Ground in Herb Stratum 68.0	<u>-</u>	– Total CO	V ()	Present? Ye	s No
Remarks:				•	
Fill material berm adjacent to Isolated F	orested	Wetla	nd Wate	r Feature 329 an	d Upland Pond Water
Feature 330.					,

SOIL Sampling Point: DP-67

Depth (inches)	Matrix	(Red	ox Feature	S			
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-4	10YR4/2	60					Clay	
0-4	10YR3/1	15						
0-4	10YR7/1							
0-4	5YR8/1	10		_				
	01110/1							
	_							
	-							
	· -							
				_				
	Concentration, D=D					d Sand G		on: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (App	licable to all LR	Rs, unless other	erwise not	ed.)		Indicators for	Problematic Hydric Soils ³ :
Histoso	` '		Sandy					k (A9) (LRR I, J)
	Epipedon (A2)			Redox (S5				irie Redox (A16) (LRR F, G, H)
	Histic (A3)			ed Matrix (S				ace (S7) (LRR G)
	en Sulfide (A4)	D E\		Mucky Mi Gleyed M			_	s Depressions (F16) I outside of MLRA 72 & 73)
	ed Layers (A5) (LR luck (A9) (LRR F, (ed Matrix (, ,		,	Vertic (F18)
	ed Below Dark Surf			Dark Surfa	,			nt Material (TF2)
	Oark Surface (A12)	,		ed Dark Su				ow Dark Surface (TF12)
	Mucky Mineral (S1)		Depressio				olain in Remarks)
	Mucky Peat or Pea		l) High P	lains Depr	essions (F	16)		ydrophytic vegetation and
5 cm M	lucky Peat or Peat	(S3) (LRR F)	(M I	LRA 72 &	73 of LRR	H)		drology must be present,
Daatsiativa	Lavar (if massaut)	1-					unless dis	turbed or problematic.
Type: G	Layer (if present)):						
, <u> </u>	nches): 4		_				Undeia Cail Dea	esent? Yes No
	ncnes): <u>+</u>		_				Hydric Soil Pre	esent? Yes No
Remarks:								
(irittv te	vtura ta alav	en						
Ornery to	xiure to clay	fill material.	Heavily di	sturbe	d.			
	xiure to clay	fill material.	Heavily di	sturbed	. k			
YDROLO		fill material	Heavily di	sturbed	d. 			
IYDROLO			Heavily di	sturbed	d.			
YDROLO	OGY	rs:			d.		Secondary I	ndicators (minimum of two required)
YDROLO Wetland Hy Primary Ind	OGY ydrology Indicator	rs:		oly)	d.		-	ndicators (minimum of two required) Soil Cracks (B6)
YDROLO Wetland Hy Primary Ind Surface	OGY ydrology Indicator icators (minimum c	rs:	neck all that app	oly) t (B11)			Surface	· · · · · · · · · · · · · · · · · · ·
YDROLO Wetland Hy Primary Ind Surface	OGY ydrology Indicator icators (minimum c e Water (A1) //ater Table (A2)	rs:	neck all that app	oly) t (B11) nvertebrate	es (B13)		Surface Sparsel	Soil Cracks (B6)
YDROLO Wetland Hy Primary Ind Surface High W Saturat	OGY ydrology Indicator icators (minimum c e Water (A1) //ater Table (A2)	rs:	heck all that app Salt Crus Aquatic Ir	oly) t (B11) nvertebrate n Sulfide O	es (B13) dor (C1)		Surface Sparsel Drainag	Soil Cracks (B6) y Vegetated Concave Surface (B8)
Wetland Hy Primary Ind Surface High W Saturat Water I	ody ydrology Indicator icators (minimum o e Water (A1) /ater Table (A2) icion (A3)	rs:	neck all that app Salt Crus Aquatic Ir Hydroger	oly) t (B11) nvertebrate n Sulfide O on Water ⁻	es (B13) dor (C1) Fable (C2)		Surface Sparsel Drainag Oxidize	Soil Cracks (B6) y Vegetated Concave Surface (B8) te Patterns (B10)
Wetland Hy Primary Ind Surface High W Saturat Water I Sedime	ydrology Indicator icators (minimum of the Water (A1) vater Table (A2) icion (A3) Warks (B1)	rs:	heck all that app Salt Crus Aquatic Ir Hydroger Dry-Seas Oxidized	oly) t (B11) nvertebrate n Sulfide O on Water ⁻	es (B13) dor (C1) Fable (C2) res on Liv		Surface Sparsel Drainag Oxidize (C3) (where	Soil Cracks (B6) y Vegetated Concave Surface (B8) le Patterns (B10) d Rhizospheres on Living Roots (C3
Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De	ydrology Indicator icators (minimum of water (A1) /ater Table (A2) cion (A3) Marks (B1) ent Deposits (B2)	rs:	heck all that app Salt Crus Aquatic Ir Hydroger Dry-Seas Oxidized	oly) t (B11) nvertebrate n Sulfide O on Water - Rhizosphe not tilled)	es (B13) dor (C1) Fable (C2) res on Liv	ing Roots	Surface Sparsel Drainag Oxidize (C3) (wher	Soil Cracks (B6) y Vegetated Concave Surface (B8) te Patterns (B10) d Rhizospheres on Living Roots (C3 te tilled)
Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De	ydrology Indicator icators (minimum of e Water (A1) fater Table (A2) fion (A3) Marks (B1) ent Deposits (B2) eposits (B3)	rs:	heck all that app Salt Crus Aquatic Ir Hydroger Dry-Seas Oxidized (where	oly) t (B11) nvertebrate n Sulfide O on Water Rhizosphe not tilled)	es (B13) dor (C1) Fable (C2) res on Liv	ing Roots	Surface Sparsel Drainag Oxidize (C3) (where	Soil Cracks (B6) y Vegetated Concave Surface (B8) ge Patterns (B10) d Rhizospheres on Living Roots (C3 re tilled) n Burrows (C8)
Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De	pdrology Indicators (minimum of Water (A1) (ater Table (A2) (ion (A3)) (Marks (B1) (B2) (B2) (B3) (B3) (B4) (B4)	rs: of one required; c	heck all that app Salt Crus Aquatic Ir Hydroger Dry-Seas Oxidized (where	oly) t (B11) nvertebrate n Sulfide O on Water Rhizosphe not tilled) t of Reduce k Surface	es (B13) dor (C1) Fable (C2) res on Liv ed Iron (C4	ing Roots	Surface Sparsel Drainag Oxidize (C3) (wher Crayfish Saturati Geomo	Soil Cracks (B6) y Vegetated Concave Surface (B8) te Patterns (B10) d Rhizospheres on Living Roots (C3 re tilled) in Burrows (C8) on Visible on Aerial Imagery (C9)
Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De	pdrology Indicators (minimum of Water (A1) (ater Table (A2) (tion (A3) (Marks (B1) ent Deposits (B2) eposits (B3) (lat or Crust (B4) eposits (B5)	rs: of one required; cl	neck all that app Salt Crus Aquatic Ir Hydroger Dry-Seas Oxidized (where Presence	oly) t (B11) nvertebrate n Sulfide O on Water Rhizosphe not tilled) t of Reduce k Surface	es (B13) dor (C1) Fable (C2) res on Liv ed Iron (C4	ing Roots	Surface Sparsel Drainag Oxidize (C3) (wher Crayfish Saturati Geomo	Soil Cracks (B6) y Vegetated Concave Surface (B8) le Patterns (B10) d Rhizospheres on Living Roots (C3 re tilled) in Burrows (C8) lon Visible on Aerial Imagery (C9) rphic Position (D2)
Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Inundar Water-t	ydrology Indicator icators (minimum of water (A1) /ater Table (A2) cion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) eposits (B5) tion Visible on Aeri Stained Leaves (B8)	rs: of one required; cl	neck all that app Salt Crus Aquatic Ir Hydroger Dry-Seas Oxidized (where Presence	oly) t (B11) nvertebrate n Sulfide O on Water Rhizosphe not tilled) t of Reduce k Surface	es (B13) dor (C1) Fable (C2) res on Liv ed Iron (C4	ing Roots	Surface Sparsel Drainag Oxidize (C3) (wher Crayfish Saturati Geomo	Soil Cracks (B6) y Vegetated Concave Surface (B8) the Patterns (B10) d Rhizospheres on Living Roots (C3 the tilled) in Burrows (C8) then Visible on Aerial Imagery (C9) therefore Position (D2) the soil Cracks (D5)
Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Inundar Water-S	ydrology Indicator icators (minimum of water (A1) /ater Table (A2) cion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) eposits (B5) tion Visible on Aeri Stained Leaves (B8)	rs: of one required; cl al Imagery (B7) Yes No	neck all that app Salt Crus Aquatic Ir Hydroger Dry-Seas Oxidized (where Presence Thin Muc Other (Ex	oly) t (B11) nvertebrate n Sulfide O on Water Rhizosphe not tilled) e of Reduce k Surface coplain in Re	es (B13) dor (C1) Fable (C2) res on Liv ed Iron (C4 (C7) emarks)	ing Roots	Surface Sparsel Drainag Oxidize (C3) (wher Crayfish Saturati Geomo	Soil Cracks (B6) y Vegetated Concave Surface (B8) the Patterns (B10) d Rhizospheres on Living Roots (C3 the tilled) in Burrows (C8) then Visible on Aerial Imagery (C9) therefore Position (D2) the soil Cracks (D5)
Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Inundar Water-S Field Obse	ydrology Indicator icators (minimum of the Water (A1) vater Table (A2) vicion (A3) Marks (B1) ent Deposits (B2) eposits (B3) dat or Crust (B4) eposits (B5) tion Visible on Aeri Stained Leaves (B3) rvations:	rs: of one required; cl	neck all that app Salt Crus Aquatic Ir Hydroger Dry-Seas Oxidized (where Presence Thin Muc Other (Ex	oly) t (B11) nvertebrate n Sulfide O con Water Rhizosphe not tilled) e of Reduce k Surface coplain in Re	es (B13) dor (C1) Fable (C2) res on Liv ed Iron (C4 (C7) emarks)	ing Roots	Surface Sparsel Drainag Oxidize (C3) (wher Crayfish Saturati Geomo	Soil Cracks (B6) y Vegetated Concave Surface (B8) le Patterns (B10) d Rhizospheres on Living Roots (C3 re tilled) in Burrows (C8) ion Visible on Aerial Imagery (C9) rephic Position (D2) eutral Test (D5) leave Hummocks (D7) (LRR F)
Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Inundar Water-S Field Obse Surface Water Table Saturation F	ydrology Indicator icators (minimum of water (A1) dater Table (A2) dion (A3) Marks (B1) ent Deposits (B2) eposits (B3) dat or Crust (B4) eposits (B5) tion Visible on Aeri Stained Leaves (B3 rvations: ater Present?	rs: of one required; cl al Imagery (B7) Yes No	neck all that app Salt Crus Aquatic Ir Hydroger Dry-Seas Oxidized (where Presence Thin Muc Other (Ex	t (B11) nvertebrate n Sulfide O on Water T Rhizosphe not tilled) e of Reduce k Surface cplain in Re	es (B13) dor (C1) Fable (C2) res on Liv ed Iron (C4 (C7) emarks)	ing Roots	Surface Sparsel Drainag Oxidize (C3) (wher Crayfish Saturati Geomo FAC-Ne	Soil Cracks (B6) y Vegetated Concave Surface (B8) the Patterns (B10) d Rhizospheres on Living Roots (C3 the tilled) in Burrows (C8) then Visible on Aerial Imagery (C9) therefore Position (D2) the soil Cracks (D5)
YDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Inundar Water-S Field Obse Surface Wa Water Table Saturation If	ydrology Indicator icators (minimum of water (A1) vater Table (A2) cion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) eposits (B5) tion Visible on Aeri Stained Leaves (B5) rvations: ter Present? e Present?	al Imagery (B7) Yes No Yes No Yes No	neck all that app Salt Crus Aquatic Ir Hydroger Dry-Seas Oxidized (where Presence Thin Muc Other (Ex	bly) t (B11) nvertebrate n Sulfide O con Water Rhizosphe not tilled) tof Reduce k Surface coplain in Re nches): nches):	es (B13) dor (C1) Fable (C2) eres on Liv ed Iron (C4 (C7) emarks)	ing Roots	Surface Sparsel Drainag Oxidize (C3) (wher Crayfish Saturati Geomo FAC-Ne Frost-H	Soil Cracks (B6) y Vegetated Concave Surface (B8) le Patterns (B10) d Rhizospheres on Living Roots (C3 re tilled) in Burrows (C8) ion Visible on Aerial Imagery (C9) rephic Position (D2) eutral Test (D5) leave Hummocks (D7) (LRR F)
YDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Inundar Water-S Field Obse Surface Wa Water Table Saturation If	pdrology Indicator icators (minimum of Water (A1) Vater Table (A2) Vater Table (A2) Vater Table (A2) Vater Deposits (B1) Vater Deposits (B3) Vater Crust (B4) Vater (B5) Vater Present? Vater Present? Vater Present?	al Imagery (B7) Yes No Yes No Yes No	neck all that app Salt Crus Aquatic Ir Hydroger Dry-Seas Oxidized (where Presence Thin Muc Other (Ex	bly) t (B11) nvertebrate n Sulfide O con Water Rhizosphe not tilled) tof Reduce k Surface coplain in Re nches): nches):	es (B13) dor (C1) Fable (C2) eres on Liv ed Iron (C4 (C7) emarks)	ing Roots	Surface Sparsel Drainag Oxidize (C3) (wher Crayfish Saturati Geomo FAC-Ne Frost-H	Soil Cracks (B6) y Vegetated Concave Surface (B8) le Patterns (B10) d Rhizospheres on Living Roots (C3 re tilled) in Burrows (C8) ion Visible on Aerial Imagery (C9) rephic Position (D2) eutral Test (D5) leave Hummocks (D7) (LRR F)
YDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Inundar Water-S Field Obse Surface Wa Water Table Saturation F includes ca	pdrology Indicator icators (minimum of Water (A1) Vater Table (A2) Vater Table (A2) Vater Table (A2) Vater Deposits (B1) Vater Deposits (B3) Vater Crust (B4) Vater (B5) Vater Present? Vater Present? Vater Present?	al Imagery (B7) Yes No Yes No Yes No	neck all that app Salt Crus Aquatic Ir Hydroger Dry-Seas Oxidized (where Presence Thin Muc Other (Ex	bly) t (B11) nvertebrate n Sulfide O con Water Rhizosphe not tilled) tof Reduce k Surface coplain in Re nches): nches):	es (B13) dor (C1) Fable (C2) eres on Liv ed Iron (C4 (C7) emarks)	ing Roots	Surface Sparsel Drainag Oxidize (C3) (wher Crayfish Saturati Geomo FAC-Ne Frost-H	Soil Cracks (B6) y Vegetated Concave Surface (B8) the Patterns (B10) d Rhizospheres on Living Roots (C3 te tilled) in Burrows (C8) fon Visible on Aerial Imagery (C9) rephic Position (D2) teutral Test (D5) teave Hummocks (D7) (LRR F)
YDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Inundar Water-S Field Obse Surface Wa Water Table Saturation Fincludes ca Describe Re	pdrology Indicator icators (minimum of Water (A1) Vater Table (A2) Vater Table (A2) Vater Table (A2) Vater Table (A2) Vater Table (B1) Vater Table (B2) Vater Deposits (B3) Vater Deposits (B3) Vater Crust (B4) Vater Prosents (B5) Vater Present? Vater Present (Vater Vater Vater Present) Vater Present (Vater Vater Vater Vater Vater Present) Vater Present (Vater Vater	al Imagery (B7) Yes No Yes No Yes No am gauge, monite	neck all that app Salt Crus Aquatic Ir Hydroger Dry-Seas Oxidized (where Presence Thin Muc Other (Ex	bly) t (B11) nvertebrate n Sulfide O con Water Rhizosphe not tilled) of Reduce k Surface coplain in Re nches): nches): photos, pi	es (B13) dor (C1) Fable (C2) eres on Liv ed Iron (C4 (C7) emarks)	Wetl	Surface Sparsel Drainag Oxidize (C3) (wher Crayfish Saturati Geomo FAC-Ne Frost-H	Soil Cracks (B6) y Vegetated Concave Surface (B8) le Patterns (B10) d Rhizospheres on Living Roots (C3 re tilled) in Burrows (C8) ion Visible on Aerial Imagery (C9) rephic Position (D2) eutral Test (D5) leave Hummocks (D7) (LRR F)

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: US 380		City/Cou	nty: Collin Cou	unty	Sampling Date: 09	9/14/2020
Applicant/Owner: TXDOT				State: TX	Sampling Point: D	P-68
Investigator(s): Kelsea Hiebert, Mike Keenan, Ethan Eichler	<u> </u>	Section,	Township, Ra	nge: N/A		
Landform (hillslope, terrace, etc.): Depression		Local re	elief (concave,	convex, none): concave	Slope	e (%): <u>2</u>
Subregion (LRR): Southwestern Prairies Cotton and Forage Region	on Lat: 33.2	205153		Long: <u>-96.585951</u>	Datum	: NAD 83
Soil Map Unit Name: Tinn clay, 0 to 1 percent slopes, frequ	ently flooded			NWI classific	cation: PFO	
Are climatic / hydrologic conditions on the site typical for th	is time of yea	ar? Yes	✓ No	(If no, explain in F	Remarks.)	
Are Vegetation, Soil, or Hydrology				"Normal Circumstances"		No
Are Vegetation, Soil, or Hydrology				eeded, explain any answe	ers in Remarks.)	
SUMMARY OF FINDINGS - Attach site map	showing	samp	ling point l	ocations, transects	s, important fea	tures, etc.
Hydrophytic Vegetation Present? Yes ✓	No					
Hydric Soil Present? Yes <u>✓</u> N	No		s the Sampled vithin a Wetlar		′No	
Wetland Hydrology Present? Yes <u>√</u> N	No	V	Allilli a Wellai	id: 165 <u>v</u>		
Remarks:	/					
Located within Forested Wetland Water Feat Water Feature 334, Intermittent Stream Water	,	•		, ,	•	
Water reature 354, intermittent Stream Water	er i cature	5 333, 6	and mydroid	bgy connected to th	e Last Fork Till	iity ixivei.
VEGETATION - Use scientific names of plan	nts.					
Trac Charles (Diet sine, 30'	Absolute		ant Indicator	Dominance Test work	sheet:	
Tree Stratum (Plot size: 30' 1. Fraxinus pennsylvanica	<u>% Cover</u> 30	yes	s? Status FAC	Number of Dominant S	•	
2. Celtis laevigata		yes		That Are OBL, FACW, (excluding FAC-):	3	(A)
3. Ulmus crassifolia	5	no	FAC			
4				Total Number of Domir Species Across All Stra	^	(B)
5				Dercent of Deminent C		+
	45	= Total (Cover	Percent of Dominant S That Are OBL, FACW,		(A/B)
Sapling/Shrub Stratum (Plot size: 15'				Prevalence Index wor	rkohooti	
1				Total % Cover of:		hv:
2					x 1 = 0	
3				FACW species 0		
4		T-1-1/		FAC species 125		
Herb Stratum (Plot size: 5'	0	= rotar	Cover		x 4 = 0	
1. Iva annua	60	yes	FAC	UPL species 0	x 5 = 0	
2. Cardiospermum halicacabum	10	no	FAC	Column Totals: 125	(A) <u>375</u>	(B)
3. Ambrosia trifida	10	no	<u>FAC</u>	Dravalance Index	, p/A 3.0	
4				Prevalence Index Hydrophytic Vegetati		
5				1 - Rapid Test for		tion
6				✓ 2 - Dominance Tes		
7				✓ 3 - Prevalence Ind		
8				4 - Morphological	Adaptations ¹ (Provid	le supporting
9					s or on a separate s	
10		T-1-1/		Problematic Hydro	phytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size: 30')		= Total (¹ Indicators of hydric so be present, unless dist		
2.				Hydrophytic		
		= Total (Vegetation	✓	
% Bare Ground in Herb Stratum 20.0				Present? Ye	es No	
Remarks:						

SOIL

Sampling Point: DP-68

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redo	x Feature				
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type'	Loc ²	<u>Texture</u>	Remarks
0-12	10YR3/1	96	7.5YR4/6	4		M/PL	Clay	
<u> </u>								
			Reduced Matrix, CS			ed Sand G		on: PL=Pore Lining, M=Matrix.
		icable to all	LRRs, unless other					r Problematic Hydric Soils ³ :
Histosol	` '		Sandy (ck (A9) (LRR I, J)
	pipedon (A2)			Redox (S5				airie Redox (A16) (LRR F, G, H)
	istic (A3)			d Matrix (S				face (S7) (LRR G)
-	en Sulfide (A4) d Layers (A5) (LRF) E \		viuску iviii Gleyed Ma	neral (F1)		_	ns Depressions (F16) H outside of MLRA 72 & 73)
	uck (A9) (LRR F, G			d Matrix (•	Vertic (F18)
	d Below Dark Surfa			o Mairix (Dark Surfa				ent Material (TF2)
-	ark Surface (A12)	- (//			urface (F7)			llow Dark Surface (TF12)
	Mucky Mineral (S1)			Depressio	, ,			plain in Remarks)
2.5 cm l	Mucky Peat or Pea	t (S2) (LRR (3, H) High Pla	ains Depre	essions (F	16)	3Indicators of	hydrophytic vegetation and
5 cm Mu	ucky Peat or Peat (S3) (LRR F)	(ML	RA 72 & 1	73 of LRR	H)	wetland h	ydrology must be present,
							unless dis	sturbed or problematic.
Restrictive	Layer (if present):							
Type:								/
Depth (in	ches):						Hydric Soil Pr	esent? Yes <u> </u>
Remarks:							•	
HYDROLO								
Wetland Hy	drology Indicator	s:						
Primary Indi	cators (minimum of	one required	d; check all that appl	y)			Secondary	Indicators (minimum of two required)
Surface	Water (A1)		Salt Crust	(B11)			Surface	e Soil Cracks (B6)
High Wa	ater Table (A2)		Aquatic In	vertebrate	es (B13)		Sparse	ely Vegetated Concave Surface (B8)
Saturati	on (A3)		Hydrogen	Sulfide O	dor (C1)		Draina	ge Patterns (B10)
✓ Water M	larks (B1)		Dry-Seaso	n Water 1	Γable (C2)		Oxidize	ed Rhizospheres on Living Roots (C3)
Sedime	nt Deposits (B2)		Oxidized F	Rhizosphe	res on Liv	ing Roots	(C3) (whe	ere tilled)
Drift De	posits (B3)		(where i	not tilled)			Crayfis	h Burrows (C8)
Algal Ma	at or Crust (B4)		Presence	of Reduce	ed Iron (C4	1)		tion Visible on Aerial Imagery (C9)
Iron Dep	posits (B5)		Thin Muck	Surface ((C7)		✓ Geomo	orphic Position (D2)
Inundati	ion Visible on Aeria	I Imagery (B	7) Other (Exp	olain in Re	emarks)		FAC-N	eutral Test (D5)
Water-S	Stained Leaves (B9))					Frost-H	Heave Hummocks (D7) (LRR F)
Field Obser	vations:							
Surface Wat	er Present?	Yes	No 🚺 Depth (in	ches):		_		
Water Table	Present?		No <u>✓</u> Depth (in					
Saturation P	resent?		No V Depth (in				and Hydrology P	Present? Yes V
(includes ca	pillary fringe)							
Describe Re	corded Data (strea	m gauge, mo	onitoring well, aerial p	ohotos, pr	evious ins	pections),	if available:	
Remarks:								
Saturation	on visible on	Google E	Earth aerial im	agerv	03/201	8, 09/2	2019, and 1 ⁻	1/2020.
		5		5)	- '	,	,	

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: US 380	Cit	y/County:	Collin Cou	nty	Sampling Da	te: 09/15/2020
Applicant/Owner: TXDOT				State: TX	Sampling Po	int: DP-69
Investigator(s): Kelsea Hiebert, Ethan Eichler	Se	ection, Tov	vnship, Rar	nge: N/A		
Landform (hillslope, terrace, etc.): Terrace	Lo	ocal relief	(concave, c	convex, none): none		Slope (%): 0
Subregion (LRR):	n Lat: 33.205	5251		Long: <u>-96.586872</u>		Datum: NAD 83
Soil Map Unit Name: Tinn clay, 0 to 1 percent slopes, freque				NWI classifica	ation: PEM	
Are climatic / hydrologic conditions on the site typical for this	s time of year?					
Are Vegetation, Soil, or Hydrologys				Normal Circumstances" p		✓ No
Are Vegetation, Soil, or Hydrologyn	aturally proble	ematic?		eded, explain any answer		
SUMMARY OF FINDINGS - Attach site map	showing s	ampling	g point lo	ocations, transects,	, importan	t features, etc
Hydrophytic Vegetation Present? Yes ✓ N	0			_		
	0		e Sampled		No	
Wetland Hydrology Present? Yes N		withi	n a Wetlan	a? Yes <u>¥</u>	NO	
Remarks:						
Located within Emergent Wetland Water Fea Water Feature 333, Intermittent Stream Wate						
VEGETATION – Use scientific names of plan	ts.					
Tree Stratum (Plot size: 30') 1	% Cover S		Status	Dominance Test works Number of Dominant Sp That Are OBL, FACW, of (excluding FAC-):	pecies or FAC	(A)
2				Total Number of Domina Species Across All Strat	ant	(B)
4						(5)
5	0 =	Total Cov	er	Percent of Dominant Sp That Are OBL, FACW, or	ecies or FAC: <u>100</u>	0.0% (A/B)
Sapling/Shrub Stratum (Plot size: 15'				Prevalence Index work	sheet:	
1				Total % Cover of:		ıltiply by:
2				OBL species 0	x 1 =	0
4				FACW species 0		
	•	Total Cov	er		x 3 =	
Herb Stratum (Plot size: 5')				FACU species 0		
1. Iva annua			FAC		x 5 = _	000
2. Chasmanthium sessiliflorum			FAC	Column Totals: 100	(A)	300 (B)
3				Prevalence Index	= B/A = 3.0	
4. 5.				Hydrophytic Vegetatio	n Indicators	:
6.				1 - Rapid Test for H		egetation
7				✓ 2 - Dominance Test		
8.				√ 3 - Prevalence Inde		
9				4 - Morphological A data in Remarks	daptations' (F or on a sepa	Provide supporting rate sheet)
10				Problematic Hydrop		*
Woody Vine Stratum (Plot size: 30') 1)	<u> </u>	Total Cov	er	¹ Indicators of hydric soil be present, unless distu	and wetland	hydrology must
2.				Hydrophytic		
% Bare Ground in Herb Stratum 0.0		Total Cov	er	Vegetation Present? Yes	✓ No	o
Remarks:				<u> </u>		

SOIL

Sampling Point: DP-69

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix			lox Featur		. 2		
(inches)	Color (moist)		Color (moist)	%	Type'	Loc ²	Texture	Remarks
0-12	2.5Y4/1	63	10YR5/6	_ 2	C	PL	Clay	
	10YR6/1	30	2.5Y6/1	5	D	M	Clay	
					-			
	-				_			
					_	-		
		_					<u></u>	
				 ,				
	-							
	-							
			=Reduced Matrix, 0			ed Sand G		cation: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Appli	cable to all	LRRs, unless oth	erwise no	oted.)		Indicators	for Problematic Hydric Soils ³ :
Histosol					Matrix (S4)			Muck (A9) (LRR I, J)
	pipedon (A2)			Redox (S				Prairie Redox (A16) (LRR F, G, H)
Black Hi	, ,			ed Matrix (surface (S7) (LRR G)
	n Sulfide (A4)				lineral (F1)		_	lains Depressions (F16)
	d Layers (A5) (LRR		,		Matrix (F2)		`	R H outside of MLRA 72 & 73)
	ick (A9) (LRR F, G,		✓ Deple		. ,			ed Vertic (F18)
	d Below Dark Surfa ark Surface (A12)	ce (ATT)		Dark Sur	race (F6) Surface (F7	`	· · · · · · · · · · · · · · · · · · ·	arent Material (TF2)
	fucky Mineral (S1)			Depressi	,)		hallow Dark Surface (TF12) (Explain in Remarks)
	Jucky Peat or Peat	(S2) (I RR				16)		of hydrophytic vegetation and
	icky Peat or Peat (· · · — ·		73 of LRF	,		d hydrology must be present,
	(1	, (,	(/		disturbed or problematic.
Restrictive I	_ayer (if present):							·
Type:								_
Depth (inc	ches):						Hydric Soil	Present? Yes No
Remarks:	· ·							
rtomanto.								
HYDROLO	GY							
Wetland Hy	drology Indicators	::						
-			d; check all that ap	alv)			Seconda	ary Indicators (minimum of two required)
	Water (A1)	one require	-					* * *
	` '		Salt Crus	, ,	taa (D40)			ace Soil Cracks (B6)
/	ater Table (A2)			nvertebrat				rsely Vegetated Concave Surface (B8)
✓ Saturation	` '			n Sulfide (nage Patterns (B10)
	arks (B1)				Table (C2)			dized Rhizospheres on Living Roots (C3)
	nt Deposits (B2)				eres on Liv	ing Roots	. ,	there tilled)
	posits (B3)			not tilled		4)		/fish Burrows (C8)
_	at or Crust (B4)				ced Iron (C	4)	·	uration Visible on Aerial Imagery (C9)
	oosits (B5)	lana e e - C		k Surface				morphic Position (D2)
	on Visible on Aerial		37) Other (E	xplain in R	(emarks)			C-Neutral Test (D5)
	tained Leaves (B9)						Fros	st-Heave Hummocks (D7) (LRR F)
Field Obser		.,						
Surface Water			No <u>✓</u> Depth (i			— [
Water Table			No Depth (i			<u> </u>		./
Saturation Pr		Yes <u></u> ✓	No Depth (i	nches): <u>6</u>		Wet	land Hydrolog	y Present? Yes No
(includes cap		m dallae m	onitoring well, aeria	Inhotoe r	revious in	snections)	if available.	
POSCIDE IVE	onaca Dala (sireal	n gaage, m	omoning wen, aena	, priotos, p	orovious ili	PC0(10118)	, ii avaliable.	
Dawrent								
Remarks:	· · · · ·							
	•		•				visible on	Google Earth aerial images
03/2018	and 12/2019	. Cattle	disturbance v	vithin v	vetland			

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: US 380		City/Co	ounty: _(Collin Co	unty	_ Sampling	Date: 09/15/	2020
Applicant/Owner: TXDOT					State: TX	Sampling	Point: DP-70)
Investigator(s): Kelsea Hiebert, Ethan Eichler		Section	n, Towr	ship, Ra	inge: N/A			
Landform (hillslope, terrace, etc.): Hillslope	_	Local	relief (c	oncave,	convex, none): convex		Slope (%)): 2
Subregion (LRR): <u>J - Southwestern Prairies Cotton and Forage Re</u>	gion Lat: 33.2	205398	}		Long: <u>-96.585654</u>		_ Datum: NA	AD 83
Soil Map Unit Name: Tinn clay, 0 to 1 percent slopes, freq					NWI classifi	cation: UPI	L	
Are climatic / hydrologic conditions on the site typical for t	this time of yea	ar? Ye	es 🗸	No	(If no, explain in I	Remarks.)		
Are Vegetation, Soil, or Hydrology					"Normal Circumstances"		res <u>√</u> N	No
Are Vegetation, Soil, or Hydrology	_ naturally pro	blemat	tic?	(If ne	eeded, explain any answe	ers in Rema	arks.)	
SUMMARY OF FINDINGS – Attach site ma				point l	ocations, transect	s, import	ant feature	es, etc.
Hydrophytic Vegetation Present? Yes			Is the	Sampled	l Δrea			
Hydric Soil Present? Yes				a Wetlar		No_	✓	
Wetland Hydrology Present? Yes	No <u>√</u>		-					
Located adjacent to Forested Wetland 334, at edge of Study area.	d Water F	eatu	ire 33	33 and	d Emergent Wetla	and Wa	ter Featu	re
VEGETATION – Use scientific names of pla	ants.							
	Absolute	Domi	inant Ir	ndicator	Dominance Test wor	ksheet:		
Tree Stratum (Plot size: 30'	% Cover				Number of Dominant S			
1					That Are OBL, FACW, (excluding FAC-):		1	(A)
2						_		_ (' ')
3 4					Total Number of Domi		2	(B)
5					Percent of Dominant S			_ ` ′
	0	= Tota	al Cover		That Are OBL, FACW,		50.0%	(A/B)
Sapling/Shrub Stratum (Plot size: 15'					Prevalence Index wo	rkshoot:		
1					Total % Cover of:		Multiply by:	
2							= 0	
3					FACW species 0			
4	_	- Tota	I Cover				= 135	
Herb Stratum (Plot size: 5'		- 1014	00701					
1. Iva annua	40	yes		AC			= 0	
2. Cynodon dactylon	30	yes		ACU_	Column Totals: 75	(A)	255	(B)
3. Cardiospermum halicacabum	5	no		AC	Prevalence Index	x = B/A = _	3.4	+
4					Hydrophytic Vegetati			
5					1 - Rapid Test for	Hydrophytic	c Vegetation	
6					2 - Dominance Te			
8.					3 - Prevalence Inc			
9					4 - Morphological data in Remark	Adaptations	s ¹ (Provide su	pporting
10.					Problematic Hydro			
001	75.0	= Tota	l Cover					
Woody Vine Stratum (Plot size: 30' 1.					¹ Indicators of hydric so be present, unless dist			must
2.					Hydrophytic			
0. D	0				Vegetation Present? Ye	es	No	
% Bare Ground in Herb Stratum 25.0 Remarks:					. resent:	<u> </u>		
Nomano.								

SOIL Sampling Point: DP-70

Profile Desc	ription: (Describe	to the depth	needed to docu	nent the i	ndicator	or confirn	n the absence	of indicators.)	
Depth	Matrix			x Feature:					
(inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks	
0-4	10YR4/2	100					Clay	Gravel in matrix	
4-10	10YR3/1	80					Clay		
4-10	10YR4/2	20							
									
- <u></u>									
1T C. C.		alatian DM D	and the same of th		0		21	action. DL Dans Linian M Matrix	
	ndicators: (Application)					a Sana Gi		cation: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :	
-		cable to all Li						•	
Histosol	ipedon (A2)		Sandy (sieyed ivia Redox (S5				Muck (A9) (LRR I, J) Prairie Redox (A16) (LRR F, G, H)	
Black His				d Matrix (S				Surface (S7) (LRR G)	
	n Sulfide (A4)			Mucky Mir				Plains Depressions (F16)	
	Layers (A5) (LRR	F)		Gleyed Ma			_	RR H outside of MLRA 72 & 73)	
1 cm Mu	ck (A9) (LRR F, G ,	H)		d Matrix (I			Reduc	ed Vertic (F18)	
Depleted	Below Dark Surfac	ce (A11)	Redox	Dark Surfa	ice (F6)			arent Material (TF2)	
	rk Surface (A12)			d Dark Su				Shallow Dark Surface (TF12)	
	lucky Mineral (S1)			Depression				(Explain in Remarks)	
	lucky Peat or Peat			ains Depre				of hydrophytic vegetation and	
5 cm iviu	cky Peat or Peat (S	53) (LRR F)	(IVIL	RA 72 & 7	3 Of LRK	П)		d hydrology must be present, disturbed or problematic.	
Restrictive I	.ayer (if present):						uniess	disturbed of problematic.	
Type:									
,. <u> </u>	ches):		_				Hydric Soil	Present? Yes No ✓	
							Tiyane 30ii	Tresent: res No	
Remarks:									
HYDROLO	GY								
Wetland Hyd	Irology Indicators								
_	ators (minimum of		check all that appl	v)			Seconda	ary Indicators (minimum of two required)	
	Water (A1)	one required,	Salt Crust				· · · · · · · · · · · · · · · · · · ·	face Soil Cracks (B6)	
	ter Table (A2)		Aquatic In		e (B13)			rsely Vegetated Concave Surface (B8)	
Saturation	` ,		Hydrogen		. ,			inage Patterns (B10)	
	arks (B1)		Dry-Seaso					dized Rhizospheres on Living Roots (C3)	
	t Deposits (B2)		Oxidized F			ina Roots		where tilled)	
	osits (B3)			not tilled)	100 011 211	ing ricoto		yfish Burrows (C8)	
-	t or Crust (B4)		Presence		d Iron (C4	I)		uration Visible on Aerial Imagery (C9)	
_	osits (B5)		Thin Muck		,	• /		omorphic Position (D2)	
	on Visible on Aerial	Imagery (B7)	Other (Ex					C-Neutral Test (D5)	
	tained Leaves (B9)				,			st-Heave Hummocks (D7) (LRR F)	
Field Observ							<u></u>	, , , ,	
Surface Water		Yes No	Depth (in	ches):					
Water Table			Depth (in						
Saturation Pr			Depth (in Depth (in				and Hydrolog	y Present? Yes No V	
(includes cap		res inc	o_▼ Deptii (iii	cries)		_ ••••••	and Hydrolog	y Fresent: Tes NO	
	corded Data (stream	n gauge, moni	toring well, aerial	photos, pr	evious ins	pections),	if available:		
Remarks:									

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: US 380	City	/County:	Collin Cou	inty	Sampling	g Date: 9/22/202	21
Applicant/Owner: TxDOT				State: TX	Sampling	g Point: DP-71	
Investigator(s): Kelsea Hiebert and Wyatt Wolfenkoehler	Sec	ction, Tow	nship, Rar	nge: <u>n/a</u>			
Landform (hillslope, terrace, etc.): Hillslope	Loc	cal relief (concave, c	convex, none): con	cave	Slope (%):	3
Subregion (LRR): J - Southwestern Prairies Cotton and Forage Region	Lat: 33.2009	936		Long: <u>-96.578035</u>	5	Datum: NAD	27
Soil Map Unit Name: LeB—Lewisville silty clay, 1 to 3 percent	slopes			NWI cla	assification: UP	PL .	
Are climatic / hydrologic conditions on the site typical for this t							
Are Vegetation, Soil, or Hydrology sig	nificantly dist	urbed?	Are "l	Normal Circumstan	ces" present?	Yes <u>√</u> No)
Are Vegetation, Soil, or Hydrology nat	turally proble	matic?		eded, explain any a			
SUMMARY OF FINDINGS - Attach site map si	howing sa	mpling	point lo	ocations, trans	ects, impor	tant features	s, etc.
Hydrophytic Vegetation Present? Yes _ ✓ No							
Hydric Soil Present? Yes No	\checkmark		Sampled n a Wetlan		No	1	
Wetland Hydrology Present? Yes No		WILIIII	i a vvetian	u! Tes	NO		
Remarks:							
Isolated depression on hill, appears to be	e former	excav	ated, u	pland pond.			
VEGETATION – Use scientific names of plants							
·		ominant	Indicator	Dominance Test	worksheet:		
	% Cover Sp			Number of Domin			
1				That Are OBL, FA	CW, or FAC	2	(1)
2				(excluding FAC-):	:		(A)
3				Total Number of D		2	(5)
4	_			Species Across A	II Strata:		(B)
Sapling/Shrub Stratum (Plot size: 15')	<u>0</u> = T	otal Cove	er	Percent of Domina		100.0%	(A (D)
1				That Are OBL, FA	CVV, or FAC:	100.070	(A/B)
2				Prevalence Index	x worksheet:		
3.					er of:		_
4.				OBL species 0	X		-
5				FACW species 5	25 x 2	$2 = \frac{100}{75}$	-
	<u>0</u> = T	otal Cove	er	FAC species _	x 3	$3 = \frac{75}{0}$	-
Herb Stratum (Plot size: 5' 1. Eleocharis compressa	50 v	, o o	ΓΛ <i>Ο</i> \Λ/	FACU species	x 2 2 x 5		-
Iva annua			FACW_ FAC	UPL species 2 Column Totals: 7			– _ (B)
3. Bothriochloa ischaemum			UPL	Column Totals	(A)		_ (B) +
4				Prevalence	Index = $B/A =$	2.4	_ "
5				Hydrophytic Veg	etation Indicat	tors:	
6.				1 - Rapid Tes			
7.				✓ 2 - Dominano			
8				3 - Prevalenc			
9				4 - Morpholog data in Re	gical Adaptation emarks or on a s	is` (Provide supp separate sheet)	oorting
10				Problematic H			n)
W 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1	77.0 = T	otal Cove	er				
Woody Vine Stratum (Plot size: 30') 1.				¹ Indicators of hydropies be present, unless			iust
2.				Hydrophytic			
	0 = T			Vegetation	Yes ✓	No	
% Bare Ground in Herb Stratum 23.0				Present?	1 eS	No	
Remarks:			_				
Maclura pomifera and Juniperus virginia	na prese	nt at e	dge of	area.			

SOIL Sampling Point: DP-71

Profile Desc	cription: (Describe	to the depth ne	eded to docur	ment the i	ndicator	or confirm	the absence of in	ndicators.)
Depth	Matrix			x Feature	4	12	Tandona	Description
(inches) 0-5	Color (moist) 10YR 3/1	<u>%</u> C 30	olor (moist)	<u>%</u>	Type'	Loc ²	<u>Texture</u>	Remarks
0-5								
	10YR 4/1	_ 30		-				
	10YR 5/2	_ 20						
	10YR 8/1	20		_				
				_				
¹ Type: C=C	oncentration, D=De	pletion, RM=Red	uced Matrix, CS	S=Covered	d or Coate	d Sand Gr	rains. ² Location	n: PL=Pore Lining, M=Matrix.
	Indicators: (Appli							Problematic Hydric Soils ³ :
Histosol	(A1)		Sandy (Gleyed Ma	atrix (S4)		1 cm Muck	(A9) (LRR I, J)
	pipedon (A2)			Redox (S5				rie Redox (A16) (LRR F, G, H)
	istic (A3)			d Matrix (S				ce (S7) (LRR G)
	en Sulfide (A4) d Layers (A5) (LRR	E)		Mucky Mir Gleyed Ma	. ,		-	s Depressions (F16) outside of MLRA 72 & 73)
	uck (A9) (LRR F, G ,			d Matrix (Reduced V	,
	d Below Dark Surfa			Dark Surfa				t Material (TF2)
Thick D	ark Surface (A12)		Deplete	d Dark Su	ırface (F7)		Very Shallo	ow Dark Surface (TF12)
	Mucky Mineral (S1)			Depressio				lain in Remarks)
	Mucky Peat or Peat ucky Peat or Peat (\$. , . , ,	_		essions (F 73 of LRR			ydrophytic vegetation and
5 CITI WIL	icky real of real (c	55) (LKK F)	(IAIL	NA 12 0	73 OI LKK	П)		drology must be present, urbed or problematic.
	Layer (if present):							
Type: Lir	nestone Bedrock							
Depth (in	ches): <u>5</u>						Hydric Soil Pres	sent? Yes No <u>✓</u>
Remarks:							•	
Gravel th	roughout ma	ıtrix.						
HYDROLO	GY							
Wetland Hy	drology Indicators	:						
Primary Indi	cators (minimum of	one required; che	eck all that appl	y)			Secondary Ir	ndicators (minimum of two required)
Surface	Water (A1)		Salt Crust	(B11)			✓ Surface	Soil Cracks (B6)
_	ater Table (A2)		Aquatic In				Sparsely	Vegetated Concave Surface (B8)
Saturati	, ,		Hydrogen				_	e Patterns (B10)
	farks (B1)		Dry-Seaso			_		d Rhizospheres on Living Roots (C3)
	nt Deposits (B2)		Oxidized F			ing Roots		e tilled)
	posits (B3)		•	not tilled)		1)		Burrows (C8)
	at or Crust (B4) posits (B5)		Presence Thin Muck		,	+)	,	on Visible on Aerial Imagery (C9) phic Position (D2)
-	on Visible on Aerial	Imagery (B7)	Other (Exp					utral Test (D5)
	Stained Leaves (B9)							eave Hummocks (D7) (LRR F)
Field Obser								, , , ,
Surface Wat	er Present?	Yes No	✓ Depth (in	ches):				
Water Table		Yes No _	,					,
Saturation P	resent?	Yes No _	,				and Hydrology Pro	esent? Yes No
	pillary fringe) corded Data (strear	m gauge monitor	ing well periol	nhotoe nr	evious ins	nections)	if available:	
DOSCIDE IVE	Jordon Data (Streat	gaage, monitor	g won, acidi	ριισισό, μι	- vious IIIS	poolio(13),	available.	
Remarks:								
	in an upland	hillside						
	a apiaila							

	Stream Data Form #: Water Feature 6
	Project Name: US 380
	CSJ: 0135-02-065
Stream Data Form	
Surveyor(s): Kelsea D. Hiebert and Wyatt Wolfenkoehler	Date of Field Work: January 19, 2021
USGS Stream Name:	
	•
USGS Topo Quad Name: Frisco	Stream Number: 6
Associated Wetland(s): Water Feature 5	Coordinates: 33.218369 -96.763156
Stream Type: Intermittent Characteristics:	
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	Concrete and silt fencing near roadway
Stream Flow Direction: Southeast	
OHWM Width (ft): 5	OHWM Height (in): 12
Stream Bottom composition:	
	Other:
☐ Sands ☐ Bedrock ☐ Muck	
Gravel Vegetation	
Aquatic Habitat: Indicate all types present within proposed ROW/p	project limits.
Sand bar Sand/Gravel beach/bar Gravel	riffles Aquatic vegetation
Overhanging Deep pool/ hole/ Dothers	
trees/shrubs Deep poor hole/ Other:	
Stream has the following characteristics:	
✓ Bed and banks	
OHWM (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
	scour
☐ leaf litter disturbed or washed away ☐ sediment deposition ☐ water staining	✓ multiple observed or predicted flow events
water staining	abrupt change in plant community
other (list):	
Water Quality:	
☐ Clear ☑ Slightly Turbid ☐ Turbid ☐ Very Tu	rbid Oily film High organic content
Other characteristics (pollutants, etc.)	
Aquatic Organisms: List all species observed. This would include w	vaterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
Frogs	
5	
Riparian Vegetation: List species observed.	
Eastern red cedar (Juniperus virginiana), fringed green brier (\$	Smilay hona-noy) black willow (Saliy pigra) black locust
(Robinia pseudoacacia)	onniar bond-nory, black willow (Gally Higha), black locust
(Nobilia podadoada)	
<u>T&E Species/Suitable Habitat: List T&E species observed or which</u>	species the habitat is suitable for.
None	

Stream Data Form #: Project Name: Water Feature 6

US 380

CSJ: 0135-02-065

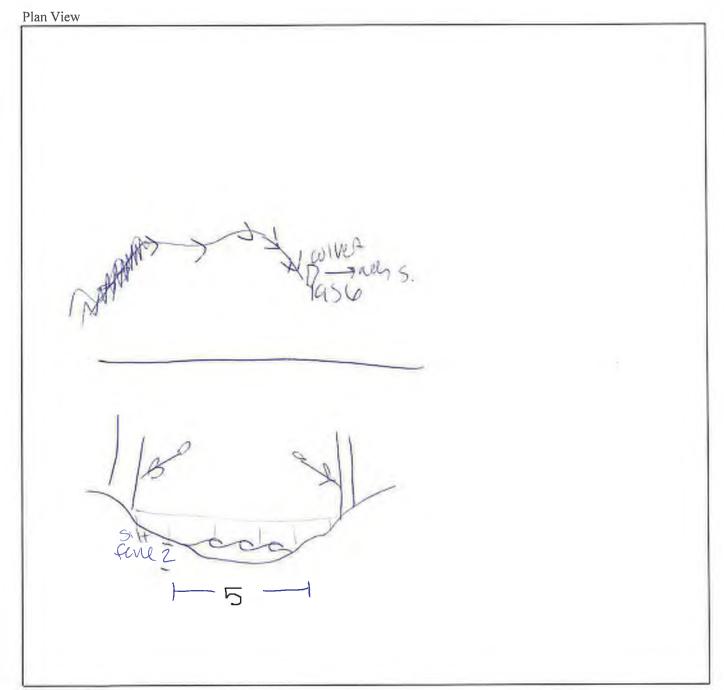
Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel.

Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.



	Stream Data Form #: Water Feature 7
	Project Name: US 380
	CSJ: 0135-02-065
Stream Data Form	
Surveyor(s): Kelsea D. Hiebert and Mike Keenan	Date of Field Work: January 19, 2021
USGS Stream Name: N/A	County/State: Collin County, Texas
USGS Topo Quad Name: Frisco	Stream Number: 7
• •	Coordinates: 33.218079 -96.762245
Associated Wetland(s): None	Coordinates. 33.210079 -90.702243
Stream Type: Ephemeral Characteristics:	Receives overflow from adjacent stream.
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	Vegetated banks
Stream Flow Direction: South	
OHWM Width (ft): 4	OHWM Height (in): 6
Stream Bottom composition:	
Silts	Other:
☐ Sands ☐ Bedrock ☐ Muck	
Gravel Vegetation	
- States - September	
Aquatic Habitat: Indicate all types present within proposed ROW/	project limits.
Sand bar Sand/Gravel beach/bar Grave	Aquatic vegetation
Overhanging Deep pool/ hole/ Others	
✓ Overhanging	
Stream has the following characteristics:	
✓ Bed and banks	
OHWM (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 Sediment deposition Water staining	scour
sediment deposition	multiple observed or predicted flow events
	abrupt change in plant community
other (list):	
Water Quality:	
☐ Clear ☐ Slightly Turbid ☐ Turbid ☐ Very T	urbid Oily film High organic content
Other characteristics (pollutants, etc.) None	
Aquatic Organisms: List all species observed. This would include	waterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
None	
Riparian Vegetation: List species observed.	
fringed green brier (Smilax bona-nox), southern dewberry (Ru	ubus trivialis), eastern red cedar (Juniperus virginiana)
The Spacias/Suitable Hebitate List The gracies absorred1:-1	a species the hebitat is suitable for
T&E Species/Suitable Habitat: List T&E species observed or which	i species the naohal is suhable for.
None	

Water Feature 7

Project Name: CSJ: 0135-02-065

US 380

Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel.

Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.

Plan View	
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	Stream Data Form #: Water Feature 8
	Project Name: US 380
	CSJ: 013502-065
Stream Data Form	
Surveyor(s): Kelsea Hiebert, Ethan Eichler	Date of Field Work: December 1, 2020
USGS Stream Name: Rutherford Branch tributary	County/State: Collin County, Texas
USGS Topo Quad Name: Frisco	Stream Number: 8
Associated Wetland(s): None	Coordinates: 33.218232 -96.759806
Associated wettaild(s). None	Coordinates. <u>33.210232</u> -30.139000
Stream Type: Ephemeral Characteristics:	Man-made concrete bottom
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	
	Concrete
Stream Flow Direction: East	
OHWM Width (ft): 2	OHWM Height (in): 2
Stream Bottom composition:	
	Other:
Sands Bedrock Muck	
☐ Gravel ☐ Vegetation	
A quatic Habitate Indicate all tymes muscant within muon and DOW/m	anaiost limita
Aquatic Habitat: Indicate all types present within proposed ROW/p Sand bar Sand/Gravel beach/bar Gravel	
Overhanging Deep pool/ hole/	riffles Aquatic vegetation
trees/shrubs	e - depression?
trees/sin tos channer	
Stream has the following characteristics:	
Bed and banks	
OHWM (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
	sediment sorting
leaf litter disturbed or washed away	scour
 □ vegetation matted down, bent, or absent □ leaf litter disturbed or washed away □ sediment deposition ☑ water staining 	multiple observed or predicted flow events
water staining	abrupt change in plant community
other (list):	
<u> </u>	
Water Quality:	
☑ Clear ☐ Slightly Turbid ☐ Turbid ☐ Very Tu	urbid Oily film High organic content
Other characteristics (pollutants, etc.)	– , – s s
Aquatic Organisms: List all species observed. This would include w	vaterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
Invertebrates	•
THY OTO STATES	
Riparian Vegetation: List species observed.	
	etylon)
Spike-rush sp. (Eleocharis sp.), Bermuda grass (Cynodon dad	ayion)
<u>T&E Species/Suitable Habitat: List T&E species observed or which</u>	species the habitat is suitable for.
None	

Stream Data Form #: Project Name:

CSJ: <u>013502-065</u>

Water Feature 8

US 380

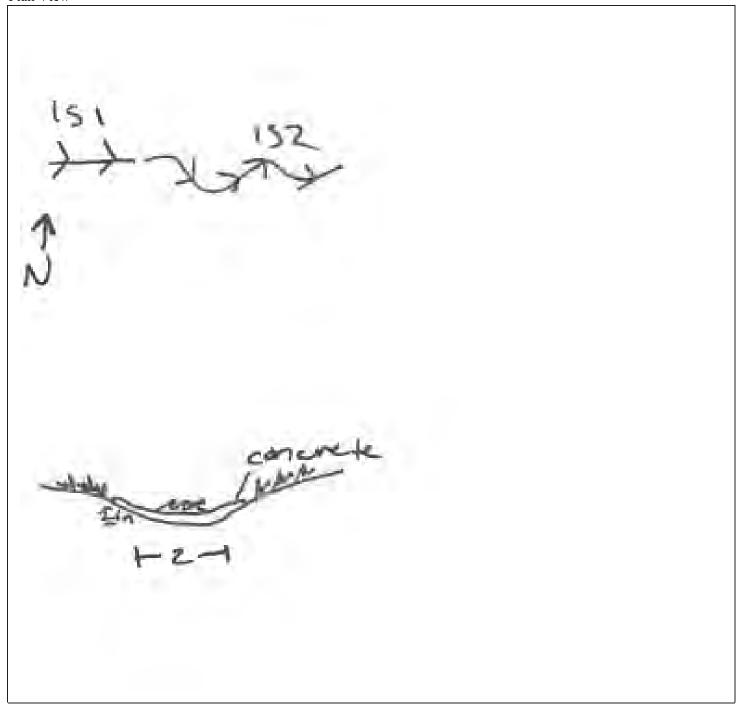
Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.

Plan View



	Stream Data Form #: Water Feature 11
	Project Name: US 380
	CSJ: 0135-02-065
Stream Data Form	
Surveyor(s): Kelsea Hiebert, Ethan Eichler	Date of Field Work: December 1, 2020
• ` ` '	County/State: Collin County, Texas
USGS Stream Name: Rutherford Branch tributary USGS Topo Quad Name: Frisco	•
	Stream Number: <u>11</u> Coordinates: 33.218126 -96.758142
Associated Wetland(s): Water Feature 18	Coordinates: 33.216120 -90.736142
Stream Type: Intermittent Characteristics:	Connected to concrete S-3. Incised flowing East.
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	Roots along edges
Stream Flow Direction: East	
OHWM Width (ft): 5	OHWM Height (in): 16
Stream Bottom composition:	Offwire fleight (iii).
	Other:
☐ Sands ☐ Bedrock ☐ Muck	Other:
Gravel Vegetation	
Graver General Vegenation	
Aquatic Habitat: Indicate all types present within proposed ROW/	project limits.
Sand bar Sand/Gravel beach/bar Grave	
✓ Overnanging trees/shrubs ✓ Deep pool/ note/ Channel Other:	
Stream has the following characteristics:	
✓ Bed and banks	
OHWM (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
☐ leaf litter disturbed or washed away ☐ sediment deposition ☑ water staining ☐ other (list):	abrupt change in plant community
other (list):	
Water Quality:	
☑ Clear □ Slightly Turbid □ Turbid □ Very Tu	urbid Oily film High organic content
Other characteristics (pollutants, etc.)	
Aquatic Organisms: List all species observed. This would include v	vaterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
Frogs and snakes	
Riparian Vegetation: List species observed.	
	iana), Virginia wild rye (Elymus virginicus), American elm (UI🖀
(Janutg. a./, Janutg. a./	
TOPO ' /C-', 11 II 1', 1', TOP ' 1 1 1'	. 4 1 12 4
T&E Species/Suitable Habitat: List T&E species observed or which	species the habitat is suitable for.
None	

Stream Data Form #: Project Name:

CSJ: <u>0135-02-065</u>

Water Feature 11

US 380

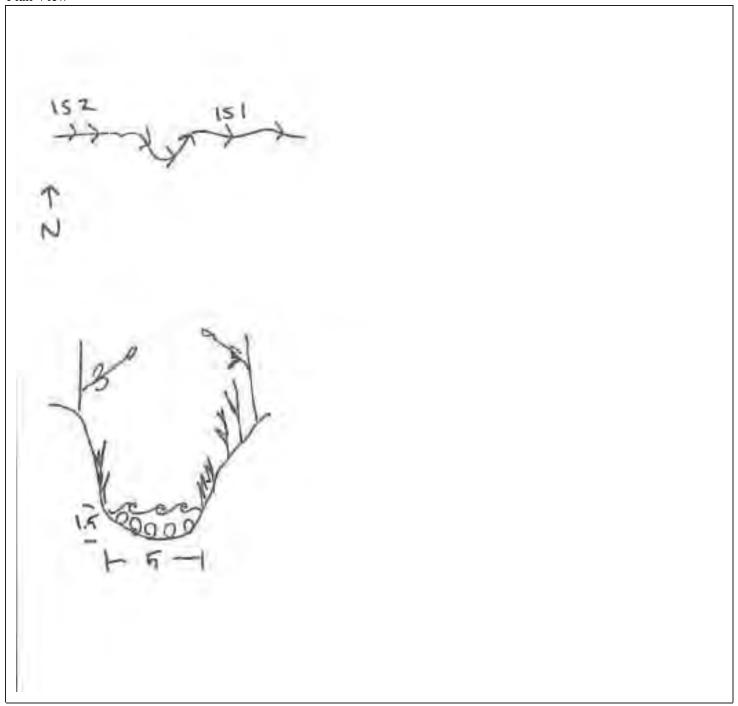
Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.

Plan View



	Stream Data Form #: Water Feature 16
	Project Name: US 380
	CSJ: <u>0135-02-065</u>
Stream Data Form	A 147 0004
Surveyor(s): Wyatt Wolfenkoehler	Date of Field Work: August 17, 2021
USGS Stream Name: Rutherford Branch	County/State: Collin County, Texas
USGS Topo Quad Name: Frisco	Stream Number: 16
Associated Wetland(s): Water Feature 18	Coordinates: 33.218617 -96.756070
Stream Type: Perennial Characteristics:	DEEPLY CHANNELIZED STREAM, EXPOSING BEDROCK, HIGHLY INCISED CHANNEL
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	HIGHLY ERODING INCISED CHANNEL
Stream Flow Direction: North	
OHWM Width (ft): 20	OHWM Height (in): 48
Stream Bottom composition: ☐ Silts ☐ Cobbles ☐ Concrete ☐ ☐ Sands ☐ Bedrock ☐ Muck ☐ Gravel ☐ Vegetation	Other:
Aquatic Habitat: Indicate all types present within proposed ROW/I Sand bar Sand/Gravel beach/bar Overhanging trees/shrubs Deep pool/ hole/ channel Other:	
Stream has the following characteristics: Bed and banks OHWM (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):	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
Water Quality: ☑ Clear ☐ Slightly Turbid ☐ Turbid ☐ Very Tu ☐ Other characteristics (pollutants, etc.)	arbid Oily film High organic content
Aquatic Organisms: List all species observed. This would include very Crawfish, sunfish, bluegill, minnows, invertebrates	vaterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
Riparian Vegetation: List species observed.	
American elm (Ulmus americana), Cedar elm (Ulmus crassifo water-willow (Justicia americana), greenbriar (smilax bona-no	
T&E Species/Suitable Habitat: List T&E species observed or which	species the habitat is suitable for.

NA

Stream Data Form #: Project Name:

CSJ: <u>0135-02-065</u>

Water Feature 16

US 380

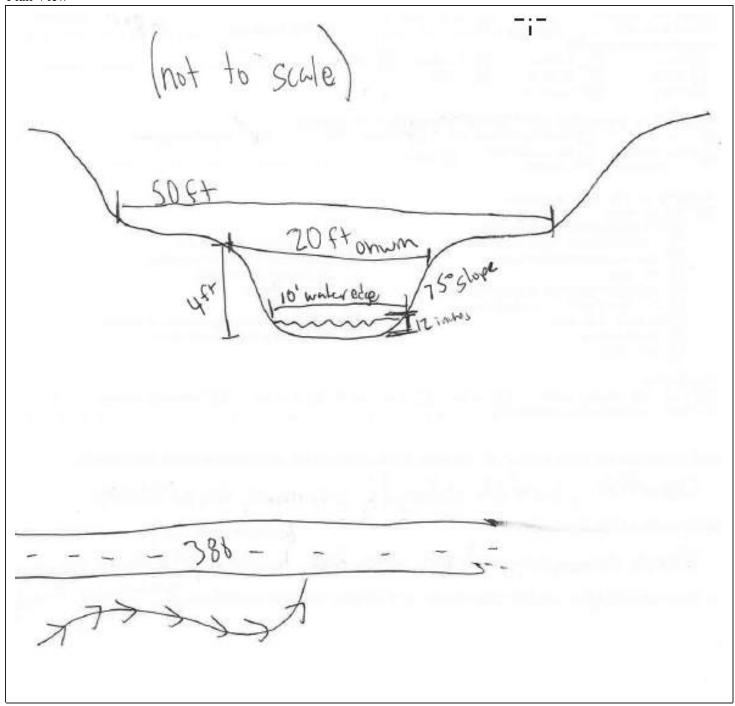
Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.

Plan View



	Stream Data Form #: Water Feature 25
	Project Name: US 380
	CSJ: 0135-02-065, 0135-15-002
Stream Data Form	
Surveyor(s): Wyatt Wolfenkoehler	Date of Field Work: August 17, 2021
USGS Stream Name: Unnamed tributary to Rutherford Bra	County/State: Collin County, Texas
USGS Topo Quad Name: Frisco	Stream Number: 25
Associated Wetland(s): None	Coordinates: 33.218622 -96.751921
Associated wetiand(s). Notice	-90.751921
Stream Type: Ephemeral Characteristics:	Small incised ephemeral drainage
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	
	Eroding
Stream Flow Direction: North	
OHWM Width (ft): 3	OHWM Height (in): 12"
Stream Bottom composition:	2.1
	Other:
✓ Sands ☐ Bedrock ✓ Muck	
☐ Gravel ☐ Vegetation	
Aquatic Habitat: Indicate all types present within proposed ROW/pr	roject limits
Sand bar Sand/Gravel beach/bar Gravel	
Overhanging Deen nool/ hole/	Tiquale vegetation
trees/shrubs channel Other:	
Stream has the following characteristics:	
✓ Bed and banks	
OHWM (check all indicators that apply):	
clear, natural line impressed on the bank	the presence of litter and debris
	destruction of terrestrial vegetation
shelving	the presence of wrack line
 ✓ vegetation matted down, bent, or absent ✓ leaf litter disturbed or washed away ✓ sediment deposition ✓ water staining 	sediment sorting
leaf litter disturbed or washed away	scour
sediment deposition	multiple observed or predicted flow events
	abrupt change in plant community
other (list):	
W. 4. O. 1'4	
Water Quality:	
☐ Clear ☐ Slightly Turbid ☐ Turbid ☐ Very Turbid ☐ Other characteristics (pollutants, etc.) No water	rbid Oily film High organic content
Other characteristics (polititalits, etc.) No water	
Aquatic Organisms: List all species observed. This would include w	aterfowl fish snakes turtles frogs invertebrates etc
None	ateriowi, non, shakes, tarties, nogs, invertebrates, etc.
Notice	
Riparian Vegetation: List species observed.	
· · · · · · · · · · · · · · · · · · ·	
Cynodon dactylon	
<u>T&E Species/Suitable Habitat: List T&E species observed or which s</u>	species the habitat is suitable for.

None

Water Feature 25

Project Name:

US 380

CSJ: <u>0135-02-065</u>, <u>0135-15-002</u>

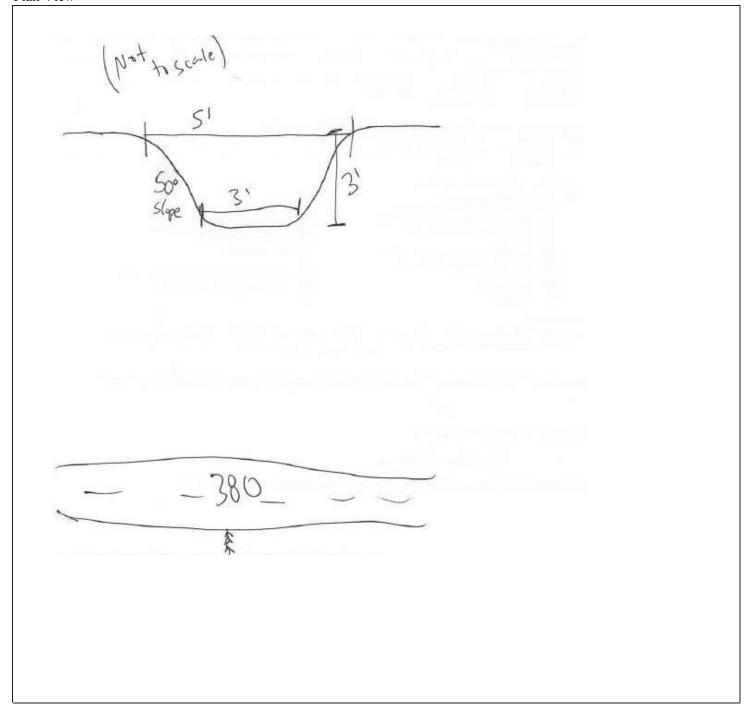
Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.

Plan View



	Stream Data Form #: Water Feature 31
	Project Name: US 380
	CSJ: 01335-02-065, 0135-15-002
Stream Data Form	<u></u>
Surveyor(s): Kelsea Hiebert	Date of Field Work: December 22, 2020
USGS Stream Name: Unnamed Tributary to Rutherford Bra	County/State: Collin County, Texas
USGS Topo Quad Name: McKinney West	Stream Number: 31
Associated Wetland(s): Water Feature 32, Water Feature 3	Coordinates: 33.218759 -96.748414
Associated wettaind(s). Water Feature 32, Water Feature 31	-30.740414
Stream Type: Perennial Characteristics:	Water from pond pools into stream channel, adjacent to right of way.
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	
Stream Flow Direction: N	
OHWM Width (ft): 15'	OHWM Height (in): 17"
Stream Bottom composition:	
✓ Silts ☐ Cobbles ☐ Concrete ☐ C	Other:
☐ Sands ☐ Bedrock ☐ Muck	
☐ Gravel ✓ Vegetation	
Aquatic Habitat: Indicate all types present within proposed ROW/pr	
☐ Sand bar ☐ Sand/Gravel beach/bar ☐ Gravel	riffles Aquatic vegetation
Overhanging Deep pool/ hole/ Other:	
trees/shrubs channel	
St	
Stream has the following characteristics: Bed and banks	
—	
OHWM (check all indicators that apply): clear, natural line impressed on the bank	the presence of litter and debris
	destruction of terrestrial vegetation
	the presence of wrack line
vegetation matted down, bent, or absent	sediment sorting
	scour
☐ leaf litter disturbed or washed away☐ sediment deposition✓ water staining	multiple observed or predicted flow events
water staining	abrupt change in plant community
other (list):	_
(),	
Water Quality:	
☐ Clear ☑ Slightly Turbid ☐ Turbid ☐ Very Turbid	rbid Oily film High organic content
Other characteristics (pollutants, etc.)	
Aquatic Organisms: List all species observed. This would include w	aterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
Frogs, ducks, snakes.	-
Riparian Vegetation: List species observed.	
Maclura pomifera, Ulmus crassifolia, and Smilax bona-nox.	
madara poriniera, Onnas diassilona, ana Onnas boria-1108.	
<u>T&E Species/Suitable Habitat: List T&E species observed or which s</u>	species the habitat is suitable for.
none	

Water Feature 31

Project Name:

US 380

CSJ: 01335-02-065, 0135-15-002

Stream Data Form (continued)

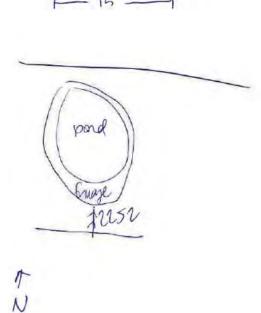
Please provide a plan and section view sketch of the stream channel.

Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.

Plan View



	Stream Data Form #: Water Feature 37
	Project Name: US 380
	CSJ: 0135-02-065, 0135-15-002
Stream Data Form	<u></u>
Surveyor(s): Kelsea Hiebert, Mike Keenan	Date of Field Work: December 22, 2020
USGS Stream Name: Unnamed Tributary to Rutherford Bra	County/State: Collin County, Texas
USGS Topo Quad Name: McKinney West	Stream Number: 37
Associated Wetland(s): Water Feature 33 and 125	Coordinates: 33.219339 -96.746994
Violet Feature 33 and 123	-30.740004
Stream Type: Perennial Characteristics:	Incised with trees lining banks.
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	molecu with trees mining burne.
Stream Flow Direction: Northwest to Pond	
OHWM Width (ft): 10'	OHWM Height (in): 36"
Stream Bottom composition:	241
	Other:
☐ Sands	
U Graver	
Aquatic Habitat: Indicate all types present within proposed ROW/p	roject limits.
Sand bar Sand/Gravel beach/bar Gravel	
Overhanding Deep need/hele/	
trees/shrubs	
Stream has the following characteristics:	
✓ Bed and banks	
OHWM (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
vegetation matted down, bent, or absent leaf litter disturbed or washed away sediment deposition water staining	scour
sediment deposition water staining	 ✓ multiple observed or predicted flow events ✓ abrupt change in plant community
other (list):	abrupt change in plant community
U other (list).	
Water Quality:	
☐ Clear ☑ Slightly Turbid ☐ Turbid ☐ Very Tu	rbid Oily film High organic content
Other characteristics (pollutants, etc.)	
<u> </u>	
Aquatic Organisms: List all species observed. This would include w	raterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
Frogs, ducks, snakes, fish	
9-,	
Riparian Vegetation: List species observed.	
Smilax bona-nox, Ulmus crassifolia, Salix nigra, and Juniperus	s virginiana.
	
The Spacias/Suitable Hebitat, List The spacias absorbed	species the hebitat is suitable for
T&E Species/Suitable Habitat: List T&E species observed or which	species the habital is suitable for.
none	

Water Feature 37

Project Name:

US 380

CSJ: 0135-02-065, 0135-15-002

Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.

Plan View

La Sala

	Stream Data Form #: Water Feature 45
	Project Name: US 380
	CSJ: 035-02-065, 0135-15-002
Stream Data Form	
Surveyor(s): Kelsea D. Hiebert and Wyatt Wolfenkoehler	Date of Field Work: August 18, 021
USGS Stream Name: Unnamed Tributary to Wilson Creek USGS Topo Quad Name: McKinney West	Stream Number: 45
	<u> </u>
Associated Wetland(s): None	Coordinates: 33.218775 -96.740663
Stream Type: Ephemeral Characteristics:	Receives flow from 380 runoff.
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	
Stream Flow Direction: North	
OHWM Width (ft): 4	OHWM Height (in): 6
Stream Bottom composition:	On white field (iii).
	Other:
✓ Sands ☐ Bedrock ☐ Muck	Other:
Gravel Vegetation	
Vegetation	
Aquatic Habitat: Indicate all types present within proposed ROW/	project limits.
Sand bar Sand/Gravel beach/bar Grave	
Overhanging Deep pool/hole/	
vernanging beep poor note Other:	
Stream has the following characteristics:	
✓ Bed and banks	
OHWM (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
	sediment sorting
leaf litter disturbed or washed away	scour
vegetation matted down, bent, or absent leaf litter disturbed or washed away sediment deposition water staining	multiple observed or predicted flow events
water staining	abrupt change in plant community
other (list):	
_	
Water Quality:	
☐ Clear ☑ Slightly Turbid ☐ Turbid ☐ Very To	urbid Oily film High organic content
Other characteristics (pollutants, etc.) Flowing due to curre	ent precipitation
Aquatic Organisms: List all species observed. This would include v	waterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
None	
Riparian Vegetation: List species observed.	
	activities) are an each (Franchiscon activities). A taken an
Great ragweed (Ambrosia trifida), bermudagrass (Cynodon da	actylon), green asn (Fraxinus pennsylvanica), jonnsongrass
(Sorghum halepense)	
T&E Species/Suitable Habitat: List T&E species observed or which	species the habitat is suitable for.
None	

Water Feature 45

Stream Data Form #: Project Name:

US 380

CSJ: 0135-02-065 0135-15-002

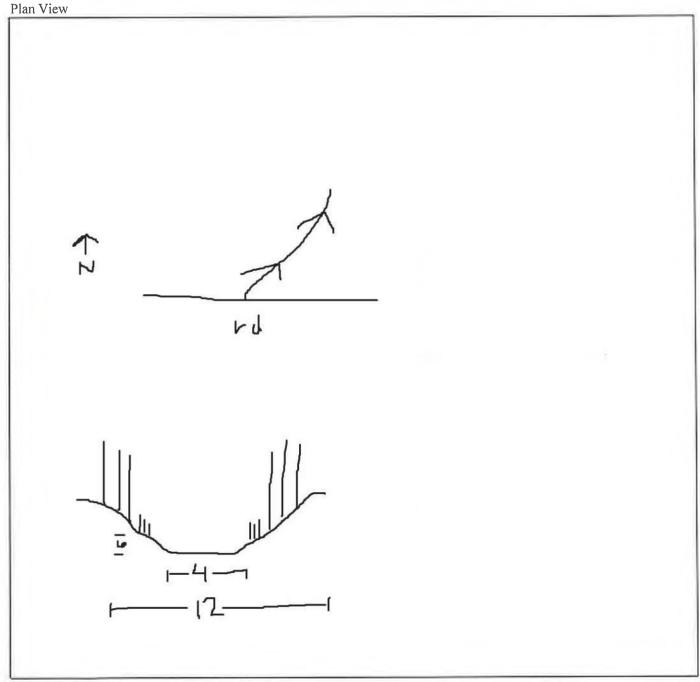
Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel.

Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.



	Stream Data Form #: Water Feature 51
	Project Name: US 380
	CSJ: 0135-02-065, 0135 - 15-002
Stream Data Form	
Surveyor(s): Kelsea D. Hiebert and Wyatt Wolfenkoehler	Date of Field Work: August 18, 2021
USGS Stream Name: Unnamed Tributary to Wilson Creek	- <u> </u>
USGS Topo Quad Name: McKinney West	Stream Number: 51
Associated Wetland(s): Water Feature 53	Coordinates: 33.218758 -96.737992
Water Feature 35	00.210100 00.10100 <u>0</u>
Stream Type: Intermittent Characteristics:	Slightly incised stream within floodplain. Recent precipitation.
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	Stabilized by vegetation
Stream Flow Direction: North	
OHWM Width (ft): 5	OHWM Height (in): 7
Stream Bottom composition:	
	Other:
✓ Sands ☐ Bedrock ☐ Muck	
✓ Gravel ✓ Vegetation	
Aquatic Habitat: Indicate all types present within proposed ROW/	
☐ Sand bar ☑ Sand/Gravel beach/bar ☑ Grave	l riffles
Overhanging Deep pool/ hole/ trees/shruhs Deep pool/ hole/ phonnel	
trees/shrubs channel Guler.	
Stream has the following characteristics:	
Bed and banks	
OHWM (check all indicators that apply):	G 41
clear, natural line impressed on the bank	the presence of litter and debris
changes in the character of soilshelving	destruction of terrestrial vegetation
	the presence of wrack line sediment sorting
vegetation matted down, bent, or absentleaf litter disturbed or washed away	scour
sediment deposition	✓ multiple observed or predicted flow events
water staining	abrupt change in plant community
other (list):	abrupt change in plant community
Water Quality:	
☐ Clear ☑ Slightly Turbid ☐ Turbid ☐ Very To	urbid Oily film High organic content
Other characteristics (pollutants, etc.) Flowing due to curre	
	nt prospitation
Aquatic Organisms: List all species observed. This would include v	waterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
Small fish	
Sitiali listi	
Riparian Vegetation: List species observed.	
Great ragweed (Ambrosia trifida), johnsongrass (Sorghum ha	alepense), black willow (Salix nigra), American elm (Ulmus
americana), and tall goldenrod (Solidago altissima)	
T&E Species/Suitable Habitat: List T&E species observed or which	species the habitat is suitable for.
None	

Water Feature 51

Stream Data Form #: Project Name:

US 380

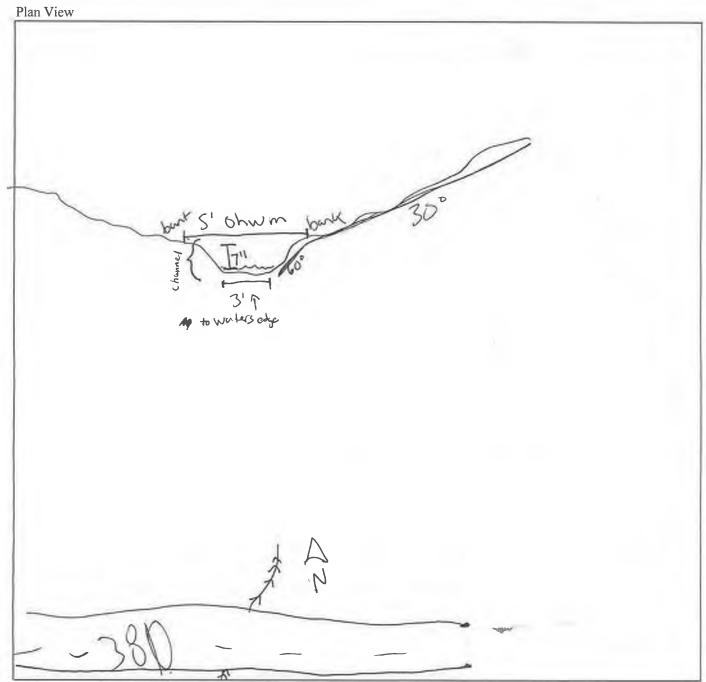
CSJ: 0135-02-065 0135-15-002

Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.



Sectional View

	Stream Data Form #: Water Feature 58
	Project Name: US 380
	CSJ: 0135-02-065, 0135-15-002
Stream Data Form	-
Surveyor(s): Kelsea D. Hiebert and Wyatt Wolfenkoehler	Date of Field Work: August 18, 2021
• • • • • • • • • • • • • • • • • • • •	
	County/State: Collin County, Texas Stream Number: 58
USGS Topo Quad Name: McKinney West	
Associated Wetland(s): None	Coordinates: 33.218955 -96.727926
Stream Type: Ephemeral Characteristics:	Shallow channel north of the roadway
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	
Stream Flow Direction: North	-
OHWM Width (ft): 3	OHWM Height (in): 6
Stream Bottom composition:	
	Other:
☐ Sands ☐ Bedrock ☐ Muck	
☐ Gravel ☐ Vegetation	
Aquatic Habitat: Indicate all types present within proposed ROW/	project limits.
	Aquatic vegetation
Overhanging Deep pool/ hole/ Others Non	
trees/shrubs Deep poor hole	<u>e</u>
Stream has the following characteristics:	
✓ Bed and banks	
OHWM (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
 ✓ vegetation matted down, bent, or absent ☐ leaf litter disturbed or washed away ☐ sediment deposition ☐ water staining 	scour
sediment deposition	multiple observed or predicted flow events
	abrupt change in plant community
other (list):	
Water Quality:	
☐ Clear ☐ Slightly Turbid ☐ Turbid ☐ Very T	urbid Oily film High organic content
Other characteristics (pollutants, etc.) No water	
Aquatic Organisms: List all species observed. This would include	waterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
None	
Riparian Vegetation: List species observed.	
johnsongrass (Sorghum halepense), bermudagrass (Cynodor	n dactylon), common sunflower (Helianthus annuus)
, 5 (5 , 1 - 1 - 1 , 1 - 1 - 1 , 1 - 1 - 1 , 1 - 1 -	, ,,
T0.E C	and the habited in this C
T&E Species/Suitable Habitat: List T&E species observed or which	species the habitat is suitable for.
None	

Water Feature 58

Stream Data Form #: Project Name:

US 380

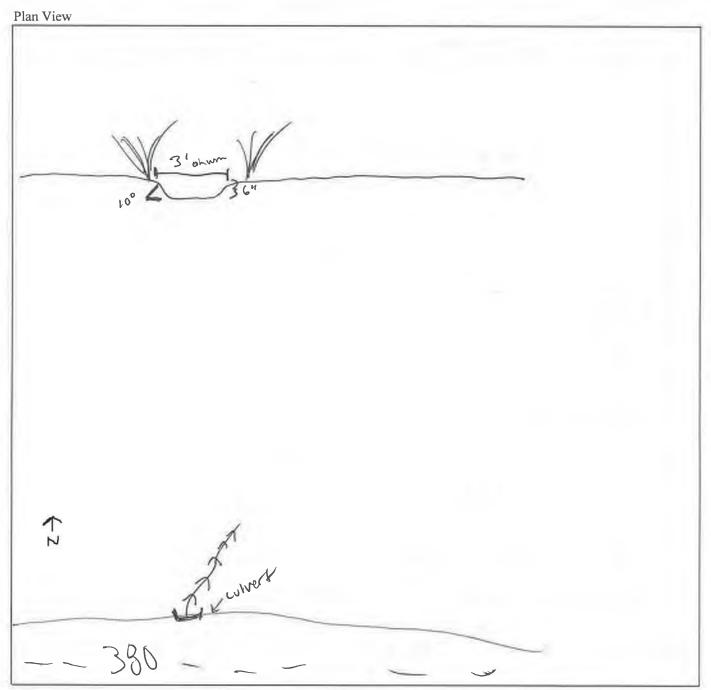
CSJ: 0135-02-065 0135-15-002

Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.



Sectional View

	Stream Data Form #: Water Feature 62
	Project Name: US 380
	CSJ: 0135-02-065, 0135-15-002
Stream Data Form	·
Surveyor(s): Kelsea D. Hiebert and Mike Keenan	Date of Field Work: January 19, 2021
• • • • • • • • • • • • • • • • • • • •	
USGS Stream Name: Unnamed Tributary to Wilson Creek	
USGS Topo Quad Name: McKinney West	Stream Number: 62 Coordinates: 33.219331 -96.722549
Associated Wetland(s): Water Feature 61 and 63	Coordinates. 33.219331 -90.722349
Stream Type: Perennial Characteristics:	Receiving groundwater flow and runoff from the south
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	Insized
Stream Flow Direction: North	-
OHWM Width (ft): 6	OHWM Height (in): 24
Stream Bottom composition:	OII WIN Height (iii).
_	Other:
☐ Sands ☐ Bedrock ☐ Muck	
☐ Gravel ☐ Vegetation	
_ starter sgermiten	
Aquatic Habitat: Indicate all types present within proposed ROW/	project limits.
Sand bar Sand/Gravel beach/bar Grave	
Overhanging — Deep pool/hole/ —	– 1 5
trees/shrubs	
Stream has the following characteristics:	
✓ Bed and banks	
OHWM (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
 □ vegetation matted down, bent, or absent □ leaf litter disturbed or washed away □ sediment deposition □ water staining 	scour
sediment deposition	✓ multiple observed or predicted flow events
_	abrupt change in plant community
other (list):	
Water Quality:	
☐ Clear ☐ Slightly Turbid ☐ Turbid ☐ Very Tu	urbid Oily film High organic content
Other characteristics (pollutants, etc.)	
Aquatic Organisms: List all species observed. This would include v	vaterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
Frogs, snakes, small fish, muscles	
Riparian Vegetation: List species observed.	
White oak (Quercus alba), black willow (Salix nigra), shumard	oak (Quercus shumardii), english ivy (Hedera helix)
, , , , , , , , , , , , , , , , , , , ,	, , , , , , , , , , , , , , , , , , , ,
The Spacias/Suitable Habitaty List The appairs absorbed as which	spacies the habitat is suitable for
T&E Species/Suitable Habitat: List T&E species observed or which	species the habital is suitable for.
None	

Water Feature 62

Stream Data Form #:

Project Name:

US 380

CSJ 0135-0

0135-02-065 0135-15-002

Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

Directional arrow;

• Width of channel from top of bank to top of bank; Depth of channel,

Approximate side slope; and,

• Width of stream from water edge to water edge

Plan View

1951 rd (350 or unicesty?)

7 - 6-+

	Stream Data Form #: Water Feature 65
	Project Name: US 380
	CSJ: 0135-02-065, 0135-15-002
Stream Data Form	· · · · · · · · · · · · · · · · · · ·
Surveyor(s): Kelsea D. Hiebert and Mike Keenan	Date of Field Work: January 19, 2021
USGS Stream Name: Unnamed Tributary to Wilson Creek	County/State: Collin County, Texas Stream Number: 65
USGS Topo Quad Name: McKinney West	Stream Number: 65 Coordinates: 33.220223 -96.722593
Associated Wetland(s): Water Feature 63	Coordinates: 33.220223 -90.722393
Stream Type: Perennial Characteristics:	Receiving groundwater flow and runoff from the south
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	Insized
Stream Flow Direction: North	
OHWM Width (ft): 6	OHWM Height (in): 24
Stream Bottom composition:	
Silts Cobbles Concrete	Other:
☐ Sands ☐ Bedrock ☐ Muck	
✓ Gravel	
Aquatic Habitat: Indicate all types present within proposed ROW/	project limits.
Sand bar Sand/Gravel beach/bar Grave	Aquatic vegetation
Overhanging Deep pool/ hole/ Others	
verification of trees/shrubs	
Stream has the following characteristics:	
✓ Bed and banks	
OHWM (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 ☐ sediment deposition ☐ water staining	scour
sediment deposition	✓ multiple observed or predicted flow events
	abrupt change in plant community
other (list):	
Water Quality:	
☐ Clear ☐ Slightly Turbid ☐ Turbid ☐ Very T	urbid Oily film High organic content
Other characteristics (pollutants, etc.)	
Aquatic Organisms: List all species observed. This would include	waterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
Frogs, snakes, small fish, muscles	
Riparian Vegetation: List species observed.	
White oak (Quercus alba), black willow (Salix nigra), shumard	d oak (Quercus shumardii), english ivy (Hedera helix)
,, , , , , , , , , , , , , , , , , , , ,	,, ,, ,,
The Spacias/Suitable Hebitate List The gracies absorred	a species the hebitat is suitable for
T&E Species/Suitable Habitat: List T&E species observed or which	i species the naohal is suhable for.
None	

Stream Data Form #: Water Feature 65

Stream Data Form Project Name:

US 380

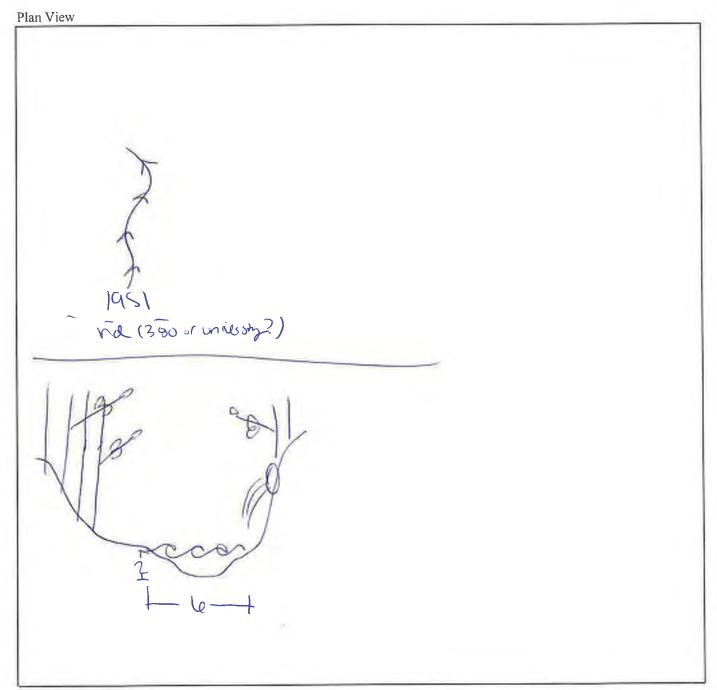
CSJ: 0135-02-065 0135-15-002

Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.



	Stream Data Form #: Water Feature 66
	Project Name: US 380
	CSJ: 0135-02-065, 0135-15-002
Stream Data Form	·
Surveyor(s): Kelsea D. Hiebert and Mike Keenan	Date of Field Work: January 19, 2021
	County/State: Collin County, Texas
USGS Stream Name: Unnamed Tributary to Wilson Creek	Stream Number: 66
USGS Topo Quad Name: McKinney West	
Associated Wetland(s): None	Coordinates: 33.220298 -96.723073
Stream Type: Ephemeral Characteristics:	Receives flow from runoff and adjacent swale
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	
Stream Flow Direction: East	
OHWM Width (ft): 4	OHWM Height (in): 12
Stream Bottom composition:	011 (11 11 11 11 11 11 11 11 11 11 11 11
	Other:
☐ Sands ☐ Bedrock ☐ Muck	
☐ Gravel	
_ Glaver vegetation	
Aquatic Habitat: Indicate all types present within proposed ROW/p	project limits.
Sand bar Sand/Gravel beach/bar Gravel	riffles Aquatic vegetation
Overhanging Deep pool/ hole/ Others	_ 1 0
trees/shrubs Deep poor note: Other:	
Stream has the following characteristics:	
✓ Bed and banks	
OHWM (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
	scour
☐ leaf litter disturbed or washed away sediment deposition water staining	multiple observed or predicted flow events
water staining	abrupt change in plant community
other (list):	
Water Quality:	
☐ Clear ☐ Slightly Turbid ☐ Turbid ☐ Very Tu	urbid Oily film High organic content
☑ Other characteristics (pollutants, etc.) None	
Aquatic Organisms: List all species observed. This would include v	vaterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
None	-
110110	
Riparian Vegetation: List species observed.	
Eastern red cedar (Juniperus virginiana), Buroak (Quercus ma	acrocarpa), shumard oak (Quercus shumardii), water oak
(Quercus nigra), chinquapin oak (Quercus muehlenbergii)	
T&E Species/Suitable Habitat: List T&E species observed or which	species the habitat is suitable for.

Project Name:

US 380

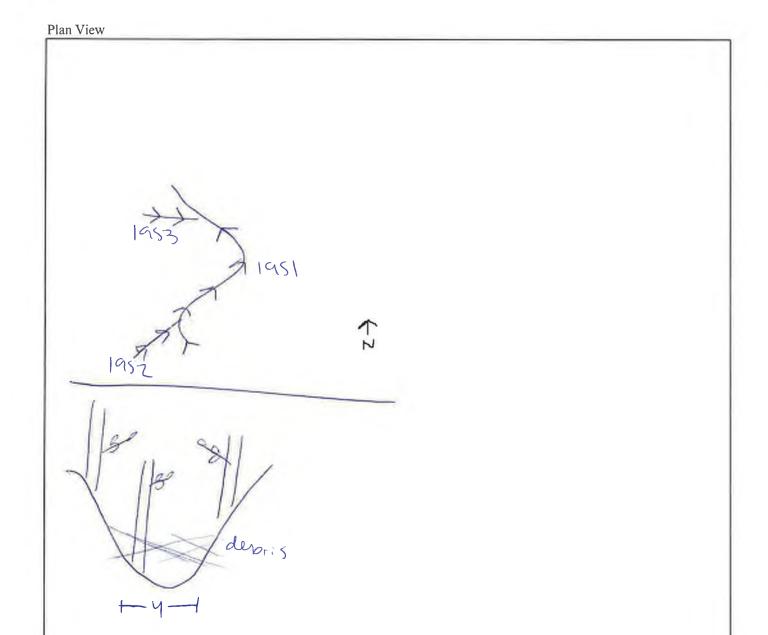
CSJ: 0135-02-065 0135-15-002

Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.



	Stream Data Form #: Water Feature 70
	Project Name: US 380
	CSJ: 0135-02-065, 0135 - 15-002
Stream Data Form	
Surveyor(s): Kelsea D. Hiebert and Mike Keenan	Date of Field Work: November 11, 2020
• ` ` `	County/State: Collin County, Texas
	Stream Number: 70
USGS Topo Quad Name: McKinney West	
Associated Wetland(s): Water Feature 69	Coordinates: 33.219704 -96.720286
Starran Tanan Enhamoral Chamatairtian	
Stream Type: Ephemeral Characteristics:	
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	Vegetated along banks
Stream Flow Direction: North	
OHWM Width (ft): 6	OHWM Height (in): 4
Stream Bottom composition:	
✓ Silts ☐ Cobbles ☐ Concrete ☐	Other:
✓ Sands ☐ Bedrock ☐ Muck	
☐ Gravel ☐ Vegetation	
_ •	
Aquatic Habitat: Indicate all types present within proposed ROW/	
☐ Sand bar ☐ Sand/Gravel beach/bar ☐ Grave	l riffles
Overhanging Deep pool/ hole/ Other:	
trees/shrubs channel channel	
Stream has the following characteristics:	
✓ Bed and banks	
OHWM (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 scour
leaf litter disturbed or washed away	scour
sediment deposition water staining	multiple observed or predicted flow events
water staining	abrupt change in plant community
other (list):	
Water Quality:	
☐ Clear ☐ Slightly Turbid ☐ Turbid ☐ Very T	urbid Oily film High organic content
✓ Other characteristics (pollutants, etc.) None	
Aquatic Organisms: List all species observed. This would include v	waterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
Frogs and snakes	
Trogo and onanco	
Riparian Vegetation: List species observed.	
American elm (Ulmus americana), chinquapin oak (Quercus r	nuehlenbergii), black willow (Salix nigra), virginia wildrye
(Elymus virginicus)	
T&E Species/Suitable Habitat: List T&E species observed or which	species the habitat is suitable for.

Water Feature 70

Stream Data Form #:

Project Name:

US 380

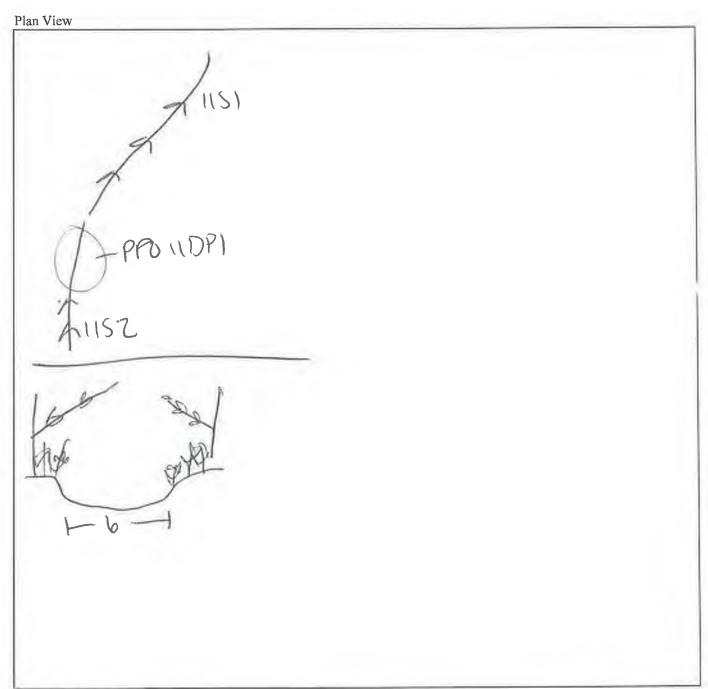
CSJ: 0135-02-065 0135-15-002

Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- · Approximate side slope; and,
- Width of stream from water edge to water edge.



	Stream Data Form #: Water Feature 79
	Project Name: US 380
	CSJ: 0135-02-065, 0135-15-002
Stream Data Form	·
Surveyor(s): Kelsea D. Hiebert and Wyatt Wolfenkoehler	Date of Field Work: August 18, 2021
USGS Stream Name: <u>Unnamed Tributary to Wilson Creek</u> USGS Topo Quad Name: McKinney West	County/State: Collin County, Texas Stream Number: 79
	Stream Number: 79 Coordinates: 33.218511 -96.715132
Associated Wetland(s): Water Feature 80	Cooldinates. 33.210311 -90.713132
Stream Type: Ephemeral Characteristics:	Drainage from culvert to W-6
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	
	Shallow channel with root bound banks
Stream Flow Direction: Northeast	
OHWM Width (ft): 2	OHWM Height (in): 1
Stream Bottom composition:	WI
	Other:
✓ Sands✓ Bedrock✓ Gravel✓ Vegetation	
V draver V vegetation	
Aquatic Habitat: Indicate all types present within proposed ROW/pr	roject limits
Sand bar Sand/Gravel beach/bar Gravel	
Overhanging — Deen nool/ hole/ —	
trees/shrubs Deep poor note Other:	
 □ changes in the character of soil □ shelving □ vegetation matted down, bent, or absent □ leaf litter disturbed or washed away 	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
	rbid Oily film High organic content
Other characteristics (pollutants, etc.) Flowing due to currer	
<u> </u>	
Aquatic Organisms: List all species observed. This would include w	aterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
None	
Riparian Vegetation: List species observed.	
American elm (Ulmus americana), pecan (Carya illinoinensis),	and eastern red cedar (Toxicodendron radicans), chinoso
American eim (oimus americana), pecan (oarya iiiinomensis),	and castern red cedar (roxicodendron radicans), chillese

privet (Ligustrum inense), green ash (Fraxinus pennsylvanica), common persimmon (Diospyros virginiana), sugarberry (Celtis laevigata), eastern cottonwood (Populus deltoides), osage orange (Maclura pomifera)

<u>T&E Species/Suitable Habitat: List T&E species observed or which species the habitat is suitable for.</u>

Water Feature 79

Stream Data Form #: Project Name:

US 380

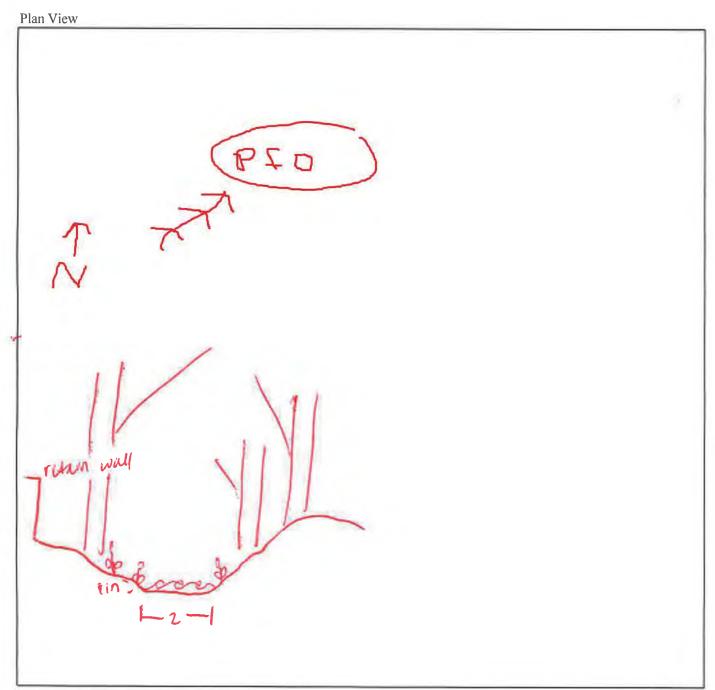
CSJ: 0135-02-065 0135-15-002

Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.



	Stream Data Form #: vvater Feature 82
	Project Name: US 380
	CSJ: 0135-02-065, 0135-15-002
Stream Data Form	·
Surveyor(s): Wyatt Wolfenkoehler	Date of Field Work: August 18, 2021
USGS Stream Name: Unnamed Tributary to Wilson Creek	County/State: Collin County, Texas
USGS Topo Quad Name: McKinney West	Stream Number: 82
Associated Wetland(s): Water Feature 80	Coordinates: 33.218142 -96.714180
Stream Type: Ephemeral Characteristics:	Shallow channel
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	
Stream Flow Direction: North	
OHWM Width (ft): 2	OHWM Height (in): 1
Stream Bottom composition:	
	Other:
Sands Bedrock Muck	
☑ Gravel ☐ Vegetation	
Aquatic Habitat: Indicate all types present within proposed ROW/p	
☐ Sand bar ☐ Sand/Gravel beach/bar ☐ Gravel	riffles Aquatic vegetation
Overhanging Deep pool/ hole/ Other:	
trees/shrubs channel other.	
Stream has the following characteristics: Bed and banks OHWM (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):	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
Water Quality: ☐ Clear ☐ Slightly Turbid ☐ Turbid ☐ Very Tu ☐ Other characteristics (pollutants, etc.) None	urbid Oily film High organic content
Aquatic Organisms: List all species observed. This would include we None	vaterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
Riparian Vegetation: List species observed.	
American elm (Ulmus americana), pecan (Carya illinoinensis),	and eastern red cedar (Toxicodendron radicans), chinese
privet (Ligustrum inense), green ash (Fraxinus pennsylvanica) (Celtis laevigata), eastern cottonwood (Populus deltoides), osa	, common persimmon (Diospyros virginiana), sugarberry
T&F Species/Suitable Habitat: List T&F species observed or which	species the habitat is suitable for

Water Feature 82

Project Name:

US 380

CSJ:

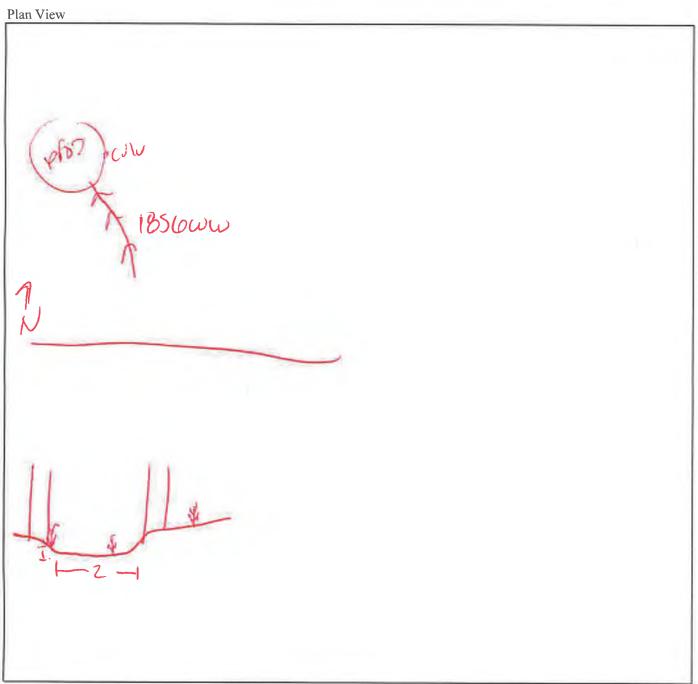
0135-02-065 0135-15-002

Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.



Sectional View

	Stream Data Form #: Water Feature 84
	Project Name: US 380
	CSJ: 0135-02-065, 0135-15-002
Stream Data Form	
	Date of Field Work: August 18, 2021
5 () <u></u>	
USGS Stream Name: Unnamed Tributary to Wilson Creek	County/State: Collin County, Texas
USGS Topo Quad Name: McKinney West	Stream Number: 84
Associated Wetland(s): Water Feature 80	Coordinates: 33.218770 -96.714366
Stream Type: Ephemeral Characteristics:	Highly modified stream channel.
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	Riprap lines banks.
Stream Flow Direction: North	
OHWM Width (ft): 10	OHWM Height (in): 12
Stream Bottom composition:	
☐ Silts	Other: rip rap
☐ Sands ☐ Bedrock ☐ Muck	
☐ Gravel ☐ Vegetation	
Aquatic Habitat: Indicate all types present within proposed ROW/p	_
Sand bar Sand/Gravel beach/bar Gravel	riffles Aquatic vegetation
Overhanging Deep pool/ hole/ trace/obswides Deep pool/ hole/ whomeal Other: None	e
trees/shrubs channel	
Stream has the following characteristics: Bed and banks OHWM (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	 ✓ the presence of litter and debris ✓ destruction of terrestrial vegetation ✓ the presence of wrack line ✓ sediment sorting ✓ scour
	multiple observed or predicted flow events
sediment deposition water staining	abrupt change in plant community
other (list):	
_	
Water Quality:	
☐ Clear ☐ Slightly Turbid ☐ Turbid ☐ Very Tu	urbid Oily film High organic content
✓ Other characteristics (pollutants, etc.) None	
Aquatic Organisms: List all species observed. This would include v	vaterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
Frogs and snakes	
Riparian Vegetation: List species observed.	
American elm (Ulmus americana), pecan (Carya illinoinensis).	cedar elm (Ulmus crassifolia), great ragweed (Ambrosia
trifida), fringed green brier (Smilax bona-nox), eastern poison	
,,	
T&E Species/Suitable Habitat: List T&E species observed or which	spacies the habitat is suitable for
1 &L Species/Sultable Habitat. List 1 &E species observed or which	species the Haultat is suitable 101.

Water Feature 84

Stream Data Form #:

Project Name:

US 380

CSJ

0135-02-065 0135-15-002

Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

Directional arrow;

Width of channel from top of bank to top of bank;

• Depth of channel,

Approximate side slope; and,

Width of stream from water edge to water edge

Plan View

A human modifies stream bed hining

25° slope cuid - fr (Obble, riprap

γ Δ ↑ ↑ ↑ ↑ Λ

	Stream Data Form #: Water Feature 85
	Project Name: US 380 CSJ: 0135-02-065, 0135-15-002
Stream Data Form Wyatt Wolfenkoehler, Kelsea	CSJ. <u>0100-02-000</u> , 0100-10-002
Surveyor(s): Hiebert, Mike Keenan	Date of Field Work: June 28, 2021
USGS Stream Name: Unnamed Tributary to Wilson Creek	County/State: Collin County, Texas
USGS Topo Quad Name: McKinney West Associated Wetland(s): Water Feature 80	Stream Number: <u>85</u> Coordinates: 33.219863 -96.713211
Associated wettaild(s). Water realure 60	-90.713211
Stream Type: Ephemeral Characteristics:	Highly eroded and steep banks
Bank Stability (e.g. highly eroding, sloughing banks, etc.): Stream Flow Direction: Northeast	
Stream Flow Direction: Northeast OHWM Width (ft): 4	OHWM Height (in): 24
Stream Bottom composition:	
	Other:
☐ Sands ☐ Bedrock ☐ Muck ☑ Gravel ☑ Vegetation	
_ •	
Aquatic Habitat: Indicate all types present within proposed ROW/p Sand bar Sand/Gravel beach/bar Gravel	
Overhanging Deep pool/ hole/ Other:	Innes Inquite regulation
trees/shrubs channel	
Stream has the following characteristics: Bed and banks OHWM (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):	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
Water Quality: ☐ Clear ☐ Slightly Turbid ☐ Turbid ☐ Very Tu ☐ Other characteristics (pollutants, etc.) None	arbid Oily film High organic content
Aquatic Organisms: List all species observed. This would include wonne	vaterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
Riparian Vegetation: List species observed.	
hermudagrass (Cynodon dactylon). American elm (I llmus ame	ericana) shumard oak (Quercus shumardii) eastern red

bermudagrass (Cynodon dactylon), American elm (Ulmus americana), shumard oak (Quercus shumardii), eastern red cedar (Juniperus virginiana), sugarberry (Celtis laevigata), pecan (Carya illinoinensis), tall false rye grass (Schedonorus arundinaceus) fringed green brier (Smilax bona-nox), eastern poison ivy (Toxicodendron radicans)

<u>T&E Species/Suitable Habitat: List T&E species observed or which species the habitat is suitable for.</u>

Stream Data Form #: Project Name:

US 380

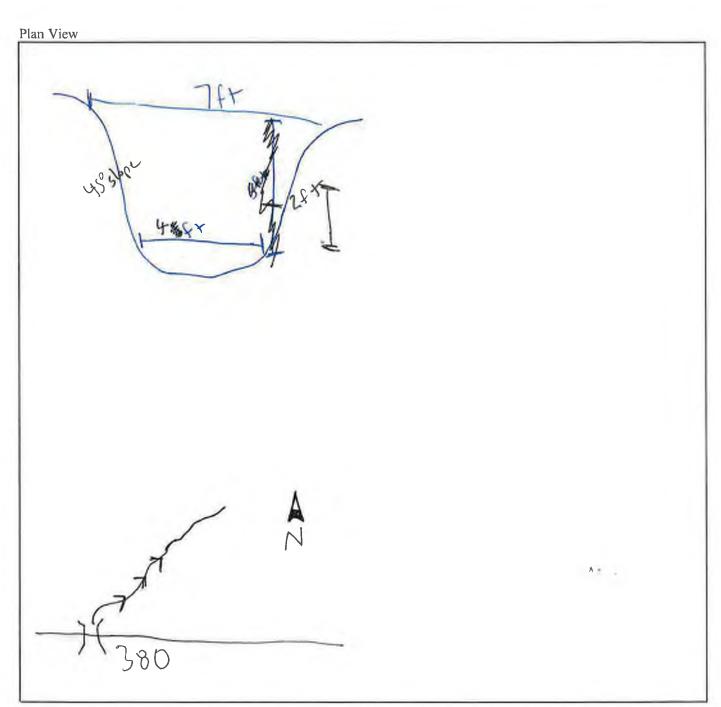
CSJ: 0135-02-065 0135-15-002

Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.



	Stream Data Form #: Water Feature 87
	Project Name: US 380
	CSJ: 0135-02-065, 0135-15-002
Stream Data Form Wyatt Wolfenkoehler, Kelsea	
Surveyor(s): Hiebert, Mike Keenan	Date of Field Work: June 28, 2021
USGS Stream Name: Unnamed Tributary to Wilson Creek	County/State: Collin County, Texas
USGS Topo Quad Name: McKinney West	Stream Number: 87
Associated Wetland(s): None	Coordinates: 33.219904 -96.712183
Stream Type: Ephemeral Characteristics:	
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	Death of the Second of Complete
	Banks stabilized with sod forming grasses
Stream Flow Direction: North OHWM Width (ft): 3	OHWM Height (in): 17
Stream Bottom composition:	On whi neight (iii).
	Other:
Sands Bedrock Muck	
☑ Gravel ☐ Vegetation	
A4:- II-1:4-4: I1:4:11.4	one to a time ta-
Aquatic Habitat: Indicate all types present within proposed ROW/p Sand bar Sand/Gravel beach/bar Gravel	
Overhanging — Deen nool/hole/ —	Influence vegetation
trees/shrubs	
Stream has the following characteristics: Bed and banks OHWM (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): Water Quality:	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
✓ Clear ☐ Slightly Turbid ☐ Turbid ☐ Very Tu ☐ Other characteristics (pollutants, etc.)	
Aquatic Organisms: List all species observed. This would include v	vaterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
None	
Riparian Vegetation: List species observed.	
bermudagrass (Cynodon dactylon), American elm (Ulmus ame	ericana), shumard oak (Quercus shumardii), eastern red

bermudagrass (Cynodon dactylon), American elm (Ulmus americana), shumard oak (Quercus shumardii), eastern red cedar (Juniperus virginiana), sugarberry (Celtis laevigata), pecan (Carya illinoinensis), tall false rye grass (Schedonorus arundinaceus) fringed green brier (Smilax bona-nox), eastern poison ivy (Toxicodendron radicans)

<u>T&E Species/Suitable Habitat: List T&E species observed or which species the habitat is suitable for.</u>

Stream Data Form #: Project Name:

US 380

CSJ: 0135-02-065 0135-15-002

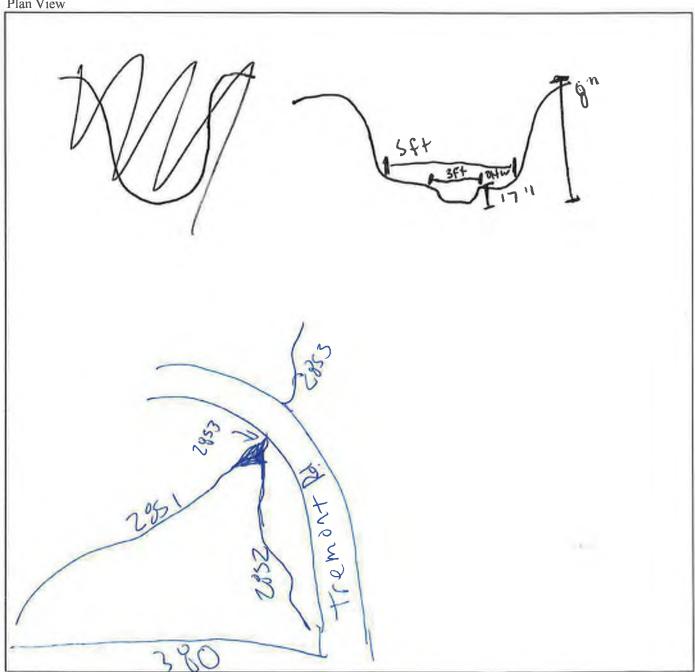
Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.





	Stream Data Form #: Water Feature 88
	Project Name: US 380
	CSJ: 0135-02-065, 0135-15-002
Stream Data Form Surveyor(s): Wyatt Wolfenkoehler, Kelsea Hiebert, Mike Ke	enan _{Date of Field Work:} June 28, 2021
USGS Stream Name: Unnamed Tributary to Wilson Creek	County/State: Collin County, Texas
USGS Topo Quad Name: McKinney West	Stream Number: 88
Associated Wetland(s): None	Coordinates: 33.219525 -96.711963
Stream Type: Ephemeral Characteristics:	Erosion is sections and concert debris within stream channel
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	Steep banks
Stream Flow Direction: North OHWM Width (ft): 2	OHWM Height (in): 11
Stream Bottom composition: Silts Cobbles Concrete	Other:
Sands Bedrock Muck	
✓ Gravel ✓ Vegetation	
Aquatic Habitat: Indicate all types present within proposed ROW/ Sand bar Sand/Gravel beach/bar Grave Overhanging Deep pool/ hole/ channel Other:	
Stream has the following characteristics: Bed and banks OHWM (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):	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
Water Quality: ☐ Clear ☐ Slightly Turbid ☐ Turbid ☐ Very T ☐ Other characteristics (pollutants, etc.) None	urbid Oily film High organic content
Aquatic Organisms: List all species observed. This would include to Crayfish, frogs, little fish	waterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
Riparian Vegetation: List species observed.	

bermudagrass (Cynodon dactylon), American elm (Ulmus americana), shumard oak (Quercus shumardii), eastern red cedar (Juniperus virginiana), sugarberry (Celtis laevigata), pecan (Carya illinoinensis), tall false rye grass (Schedonorus arundinaceus) fringed green brier (Smilax bona-nox), eastern poison ivy (Toxicodendron radicans)

T&E Species/Suitable Habitat: List T&E species observed or which species the habitat is suitable for.

Water Feature 88

Stream Data Form #

US 380

Project Name:

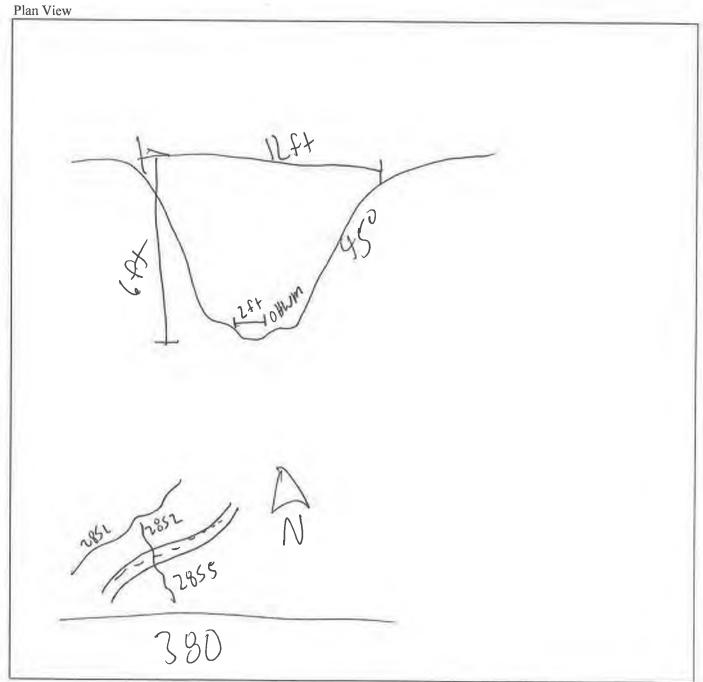
0135-02-065 0135-15-002

Stream Data Form (continued) US 380

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.



	Stream Data Form #: Water Feature 89
	Project Name: US 380
	CSJ: 0135-02-065, 0135-15-002
Stream Data Form	<u></u>
Surveyor(s): Wyatt Wolfenkoehler	Date of Field Work: August 18, 021
USGS Stream Name: Unnamed Tributary to Wilson Creek	County/State: Collin County, Texas
USGS Topo Quad Name: McKinney West	Stream Number: 89
Associated Wetland(s): Water Feature 91	Coordinates: 33.218792 -96.711595
Water Feature 91	-50.711000
Stream Type: Ephemeral Characteristics:	Current precipitation during delineation.
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	Banks stabilized by vegetation and man made structures
	Banks stabilized by vegetation and man made structures
	OIDWA II ' 14 (') 49
OHWM Width (ft): 3	OHWM Height (in): 12
Stream Bottom composition: Silts Cobbles Concrete	Other:
✓ Silts ✓ Cobbles ✓ Concrete ☐ ☐ Sands ☐ Bedrock ☐ Muck	Other:
☐ Sands ☐ Bedrock ☐ Widek ☐ Gravel ☐ Vegetation	
V Glaver V vegetation	
Aquatic Habitat: Indicate all types present within proposed ROW/	project limits.
Sand bar Sand/Gravel beach/bar Grave	l riffles Aquatic vegetation
— Overhanging — Deen nool/ hole/ —	
trees/shrubs Deep poor hole Other:	
Stream has the following characteristics:	
✓ Bed and banks	
OHWM (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
vegetation matted down, bent, or absent leaf litter disturbed or washed away sediment deposition water staining	scour
sediment deposition water staining	multiple observed or predicted flow events abrupt change in plant community
other (list):	abrupt change in plant community
Unit (list).	
Water Quality:	
☐ Clear ☑ Slightly Turbid ☐ Turbid ☐ Very To	urbid Oily film High organic content
Other characteristics (pollutants, etc.)	
<u> </u>	
Aquatic Organisms: List all species observed. This would include v	waterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
None	
Riparian Vegetation: List species observed.	
American elm (Ulmus americana), cedar elm (Ulmus crassifol	lia) fringed green brier (Smiley bone ney) block willow (Saliy
nigra)	lia), Illilged green blief (Sillilax bolla-llox), black willow (Salix
ingra/	
T0.E C	and the first test to sold the first
T&E Species/Suitable Habitat: List T&E species observed or which	species the habitat is suitable for.
None	

Water Feature 89

Stream Data Form #: Project Name:

US 380

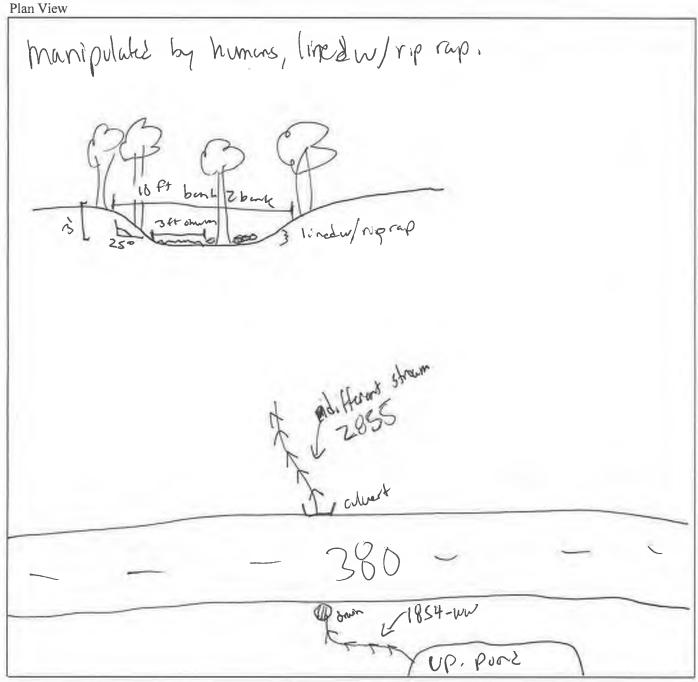
CSJ: 0135-15-002 0135-02-065

Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.



	Stream Data Form #: Water Feature 92
	Project Name: US 380
	CSJ: 0135-02-065, 0135-15-002
Stream Data Form	
Surveyor(s): Wyatt Wolfenkoehler, Kelsea Hiebert, Mike Ke	enanDate of Field Work: June 28, 2021
USGS Stream Name: Unnamed Tributary to Wilson Creek	
USGS Topo Quad Name: McKinney West	Stream Number: 92
Associated Wetland(s): None	Coordinates: 33.221653 -96.710545
Stream Type: Intermittent Characteristics:	
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	Banks stabilized with sod forming grasses
Stream Flow Direction: East	
OHWM Width (ft): 5	OHWM Height (in): 17
Stream Bottom composition:	
	Other:
☐ Sands ☐ Bedrock ☐ Muck ☑ Gravel ☐ Vegetation	
✓ Gravel	
Aquatic Habitat: Indicate all types present within proposed ROW/	project limits.
☐ Sand bar ☑ Sand/Gravel beach/bar ☐ Grave	
Overhanging Deep pool/ hole/ Other:	
trees/shrubs channel	
Stream has the following characteristics: Bed and banks OHWM (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):	 ✓ 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
Water Quality: ☑ Clear ☐ Slightly Turbid ☐ Turbid ☐ Very To ☐ Other characteristics (pollutants, etc.)	urbid Oily film High organic content
Aquatic Organisms: List all species observed. This would include v	waterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
Crayfish, frogs, little fish	The state of the s
oraynon, nogo, nao non	
Riparian Vegetation: List species observed.	
repartan regetation. List species observed.	

bermudagrass (Cynodon dactylon), American elm (Ulmus americana), shumard oak (Quercus shumardii), eastern red cedar (Juniperus virginiana), sugarberry (Celtis laevigata), pecan (Carya illinoinensis), tall false rye grass (Schedonorus arundinaceus) fringed green brier (Smilax bona-nox), eastern poison ivy (Toxicodendron radicans)

T&E Species/Suitable Habitat: List T&E species observed or which species the habitat is suitable for.

Water Feature 92

Stream Data Form #: Project Name:

US 380

CSJ: 0135-02-065

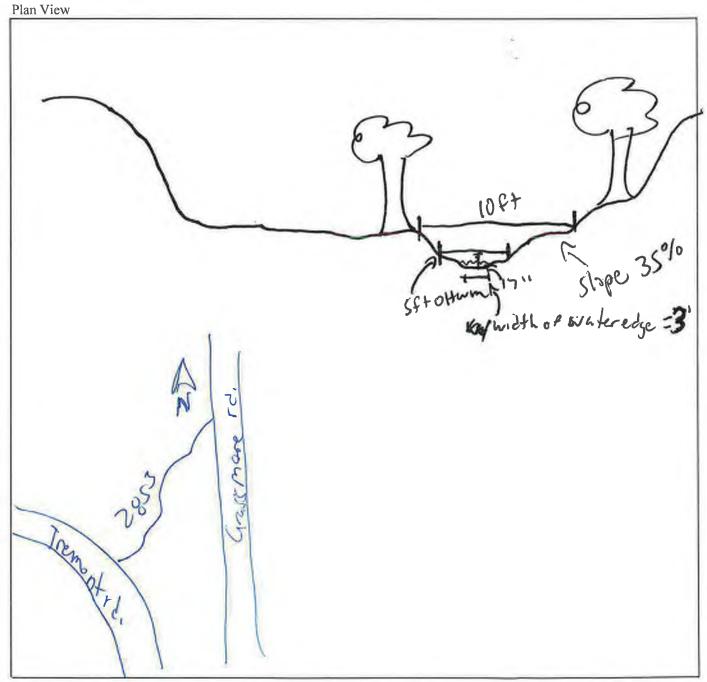
0135-15-002

Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.



Sectional View

	Stream Data Form #: Water Feature 94
	Project Name: US 380
	CSJ: 0135-02-065, 0135-15-002
Stream Data Form	·
Surveyor(s): Kelsea Hiebert, Mike Keenan	Date of Field Work: January 19, 2021
USGS Stream Name: Unnamed Tributary to Wilson Creek	
USGS Topo Quad Name: McKinney West Associated Wetland(s): None	Stream Number: 94 Coordinates: 33.218160 -96.704640
Associated Wetland(s): None	Coordinates: 35.210100 -90.704040
Stream Type: Intermittent Characteristics:	Anna ana handra ana indhana and haraanna dia malayalanna ant
	Appears banks are influenced by surrounding development
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	
Stream Flow Direction: North	
OHWM Width (ft): 8	OHWM Height (in): 12
Stream Bottom composition:	
✓ Silts ☐ Cobbles ☐ Concrete ☐	Other:
☐ Sands ☐ Bedrock ☐ Muck	
☐ Gravel ☐ Vegetation	
_ •	
Aquatic Habitat: Indicate all types present within proposed ROW/	
☐ Sand bar ☐ Sand/Gravel beach/bar ☐ Grave	l riffles Aquatic vegetation
Overhanging Deep pool/ hole/ Other:	
trees/shrubs channel differ.	
Stream has the following characteristics:	
✓ Bed and banks	
OHWM (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
☐ leaf litter disturbed or washed away ☐ sediment deposition ☐ water staining	✓ multiple observed or predicted flow events
water staining	abrupt change in plant community
other (list):	_ , , , ,
_ ` ` /	
Water Quality:	
☐ Clear ☐ Slightly Turbid ☐ Turbid ☐ Very To	urbid Oily film High organic content
Other characteristics (pollutants, etc.)	
Aquatic Organisms: List all species observed. This would include v	waterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
Frogs and snakes	
1 logs and snakes	
Dinarian Vacatation: List anasias absorbed	
Riparian Vegetation: List species observed.	
Black willow (Salix nigra), eastern red cedar (Juniperus virgini	iana), greenbriar (Smilax bona-nox), giant ragweed (Ambrosi
T&E Species/Suitable Habitat: List T&E species observed or which	species the habitat is suitable for.
None	

Water Feature 94

Project Name:

US 380

CSJ: 0135-02-065, 0135-15-002

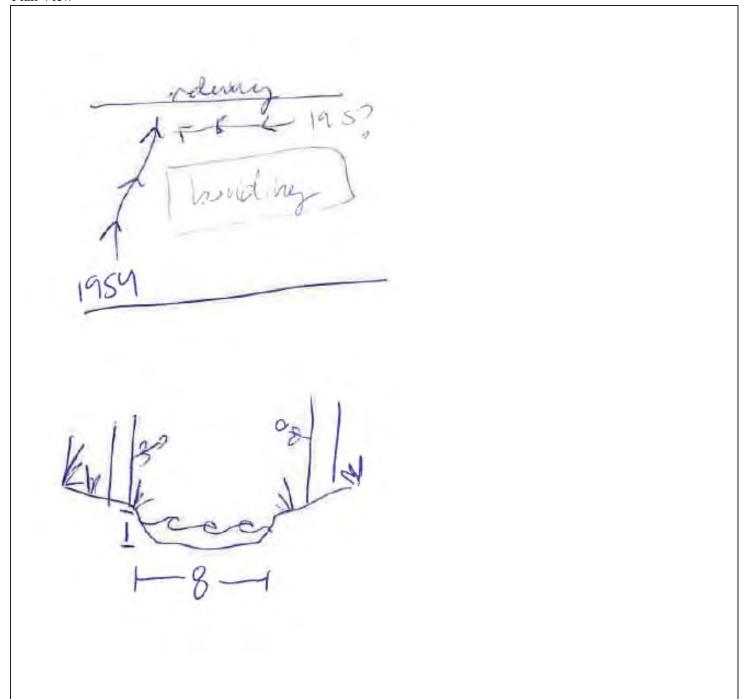
Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.

Plan View



	Stream Data Form #: Water Feature 100
	Project Name: US 380
	CSJ: 0135-02-065, 0135-15-002
Stream Data Form	<u></u>
Surveyor(s): Mike Keenan and Ethan Eichler	Date of Field Work: September 16, 2020
· · · · · · · · · · · · · · · · · · ·	
USGS Stream Name: <u>Unnamed Tributary to Wilson Creek</u> USGS Topo Quad Name: McKinney West	County/State: Collin County, Texas Stream Number: 100
	Coordinates: 33.223528 -96.705798
Associated Wetland(s): Water Feature 99	Coordinates. 33.223320 -90.703796
Stream Type: Intermittent Characteristics:	Anthropologically created drainage
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	Minimal bank erosion
Stream Flow Direction: Northeast	
OHWM Width (ft): 5	OHWM Height (in): 6
Stream Bottom composition:	On white ight (iii).
	Other:
✓ Sands ☐ Bedrock ☐ Muck	Other:
Gravel Vegetation	
Graver Vegenation	
Aquatic Habitat: Indicate all types present within proposed ROW/	project limits.
Sand bar Sand/Gravel beach/bar Grave	
Overhanging — Deen nool/ hole/ —	
trees/shrubs Deep poor note Other:	
Stream has the following characteristics:	
✓ Bed and banks	
OHWM (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
	sediment sorting scour
✓ leaf litter disturbed or washed away✓ sediment deposition✓ water staining	multiple observed or predicted flow events
water staining	abrupt change in plant community
other (list):	
Water Quality:	
✓ Clear ☐ Slightly Turbid ☐ Turbid ☐ Very T	urbid Oily film High organic content
Other characteristics (pollutants, etc.)	
Aquatic Organisms: List all species observed. This would include	waterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
None	
Riparian Vegetation: List species observed.	
-	amorican alm (Hlmus amoricana), acetara naicen iuu
greenbriar (Smilax bona-nox), cedar elm (Ulmus crassifolia), (Toxicodendron radicans)	amencan eim (oimus amencana), eastem poison ivy
(TONICOUGHUIOH TAUICAHS)	
TOP C 1 /G 1 11 II 1 1 1 1 TOP 1 1 1 TOP 1	
T&E Species/Suitable Habitat: List T&E species observed or which	species the habitat is suitable for.

Water Feature 100

Project Name:

US 380

CSJ: <u>0135-02-065</u>, <u>0135-15-002</u>

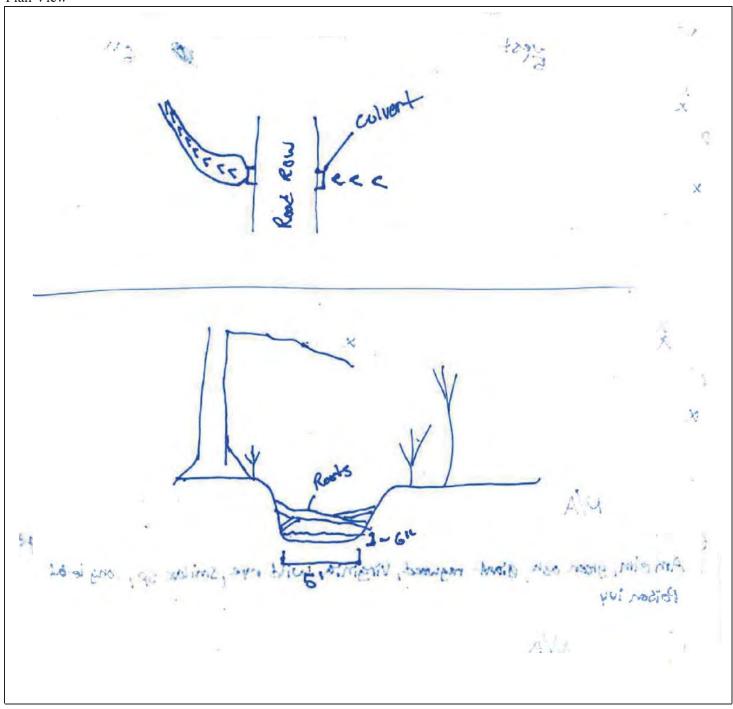
Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.

Plan View



	Stream Data Form #: Water Feature 101
	Project Name: US 380
	CSJ: 0135-02-065, 0135-15-002
Stream Data Form	<u></u>
Surveyor(s): Mike Keenan and Ethan Eichler	Date of Field Work: September 15, 2020
· · · · · · · · · · · · · · · · · · ·	
USGS Stream Name: Unnamed Tributary to Wilson Creek	County/State: Collin County, Texas
USGS Topo Quad Name: McKinney West	Stream Number: 101
Associated Wetland(s): None	Coordinates: 33.223483 -96.705110
Stream Type: Intermittent Characteristics:	
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	Minimal bank erosion
Stream Flow Direction: East	
OHWM Width (ft): 7	OHWM Height (in): 4
Stream Bottom composition:	
	Other:
✓ Sands ☐ Bedrock ☐ Muck	
Gravel Vegetation	
_ starter segeration	
Aquatic Habitat: Indicate all types present within proposed ROW/	project limits.
Sand bar Sand/Gravel beach/bar Grave	
Overhanging — Deep pool/hole/ —	_ 1 0
trees/shrubs	
Stream has the following characteristics:	
✓ Bed and banks	
OHWM (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):	
Water Quality:	
✓ Clear ☐ Slightly Turbid ☐ Turbid ☐ Very Tri	urbid Oily film High organic content
Other characteristics (pollutants, etc.)	
Aquatic Organisms: List all species observed. This would include v	waterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
None	
Riparian Vegetation: List species observed.	
-	one suis on alms / I limite and suis our all a state of the state of t
greenbriar (Smilax bona-nox), cedar elm (Ulmus crassifolia), a	american eim (Ulmus americana), eastern poison ivy
(Toxicodendron radicans)	
T&E Species/Suitable Habitat: List T&E species observed or which	species the habitat is suitable for

Water Feature 101

Project Name:

US 380

CSJ: <u>0135-02-065</u>, <u>0135-15-002</u>

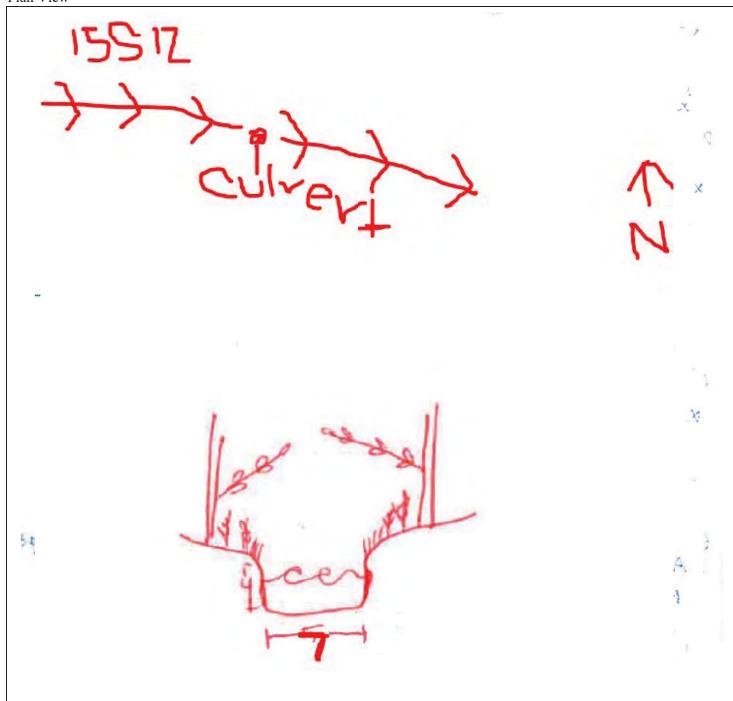
Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.

Plan View



	Stream Data Form #: Water Feature 102
	Project Name: US 380
	CSJ: 0135-02-065, 0135-15-002
Stream Data Form	
Surveyor(s): Mike Keenan and Ethan Eichler	Date of Field Work: September 16, 2020
USGS Stream Name: Unnamed Tributary to Wilson Creek	County/State: Collin County, Texas
USGS Topo Quad Name: McKinney West	Stream Number: 102
Associated Wetland(s): None	Coordinates: 33.223098 -96.706252
()	
Stream Type: Ephemeral Characteristics:	
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	
Stream Flow Direction: East	
OHWM Width (ft): 2	OHWM Height (in): 6
Stream Bottom composition:	on with freight (iii).
	Other:
☐ Sands ☐ Bedrock ☐ Muck	
Gravel Vegetation	
– – <i>e</i>	
Aquatic Habitat: Indicate all types present within proposed ROW/J	
☐ Sand bar ☐ Sand/Gravel beach/bar ☐ Grave	l riffles
Overhanging Deep pool/ hole/ Other:	
trees/shrubs channel	
Stream has the following characteristics:	
Bed and banks	
OHWM (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	
leaf litter disturbed or washed away	sediment sorting scour
sediment deposition	✓ multiple observed or predicted flow events
sediment deposition water staining	abrupt change in plant community
other (list):	
_	
Water Quality:	
☑ Clear ☐ Slightly Turbid ☑ Turbid ☐ Very Turbid ☐ Ve	
Other characteristics (pollutants, etc.) Water flow likely from	n recent precipitation
Aquatic Organisms: List all species observed. This would include v	vaterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
None	
Riparian Vegetation: List species observed.	
greenbriar (Smilax bona-nox), cedar elm (Ulmus crassifolia), a	american elm (Ulmus americana), eastern poison ivv
(Toxicodendron radicans)	····· (-·····
,	
T&E Species/Suitable Habitat: List T&E species observed or which	species the habitat is suitable for.
*	-

Water Feature 102

Project Name:

US 380

CSJ: <u>0135-02-065</u>, <u>0135-15-002</u>

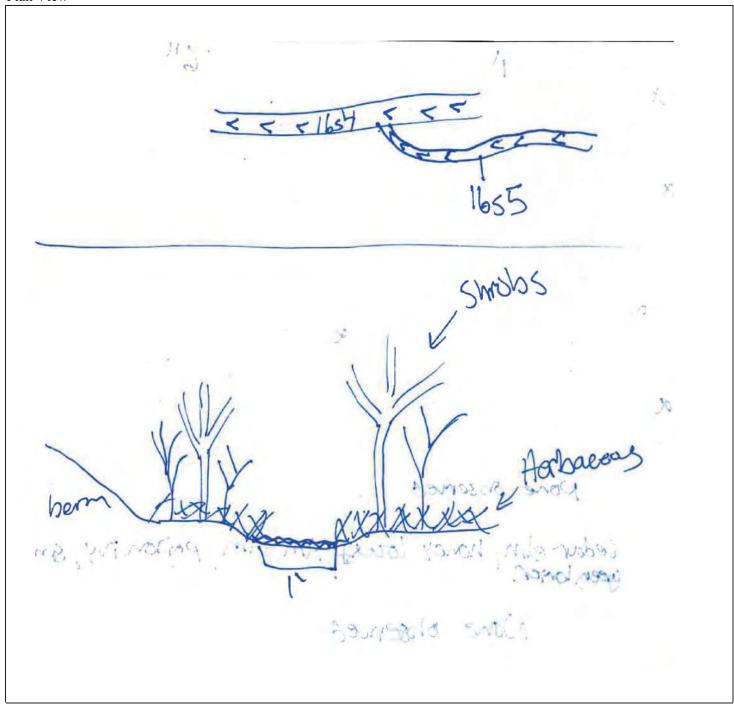
Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.

Plan View



	Stream Data Form #: Water Feature 104
	Project Name: US 380
	CSJ: <u>0135-02-065</u> , <u>0135-15-002</u>
Stream Data Form	
Surveyor(s): Mike Keenan and Ethan Eichler	Date of Field Work: September 16, 2020
USGS Stream Name: Unnamed Tributary to Wilson Creek	County/State: Collin County, Texas
USGS Topo Quad Name: McKinney West	Stream Number: 104
Associated Wetland(s): None	Coordinates: 33.222946 -96.705536
1155001ated (Foliation). Notice	
Stream Type: Intermittent Characteristics:	Receives flow from adjacent ephemeral streams
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	Shallow banks
Stream Flow Direction: Northeast	
OHWM Width (ft): 2	OHWM Height (in): 8
Stream Bottom composition:	<u> </u>
	Other:
☐ Sands ☐ Bedrock ☐ Muck	
Gravel Vegetation	
_ _	
Aquatic Habitat: Indicate all types present within proposed ROW/	
☐ Sand bar ☐ Sand/Gravel beach/bar ☐ Grave	l riffles Aquatic vegetation
Overhanging Deep pool/ hole/ Other:	
trees/shrubs channel channel	
Stream has the following characteristics:	
✓ Bed and banks	
OHWM (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
✓ vegetation matted down, bent, or absent leaf litter disturbed or washed away	scour
sediment deposition	multiple observed or predicted flow events
water staining water staining	abrupt change in plant community
other (list):	
W. C. P.	
Water Quality:	1:1 🗖 0:1 0:1
☐ Clear ☐ Slightly Turbid ☐ Turbid ☐ Very Tu	urbid Oily film High organic content
Other characteristics (pollutants, etc.)	
Aquatic Organisms: List all species observed. This would include v	votanforvil fich analysis truttles from inventalments, etc
*	vateriowi, fish, shakes, turties, frogs, invertebrates, etc.
None	
Riparian Vegetation: List species observed.	
greenbriar (Smilax bona-nox), cedar elm (Ulmus crassifolia), a	american elm (Ulmus americana), eastern poison ivy
(Toxicodendron radicans)	(,,,,,
T&E Species/Suitable Habitat: List T&E species observed or which	species the habitat is suitable for
	Species the matter is summittee tot.
None	

Water Feature 104

Project Name:

US 380

CSJ: <u>0135-02-065</u>, 0135-15-002

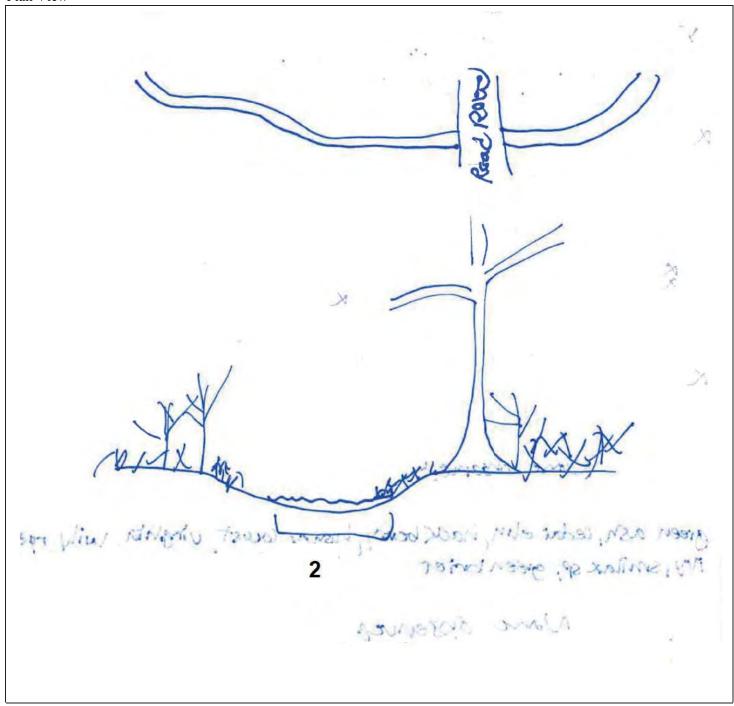
Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.

Plan View



	Stream Data Form #: Water Feature 105
	Project Name: US 380
	CSJ: 0135-02-065, 0135-15-002
Stream Data Form	
	Date of Field Work: September 15, 2020
• • • • • • • • • • • • • • • • • • • •	
USGS Stream Name: Unnamed Tributary to Wilson Creek	County/State: Collin County, Texas
USGS Topo Quad Name: McKinney West	Stream Number: 105
Associated Wetland(s): Water Feature 99	Coordinates: 33.222974 -96.703370
Stream Type: Intermittent Characteristics:	Undercut banks
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	
Stream Flow Direction: East	
OHWM Width (ft): 5	OHWM Height (in): 48
Stream Bottom composition:	
	Other:
☐ Sands ☐ Bedrock ☐ Muck	
☐ Gravel ☐ Vegetation	
Aquatic Habitat: Indicate all types present within proposed ROW/p	_
☐ Sand bar ☐ Sand/Gravel beach/bar ☐ Gravel	riffles Aquatic vegetation
Overhanging Deep pool/ hole/ other:	
trees/shrubs channel Cther.	
Stream has the following characteristics:	
✓ Bed and banks	
OHWM (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 ☐ sediment deposition ☐ water staining	scour
sediment deposition	multiple observed or predicted flow events
—	abrupt change in plant community
other (list):	
W-+ O1'+	
Water Quality: ☐ Clear ☐ Slightly Turbid ☐ Turbid ☐ Very Tu	urbid Oily film High organic content
Other characteristics (pollutants, etc.)	irbid
Other characteristics (polititants, etc.)	
Aquatic Organisms: List all species observed. This would include v	vaterfowl fish snakes turtles from invertebrates etc
* * *	Take to the transfer of the tr
Snakes and frogs	
Dinarian Vacatation, List anguing absenced	
Riparian Vegetation: List species observed.	
Poison Ivy (Toxicodendron radicans), hackberry (Celtis laevig	
illinoinensis), Indian wood oats (Chasmanthium latifolium), and	d giant ragweed (Ambrosia trifida)
T&E Species/Suitable Habitat: List T&E species observed or which	species the habitat is suitable for.

Water Feature 105

Project Name:

US 380

CSJ: 0135-02-065, 0135-15-002

Stream Data Form (continued)

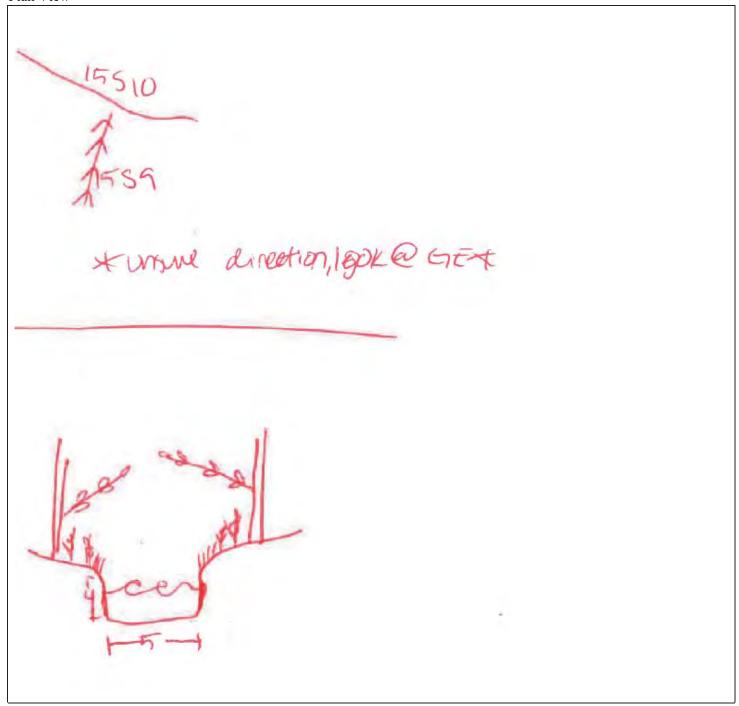
Please provide a plan and section view sketch of the stream channel.

Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.

Plan View



	Stream Data Form #: Water Feature 107
	Project Name: US 380
	CSJ: 0135-02-065, 0135-15-002
Stream Data Form	
	Date of Field Work: September 15, 2020
· · · · · · · · · · · · · · · · · · ·	
USGS Stream Name: Unnamed Tributary to Wilson Creek	County/State: Collin County, Texas
USGS Topo Quad Name: McKinney West	Stream Number: 107
Associated Wetland(s): None	Coordinates: 33.222551 -96.702711
Stream Type: Ephemeral Characteristics:	Shallow seasonal stream
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	
Stream Flow Direction: North	
OHWM Width (ft): 1	OHWM Height (in): 2
Stream Bottom composition:	
	Other:
Sands Bedrock Muck	
Gravel Vegetation	
_ `	
Aquatic Habitat: Indicate all types present within proposed ROW/p	project limits.
☐ Sand bar ☐ Sand/Gravel beach/bar ☐ Gravel	riffles Aquatic vegetation
Overhanging Deep pool/ hole/ Other:	
trees/shrubs channel channel	
Stream has the following characteristics:	
✓ Bed and banks	
OHWM (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
 ✓ vegetation matted down, bent, or absent ✓ leaf litter disturbed or washed away ✓ sediment deposition ✓ water staining 	multiple observed or predicted flow events
_	abrupt change in plant community
other (list):	
W . O . I'.	
Water Quality:	111 0 01 01 0 111
Clear Slightly Turbid Turbid Very Tu	arbid Oily film High organic content
Other characteristics (pollutants, etc.) None	
Aquatia Organismas, List all angelies absorred. This would include a	votanfavyl figh analysis trutles from inventohuotas ata
Aquatic Organisms: List all species observed. This would include w	vateriowi, fish, shakes, turties, flogs, fliverteorates, etc.
None	
Riparian Vegetation: List species observed.	
Poison ivy (Toxicodendron radicans), trumpet creeper (Camps	sis radicans), hackberry (Celtis laevigata), honey locust
(Gleditsia triacanthos), overcup oak (Quercus lyrata), America	
	•
T&E Species/Suitable Habitat: List T&E species observed or which	species the habitat is suitable for.
	•

Water Feature 107

Project Name:

US 380

CSJ: 0135-02-065, 0135-15-002

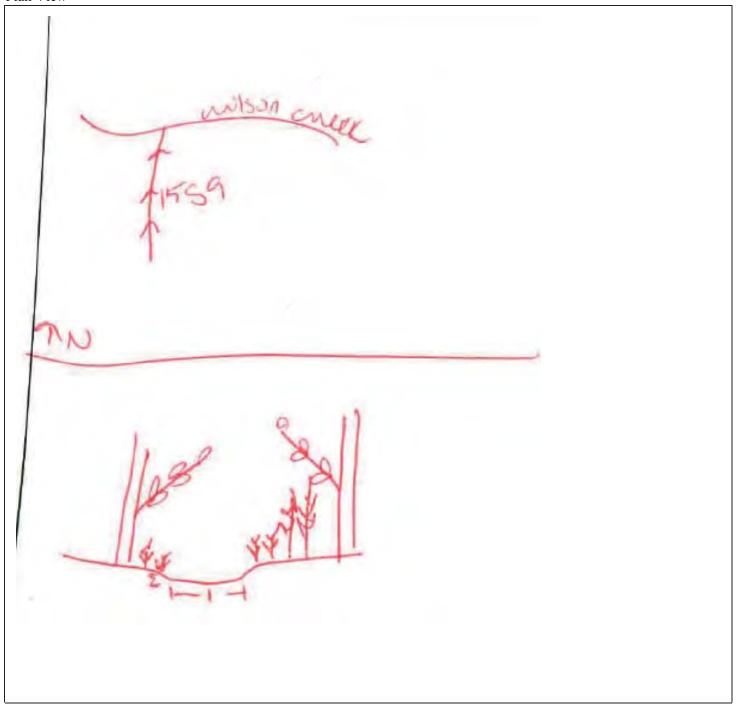
Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.

Plan View



	Stream Data Form #: Water Feature 110
	Project Name: US 380
	CSJ: 0135-15-002
Stream Data Form	
Surveyor(s): Kelsea Hiebert, Ethan Eichler	Date of Field Work: September 15, 2020
USGS Stream Name: Wilson Creek	County/State: Collin County, TX
USGS Topo Quad Name: McKinney West	Stream Number: 110
Associated Wetland(s): Water Feature 109	Coordinates: 33.227634 -96.707633
Stream Type: Perennial Characteristics:	Steep with scour
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	High erosion, macrophytes, pebble beaches
Stream Flow Direction: East	g,, p
OHWM Width (ft): 15	OHWM Height (in): 4
Stream Bottom composition:	
✓ Silts ✓ Cobbles ☐ Concrete ☐	Other:
✓ Sands✓ Bedrock✓ Muck✓ Gravel✓ Vegetation	
☐ Gravel ☐ Vegetation	
Aquatic Habitat: Indicate all types present within proposed ROW/	project limits.
Sand bar Sand/Gravel beach/bar Grave	
Overhanging Deep pool/ hole/ trace/obswides Other:	
trees/shrubs channel	
Stream has the following characteristics: Bed and banks OHWM (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):	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
Water Quality: ☑ Clear ☑ Slightly Turbid ☐ Turbid ☐ Very T ☐ Other characteristics (pollutants, etc.) Aquatic Organisms: List all species observed. This would include the second sec	
Fish, frogs, snakes, aquatic insects	
Riparian Vegetation: List species observed.	
/	

Poison ivy (Toxicodendron radicans), ash leaf maple (Acer negundo), American elm (Ulmus americana), green ash (Fraxinus pennsylvanica), hackberry (Celtis laevigata), Shumard oak (Quercus shumardii, pecan (Carya illinoinensis), mustang grape (Vitis mustangensis), greenbriar (Smilax bona-nox), in-stream algae

T&E Species/Suitable Habitat: List T&E species observed or which species the habitat is suitable for.

Stream Data Form #: Project Name:

CSJ: <u>0135-15-002</u>

Water Feature 110

US 380

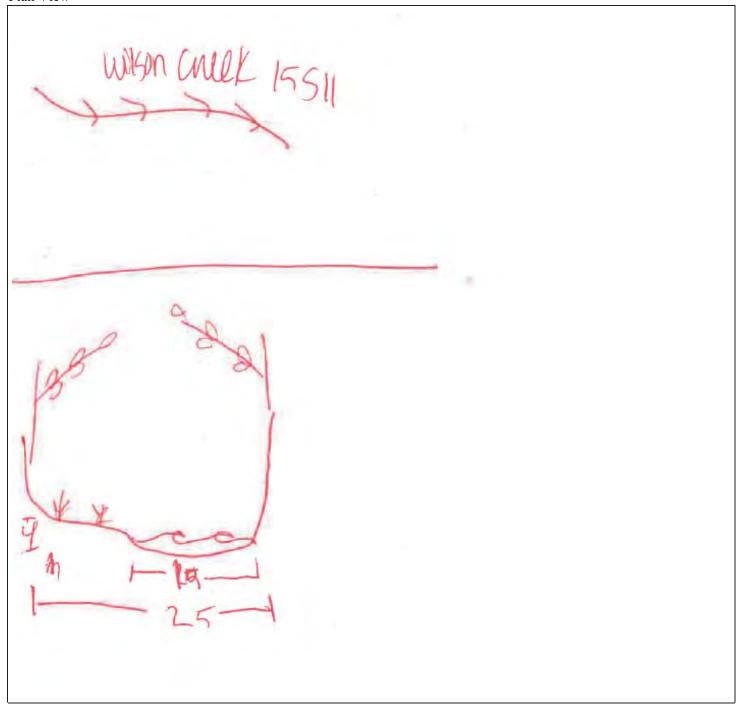
Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.

Plan View



	Stream Data Form #: Water Feature 113
	Project Name: US 380
	CSJ: 0135-15-002, 0135-02-065
Stream Data Form	· · · · · · · · · · · · · · · · · · ·
Surveyor(s): Kelsea Hiebert, Ethan Eichler	Date of Field Work: September 16, 2020
USGS Stream Name: Unnamed Tributary to Wilson Creek	
USGS Topo Quad Name: McKinney West	
Associated Wetland(s): None	Coordinates: 33.225064 -96.702941
Stream Type: Intermittent Characteristics:	
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	Established banks with silty substrate bottom
Stream Flow Direction: South	·
OHWM Width (ft): 6	OHWM Height (in): 3
Stream Bottom composition:	on with freight (iii).
	Other:
☐ Sands ☐ Bedrock ☐ Muck	
Gravel Vegetation	
_ starter regerment	
Aquatic Habitat: Indicate all types present within proposed ROW/	project limits.
Sand bar Sand/Gravel beach/bar Grave	
Overhanging Deep pool/hole/	
verification of trees/shrubs Deep poor hole/ Other:	
Stream has the following characteristics:	
✓ Bed and banks	
OHWM (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 Sediment deposition Water staining	scour
sediment deposition	multiple observed or predicted flow events
	abrupt change in plant community
other (list):	
Water Quality:	_
☐ Clear ☐ Slightly Turbid ☐ Turbid ☑ Very Tu	
Other characteristics (pollutants, etc.) Existing ponds of wa	iter are very turbid
Aquatic Organisms: List all species observed. This would include v	vaterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
None	
Riparian Vegetation: List species observed.	
Green ash (Fraxinus pennsylvanica), Osage orange (Maclura	pomitera), greenbriar (Smilax bona-nox), hackberry (Celtis
laevigata)	
TOP 0 ' /0': 11 III': / I': TOP ' 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	. 4 1 1 2 4 2 2 11 6
T&E Species/Suitable Habitat: List T&E species observed or which	species the habitat is suitable for.
None	

Stream Data Form #:

Water Feature 113

Project Name:

US 380

CSJ: 0135-15-002, 0135-02-065

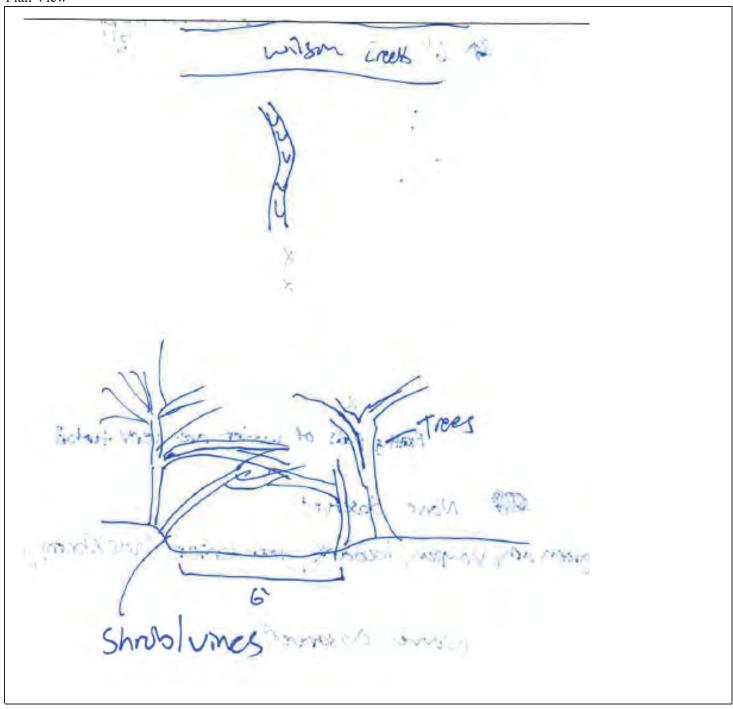
Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.

Plan View



	Stream Data Form #: Water Feature 114
	Project Name: US 380
	CSJ: 0135-02-065, 0135-15-002
Stream Data Form	
	Date of Field Work: September 16, 2020
• • • • • • • • • • • • • • • • • • • •	
USGS Stream Name: Unnamed Tributary to Wilson Creek	County/State: Collin County, Texas
USGS Topo Quad Name: McKinney West	Stream Number: 114
Associated Wetland(s): None	Coordinates: 33.225183 -96.703507
Stream Type: Ephemeral Characteristics:	
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	Little to no incision
Stream Flow Direction: North	
OHWM Width (ft): 6	OHWM Height (in): 3
Stream Bottom composition:	on with neight (iii).
	Other:
☐ Sands ☐ Bedrock ☐ Muck	Other:
Gravel Vegetation	
Graver Generalism	
Aquatic Habitat: Indicate all types present within proposed ROW/1	project limits.
Sand bar Sand/Gravel beach/bar Gravel	
Overhanging — Deep pool/hole/ —	– 1 0
trees/shrubs Deep poor hole/ Other:	
Stream has the following characteristics:	
✓ Bed and banks	
OHWM (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
	Scour
☐ leaf litter disturbed or washed away ☐ sediment deposition ☐ water staining	multiple observed or predicted flow events
water staining	abrupt change in plant community
other (list):	
Water Quality:	
☐ Clear ☐ Slightly Turbid ☐ Turbid ☑ Very Tu	urbid Oily film High organic content
Other characteristics (pollutants, etc.) Existing ponds of wa	
	•
Aquatic Organisms: List all species observed. This would include v	vaterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
None	
110110	
Riparian Vegetation: List species observed.	
	
Green ash (Fraxinus pennsylvanica), Osage orange (Maclura	pomifera), greenbriar (Smilax bona-nox), hackberry (Celtis
laevigata)	
T&E Species/Suitable Habitat: List T&E species observed or which	species the habitat is suitable for.

None

Stream Data Form #:

Water Feature 114

Project Name:

US 380

CSJ: <u>0135-02-065</u>, <u>0135-15-002</u>

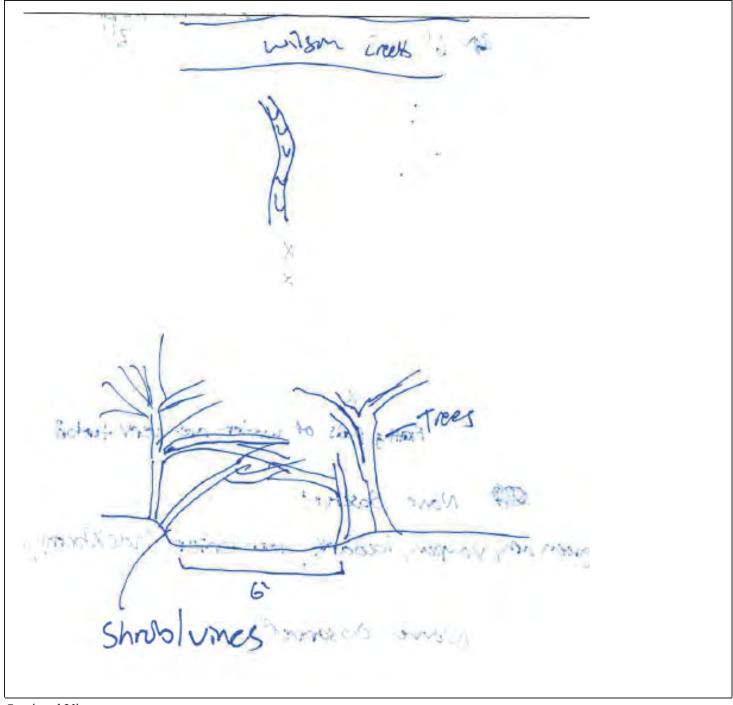
Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.

Plan View



	Stream Data Form #: Water Feature 115
	Project Name: US 380 CSJ: 0135-15-002
Stream Data Form	C31. 0133-13-002
Surveyor(s): Kelsea Hiebert, Kathryn Burton	Date of Field Work: August 18, 2021
USGS Stream Name: Unnamed Tributary to Wilson Creek	County/State: Collin County, Texas
USGS Topo Quad Name: McKinney West	Stream Number: 115
Associated Wetland(s): None	Coordinates: 33.226845 -96.702997
Stream Type: Ephemeral Characteristics: Bank Stability (e.g. highly eroding, sloughing banks, etc.):	RIPARIAN IS UPL, FLOWS INTO WILSON CREEK
Stream Flow Direction: South OHWM Width (ft): 5	OHWM Height (in): 24
Stream Bottom composition:	On wivi Height (iii). 24
✓ Silts Cobbles Concrete ✓ Sands Bedrock Muck ✓ Gravel Vegetation	Other: Vegetation has been destroyed
Aquatic Habitat: Indicate all types present within proposed ROW Sand bar Sand/Gravel beach/bar Overhanging trees/shrubs Deep pool/ hole/ channel Other:	
Stream has the following characteristics: Bed and banks OHWM (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):	 ✓ 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
Water Quality: ☐ Clear ☐ Slightly Turbid ☐ Turbid ☐ Very To Other characteristics (pollutants, etc.) Flowing from currents.	Furbid Oily film High organic content
Aquatic Organisms: List all species observed. This would include Invertebrates, frogs	waterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
Riparian Vegetation: List species observed.	

Japanese privet (Ligustrum japonicum), Carolina buckthorn (Frangula caroliniana), American elm (Ulmus americana), Cedar elm (Ulmus crassifolia), Chinquapin oak (Quercus muehlenbergii), hackberry (Celtis laevigata), yaupon (Ilex vomitoria), knotting wild rye (Elymus canadensis), green ash (Fraxinus pennsylvanica), southern red oak (Quercus falcata variation)

T&E Species/Suitable Habitat: List T&E species observed or which species the habitat is suitable for.

NA

Stream Data Form #:
Project Name:
CSJ: <u>0135-</u>15-002

Water Feature 115

US 380

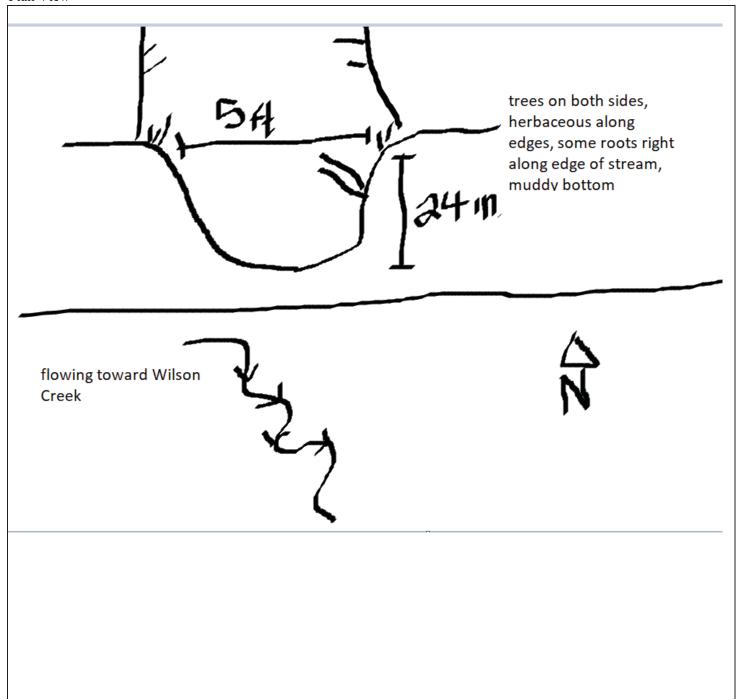
Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.

Plan View



	Stream Data Form #:	Water Feature 119
	Project Name:	US 380
	CSJ: 0135-15-002	
Stream Data Form		
Surveyor(s): Kelsea D. Hiebert and Ethan Eichler	Date of Field Work: Se	eptember 15, 2020
USGS Stream Name: Unnamed Tributary to Stover Creek		ollin County, Texas
USGS Topo Quad Name: McKinney West	Stream Number: 11	
Associated Wetland(s): Water Feature 118	Coordinates: 33.234522	-96.703800
Associated wetiand(s). <u>Water Feature 118</u>	Hydrology flows into pond to the e	
Stream Type: Ephemeral Characteristics:	Hydrology flows into pond to the e	dast.
<u> </u>		
Bank Stability (e.g. highly eroding, sloughing banks, etc.):		
Stream Flow Direction: East		
OHWM Width (ft): 2	OHWM Height (in): 6	
Stream Bottom composition:		
<u> </u>	Other:	
☐ Sands ☐ Bedrock ☐ Muck		
☐ Gravel ☐ Vegetation		
A CHILL I I CHILL I I DOWN		
Aquatic Habitat: Indicate all types present within proposed ROW/p		
Sand bar Sand/Gravel beach/bar Gravel	riffles Aquatic	vegetation
Overhanging Deep pool/ hole/ Other:		
trees/snruos channel ——		
Straam has the following characteristics:		
Stream has the following characteristics: Bed and banks		
✓ Bed and banks OHWM (check all indicators that apply):		
clear, natural line impressed on the bank	the presence of litter and d	ehris
changes in the character of soil	destruction of terrestrial ve	
shelving	the presence of wrack line	getation
	sediment sorting	
✓ vegetation matted down, bent, or absent☐ leaf litter disturbed or washed away	scour	
sediment deposition	multiple observed or prediction	cted flow events
sediment deposition water staining	abrupt change in plant com	
other (list):		•
Water Quality:		
☐ Clear ☐ Slightly Turbid ☐ Turbid ☐ Very Tu	ırbid 🗌 Oily film 🔲 Hi	gh organic content
Other characteristics (pollutants, etc.) Dry		
Aquatic Organisms: List all species observed. This would include w	vaterfowl, fish, snakes, turtles, fr	ogs, invertebrates, etc.
None.		
Riparian Vegetation: List species observed.		
False daisy (Eclipta prostrata), love-in-a-puff (Cardiospermum halicacabum), American elm (Ulmus ame	ericana), pecan (Carya illinoinensis)	
TOP G 1 /G 1: 11 H 11: A I 1 TOP TO TO THE STATE OF THE S		
T&E Species/Suitable Habitat: List T&E species observed or which	species the habitat is suitable for	<u> </u>

None.

Stream Data Form #:

Water Feature 119

Project Name: CSJ: 0135-15-002 US 380

Stream Data Form (continued)

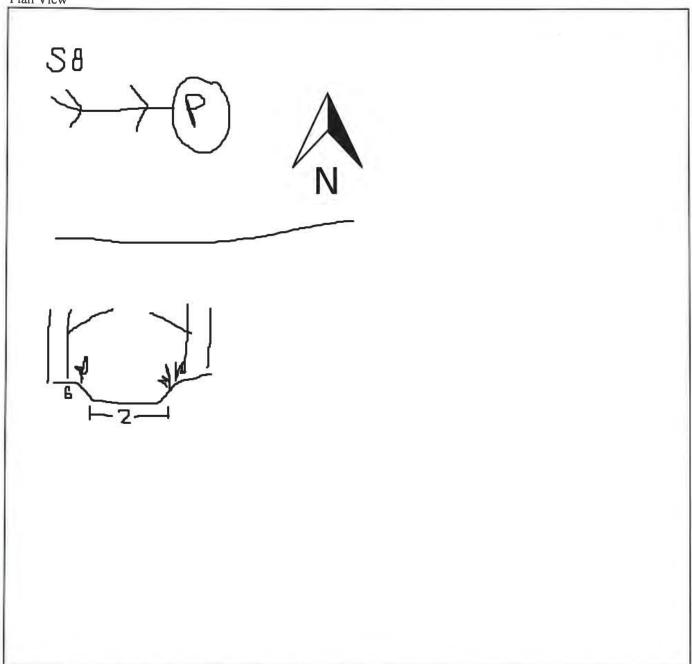
Please provide a plan and section view sketch of the stream channel.

Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.

Plan View



	Stream Data Form #:	Water Feature 127
	Project Name:	US 380
	CSJ: <u>0135-15-002</u>	
Stream Data Form		
Surveyor(s): Kelsea Hiebert, Mike Keenan	Date of Field Work: De	ecember 22, 2020
USGS Stream Name: Unnamed Tributary to Rutherford Bra		ollin County, Texas
USGS Topo Quad Name: McKinney West	Stream Number: 12	
Associated Wetland(s): Water Feature 126	Coordinates: 33.225258	-96.743963
() <u>Water Found 120</u>		
Stream Type: Intermittent Characteristics:	Varying widths	
Bank Stability (e.g. highly eroding, sloughing banks, etc.):		
Stream Flow Direction: North		
OHWM Width (ft): 6	OHWM Height (in): 12	
Stream Bottom composition:	Off w Wi Height (iii).	
	Other:	
☐ Sands ☐ Bedrock ☐ Muck		•
Gravel Vegetation		
- regenmen		
Aquatic Habitat: Indicate all types present within proposed ROW/pr	roject limits.	
☐ Sand bar ☐ Sand/Gravel beach/bar ☐ Gravel		vegetation
Overhanging Deep pool/ hole/ Other:		
trees/shrubs channel ———		
Stream has the following characteristics:		
✓ Bed and banks		
OHWM (check all indicators that apply):		
clear, natural line impressed on the bank	the presence of litter and d	
= &	destruction of terrestrial ve	egetation
shelving	the presence of wrack line	
 □ vegetation matted down, bent, or absent □ leaf litter disturbed or washed away □ sediment deposition ☑ water staining 	sediment sorting scour	
sediment deposition	multiple observed or prediction	cted flow events
✓ water staining	abrupt change in plant com	
other (list):	uorapi enange in piani con	minimity
Water Quality:		
☐ Clear ☑ Slightly Turbid ☐ Turbid ☐ Very Tur	rbid 🔲 Oily film 🔲 Hi	igh organic content
Other characteristics (pollutants, etc.)		
Aquatic Organisms: List all species observed. This would include wa	aterfowl, fish, snakes, turtles, fr	ogs, invertebrates, etc.
Frogs and snakes		
•		
Riparian Vegetation: List species observed.		
Gren ash (Fraxinus pennsylvanica), Eastern red cedar (Junipe	rus virginiana), cedar elm (Ul	mus crassifolia), Chinese privet
(Lonicera japonica)		
T0.E C		_
<u>T&E Species/Suitable Habitat: List T&E species observed or which s</u>	species the nabitat is suitable for	<u>.</u>

none

Stream Data Form #: Project Name:

CSJ: <u>0135-15-002</u>

Water Feature 127

US 380

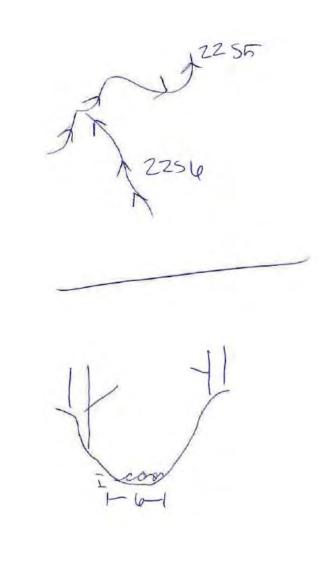
Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.

Plan View



	Stream Data Form #: Water Features 136, 138, 142
	Project Name: US 380
	CSJ: <u>0315-15-002</u>
Stream Data Form	
Surveyor(s): Kelsea D. Hiebert and Wyatt Wolfenkoehler	Date of Field Work: July 19, 2021
USGS Stream Name: Rutheford Branch	County/State: Collin County, Texas
USGS Topo Quad Name: McKinney West	Stream Number: 136, 138, 142
Associated Wetland(s): Water Feature 137	Coordinates: 33.231957 -96.732417
() <u> </u>	
Stream Type: Perennial Characteristics:	Limestone bedrock banks with water marks and current flow
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	Slight scour
Stream Flow Direction: Northeast	ong. it cooks
OHWM Width (ft): 25	OHWM Height (in): 60
Stream Bottom composition:	On whi neight (iii).
	Other:
✓ Sands ✓ Bedrock ☐ Muck	
Gravel Vegetation	
_	
Aquatic Habitat: Indicate all types present within proposed ROW/	project limits.
☐ Sand bar ☑ Sand/Gravel beach/bar ☐ Grave	l riffles
Overhanging Deep pool/ hole/ Other:	
trees/shrubs channel channel	
Stream has the following characteristics:	
✓ Bed and banks	
OHWM (check all indicators that apply):	C11/2 1.1.1.1
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✓ sediment sorting
✓ vegetation matted down, bent, or absent✓ leaf litter disturbed or washed away	✓ sediment sorting✓ scour
 ✓ vegetation matted down, bent, or absent ✓ leaf litter disturbed or washed away ✓ sediment deposition ✓ water staining 	✓ multiple observed or predicted flow events
water staining	abrupt change in plant community
other (list):	a distribution in plant community
Water Quality:	
✓ Clear ☐ Slightly Turbid ☐ Turbid ☐ Very To	urbid Oily film High organic content
Other characteristics (pollutants, etc.)	
<u> </u>	
Aquatic Organisms: List all species observed. This would include v	waterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
Bivalves and other inverts, fish, snakes, frogs	
, , , ,	
Riparian Vegetation: List species observed.	
Pecan (Carya illinoinensis), green ask (Fraxinus pennsylvanio	ea) eastern noison ivy (Toyicodondron radicans), codar olm
(Ulmus crassifolia), eastern cottonwood (Populus deltoides),	
(Oimas orassilolia), eastern cottonwood (Fopulus delitides), a	amencan cim (Oimus amencana)
TOTAL 1 (0) 11 TITLE 1 TOTAL 1 TOTAL 1	
T&E Species/Suitable Habitat: List T&E species observed or which	species the habitat is suitable for.

None

Stream Data Form #: Project Name: CSJ: 0135-15-002

Water Features 136, 138, 142

US 380

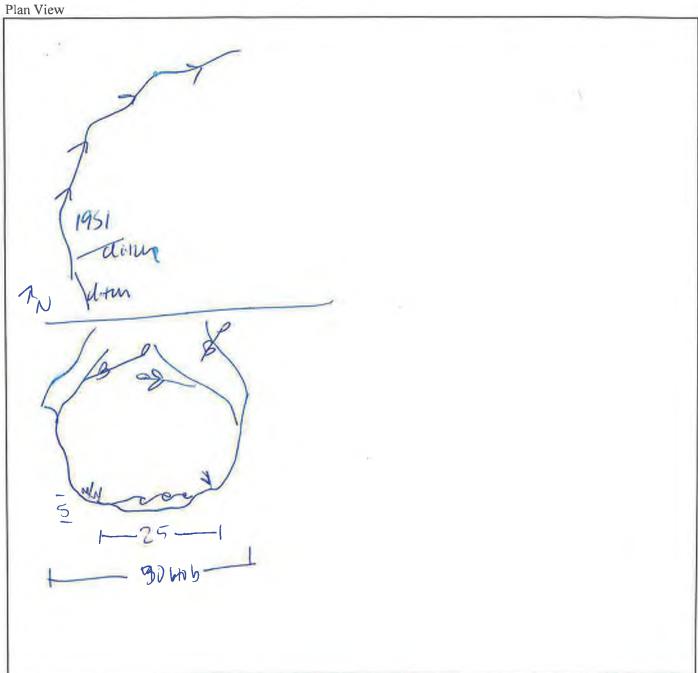
Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.





	Stream Data Form #: Water Feature 139
	Project Name: US 380
	CSJ: 0135-15-002
Stream Data Form	
Surveyor(s): Kelsea D. Hiebert and Wyatt Wolfenkoehler	Date of Field Work: July 19, 2021
USGS Stream Name: Unnamed Tributary to Rutherford Bra	County/State: Collin County,TX
USGS Topo Quad Name: McKinney West	Stream Number: 139
Associated Wetland(s): Water Features 140 and 141	Coordinates: 33.234056 -96.732209
vvaici i catales 140 and 141	30.23 1000 00:11 d2200
Stream Type: Ephemeral Characteristics:	Drains from culvert near roadway to the west.
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	· · · · · · · · · · · · · · · · · · ·
Stream Flow Direction: Northeast	-
OHWM Width (ft): 4	OHWM Height (in): 6
Stream Bottom composition:	Offwiri ficiglit (iii).
	Other: riprap dam for stability within stream
☐ Sands ☐ Bedrock ☐ Muck	
Gravel Vegetation	
- Samon - Sgermann	
Aquatic Habitat: Indicate all types present within proposed ROW/p.	roject limits.
☐ Sand bar ☐ Sand/Gravel beach/bar ☐ Gravel	
Overhanging Deep pool/ hole/ trace/chrybs Other:	
trees/shrubs channel channel	
Stream has the following characteristics:	
✓ Bed and banks	
OHWM (check all indicators that apply):	
clear, natural line impressed on the bank	the presence of litter and debris
changes in the character of soil shelving	destruction of terrestrial vegetation the presence of wrack line
	sediment sorting
 ✓ vegetation matted down, bent, or absent ☐ leaf litter disturbed or washed away ☐ sediment deposition ☐ water staining 	scour
sediment deposition	multiple observed or predicted flow events
water staining	abrupt change in plant community
other (list):	actupe change in plant community
Water Quality:	
✓ Clear ☐ Slightly Turbid ☐ Turbid ☐ Very Tu	rbid Oily film High organic content
Other characteristics (pollutants, etc.)	_ , _ c
Aquatic Organisms: List all species observed. This would include w	aterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
snakes, frogs	
Riparian Vegetation: List species observed.	
Pecan (Carya illinoinensis), bermudagrass (Cynodon dactylon)) iohnsongrass (Sorghum halenense), chinese privet
(Ligustrum sinense), riverbank grape (Vitis riparia), peppervin	
(3 since), since (vide riparia), poppor viii	(
T&E Species/Suitable Habitat: List T&E species observed or which:	species the habitat is suitable for
Tell appeared between traction but I will be provided condition of William	openies are manimum to outmore tore

None

Stream Data Form #: Project Name: CSJ: 0135-15-002 Water Feature 139

US 380

Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel.

Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.

Plan View

	Stream Data Form #: Water Feature 148
	Project Name: US 380
Carre D. A. E	CSJ: <u>0135-15-002</u>
Stream Data Form	Sontombor 15, 2020
Surveyor(s): Kelsea D. Hiebert and Ethan Eichler	Date of Field Work: September 15, 2020
USGS Stream Name: <u>Unnamed Tributary to Stover Creek</u> USGS Topo Quad Name: McKinney West	County/State: Collin County, Texas Stream Number: 148
Associated Wetland(s): Water Feature 147	Coordinates: 33.246262 -96.700240
valer readile 147	Incised stream within the east reach
Stream Type: Intermittent Characteristics:	
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	
Stream Flow Direction: West	
OHWM Width (ft): 3	OHWM Height (in): 4
Stream Bottom composition:	
	Other:
☐ Sands ☐ Bedrock ☐ Muck	
✓ Gravel	
Aquatic Habitat: Indicate all types present within proposed ROW/pr	roject limits.
Sand bar Sand/Gravel beach/bar Gravel	
Overhanging Deep pool/ hole/ Other:	
trees/shrubs channel channel	
Stream has the following characteristics:	
✓ Bed and banks OHWM (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
	the presence of wrack line
 ✓ shelving ✓ vegetation matted down, bent, or absent ☐ leaf litter disturbed or washed away ☐ sediment deposition ☐ water staining 	sediment sorting
leaf litter disturbed or washed away	scour
sediment deposition	multiple observed or predicted flow events
	abrupt change in plant community
other (list):	
Water Quality:	
☐ Clear ☑ Slightly Turbid ☐ Turbid ☐ Very Turbid	rbid Oily film High organic content
Other characteristics (pollutants, etc.)	_ ingli organic content
u , , , <u> </u>	
Aquatic Organisms: List all species observed. This would include w	aterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
Frogs	
Riparian Vegetation: List species observed.	
green ash (Fraxinus pennsylvanica), chinese privet (Ligustrum inense), sweetscent (Pluchea odorata), c (Chasmanthium latifolium), sugarberry (Celtis laevigata) poison ivy (Toxicodendron radicans), Virginia cr	
T&E Species/Suitable Habitat: List T&E species observed or which s	species the habitat is suitable for.

None.

Stream Data Form #: Project Name:

CSJ: 0135-15-002

Water Feature 148

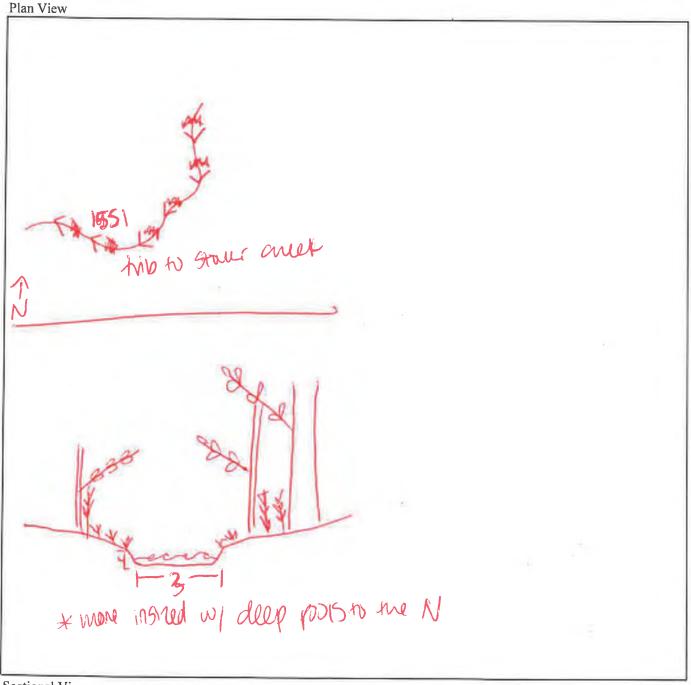
US 380

Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.



	Stream Data Form #: Water Feature 158
	Project Name: US 380
	CSJ: 0135-15-002
Stream Data Form	
Surveyor(s): Kelsea D. Hiebert and Ethan Eichler	Date of Field Work: September 15, 2020
USGS Stream Name: Franklin Branch	County/State: Collin County, Texas
USGS Topo Quad Name: McKinney West	Stream Number: 158
Associated Wetland(s): Water Feature 160	Coordinates: 33.247412 -96.679924
Associated Wettand(s). Water Feature 100	Vegetated banks and reinforced concrete adjacent to bridge
Stream Type: Intermittent Characteristics:	vegetated banks and remoreed consiste adjacent to bridge
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	-
Stream Flow Direction: South	
OHWM Width (ft): 15	OHWM Height (in): 36
Stream Bottom composition:	O.I
	Other:
☐ Sands ☐ Bedrock ☐ Muck	
☐ Gravel ☐ Vegetation	
A4'- II-1:4-4. I1:4114	
Aquatic Habitat: Indicate all types present within proposed ROW/	
Occasional Department Departm	l riffles
✓ Overnanging trees/shrubs ✓ Deep pool/ note/ Channel Other:	
trees/sin tos chamier	
Stream has the following characteristics:	
Bed and banks	
OHWM (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
	sediment sorting
 ✓ vegetation matted down, bent, or absent ✓ leaf litter disturbed or washed away ✓ sediment deposition ✓ water staining 	scour
sediment deposition	multiple observed or predicted flow events
water staining	abrupt change in plant community
other (list):	
_ ` ` ′	
Water Quality:	
☐ Clear ☑ Slightly Turbid ☐ Turbid ☐ Very T	urbid Oily film High organic content
Other characteristics (pollutants, etc.)	
Aquatic Organisms: List all species observed. This would include v	waterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
Frogs, insects, snakes, fish	
3, , ,	
Riparian Vegetation: List species observed.	
Ash leaf maple (Acer negundo), American elm (Ulmus americana), pecan (Carya illinoinensis), green a	ash (Fraxinus pennsylvanica), cedar elm (Ulmus crassifolia), sugarberry (Celtis laevigata) poison ivy
(Toxicodendron radicans), yaupon (Ilex vomitoria), fringed green brier (Smilax bona-nox)	
TOP C /O	
T&E Species/Suitable Habitat: List T&E species observed or which	species the habitat is suitable for.
None.	

Stream Data Form #: Project Name: CSJ: 0135-15-002 Water Feature 158

US 380

Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel.

Sketch should include:

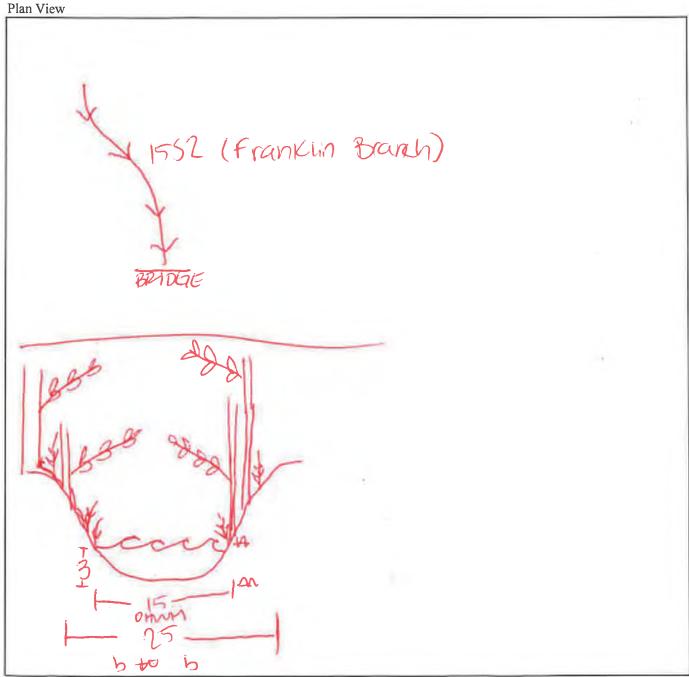
Directional arrow;

• Width of channel from top of bank to top of bank;

Depth of channel,

• Approximate side slope; and,

Width of stream from water edge to water edge.



	Stream Data Form #: Water Feature 172
	Project Name: US 380
	CSJ: 0135-15-002
Stream Data Form	
Surveyor(s): Kelsea Hiebert, Wyatt Wolfenkoehler	Date of Field Work: September 22, 2021
USGS Stream Name: Unnamed Tributary to Honey Creek	County/State: Collin County, Texas
USGS Topo Quad Name: Weston	Stream Number: 172
Associated Wetland(s): Water Feature 171	Coordinates: 33.251255 -96.640169
()	
Stream Type: Ephemeral Characteristics:	Deeply incised
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	Highly eroding
Stream Flow Direction: East	
OHWM Width (ft): 8	OHWM Height (in): 42
Stream Bottom composition:	<u> </u>
<u> </u>	Other:
☐ Sands ☐ Bedrock ☐ Muck	
✓ Gravel	
Aquatic Habitat: Indicate all types present within proposed ROW/p	rainat limita
Sand bar Sand/Gravel beach/bar Gravel	
— Overhanging — Deen nool/ hole/ —	riquate vegetation
trees/shrubs channel Other:	
Stream has the following characteristics:	
✓ Bed and banks	
OHWM (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☐ leaf litter disturbed or washed away	sediment sorting scour
sediment deposition	multiple observed or predicted flow events
 ✓ vegetation matted down, bent, or absent ☐ leaf litter disturbed or washed away ✓ sediment deposition ☐ water staining 	abrupt change in plant community
other (list):	acrupt enange in plant community
Water Quality:	
☐ Clear ☐ Slightly Turbid ☐ Turbid ☐ Very Tu	rbid Oily film High organic content
Other characteristics (pollutants, etc.) No water observed	
A quetic Organisms. List all anguing absorpted. This would include w	rateuforni fich analysa tuntlas fusas inventalmentas etc
Aquatic Organisms: List all species observed. This would include w	rateriowi, fish, shakes, turties, frogs, invertebrates, etc.
none	
Riparian Vegetation: List species observed.	
Green ash (Fraxinus pennsylvanica), eastern red cedar (Junip (Carva illinoinensis), American elm (Ulmus americana), cedar	

(Carya illinoinensis), American elm (Ulmus americana), cedar elm (Ulmus crassifolia), yaupon green brier (Smilax bona-nox), and eastern poison ivy (Toxicodendron radicans)

+

<u>T&E Species/Suitable Habitat: List T&E species observed or which species the habitat is suitable for.</u>

None

Stream Data Form #: Project Name:

Water Feature 172

US 380

CSJ: <u>0135-15-002</u>

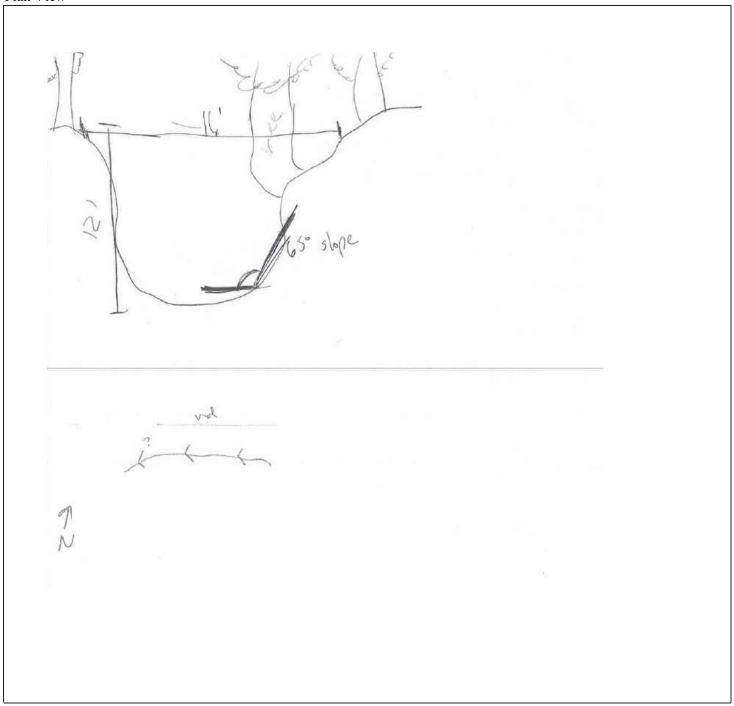
Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.

Plan View



	Stream Data Form #: Water Feature 173 Project Name: US 380
	CSJ: 0135-15-002
Stream Data Form	
Surveyor(s): Kelsea Hiebert, Wyatt Wolfenkoehler	Date of Field Work: September 22, 2021
USGS Stream Name: Unnamed Tributary to Honey Creek	County/State: Collin County, Texas
USGS Topo Quad Name: Weston	Stream Number: 173
Associated Wetland(s): None	Coordinates: 33.251402 -96.639296
Stream Type: Ephemeral Characteristics:	Deeply incised.
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	Highly eroding
Stream Flow Direction: South	
OHWM Width (ft): 3	OHWM Height (in): 12
Stream Bottom composition: Silts Cobbles Concrete	Other:
☐ Sands ☐ Bedrock ☐ Muck	Other:
Gravel Vegetation	
A quatic Helitate Indicate all tymes are controlling arounded DOW/	anaisat limita
Aquatic Habitat: Indicate all types present within proposed ROW/ Sand bar Sand/Gravel beach/bar Grave	
Overhanging Deep pool/ hole/ Other:	
trees/shrubs channel	
Stream has the following characteristics: Bed and banks OHWM (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): Water Quality:	 ✓ 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
☐ Clear ☐ Slightly Turbid ☐ Turbid ☐ Very Turbid ☐ Other characteristics (pollutants, etc.) no water observed	urbid Oily film High organic content
Aquatic Organisms: List all species observed. This would include v	vaterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
none	
Riparian Vegetation: List species observed.	
Green ash (Fraxinus pennsylvanica), eastern red cedar (Junip	perus virginiana), texas red oak (Quercus texana), pecan

(Carya illinoinensis), American elm (Ulmus americana), cedar elm (Ulmus crassifolia), yaupon (Ilex vomitoria), fringed green brier (Smilax bona-nox), and eastern poison ivy (Toxicodendron radicans)

<u>T&E Species/Suitable Habitat: List T&E species observed or which species the habitat is suitable for.</u>

None

Stream Data Form #: Project Name:

CSJ: <u>0135-15-002</u>

Water Feature 173

US 380

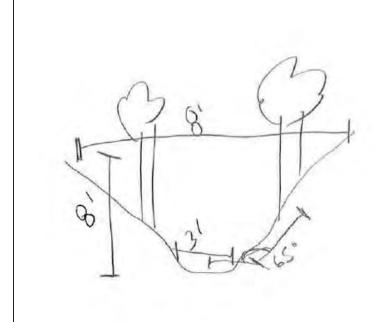
Stream Data Form (continued)

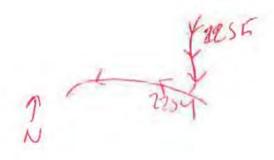
Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.

Plan View





	Stream Data Form #: Water Feature 175
	Project Name: US 380
	CSJ: 0135-05-002
Stream Data Form	
Surveyor(s): Kelsea Hiebert, Kathryn Burton	Date of Field Work: August 17, 2021
USGS Stream Name: Unnamed Tributary to Honey Creek	County/State: Collin County, Texas
USGS Topo Quad Name: Weston / McKinney West	Stream Number: 175
Associated Wetland(s): None	Coordinates: 33.250696 -96.634888
Noticed Westerna(b). Notice	00.20000 00.00+000
Stream Type: Intermittent Characteristics:	FLOWING FROM RECENT RAIN, BEAVER DAM SOUTH
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	- LOVING FROM RECEIVED AND SECTION OF STATE OF S
	OHWM H-:-14 (:). 10
OHWM Width (ft): 7	OHWM Height (in): 18
Stream Bottom composition: ✓ Silts ✓ Cobbles ✓ Concrete □	Other:
✓ Sitts ✓ Cooles ✓ Collete ☐ ✓ Sands ☐ Bedrock ☐ Muck	Other:
Gravel Vegetation	
☐ Glavei ☐ Vegetation	
Aquatic Habitat: Indicate all types present within proposed ROW/	project limits.
☐ Sand bar ✓ Sand/Gravel beach/bar ☐ Grave	
Overhanging — Deen pool/hole/ —	
trees/shrubs Deep poor hole/ Other:	
Stream has the following characteristics:	
✓ Bed and banks	
OHWM (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✓ leaf litter disturbed or washed away	sediment sorting
leaf litter disturbed or washed away	scour
sediment deposition water staining	multiple observed or predicted flow events
water staining other (list):	abrupt change in plant community
other (list).	
Water Quality:	
✓ Clear Slightly Turbid Turbid Very Tu	urbid Oily film High organic content
Other characteristics (pollutants, etc.)	arota
<u> </u>	
Aquatic Organisms: List all species observed. This would include v	vaterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
Frogs, snakes, fish	•
rogo, shakoo, hori	
Riparian Vegetation: List species observed.	
	radiana) hay aldar (Asar nagrosta) and a sale (Estates)
American elm (Ulmus americana), poison ivy (Toxicodendron	
pennsylvanica), Cedar elm (Ulmus crassifolia), Indian wood o	ais (Onasilianunum laulollum)
T&E Species/Suitable Habitat: List T&E species observed or which	species the habitat is suitable for.

NA

Stream Data Form #: Project Name:

CSJ: <u>0135-05-002</u>

Water Feature 175

US 380

Stream Data Form (continued)

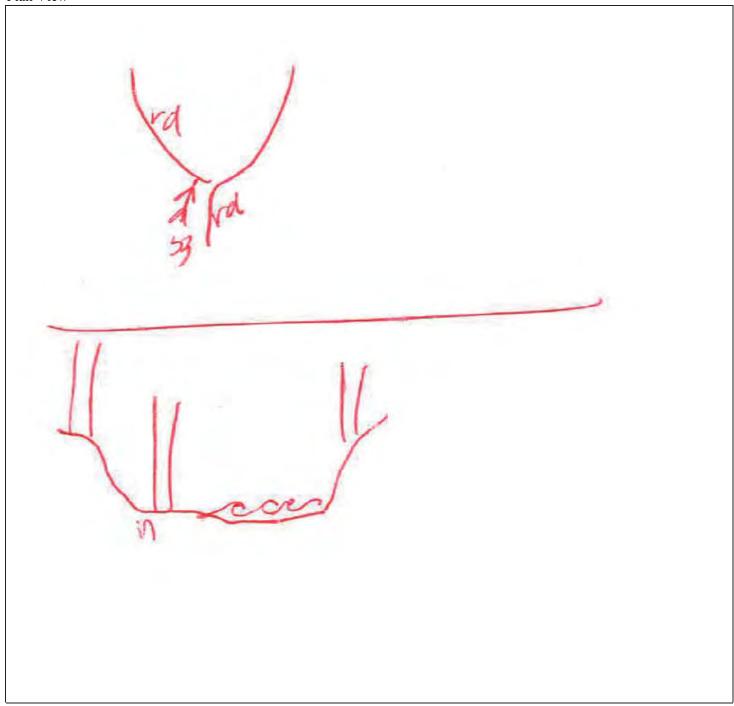
Please provide a plan and section view sketch of the stream channel. Sketch should include:

Sketch should include

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.

Plan View



	Stream Data Form #: Water Feature 176		
	Project Name: US 380		
	CSJ: 0135-05-002		
Stream Data Form			
Surveyor(s): Kelsea Hiebert, Mike Keenan, Ethan Eichler	Date of Field Work: August 24, 2020		
USGS Stream Name: Unnamed Tributary to Honey Creek	County/State: Collin County, Texas		
USGS Topo Quad Name: Weston / McKinney West	Stream Number: 176		
Associated Wetland(s): None	Coordinates: 33.252068 -96.634514		
Stream Type: Perennial Characteristics:	Scattered large DBH and Specimen trees along banks. Dense understory.		
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	Active erosion and currently moderately eroded		
Stream Flow Direction: North			
OHWM Width (ft): 8	OHWM Height (in): 36		
Stream Bottom composition:			
	Other:		
☐ Sands ☐ Bedrock ☐ Muck ☑ Gravel ☐ Vegetation			
- Olaver - Ogeanon			
Aquatic Habitat: Indicate all types present within proposed ROW/p			
☐ Sand bar ☑ Sand/Gravel beach/bar ☐ Gravel	riffles Aquatic vegetation		
Overhanging Deep pool/ hole/ Channel Other:			
ti ces/siii tibs — Chainlei			
Stream has the following characteristics:			
✓ Bed and banks			
OHWM (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		
shelvingvegetation matted down, bent, or absent	the presence of wrack line sediment sorting		
leaf litter disturbed or washed away	scument sorting scour		
 ✓ shelving ✓ vegetation matted down, bent, or absent ☐ leaf litter disturbed or washed away ☐ sediment deposition 	✓ multiple observed or predicted flow events		
water staining	abrupt change in plant community		
other (list):			
W. O. P.			
Water Quality: ☐ Clear Slightly Turbid ☐ Turbid ☐ Very Tu	urbid Oily film High organic content		
Other characteristics (pollutants, etc.)	iloid [] Ony iliii [] Trigii organic content		
Aquatic Organisms: List all species observed. This would include w	vaterfowl, fish, snakes, turtles, frogs, invertebrates, etc.		
Fish, insects, snakes, and frogs.			

Riparian Vegetation: List species observed.

Black willow (Salix nigra), American elm (Ulmus americana), Osage-orange (Maclura pomifera), green ash (Fraxinus pennsylvanica), eastern red cedar (Juniperus virginiana), poison ivy (Toxidendron radicans), virginia creeper (Parthenocissus quinquefolia), Chinese privet (Ligustrum sinense), Virginia wild rye (Elymus virginicus), Nuttall oak (Quercus texana), Pecan (Carya illinoinensis), ash leaf maple (Acer negundo), yaupon (Ilex vomitoria), fringed green brier (Smilax bona-nox), Johnsongrass (Sorghum halepense), sweetscent (Pluchea odorata), cedar elm (Ulmus crassifolia), and inland sea oats (Chasmanthium latifolium).

<u>T&E Species/Suitable Habitat: List T&E species observed or which species the habitat is suitable for.</u> None.

Stream Data Form #: Project Name: CSJ: 0135-15-002

Water Feature 176

US 380

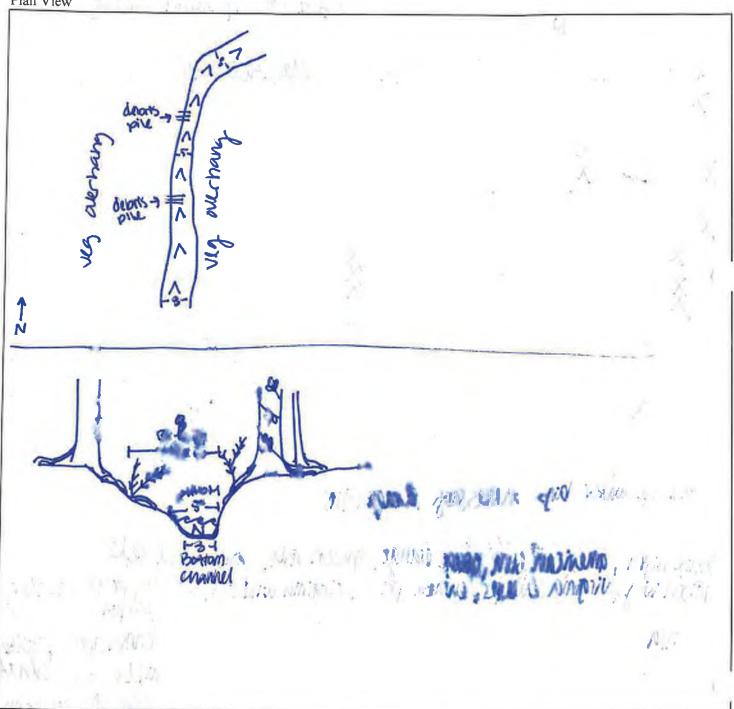
Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.

Plan View



	Stream Data Form #: Water Features 182, 192, 227		
	Project Name: US 380 CSJ: 0135-05-002		
Stream Data Form	CSJ. 0155-05-002		
Surveyor(s): Kelsea Hiebert, Mike Keenan, Ethan Eichler	Date of Field Work: August 24, 2020		
USGS Stream Name: Honey Creek	County/State: Collin County, Texas		
USGS Topo Quad Name: Weston / McKinney West & East	Stream Number: 182, 192, 227		
Associated Wetland(s): Water Features 178, 179, 185	Coordinates: 33.246280 -96.623698		
Stream Type: Perennial Characteristics:	Moderately high erosion along banks. Steep banks.		
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	Steep banks.		
Stream Flow Direction: South			
OHWM Width (ft): 25	OHWM Height (in): 120		
Stream Bottom composition: Silts Cobbles Concrete Sands Bedrock Muck Gravel Vegetation	Other:		
Aquatic Habitat: Indicate all types present within proposed ROW/ Sand bar Sand/Gravel beach/bar Grave Overhanging Deep pool/ hole/ trees/shrubs Deep pool/ hole/ channel Other:			
Stream has the following characteristics: Bed and banks OHWM (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):	 ✓ 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 		
Water Quality: ☐ Clear ☐ Slightly Turbid ☐ Turbid ☐ Very T ☐ Other characteristics (pollutants, etc.)	urbid Oily film High organic content		
Aquatic Organisms: List all species observed. This would include Frogs, fish, snakes, Great Blue Heron.	waterfowl, fish, snakes, turtles, frogs, invertebrates, etc.		
Riparian Vegetation: List species observed. Virginia wild rye (Elymus virginicus), poison ivy (Toxidendron radicans), Chinese privet (Ligustrum sincillinoinensis).	ense), green ash (Fraxinus pennsylvanica), American elm (Ulmus americana), and Pecan (Carya		
T&E Species/Suitable Habitat: List T&E species observed or which	species the habitat is suitable for.		
None.			

Stream Data Form #:
Project Name:

Water Features 182, 192, 227 US 380

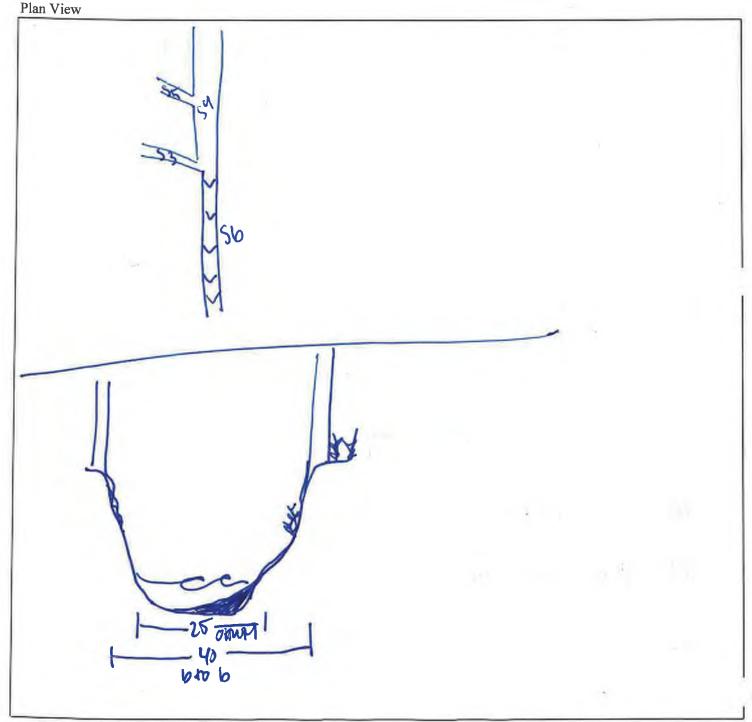
CSJ: 0135-15-002

Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.



	Stream Data Form #: Water Feature 187			
	Project Name: US 380			
	CSJ: <u>0135-15-002</u>			
Stream Data Form				
Surveyor(s): Kelsea Hiebert, Mike Keenan, Ethan Eichler	Date of Field Work: August 25, 2020			
USGS Stream Name: Unnamed Tributary to Honey Creek	County/State: Collin County, Texas			
USGS Topo Quad Name: McKinney West	Stream Number: 187			
Associated Wetland(s): None	Coordinates: 33.249408 -96.624136			
() None	Drainage from the adjacent agricultural field.			
Stream Type: Ephemeral Characteristics:	Brailiago nom the adjacont agricultural nota.			
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	Manmade banks			
Stream Flow Direction: Southwest	Manified Santo			
OHWM Width (ft): 4	OHWM Height (in): 12			
Stream Bottom composition:	Dug out and rock/pebble placed in the stream bed			
	Other: for ag drainage			
☐ Sands ☐ Bedrock ☐ Muck	Offici. 101 ag aramago			
☐ Gravel ☐ Vegetation				
- Glaver - Vegetation				
Aquatic Habitat: Indicate all types present within proposed ROW/	project limits.			
	l riffles			
Overhanging Deep pool/ hole/ Other: Man				
trees/shrubs Channel Other: Man	imade			
Stream has the following characteristics:				
✓ Bed and banks				
OHWM (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 water staining	multiple observed or predicted flow events abrupt change in plant community			
	abrupt change in plant community			
other (list):				
Water Quality:				
☐ Clear ☐ Slightly Turbid ☐ Turbid ☐ Very Tu	urbid Oily film High organic content			
Other characteristics (pollutants, etc.) Dry	arold			
other characteristics (portatalitis, etc.)				
Aquatic Organisms: List all species observed. This would include v	vaterfowl, fish, snakes, turtles, frogs, invertebrates, etc.			
None.	The state of the s			
None.				
Riparian Vegetation: List species observed.				
	Chinese privat (Liquetrum sinense), and hurr ask (Quereus magracerne)			
Giant ragweed (Ambrosia trifida), Virginia wild rye (Elymus virginicus), ash leaf maple (Acer negundo), Chinese privet (Ligustrum sinense), and burr oak (Quercus macrocarpa).				
T&E Species/Suitable Habitat: List T&E species observed or which	species the habitat is suitable for.			
None.				

Stream Data Form #: Project Name: CSJ: 0135-15-002 Water Feature 187

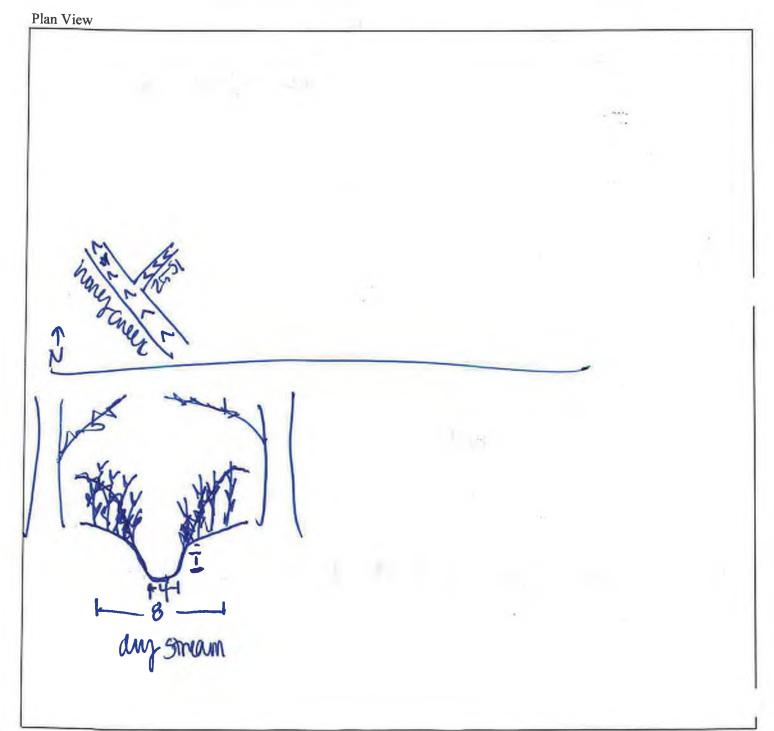
US 380

Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.



	Stream Data Form #: Water Feature 189		
	Project Name: US 380		
	CSJ: 0135-05-002		
Stream Data Form			
Surveyor(s): Kelsea Hiebert, Ethan Eichler	Date of Field Work: December 1, 2020		
· · · · · · · · · · · · · · · · · · ·			
USGS Stream Name: Unnamed Tributary to Honey Creek	County/State: Collin County, Texas		
USGS Topo Quad Name: McKinney West	Stream Number: 189		
Associated Wetland(s): None	Coordinates: 33.235952 -96.628867		
Stream Type: Ephemeral Characteristics:	Root bound and incised		
Bank Stability (e.g. highly eroding, sloughing banks, etc.):			
Stream Flow Direction: East			
OHWM Width (ft): 3	OHWM Height (in): 12		
Stream Bottom composition:			
✓ Silts ☐ Cobbles ☐ Concrete ✓	Other: Trash		
☐ Sands ☐ Bedrock ☐ Muck			
☐ Gravel ☐ Vegetation			
Aquatic Habitat: Indicate all types present within proposed ROW/			
☐ Sand bar ☐ Sand/Gravel beach/bar ☐ Grave	el riffles		
Overhanging Deep pool/ hole/ Other:			
trees/shrubs channel other.			
Stream has the following characteristics:			
✓ Bed and banks			
OHWM (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 Sediment deposition Water staining	scour		
sediment deposition	multiple observed or predicted flow events		
	abrupt change in plant community		
other (list):			

Water Quality:			
☐ Clear ☐ Slightly Turbid ☐ Turbid ☐ Very T	urbid Oily film High organic content		
Other characteristics (pollutants, etc.) None			
Aquatic Organisms: List all species observed. This would include	waterfowl, fish, snakes, turtles, frogs, invertebrates, etc.		
Snakes and frogs			
Riparian Vegetation: List species observed.			
Black locust (Robinia pseudoacacia), barnyard grass (Echinochloa crus-galli), johnsongrass (Sorghum halepense), giant			
ragweed (Ambrosia trifida), Rubus sp., summer farewell (Dalea pinnata)			
Taginasa (and cold and a), rabad op., danning larowen (ban	ou printed/		
TOTAL CONTRACTOR OF THE TOTAL			
<u>T&E Species/Suitable Habitat: List T&E species observed or which species the habitat is suitable for.</u>			

None

Stream Data Form #: Project Name:

CSJ: <u>0135-05-002</u>

Water Feature 189

US 380

Stream Data Form (continued)

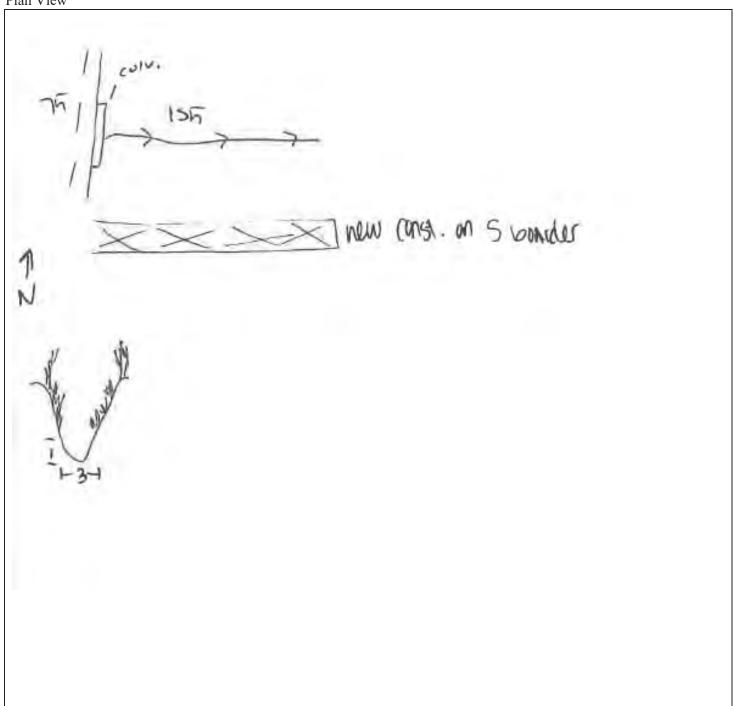
Please provide a plan and section view sketch of the stream channel. Sketch should include:

Directional arrow;

- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.

Plan View



	Stream Data Form #: Water Feature 196	
	Project Name: US 380	
	CSJ: 0135-15-002	
Stream Data Form		
Surveyor(s): Kelsea Hiebert, Kathryn Burton	Date of Field Work: August 17, 2021	
• • • • • • • • • • • • • • • • • • • •	County/State: Collin County, Texas	
USGS Stream Name: <u>Unnamed Tributary to Honey Creek</u> USGS Topo Quad Name: Anna	Stream Number: 196	
• •	Coordinates: 33.218359 -96.751950	
Associated Wetland(s): None	Coordinates. 33.210339 -90.731930	
Stream Type: Intermittent Characteristics:	CONTINUES PARALLEL NORTH ADJACENT TO ROAD	
	CONTINUES PARALLEL NORTH ADJACENT TO ROAD	
Bank Stability (e.g. highly eroding, sloughing banks, etc.):		
Stream Flow Direction: North		
OHWM Width (ft): 7	OHWM Height (in): 6	
Stream Bottom composition:		
	Other:	
☑ Sands ☐ Bedrock ☐ Muck		
☐ Gravel ☐ Vegetation		
A CHILL I CAN THE TOWN	*	
Aquatic Habitat: Indicate all types present within proposed ROW/1		
☐ Sand bar ☐ Sand/Gravel beach/bar ☐ Grave	l riffles Aquatic vegetation	
Overhanging Deep pool/ hole/ Other:		
trees/shrubs channel		
Stream has the following characteristics:		
Bed and banks		
OHWM (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	
	scour	
☐ leaf litter disturbed or washed away ☐ sediment deposition ☐ water staining	✓ multiple observed or predicted flow events	
water staining	abrupt change in plant community	
other (list):	acrapt change in plant community	
other (not).		
Water Quality:		
☐ Clear ☑ Slightly Turbid ☐ Turbid ☐ Very Tu	urbid Oily film High organic content	
Other characteristics (pollutants, etc.)	Tingii engami veman	
_ (+		
Aquatic Organisms: List all species observed. This would include v	vaterfowl, fish, snakes, turtles, frogs, invertebrates, etc.	
Frogs, snakes		
1 1095, Shakes		
Riparian Vegetation: List species observed.		
Broadleaf cattail (Typha latifolia), black willow (Salix nigra), Ea	astern cottonwood (Populus deltoides), common spike-rush	
(Eleocharis palustris)		
T&E Species/Suitable Habitat: List T&E species observed or which	species the habitat is suitable for.	
NA		

Stream Data Form #: Project Name:

CSJ: <u>0135-15-002</u>

Water Feature 196

US 380

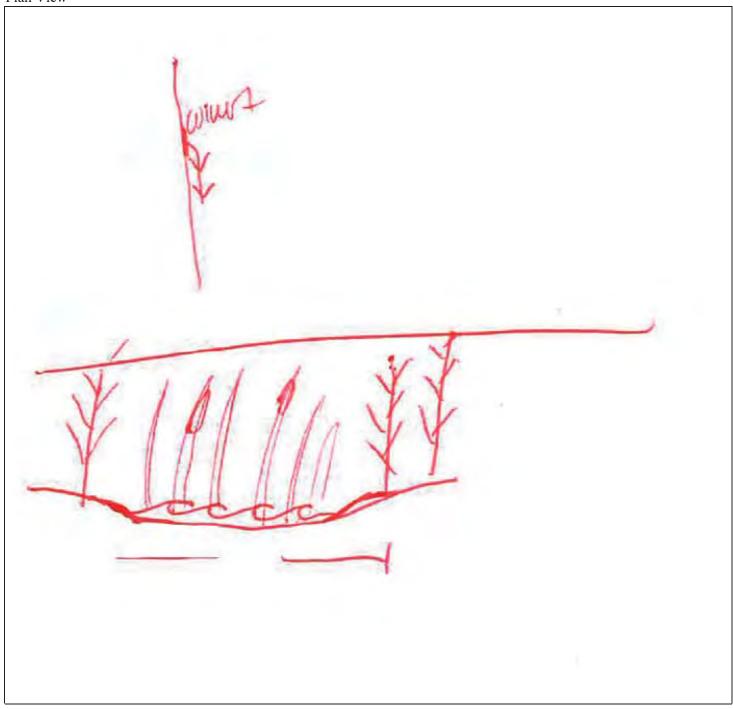
Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.

Plan View



	Stream Data Form #:	Water Feature 199		
	Project Name:	US 380		
	CSJ: 0135-15-002			
Stream Data Form				
Surveyor(s): Kelsea Hiebert, Kathryn Burton	Date of Field Work: Au	gust 17, 2021		
USGS Stream Name: Unnamed Tributary to the East Fork		llin County, Texas		
USGS Topo Quad Name: Anna	Stream Number: 19			
Associated Wetland(s): Water Feature 200	Coordinates: 33.218172	-96.756576		
Valer i eature 200	<u> </u>	30.700070		
Stream Type: Ephemeral Characteristics:	DRAINAGE TO AND FROM FIELD			
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	<u> </u>			
Stream Flow Direction: North				
OHWM Width (ft): 5	OHWM Height (in): 6			
Stream Bottom composition: Silts Cobbles Concrete	Other:			
✓ Silts ✓ Cobbles ☐ Concrete ☐ C ☐ Sands ☐ Bedrock ☐ Muck	ther.			
Gravel Vegetation				
Graver vegetation				
Aquatic Habitat: Indicate all types present within proposed ROW/pr	roject limits.			
Sand bar Sand/Gravel beach/bar Gravel		vegetation		
Overhanging — Deen nool/hole/ —	_ 1	8		
trees/shrubs				
Stream has the following characteristics:				
✓ Bed and banks				
OHWM (check all indicators that apply):				
clear, natural line impressed on the bank	the presence of litter and de			
changes in the character of soil	destruction of terrestrial ve	getation		
shelving	the presence of wrack line			
 ✓ vegetation matted down, bent, or absent ✓ leaf litter disturbed or washed away ✓ sediment deposition ✓ water staining 	sediment sorting			
leaf litter disturbed or washed away	scour	4-1-1		
sediment deposition water staining	multiple observed or prediction abrupt change in plant com			
other (list):		mumty		
Unit (list).				
Water Quality:				
☐ Clear ☐ Slightly Turbid ☐ Turbid ☑ Very Tur	rbid 🔲 Oily film 🔲 Hig	gh organic content		
Other characteristics (pollutants, etc.) Not flowing - stagnant		5 8		
<u> </u>				
Aquatic Organisms: List all species observed. This would include wa	aterfowl, fish, snakes, turtles, fro	gs, invertebrates, etc.		
NA .				
Riparian Vegetation: List species observed.				
Johnsongrass (Sorghum halepense), annual marsh-elder (Iva annua), giant ragweed (Ambrosia trifida)				
osmiosnigrass (oorginam naioponoo), armaar maron oldor (iva armaa), giant ragwood (Ambrosia tinida)				
The Cracina/Critable Hebitati List The sussission of the sussissio	received the helpitet in anital C			
T&E Species/Suitable Habitat: List T&E species observed or which s	species the nabital is suitable for	<u>.</u>		
NA				

Stream Data Form #: Project Name:

CSJ: <u>0135-15-002</u>

Water Feature 199

US 380

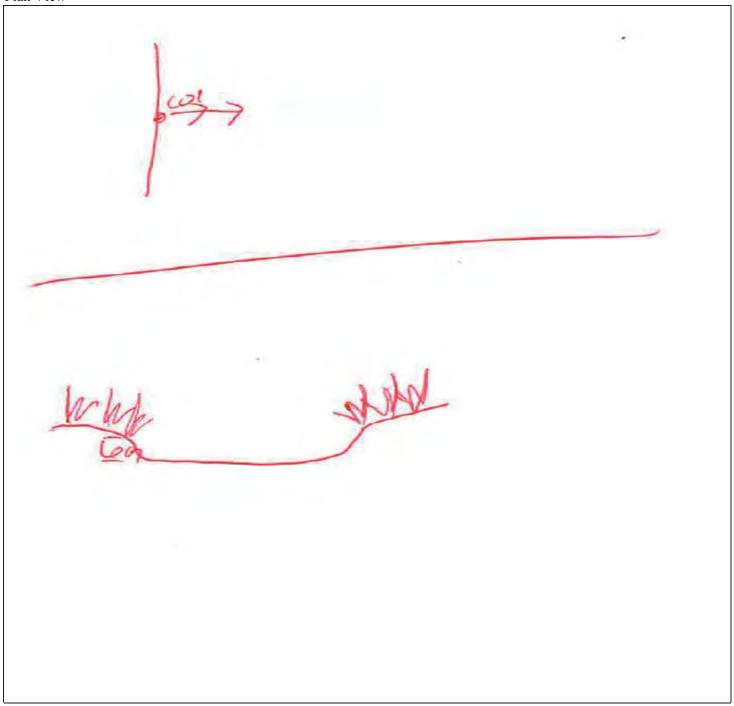
Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.

Plan View



	Stream Data Form #:	Water Feature 204
	Project Name:	US 380
	CSJ: 0135-02-002	
Stream Data Form		
Surveyor(s): Ethan Eichler and Mike Keenan	Date of Field Work: Se	eptember 8, 2020
USGS Stream Name: Unnamed Tributary to the East Fork		ollin County, Texas 04
USGS Topo Quad Name: Anna		
Associated Wetland(s): Water Features 201 and 202	Coordinates: <u>33.257154</u>	
Stream Type: Intermittent Characteristics:	Vertical banks. Man made with gr	oundwater influence
Bank Stability (e.g. highly eroding, sloughing banks, etc.):		
Stream Flow Direction: Northeast	-	
OHWM Width (ft): 3	OHWM Height (in): 25	
Stream Bottom composition:	<i>5</i> () <u> </u>	
	Other:	
☐ Sands ☐ Bedrock ☐ Muck		
Gravel Vegetation		
Aquatic Habitat: Indicate all types present within proposed ROW/pr		
☐ Sand bar ☐ Sand/Gravel beach/bar ☐ Gravel	riffles	e vegetation
Overhanging Deep pool/ hole/ Other:		
trees/shrubs channel		
Stream has the following characteristics:		
✓ Bed and banks		
OHWM (check all indicators that apply):		
	the presence of litter and d	
changes in the character of soil	destruction of terrestrial ve	
shelving	the presence of wrack line	
vegetation matted down, bent, or absent	sediment sorting scour	
		. 10
sediment deposition	multiple observed or predi	
	abrupt change in plant con	mmumity
other (list):		
Water Ovality		
Water Quality: ☐ Clear ☑ Slightly Turbid ☐ Turbid ☐ Very Tur	rbid 🗌 Oily film 📗 H	ich anconia contant
☐ Clear ☑ Slightly Turbid ☐ Turbid ☐ Very Turbid ☐ Other characteristics (pollutants, etc.)	rbid Oily film H	igh organic content
Other characteristics (polititants, etc.)		
Aquatic Organisms: List all species observed. This would include w	aterfowl fich enakes turtles fr	rogs invertebrates etc
*	attriowi, fish, shakes, turties, fi	ogs, invertebrates, etc.
None.		
Riparian Vegetation: List species observed.		
Giant ragweed (Ambrosia trifida), Pecan (Carya illinoinensis), green ash (Fraxinus pennsylvanica), black oak (Quercus texana), johnsongrass (Sorghum halepense), and bermuda grass (Cynodon dactylon)	willow (Salix nigra), American elm (Ulmus ame	ricana), burr oak (Quercus macrocarpa), Texas red
T&E Species/Suitable Habitat: List T&E species observed or which s	species the habitat is suitable fo	r
*	species the haditat is suitable to	<u> </u>
None.		

Stream Data Form #: Project Name: Water Feature 204

CSJ: 0135-15-002

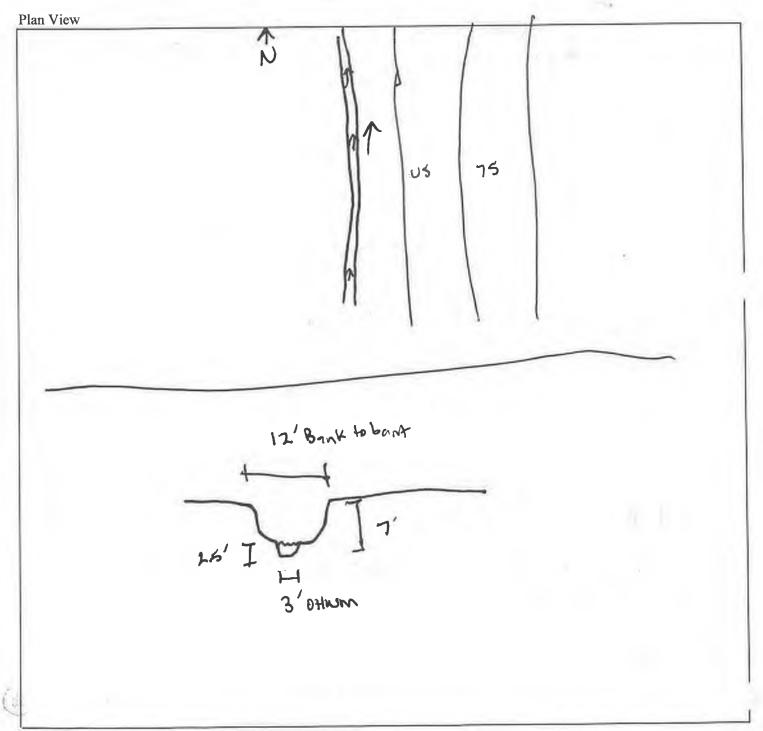
Name: US 380

Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.



	Stream Data Form #: Water Features 205, 231, 234, 235,236 Project Name: US 380
	CSJ: <u>0135-15-02</u>
Stream Data Form Surveyor(s): Ethan Eichler and Mike Keenan	Date of Field Work: September 8, 2020
USGS Stream Name: <u>East Fork Trinity River</u>	County/State: Collin County, Texas
USGS Topo Quad Name: Anna / McKinney East	Stream Number: 205, 231, 234, 235, 236
Associated Wetland(s): WFs 207, 233, 286, 288, 289, 290	Coordinates: 33.238560 -96.604195
Stream Type: Perennial Characteristics:	Incised stream banks
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	
Stream Flow Direction: South	
OHWM Width (ft): 40	OHWM Height (in): 30
Stream Bottom composition:	
✓ Silts ☐ Cobbles ☐ Concrete ☐ Concrete	Other:
Aquatic Habitat: Indicate all types present within proposed ROW/pr Sand bar	
 □ changes in the character of soil ☑ shelving ☑ vegetation matted down, bent, or absent ☑ leaf litter disturbed or washed away 	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
Water Quality: ☐ Clear ☐ Slightly Turbid ☑ Turbid ☐ Very Tur ☐ Other characteristics (pollutants, etc.)	rbid Oily film High organic content
Aquatic Organisms: List all species observed. This would include was None.	aterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
Riparian Vegetation: List species observed. Pecan (Carya illinoinensis), black walnet (Juglans nigra), green ash (Fraxinus pennsylvanica), poison ivy osage-orange (Maclura pomifera), fringed green brier (Smilax bona-nox), Virginia wild rye (Elymus virgin	
T&E Species/Suitable Habitat: List T&E species observed or which s	species the habitat is suitable for.
None.	

Stream Data Form #: 205, 231, 234, 235, 236

Project Name: US 380

CSJ: 0135-15-002

Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

Approximate side slope; and,

Width of stream from water edge to water edge.

Plan View

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60' Bank to Bank

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	Stream Data Form #: Water Feature 206
	Project Name: US 380
	CSJ: 0135-15-002
Stream Data Form	
Surveyor(s): Kelsea Hiebert, Wyatt Wolfenkoehler	Date of Field Work: September 22, 2021
USGS Stream Name: Unnamed Tributary to the East Fork	County/State: Collin County, Texas
USGS Topo Quad Name: Anna	Stream Number: 206
Associated Wetland(s): Water Feature 207	Coordinates: 33.257359 -96.608136
Water Feature 201	-50.000100
Stream Type: Intermittent Characteristics:	Flooded from beaver dam, flows into the East Fork Trinity River
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	
Stream Flow Direction: Southwest	
OHWM Width (ft): 5	OHWM Height (in): 24
Stream Bottom composition:	
	ther:
☐ Sands ☐ Bedrock ☐ Muck	
✓ Gravel	
Aquatic Habitat: Indicate all types present within proposed ROW/pro	oject limits
Sand bar Sand/Gravel beach/bar Gravel r	
Overhanging Deen nool/ hole/	Intes I require vegetation
Overnanging trees/shrubs Deep pool/ hole/ channel Other:	
Stream has the following characteristics:	
✓ Bed and banks	
OHWM (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
	the presence of wrack line
vegetation matted down, bent, or absent	sediment sorting
leaf litter disturbed or washed away	scour
	multiple observed or predicted flow events
water staining	abrupt change in plant community
other (list):	
Water Quality	
Water Quality: ☐ Clear ☑ Slightly Turbid ☐ Turbid ☐ Very Turbid	bid ☐ Oily film ☐ High organic content
Other characteristics (pollutants, etc.)	old
Other characteristics (politicalits, etc.)	
Aquatic Organisms: List all species observed. This would include wa	terfowl, fish, snakes, turtles, frogs, invertebrates, etc.
Beaver activity	
Deaver activity	
Riparian Vegetation: List species observed.	
Great ragweed (Ambrosia trifida), black willow (Salix nigra), blue	e mistflower (Conoclinium coelestinum), annual marsh
elder (Iva annua), northern frogfruit (Phyla lanceolata)	
T&E Species/Suitable Habitat: List T&E species observed or which species	pecies the habitat is suitable for.

none

Stream Data Form #: Project Name:

CSJ: <u>0135-15-002</u>

Water Feature 206

US 380

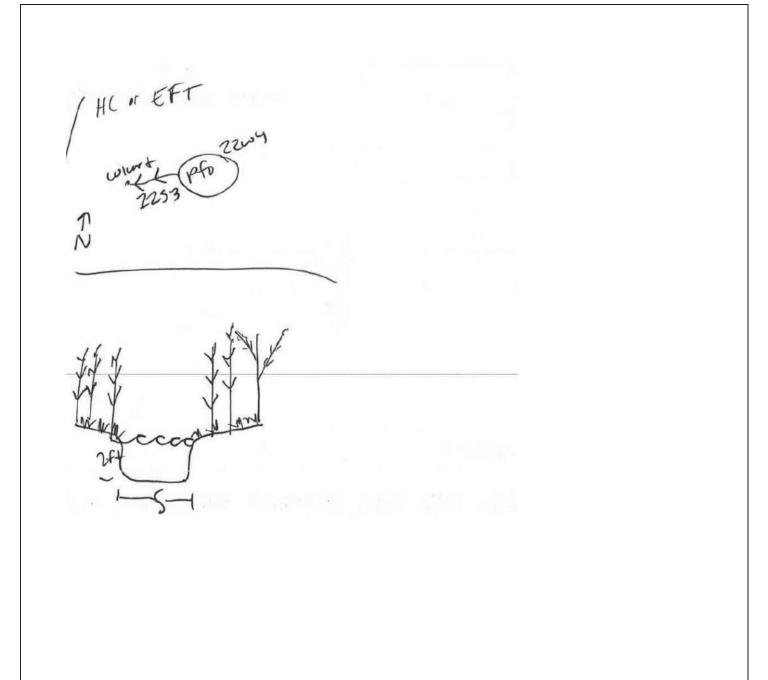
Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.

Plan View



	Stream Data Form #: Water Feature 209
	Project Name: US 380
	CSJ: 0135-15-002
Stream Data Form	
Surveyor(s): Kelsea Hiebert, Wyatt Wolfenkoehler	Date of Field Work: August 16, 2021
USGS Stream Name: Unnamed Tributary to the East Fork	County/State: Collin County, Texas
USGS Topo Quad Name: Anna	Stream Number: 209
Associated Wetland(s): None	Coordinates: 33.259244 -96.607923
Notice Westerna (b).	00.2002 11 00.001020
Stream Type: Ephemeral Characteristics:	POOLED WATER BY CULVERT, DRY OTHERWISE
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	TOOLES WITEREST COLVERT, BIRT OTHERWISE
Stream Flow Direction: West	0.77777 (7.7 (1) (1) 0.4 (10
OHWM Width (ft): 5	OHWM Height (in): 24-48
Stream Bottom composition:	A.d.
	Other:
✓ Sands ☐ Bedrock ☐ Muck	
☐ Gravel ☐ Vegetation	
A quotic Helitati. Indicata all trong progent within proposed DOW/n	uniont limita
Aquatic Habitat: Indicate all types present within proposed ROW/pr	
Overhancing Dean mod/hole/	Aquatic vegetation
Vernanging beep pool/ note/ Channel Other:	
trees/sin dos Chamier	
Stream has the following characteristics:	
Bed and banks	
OHWM (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
	multiple observed or predicted flow events
water staining	abrupt change in plant community
other (list):	_
- ().	
Water Quality:	
	rbid Oily film High organic content
Other characteristics (pollutants, etc.) Dry farther West	
Aquatic Organisms: List all species observed. This would include w	aterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
Invertebrates, frogs	•
mvortesrates, nogs	
Riparian Vegetation: List species observed.	
) D
Giant ragweed (Ambrosia trifida), johnsongrass (Sorghum hale	
(Fraxinus pennsylvanica), yaupon (Ilex vomitoria), hackberry (C	
(Ulmus crassifolia)	₽
T&E Species/Suitable Habitat: List T&E species observed or which s	species the habitat is suitable for.
NA	

Stream Data Form #: Project Name:

CSJ: <u>0135-15-002</u>

Water Feature 209

US 380

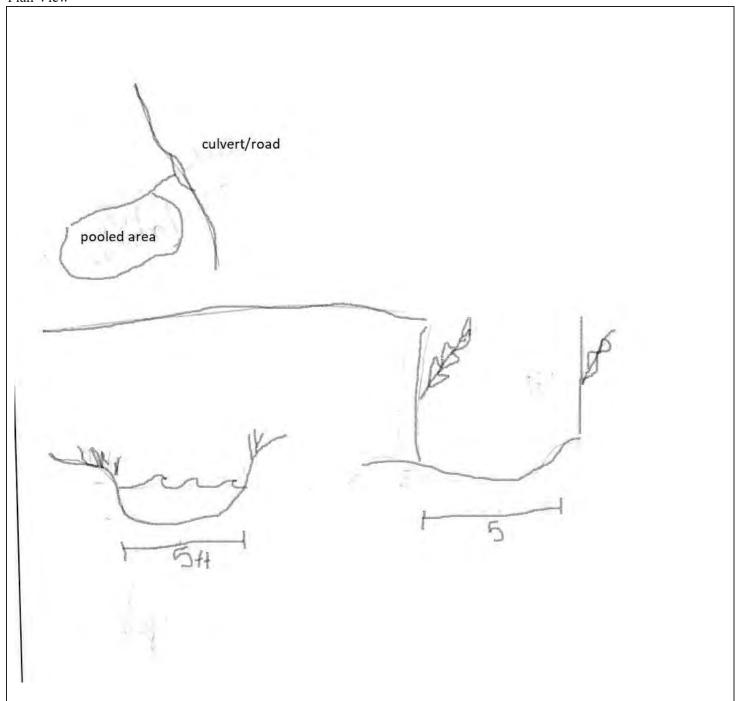
Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.

Plan View



	Stream Data Form #: Water Feature 212
	Project Name: US 380
	CSJ: 0135-15-002
Stream Data Form	
Surveyor(s): Kelsea Hiebert, Wyatt Wolfenkoehler	Date of Field Work: August 16, 2021
USGS Stream Name: Unnamed Tributary to the East Fork	County/State: Collin County, Texas
USGS Topo Quad Name: Anna	Stream Number: 212
Associated Wetland(s): None	Coordinates: 33.262994 -96.603835
Stream Type: Intermittent Characteristics: Bank Stability (e.g. highly eroding, sloughing banks, etc.):	Oll Sheen seen in water, dead wetland vegetation.
Stream Flow Direction: West	
OHWM Width (ft): 5	OHWM Height (in): 6
Stream Bottom composition:	
Sands Bedrock Muck	Other:
☐ Gravel ☐ Vegetation	
Aquatic Habitat: Indicate all types present within proposed ROW/pr Sand bar Sand/Gravel beach/bar Gravel r	
Overhanging Deep pool/ hole/ Others	
trees/shrubs	_
Stream has the following characteristics: Bed and banks OHWM (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
_	the presence of wrack line
vegetation matted down, bent, or absent	sediment sorting
leaf litter disturbed or washed away	scour
	multiple observed or predicted flow events
sediment deposition water staining	abrupt change in plant community
other (list):	
Water Quality:	
	bid Oily film High organic content
Other characteristics (pollutants, etc.) oil/organic sheen	
Aquatic Organisms: List all species observed. This would include wa	aterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
Frogs, aquatic invertebrates.	
Riparian Vegetation: List species observed.	
narrow-leaf cattail (Typha latifolia), lack willow (Salix nigra), cor	mmon persimmon (Diospyros virginiana), ash leaf manla
(Acer negundo), green ash (Fraxinus pennsylvanica), johnsong trifida).	
T&E Species/Suitable Habitat: List T&E species observed or which s	

None

Stream Data Form #: Project Name:

CSJ: <u>0135-15-002</u>

Water Feature 212

US 380

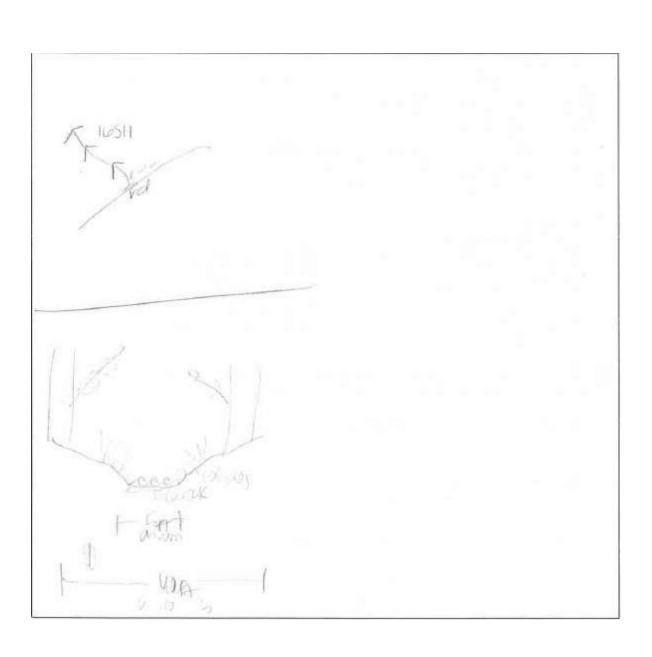
Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.

Plan View



	Stream Data Form #: Water Feature 215
	Project Name: US 380
	CSJ: 0135-15-002
Stream Data Form	
Surveyor(s): Kelsea Hiebert, Wyatt Wolfenkoehler	Date of Field Work: August 16, 2021
USGS Stream Name: Unnamed Tributary to the East Fork	County/State: Collin County, Texas
USGS Topo Quad Name: Anna	Stream Number: 215
Associated Wetland(s): None	Coordinates: 33.26332 -96.599625
() <u>116110</u>	
Stream Type: Ephemeral Characteristics:	Channelized flow toward road
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	
Stream Flow Direction: West	
OHWM Width (ft): 5	OHWM Height (in): 7
Stream Bottom composition:	on with height (iii).
	Other:
✓ Sands ☐ Bedrock ☐ Muck	
Gravel Vegetation	
-	
Aquatic Habitat: Indicate all types present within proposed ROW/pr	
☐ Sand bar ☐ Sand/Gravel beach/bar ☐ Gravel:	riffles Aquatic vegetation
Overhanging Deep pool/ hole/ Other:	
trees/shrubs channel channel	
Stream has the following characteristics:	
Bed and banks	
OHWM (check all indicators that apply): clear, natural line impressed on the bank	the massage of litter and dehair
= :	✓ the presence of litter and debris ✓ destruction of terrestrial vegetation
shelving	the presence of wrack line
vegetation matted down, bent, or absent	sediment sorting
	scour
✓ leaf litter disturbed or washed away✓ sediment deposition✓ water staining	multiple observed or predicted flow events
water staining	abrupt change in plant community
other (list):	
Water Quality:	
☐ Clear ☐ Slightly Turbid ☐ Turbid ☐ Very Tur	rbid Oily film High organic content
Other characteristics (pollutants, etc.) none	
Aquatic Organisms: List all species observed. This would include wa	aterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
none	
Riparian Vegetation: List species observed.	
Hackberry (Celtis laevigata), green ash (Fraxinus pennsylvanic	a) American elm (Ulmus americana), eastern noison ivy
(Toxicodendron radicans), and pecan (Carya illinoinensis)	, ranonoan onn (onnas amendana), eastern poison ivy
(1.57.35 a 51 a 161 a	
T&E Species/Suitable Habitat: List T&E species observed or which s	species the habitat is suitable for.

none

Stream Data Form #: Project Name:

CSJ: <u>0135-15-002</u>

Water Feature 215

US 380

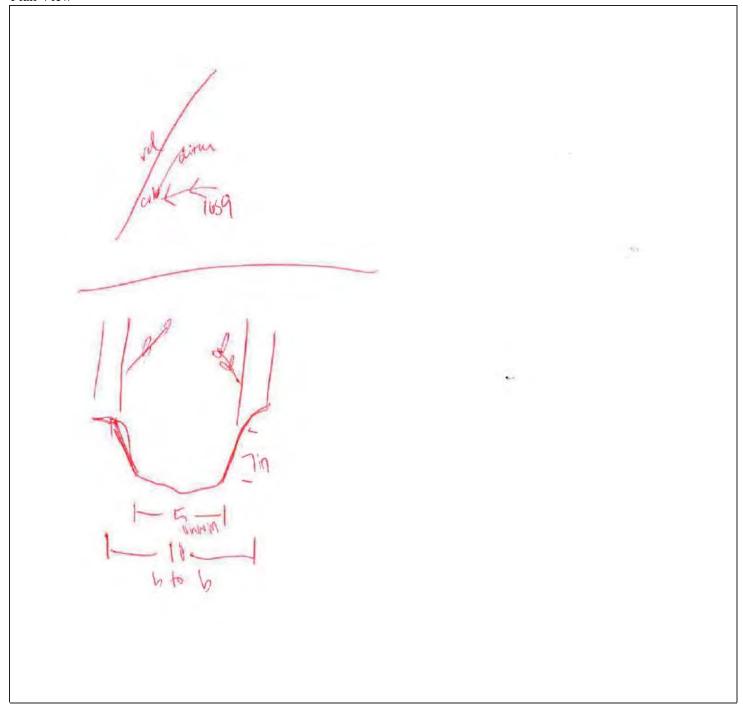
Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.

Plan View



	Stream Data Form #: Water Feature 218
	Project Name: US 380
	CSJ: 0135-15-002
Stream Data Form	
Surveyor(s): Wyatt Wolfenkoehler, Kelsea Hiebert	Date of Field Work: August 16, 2021
• ` ` '	
USGS Stream Name: Unnamed Tributary to the East Fork	County/State: Collin County, Texas
USGS Topo Quad Name: Anna	Stream Number: 218
Associated Wetland(s): Water Feature 219	Coordinates: 33.269617 -96.596378
Stream Type: Intermittent Characteristics:	Channelized
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	
Stream Flow Direction: West	
OHWM Width (ft): 12	OHWM Height (in): 38
Stream Bottom composition:	
	Other:
✓ Sands ✓ Bedrock ✓ Muck	
☐ Gravel ☐ Vegetation	
Aquatic Habitat: Indicate all types present within proposed ROW/pr	roject limits.
Sand bar Sand/Gravel beach/bar Gravel	riffles
Overhanging Deep pool/ hole/ Other:	
trees/shrubs	
Stream has the following characteristics:	
✓ Bed and banks	
OHWM (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):	
Water Quality:	
✓ Clear ☐ Slightly Turbid ☐ Turbid ☐ Very Turbid ☐ Ve	rbid Oily film High organic content
Other characteristics (pollutants, etc.)	
Aquatic Organisms: List all species observed. This would include wa	aterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
Invertebrates, small fish	
involtobratos, smail non	
Riparian Vegetation: List species observed.	
Eastern red cedar (Juniperus virginiana), cedar elm (Ulmus cra	
ivy (Toxicodendron radicans), and bermudagrass (Cynodon da	ictylon).
T&E Species/Suitable Habitat: List T&E species observed or which s	species the habitat is suitable for.

None

Stream Data Form #: Project Name:

CSJ: <u>0135-15-002</u>

Water Feature 218

US 380

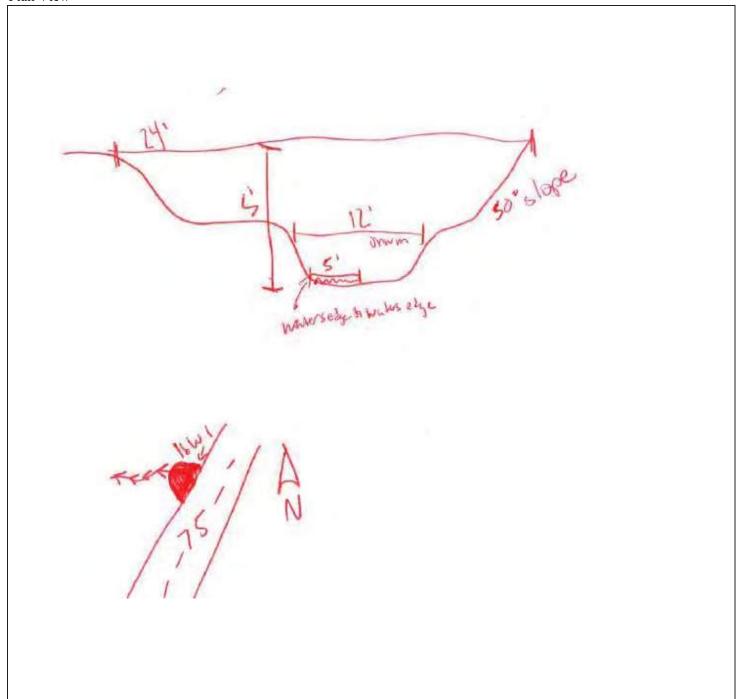
Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.

Plan View



	Stream Data Form #: Water Feature 224
	Project Name: US 380 CSJ: 0135-15-002
Stream Data Form	CSJ. 0133-13-002
Surveyor(s): Kelsea Hiebert, Mike Keenan, Ethan Eichler	Date of Field Work: August 25, 2020
USGS Stream Name: Unnamed Tributary to Honey Creek	County/State: Collin County, Texas
USGS Topo Quad Name: McKinney East	Stream Number: 224
Associated Wetland(s): Water Features 222, 223	Coordinates: 33.246536 -96.618290
<u></u>	Beaver influenced channel.
Stream Type: Ephemeral Characteristics:	
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	
Stream Flow Direction: East	
OHWM Width (ft): 2	OHWM Height (in): 8
Stream Bottom composition:	
	Other:
☐ Sands ☐ Bedrock ☐ Muck ☐ Gravel ☐ Vegetation	
Gravei Gravei Vegetation	
Aquatic Habitat: Indicate all types present within proposed ROW/pr	roject limits.
☐ Sand bar ☐ Sand/Gravel beach/bar ☐ Gravel	
Overhanging Deep pool/ hole/ I other: Beav	er influenced channel.
trees/shrubs channel	
Stream has the following characteristics:	
✓ Bed and banks	
OHWM (check all indicators that apply):	the massenes of litter and debais
clear, natural line impressed on the bank changes in the character of soil	the presence of litter and debris destruction of terrestrial vegetation
shelving	the presence of wrack line
	sediment sorting
 ✓ vegetation matted down, bent, or absent ☐ leaf litter disturbed or washed away ☐ sediment deposition ☐ water staining 	scour
sediment deposition	multiple observed or predicted flow events
	abrupt change in plant community
other (list):	
Water Quality:	
☐ Clear ☐ Slightly Turbid ☐ Turbid ☐ Very Tur	rbid Oily film High organic content
Other characteristics (pollutants, etc.) Dry	
<u> </u>	
Aquatic Organisms: List all species observed. This would include w	aterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
Beavers.	
Dinarian Wasstatian, List species absorbed	
Riparian Vegetation: List species observed. Green ash (Fraxinus pennsylvanica), sugarberry (Celtis laevigata), black locust (Gleditsia triacanthos), A	marican alm (I llmus amaricana), paisan iyu /Tayicadandran radicana), glassy priyat (I igustrum
lucidum), yaupon (llex vomitoria), cedar elm (Ulmus crassifolia), green brier (Smilax bona-nox).	monoan om (omido americana), poison ny (roxicodendron radicans), giossy privet (Ligustidin
TOFO ' /0 '4 11 H 1'4 4 1' / TOF ' 1 1 1 1 1 1 1 1	. 4 1 1 2 4 2 - 2 11 6
T&E Species/Suitable Habitat: List T&E species observed or which s	species the nabitat is suitable for.

None.

Stream Data Form #: Project Name:

Water Feature 224

CSJ: 0135-15-002

US 380

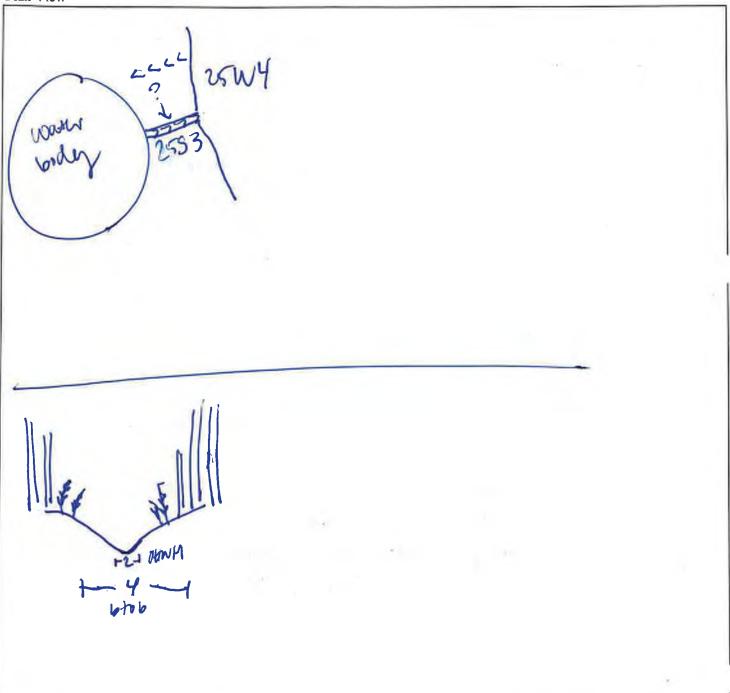
Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.

Plan View



	Stream Data Form #: Water Feature 232
	Project Name: US 380
	CSJ: 0135-15-002
Stream Data Form	
Surveyor(s): Kelsea Hiebert, Ethan Eichler	Date of Field Work: August 26, 2020
USGS Stream Name: Unnamed Tributary to the East Fork	County/State: Collin County, Texas
USGS Topo Quad Name: McKinney East	Stream Number: 232
Associated Wetland(s): None	Coordinates: <u>33.244119</u> -96.608037
Stream Type: Ephemeral Characteristics:	Slough draining into East Fork Trinity River.
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	
Stream Flow Direction: Southeast	
OHWM Width (ft): 6	OHWM Height (in): 3
Stream Bottom composition:	511 W 112 1131 gair (m.) v
	Other:
☐ Sands ☐ Bedrock ☐ Muck	
☐ Gravel ☐ Vegetation	
_	
Aquatic Habitat: Indicate all types present within proposed ROW/pr	roject limits.
☐ Sand bar ☐ Sand/Gravel beach/bar ☐ Gravel	
Overhanging Deep pool/ hole/ Other:	
trees/shrubs	_
Stream has the following characteristics:	
✓ Bed and banks	
OHWM (check all indicators that apply):	
	the presence of litter and debris
	destruction of terrestrial vegetation
shelving	the presence of wrack line
vegetation matted down, bent, or absent	sediment sorting
 ✓ vegetation matted down, bent, or absent ☐ leaf litter disturbed or washed away ☐ sediment deposition ☐ water staining 	scour
sediment deposition	multiple observed or predicted flow events
	abrupt change in plant community
other (list):	
W 4 0 - 1'4-	
Water Quality:	4:4
☐ Clear ☐ Slightly Turbid ☐ Turbid ☐ Very Tur ☐ Other characteristics (pollutants, etc.) Dry	rbid Oily film High organic content
Other characteristics (pollutants, etc.) Dry	
Aquatic Ongonisms, List all anguing absorbed. This would include w	stanform fish analysis trutton from invantalmentas etc
Aquatic Organisms: List all species observed. This would include w	ateriowi, fish, shakes, turties, frogs, invertebrates, etc.
None.	
Riparian Vegetation: List species observed.	
Sugarberry (Celtis laevigata), ash leaf maple (Acer negundo), blue mistflower (Conoclinium coelestinum) americana), osage-orange (Maclura pomifera), cedar elm (Ulmus crassifolia).), giant ragweed (Ambrosia trifida), poison ivy (Toxicodendron radicans), American elm (Ulmus
amonoana), osaye-vranye (maouna pomilera), oeudi elifi (Ullilus Gassiiulia).	
T&E Species/Suitable Habitat: List T&E species observed or which s	species the habitat is suitable for
*	species the habitat is surfable for.
None.	

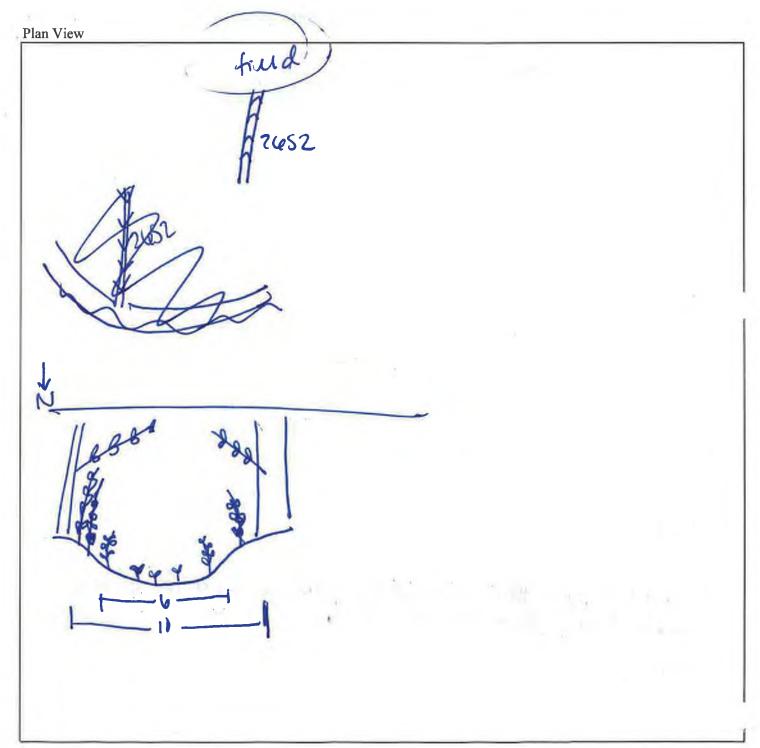
Project Name: CSJ: 0135-15-002 Water Feature 234
US 380

Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- · Approximate side slope; and,
- Width of stream from water edge to water edge.



	Stream Data Form #:	Water Feature 242
	Project Name:	US 380
	CSJ: 0135-15-002	
Stream Data Form		
Surveyor(s): Wyatt Wolfenkoehler, Kelsea Hiebert	Date of Field Work: Au	gust 16, 2021
USGS Stream Name: Powerhouse Creek		ollin County, Texas
USGS Topo Quad Name: McKinney East	Stream Number: 24	
	Coordinates: 33.219487	-96.600146
Associated Wetland(s): None	Coordinates: 33.219467	-90.000140
Stream Type: Perennial Characteristics:	Ob any alies d	
	Channelized	
Bank Stability (e.g. highly eroding, sloughing banks, etc.):		
Stream Flow Direction: East		
OHWM Width (ft): 7	OHWM Height (in): 60	
Stream Bottom composition:		
	Other:	
☑ Sands ☑ Bedrock ☐ Muck		
☑ Gravel ☐ Vegetation		
A STATE AND A STATE OF THE STAT		
Aquatic Habitat: Indicate all types present within proposed ROW/		
☐ Sand bar ☑ Sand/Gravel beach/bar ☑ Grave	l riffles	vegetation
Overhanging Deep pool/ hole/ Other:		
trees/shrubs channel		
C4		
Stream has the following characteristics:		
Bed and banks		
OHWM (check all indicators that apply):	□ 41 C1'44 1.1	1.1
clear, natural line impressed on the bank	the presence of litter and de	
changes in the character of soil	destruction of terrestrial ve	getation
shelving	the presence of wrack line	
vegetation matted down, bent, or absent	sediment sorting	
 ✓ vegetation matted down, bent, or absent ☐ leaf litter disturbed or washed away ✓ sediment deposition ☐ water staining 	scour	stad flavo avanta
sediment deposition	multiple observed or prediction abrupt change in plant com	
	abrupt change in plant com	mumty
other (list):		
Water Quality:		
Water Quarty. ☐ Clear ✓ Slightly Turbid ☐ Turbid ☐ Very To	urbid 🗌 Oily film 🔲 Hi	gh organic content
Other characteristics (pollutants, etc.)	arold [] Onymin [] In	gii organic content
Other characteristics (portutaints, etc.)		
Aquatic Organisms: List all species observed. This would include v	voterfowl fish snokes turtles fro	ag invertabrates etc
	vateriowi, fish, shakes, turties, fic	ogs, inverteorates, etc.
Bluegill, sunfish, and other small fish. Rattlesnake present.		
D' ' II		
Riparian Vegetation: List species observed.		
American elm (Ulmus americana), pecan (Carya illinoinensis)	, and ash leaf maple (Acer neg	gundo)
T&E Species/Suitable Habitat: List T&E species observed or which	species the habitat is suitable for	_
*	ep 22.25 me monut is summore for	<u>-</u>
none		

Stream Data Form #: Project Name:

CSJ: <u>0135-15-002</u>

Water Feature 242

US 380

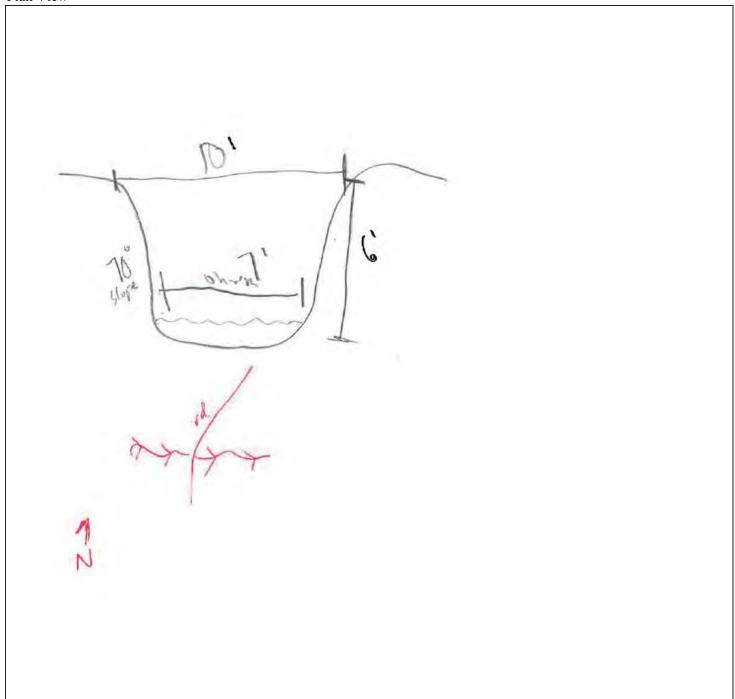
Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.

Plan View



	Vyater Feature 261
	Project Name: US 380
	CSJ: 0135-03-053 0135-15-002
Stream Data Form	
Surveyor(s): Kelsea Hiebert, Mike Keenan	Date of Field Work: November 11, 2020
USGS Stream Name: Unnamed Tributary to the East Fork	County/State: Collin County, Texas
USGS Topo Quad Name: McKinney East	Stream Number: 261
Associated Wetland(s): Water Feature 258	Coordinates: 33.205815 -96.600205
valer readile 250	00.000200
Stream Type: Perennial Characteristics:	Stagnant water flow
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	oughant water now
Stream Flow Direction: South East	
OHWM Width (ft): 10	OHWM Height (in): 48
Stream Bottom composition:	N.I.
	Other:
✓ Sands ☐ Bedrock ☐ Muck	
✓ Gravel	
A quatic Habitata Indicate all transparagent within managed DOW/m	unicat limita
Aquatic Habitat: Indicate all types present within proposed ROW/p. Sand bar Sand/Gravel beach/bar Gravel	
	riffles Aquatic vegetation
✓ Overhanging trees/shrubs ✓ Deep pool/ hole/ channel Other:	
trees/sin tios channer	
Stream has the following characteristics:	
Bed and banks	
OHWM (check all indicators that apply):	
_ `	the presence of litter and debris
	destruction of terrestrial vegetation
	the presence of wrack line
vegetation matted down, bent, or absent	sediment sorting
leaf litter disturbed or washed away	Scour
	multiple observed or predicted flow events
sediment deposition water staining	abrupt change in plant community
other (list):	acrapt change in plant community
other (hist).	
Water Quality:	
☐ Clear ☐ Slightly Turbid ☐ Turbid ☐ Very Tur	rbid Oily film High organic content
Other characteristics (pollutants, etc.)	I Ingli organic content
Aquatic Organisms: List all species observed. This would include w	aterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
Frogs, snakes, birds, beavers, fish	willowing india similary with the graph in the control of the cont
riogs, snakes, bilds, beavers, listi	
D' ' W 44' I'4 ' 1 - 1	
Riparian Vegetation: List species observed.	
great ragweed (Ambrosia trifida), hackberry (Celtis laevigata),	eastern poison ivy (Toxicodendron radicans), and American
elm (Ulmus americana).	
om (omac amonouna).	
T&E Species/Suitable Habitat: List T&E species observed or which s	species the habitat is suitable for.
•	person me impirm to butmote toti
None	

Water Feature 261

Project Name:

US 380

CSJ: 0135-03-053 0135-15-002

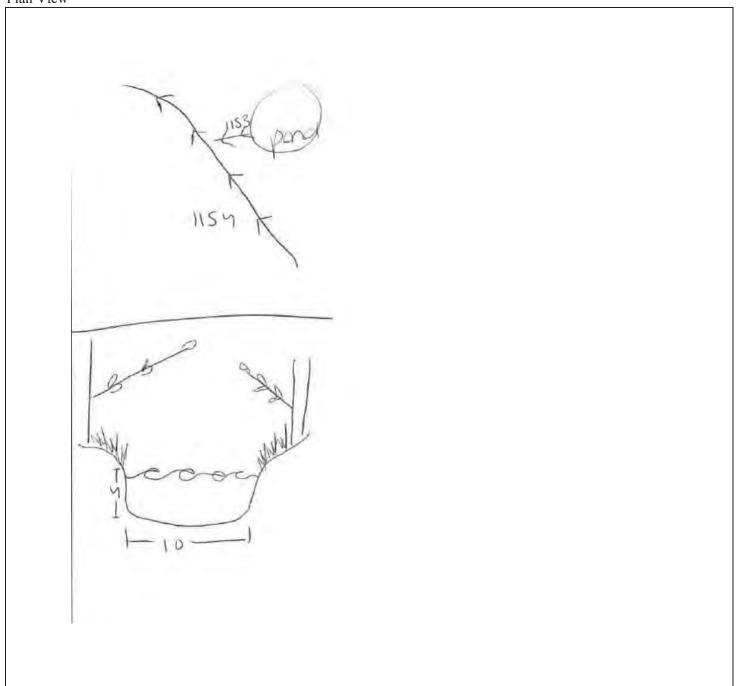
Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.

Plan View



	Stream Data Form #: Water Feature 262
	Project Name: US 380
	CSJ: 0135-03-053 0135-15-002
Stream Data Form	
Surveyor(s): Kelsea Hiebert, Mike Keenan	Date of Field Work: November 11, 2020
USGS Stream Name: Unnamed Tributary to the East Fork	County/State: Collin County, Texas
USGS Topo Quad Name: McKinney East	Stream Number: 262
Associated Wetland(s): Water Feature 258	Coordinates: 33.205819 -96.600037
Stream Type: Perennial Characteristics: Bank Stability (e.g. highly eroding, sloughing banks, etc.):	Potentially excavated to connect pond to adjacent stream.
Stream Flow Direction: South	
OHWM Width (ft): 8	OHWM Height (in): 36
Stream Bottom composition:	
	ther: Bricks and other debris
✓ Sands ☐ Bedrock ☐ Muck ☐ Gravel ☐ Vegetation	
Graver Constitution	
Aquatic Habitat: Indicate all types present within proposed ROW/pr Sand bar Sand/Gravel beach/bar Gravel proposed ROW/pr Sand bar Deep pool/ hole/ channel Other:	
 □ vegetation matted down, bent, or absent □ leaf litter disturbed or washed away □ sediment deposition □ water staining □ other (list): 	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
Water Quality: ☐ Clear ☐ Slightly Turbid ☐ Turbid ☐ Very Tur ☐ Other characteristics (pollutants, etc.)	bid Oily film High organic content
Aquatic Organisms: List all species observed. This would include was Beavers, fish, ducks, frogs, and snakes.	sterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
Riparian Vegetation: List species observed.	
marsh millet (Zizaniopsis miliacea), eastern poison ivy (Toxicoo	lendron radicans), ash leaf manle (Acer negundo)
The state of the s	in in its individual in its in

marsh millet (Zizaniopsis miliacea), eastern poison ivy (Toxicodendron radicans), ash leaf maple (Acer negundo), canadian goldenrod (Solidago canadensis), cedar elm (Ulmus crassifolia), green ash (Fraxinus pennsylvanica), and american elm (Ulmus americana).

<u>T&E Species/Suitable Habitat: List T&E species observed or which species the habitat is suitable for.</u>

None

Water Feature 262

Project Name:

US 380

CSJ: 0135-03-053 0135-15-002

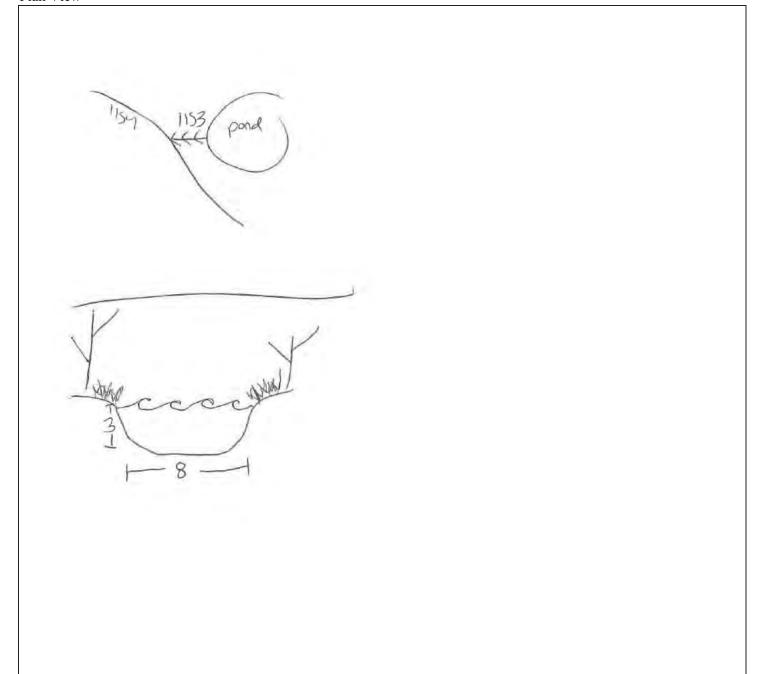
Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.

Plan View



	Stream Data Form #: Water Feature 269 Project Name: US 380
	CSJ: <u>0135-03-053 0135-15-002</u>
Stream Data Form Surveyor(s): Wyatt Wolfenkoehler, Kelsea Hiebert USGS Stream Name: Unnamed Tributary to the East Fork Tours USGS Topo Quad Name: McKinney East Associated Wetland(s): None	Date of Field Work: August 16, 2021 County/State: Collin County, Texas Stream Number: 269 Coordinates: 33.204744 -96.598906
Stream Type: Intermittent Characteristics: Bank Stability (e.g. highly eroding, sloughing banks, etc.):	Artificially Stabilized Bank
Stream Flow Direction: East OHWM Width (ft): 6 Stream Bottom composition:	OHWM Height (in): 17 Other:
✓ Gravel ✓ Vegetation Aquatic Habitat: Indicate all types present within proposed ROW/p ✓ Sand bar ✓ Sand/Gravel beach/bar ✓ Gravel ✓ Overhanging trees/shrubs ✓ Deep pool/ hole/ channel ✓ Other:	
	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
Water Quality: ☐ Clear ☐ Slightly Turbid ☐ Turbid ☐ Very Tu ☐ Other characteristics (pollutants, etc.)	rbid
Aquatic Organisms: List all species observed. This would include we Small fish, Largemouth bass fry.	aterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
Riparian Vegetation: List species observed.	
ohnsongrass (Sorghum halapense), great ragweed (Ambrosia	
negundo), chickasaw plum (Prunus angustifolia), bull tongue a	rrownead (Sadiffaria lancifolia), and floating primrose willow

negundo), chickasaw plum (Prunus angustifolia), bull tongue arrowhead (Sagittaria lancifolia), and floating primrose willow (Ludwigia peploides).

<u>T&E Species/Suitable Habitat: List T&E species observed or which species the habitat is suitable for.</u>

None

Water Feature 269

Project Name:

US 380

CSJ: <u>0135-03-053 0135-15-002</u>

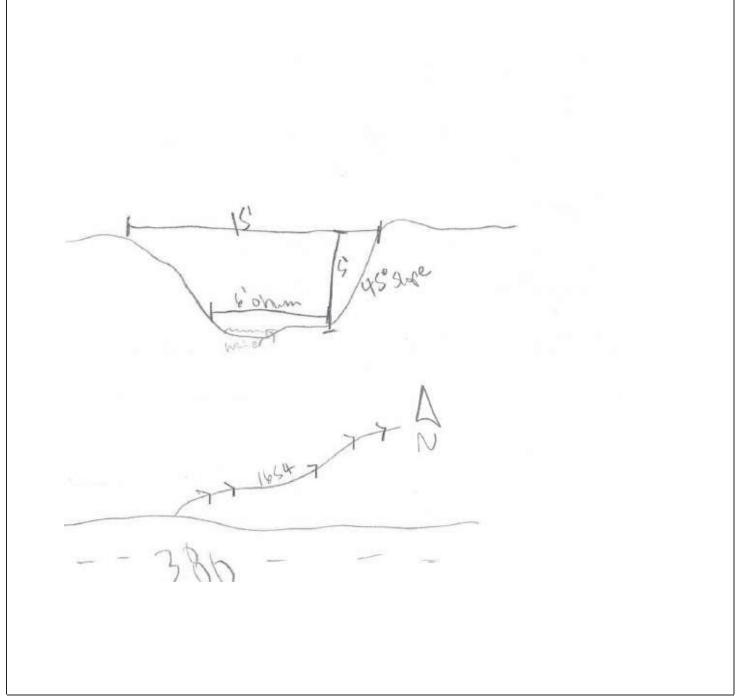
Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.





	Stream Data Form #: Vvater Feature 2/1
	Project Name: US 380
	CSJ: 0135-03-053 0135-15-002
Stream Data Form	
Surveyor(s): Mike Keenan and Ethan Eichler	Date of Field Work: September 24, 2020
USGS Stream Name: Unnamed Tributary to the East Fork	County/State: Collin County, Texas
USGS Topo Quad Name: McKinney East	Stream Number: 271
Associated Wetland(s): None	Coordinates: 33.204734 -96.597356
☐ Sands ☐ Bedrock ☐ Muck ☐ Gravel ☐ Vegetation Aquatic Habitat: Indicate all types present within proposed ROW/pre	
Sand bar Sand/Gravel beach/bar Gravel r Overhanging trees/shrubs Deep pool/ hole/ Other:	riffles
Stream has the following characteristics: Bed and banks OHWM (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):	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
Water Quality: ✓ Clear ☐ Slightly Turbid ☐ Turbid ☐ Very Turbid ☐ Other characteristics (pollutants, etc.)	bid Oily film High organic content
Aquatic Organisms: List all species observed. This would include wa None observed	tterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
Riparian Vegetation: List species observed.	
	rrow loof cottail /Typha angustifelia) hallaan vina
Black willow (Salix nigra), cottonwood (Populous deltoides), nar (Cardiospermum halicacabum), great ragweed (Ambrosia trifida qiqantea), greenbriear(Smilax bona-nox).	

T&E Species/Suitable Habitat: List T&E species observed or which species the habitat is suitable for.

Water Feature 271

Project Name:

US 380

CSJ: 0135-03-053 0135-15-002

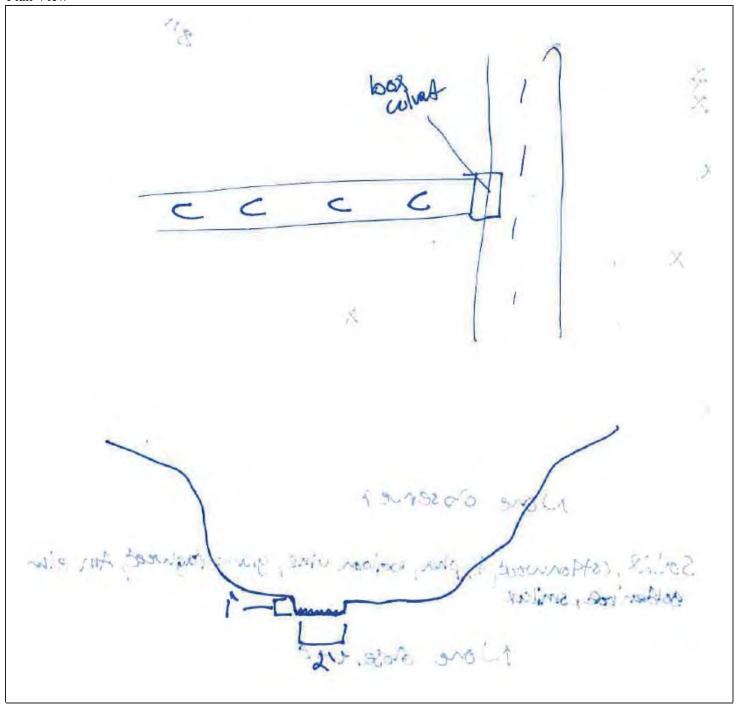
Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.

Plan View



	Stream Data Form #: Water Feature 273
	Project Name: US 380
	CSJ: 0135-03-053 0135-15-002
Stream Data Form	
Surveyor(s): Kelsea Hiebert Ethan Eichler and Mike Keenan	Date of Field Work: October 14, 2020
USGS Stream Name: East Fork Trinity River	County/State: Collin County, Texas
USGS Topo Quad Name: McKinney East	Stream Number: 273
Associated Wetland(s): None	Coordinates: 33.203798 -96.595878
Associated wettaind(s). NOTIE	20.203790 -90.393070
Stream Type: Perennial Characteristics:	Incised with water
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	Roots from trees along banks proving stabilization. Inundated outside of
Stream Flow Direction: South	tree line.
OHWM Width (ft): 50	OHWM Height (in): 48
Stream Bottom composition:	
	Other:
Sands Bedrock Muck	
✓ Gravel	
Aquatic Habitat: Indicate all types present within proposed ROW/pr	
☐ Sand bar ☐ Sand/Gravel beach/bar ☐ Gravel	riffles Aquatic vegetation
Overhanging Deep pool/ hole/ trace/chrybs	
trees/shrubs channel channel	
Stream has the following characteristics:	
✓ Bed and banks	
OHWM (check all indicators that apply):	-
—	the presence of litter and debris
	destruction of terrestrial vegetation
shelving	the presence of wrack line
✓ vegetation matted down, bent, or absent✓ leaf litter disturbed or washed away	sediment sorting
leaf litter disturbed or washed away	scour
	multiple observed or predicted flow events
water staining	abrupt change in plant community
other (list):	
Water Quality:	
Water Quarty. ☐ Clear ✓ Slightly Turbid ☐ Turbid ☐ Very Tur	rbid Oily film High organic content
Other characteristics (pollutants, etc.)	old
Other characteristics (pondiants, etc.)	
Aquatic Organisms: List all species observed. This would include wa	starfowl fish engkes turtles from invertebrates etc
	actiowi, fish, shakes, turies, flogs, invertebrates, etc.
Snakes, frogs, bugs, otters	
The state of the s	
Riparian Vegetation: List species observed.	
American elm, nodding wild rye, osage-orange, sugarberry, black locust, fringed green brier, johnsongras	ss, cedar elm, giant ragweed.
T&E Species/Suitable Habitat: List T&E species observed or which s	species the habitat is suitable for.
None.	<u> </u>
I TOTIO.	

Water Feature 273

Project Name:

US 380

CSJ: 0135-03-053 0135-15-002

Stream Data Form (continued)

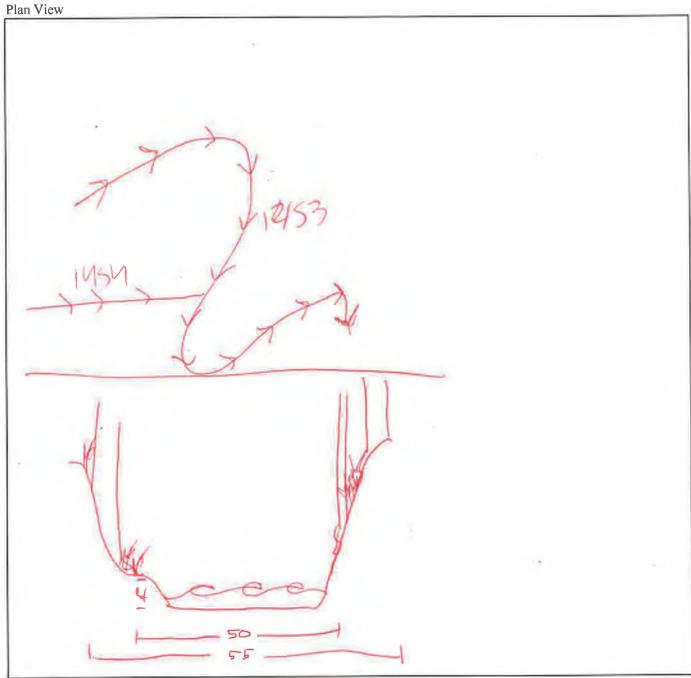
Please provide a plan and section view sketch of the stream channel.

Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.





	Stream Data Form #: Water Feature 283
	Project Name: US 380
	CSJ: 0135-15-002 0135-03-053
Stream Data Form	
Surveyor(s): Ethan Eichler and Mike Keenan	Date of Field Work: September 10, 2020
USGS Stream Name: Unnamed Tributary to the East Fork	
USGS Topo Quad Name: McKinney East	Stream Number: 283
Associated Wetland(s): Water Features 279*, 280*, 284*	Coordinates: <u>33.199619</u> -96.583969
Stream Type: Intermittent Characteristics:	Overhanding veg and roots along banks.
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	stable
Stream Flow Direction: Southeast	-
	OHWM H-:-14 (:-). 26
OHWM Width (ft): 15	OHWM Height (in): 36
Stream Bottom composition: Silts Cobbles Concrete Concre)than
	Other:
✓ Sands ☐ Bedrock ☐ Muck	
☐ Gravel ☐ Vegetation	
Aquatic Habitat: Indicate all types present within proposed ROW/pr	raigat limits
Sand bar Sand/Gravel beach/bar Gravel	
Overhanging — Deep pool/hole/ —	Aquatic vegetation
trees/shrubs	
ti cos/sin dos Chamier	
Stream has the following characteristics:	
Bed and banks	
OHWM (check all indicators that apply):	
	the presence of litter and debris
	destruction of terrestrial vegetation
shelving	the presence of wrack line
	sediment sorting
leaf litter disturbed or washed away	scour
	multiple observed or predicted flow events
water staining	abrupt change in plant community
other (list):	acrapt change in plant community
other (nst).	
Water Quality:	
☐ Clear ☐ Slightly Turbid ☐ Turbid ☐ Very Tur	rbid Oily film High organic content
Other characteristics (pollutants, etc.)	_ ingn organic content
Aquatic Organisms: List all species observed. This would include wa	aterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
None	
None	
Riparian Vegetation: List species observed.	
Bur oak, green ash, osage-orange, poison ivy, cedar elm	
Dui Jak, green asii, osage-orange, poison iyy, ceual elin	
T&E Species/Suitable Habitat: List T&E species observed or which s	species the habitat is suitable for.

None.

Water Feature 283

Project Name:

US 380

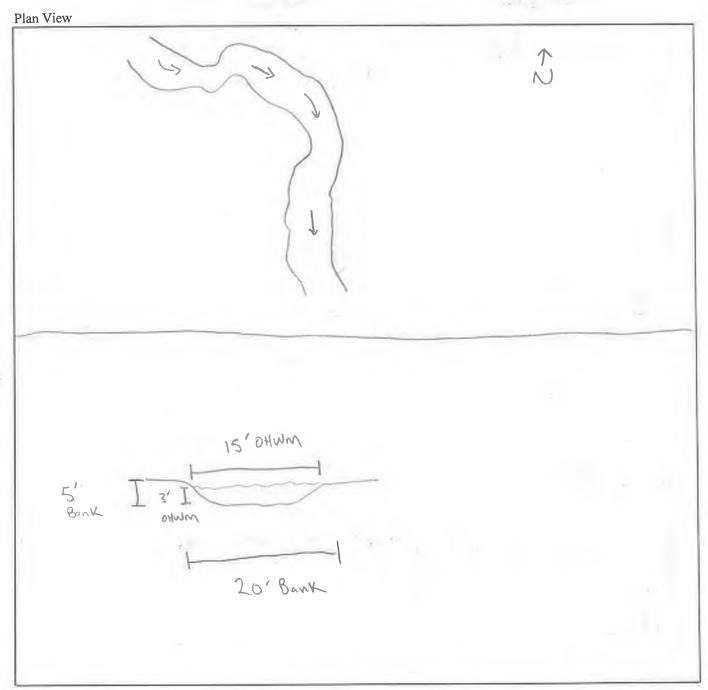
CSJ: 0135-15-002 0135-03-053

Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.



	Stream Data Form #: Water Feature 285
	Project Name: US 380
	CSJ: 0135-15-002 0135-03-053
Stream Data Form	
Surveyor(s): Ethan Eichler and Mike Keenan	Date of Field Work: September 10, 2020
USGS Stream Name: Unnamed Tributary to the East Fork	County/State: Collin County, Texas
USGS Topo Quad Name: McKinney East	Stream Number: 285
Associated Wetland(s): None	Coordinates: <u>33.199630</u> -96.583054
Stream Type: Ephemeral Characteristics:	Largely within the right-of-way. Water flow due to precent precipitation.
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	Heavily sedimented within stream.
Stream Flow Direction: South	
OHWM Width (ft): 5	OHWM Height (in): 18
Stream Bottom composition:	
	Other:
☑ Sands ☐ Bedrock ☐ Muck	
Gravel Vegetation	
_ _	
Aquatic Habitat: Indicate all types present within proposed ROW/pr	roject limits.
☐ Sand bar ☐ Sand/Gravel beach/bar ☐ Gravel:	
Overhanging Deep pool/ hole/ Other:	
trees/shrubs	_
Stream has the following characteristics: Bed and banks	
✓ Bed and banks OHWM (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
	sediment sorting
leaf litter disturbed or washed away	scour
	multiple observed or predicted flow events
water staining	abrupt change in plant community
other (list):	_ werefreeninge in frame community
().	
Water Quality:	
☐ Clear ☑ Slightly Turbid ☐ Turbid ☐ Very Tur	bid Oily film High organic content
Other characteristics (pollutants, etc.)	
_	
Aquatic Organisms: List all species observed. This would include wa	aterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
None.	······································
Notic.	
Dinarian Vagatation List anguing absorbed	
Riparian Vegetation: List species observed.	Associates the (Ultrus associates)
Giant ragweed (Ambrosia trifida), osage-orange (Maclura pomifera), green ash (Fraxinus pennsylvanica)	, American eim (Ulmus americana)
T&E Species/Suitable Habitat: List T&E species observed or which s	species the habitat is suitable for.
None.	•
140110.	

Water Feature 285

Project Name:

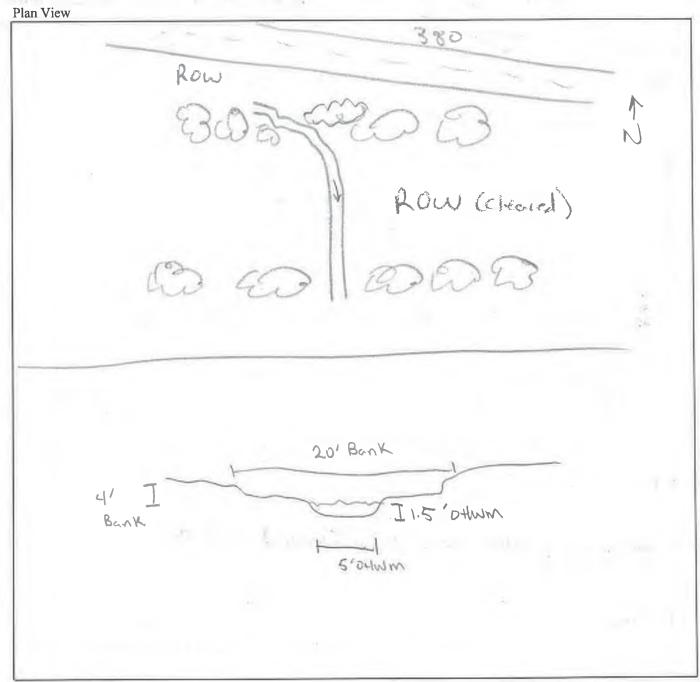
US 380 CSJ: 0135-15-002 0135-03-053

Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.



	Stream Data Form #: Water Feature 287
	Project Name: US 380
	CSJ: 0135-15-002
Stream Data Form	
Surveyor(s): Kelsea Hiebert, Ethan Eichler	Date of Field Work: August 26, 2020
USGS Stream Name: Unnamed Tributary to the East Fork	County/State: Collin County, Texas
USGS Topo Quad Name: McKinney East	Stream Number: 287
Associated Wetland(s): Water Features 286, 289, 288, 290	Coordinates: 33.241048 -96.600562
· · · · · · · · · · · · · · · · · · ·	
Stream Type: Intermittent Characteristics:	
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	
Stream Flow Direction: South	
OHWM Width (ft): 5	OHWM Height (in): 24
Stream Bottom composition:	= :
	ther:
☐ Sands ☐ Bedrock ☐ Muck	
Gravel Vegetation	
_	
Aquatic Habitat: Indicate all types present within proposed ROW/pro	
☐ Sand bar ☐ Sand/Gravel beach/bar ☐ Gravel r	riffles Aquatic vegetation
Overhanging Deep pool/ hole/ Other:	
trees/shrubs channel	
C4	
Stream has the following characteristics: Bed and banks	
✓ Bed and banks OHWM (check all indicators that apply):	
clear, natural line impressed on the bank	the presence of litter and debris
	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
_	multiple observed or predicted flow events
sediment deposition water staining	abrupt change in plant community
other (list):	
Water Quality:	
☐ Clear ☑ Slightly Turbid ☐ Turbid ☐ Very Turbid	bid ☐ Oily film ☐ High organic content
Other characteristics (pollutants, etc.)	
Aquatic Organisms: List all species observed. This would include wa	tourforvil field analysis trutles faces inventalmentes ato
*	neriowi, fish, shakes, turties, frogs, invertebrates, etc.
Frogs, fish	
Dinasian Wassettian List annulus at the state of the stat	
Riparian Vegetation: List species observed.	(Markov and San Anderson and An
rice cutgrass (Leersia oryzoides), American elm (Ulmus americana), sugarberry (Celtis laevigata), osage-	prange (macura pomitera), and giant ragweed (Ambrosia trifida).
T&E Species/Suitable Habitat: List T&E species observed or which s	pecies the habitat is suitable for.
None.	

Water Feature 287

Project Name: CSJ: 0135-15-002

US 380

Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

7662

- Approximate side slope; and,
- Width of stream from water edge to water edge.

Plan View

H 8 ----

	Stream Data Form #: Water Feature 291
	Project Name: US 380
	CSJ: 0135-15-002
Stream Data Form	
	Date of Field Work: August 27, 2020
· · · · · · · · · · · · · · · · · · ·	
USGS Stream Name: Unnamed Tributary to the East Fork	County/State: Collin County, Texas
USGS Topo Quad Name: McKinney East	Stream Number: 291
Associated Wetland(s): None	Coordinates: <u>33.239533</u> -96.597631
Stream Type: Perennial Characteristics:	Hydrology impacted by beaver dams.
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	vegetated banks
Stream Flow Direction: South	
OHWM Width (ft): 15	OHWM Height (in): 30
Stream Bottom composition:	on with neight (iii).
_	Other:
Aquatic Habitat: Indicate all types present within proposed ROW/pr	_
☐ Sand bar ☐ Sand/Gravel beach/bar ☐ Gravel	riffles Aquatic vegetation
Overhanging Deep pool/ hole/ Other:	
trees/shrubs channel	
 □ changes in the character of soil □ shelving ☑ vegetation matted down, bent, or absent ☑ leaf litter disturbed or washed away 	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
Water Quality: ☐ Clear ☑ Slightly Turbid ☐ Turbid ☐ Very Turbit ☐ Other characteristics (pollutants, etc.)	rbid Oily film High organic content
A4:- O:	
Aquatic Organisms: List all species observed. This would include w	ateriowi, fish, shakes, turties, frogs, invertebrates, etc.
Frogs, snakes, insects	
Riparian Vegetation: List species observed. rice cutgrass (Leersia oryzoides), green ash (Fraxinus pennsylvanica), giant ragweed (Ambrosia trifida), black willow (Salix nigra), swamp smartweed (Persicaria hydropiperoides), and love-in-a-puff (Cardiospe	
T&E Species/Suitable Habitat: List T&E species observed or which s	species the habitat is suitable for.

None.

CSJ: 0135-15-002

Water Feature 291

Project Name:

US 380

Stream Data Form (continued)
Please provide a plan and section view sketch of the stream channel.

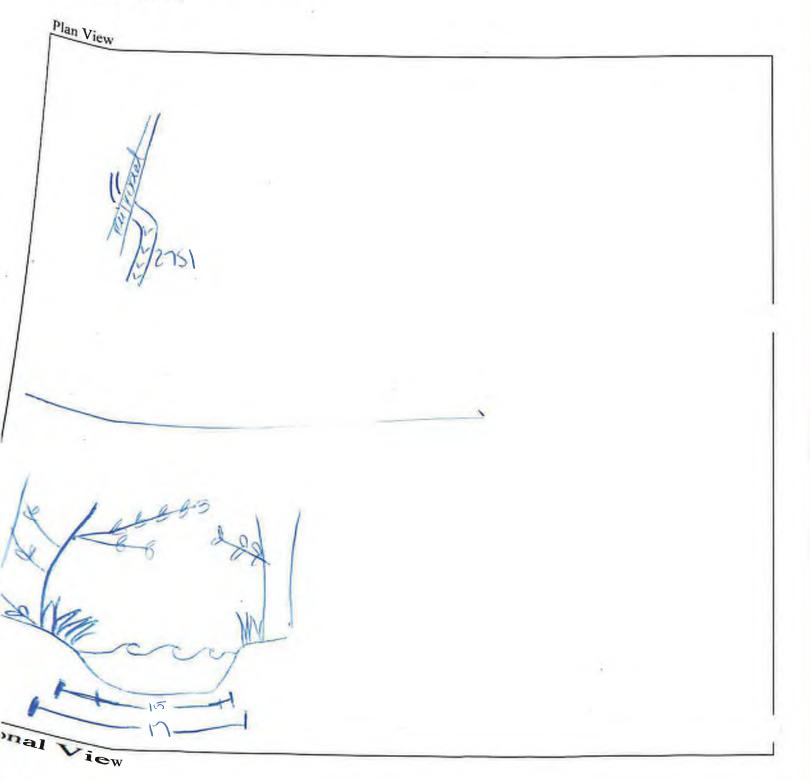
Directional arrow;

Width of channel from top of bank to top of bank;

Depth of channel,

Approximate side slope; and,

Width of stream from water edge to water edge.



	Stream Data Form #: Water Feature 293
	Project Name: US 380
	CSJ: 0135-15-002
Stream Data Form	
Surveyor(s): Kelsea Hiebert, Mike Keenan, Kathryn Burton	Date of Field Work: August 12, 2021
USGS Stream Name: Clemmons Creek	County/State: Collin County, Texas
USGS Topo Quad Name: McKinney East	Stream Number: 293
Associated Wetland(s): None	Coordinates: 33.239076 -96.595716
Stream Type: Intermittent Characteristics:	8.6.
Stream Type: Intermittent Characteristics: Bank Stability (e.g. highly eroding, sloughing banks, etc.):	Drift deposits. Hydrology altered due to human manipulation upstream.
	Deep defined banks
Stream Flow Direction: Southeast OHWM Width (ft): 12	OHWM Height (in): 24
Stream Bottom composition:	<u> </u>
	Other:
✓ Sands ☐ Bedrock ☐ Muck	
☐ Gravel ☐ Vegetation	
Aquatic Habitat: Indicate all types present within proposed ROW/p	project limits
Sand bar Sand/Gravel beach/bar Gravel	
— Overhanging — Deep pool/ hole/	_ 1 0
trees/shrubs	
Stream has the following characteristics: Bed and banks OHWM (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):	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
Water Quality: ☐ Clear ☐ Slightly Turbid ☐ Turbid ☐ Very Turbid ☐ Other characteristics (pollutants, etc.) no surface water, soil	
Aquatic Organisms: List all species observed. This would include we Frogs, insects, and snakes.	vaterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
Riparian Vegetation: List species observed.	
apartin - apartin sist species sossified	

Ash leaf maple (Acer negundo), black willow (Salix nigra), American elm (Ulmus americana), swamp smartweed (Persicaria hydropiperoides), green ash (Fraxinus pennsylvanica), cedar elm (Ulmus crassifolia), oak species (Quercus sp.), pecan (Carya illinoinensis), eastern poison ivy (Toxicodendron radicans), and chinese privet (Ligustrum inense)

T&E Species/Suitable Habitat: List T&E species observed or which species the habitat is suitable for.

None

Stream Data Form #: Project Name:

CSJ: <u>0135-15-002</u>

Water Feature 293

US 380

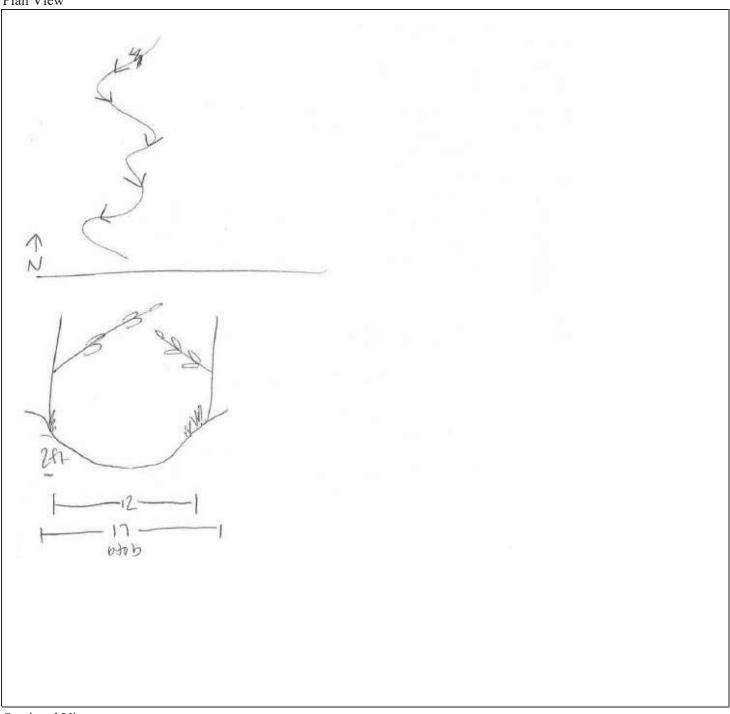
Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.

Plan View



	Stream Data Form #: Water Feature 304
	Project Name: US 380
	CSJ: 0135-15-002
Stream Data Form	
Surveyor(s): Kelsea Hiebert, Mike Keenan, Kathryn Burton	Date of Field Work: August 12, 2021
• • •	County/State: Collin County, Texas
USGS Stream Name: Unnamed Tributary to the East Fork USGS Topo Quad Name: McKinney East	Stream Number: 304
Associated Wetland(s): Water Feature 300*	Coordinates: 33.235521 -96.587871
Associated wetiand(s). Water Feature 300"	-90.367671
Stream Type: Ephemeral Characteristics:	Receives flow from pond and ditch.
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	Neceives now from point and ditori.
Stream Flow Direction: South	0.7777 (.Y. 1.1. (1.) 40
OHWM Width (ft): 5	OHWM Height (in): 18
Stream Bottom composition:	2.1
	Other:
☐ Sands ☐ Bedrock ☐ Muck	
✓ Gravel ✓ Vegetation	
Aquatic Habitat: Indicate all types present within proposed ROW/p.	roject limite
Sand bar Sand/Gravel beach/bar ✓ Gravel	
Overhanging Deen nool/ hole/	Aquatic vegetation
trees/shrubs channel Other:	
vices, sin des	
Stream has the following characteristics:	
Bed and banks	
OHWM (check all indicators that apply):	
clear, natural line impressed on the bank	the presence of litter and debris
_	destruction of terrestrial vegetation
	✓ the presence of wrack line
vegetation matted down, bent, or absent	sediment sorting
leaf litter disturbed or washed away	scour
☐ leaf litter disturbed or washed away ☐ sediment deposition ☐ water staining	multiple observed or predicted flow events
	abrupt change in plant community
other (list):	
W. O. P.	
Water Quality:	
Clear Slightly Turbid Turbid Very Tu	rbid Oily film High organic content
Other characteristics (pollutants, etc.) none	
Aquatic Organisms: List all species observed. This would include w	starfowl fish snokes turtles from invertebrates ato
*	ateriowi, fish, shakes, turnes, frogs, filverteorates, etc.
None	
D' ' 77 (4' T' 1 1 1	
Riparian Vegetation: List species observed.	
common persimmon (Diospyros virginiana), american elm (Uln	
(Celtis laevigata), chinkapin oak (Quercus muehlenbergii), and	osage orange (Maclura pomifera)
T&E Species/Suitable Habitat: List T&E species observed or which	species the habitat is suitable for.

none

Stream Data Form #: Project Name:

CSJ: <u>0135-</u>15-002

Water Feature 304

US 380

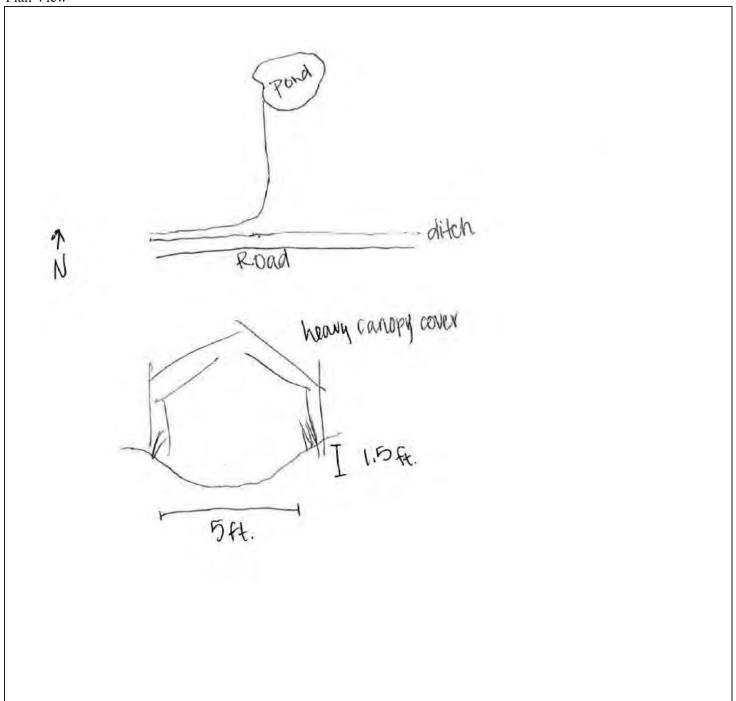
Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.

Plan View



	Stream Data Form #: Water Feature 322
	Project Name: US 380
	CSJ: 0135-15-002
Stream Data Form	
Surveyor(s): Kelsea D. Hiebert and Ethan Eichler	Date of Field Work: September 14, 2020
USGS Stream Name: Unnamed Tributary to the East Fork	County/State: Collin County, Texas
USGS Topo Quad Name: McKinney East	Stream Number: 322
Associated Wetland(s): None	Coordinates: 33.212504 -96.583098
	Stream becomes less incised toward the east reach.
Stream Type: Intermittent Characteristics:	
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	High erosion along banks
Stream Flow Direction: West	
OHWM Width (ft): 8	OHWM Height (in): 36
Stream Bottom composition:	
	Other:
☐ Sands ☐ Bedrock ☑ Muck	
☐ Gravel ☐ Vegetation	
Aquatic Habitat: Indicate all types present within proposed ROW/p	roject limits
Sand bar Sand/Gravel beach/bar Gravel	
Overhanging — Deen nool/hole/ —	
trees/shrubs Deep poor note/ Other:	
Stream has the following characteristics:	
✓ Bed and banks	
OHWM (check all indicators that apply):	D 4 61% 111.
clear, natural line impressed on the bank	the presence of litter and debris
changes in the character of soil shelving	destruction of terrestrial vegetation the presence of wrack line
vegetation matted down, bent, or absent	sediment sorting
leaf litter disturbed or washed away	scour
	multiple observed or predicted flow events
water staining	abrupt change in plant community
other (list):	
Water Quality:	
☐ Clear ☑ Slightly Turbid ☐ Turbid ☐ Very Tu	rbid Oily film High organic content
Other characteristics (pollutants, etc.)	
quatic Organisms: List all species observed. This would include w	ateriowl, fish, snakes, turtles, frogs, invertebrates, etc.
nsects	

Riparian Vegetation: List species observed.

Yaupon (llex vomitoria), Indian wood-oats (Chasmanthium latifolium), cedar elm (Ulmus crassifolia), American elm (Ulmus americana), pecan (Carya illinoinensis), southern catalpa (Catalpa bignonioides), poison ivy (Toxicodendron radicans), osage-orange (Maclura pomifera), eastern red cedar (Juniperus virginiana), sugarberry (Celtis laevigata), honey locust (Gleditsia triacanthos), fringed green brier (Smilax bona-nox), sawtooth oak (Quercus acutissima), rough cockleburr (Xanthium strumarium), hercules club (Zanthoxylum clava-herculis), curley dock (Rumex crispus), bermudagrass (Cynodon dactylon), and perennial ragweed (Ambrosia psilostachya).

<u>T&E Species/Suitable Habitat</u>: <u>List T&E species observed or which species the habitat is suitable for.</u> None.

CSJ: _0135-15-002

Water Feature 322

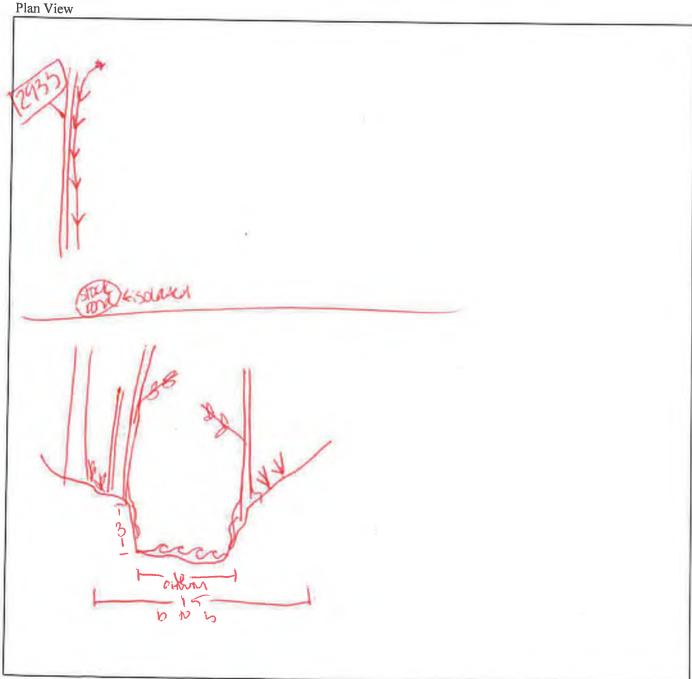
Project Name:

US 380

Stream Data Form (continued)
Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.



	Stream Data Form #: Water Feature 335
	Project Name: US 380
	CSJ: 0135-15-002 0135-03-053
Stream Data Form	
Surveyor(s): Kelsea D. Hiebert and Ethan Eichler	Date of Field Work: September 14, 2020
USGS Stream Name: Unnamed Tributary to the East Fork	County/State: Collin County, Texas Stream Number: 335
USGS Topo Quad Name: McKinney East	
Associated Wetland(s): 333, 334, 276*	Coordinates: <u>33.204588</u> -96.586570
Stream Type: Intermittent Characteristics:	
	0.17
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	Stabilized by emergent and forested wetland vegetation.
Stream Flow Direction: Southeast	
OHWM Width (ft): 1	OHWM Height (in): 6
Stream Bottom composition:	
	Other:
☐ Sands ☐ Bedrock ☐ Muck	
☐ Gravel ☐ Vegetation	
Aquatic Habitat: Indicate all types present within proposed ROW/pr	
☐ Sand bar ☐ Sand/Gravel beach/bar ☐ Gravel	riffles Aquatic vegetation
Overhanging Deep pool/ hole/ Other:	
trees/shrubs channel	
Stream has the following characteristics:	
Bed and banks	
OHWM (check all indicators that apply):	- 1 111 1
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
	multiple observed or predicted flow events
water staining	abrupt change in plant community
other (list):	
Water Ovality	
Water Quality:	which O Oily films I High amounts contant
✓ Clear ☐ Slightly Turbid ☐ Turbid ☐ Very Turbid ☐ Other characteristics (pollutants, etc.)	rbid Oily film High organic content
Other characteristics (pollutants, etc.)	
A quatic Ouseniames, List all amosine absorbed. This would include w	atamfarril fich amalras trimtles funas immentalmentas ata
Aquatic Organisms: List all species observed. This would include w	ateriowi, fish, shakes, turnes, frogs, invertebrates, etc.
Snakes, insects	
Riparian Vegetation: List species observed.	
Annual marsh elder (Iva annua)	
T&E Species/Suitable Habitat: List T&E species observed or which s	energies the habitat is suitable for
*	species the habital is suitable for.
None.	

Water Feature 335

US 380

Project Name:

CSJ: __0135-15-002 0135-03-053

Stream Data Form (continued)
Please provide a plan and section view sketch of the stream channel.

Sketch should include:

Width of channel from top of bank to top of bank;

Depth of channel,

Approximate side slope; and,

Width of stream from water edge to water edge.

Plan View ctional View

	Stream Data Form #: vvater Feature 337
	Project Name: US 380
	CSJ: 0135-15-002 0135-03-053
Stream Data Form	
Surveyor(s): Kelsea D. Hiebert, Mike Keenan, Ethan Eichler	Date of Field Work: October 14, 2020
USGS Stream Name: Unnamed Tributary to the East Fork	County/State: Collin County Stream Number: 337
USGS Topo Quad Name: McKinney East	
Associated Wetland(s): None	Coordinates: 33.199328 -96.578060
G/ T- Intermittent GI / '	
Stream Type: Intermittent Characteristics:	Stream has a section of concrete banks.
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	
Stream Flow Direction: Southwest	
OHWM Width (ft): 8	OHWM Height (in): 12
Stream Bottom composition:	
✓ Silts ☐ Cobbles ✓ Concrete ☐ C	Other:
☐ Sands ☐ Bedrock ☐ Muck	
☐ Gravel ☐ Vegetation	
_ •	
Aquatic Habitat: Indicate all types present within proposed ROW/pr	
☐ Sand bar ☐ Sand/Gravel beach/bar ☐ Gravel	riffles Aquatic vegetation
Overhanging Deep pool/ hole/ Other:	
trees/shrubs channel	
Stream has the following characteristics:	
✓ Bed and banks	
OHWM (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):	
Water Quality:	
☐ Clear ☐ Slightly Turbid ☐ Turbid ☐ Very Turbid	rbid Oily film High organic content
Other characteristics (pollutants, etc.)	
Aquatic Organisms: List all species observed. This would include w	aterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
Snakes and frogs	
Riparian Vegetation: List species observed.	
	(0.10)
Green ash (Fraxinus pennsylvanica), American elm (Ulmus am	
(Catalpa bignonioides), fringed green brier (Smilax bonanox), o	chinese privet (Ligustrum inense).
T&E Species/Suitable Habitat: List T&E species observed or which s	species the habitat is suitable for.

None

Water Feature 337

Project Name:

US 380

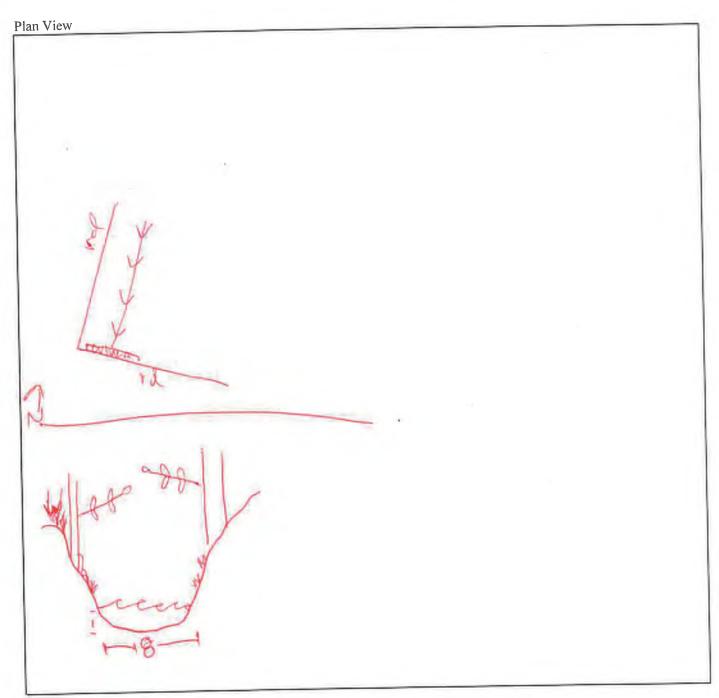
CSJ: 0135-15-002 0135-03-053

Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.



	Stream Data Form #: Water Feature 338
	Project Name: US 380
	CSJ: 0135-15-002 0135-03-053
Stream Data Form	
Surveyor(s): Wyatt Wolfenkoehler, Kelsea Hiebert	Date of Field Work: August 16, 2021
USGS Stream Name: Unnamed Tributary to the East Fork	County/State: Collin County, Texas
USGS Topo Quad Name: McKinney East	Stream Number: 338
Associated Wetland(s): None	Coordinates: 33.200055 -96.577684
Stream Type: Ephemeral Characteristics:	Deeply channelized, eroded
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	highly eroding
Stream Flow Direction: South East	
OHWM Width (ft): 3	OHWM Height (in): 12
Stream Bottom composition:	
	Other:
✓ Gravel	
- Graver - Generalist	
Aquatic Habitat: Indicate all types present within proposed ROW/p	roject limits.
☐ Sand bar ☐ Sand/Gravel beach/bar ☐ Gravel	riffles Aquatic vegetation
Overhanging Deep pool/ hole/ Other:	
trees/shrubs	
Stream has the following characteristics:	
✓ Bed and banks	
OHWM (check all indicators that apply):	
	the presence of litter and debris
	destruction of terrestrial vegetation
shelving	the presence of wrack line
vegetation matted down, bent, or absentleaf litter disturbed or washed away	sediment sorting scour
leaf litter disturbed or washed away	
	multiple observed or predicted flow events
water staining	abrupt change in plant community
other (list):	
W. O. P.	
Water Quality:	
☐ Clear ☐ Slightly Turbid ☐ Turbid ☐ Very Tu	rbid Oily film High organic content
Other characteristics (pollutants, etc.) No water	
A 4' O ' I' 4 11 ' 1 1 TI' 11' 1-1	
Aquatic Organisms: List all species observed. This would include w	ateriowi, fish, snakes, turties, frogs, invertebrates, etc.
None	
Riparian Vegetation: List species observed.	
American elm (Ulmus americana),green ash (Fraxinus pennsy	Ivanica), hackberry (Celtis laevigata), and pecan (Carva
illinoinensis).	,, , , , ,
,	
T&E Species/Suitable Habitat: List T&E species observed or which	species the habitat is suitable for
Tean appeared building tradition. That I den appeared observed of which	species the hauttat is suitable for.

None

Water Feature 338

Project Name:

US 380

CSJ: <u>0135-15-002 0135-03-053</u>

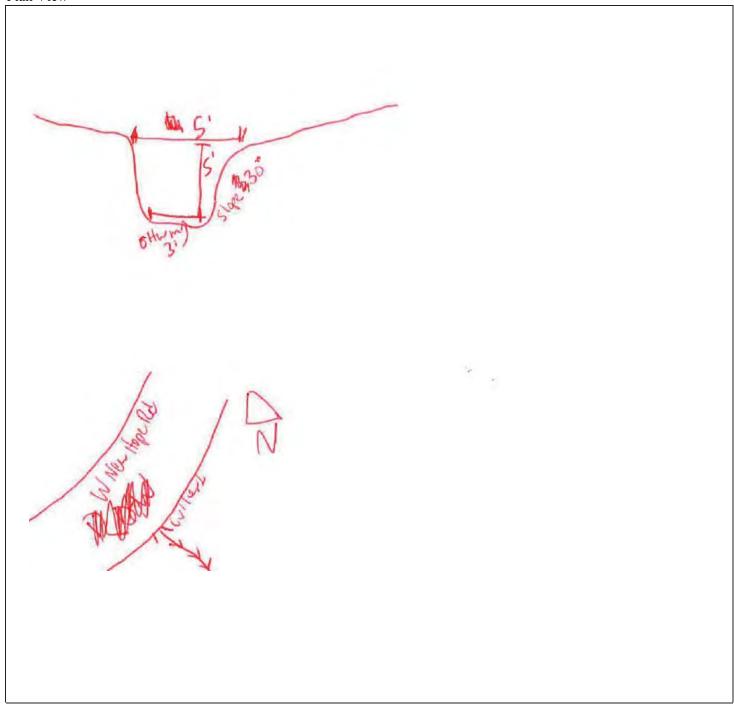
Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.

Plan View



	Stream Data Form #: Water Feature 342
	Project Name: US 380
	CSJ: 0135-15-002 0135-03-053
Stream Data Form	
Surveyor(s): Kelsea Hiebert, Wyatt Wolfenkoehler	Date of Field Work: August 16, 2021
USGS Stream Name: Unnamed Tributary to the East Fork	County/State: Collin County, Texas
LICCOT O IN MAKENING FACE	Stream Number: 342
Associated Wetland(s): None	Coordinates: 33.197015 -96.573861
Associated wetiand(s). None	-90.373001
Stream Type: Ephemeral Characteristics:	Lhidralagy from LIC 200 drainage
	Hydrology from US 380 drainage.
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	
Stream Flow Direction: South	
OHWM Width (ft): 3	OHWM Height (in): 12
Stream Bottom composition:	at a second control of the second control of
<u> </u>	ther:
☐ Sands ☑ Bedrock ☐ Muck	
☐ Gravel ☐ Vegetation	
Aquatic Habitat: Indicate all types present within proposed ROW/pr	aiget limite
Sand bar Sand/Gravel beach/bar Gravel r	
Overhanging — Deen nool/hole/ —	
trees/shrubs Deep poor/ note/ Other:	
VIOLE 1000	
Stream has the following characteristics:	
☑ Bed and banks	
OHWM (check all indicators that apply):	
	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 ☐ leaf litter disturbed or washed away [sediment sorting
leaf litter disturbed or washed away	scour
	multiple observed or predicted flow events
	abrupt change in plant community
other (list):	
Water Quality:	
☐ Clear ☐ Slightly Turbid ☐ Turbid ☐ Very Tur	bid Oily film High organic content
Other characteristics (pollutants, etc.) none	
A	
Aquatic Organisms: List all species observed. This would include wa	neriowi, fish, shakes, turties, frogs, invertebrates, etc.
Frogs	
Riparian Vegetation: List species observed.	
American elm (Ulmus americana), hackberry (Celtis laevigata),	pecan (Carya illinoinensis), eastern poison ivy
(Toxicodendron radicans), fringed green brier (Smilax bona-nox	
T&E Species/Suitable Habitat: List T&E species observed or which s	pecies the habitat is suitable for.

None

Water Feature 342

Project Name:

US 380

CSJ: 0135-15-002 0135-03-053

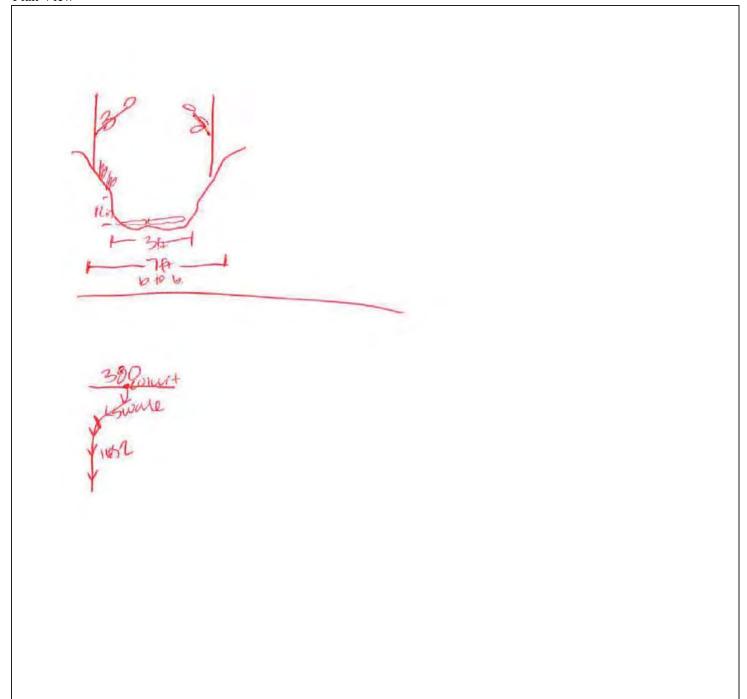
Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.

Plan View



	Stream Data Form #: Water Feature 351
	Project Name: US 380
	CSJ: 0135-15-002 0135-03-053
Stream Data Form	
Surveyor(s): Wyatt Wolfenkoehler and Kelsea Hiebert	Date of Field Work: August 16, 021
USGS Stream Name: Unnamed Tributary to the East Fork	County/State: Collin County, Texas
USGS Topo Quad Name: McKinney East	Stream Number: 351
Associated Wetland(s): None	Coordinates: 33.195442 -96.567532
Associated wettand(s). None	-90.307332
Stream Type: Ephemeral Characteristics:	
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	
Stream Flow Direction: South East	0.1777 (.1. //) 40
OHWM Width (ft): 2	OHWM Height (in): 10
Stream Bottom composition:	
☐ Silts ☐ Cobbles ☐ Concrete ☐ Oth	ner:
Sands Bedrock Muck	
☐ Gravel ☐ Vegetation	
Aquatic Habitat: Indicate all types present within proposed ROW/proj	igot limits
Sand bar Sand/Gravel beach/bar Gravel rif	
Overhanging Deep pool/ hole/ Other pope	Aquatic vegetation
trees/shrubs	
citatille	
Stream has the following characteristics:	
✓ Bed and banks	
OHWM (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
 ✓ vegetation matted down, bent, or absent ✓ leaf litter disturbed or washed away ✓ sediment deposition ✓ water staining 	scour
sediment deposition	multiple observed or predicted flow events
□ water staining □	abrupt change in plant community
other (list):	
Water Quality:	
☐ Clear ☐ Slightly Turbid ☐ Turbid ☐ Very Turbi	id Oily film High organic content
Other characteristics (pollutants, etc.) no water	
Aquatic Organisms: List all species observed. This would include water	erfowl, fish, snakes, turtles, frogs, invertebrates, etc.
none	
Riparian Vegetation: List species observed.	
cedar elm (Ulmus crassifolia), johnsongrass (Sorghum halapense	e), and tall false rve grass (Schedonorus arundinaceus)
(- ,, , (g (g (g	,, , , , , , , , , , , , , , , , , , , ,
T&E Species/Suitable Habitat: List T&E species observed or which species	exies the hobitot is suitable for
	ecies the habitat is suitable for.
none	

Water Feature 351

Project Name:

US 380

CSJ: 0135-15-002 0135-03-053

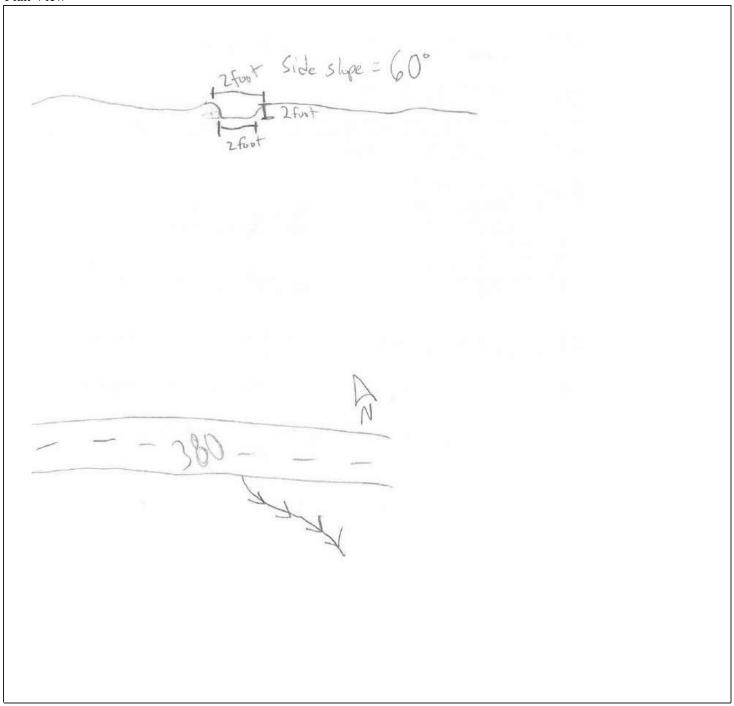
Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.

Plan View



	Stream Data Form #: Water Features 354
	Project Name: US 380
	CSJ: 0135-03-053
Stream Data Form	
Surveyor(s): Ethan Eichler and Mike Keenan	Date of Field Work: September 10, 2020
USGS Stream Name: Unnamed Tributary to the East Fork Trinity	River County/State: Collin County, Texas
USGS Topo Quad Name: McKinney East	Stream Number: 353, 354
Associated Wetland(s): None	Coordinates: 33.198545, -96.598042
Stream Type: Intermittent Characteristics:	Heavy flow due to rain in recent days. Moderate flow predicted from average precipitation.
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	Little erosion along banks
Stream Flow Direction: East	
OHWM Width (ft): 6	OHWM Height (in): 14
Stream Bottom composition:	Significant broken glass within stream bed
☐ Silts ☐ Cobbles ☐ Concrete ☑	Other:
☑ Sands ☐ Bedrock ☐ Muck	
☑ Gravel ☐ Vegetation	
A quatic Habitate Indicate all trace messant within managed DOW	Immaignet limits
Aquatic Habitat: Indicate all types present within proposed ROW Sand bar Sand/Gravel beach/bar Grave	
Overhanging Deen nool/hole/	Aquatic vegetation
✓ Overnanging trees/shrubs ✓ Deep pool/ hole/ channel Other:	
Stream has the following characteristics:	
✓ Bed and banks	
OHWM (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 water staining	✓ multiple observed or predicted flow events☐ abrupt change in plant community
other (list):	abrupt change in plant community
U other (list).	
Water Quality:	
☐ Clear ☑ Slightly Turbid ☐ Turbid ☐ Very T	Turbid ☐ Oily film ☐ High organic content
Other characteristics (pollutants, etc.)	
Aquatic Organisms: List all species observed. This would include	waterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
None.	
Riparian Vegetation: List species observed.	
Sugarberry (Celtis laevigata), giant ragweed (Ambrosia trifida), osage-orange (Maclura pomifera), ash	leaf maple (Acer negundo), fringed green brier (Smilax bona-nox), and poison ivy (Toxicodendron
radicans).	
T&E Species/Suitable Habitat: List T&E species observed or which	n species the habitat is suitable for
•	1 species the habital is sultable for.
None.	

Stream Data Form #:
Project Name:
CSJ:

Water Features 353 and 354 US 380

1101

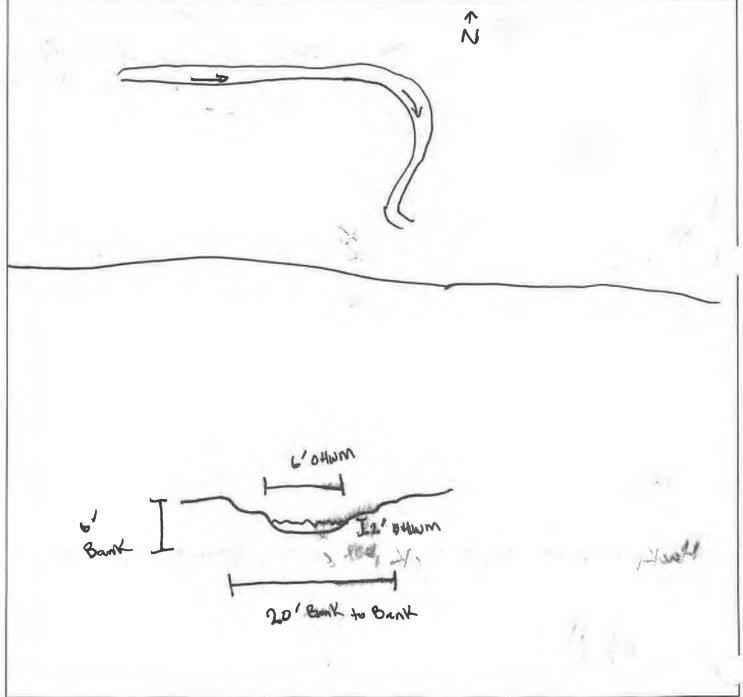
Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.





	Stream Data Form #: Water Features 356
	Project Name: US 380
	CSJ: 0135-03-053 0135-15-002
Stream Data Form	
Surveyor(s): Ethan Eichler and Mike Keenan	Date of Field Work: September 10, 2020
USGS Stream Name: Unnamed Tributary to the East Fork	County/State: Collin County, Texas
USGS Topo Quad Name: McKinney East	Stream Number: 355, 356
Associated Wetland(s): None	Coordinates: <u>33.203268</u> -96.597500
Stream Type: Perennial Characteristics:	Flows east into the East Fork Trinity River
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	
Stream Flow Direction: East	
OHWM Width (ft): 22	OHWM Height (in): 72
Stream Bottom composition:	
✓ Silts ☐ Cobbles ☐ Concrete ☐ C	Other:
✓ Sands ☐ Bedrock ☐ Muck	
✓ Gravel	
Aquatic Habitat: Indicate all types present within proposed ROW/pr	
☐ Sand bar ☐ Sand/Gravel beach/bar ☐ Gravel	riffles Aquatic vegetation
Overhanging Deep pool/ hole/ I other:	
trees/shrubs channel	
Stream has the following characteristics:	
✓ Bed and banks	
OHWM (check all indicators that apply):	
	the presence of litter and debris
	destruction of terrestrial vegetation
shelving	the presence of wrack line
vegetation matted down, bent, or absent	sediment sorting
	scour
sediment deposition	multiple observed or predicted flow events
	abrupt change in plant community
other (list):	
W-t O1't	
Water Quality:	which O Oily film D High agreemic content
Clear Slightly Turbid Turbid Very Tur	rbid Oily film High organic content
Other characteristics (pollutants, etc.)	
Aquatic Organisms: List all species observed. This would include wa	starfoxyl figh analysis turtles from invertebrates at
	aterrowi, fish, shakes, turnes, flogs, fliverteorates, etc.
None.	
Riparian Vegetation: List species observed.	
osage-orange (Maclura pomifera), fringed green brier (Smilax bona-nox), black willow (Salix nigra), giant	ragweed (Ambrosia trifida), pecan (Carya illinoinensis), green ash (Fraxinus pennsylvanica)
T&E Species/Suitable Habitat: List T&E species observed or which s	species the habitat is suitable for
•	species the habitat is surfable for.
None.	

Stream Data Form # Water Features 355/ 356

Project Name: US 380 CSJ: 0135-15-002 0135-03-053

Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel.

Sketch should include:

Directional arrow;

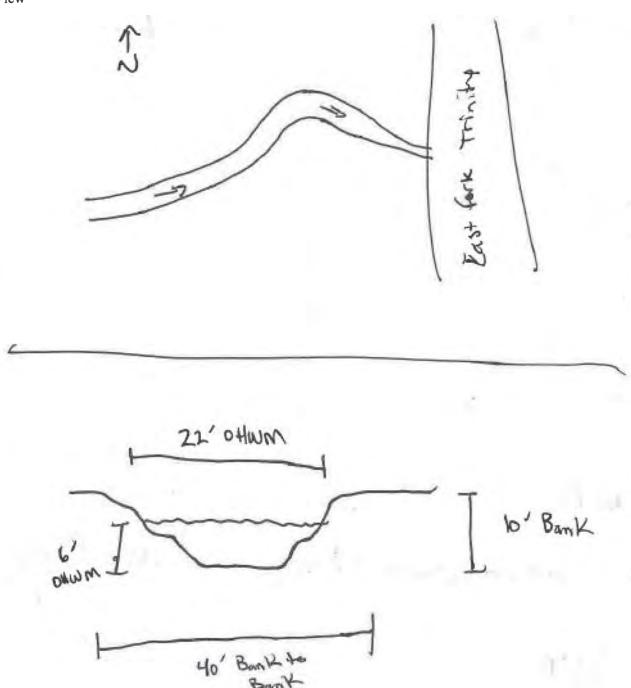
Width of channel from top of bank to top of bank;

Depth of channel,

Approximate side slope; and,

Width of stream from water edge to water edge.

Plan View



	Stream Data Form #: Water Feature 358
	Project Name: US 380
	CSJ: 0135-03-053
Stream Data Form	
Surveyor(s): Ethan Eichler and Mike Keenan	Date of Field Work: September 8, 2020
	County/State: Collin County, Texas
USGS Topo Quad Name: McKinney East	Stream Number: 358
Associated Wetland(s): <u>367, 370, 368, 366, 364, 362</u>	Coordinates: <u>33.190381</u> , -96.577237
G. T. Doronnial Gl. 4 '4'	Incised stream banks.
Stream Type: Perennial Characteristics:	
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	
Stream Flow Direction: South	
OHWM Width (ft): 40	OHWM Height (in): 30
Stream Bottom composition:	
✓ Silts ☐ Cobbles ☐ Concrete ☐	Other:
☐ Sands ☐ Bedrock ☐ Muck	
☐ Gravel ☐ Vegetation	
Aquatic Habitat: Indicate all types present within proposed ROW/p	
☐ Sand bar ☐ Sand/Gravel beach/bar ☐ Gravel	riffles Aquatic vegetation
Overhanging Deep pool/ hole/ Other:	
trees/shrubs channel channel	
Stream has the following characteristics:	
Bed and banks	
OHWM (check all indicators that apply):	□ d C1'a 1.1.1.1
clear, natural line impressed on the bank	the presence of litter and debris
changes in the character of soil	destruction of terrestrial vegetation
 ✓ shelving ✓ vegetation matted down, bent, or absent ✓ leaf litter disturbed or washed away ✓ sediment deposition ✓ water staining 	the presence of wrack line
✓ vegetation matted down, bent, or absent✓ leaf litter disturbed or washed away	sediment sorting scour
sediment deposition	✓ scoul ✓ multiple observed or predicted flow events
water staining	abrupt change in plant community
other (list):	abrupt change in plant community
ouler (list).	
Water Quality:	
☐ Clear ☐ Slightly Turbid ☐ Turbid ☐ Very Tu	urbid Oily film High organic content
Other characteristics (pollutants, etc.)	
<u> </u>	
Aquatic Organisms: List all species observed. This would include w	vaterfowl, fish, snakes, turtles, frogs, invertebrates, etc.
None.	•
None.	
Riparian Vegetation: List species observed.	
Pecan (Carya illinoinensis), black walnut (Juglans nigra), green ash (Fraxinus pennsylvanica), poison iv	v (Toxicodendron radicans). American elm (Illmus americana), sugarherry (Celtis laggiagta)
osage-orange (Maclura pomifera), fringed green brier (Smilax bona-nox), Virginia wild rye (Elymus virgi	
T&E Species/Suitable Habitat: List T&E species observed or which	species the habitat is suitable for.

None.

Water Feature 358

Project Name: CSJ:

US 380

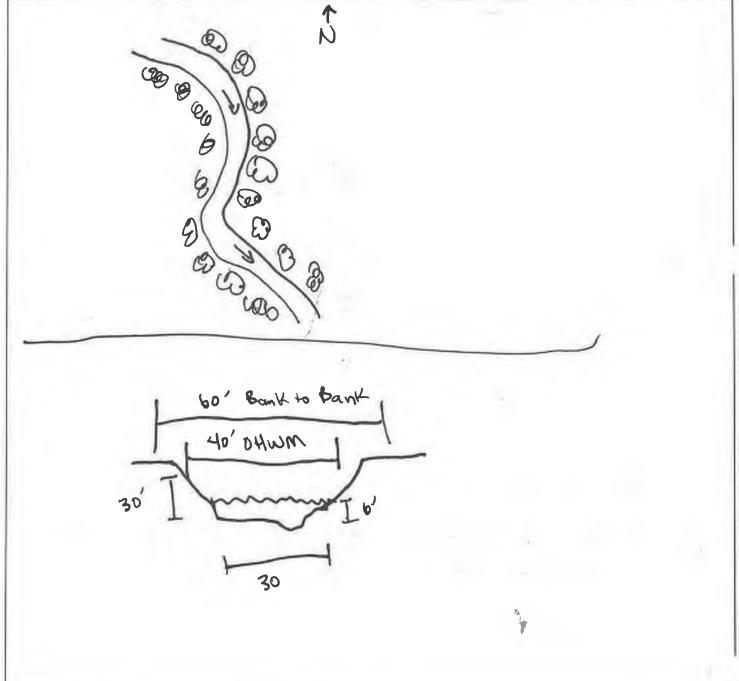
Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

- Directional arrow;
- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.





	Stream Data Form #: Water Feature 359				
	Project Name: US 380				
	CSJ: 0135-03-053				
Stream Data Form					
Surveyor(s): Ethan Eichler and Mike Keenan	Date of Field Work: September 10, 2020				
USGS Stream Name: Unnamed Tributary to the East Fork Trinity	River County/State: Collin County, Texas				
USGS Topo Quad Name: McKinney East	Stream Number: 359				
Associated Wetland(s): 364, 362	Coordinates: <u>33.190661</u> , -96.576704				
Stream Type: Intermittent Characteristics:	Upper portion of stream historically mowed for agricultural field.				
Bank Stability (e.g. highly eroding, sloughing banks, etc.):	Highly eroded banks.				
Stream Flow Direction: South					
OHWM Width (ft): 8	OHWM Height (in): 12				
Stream Bottom composition: Silts Cobbles Concrete Sands Bedrock Muck Gravel Vegetation	Other:				
Aquatic Habitat: Indicate all types present within proposed ROW/p Sand bar Sand/Gravel beach/bar Grave Overhanging trees/shrubs Deep pool/ hole/ channel Other:					
Stream has the following characteristics: Bed and banks OHWM (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):	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				
Water Quality: ✓ Clear Slightly Turbid Turbid Very To Other characteristics (pollutants, etc.)	urbid Oily film High organic content				
Aquatic Organisms: List all species observed. This would include volume.	waterfowl, fish, snakes, turtles, frogs, invertebrates, etc.				
Riparian Vegetation: List species observed. pecan (Carya illinoinensis), osage-orange (Maclura pomifera), green ash (Fraxinus pennsylvanica), An	nerican elm (Ulmus americana)				
The Carolina/Critical a Habitata List The Essential	amoning the helitatic evitable for				
T&E Species/Suitable Habitat: List T&E species observed or which	species the nabital is sultable for.				
None.					

Stream Data Form #:
Project Name:

CSJ: 0135-03-053

Water Feature 359

US 380

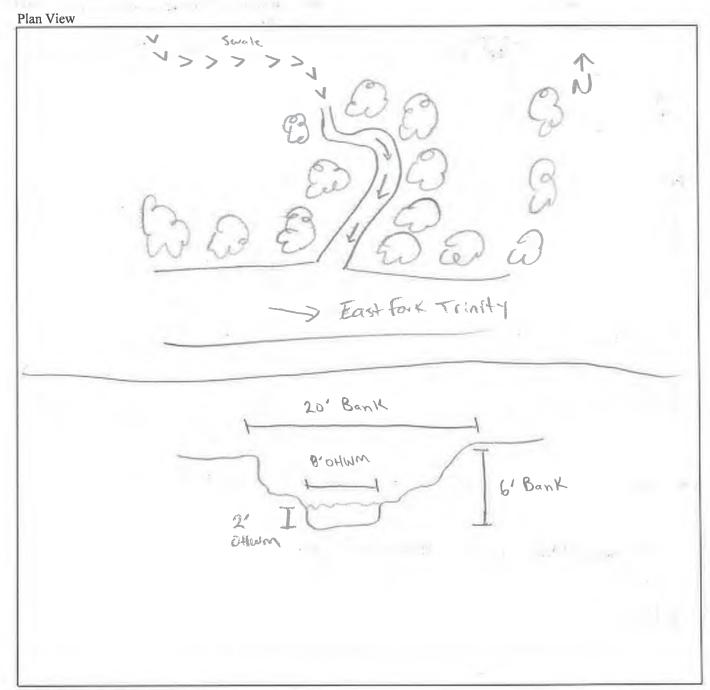
Stream Data Form (continued)

Please provide a plan and section view sketch of the stream channel. Sketch should include:

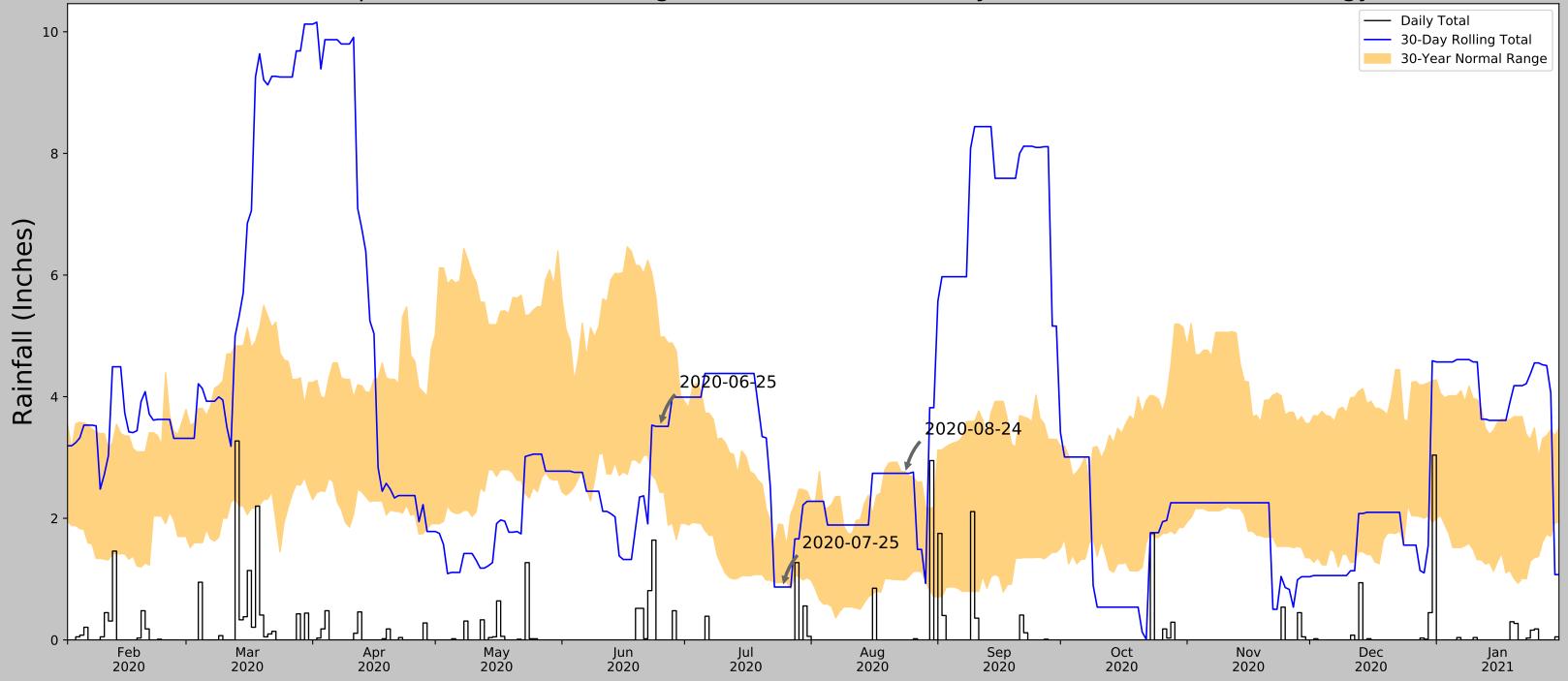
Directional arrow;

- Width of channel from top of bank to top of bank;
- Depth of channel,

- Approximate side slope; and,
- Width of stream from water edge to water edge.

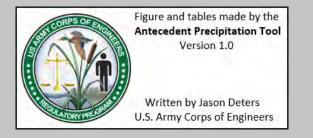


Attachment 3 – Antecedent Precipitation Tool for McKinney, Texas

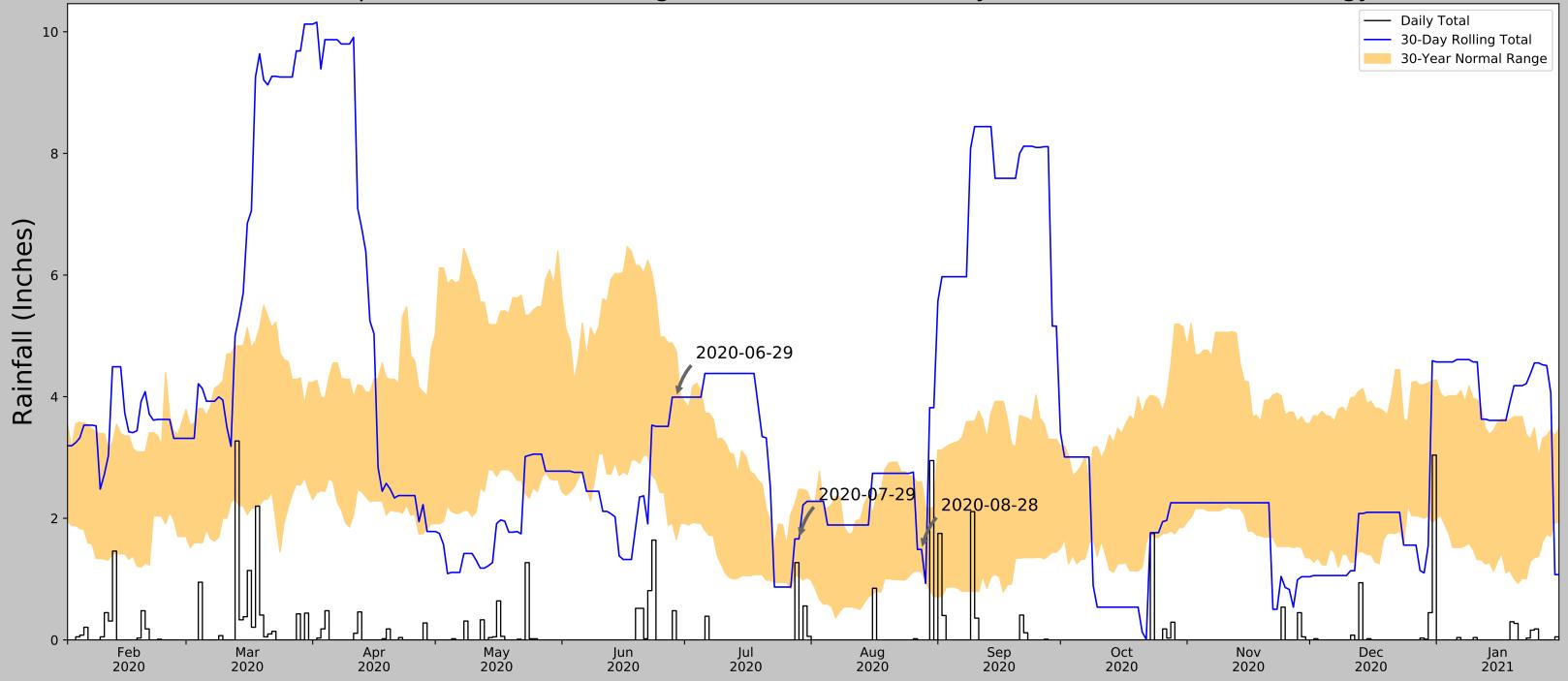


Coordinates	33.250326, -96.618486
Observation Date	2020-08-24
Elevation (ft)	550.01
Drought Index (PDSI)	Mild wetness
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-08-24	0.986221	2.766929	2.740158	Normal	2	3	6
2020-07-25	0.944882	1.892126	0.870079	Dry	1	2	2
2020-06-25	2.425197	4.980709	3.511811	Normal	2	1	2
Result							Normal Conditions - 10

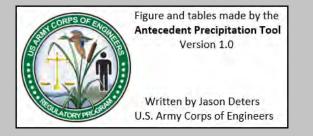


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
MCKINNEY MUNI AP	33.1803, -96.5903	580.053	5.105	30.043	2.451	7820	89
MCKINNEY 1.6 ESE	33.1927, -96.6288	604.003	4.026	53.993	2.029	7	1
MCKINNEY MUNICIPAL AIRPORT	33.1903, -96.5914	585.958	4.433	35.948	2.154	3493	0
ANNA 3.7 SSW	33.3127, -96.5827	580.053	4.78	30.043	2.295	1	0
ANNA	33.35, -96.5167	680.118	9.054	130.108	5.252	26	0
FRISCO	33.1925, -96.7931	747.047	10.855	197.037	7.024	5	0

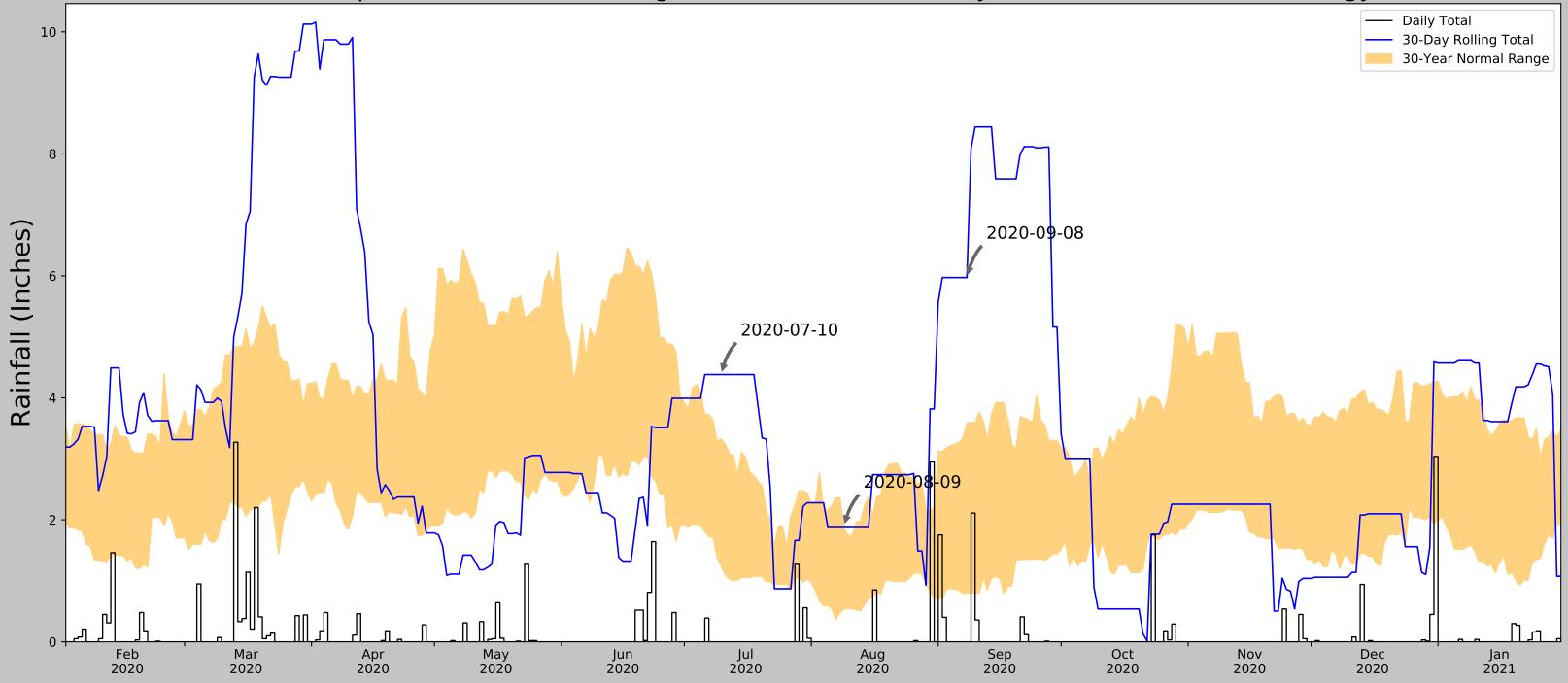


Coordinates	33.250326, -96.618486
Observation Date	2020-08-28
Elevation (ft)	550.01
Drought Index (PDSI)	Mild wetness
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-08-28	1.118504	2.60315	1.488189	Normal	2	3	6
2020-07-29	1.04685	2.47874	1.661417	Normal	2	2	4
2020-06-29	1.651575	4.748425	3.992126	Normal	2	1	2
Result							Normal Conditions - 12

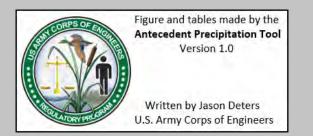


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
MCKINNEY MUNI AP	33.1803, -96.5903	580.053	5.105	30.043	2.451	7820	89
MCKINNEY 1.6 ESE	33.1927, -96.6288	604.003	4.026	53.993	2.029	7	1
MCKINNEY MUNICIPAL AIRPORT	33.1903, -96.5914	585.958	4.433	35.948	2.154	3493	0
ANNA 3.7 SSW	33.3127, -96.5827	580.053	4.78	30.043	2.295	1	0
ANNA	33.35, -96.5167	680.118	9.054	130.108	5.252	26	0
FRISCO	33.1925, -96.7931	747.047	10.855	197.037	7.024	5	0

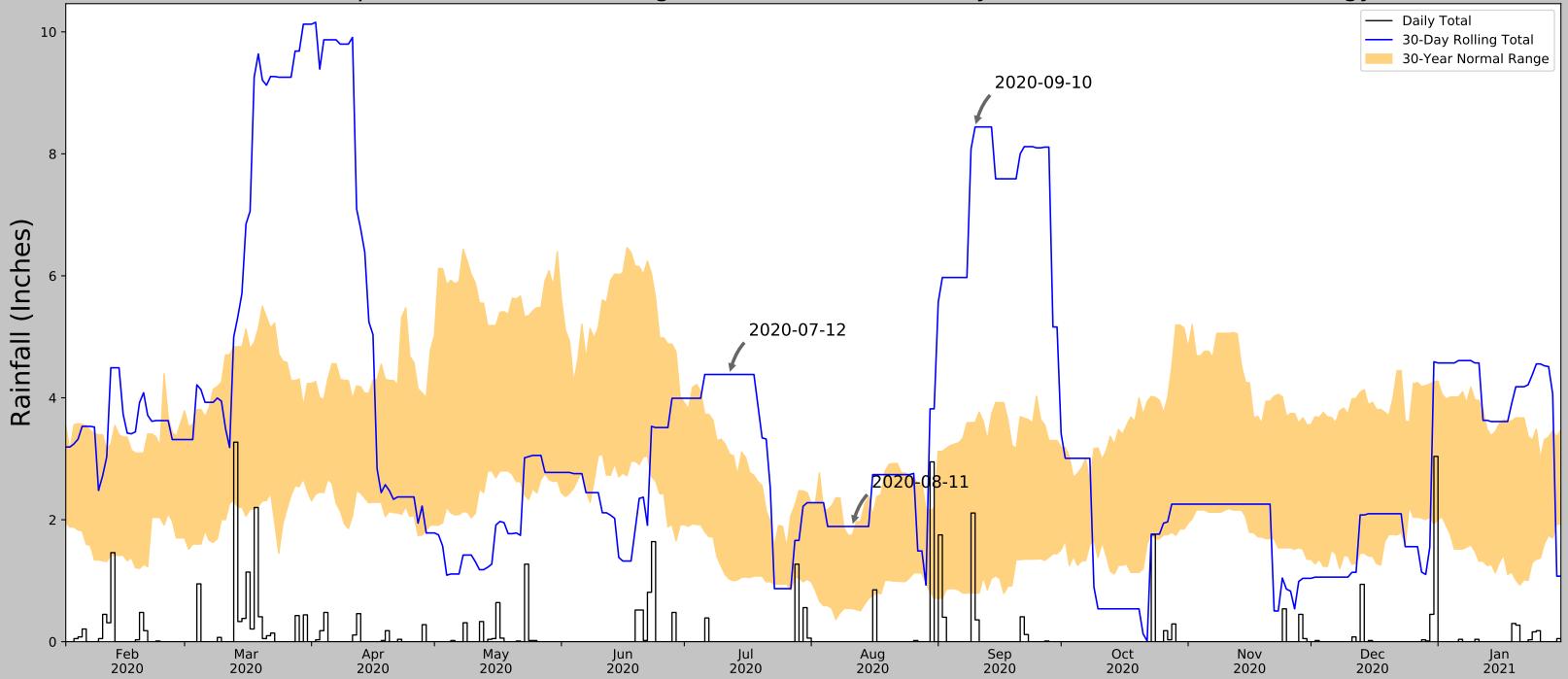


Coordinates	33.250326, -96.618486
Observation Date	2020-09-08
Elevation (ft)	550.01
Drought Index (PDSI)	Moderate wetness
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-09-08	0.798425	3.58937	5.972441	Wet	3	3	9
2020-08-09	0.543701	1.864567	1.889764	Wet	3	2	6
2020-07-10	1.237402	3.322441	4.38189	Wet	3	1	3
Result							Wetter than Normal - 18

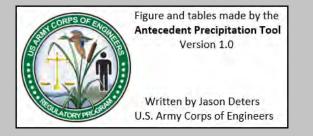


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
MCKINNEY MUNI AP	33.1803, -96.5903	580.053	5.105	30.043	2.451	7820	89
MCKINNEY 1.6 ESE	33.1927, -96.6288	604.003	4.026	53.993	2.029	7	1
MCKINNEY MUNICIPAL AIRPORT	33.1903, -96.5914	585.958	4.433	35.948	2.154	3493	0
ANNA 3.7 SSW	33.3127, -96.5827	580.053	4.78	30.043	2.295	1	0
ANNA	33.35, -96.5167	680.118	9.054	130.108	5.252	26	0
FRISCO	33.1925, -96.7931	747.047	10.855	197.037	7.024	5	0

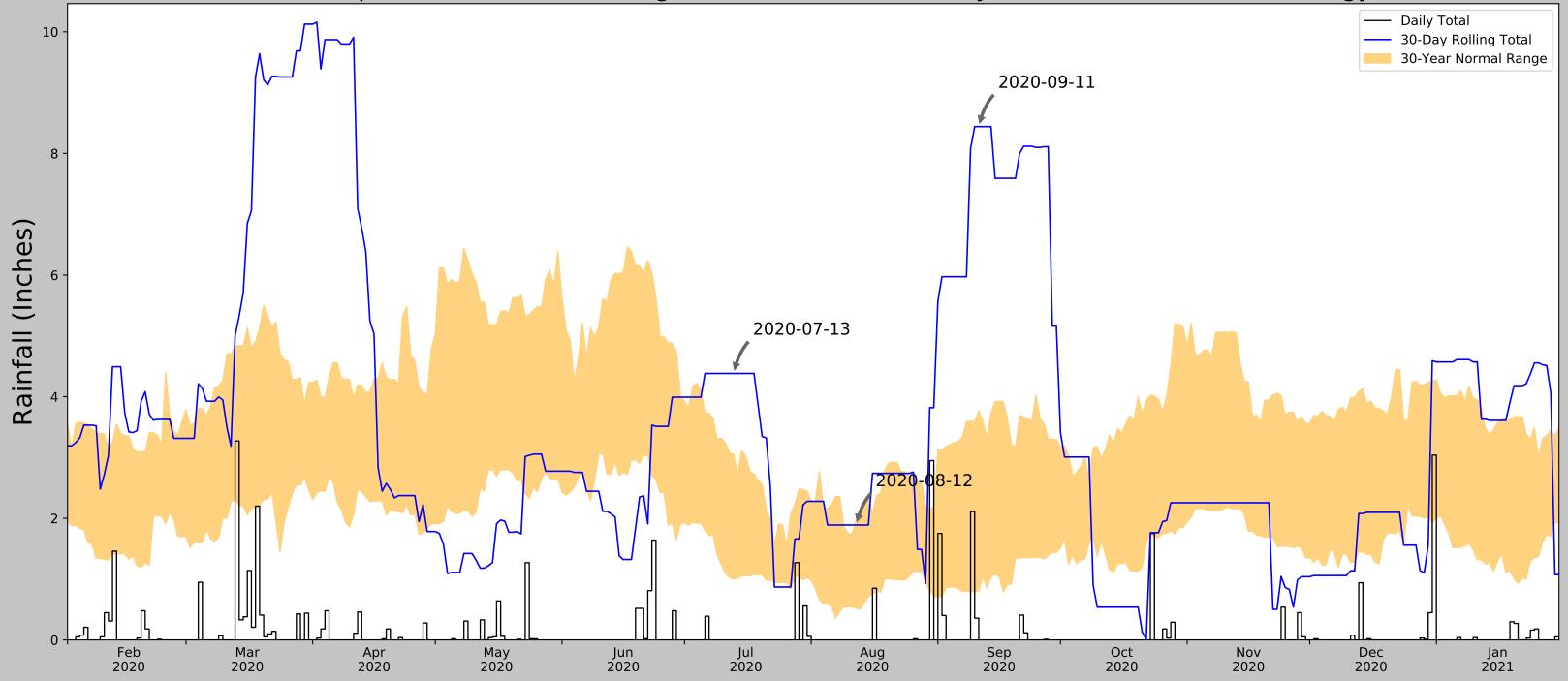


Coordinates	33.250326, -96.618486
Observation Date	2020-09-10
Elevation (ft)	550.01
Drought Index (PDSI)	Moderate wetness
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-09-10	0.798425	3.595276	8.440945	Wet	3	3	9
2020-08-11	0.543701	1.74685	1.889764	Wet	3	2	6
2020-07-12	1.025984	3.079528	4.38189	Wet	3	1	3
Result							Wetter than Normal - 18

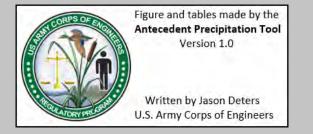


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
MCKINNEY MUNI AP	33.1803, -96.5903	580.053	5.105	30.043	2.451	7820	89
MCKINNEY 1.6 ESE	33.1927, -96.6288	604.003	4.026	53.993	2.029	7	1
MCKINNEY MUNICIPAL AIRPORT	33.1903, -96.5914	585.958	4.433	35.948	2.154	3493	0
ANNA 3.7 SSW	33.3127, -96.5827	580.053	4.78	30.043	2.295	1	0
ANNA	33.35, -96.5167	680.118	9.054	130.108	5.252	26	0
FRISCO	33.1925, -96.7931	747.047	10.855	197.037	7.024	5	0

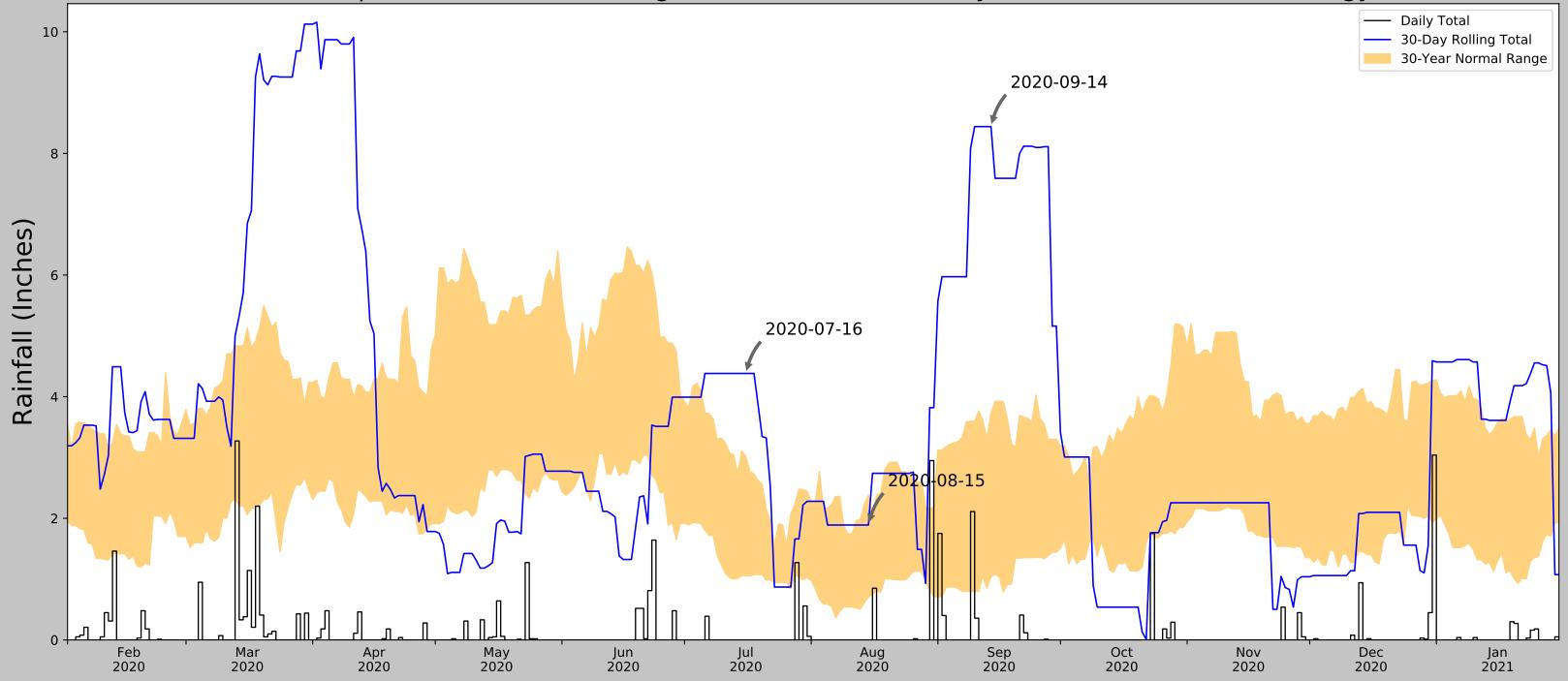


Coordinates	33.250326, -96.618486
Observation Date	2020-09-11
Elevation (ft)	550.01
Drought Index (PDSI)	Moderate wetness
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-09-11	0.799606	3.769685	8.440945	Wet	3	3	9
2020-08-12	0.524803	1.966535	1.889764	Normal	2	2	4
2020-07-13	1.0	3.05	4.38189	Wet	3	1	3
Result							Wetter than Normal - 16

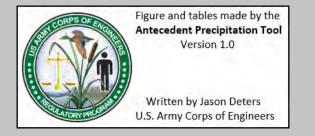


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
MCKINNEY MUNI AP	33.1803, -96.5903	580.053	5.105	30.043	2.451	7820	89
MCKINNEY 1.6 ESE	33.1927, -96.6288	604.003	4.026	53.993	2.029	7	1
MCKINNEY MUNICIPAL AIRPORT	33.1903, -96.5914	585.958	4.433	35.948	2.154	3493	0
ANNA 3.7 SSW	33.3127, -96.5827	580.053	4.78	30.043	2.295	1	0
ANNA	33.35, -96.5167	680.118	9.054	130.108	5.252	26	0
FRISCO	33.1925, -96.7931	747.047	10.855	197.037	7.024	5	0

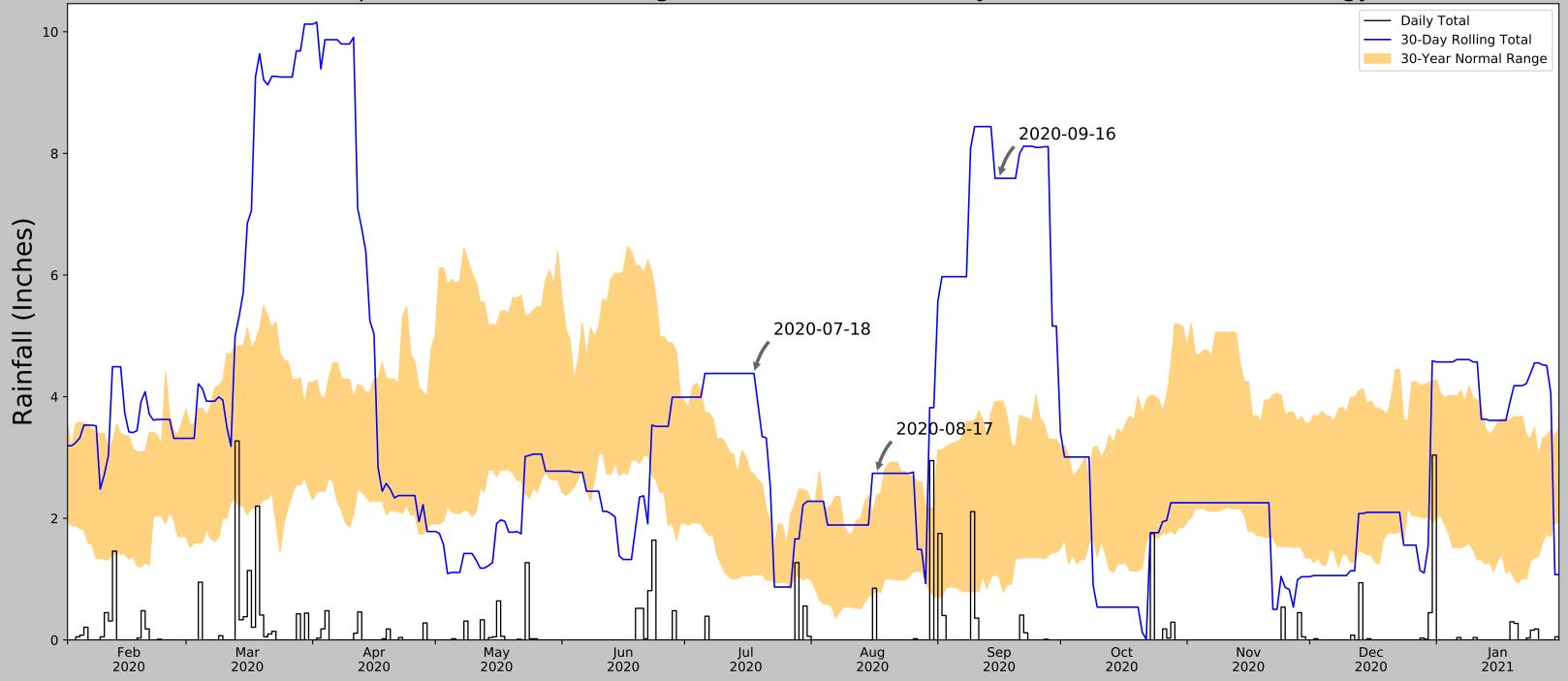


Coordinates	33.250326, -96.618486
Observation Date	2020-09-14
Elevation (ft)	550.01
Drought Index (PDSI)	Moderate wetness
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-09-14	1.039764	3.728347	8.440945	Wet	3	3	9
2020-08-15	0.708661	2.379921	1.889764	Normal	2	2	4
2020-07-16	1.059055	3.019685	4.38189	Wet	3	1	3
Result							Wetter than Normal - 16

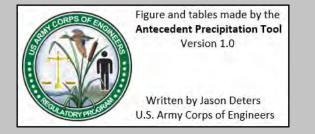


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted ∆	Days (Normal)	Days (Antecedent)
MCKINNEY MUNI AP	33.1803, -96.5903	580.053	5.105	30.043	2.451	7820	89
MCKINNEY 1.6 ESE	33.1927, -96.6288	604.003	4.026	53.993	2.029	7	1
MCKINNEY MUNICIPAL AIRPORT	33.1903, -96.5914	585.958	4.433	35.948	2.154	3493	0
ANNA 3.7 SSW	33.3127, -96.5827	580.053	4.78	30.043	2.295	1	0
ANNA	33.35, -96.5167	680.118	9.054	130.108	5.252	26	0
FRISCO	33.1925, -96.7931	747.047	10.855	197.037	7.024	5	0

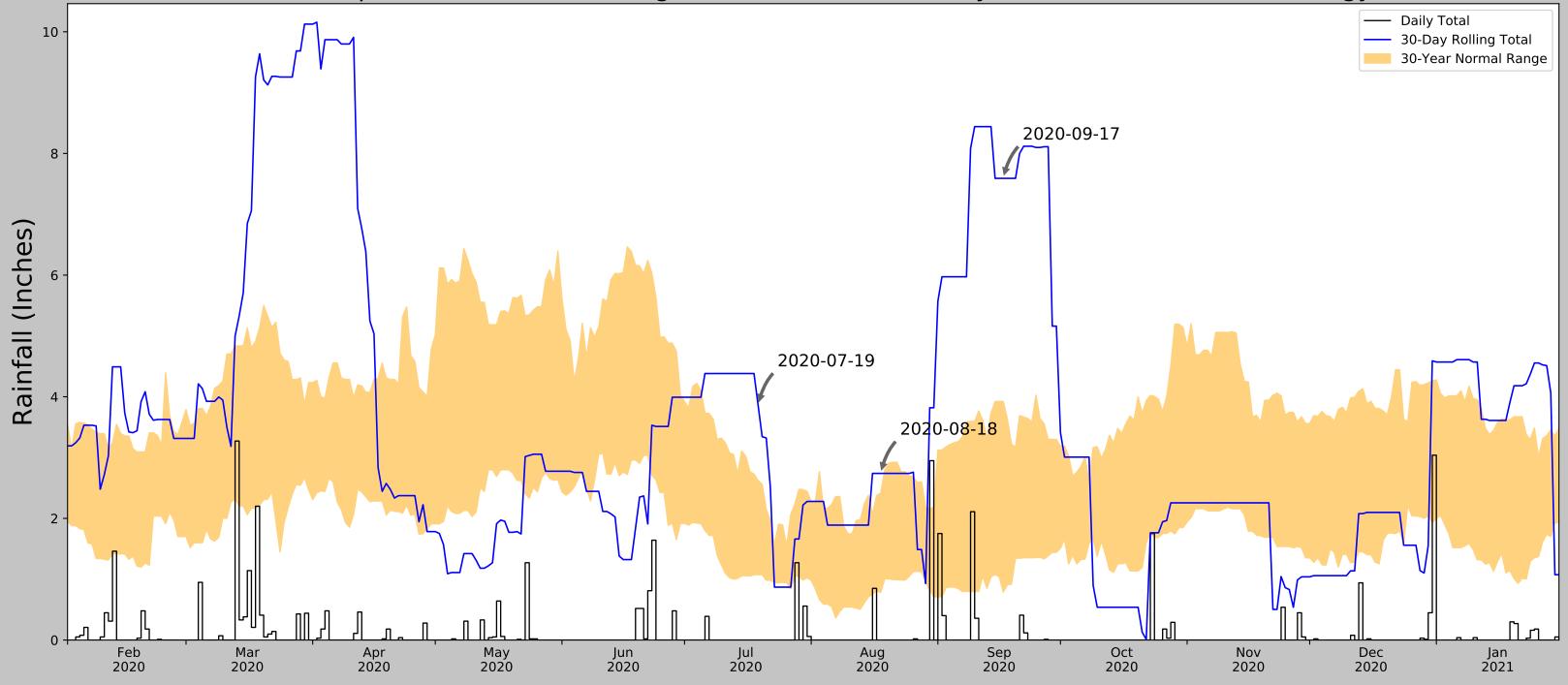


Coordinates	33.250326, -96.618486
Observation Date	2020-09-16
Elevation (ft)	550.01
Drought Index (PDSI)	Moderate wetness
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-09-16	1.038976	3.922047	7.590551	Wet	3	3	9
2020-08-17	0.809843	2.379921	2.740158	Wet	3	2	6
2020-07-18	1.074409	2.728347	4.38189	Wet	3	1	3
Result							Wetter than Normal - 18

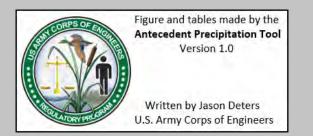


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
MCKINNEY MUNI AP	33.1803, -96.5903	580.053	5.105	30.043	2.451	7820	89
MCKINNEY 1.6 ESE	33.1927, -96.6288	604.003	4.026	53.993	2.029	7	1
MCKINNEY MUNICIPAL AIRPORT	33.1903, -96.5914	585.958	4.433	35.948	2.154	3493	0
ANNA 3.7 SSW	33.3127, -96.5827	580.053	4.78	30.043	2.295	1	0
ANNA	33.35, -96.5167	680.118	9.054	130.108	5.252	26	0
FRISCO	33.1925, -96.7931	747.047	10.855	197.037	7.024	5	0

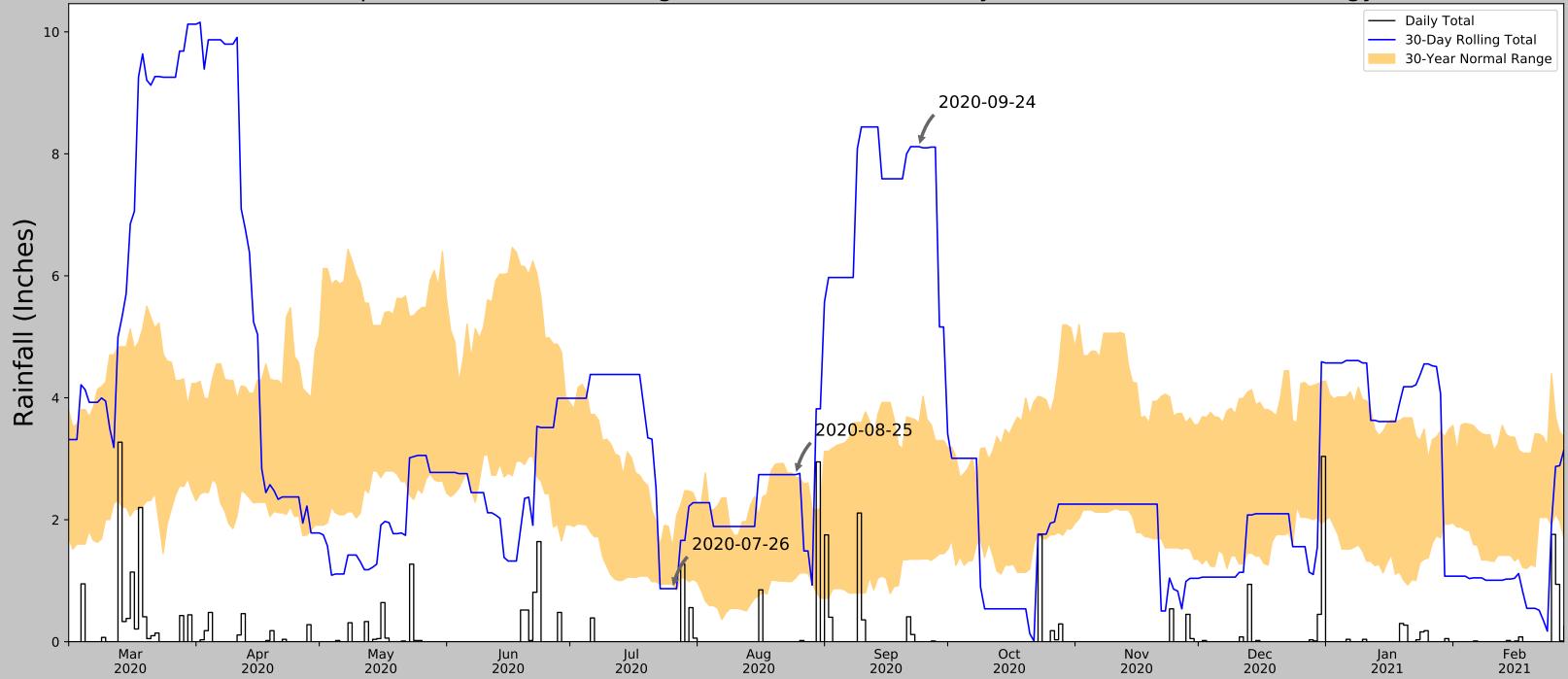


Coordinates	33.250326, -96.618486
Observation Date	2020-09-17
Elevation (ft)	550.01
Drought Index (PDSI)	Moderate wetness
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-09-17	0.78937	3.922047	7.590551	Wet	3	3	9
2020-08-18	0.783071	2.412992	2.740158	Wet	3	2	6
2020-07-19	1.074409	2.622441	3.862205	Wet	3	1	3
Result							Wetter than Normal - 18

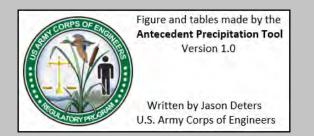


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
MCKINNEY MUNI AP	33.1803, -96.5903	580.053	5.105	30.043	2.451	7820	89
MCKINNEY 1.6 ESE	33.1927, -96.6288	604.003	4.026	53.993	2.029	7	1
MCKINNEY MUNICIPAL AIRPORT	33.1903, -96.5914	585.958	4.433	35.948	2.154	3493	0
ANNA 3.7 SSW	33.3127, -96.5827	580.053	4.78	30.043	2.295	1	0
ANNA	33.35, -96.5167	680.118	9.054	130.108	5.252	26	0
FRISCO	33.1925, -96.7931	747.047	10.855	197.037	7.024	5	0

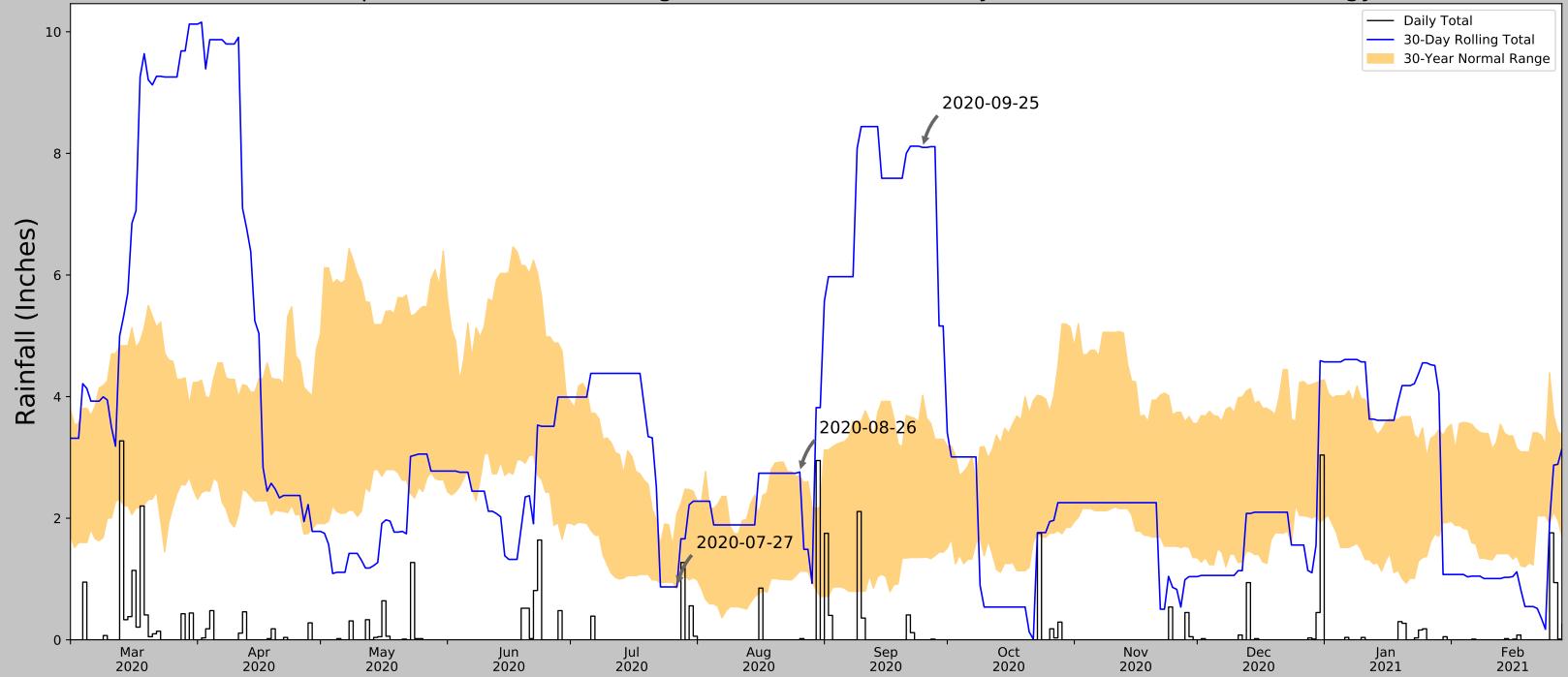


Coordinates	33.250326, -96.618486
Observation Date	2020-09-24
Elevation (ft)	550.01
Drought Index (PDSI)	Moderate wetness
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-09-24	1.352756	3.583858	8.11811	Wet	3	3	9
2020-08-25	1.048819	2.694882	2.740158	Wet	3	2	6
2020-07-26	0.944882	1.548819	0.870079	Dry	1	1	1
Result							Wetter than Normal - 16

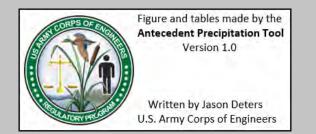


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
MCKINNEY MUNI AP	33.1803, -96.5903	580.053	5.105	30.043	2.451	7820	90
MCKINNEY 1.6 ESE	33.1927, -96.6288	604.003	4.026	53.993	2.029	7	0
MCKINNEY MUNICIPAL AIRPORT	33.1903, -96.5914	585.958	4.433	35.948	2.154	3493	0
ANNA 3.7 SSW	33.3127, -96.5827	580.053	4.78	30.043	2.295	1	0
ANNA	33.35, -96.5167	680.118	9.054	130.108	5.252	26	0
FRISCO	33.1925, -96.7931	747.047	10.855	197.037	7.024	5	0

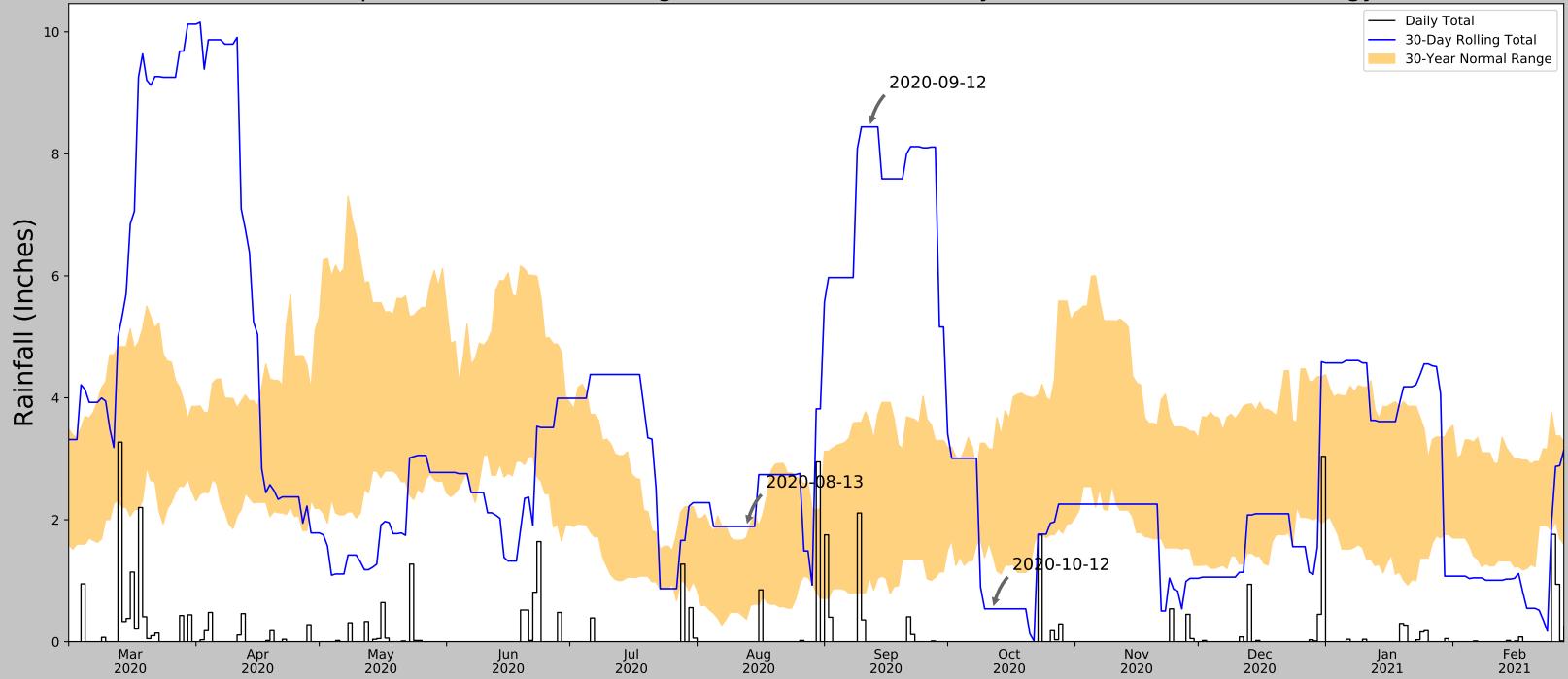


Coordinates	33.250326, -96.618486
Observation Date	2020-09-25
Elevation (ft)	550.01
Drought Index (PDSI)	Moderate wetness
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-09-25	1.356299	4.025984	8.098425	Wet	3	3	9
2020-08-26	1.125591	2.683465	2.759843	Wet	3	2	6
2020-07-27	0.840945	2.070079	0.870079	Normal	2	1	2
Result							Wetter than Normal - 17

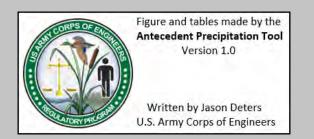


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
MCKINNEY MUNI AP	33.1803, -96.5903	580.053	5.105	30.043	2.451	7820	90
MCKINNEY 1.6 ESE	33.1927, -96.6288	604.003	4.026	53.993	2.029	7	0
MCKINNEY MUNICIPAL AIRPORT	33.1903, -96.5914	585.958	4.433	35.948	2.154	3493	0
ANNA 3.7 SSW	33.3127, -96.5827	580.053	4.78	30.043	2.295	1	0
ANNA	33.35, -96.5167	680.118	9.054	130.108	5.252	26	0
FRISCO	33.1925, -96.7931	747.047	10.855	197.037	7.024	5	0

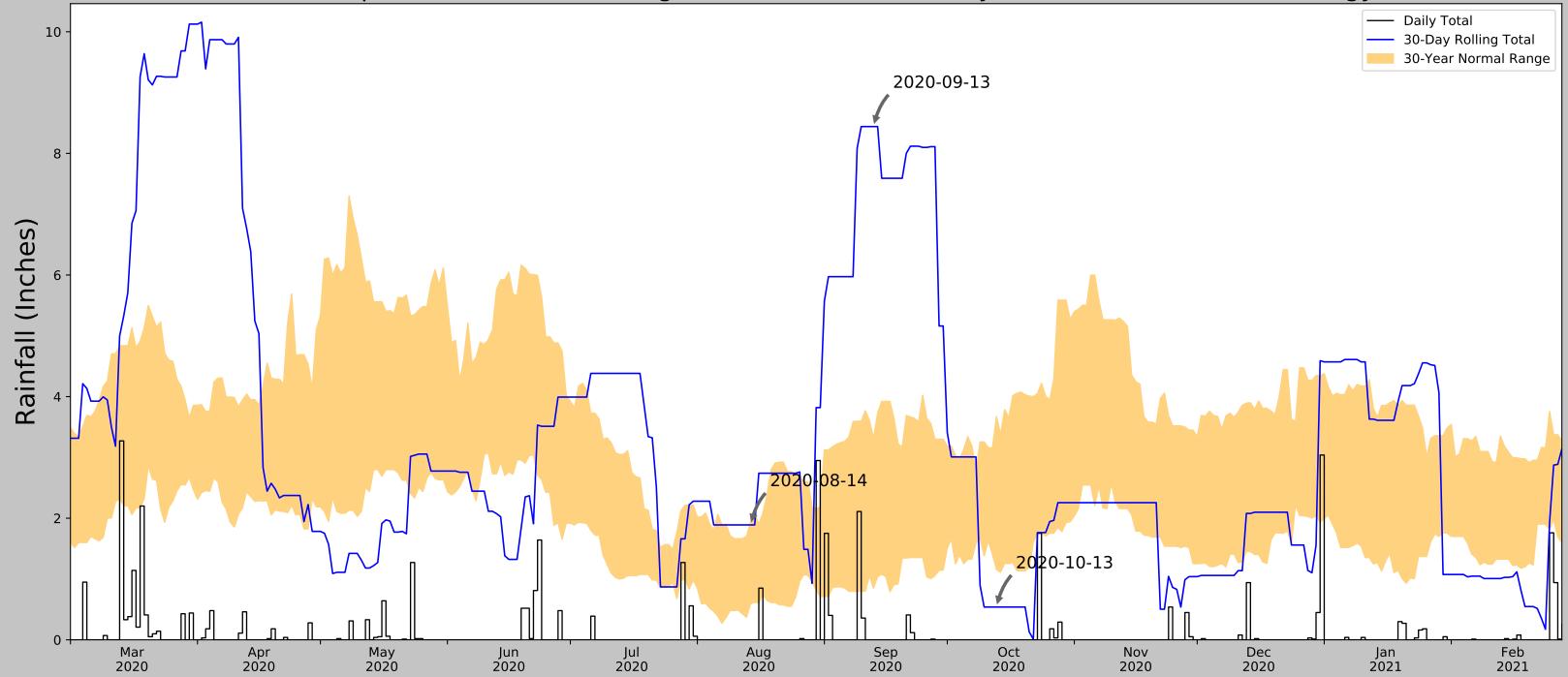


Coordinates	33.250326, -96.618486
Observation Date	2020-10-12
Elevation (ft)	550.01
Drought Index (PDSI)	Normal
WebWIMP H₂O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-10-12	1.413386	3.149213	0.53937	Dry	1	3	3
2020-09-12	1.05748	3.609055	8.440945	Wet	3	2	6
2020-08-13	0.369685	1.704331	1.889764	Wet	3	1	3
Result							Normal Conditions - 12

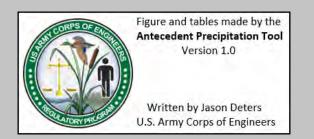


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
MCKINNEY MUNI AP	33.1803, -96.5903	580.053	5.105	30.043	2.451	8184	90
MCKINNEY 1.6 ESE	33.1927, -96.6288	604.003	4.026	53.993	2.029	9	0
MCKINNEY MUNICIPAL AIRPORT	33.1903, -96.5914	585.958	4.433	35.948	2.154	3130	0
ANNA 3.7 SSW	33.3127, -96.5827	580.053	4.78	30.043	2.295	1	0
ANNA	33.35, -96.5167	680.118	9.054	130.108	5.252	24	0
FRISCO	33.1925, -96.7931	747.047	10.855	197.037	7.024	5	0

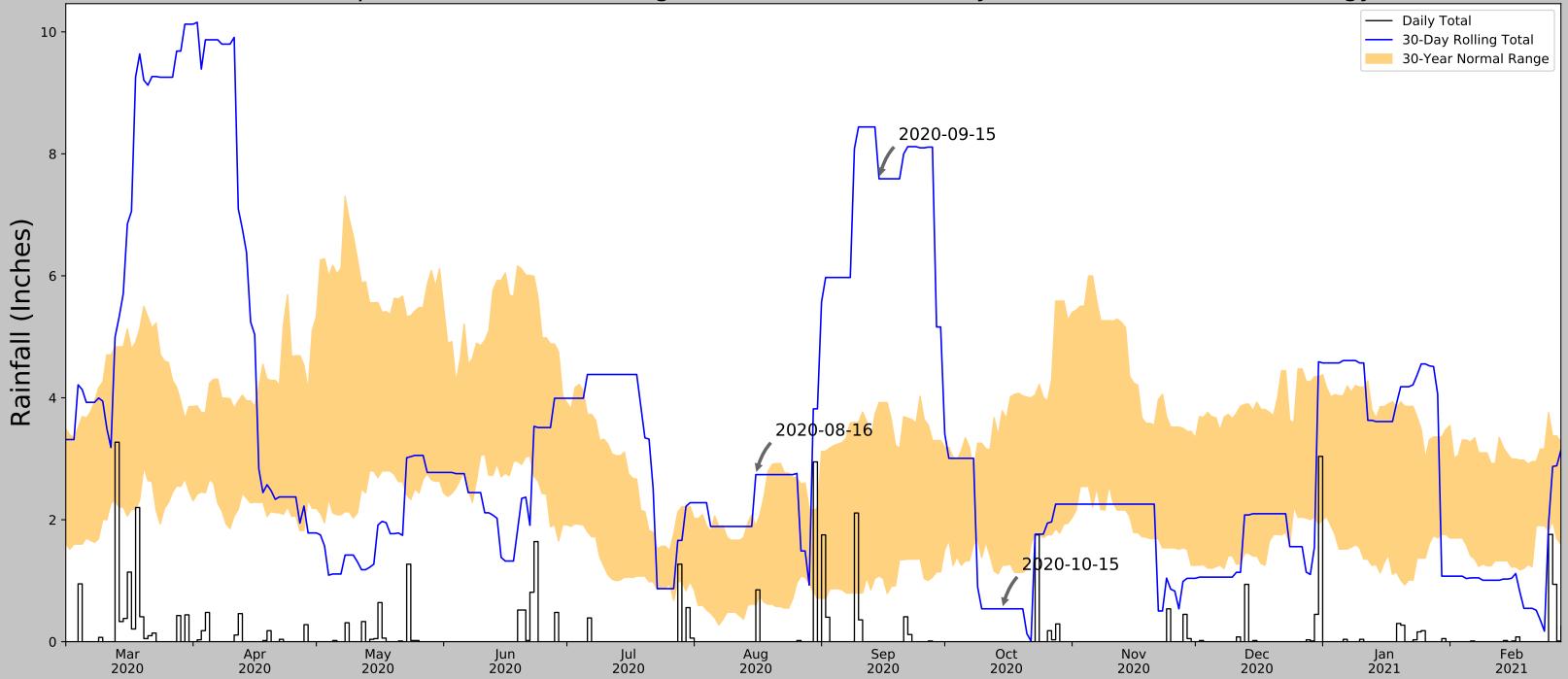


Coordinates	33.250326, -96.618486
Observation Date	2020-10-13
Elevation (ft)	550.01
Drought Index (PDSI)	Normal
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-10-13	1.156299	3.67441	0.53937	Dry	1	3	3
2020-09-13	0.849606	3.31378	8.440945	Wet	3	2	6
2020-08-14	0.594882	1.940158	1.889764	Normal	2	1	2
Result							Normal Conditions - 11

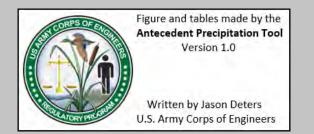


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
MCKINNEY MUNI AP	33.1803, -96.5903	580.053	5.105	30.043	2.451	8184	90
MCKINNEY 1.6 ESE	33.1927, -96.6288	604.003	4.026	53.993	2.029	9	0
MCKINNEY MUNICIPAL AIRPORT	33.1903, -96.5914	585.958	4.433	35.948	2.154	3130	0
ANNA 3.7 SSW	33.3127, -96.5827	580.053	4.78	30.043	2.295	1	0
ANNA	33.35, -96.5167	680.118	9.054	130.108	5.252	24	0
FRISCO	33.1925, -96.7931	747.047	10.855	197.037	7.024	5	0

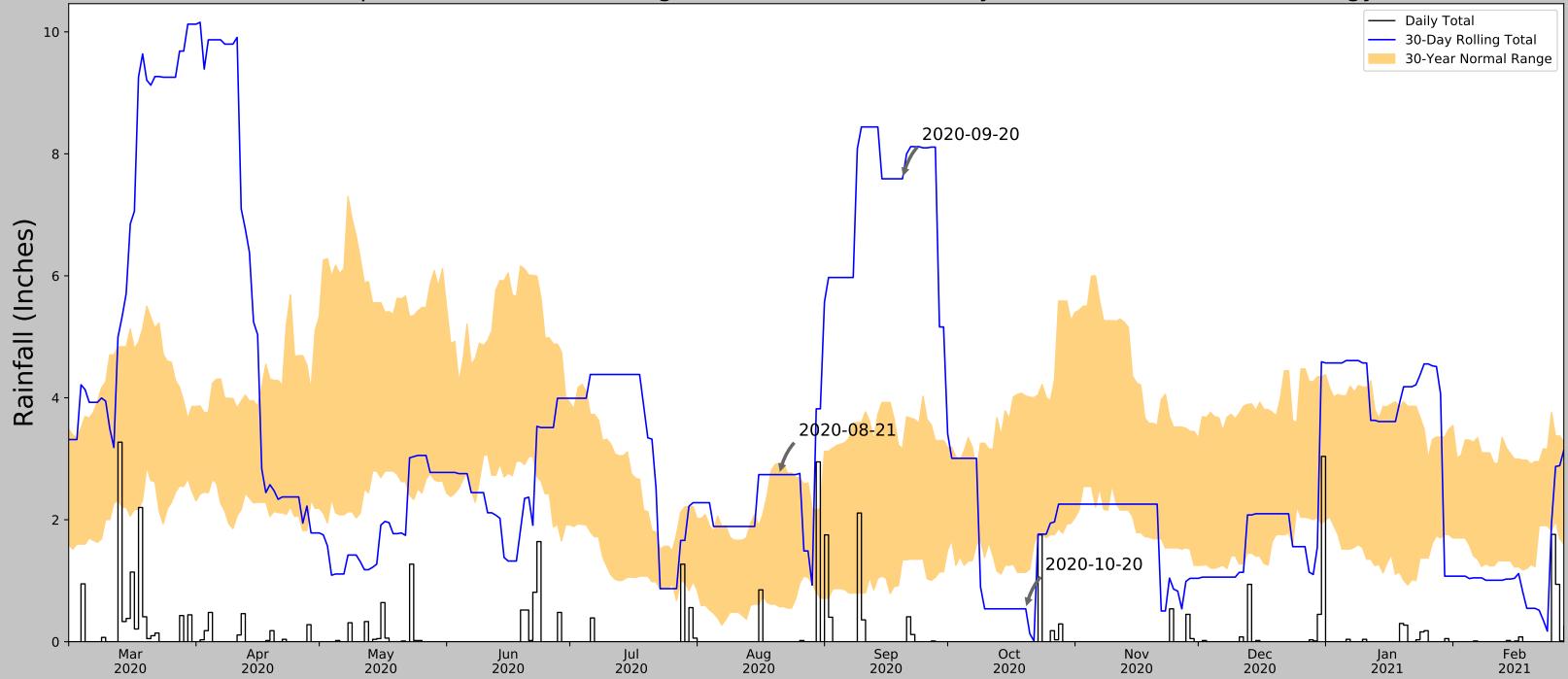


Coordinates	33.250326, -96.618486
Observation Date	2020-10-15
Elevation (ft)	550.01
Drought Index (PDSI)	Normal
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-10-15	1.253937	3.786614	0.53937	Dry	1	3	3
2020-09-15	1.07874	3.922047	7.590551	Wet	3	2	6
2020-08-16	0.605906	1.899606	2.740158	Wet	3	1	3
Result							Normal Conditions - 12

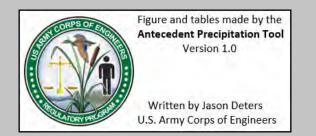


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
MCKINNEY MUNI AP	33.1803, -96.5903	580.053	5.105	30.043	2.451	8184	90
MCKINNEY 1.6 ESE	33.1927, -96.6288	604.003	4.026	53.993	2.029	9	0
MCKINNEY MUNICIPAL AIRPORT	33.1903, -96.5914	585.958	4.433	35.948	2.154	3130	0
ANNA 3.7 SSW	33.3127, -96.5827	580.053	4.78	30.043	2.295	1	0
ANNA	33.35, -96.5167	680.118	9.054	130.108	5.252	24	0
FRISCO	33.1925, -96.7931	747.047	10.855	197.037	7.024	5	0

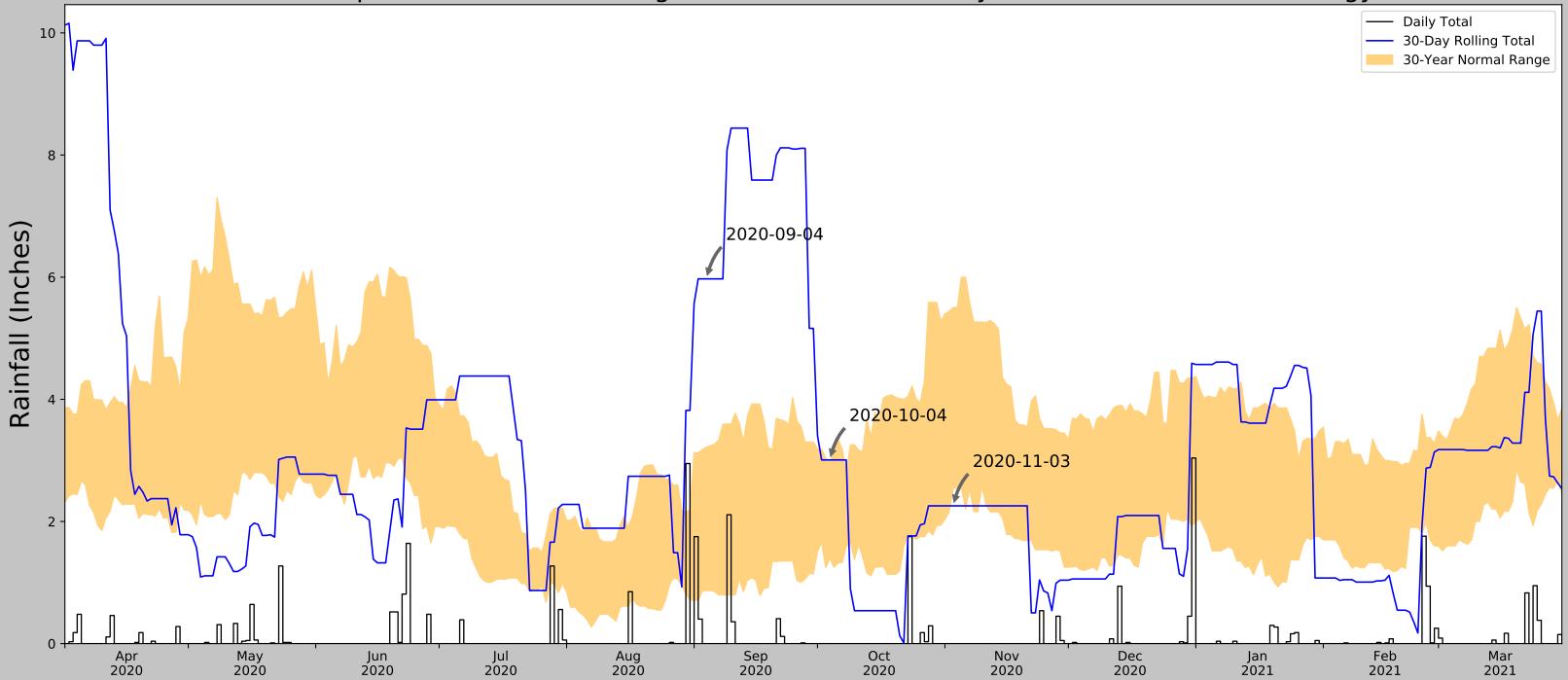


Coordinates	33.250326, -96.618486
Observation Date	2020-10-20
Elevation (ft)	550.01
Drought Index (PDSI)	Normal
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-10-20	1.135827	4.031496	0.53937	Dry	1	3	3
2020-09-20	1.344488	3.16811	7.590551	Wet	3	2	6
2020-08-21	0.575591	2.922835	2.740158	Normal	2	1	2
Result							Normal Conditions - 11

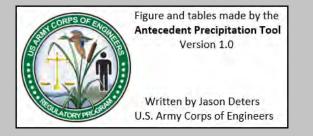


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
MCKINNEY MUNI AP	33.1803, -96.5903	580.053	5.105	30.043	2.451	8184	90
MCKINNEY 1.6 ESE	33.1927, -96.6288	604.003	4.026	53.993	2.029	9	0
MCKINNEY MUNICIPAL AIRPORT	33.1903, -96.5914	585.958	4.433	35.948	2.154	3130	0
ANNA 3.7 SSW	33.3127, -96.5827	580.053	4.78	30.043	2.295	1	0
ANNA	33.35, -96.5167	680.118	9.054	130.108	5.252	24	0
FRISCO	33.1925, -96.7931	747.047	10.855	197.037	7.024	5	0

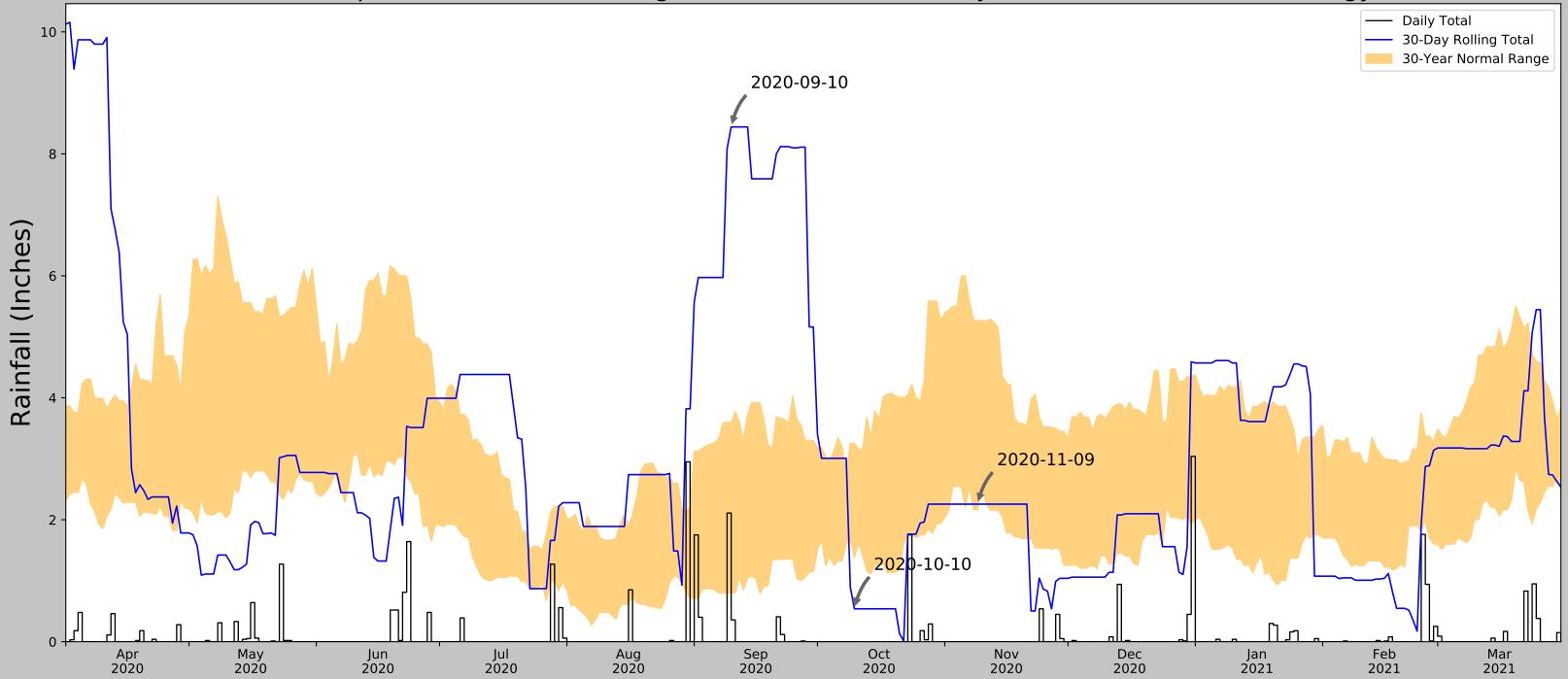


Coordinates	33.250326, -96.618486
Observation Date	2020-11-03
Elevation (ft)	550.01
Drought Index (PDSI)	Incipient drought
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-11-03	2.545276	5.50315	2.255906	Dry	1	3	3
2020-10-04	1.397638	2.980315	3.007874	Wet	3	2	6
2020-09-04	0.869685	3.21811	5.972441	Wet	3	1	3
Result							Normal Conditions - 12

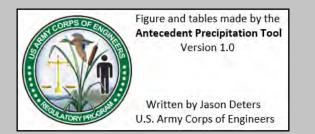


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
MCKINNEY MUNI AP	33.1803, -96.5903	580.053	5.105	30.043	2.451	8184	90
MCKINNEY 1.6 ESE	33.1927, -96.6288	604.003	4.026	53.993	2.029	9	0
MCKINNEY MUNICIPAL AIRPORT	33.1903, -96.5914	585.958	4.433	35.948	2.154	3130	0
ANNA 3.7 SSW	33.3127, -96.5827	580.053	4.78	30.043	2.295	1	0
ANNA	33.35, -96.5167	680.118	9.054	130.108	5.252	24	0
FRISCO	33.1925, -96.7931	747.047	10.855	197.037	7.024	5	0

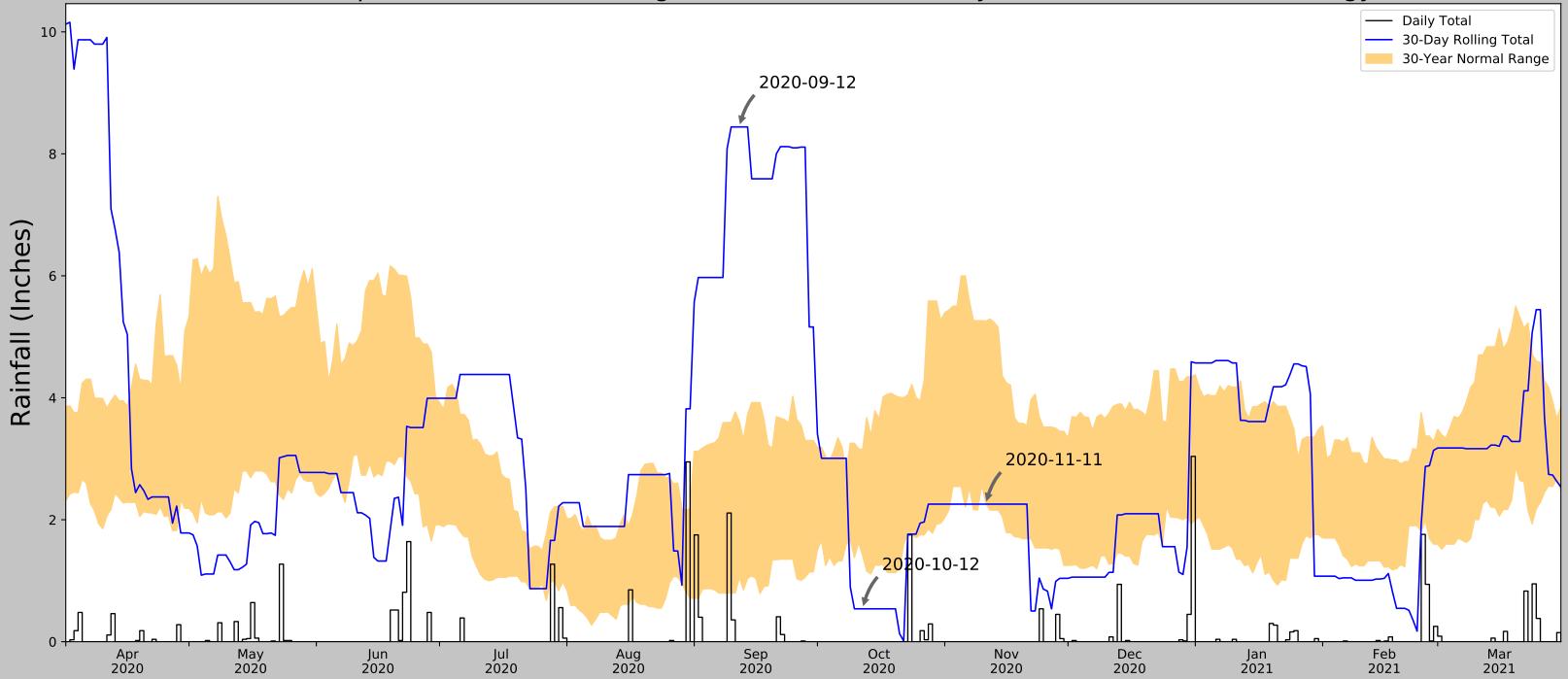


Coordinates	33.250326, -96.618486
Observation Date	2020-11-09
Elevation (ft)	550.01
Drought Index (PDSI)	Incipient drought
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-11-09	2.157874	5.264961	2.255906	Normal	2	3	6
2020-10-10	1.379134	3.255118	0.53937	Dry	1	2	2
2020-09-10	0.798425	3.595276	8.440945	Wet	3	1	3
Result							Normal Conditions - 11

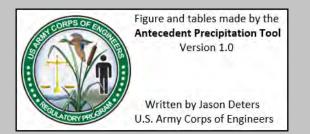


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
MCKINNEY MUNI AP	33.1803, -96.5903	580.053	5.105	30.043	2.451	8184	90
MCKINNEY 1.6 ESE	33.1927, -96.6288	604.003	4.026	53.993	2.029	9	0
MCKINNEY MUNICIPAL AIRPORT	33.1903, -96.5914	585.958	4.433	35.948	2.154	3130	0
ANNA 3.7 SSW	33.3127, -96.5827	580.053	4.78	30.043	2.295	1	0
ANNA	33.35, -96.5167	680.118	9.054	130.108	5.252	24	0
FRISCO	33.1925, -96.7931	747.047	10.855	197.037	7.024	5	0

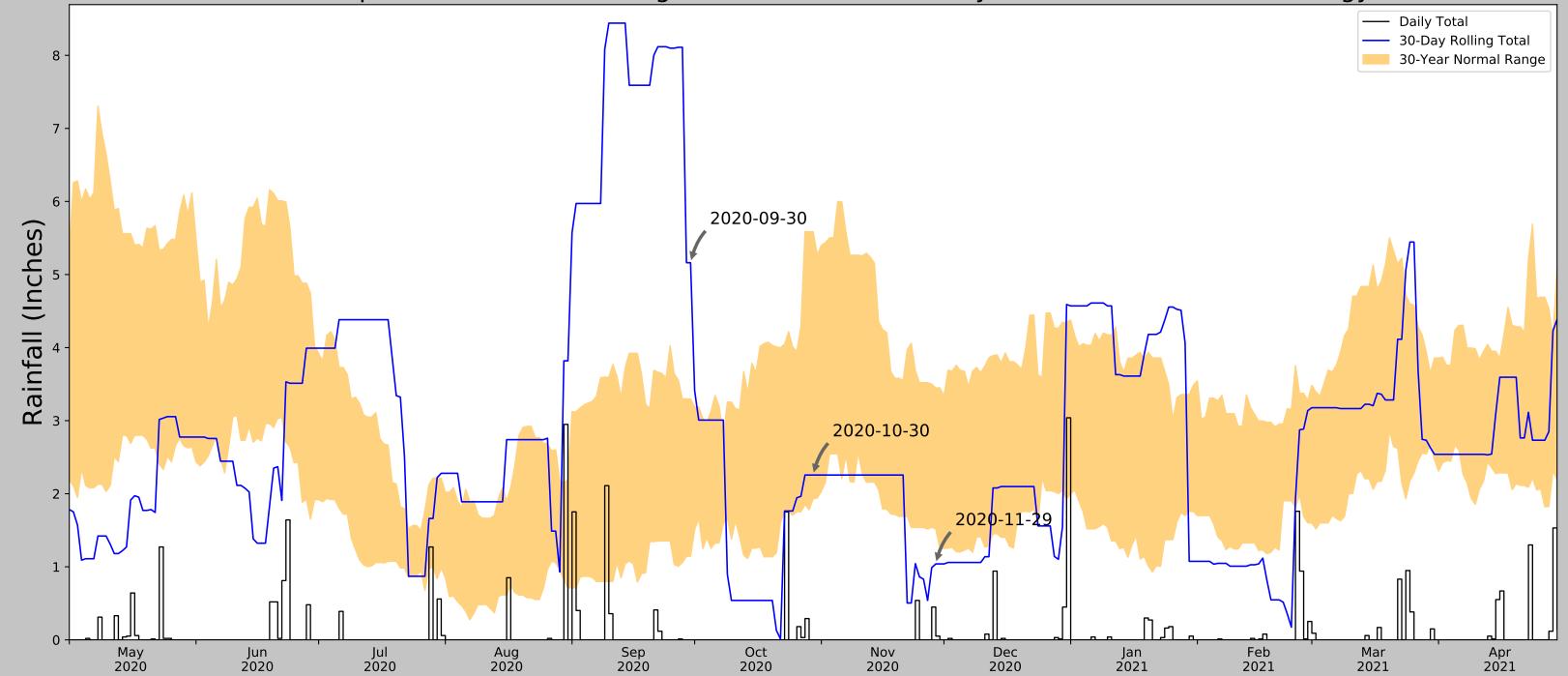


Coordinates	33.250326, -96.618486
Observation Date	2020-11-11
Elevation (ft)	550.01
Drought Index (PDSI)	Incipient drought
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-11-11	2.270079	5.256693	2.255906	Dry	1	3	3
2020-10-12	1.413386	3.149213	0.53937	Dry	1	2	2
2020-09-12	1.05748	3.609055	8.440945	Wet	3	1	3
Result							Drier than Normal - 8

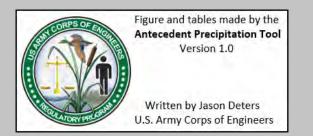


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
MCKINNEY MUNI AP	33.1803, -96.5903	580.053	5.105	30.043	2.451	8184	90
MCKINNEY 1.6 ESE	33.1927, -96.6288	604.003	4.026	53.993	2.029	9	0
MCKINNEY MUNICIPAL AIRPORT	33.1903, -96.5914	585.958	4.433	35.948	2.154	3130	0
ANNA 3.7 SSW	33.3127, -96.5827	580.053	4.78	30.043	2.295	1	0
ANNA	33.35, -96.5167	680.118	9.054	130.108	5.252	24	0
FRISCO	33.1925, -96.7931	747.047	10.855	197.037	7.024	5	0

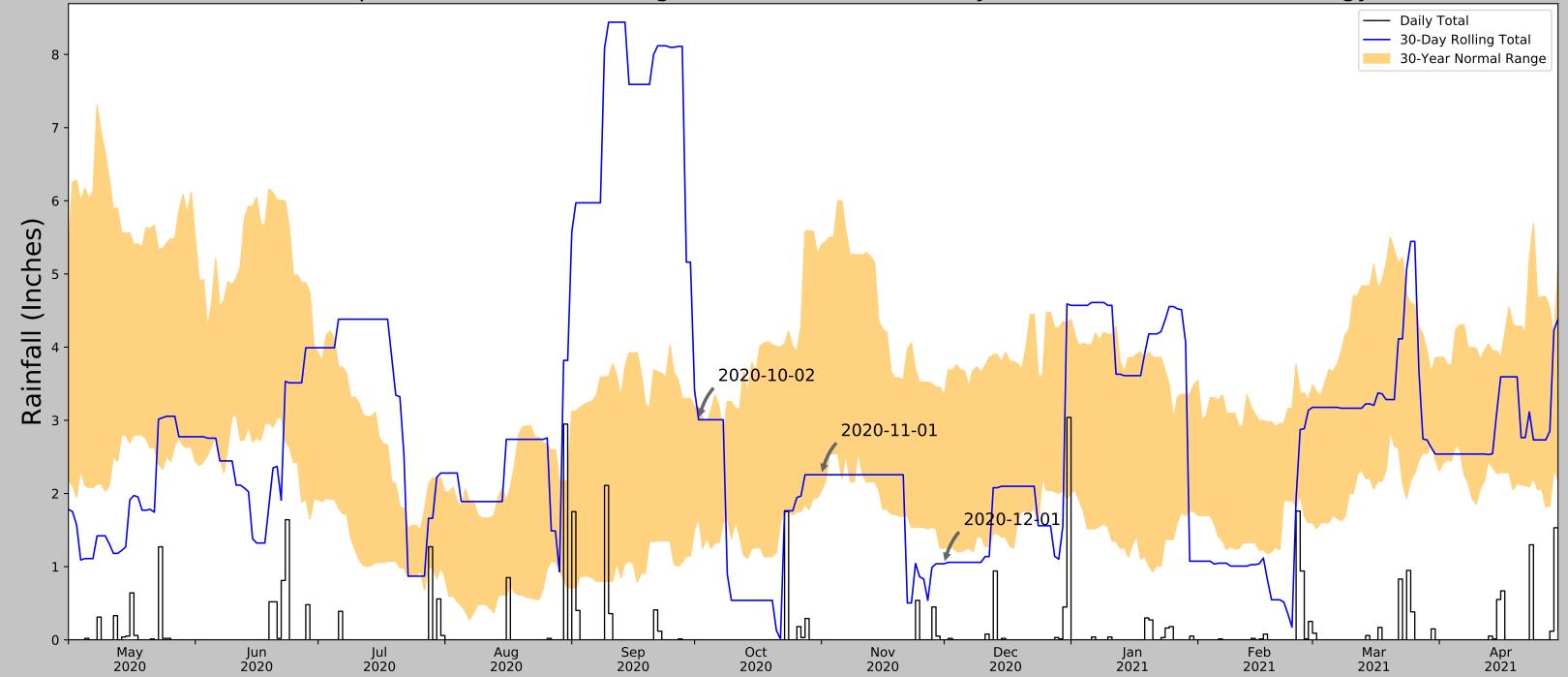


Coordinates	33.250326, -96.618486
Observation Date	2020-11-29
Elevation (ft)	550.01
Drought Index (PDSI)	Incipient drought
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-11-29	1.516535	3.449606	1.03937	Dry	1	3	3
2020-10-30	1.928347	5.587008	2.255906	Normal	2	2	4
2020-09-30	1.144095	3.299213	5.161417	Wet	3	1	3
Result							Normal Conditions - 10

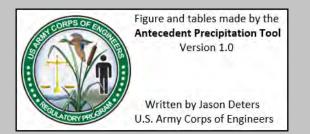


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
MCKINNEY MUNI AP	33.1803, -96.5903	580.053	5.105	30.043	2.451	8184	90
MCKINNEY 1.6 ESE	33.1927, -96.6288	604.003	4.026	53.993	2.029	9	0
MCKINNEY MUNICIPAL AIRPORT	33.1903, -96.5914	585.958	4.433	35.948	2.154	3130	0
ANNA 3.7 SSW	33.3127, -96.5827	580.053	4.78	30.043	2.295	1	0
ANNA	33.35, -96.5167	680.118	9.054	130.108	5.252	24	0
FRISCO	33.1925, -96.7931	747.047	10.855	197.037	7.024	5	0

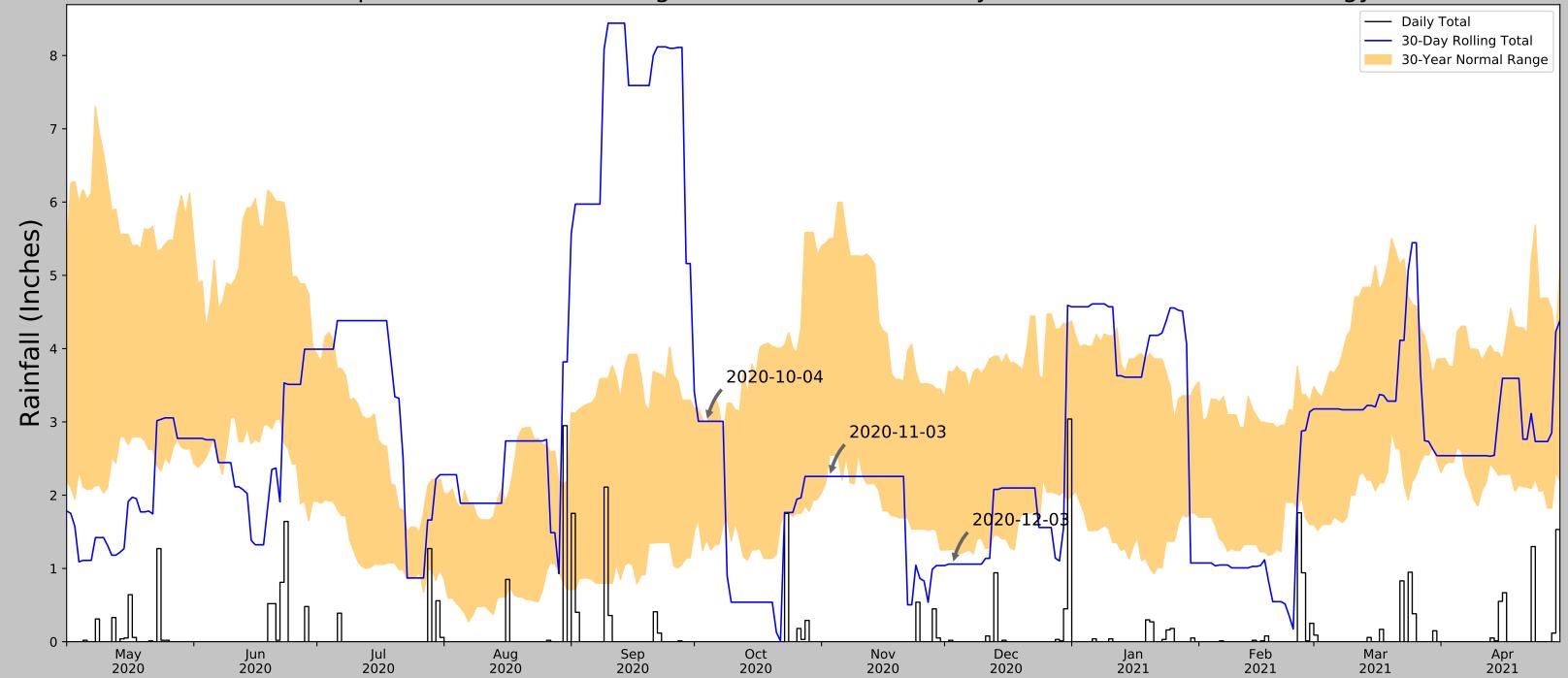


Coordinates	33.250326, -96.618486
Observation Date	2020-12-01
Elevation (ft)	550.01
Drought Index (PDSI)	Incipient drought
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-12-01	1.251575	3.33937	1.03937	Dry	1	3	3
2020-11-01	2.033465	5.399213	2.255906	Normal	2	2	4
2020-10-02	1.660236	3.187008	3.007874	Normal	2	1	2
Result							Drier than Normal - 9

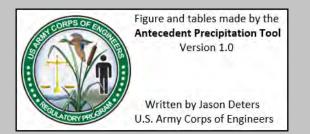


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
MCKINNEY MUNI AP	33.1803, -96.5903	580.053	5.105	30.043	2.451	8184	90
MCKINNEY 1.6 ESE	33.1927, -96.6288	604.003	4.026	53.993	2.029	9	0
MCKINNEY MUNICIPAL AIRPORT	33.1903, -96.5914	585.958	4.433	35.948	2.154	3130	0
ANNA 3.7 SSW	33.3127, -96.5827	580.053	4.78	30.043	2.295	1	0
ANNA	33.35, -96.5167	680.118	9.054	130.108	5.252	24	0
FRISCO	33.1925, -96.7931	747.047	10.855	197.037	7.024	5	0

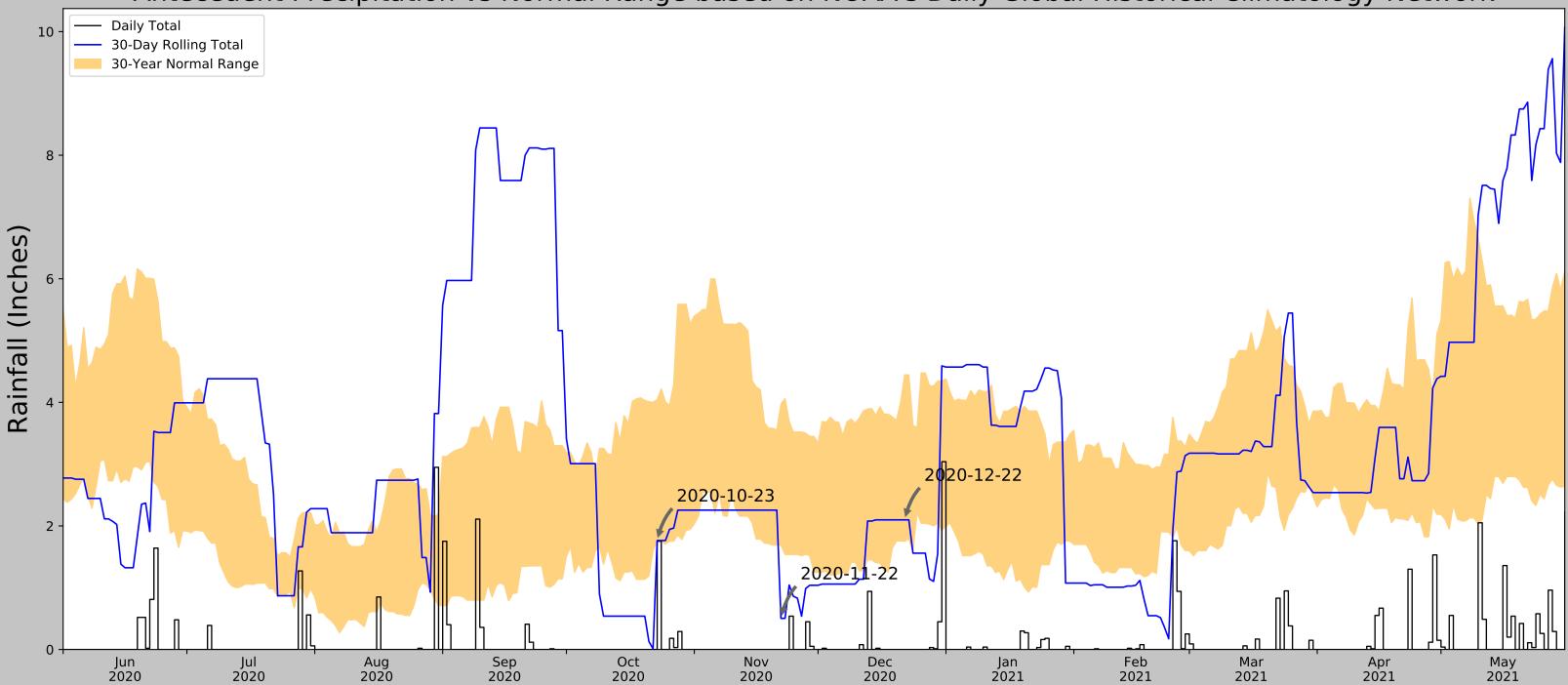


Coordinates	33.250326, -96.618486
Observation Date	2020-12-03
Elevation (ft)	550.01
Drought Index (PDSI)	Incipient drought
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-12-03	1.263386	3.678347	1.059055	Dry	1	3	3
2020-11-03	2.545276	5.50315	2.255906	Dry	1	2	2
2020-10-04	1.397638	2.980315	3.007874	Wet	3	1	3
Result							Drier than Normal - 8

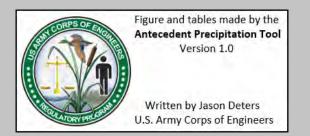


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
MCKINNEY MUNI AP	33.1803, -96.5903	580.053	5.105	30.043	2.451	8184	90
MCKINNEY 1.6 ESE	33.1927, -96.6288	604.003	4.026	53.993	2.029	9	0
MCKINNEY MUNICIPAL AIRPORT	33.1903, -96.5914	585.958	4.433	35.948	2.154	3130	0
ANNA 3.7 SSW	33.3127, -96.5827	580.053	4.78	30.043	2.295	1	0
ANNA	33.35, -96.5167	680.118	9.054	130.108	5.252	24	0
FRISCO	33.1925, -96.7931	747.047	10.855	197.037	7.024	5	0

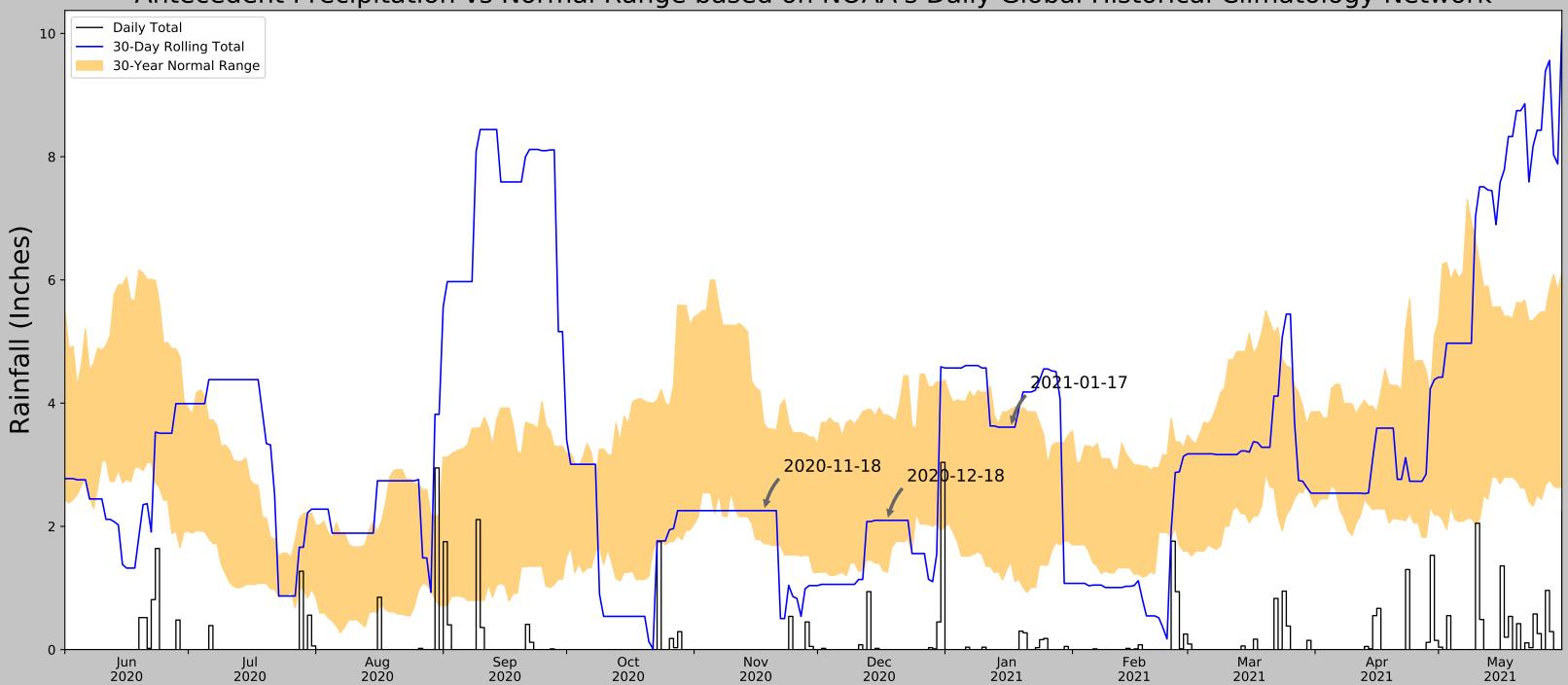


Coordinates	33.250326, -96.618486
Observation Date	2020-12-22
Elevation (ft)	550.01
Drought Index (PDSI)	Incipient drought
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-12-22	1.750394	4.444488	2.098425	Normal	2	3	6
2020-11-22	1.68937	3.969685	0.503937	Dry	1	2	2
2020-10-23	1.757874	4.047244	1.76378	Normal	2	1	2
Result							Normal Conditions - 10

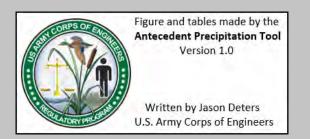


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
MCKINNEY MUNI AP	33.1803, -96.5903	580.053	5.105	30.043	2.451	8184	90
MCKINNEY 1.6 ESE	33.1927, -96.6288	604.003	4.026	53.993	2.029	9	0
MCKINNEY MUNICIPAL AIRPORT	33.1903, -96.5914	585.958	4.433	35.948	2.154	3130	0
ANNA 3.7 SSW	33.3127, -96.5827	580.053	4.78	30.043	2.295	1	0
ANNA	33.35, -96.5167	680.118	9.054	130.108	5.252	24	0
FRISCO	33.1925, -96.7931	747.047	10.855	197.037	7.024	5	0

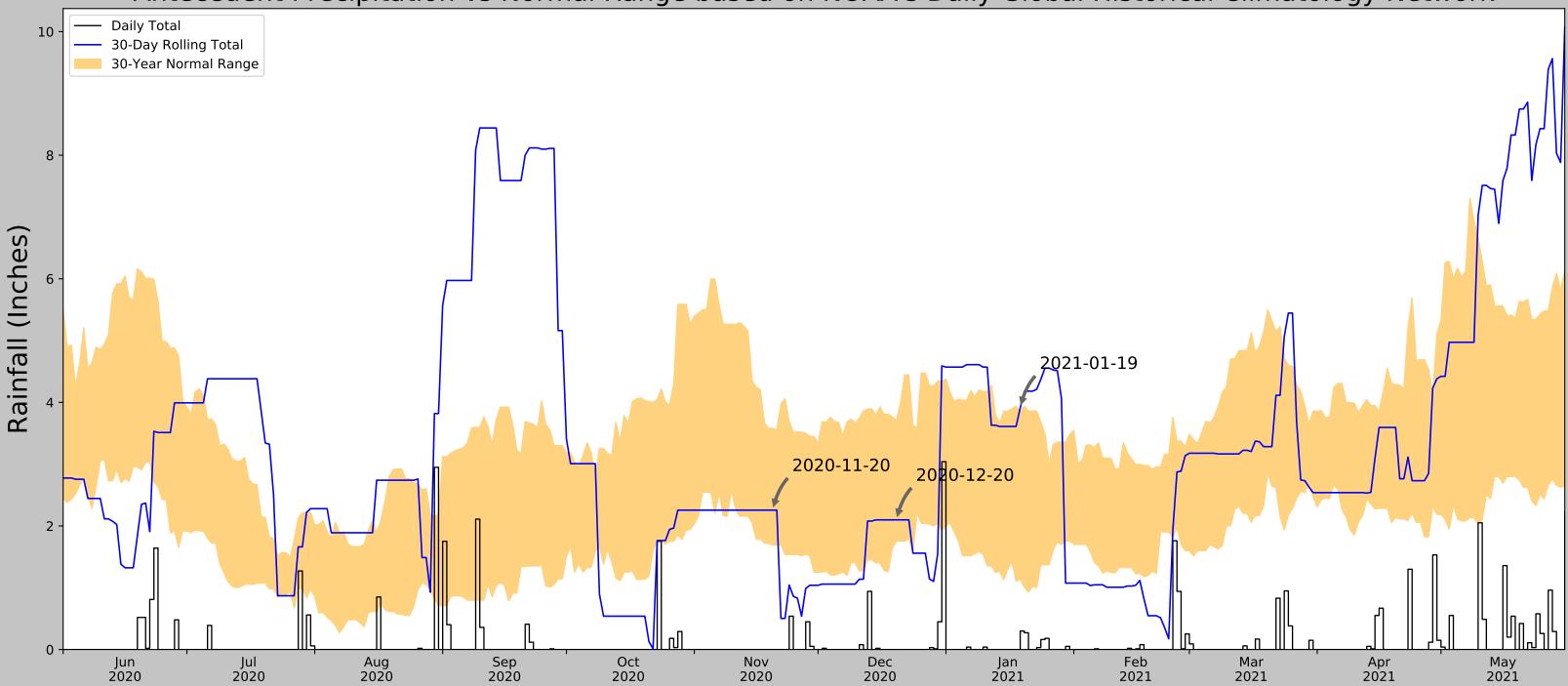


Coordinates	33.250326, -96.618486
Observation Date	2021-01-17
Elevation (ft)	550.01
Drought Index (PDSI)	Incipient drought
WebWIMP H₂O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2021-01-17	1.426378	3.9	3.610236	Normal	2	3	6
2020-12-18	1.255118	3.808268	2.098425	Normal	2	2	4
2020-11-18	1.722441	3.670079	2.255906	Normal	2	1	2
Result							Normal Conditions - 12

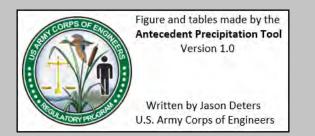


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
MCKINNEY MUNI AP	33.1803, -96.5903	580.053	5.105	30.043	2.451	8184	90
MCKINNEY 1.6 ESE	33.1927, -96.6288	604.003	4.026	53.993	2.029	9	0
MCKINNEY MUNICIPAL AIRPORT	33.1903, -96.5914	585.958	4.433	35.948	2.154	3130	0
ANNA 3.7 SSW	33.3127, -96.5827	580.053	4.78	30.043	2.295	1	0
ANNA	33.35, -96.5167	680.118	9.054	130.108	5.252	24	0
FRISCO	33.1925, -96.7931	747.047	10.855	197.037	7.024	5	0

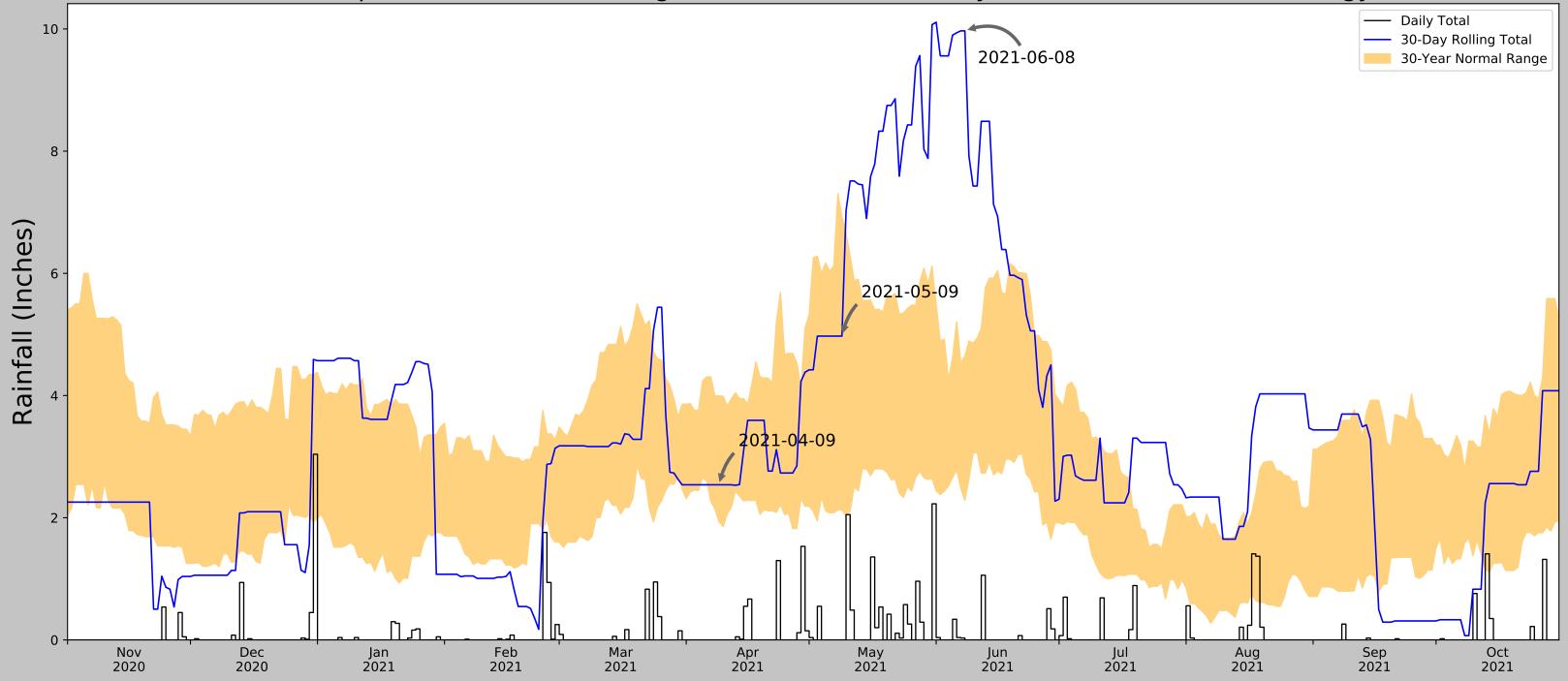


Coordinates	33.250326, -96.618486
Observation Date	2021-01-19
Elevation (ft)	550.01
Drought Index (PDSI)	Incipient drought
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2021-01-19	1.142126	3.849213	3.909449	Wet	3	3	9
2020-12-20	1.755118	3.706299	2.098425	Normal	2	2	4
2020-11-20	1.68937	3.581496	2.255906	Normal	2	1	2
Result							Wetter than Normal - 15

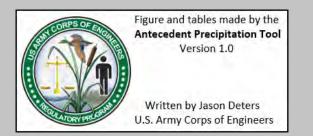


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
MCKINNEY MUNI AP	33.1803, -96.5903	580.053	5.105	30.043	2.451	8184	90
MCKINNEY 1.6 ESE	33.1927, -96.6288	604.003	4.026	53.993	2.029	9	0
MCKINNEY MUNICIPAL AIRPORT	33.1903, -96.5914	585.958	4.433	35.948	2.154	3130	0
ANNA 3.7 SSW	33.3127, -96.5827	580.053	4.78	30.043	2.295	1	0
ANNA	33.35, -96.5167	680.118	9.054	130.108	5.252	24	0
FRISCO	33.1925, -96.7931	747.047	10.855	197.037	7.024	5	0

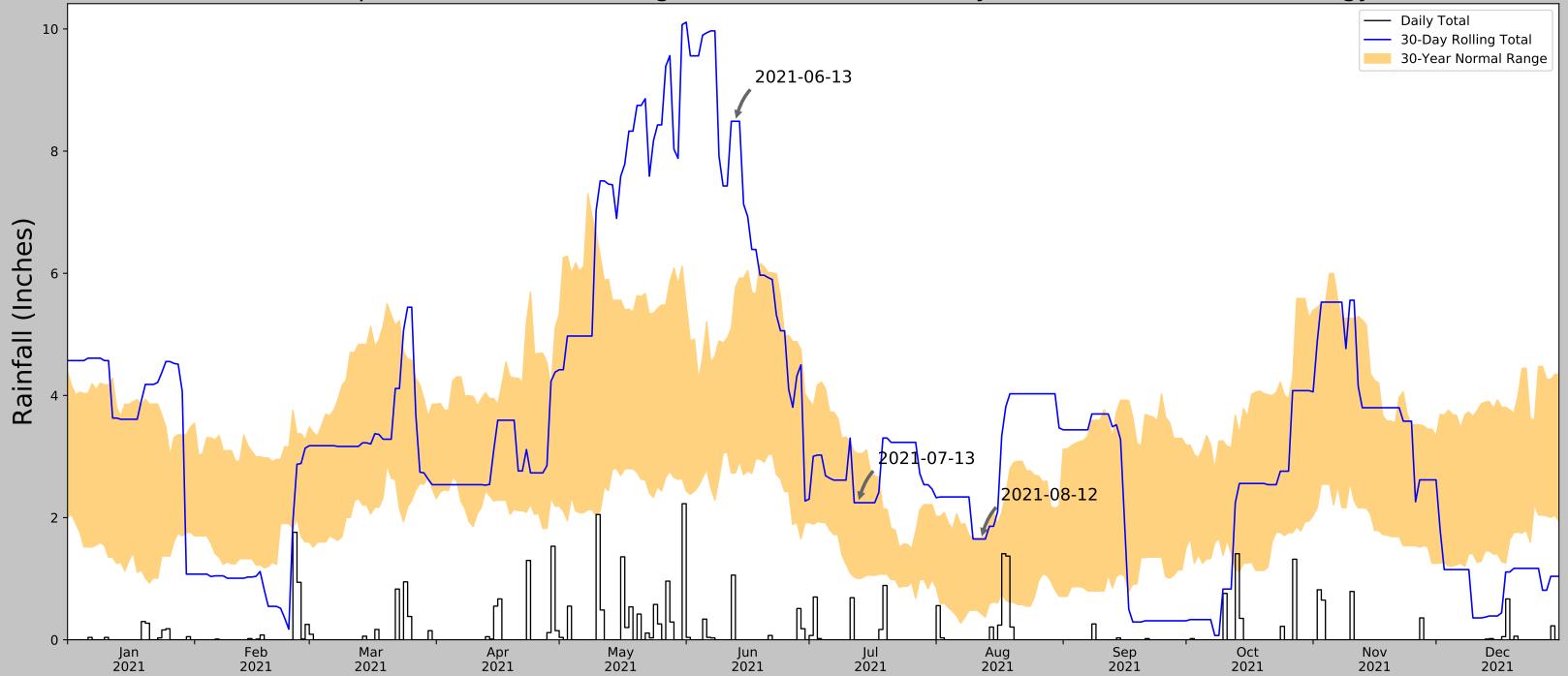


Coordinates	33.250326, -96.618486
Observation Date	2021-06-08
Elevation (ft)	550.01
Drought Index (PDSI)	Mild wetness
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2021-06-08	2.284646	4.643307	9.968504	Wet	3	3	9
2021-05-09	2.130315	6.93504	4.972441	Normal	2	2	4
2021-04-09	1.933465	3.994488	2.53937	Normal	2	1	2
Result							Wetter than Normal - 15

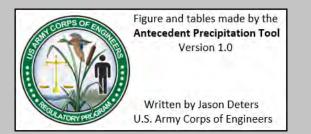


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
MCKINNEY MUNI AP	33.1803, -96.5903	580.053	5.105	30.043	2.451	8184	90
MCKINNEY 1.6 ESE	33.1927, -96.6288	604.003	4.026	53.993	2.029	9	0
MCKINNEY MUNICIPAL AIRPORT	33.1903, -96.5914	585.958	4.433	35.948	2.154	3130	0
ANNA 3.7 SSW	33.3127, -96.5827	580.053	4.78	30.043	2.295	1	0
ANNA	33.35, -96.5167	680.118	9.054	130.108	5.252	24	0
FRISCO	33.1925, -96.7931	747.047	10.855	197.037	7.024	5	0

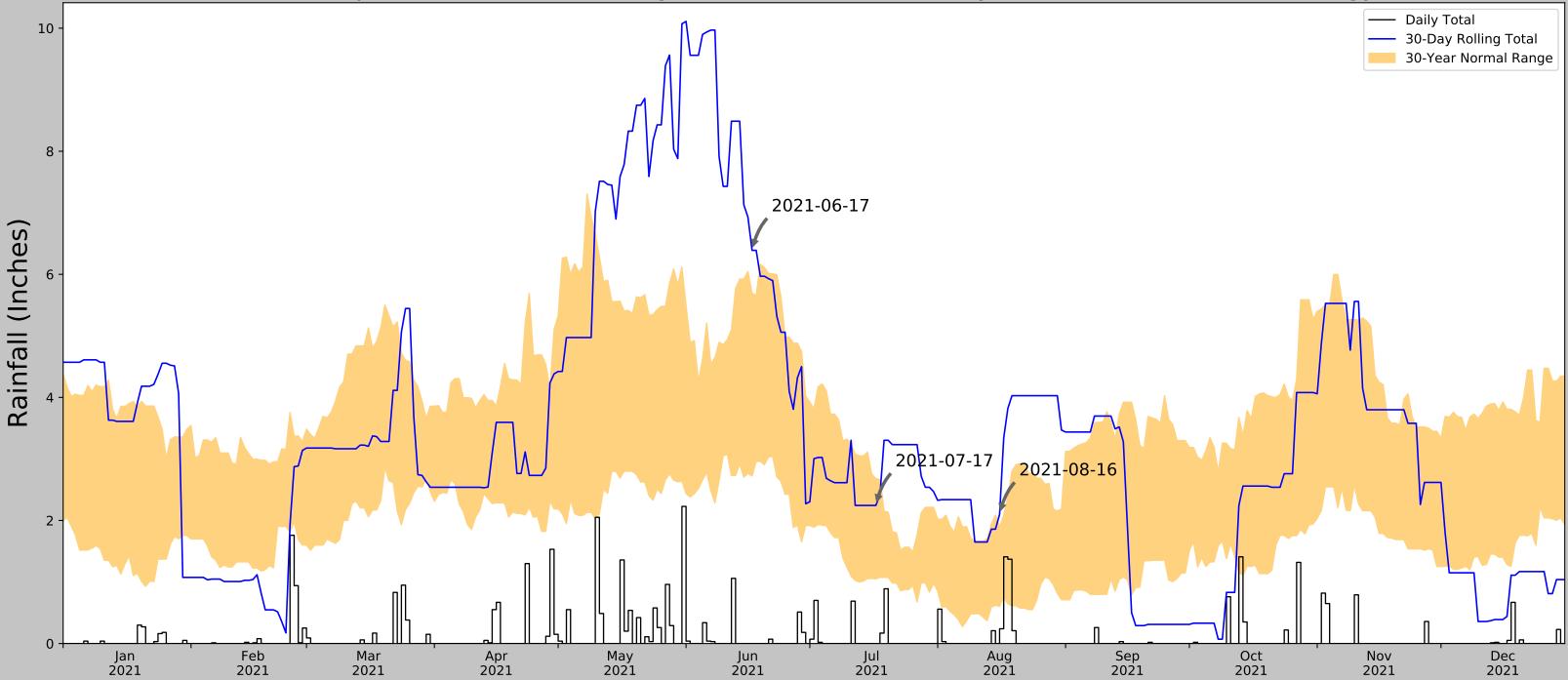


Coordinates	33.250326, -96.618486
Observation Date	2021-08-12
Elevation (ft)	550.01
Drought Index (PDSI)	Severe wetness
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2021-08-12	0.428346	1.664961	1.649606	Normal	2	3	6
2021-07-13	1.0	3.05	2.244095	Normal	2	2	4
2021-06-13	2.730315	5.765748	8.488189	Wet	3	1	3
Result							Normal Conditions - 13

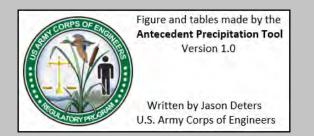


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
MCKINNEY MUNI AP	33.1803, -96.5903	580.053	5.105	30.043	2.451	8184	90
MCKINNEY 1.6 ESE	33.1927, -96.6288	604.003	4.026	53.993	2.029	9	0
MCKINNEY MUNICIPAL AIRPORT	33.1903, -96.5914	585.958	4.433	35.948	2.154	3130	0
ANNA 3.7 SSW	33.3127, -96.5827	580.053	4.78	30.043	2.295	1	0
ANNA	33.35, -96.5167	680.118	9.054	130.108	5.252	24	0
FRISCO	33.1925, -96.7931	747.047	10.855	197.037	7.024	5	0

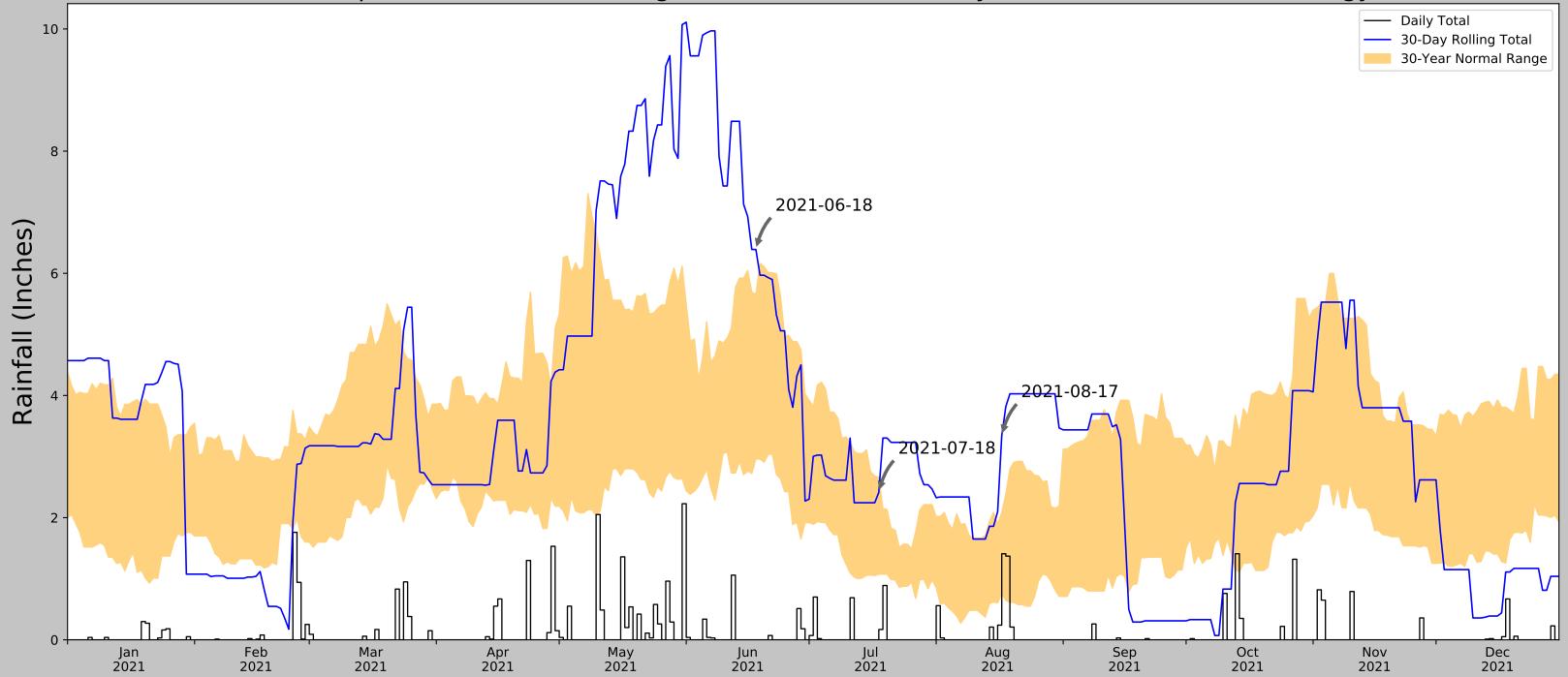


Coordinates	33.250326, -96.618486
Observation Date	2021-08-16
Elevation (ft)	550.01
Drought Index (PDSI)	Severe wetness
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2021-08-16	0.605906	1.899606	2.098425	Wet	3	3	9
2021-07-17	1.051969	2.681496	2.244095	Normal	2	2	4
2021-06-17	2.722047	5.690551	6.389764	Wet	3	1	3
Result							Wetter than Normal - 16

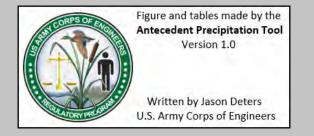


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
MCKINNEY MUNI AP	33.1803, -96.5903	580.053	5.105	30.043	2.451	8184	90
MCKINNEY 1.6 ESE	33.1927, -96.6288	604.003	4.026	53.993	2.029	9	0
MCKINNEY MUNICIPAL AIRPORT	33.1903, -96.5914	585.958	4.433	35.948	2.154	3130	0
ANNA 3.7 SSW	33.3127, -96.5827	580.053	4.78	30.043	2.295	1	0
ANNA	33.35, -96.5167	680.118	9.054	130.108	5.252	24	0
FRISCO	33.1925, -96.7931	747.047	10.855	197.037	7.024	5	0

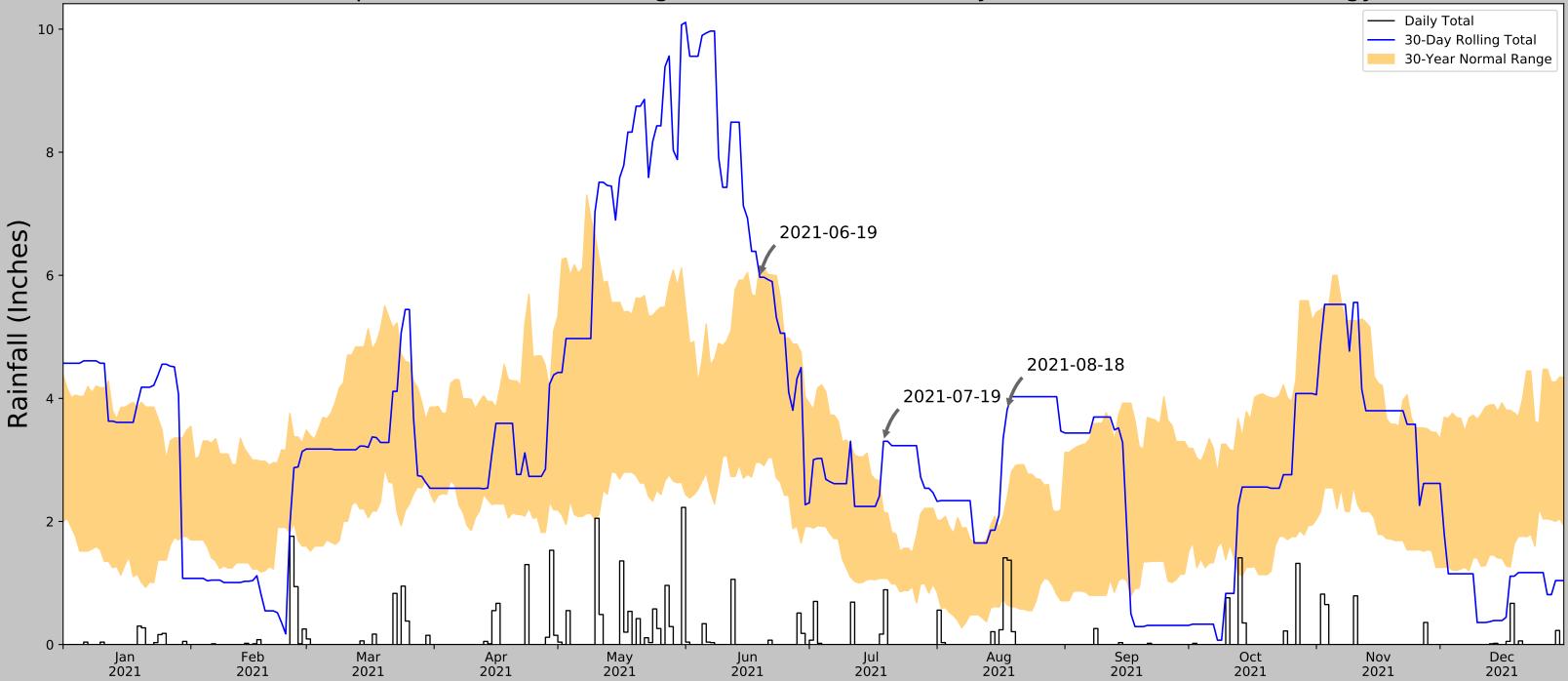


Coordinates	33.250326, -96.618486
Observation Date	2021-08-17
Elevation (ft)	550.01
Drought Index (PDSI)	Severe wetness
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2021-08-17	0.752756	2.085039	3.338583	Wet	3	3	9
2021-07-18	1.074409	2.66378	2.413386	Normal	2	2	4
2021-06-18	2.959055	5.657874	6.389764	Wet	3	1	3
Result							Wetter than Normal - 16

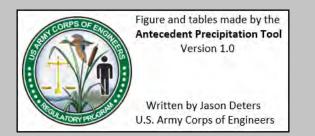


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
MCKINNEY MUNI AP	33.1803, -96.5903	580.053	5.105	30.043	2.451	8184	90
MCKINNEY 1.6 ESE	33.1927, -96.6288	604.003	4.026	53.993	2.029	9	0
MCKINNEY MUNICIPAL AIRPORT	33.1903, -96.5914	585.958	4.433	35.948	2.154	3130	0
ANNA 3.7 SSW	33.3127, -96.5827	580.053	4.78	30.043	2.295	1	0
ANNA	33.35, -96.5167	680.118	9.054	130.108	5.252	24	0
FRISCO	33.1925, -96.7931	747.047	10.855	197.037	7.024	5	0

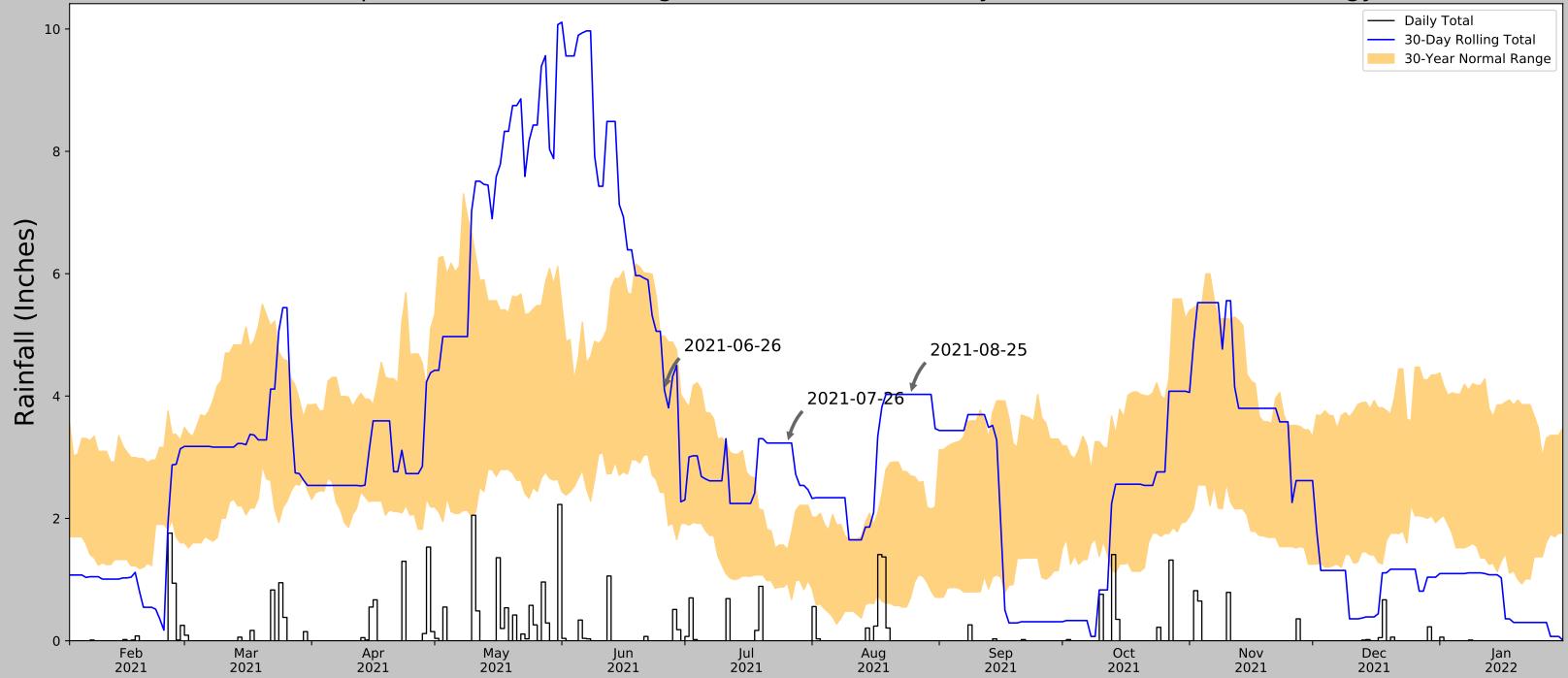


Coordinates	33.250326, -96.618486
Observation Date	2021-08-18
Elevation (ft)	550.01
Drought Index (PDSI)	Severe wetness
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2021-08-18	0.645276	2.385433	3.818898	Wet	3	3	9
2021-07-19	1.074409	2.15315	3.30315	Wet	3	2	6
2021-06-19	2.959055	6.162205	5.968504	Normal	2	1	2
Result							Wetter than Normal - 17

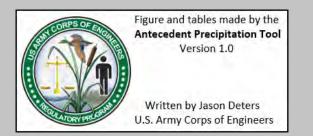


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
MCKINNEY MUNI AP	33.1803, -96.5903	580.053	5.105	30.043	2.451	8184	90
MCKINNEY 1.6 ESE	33.1927, -96.6288	604.003	4.026	53.993	2.029	9	0
MCKINNEY MUNICIPAL AIRPORT	33.1903, -96.5914	585.958	4.433	35.948	2.154	3130	0
ANNA 3.7 SSW	33.3127, -96.5827	580.053	4.78	30.043	2.295	1	0
ANNA	33.35, -96.5167	680.118	9.054	130.108	5.252	24	0
FRISCO	33.1925, -96.7931	747.047	10.855	197.037	7.024	5	0

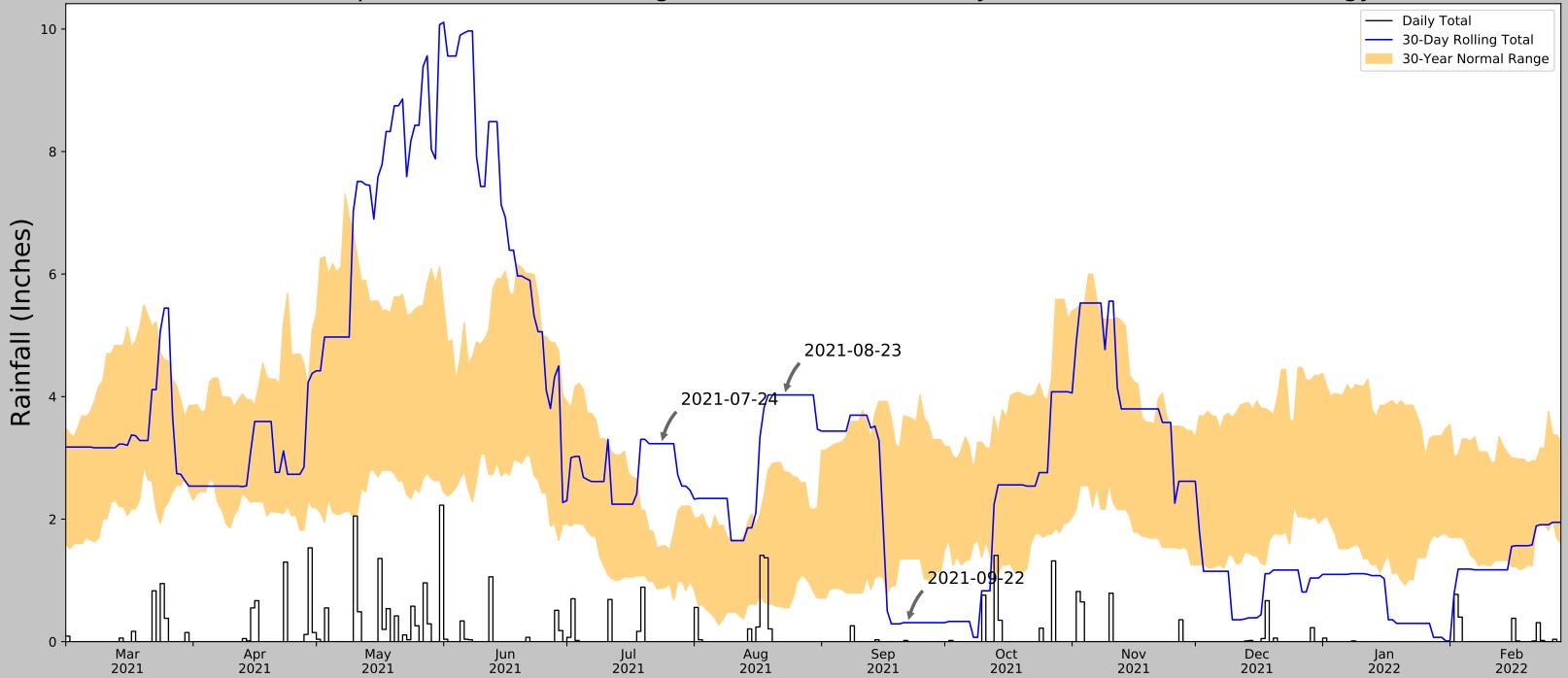


Coordinates	33.250326, -96.618486
Observation Date	2021-08-25
Elevation (ft)	550.01
Drought Index (PDSI)	Severe wetness
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2021-08-25	0.705118	2.694882	4.027559	Wet	3	3	9
2021-07-26	0.94252	1.492913	3.232284	Wet	3	2	6
2021-06-26	2.425197	4.983465	4.098425	Normal	2	1	2
Result							Wetter than Normal - 17

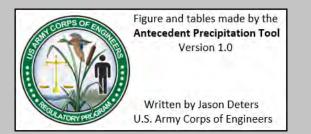


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
MCKINNEY MUNI AP	33.1803, -96.5903	580.053	5.105	30.043	2.451	8184	90
MCKINNEY 1.6 ESE	33.1927, -96.6288	604.003	4.026	53.993	2.029	9	0
MCKINNEY MUNICIPAL AIRPORT	33.1903, -96.5914	585.958	4.433	35.948	2.154	3130	0
ANNA 3.7 SSW	33.3127, -96.5827	580.053	4.78	30.043	2.295	1	0
ANNA	33.35, -96.5167	680.118	9.054	130.108	5.252	24	0
FRISCO	33.1925, -96.7931	747.047	10.855	197.037	7.024	5	0



Coordinates	33.250326, -96.618486
Observation Date	2021-09-22
Elevation (ft)	550.01
Drought Index (PDSI)	Incipient drought
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2021-09-22	1.352756	3.666142	0.311024	Dry	1	3	3
2021-08-23	0.550787	2.766929	4.027559	Wet	3	2	6
2021-07-24	0.877559	1.565354	3.232284	Wet	3	1	3
Result							Normal Conditions - 12



Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
MCKINNEY MUNI AP	33.1803, -96.5903	580.053	5.105	30.043	2.451	8184	90
MCKINNEY 1.6 ESE	33.1927, -96.6288	604.003	4.026	53.993	2.029	9	0
MCKINNEY MUNICIPAL AIRPORT	33.1903, -96.5914	585.958	4.433	35.948	2.154	3130	0
ANNA 3.7 SSW	33.3127, -96.5827	580.053	4.78	30.043	2.295	1	0
ANNA	33.35, -96.5167	680.118	9.054	130.108	5.252	24	0
FRISCO	33.1925, -96.7931	747.047	10.855	197.037	7.024	5	0