# WATERS AND WETLANDS EVALUATION REPORT

# For

County	Bryan & Marshall	JP Number	33873(04)	Project Number	J3-3873(004)
Road Number	US-70	Water Body	Name	Lake Texo	ma
ROW Date		Let Date	Not programmed	Project Length	4.45 Miles
Project Ge	neral Location	5 miles east	of Kingston, an	d 10 miles w	vest of Durant, OK
Project Sta	tement	Bridge and Bridge)	Approaches on	US-70 Ove	r Lake Texoma (Roosevelt

# Prepared for: Oklahoma Department of Transportation Environmental Programs Division 200 NE 21<sup>st</sup> Street Oklahoma City, OK 73105

# Prepared by:

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Report Date:	February 4, 2022
Field Date:	December 1-2, 2021

Form Date: January 24, 2017

#### PROJECT OVERVIEW

Project Type (Choose one)	Check √
Bridge and Approaches or bridge widening/structure extension	V
Grade, Drain, Surface and Bridge	
Grade, Drain and Surface	
Asphalt Overlay Resurfacing	
Widen and Resurface existing lanes	
Pavement Reconstruction or rehabilitation	
Bridge Rehabilitation	
Safety Improvements (Cable Barrier, Guardrail, signage)	
Intersection Modifications	
Safe Routes to School (Describe)	
Enhancements (Describe)	
Other (Describe)	

## Description of the **existing** bridge/roadway

The existing bridge on US-70 over Lake Texoma (NBI 10965) is a 24-foot-wide, 87-span bridge consisting of a Warren through truss central span, 63 steel girders spans, and 23 tower spans. The bridge has a sufficiency rating of 42.3 and is at risk of becoming structurally deficient. The bridge is classified as functionally obsolete. The vertical clearance on the truss span is 14 feet 9 inches, which does not meet today's standards. The bridge has been determined eligible for listing in the National Register of Historic Places. The US-70 approach roadway is 38 feet wide, consisting of two 12-foot-wide driving lanes and 7-foot-wide shoulders. The existing average annual daily traffic (AADT) on US-70 is 8,500 vehicles per day (vpd) with a 20-year future projected AADT of 13,200 vpd. The purpose of this project is to correct the narrow, at-risk bridge, provide adequate vertical clearance, and accommodate existing and future traffic demand.

## Description of **proposed** improvements **SPECIFIC TO THIS PROJECT**

Because the bridge is an eligible historic resource, several alternatives to improve the existing bridge are under consideration. These alternatives include rehabilitation (including a widened option), reuse as part of a one-way pair, reuse as a pedestrian/bicycle facility, and preservation as a historic monument. The last three options include construction of a new bridge on new alignment to the south. Should none of these alternatives be determined prudent or feasible, replacement options will be considered. In order to meet the purpose and need for the project, the new bridge should provide four 12-foot driving lanes and 8 to 10-foot paved shoulders. New right-of-way (ROW) would be required. The roadway would remain open during construction.

# **Project Environmental Study Footprint**

<b>Project Location</b>		<b>Environmental Study Footprint</b>	
Section Range &	Lat/Long (NAD 83)	Dimensions	Acreage
Township	_		_
S25, S26, S35 &	Center of NBI 10965:	Beginning approximately 800 feet	404
S36, T6S, R6E	34.001542, -96.618735	east of the US-70 and Johnson	
		Road intersection and extending	
S27-34, T6S, 7E	West End:	4.45 miles, widths vary from 159	
	33.997445, -96.644033	feet to 445 feet from the center of	
		the roadway. At the lake	
	East End:	bumpout, widths vary from 158	
	33.998229, -96.567467	feet to 1,327 feet from the center	
		of the roadway.	

**Environmental Study Footprint Soils (NRCS Soil Survey Map)** 

Map Unit Name	Percent Slope	<b>Drainage Class</b>		dric ting	Description
rvainc	Бюрс		YES	NO	-
10 – Bernow fine sandy loam, severely eroded	3 to 8	Well drained		<b>√</b>	Sandy and loamy alluvium soils. Common landform is paleoterraces.
13 – Boxville fine sandy loam	1 to 3	Well drained		1	Loamy and/or clayey alluvium soils. Common landform is stream terraces.
14 – Boxville fine sandy loam	3 to 8	Well drained		1	Loamy and/or clayey alluvium. Common landform is stream terraces.
42 – Karma fine sandy loam	1 to 3	Well drained		1	Loamy alluvium soils. Common landform is paleoterraces.
52 – Larton loamy fine sand	3 to 5	Well drained		1	Loamy and sandy alluvium and/or eolian deposits. Common landform is paleoterraces.
68 - Pits	-	-		1	Mine spoil or earthy fill. Common landform is not specified.
79 – Woodson silt loam	0 to 1	Somewhat poorly drained		√	Silty and/or clayey alluvium soils. Common landform is paleoterraces.
W – Water	-	-		V	Common landform is valleys.

Map Unit Name	Percent Slope	<b>Drainage Class</b>	Hydric Rating		Description
			YES	NO	
8 – Durant clay loam, eroded	1 to 5	Moderately well drained		1	Clayey residuum weathered from shale and/or claystone. Common landform is ridges.
12 – Ferris- Tarrant complex	5 to 12	Well drained		<b>V</b>	Ferris (70% composition) soil is calcareous clayey residuum weathered from shale. Tarrant (20% composition) soils are clayey residuum weathered from limestone. Common landform is hillslopes on hills.
SwiE – Swink very cobbly clay loam	2 to 15	Well drained		1	Residuum weathered from limestone soils. Common landform is ridges.

## **Environmental Study Footprint General Description and Vegetation Present**

The study area is located over Lake Texoma west of Durant in Bryan and Marshall Counties, Oklahoma. The study area primarily contains Lake Texoma, roadway, watercourses, upland wooded habitat, riparian, palustrine scrub-shrub (PSS) wetlands, and tall grass habitat. The remainder of the study area is occupied by ROW. According to the 1982 Platter, Okla.-Tex., the 1967 Little City, Okla., the 1967 Kingston North, Okla., and the 1982 Kingston South, Okla.-Tex. 7.5-minute U.S. Geological Survey (USGS) topographic quadrangles, one perennial waterbody (Lake Texoma), four perennial coves (of Lake Texoma), and one intermittent stream (unnamed tributary to Lake Texoma) occur within the study area. Field work was conducted December 1-2, 2021. According to the closest weather station (Newberry Creek, KOKMEAD9) to the study area, the area received no precipitation within the two weeks prior to December 1<sup>st</sup>. Two USGS-mapped perennial waterbodies (Lake Texoma and OW 3b), one perennial cove, one perennial overflow pond, one intermittent stream, four ephemeral streams, and six PSS wetlands were delineated within the study footprint.

Vegetation present within the upland wooded habitat predominately consists of American elm (Ulmus americana), sugar-berry (Celtis laevigata), common buttonbush (Cephalanthus occidentalis), willow oak (Quercus phellos), eastern red-cedar (Juniperus virginiana), osageorange (Maclura pomifera), deciduous holly (Ilex decidua), peatree (Sesbania herbacea), eastern cottonwood (Populus deltoides), northern red oak (Quercus rubra), spotted crane's-bill (Geranium maculatum), horsebrier (Smilax rotundifolia), bushy bluestem (Andropogon glomeratus), Alabama supplejack (Berchemia scandens), henbit deadnettle (Lamium amplexicaule), common chickweed (Stellaria media), nodding wild rye (Elymus canadensis), tapered rosette grass (Dichanthelium acuminatum), aster (Symphyotrichum spp.), fringed greenbrier (Smilax bona-nox), sedge (Carex spp.), and southern dewberry (Rubus trivialis). Vegetation present within the riparian habitat predominately consists of honey-locust (Gleditsia triacanthos), common buttonbush, green ash (Fraxinus pennsylvanica), black willow (Salix nigra), eastern red- cedar, sedge, spotted crane's-bill, aster, Johnson grass (Sorghum

halepense), southern dewberry, nodding wild rye, tumble windmill grass (*Chloris verticillata*), tall false rye grass (*Schedonorus arundinaceus*), little barley (*Hordeum pusillum*), Bermuda grass (*Cynodon dactylon*), heliotrope (*Heliotropium spp.*), tapered rosette grass, speedwell (*Veronica spp.*), rough cocklebur (*Xanthium strumarium*), and hogwort (*Croton capitatus*). Vegetation present within the PSS wetlands consists of black willow, common buttonbush, sedge, and southern dewberry. Vegetation present within the tallgrass habitat consists of American elm, common buttonbush, Bermuda grass, southern dewberry, hogwort, tapered rosette grass, and aster. Vegetation present within the ROW habitat includes Bermuda grass, aster, crown grass (*Paspalum spp.*), spotted crane's-bill, and Johnson grass.

#### WATERS AND WETLANDS EVALUATION

## **Data Sources Reviewed (list)**

USGS 7.5 minute Quad	NWI Map	<b>USACE</b> Wetland	Additional
		Regional	Resources
		Supplement	Reviewed
1982 Platter, OklaTex.,	1990 Platter, OklaTex.,	Great Plains Region	Google Earth;
1967 Little City, Okla.,	1990 Little City, Okla.,		NRCS Web Soil
1967 Kingston North,	1990 Kingston North,		Survey;
Okla.,	Okla.,		USDA Plant
1982 Kingston South,	1990 Kingston South,		Database;
OklaTex.	OklaTex.		USGS Water
			Resources

**Wetlands and Ponds Summary Table** 

Field Sites	Type of Wetland or Pond	Cowardin Classification	Potential Jurisdictional Status	Acres within Environmental Study Footprint
Wetland 1	Palustrine Scrub-Shrub	PSS1J	Likely	0.06
Wetland 2	Palustrine Scrub-Shrub	PSS1J	Likely	1.31
Wetland 3	Palustrine Scrub-Shrub	PSS1J	Likely	0.25
Wetland 4	Palustrine Scrub-Shrub	PSS1J	Likely	0.35
Wetland 5	Palustrine Scrub-Shrub	PSS1J	Likely	0.95
Wetland 6	Palustrine Scrub-Shrub	PSS1J	Likely	0.38
Lake Texoma (OW 3a)	Lacustrine Limnetic Aquatic Bed	L1UBHh	Likely	211.11
Lake Texoma Cove (OW 3c)	Lacustrine Limnetic Aquatic Bed	L1UBHh	Likely	3.52

Field Sites	Type of Wetland or Pond	Cowardin Classification	Potential Jurisdictional Status	Acres within Environmental Study Footprint
Lake Texoma Overflow (OW 3d)	Lacustrine Limnetic Aquatic Bed	L1UBHh	Likely	2.62

**Streams and Drainages Summary Table** 

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Field Sites	Stream Name	USGS Mapped Status	Potential Jurisdictional Status	Acres within Environmental Study Footprint	Linear Feet within Environmental Study Footprint
OW 1	Unnamed Tributary to Lake Texoma	Not Mapped	Likely	0.003	49
OW 2	Unnamed Tributary to Lake Texoma	Not Mapped	Likely	0.04	431
OW 3b	Unnamed Tributary to Lake Texoma	Perennial	Likely	0.06	267
OW 4a	Unnamed Tributary to Lake Texoma	Not Mapped	Likely	0.003	38
OW 4b	Unnamed Tributary to Lake Texoma	Not Mapped	Likely	0.02	136
OW 5	Unnamed Tributary to Lake Texoma	Not Mapped	Likely	0.01	118

## Streams and other linear aquatic features

OW 1 – An unnamed tributary to Lake Texoma, is not a USGS-mapped feature but was observed as an ephemeral stream during the field investigation. An estimated total of 49 linear feet (0.003 acre) of OW 1 occurs within the study footprint where it flows south to north. This short stream begins at a culvert and ends at the highly disturbed section of the lake cove where extensive trees clearing, and erosion activities have occurred from the construction east of the feature. The minimum ordinary high water mark (OHWM) was observed to be 1 foot wide, the maximum OHWM was observed to be 3 feet wide, and the average OHWM was observed to be 2 feet wide.

The estimated OHWM depth is between 1 and 2 inches. The riparian zone consists mainly of wooded and scrub-shrub vegetation. The streambanks are low, steep, disturbed, and streambank erosion potential is high. No water was observed, and the stream substrate is primarily clay loam. OW 1 likely receives water from precipitation and OW 2. During the field investigation, drift material in the channel was observed. No aquatic organisms were observed. Dominant riparian plant species observed include common buttonbush, honey-locust, sedge, aster, southern dewberry, and spotted crane's-bill. This feature is likely subject to regulation by the U.S. Army Corps of Engineers (USACE) as it is an ephemeral stream that flows into a USGS-mapped cove of a Traditional Navigable Water (TNW; Lake Texoma).

OW 2 – An unnamed tributary to Lake Texoma, is not a USGS-mapped feature but was observed as an ephemeral stream during the field investigation. An estimated total of 431 linear feet (0.04 acre) of OW 2 occurs within the study footprint where it flows west to east into OW 1. The stream channel is lined with rip rap. The minimum OHWM was observed to be 3 feet wide, the maximum OHWM was observed to be 8 feet wide, and the average OHWM was observed to be 5 feet wide. The estimated OHWM depth is between 1 and 2 inches. The riparian zone consists mainly of sapling and scrub-shrub vegetation. The streambanks are low, gently sloped, lined with rip rap, and streambank erosion potential is low. No water was observed. OW 2 likely receives water from precipitation and roadway runoff. During the field investigation, rock ledges, root wads, and drift material in the channel were observed. No aquatic organisms were observed. Dominant riparian plant species observed include black willow, green ash, eastern red-cedar, southern dewberry, Johnson grass, and nodding wild rye. This feature is likely subject to regulation by the USACE as it is an ephemeral tributary to a USGS-mapped cove of a TNW (Lake Texoma).

OW 3b – A USGS-mapped perennial cove of Lake Texoma, was observed as a perennial stream feature during the field investigation. An estimated total of 267 linear feet (0.06 acre) of OW 3b occurs within the study footprint. This stream is located east of Lake Texoma and south of US-70. The minimum OHWM was observed to be 1 foot wide, the maximum OHWM was observed to be 30 feet wide, and the average OHWM was observed to be 11 feet wide. The estimated OHWM depth is between 1 and 2 inches. The riparian zone consists mainly of wooded and scrub-shrub vegetation. The streambanks are low, have a 4:1 slope, are not well vegetated, and streambank erosion potential is moderate. Water was clear reddish brown, and the stream substrate is primarily clay loam. OW 3b likely receives back water from Lake Texoma, groundwater, roadway runoff, and precipitation. During the field investigation, wetlands were observed along both banks (Wetland 2). Large fish were observed during the field investigation. Dominant riparian plant species observed include black willow, common buttonbush, southern dewberry, and tapered rosette grass. This feature is likely subject to regulation by the USACE as it is a USGS-mapped perennial stream of a USGS-mapped TNW (Lake Texoma).

OW 4a – An unnamed tributary to Lake Texoma, is not a USGS-mapped feature but was observed as an ephemeral stream during the field investigation. A reinforced concrete pipe (RCP) under US-70 conveys water from OWs 4a, 4b, and 5 south into OW 3b. An estimated total of 38 linear feet (0.003 acre) of OW 4a occurs within the study footprint where it flows northeast to southwest. The minimum OHWM was observed to be 1 foot wide, the maximum OHWM was observed to be 8 feet wide, and the average OHWM was observed to be 4 feet wide.

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The estimated OHWM depth is between 1 and 1.5 inches. The riparian zone consists mainly of scrub-shrub vegetation with a dense herbaceous layer. The streambanks are well vegetated, low, and streambank erosion potential is low. The stream substrate is primarily clay. OW 4a likely receives water from precipitation. No aquatic organisms were observed. Dominant riparian plant species observed include black willow, common buttonbush, Bermuda grass, spotted crane's-bill, southern dewberry, and hogwort. This feature is likely subject to regulation by the USACE as it is an ephemeral tributary to a USGS-mapped perennial cove of a TNW (Lake Texoma).

OW 4b - An unnamed tributary to Lake Texoma, is not a USGS-mapped feature but was observed as an intermittent stream during the field investigation. An RCP under US-70 conveys water from OWs 4a, 4b, and 5 south into OW 3b. An estimated total of 136 linear feet (0.02 acre) of OW 4b occurs within the study footprint. OW 4 occurs both west and east of the RCP and flows west to east and east to west, respectively. The minimum OHWM was observed to be 3 foot wide, the maximum OHWM was observed to be 12 feet wide, and the average OHWM was observed to be 6 feet wide. The estimated OHWM depth is between 2 and 5 inches. The riparian zone consists mainly of scrub-shrub vegetation with a dense herbaceous layer. The streambanks are well vegetated, low, and streambank erosion potential is low. Water color was clear yellowish brown, and the stream substrate is primarily clay. OW 4b likely receives water from precipitation and a potential spring at the far west end of the feature. During the field investigation, rock ledges, roots, drift material, and algae in the channel were observed. No aquatic organisms were observed. Dominant riparian plant species observed include black willow, common buttonbush, Bermuda grass, spotted crane's-bill, southern dewberry, and hogwort. This feature is likely subject to regulation by the USACE as it is an ephemeral tributary to a USGS-mapped perennial cove of a TNW (Lake Texoma).

OW 5 – An unnamed tributary to Lake Texoma, is not a USGS-mapped feature but was observed as an ephemeral stream during the field investigation. An estimated total of 118 linear feet (0.01 acre) of OW 5 occurs within the study footprint where it flows north to south. The headwaters of OW 5 begin within the study area and the stream ends at the confluence of OW 4. The minimum OHWM was observed to be 2 feet wide, the maximum OHWM was observed to be 6 feet wide, and the average OHWM was observed to be 3 feet wide. The estimated OHWM depth is between 1 and 1.5 inches. The riparian zone consists mainly of scrub-shrub vegetation with a dense herbaceous layer. The streambanks are well vegetated, low, and streambank erosion potential is low. The majority of the stream is dry; however, water is present near the confluence with OW 4. The water was clear brown, and the stream substrate is primarily clay. OW 5 likely receives water from precipitation. During the field investigation, undercut banks and roots in the channel were observed. No aquatic organisms were observed. Dominant riparian plant species observed include common buttonbush, sedge, aster, southern dewberry, and hogwort. This feature is likely subject to regulation by the USACE as it is an ephemeral tributary to a USGS-mapped cove of a TNW (Lake Texoma).

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## Wetlands and ponds

Wetland 1 – This wetland is an NWI-mapped feature and is classified as a L1UBHh (Lacustrine, Limnetic, Unconsolidated Bottom, Permanently Flooded, Diked/Impounded Wetland); however, it was observed as a PSS1J (Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Intermittently Flooded Wetland) during the field investigation. This wetland is located west of Lake Texoma and north of US-70. Wetland 1 has been disturbed from excavation activities to the east. This feature displayed geomorphic position, a FAC-neutral test, and soils that exhibited a depleted matrix. Vegetation observed includes common buttonbush. Approximately 0.06 acre occurs within the footprint. This feature is likely subject to regulation by the USACE as it abuts a USGS-mapped perennial cove (outside of the study area) of Lake Texoma, a TNW.

Wetland 2 – This wetland is an NWI-mapped feature and is classified as a L1UBHh; however, it was observed as a PSS1J during the field investigation. This wetland is located east of Lake Texoma and south of US-70. Wetland 2 was observed as a fringe PSS wetland on both banks of OW 3b. This feature displayed sediment deposits, geomorphic position, a FAC-neutral test, and soils with a depleted matrix. Vegetation observed includes buttonbush. Approximately 1.31 acres occur within the footprint. This feature is likely subject to regulation by the USACE as it abuts a USGS-mapped perennial cove of Lake Texoma, a TNW.

Wetland 3 – This wetland is a NWI-mapped feature and is classified as a L1UBHh; however, it was observed as a PSS1J during the field investigation. This wetland is located south of US-70 and west of Wetland 2. This feature displayed geomorphic position, a FAC-neutral test, and soils with a depleted matrix. Vegetation observed include black willow, common buttonbush, and sedge. Approximately 0.25 acre occurs within the footprint. This feature is likely subject to regulation by the USACE as it abuts a USGS-mapped perennial cove (outside of the study area) of Lake Texoma, a TNW.

Wetland 4 – A small section of this wetland is classified as a L1UBHh on the NWI map; however, it was observed as a PSS1J during the field investigation. This wetland is located north of US-70 and directly abuts the west side of OW 3c. This feature displayed a high water table, saturated soils, geomorphic position, a FAC-neutral test, and soils with a depleted matrix. Vegetation observed include common buttonbush and sedge. Approximately 0.35 acre occurs within the footprint. This feature is likely subject to regulation by the USACE as it abuts a USGS-mapped perennial cove of Lake Texoma, a TNW.

Wetland 5 – A small section of this wetland is classified as a L1UBHh on the NWI map; however, it was observed as a PSS1J during the field investigation. This wetland is located sound of US-70 and was observed as a PSS fringe wetland on the east side of OW 3d. This feature displayed a sparsely vegetated concave surface, geomorphic position, a FAC-neutral test, and soils with a depleted matrix. Vegetation observed include black willow, common buttonbush, sedge, and southern dewberry. Approximately 0.95 acre occurs within the footprint. This feature is likely subject to regulation by the USACE as it abuts a USGS-mapped perennial Relatively Permanent Water (RPW; OW 3d) that has a direct surface water connection to Lake Texoma, a TNW.

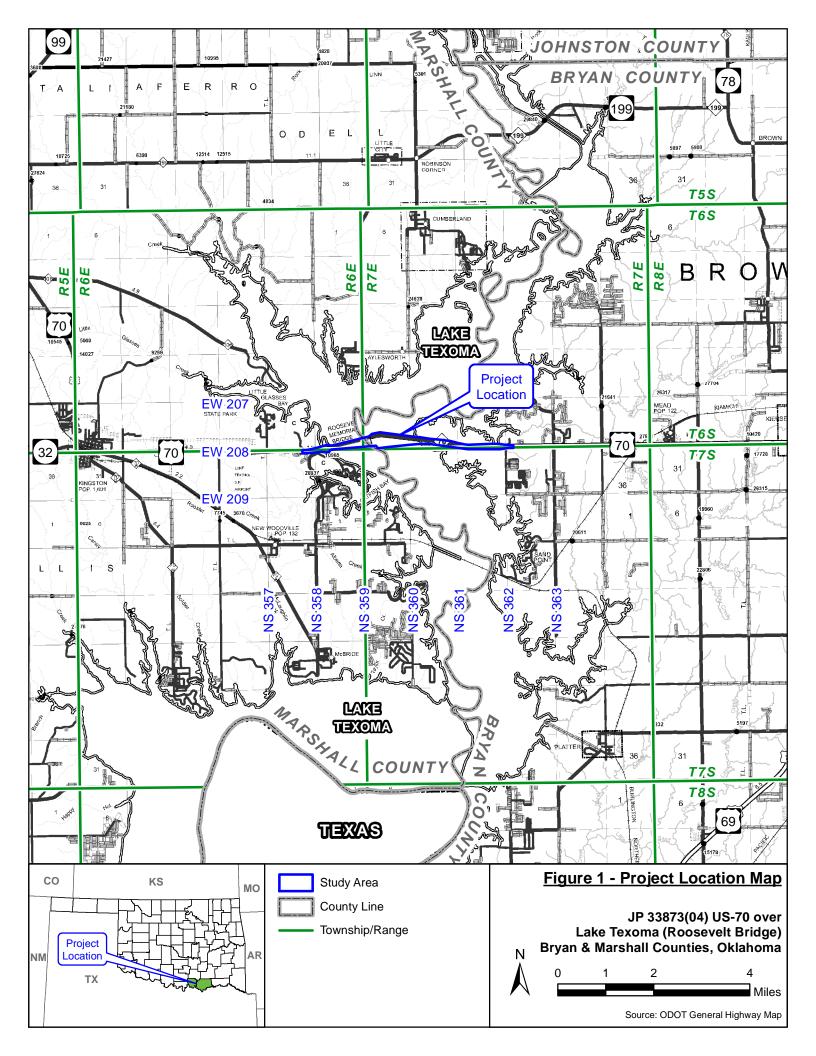
Wetland 6 – A small section of this wetland is classified as a L1UBHh on the NWI map; however, it was observed as a PSS1J during the field investigation. This wetland is located sound of US-70 and was observed as a PSS fringe wetland on the west side of OW 3d. This feature displayed geomorphic position, a FAC-neutral test, and soils with a depleted matrix. Vegetation observed include black willow, common buttonbush, and southern dewberry. Approximately 0.38 acre occurs within the footprint. This feature is likely subject to regulation by the USACE as it abuts a USGS-mapped perennial RPW that flows into Lake Texoma, a TNW.

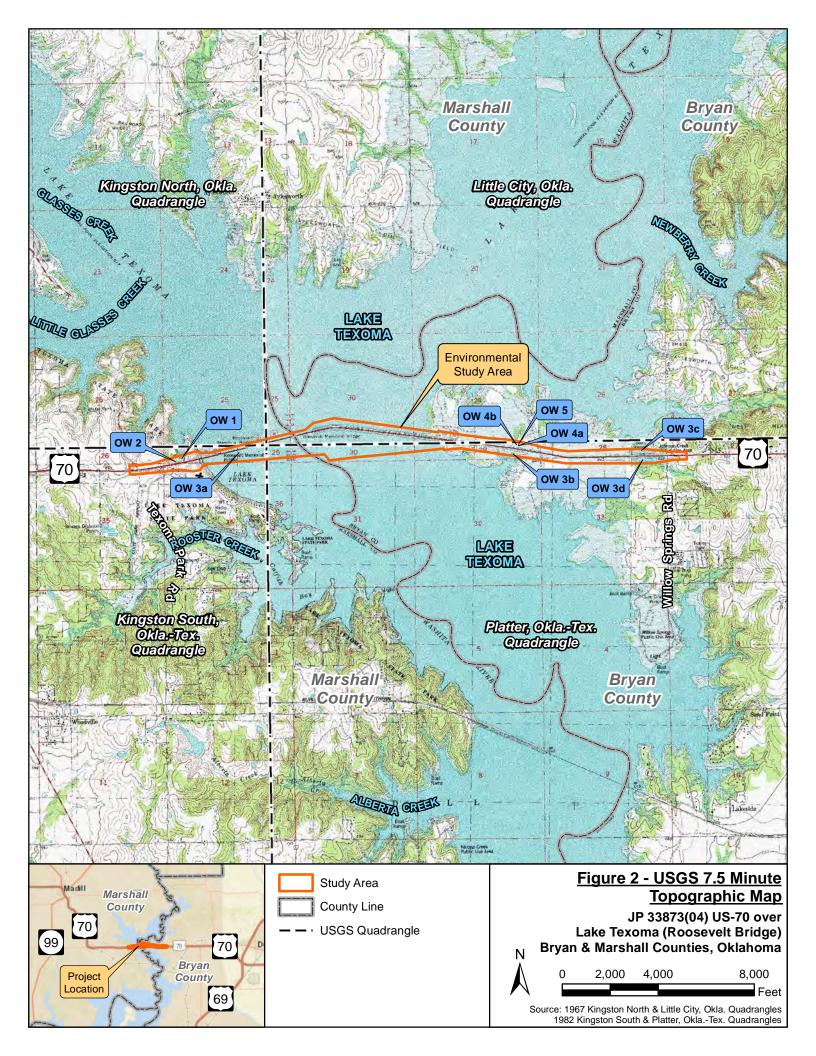
OW 3a – Lake Texoma, is a NWI-mapped perennial lake and is classified and observed during the field investigation as a L1UBHh. An estimated total of 211.11 acres of OW 3 occurs within the study footprint. This feature spans the majority of the study area. The estimated water depth is between 2 and 67 feet. The west shoreline is rocky with tree debris and the east shoreline is sandy. The lake substrate is clay, cobble, and gravel. OW 3 receives water from the Red and Washita Rivers, precipitation, groundwater, and tributaries. During the field investigation, rock ledges, root wads, drift material, and algae in the lake were observed. No aquatic organisms were observed but it is assumed that multiple fish, reptile, amphibian, and mussel species are present. Dominant plant species observed along the banks include eastern cottonwood, common buttonbush, black willow, eastern red-cedar, sedge, aster, and Johnson grass. This feature is likely subject to regulation by the USACE as it is a TNW.

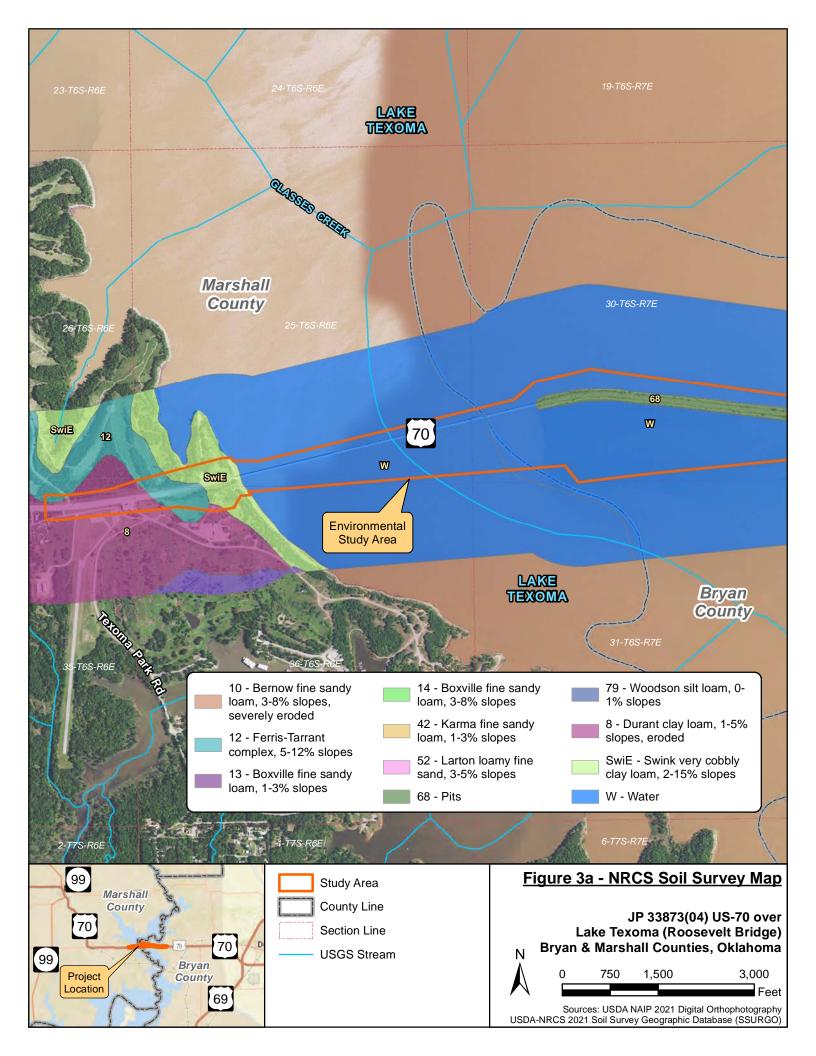
OW 3c – A NWI-mapped perennial cove of Lake Texoma, is classified and observed during the field investigation as a L1UBHh. An estimated total of 3.52 acres of OW 3c occurs within the study footprint. This cove is located north of north of US-70. The estimated water depth is between 2 and 8 feet. Water was clear dark brown, and the substrate is primarily loam. OW 3c receives back water from Lake Texoma, groundwater, and precipitation. During the field investigation, a wetland along the west bank (Wetland 4) was observed. No aquatic organisms were observed but it is assumed that multiple fish, reptile, amphibian, and mussel species are present. Dominant plant species observed along the banks include black willow, common buttonbush, heliotrope, speedwell, rough cocklebur, and tapered rosette grass. This feature is likely subject to regulation by the USACE as it is a perennial cove of a USGS-mapped TNW (Lake Texoma).

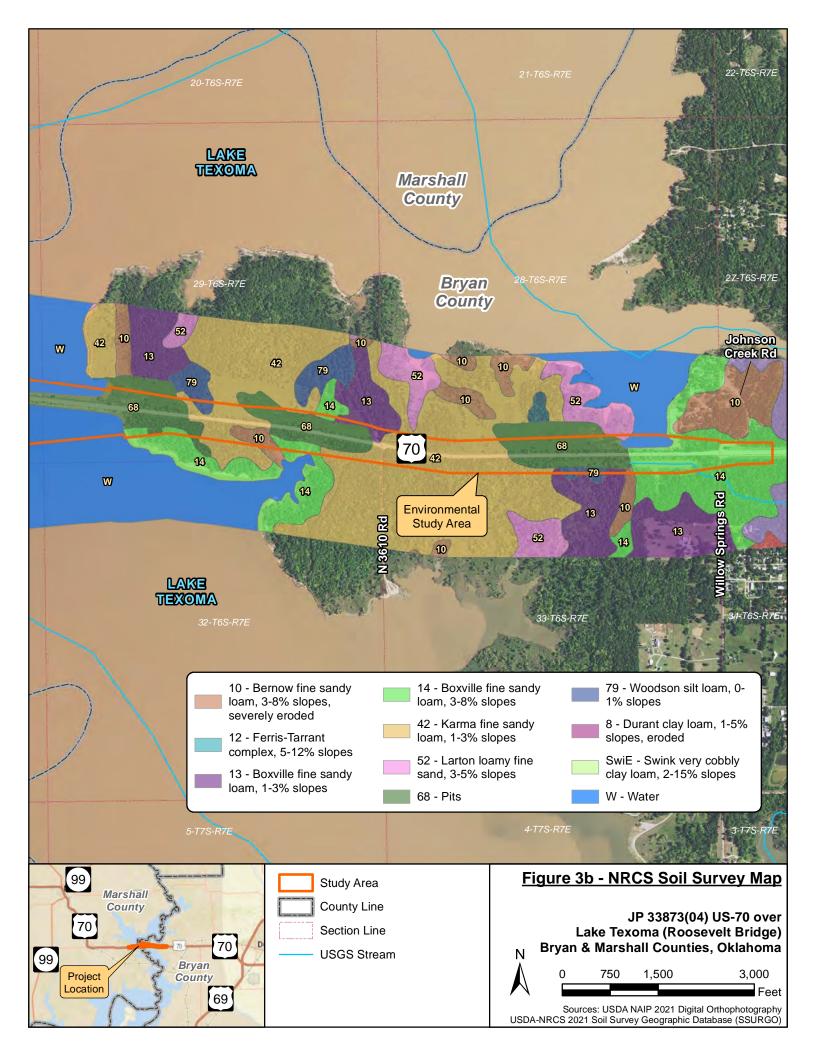
OW 3d – A NWI-mapped perennial waterbody, is classified and observed during the field investigation as a L1UBHh. A reinforced concrete bridge (RCB) under US-70 conveys water between OW 3d and OW 3c. An estimated total of 2.62 acres of OW 3d occurs within the study footprint. This lake overflow is located south of US-70. The estimated water depth is between 1 and 2.5 feet. Water was clear dark brown, and the substrate is primarily loam. OW 3d likely receives back water from Lake Texoma, groundwater, and precipitation. During the field investigation, wetlands along the east and west banks were observed. No aquatic organisms were observed during the field investigation. Dominant plant species observed along the banks include black willow, common buttonbush, osage-orange, aster, fringed greenbrier, southern dewberry, sedge, and tapered rosette grass. This feature is likely subject to regulation by the USACE as it is a perennial overflow of a USGS-mapped TNW (Lake Texoma).

#### **FIGURES**



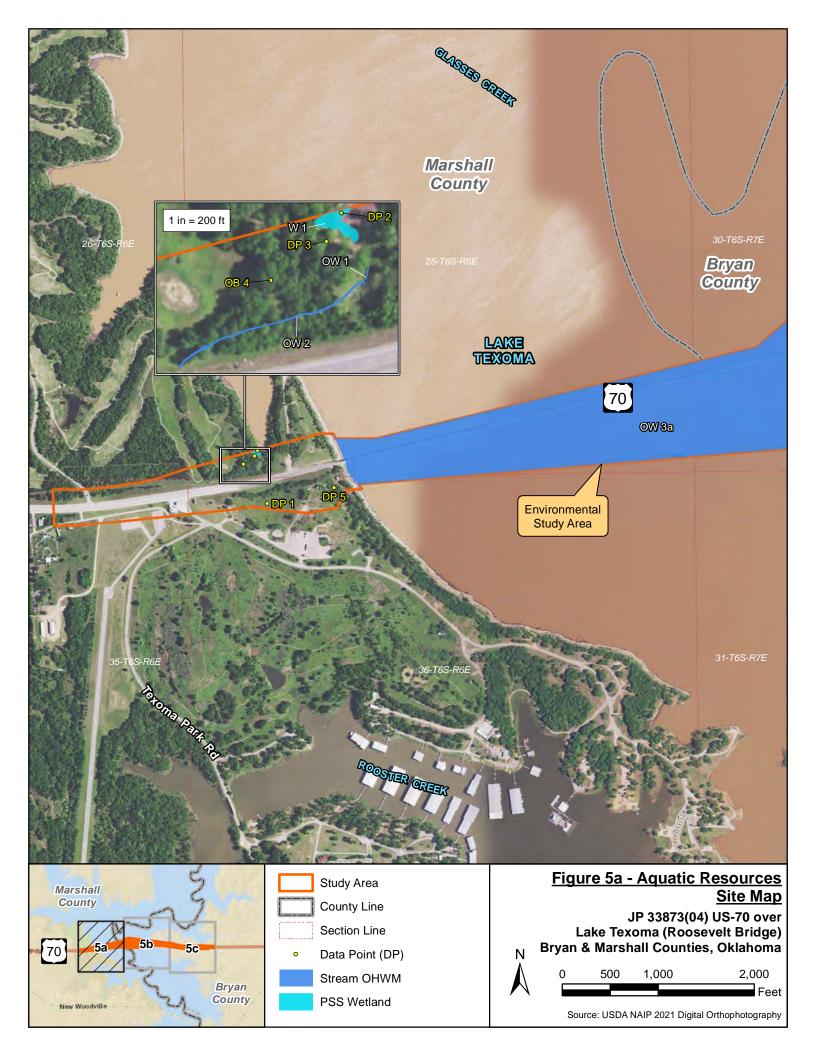


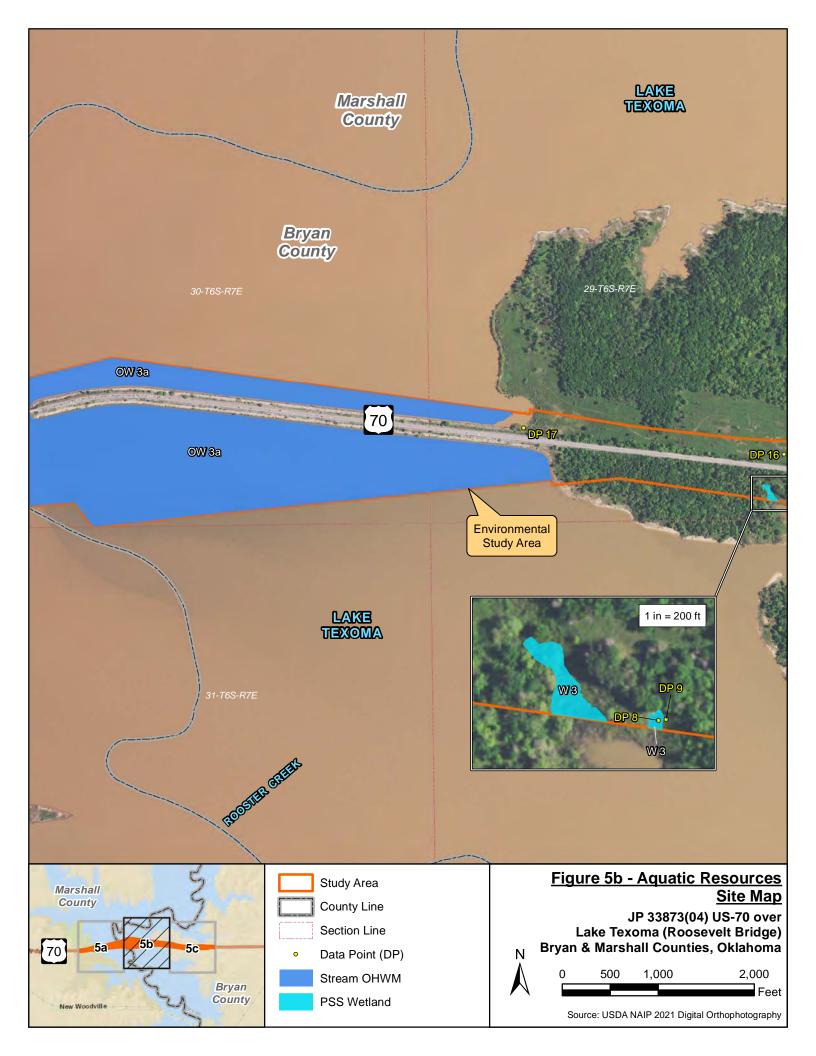


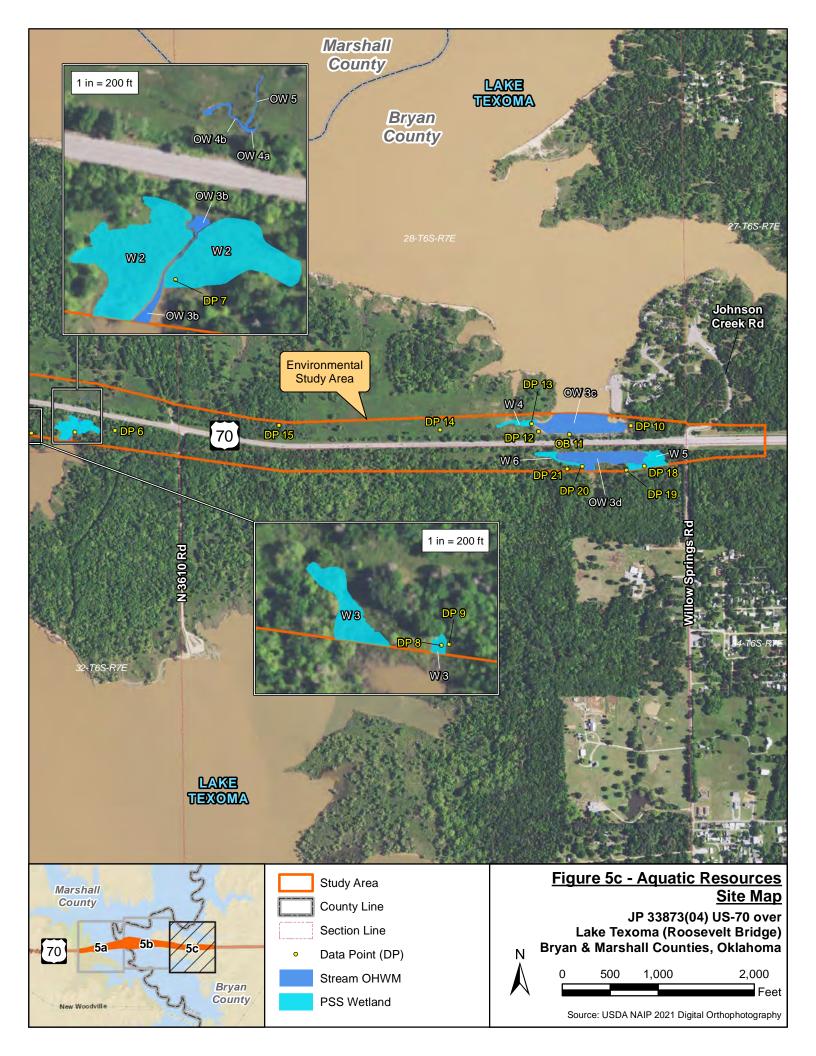










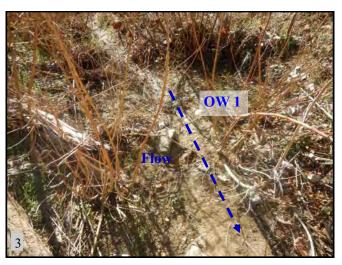




 $\triangle$  (PS 1): Typical view of US-70, west of Lake Texoma. View is to the west.



 $\triangle$  (PS 1): Typical view of US-70, west of Lake Texoma. View is to the east.



▲ (PS 2): View of OW 1, a small ephemeral stream that drains into a cove. View is upstream to the south.



**▲**(PS 2): View of OW 1 and the disturbed riparian habitat. View is downstream to the north.



**▲** (PS 2): View of disturbed habitat from construction to the east. No stream characteristics were observed.



**▲**(PS 2): View of disturbed habitat from construction to the east. No stream characteristics were observed.



**▲**(PS 2): View of Wetland 1, a small PSS wetland. View is to the east.



 $\blacktriangle$  (PS 2): View of hydric soils collected at DP 2 from Wetland 1.



▲ (PS 2): View of OW 2, a rock lined ephemeral stream that flows into OW 1. View is upstream to the west.



▲ (PS 2): View of OW 2, a rock lined ephemeral stream that flows into OW 1. View is downstream to the north.



▲ (PS 2): View of wooded habitat around OWs 1 and 2. View is to the north.



▲ (PS 3): View of upland herbaceous habitat located south of US-70 and west of Lake Texoma.



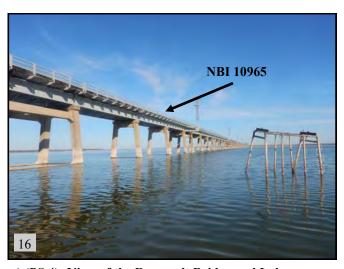
▲ (PS 3): View of nonhydric soils collected at DP 1.



▲ (PS 4): View of shoreline and riparian habitat along the west bank of Lake Texoma. View is to the south.



▲ (PS 4): View of shoreline and riparian habitat along the west bank of Lake Texoma (OW 3a).



▲ (PS 4): View of the Roosevelt Bridge and Lake Texoma (OW 3a). View is to the east.



▲ (PS 4): View of upland wooded habitat at DP 5. View is to the east.



▲ (PS 4): View of the Roosevelt Bridge from the west side of Lake Texoma. View is to the east.



▲ (PS 5): View of Lake Texoma (OW 3a) taken from the east side of the lake. View is to the west.



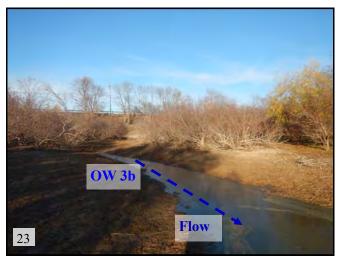
▲ (PS 5): View of habitat along the east bank of Lake Texoma. View is to the west.



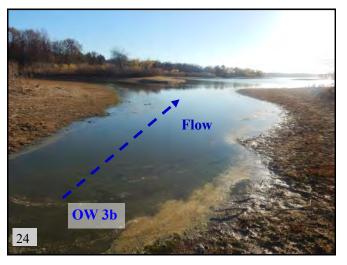
▲ (PS 5): View of area, on the east bank of Lake Texoma, where DP 17 was collected (circled).



▲ (PS 5): View of nonhydric soils collected at DP 17.



**▲**(PS 6): View of perennial stream, OW 3b. View is upstream to the northeast.



**▲**(PS 6): View of OW 3b that flows into Lake Texoma. View is downstream to the southwest.



▲ (PS 6): View of Wetland 2, a large PSS wetland around OW 3b. View is to the west.



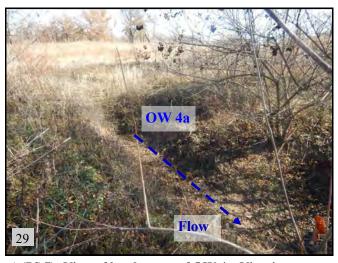
 $\blacktriangle$  (PS 6): View of hydric soils excavated at Wetland 2 at DP 7.



▲ (PS 6): View of Wetland 3, a PSS wetland located west of Wetland 2. View is to the north.



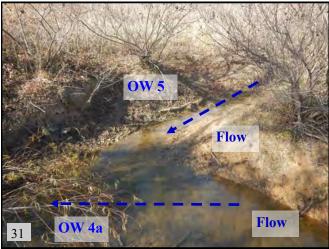
 $\triangle$  (PS 6): View of hydric soils excavated at Wetland 3 at DP 8.



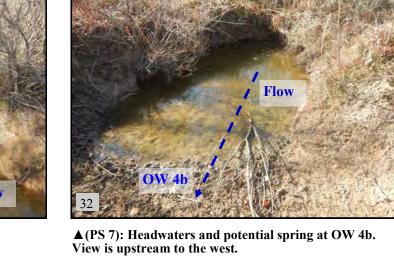
**▲**(PS 7): View of headwaters of OW 4a. View is upstream to the northeast.

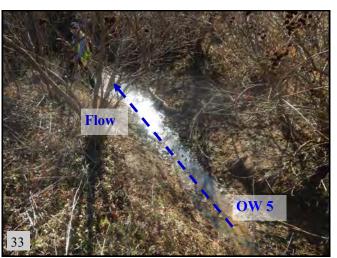


▲ (PS 7): View of flooded structure that OW 4a, 4b, and OW 5 flow into. View is to the south.

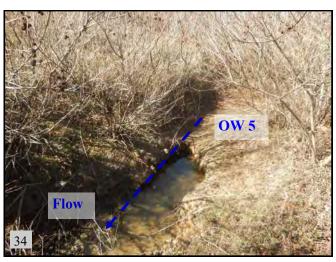


▲ (PS 7): View of OW 4a and OW 5 confluence.





▲ (PS 7): View of OW 5, an ephemeral stream. View is downstream to the south.



 $\triangle$  (PS 7): View of OW 5 and riparian habitat. View is to the north.



▲ (PS 8): View of tall grass habitat at DP 14, which is suitable ABB habitat. View is to the north.



**▲**(PS 8): View of wooded habitat at DP 15, which is suitable ABB habitat. View is to the north.



▲ (PS 9): View of the west section of OW 3c, a perennial cove of Lake Texoma. View is to the east.



▲ (PS 9): View of Wetland 4, a linear PSS wetland. View is to the north.



 $\blacktriangle$  (PS 9): View of hydric soils collected at DP 13 at Wetland 4.



▲ (PS 9): View of streambed and riparian habitat of OW 3c. View is to the west.



▲ (PS 10): View of the east section of OW 3c, a perennial cove of Lake Texoma. View is to the west.



▲ (PS 10): View of habitat along OW 3c. View is to the east.



 $\blacktriangle$  (PS 11): View of Wetland 5, a large PSS wetland on the east side of OW 3d. View is to the north.



**▲**(PS 11): View of hydric soils collected at DP 18 at Wetland 5.



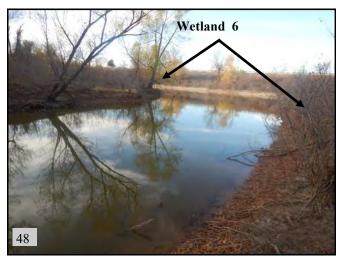
▲ (PS 11): View of OW 3d, a large perennial lake overflow area south of US-70. View is to the west.



▲ (PS 11): View of OW 3d. View is to the north.



▲(PS 11): View of upland herbaceous habitat south of OW 3d and west of Wetland 5. View is to the north.



**▲**(PS 12): View of Wetland 6, a fringe PSS around OW 3d. View is to the north.



▲ (PS 12): View of Wetland 6 section on the east side of OW 3d. View is to the north.



▲ (PS 12): View of Wetland 6 section on the west side of OW 3d. View is to the west.



 $\blacktriangle$  (PS 12): View of hydric soils collected at DP 20 at Wetland 6.



▲ (PS 12): View of the west section of OW 3d and fringe Wetland 6. View is to the west.

# WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: US-70 Over Lake Texoma (Roosevelt Bridge)		City/Cou	inty: Marshall		Sampling Date: 12/1/2021	
Applicant/Owner: The Oklahoma Department of Transport	ation (ODOT	.)		State: OK	Sampling Point: DP 1	
Investigator(s): Megan Philips-Schaap & Lacee Stanley		Section.	Township, Ra	nge: Sec. 36, T6S, R6E		
Landform (hillslope, terrace, etc.): open grassland		Local re	lief (concave	convex none). concave	Slope (%): <u>5-</u>	10
Subregion (LRR): Southwestern Prairies (LRR J)	Lat. 33.9	997502	mor (corroare,	-96.636705	eleps (%) Datum. WGS 8	34
Soil Map Unit Name: 12: Ferris-Tarrant complex, 5 to 12 p	ercent slope:	s		NWI classific	ation: NA	
Are climatic / hydrologic conditions on the site typical for thi						
Are Vegetation, Soil, or Hydrology:					ernarks.) eresent? Yes <u> </u>	
				·		
Are Vegetation, Soil, or Hydrology				eded, explain any answe		
SUMMARY OF FINDINGS – Attach site map	showing	samp	ling point l	ocations, transects	, important features, e	etc.
Hydrophytic Vegetation Present? Yes N	۸o <b>x</b>		the Compled	Aron		
Hydric Soil Present? Yes N			s the Sampled vithin a Wetlar		No <u> </u>	
Wetland Hydrology Present? Yes N	10 <u>x</u>		ritiiii a vvetiai	iu: 165		
Remarks:						
This point was determined not to be within a wetland du	ue to the lack	c of all th	rree wetland cr	riteria.		
VEGETATION	4-					
VEGETATION – Use scientific names of plar						
Tree Stratum (Plot size:)	Absolute % Cover		ant Indicator s? Status	Dominance Test work		
1. None observed				Number of Dominant Sp That Are OBL, FACW, or	or FAC	
2.				(excluding FAC-):	0 (A	4)
3.				Total Number of Domin	ant <sub>-</sub>	
4				Species Across All Stra	• • • • • • • • • • • • • • • • • • • •	;)
		= Total	Cover	Percent of Dominant Sp	pecies	
Sapling/Shrub Stratum (Plot size:)  None observed				That Are OBL, FACW, o		√B)
···				Prevalence Index worl	ksheet:	
2.				Total % Cover of:	Multiply by:	
3					x 1 =	
4				FACW species	x 2 =	
- O		= Total (	Cover	FAC species	x 3 =	
Herb Stratum (Plot size:)				FACU species	x 4 =	
1. Tumble windmill grass (Chloris verticillata)*	40	Yes	UPL		x 5 =	
2. Bermuda grass (Cynodon dactylon)	_ 30	Yes		Column Totals:	(A) (	(B)
3. Tall false rye grass (Schedonorus arundinaceus) Little barley (Hordeum pusillum)		No No	FACU FACU	Prevalence Index	= B/A =	
4		No		Hydrophytic Vegetation		
5				1 - Rapid Test for H		
6				2 - Dominance Tes		
7				3 - Prevalence Inde		
8				4 - Morphological A	Adaptations <sup>1</sup> (Provide support	ting
9					s or on a separate sheet)	
10.	105%	= Total (	Cover	Problematic Hydror	ohytic Vegetation <sup>1</sup> (Explain)	
Woody Vine Stratum (Plot size:)  None observed  1.			Oover	<sup>1</sup> Indicators of hydric soil be present, unless distu	l and wetland hydrology mus irbed or problematic.	it
2.				Hydrophytic		
			Cover	Vegetation	. N. Y	
% Bare Ground in Herb Stratum0%				Present? Yes	s No	
Remarks:						
No positive indication of hydrophytic vegetation was ob *Plant species does not have a wetland indicator accor				indexed as FAC- or drier	·).	
Thank species does not have a welland indicator accor-	ang to USD/	n, assul	no upianu.			

SOIL

	ription: (Describe	to the depth n				or confirn	n the absence of	f indicators.)
Depth (inches)	Matrix Color (moist)	%	Redox Color (moist)	<u>x Features</u> %	Type <sup>1</sup> _	Loc <sup>2</sup>	Texture	Remarks
0-14	10YR 5/3	90	10YR 5/8	10	C	M	clay loam	
		· <del></del>					·	
		· <del></del> -						
		· —— —						
-		·						
·		·					·	
		· <del></del>						
1Type: C=Cc	ncentration, D=Dep	letion RM=Re	duced Matrix CS	=Covered	or Coate	d Sand G	rains <sup>2</sup> l ocat	tion: PL=Pore Lining, M=Matrix.
	ndicators: (Applic					u Sanu Si		or Problematic Hydric Soils <sup>3</sup> :
Histosol			Sandy G		-			ck (A9) ( <b>LRR I, J</b> )
	ipedon (A2)			Redox (S5)				rairie Redox (A16) ( <b>LRR F, G, H</b> )
Black His			Stripped	Matrix (S	6)		Dark Sur	face (S7) (LRR G)
	n Sulfide (A4)			∕lucky Min				ins Depressions (F16)
	Layers (A5) (LRR F			Sleyed Ma			•	H outside of MLRA 72 & 73)
	ck (A9) ( <b>LRR F, G, I</b> Below Dark Surfac			d Matrix (F )ark Surfa				l Vertic (F18) ent Material (TF2)
-	rk Surface (A12)	c (ATT)		d Dark Sui				allow Dark Surface (TF12)
	ucky Mineral (S1)		•	epression			-	xplain in Remarks)
	lucky Peat or Peat (		) High Pla	ins Depre	ssions (F	16)		hydrophytic vegetation and
5 cm Mu	cky Peat or Peat (S	3) ( <b>LRR F</b> )	(MLI	RA 72 & 7	3 of LRR	H)		nydrology must be present,
Dootriotivo I	aver (if present).						unless di	isturbed or problematic.
	.ayer (if present):							
Type:	de a N		_				Hadria Cail D	resent? Yes NoX
Depth (inc	nes)		_				Hydric Soil P	resent? Yes No
Remarks:								
No positive in	dication of hydric so	oils was observ	ed. This area is r	not subjec	t to pond	ing.		
HYDROLO	GY							
Wetland Hyd	Irology Indicators:							
Primary Indic	ators (minimum of o	ne required; ch	neck all that apply	/)			<u>Secondary</u>	Indicators (minimum of two required)
Surface \	Water (A1)		Salt Crust	(B11)			Surfac	ce Soil Cracks (B6)
High Wa	ter Table (A2)		Aquatic Inv		` ,		Spars	ely Vegetated Concave Surface (B8)
Saturatio	n (A3)		Hydrogen				Draina	age Patterns (B10)
	arks (B1)		Dry-Seaso				<del></del>	ted Rhizospheres on Living Roots (C3)
	t Deposits (B2)		Oxidized R		es on Livi	ng Roots		ere tilled)
	osits (B3)		,	ot tilled)	al luana (C.4	`		sh Burrows (C8)
	t or Crust (B4)		Presence of		•	·)		ation Visible on Aerial Imagery (C9) orphic Position (D2)
	osits (B5) on Visible on Aerial <b>I</b>	magany (R7)	Thin Muck Other (Exp	,	,		<del></del>	Veutral Test (D5)
	ained Leaves (B9)	magery (br)	Other (Exp	iaiii iii iXei	marks)			Heave Hummocks (D7) ( <b>LRR F</b> )
Field Observ	. ,							(2.7)
Surface Water		es No	X Depth (inc	ches):				
Water Table			Depth (inc		> 14"	_		
Saturation Pr			X Depth (inc		> 14"	— Wetl	and Hydrology I	Present? Yes NoX
(includes cap	illary fringe)							<u> </u>
Describe Rec	corded Data (stream	gauge, monito	ring well, aerial p	hotos, pre	evious ins	pections),	if available:	
Remarks:								
No positiva ir	ndication of wetland	l hydrology wa	s ohserved					
μο ροσιανό ΙΙ	idiodelon of wording	i ilyarology wa	J JUJUI VUU.					

DP 1

Sampling Point:

# WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: US-70 Over Lake Texoma (Roosevelt Bridge)		County: Marshall		Sampling Date: <u>12/1/2021</u>
Applicant/Owner: The Oklahoma Department of Transport	ation (ODOT)		State: OK	Sampling Point: DP 2
Investigator(s): Megan Philips-Schaap & Lacee Stanley		ion, Township, Rar	nge: Sec. 25, T6S, R6E	
Landform (hillslope, terrace, etc.): lake terrace	Loca	al relief (concave, c	convex, none): concave	Slope (%): 15-20
Subregion (LRR): Southwestern Prairies (LRR J)	Lat: 33.9990	011	-96.637000 Long:	Datum: WGS 84
Soil Map Unit Name: SwiE: Swink very cobbly clay loam, 2	2 to 15 percent sl	opes	NWI classifica	ition: L1UBHh
Are climatic / hydrologic conditions on the site typical for th				
Are Vegetation, Soil, or Hydrology	significantly distu	ırbed? Are "l	Normal Circumstances" pr	esent? Yes <b>x</b> _ No
Are Vegetation, Soil, or Hydrology	naturally problem	natic? (If ne	eded, explain any answer	s in Remarks.)
SUMMARY OF FINDINGS – Attach site map	showing sai	mpling point lo	ocations, transects,	important features, etc.
Lindrahadia Vandadian Bassada	.1-			
Hydrophytic Vegetation Present? Yes X N Hydric Soil Present? Yes X N		Is the Sampled		
Wetland Hydrology Present?	No	within a Wetlan	d? Yes	No
Remarks:				
This point was determined to be within a wetland due to	o the presence o	f all 3 wetland crite	ria.	
Wetland 1	oo p. ooooo o			
VEGETATION – Use scientific names of plan	nts.			
Tree Stratum (Plot size:		minant Indicator	Dominance Test works	heet:
None observed		ecies? Status	Number of Dominant Sp That Are OBL, FACW, o	
2.			(excluding FAC-):	(A)
3.			Total Number of Domina	int
4			Species Across All Strat	
Carling/Obash Charles (Distains 15'	= To	otal Cover	Percent of Dominant Sp	ecies
Sapling/Shrub Stratum (Plot size:	70	Yes OBL	That Are OBL, FACW, o	
	<del> </del>		Prevalence Index work	sheet:
2.			Total % Cover of:	Multiply by:
3				x 1 =
4			FACW species	x 2 =
O	70% = To	otal Cover	FAC species	x 3 =
Herb Stratum (Plot size:)		star Gover	FACU species	x 4 =
1. None observed			The state of the s	x 5 =
2			Column Totals:	(A) (B)
3			Prevalence Index	= B/A =
4			Hydrophytic Vegetation	n Indicators:
5			🗶 1 - Rapid Test for H	ydrophytic Vegetation
6			2 - Dominance Test	is >50%
7			3 - Prevalence Inde	x is ≤3.0 <sup>1</sup>
8 9			4 - Morphological A	daptations <sup>1</sup> (Provide supporting
10.				or on a separate sheet)
	= To		Problematic Hydrop	hytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size:) None observed 1.			<sup>1</sup> Indicators of hydric soil be present, unless distu	and wetland hydrology must bed or problematic.
2.			Hydrophytic	
% Bare Ground in Herb Stratum	= To	otal Cover	Vegetation Present? Yes	No
Remarks:				<del></del>
A positive indication of hydrophytic vegetation was obs	erved (Rapid Tes	st for Hydrophytic V	/egetation).	

US Army Corps of Engineers

(inches)         Color (moist)         %         Type¹         Loc²         Texture         F           0-14         10YR 5/1         85         10YR 6/6         15         C         M         clay loam	Remarks
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore	- Lining M=Matrix
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problemati	
Histosol (A1) Sandy Gleyed Matrix (S4) 1 cm Muck (A9) (LRR	-
Histic Epipedon (A2) Sandy Redox (S5) Coast Prairie Redox (A2)	
Black Histic (A3) Stripped Matrix (S6) Dark Surface (S7) (LF	'
Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) High Plains Depressio	
Stratified Layers (A5) (LRR F) Loamy Gleyed Matrix (F2) (LRR H outside of	•
1 cm Muck (A9) (LRR F, G, H)	
Depleted Dark Surface (A12) Depleted Dark Surface (F7) Very Shallow Shallow Surface (F7) Very Shallow Shallow Surface (F7) Very Shallow Shall	
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) <sup>3</sup> Indicators of hydrophytic v	=
5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) wetland hydrology mus	
unless disturbed or pro	oblematic.
Restrictive Layer (if present):	
Type:	es <u> </u>
	es No
Remarks:	
A positive indication of hydric soil was observed.	
IVNDOLOCY	
IYDROLOGY	
Wetland Hydrology Indicators:	ainimuum af tura maarrimad
Primary Indicators (minimum of one required; check all that apply)  Secondary Indicators (m	•
Surface Water (A1)	i (B6) I Concave Surface (B8)
Saturation (A3) Addate invertebrates (B15) Sparsery vegetated	
	eres on Living Roots (C3
Sediment Deposits (B2)  Oxidized Rhizospheres on Living Roots (C3)  (where tilled)	sico dil Elving Rodio (Oc
Drift Deposits (B3) (where not tilled) Crayfish Burrows (C	C8)
<del></del>	on Aerial Imagery (C9)
Iron Deposits (B5) Thin Muck Surface (C7) X Geomorphic Positio	
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) FAC-Neutral Test (I	D5)
Water-Stained Leaves (B9) Frost-Heave Humm	iocks (D7) ( <b>LRR F</b> )
Field Observations:	
Surface Water Present? Yes No Depth (inches): > 14"	
Water Table Present? Yes No Depth (inches):	
	es <u>X</u> No
Saturation Present? Yes No Depth (inches): > 14" Wetland Hydrology Present? Yes	
Saturation Present? Yes No _x Depth (inches): > 14" Wetland Hydrology Present? You (includes capillary fringe)	
Saturation Present? Yes No _x Depth (inches): > 14" Wetland Hydrology Present? You (includes capillary fringe)	
Saturation Present? Yes No _x _ Depth (inches): > 14" <b>Wetland Hydrology Present? Yo</b> (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Saturation Present? Yes No Depth (inches): > 14" Wetland Hydrology Present? You (includes capillary fringe)	

# WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: US-70 Over Lake Texoma (Roosevelt Bridge)	(	City/County:	Marshall		Sampling Date:	12/1/2021
Applicant/Owner: The Oklahoma Department of Transporta	tion (ODOT	.)		State: OK	Sampling Point:	DP 3
Investigator(s): Megan Philips-Schaap & Lacee Stanley		Section. To	wnship. Ra	nge: Sec. 25, T6S, R6E	oapiig . ou	
Landform (hillslope, terrace, etc.): hillslope		Local relief	(concave.	convex. none): slope	Slo	ope (%): 10-15
Subregion (LRR). Southwestern Prairies (LRR J)	Lat: 33.9	998849	(,	-96.637108	Datu	<sub>Im</sub> . WGS 84
Subregion (LRR): Southwestern Prairies (LRR J) Soil Map Unit Name: SwiE: Swink very cobbly clay loam, 2	to 15 perce	nt slopes		NWI classific	ation: NA	um
Are climatic / hydrologic conditions on the site typical for this						
Are Vegetation, Soil, or Hydrology si	ignificantly	disturbed?	Are '	'Normal Circumstances" p	resent? Yes	<b>x</b> No
Are Vegetation, Soil, or Hydrologyn	aturally pro	blematic?	(lf ne	eeded, explain any answe	rs in Remarks.)	
SUMMARY OF FINDINGS – Attach site map s	showing	sampling	g point l	ocations, transects	, important fo	eatures, etc.
Hydrophytic Vegetation Present? Yes X No						
Hydric Soil Present? Yes X			e Sampled		No	
Wetland Hydrology Present? Yes No		With	in a Wetlaı	id? fes	NO	_
Remarks:		•				
This point was determined not to be within a wetland due	e to the lack	κ of wetland	hydrology.	·		
·			, ,,			
VEGETATION – Use scientific names of plant	ts.					
Trac Strature (Diet sine) 30'	Absolute	Dominant	Indicator	Dominance Test work	sheet:	
Tree Stratum (Plot size:)		Species? Yes		Number of Dominant Sp		
1. Sugar-berry (Celtis laevigata)	10		FAC_	That Are OBL, FACW, o	or FAC	3 (4)
2				(excluding FAC-):		(A)
3				Total Number of Domin	/	1 (B)
4				Species Across All Stra	ta:	* (B)
Cardinar/Charle Charles (Diet alian) 15'	10%	= Total Cov	er	Percent of Dominant Sp	oecies _,	-0.4
Sapling/Shrub Stratum (Plot size:)	10	Yes	EAC	That Are OBL, FACW,		5% (A/B)
1. Deciduous holly (Ilex decidua)	10		FAC	Prevalence Index worl	kshoot:	
2				Total % Cover of:		dy by:
3				,		
4				OBL species		
5				FACW species		
Herb Stratum (Plot size: 5' )	10%	= Total Cov	er	FAC species		
Herb Stratum (Plot size: 5 ) Spotted crane's-bill (Geranium maculatum)	25	Yes	FACU	FACU species		
16	· <del></del>				x 5 =	
2				Column Totals:	(A)	(B)
3				Prevalence Index	= B/A =	
4				Hydrophytic Vegetation		
5				1 - Rapid Test for H		tation
6				x 2 - Dominance Tes		itation
7				3 - Prevalence Inde		
8				4 - Morphological A		vido supporting
9					s or on a separate	
10				Problematic Hydror	ohytic Vegetation	¹ (Explain)
Woody Vino Stratum (Plataire) 30'	25%	= Total Cov	er	<del>-</del>	-	
Horsebrier (Smilax rotunditolia)	35	Yes	FAC	<sup>1</sup> Indicators of hydric soil be present, unless distu		
1	15	No	FAC	Hydrophytic		
	50%	= Total Cov	er.	Vegetation		
% Bare Ground in Herb Stratum75%		- 10tal C0V	CI		s <u> </u>	
Remarks:				1		
A positive indication of hydrophytic vegetation was obse	rved (>50%	of dominar	nt species i	ndexed as OBL, FACW, o	r FAC).	

SOIL

Profile Desc	ription: (Describe	to the depth n	eeded to docun	nent the i	ndicator	or confirn	n the absence o	of indicators.)
Depth	<u>Matrix</u>			x Features				
(inches)	Color (moist)		Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u>	Remarks
0-6	10YR 2/1	100	<del>-</del>				loam	
	-	<del>-</del>						
		<del></del>						
		<u> </u>						
								_
¹Type: C=Cc	oncentration, D=Dep	lotion PM-Pag	luced Matrix CS		l or Coate	d Sand G	rains <sup>2</sup> Loca	ation: PL=Pore Lining, M=Matrix.
	ndicators: (Applic					u Sanu G		or Problematic Hydric Soils <sup>3</sup> :
Histosol			Sandy G		-			uck (A9) ( <b>LRR I, J</b> )
	pipedon (A2)			Redox (S5	. ,			rairie Redox (A16) ( <b>LRR F, G, H</b> )
Black His				l Matrix (S				urface (S7) ( <b>LRR G</b> )
	n Sulfide (A4)			Лиску Min	•		<del></del>	ains Depressions (F16)
	Layers (A5) ( <b>LRR</b> l	F)		Gleyed Ma				R H outside of MLRA 72 & 73)
	ck (A9) ( <b>LRR F, G</b> ,			d Matrix (F	,			d Vertic (F18)
	Below Dark Surfac	e (A11)		oark Surfa				rent Material (TF2)
	irk Surface (A12)			d Dark Su	, ,	)	-	allow Dark Surface (TF12)
-	lucky Mineral (S1) lucky Peat or Peat (	(S2) (I <b>DD C U</b> )		Depression ins Depre		16)		Explain in Remarks)  If hydrophytic vegetation and
· <del></del>	cky Peat or Peat (S	. , ,	_	RA 72 & 7				hydrology must be present,
0 0 111 1110	ony i out of i out (o	o, ( <b>=</b> ,	(		0 01 2141	• • • •		disturbed or problematic.
Restrictive L	ayer (if present):							
Type:	rock							
Depth (inc	thes): 6"		•				Hydric Soil F	Present? Yes X No
Remarks:			-				,	
A positive ind	ication of hydric so	ils was observe	d.					
HYDROLO	GY							
Wetland Hyd	drology Indicators:							
Primary Indic	ators (minimum of c	ne required; ch	eck all that apply	<b>/</b> )			Secondar	y Indicators (minimum of two required)
Surface \	Water (A1)		Salt Crust	(B11)			Surfa	ce Soil Cracks (B6)
· <u> </u>	ter Table (A2)		Aquatic Inv		s (B13)			sely Vegetated Concave Surface (B8)
Saturation	` '		Hydrogen	Sulfide Oc	dor (C1)			age Patterns (B10)
Water M	arks (B1)		Dry-Seaso				Oxidi:	zed Rhizospheres on Living Roots (C3)
Sedimen	t Deposits (B2)		Oxidized R	Rhizosphei	res on Liv	ing Roots	(C3) (wh	nere tilled)
Drift Dep	osits (B3)		(where n	ot tilled)			Crayf	ish Burrows (C8)
Algal Ma	t or Crust (B4)		Presence of	of Reduce	d Iron (C4	1)	Satur	ration Visible on Aerial Imagery (C9)
	osits (B5)		Thin Muck	Surface (	C7)			norphic Position (D2)
Inundatio	on Visible on Aerial	lmagery (B7)	Other (Exp	lain in Re	marks)		FAC-	Neutral Test (D5)
Water-St	tained Leaves (B9)						Frost-	-Heave Hummocks (D7) (LRR F)
Field Observ	vations:							
Surface Water	er Present? Y	'es No _	X Depth (inc	ches):		_		
Water Table			Depth (inc		> 6"	_		
Saturation Pr	resent? Y		X Depth (inc		> 6"	Wetl	and Hydrology	Present? Yes NoX
	corded Data (stream	gauge, monito	ring well, aerial p	hotos, pre	evious ins	pections),	if available:	
Remarks:								
	alterate 6 et	1111	. 1					
ino positive ir	ndication of wetland	ı nyarology was	observea.					

DP 3

Sampling Point: \_

# WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: US-70 Over Lake Texoma (Roosevelt Bridge		City/County:	Marshall		Sampling Date: 12/1/2021
Applicant/Owner: The Oklahoma Department of Transport				State: OK	
Investigator(s): Megan Philips-Schaap & Lacee Stanley		Section, Tov	vnship, Ra	nge: Sec. 25, T6S, R6E	
Landform (hillslope, terrace, etc.): wooded		Local relief	(concave,	convex, none): concave	Slope (%): <u>5-10</u>
Subregion (LRR): Southwestern Prairies (LRR J)	Lat:33.9	98631		Long: <u>-96.637492</u>	Datum: WGS 84
Soil Map Unit Name: SwiE: Swink very cobbly clay loam	n, 2 to 15 percer	nt slopes		NWI classifica	ation: NA
Are climatic / hydrologic conditions on the site typical for					
Are Vegetation, Soil, or Hydrology	significantly d	listurbed?	Are "	Normal Circumstances" pr	resent? Yes <b>X</b> No
Are Vegetation, Soil, or Hydrology			(If ne	eded, explain any answer	s in Remarks.)
SUMMARY OF FINDINGS – Attach site ma	ap showing	sampling	g point le	ocations, transects,	important features, etc.
Hydrophytic Vegetation Present? Yes	No <b>X</b>	lo the	Campled	Area	
	No		e Sampled n a Wetlar		No <u> </u>
Wetland Hydrology Present? Yes	No <u>*</u>	Within	ii a vvetiai	id: 165	_ 110
Remarks:					
Hydrophytic vegetation and wetland hydrology were  VEGETATION – Use scientific names of pl		this data p	oint. Soils v	were not collected at this c	bservation point.
201	Absolute	Dominant	Indicator	Dominance Test works	sheet:
Tree Stratum (Plot size: 30')	% Cover	Species? Yes		Number of Dominant Sp	
1. Eastern red-cedar (Juniperus virginiana) Lastern cottonwood (Populus deltoides)	<u>25</u> 20	Yes	UPL FAC	That Are OBL, FACW, o (excluding FAC-):	r FAC2 (A)
3. Northern red oak (Quercus rubra)	15	Yes	FACU		
4.				Total Number of Domina Species Across All Strat	E 1
7.	60%	= Total Cov		·	
Sapling/Shrub Stratum (Plot size:15')				Percent of Dominant Sp That Are OBL, FACW, o	
1. Peatree (Sesbania herbacea)		Yes	FACW	Dravalance Index work	rahaati
2. Eastern red-cedar (Juniperus virginiana)		Yes	UPL_	Prevalence Index work  Total % Cover of:	
3					x 1 =
4					x 2 =
5					x 3 =
Herb Stratum (Plot size:)		= Total Cov	er	FACU species	4 =
1. None observed					x 5 =
2				Column Totals:	(A) (B)
3				Dunielana a ludan	- D/A -
4				Hydrophytic Vegetatio	= B/A =
5				1 - Rapid Test for H	
6				2 - Dominance Test	· · · · · -
7				3 - Prevalence Inde	
8				l <del></del>	daptations <sup>1</sup> (Provide supporting
9				data in Remarks	or on a separate sheet)
10		Total Cov		Problematic Hydrop	hytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size:)  None observed  1			<del>o</del> i	<sup>1</sup> Indicators of hydric soil be present, unless distu	and wetland hydrology must rbed or problematic.
2				Hydrophytic	
% Bare Ground in Herb Stratum 100%		= Total Cov	er	Vegetation	No <u> </u>
Remarks:					
No positive indication of hydrophytic vegetation was	observed (≥50%	% of domina	nt species	indexed as FAC- or drier	ı.

SOIL Sampling Point: OB 4

Depth (inches)	Matrix Color (moist)	<u></u> %	Redox Features  Color (moist) % Type <sup>1</sup> Lo	c <sup>2</sup> Texture Remarks
				Tomano nomano
		. —— -[	Caile were not executed	<u> </u>
			Soils were not excavated	
		- — — —		<u></u>
		· ——— —		
				<del>_</del>
		<del> </del>		2
			educed Matrix, CS=Covered or Coated Sai	
-	• • •	able to all LR	Rs, unless otherwise noted.)	Indicators for Problematic Hydric Soils <sup>3</sup> :
Histosol	` '		Sandy Gleyed Matrix (S4)	1 cm Muck (A9) ( <b>LRR I, J</b> )
	ipedon (A2)		Sandy Redox (S5)	Coast Prairie Redox (A16) (LRR F, G, H)
Black His	, ,		Stripped Matrix (S6)	Dark Surface (S7) (LRR G)
	n Sulfide (A4) I Layers (A5) ( <b>LRR F</b>	=\	Loamy Mucky Mineral (F1)	High Plains Depressions (F16) (LRR H outside of MLRA 72 & 73)
	ck (A9) ( <b>LRR F, G, I</b>	7.5	Loamy Gleyed Matrix (F2) Depleted Matrix (F3)	Reduced Vertic (F18)
	Below Dark Surface		Redox Dark Surface (F6)	Red Parent Material (TF2)
	irk Surface (A12)	C (A11)	Depleted Dark Surface (F7)	Very Shallow Dark Surface (TF12)
	lucky Mineral (S1)		Redox Depressions (F8)	Other (Explain in Remarks)
-	lucky Peat or Peat (	S2) ( <b>LRR G</b> , H		<sup>3</sup> Indicators of hydrophytic vegetation and
	cky Peat or Peat (S		(MLRA 72 & 73 of LRR H)	wetland hydrology must be present,
<u></u>	`	, ,	,	unless disturbed or problematic.
estrictive L	ayer (if present):			
Type:				
••	ches):		<del></del>	Hydric Soil Present? Yes No
Remarks:				
Kemarks.				
oils were no	t collected at this o	bservation po	int.	
YDROLO	GY			
Vetland Hyd	drology Indicators:			
	ators (minimum of o		heck all that apply)	Secondary Indicators (minimum of two require
	-	nio roquirou, o		
	Water (A1)		Salt Crust (B11)	Surface Soil Cracks (B6)
	ter Table (A2)		Aquatic Invertebrates (B13)	Sparsely Vegetated Concave Surface (B8
Saturatio			Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Water Ma			Dry-Season Water Table (C2)	Oxidized Rhizospheres on Living Roots (
	t Deposits (B2)		Oxidized Rhizospheres on Living R	
	osits (B3)		(where not tilled)	Crayfish Burrows (C8)
	t or Crust (B4)		Presence of Reduced Iron (C4)	Saturation Visible on Aerial Imagery (C9)
	osits (B5)		Thin Muck Surface (C7)	<b>X</b> Geomorphic Position (D2)
Inundatio	on Visible on Aerial <b>I</b>	magery (B7)	Other (Explain in Remarks)	FAC-Neutral Test (D5)
	tained Leaves (B9)			Frost-Heave Hummocks (D7) (LRR F)
	` '			
Water-St	, ,			
Water-St	vations:	es No	Depth (inches):	
Water-St Field Observ Surface Wate	vations: er Present? Y			
Water-St Field Observ Surface Water Water Table	vations: er Present?  Y Present?  Y	es No	Depth (inches):	Wetland Hydrology Present? Yes No X
Water-St Field Observ Surface Wate	vations: er Present? Y Present? Y resent? Y	es No	Depth (inches):	Wetland Hydrology Present? Yes No
Water-St Field Observ Surface Water Vater Table Saturation Pr includes cap	vations: er Present? Present? esent? variable Y variabl	es No es No	Depth (inches):	
Water-St Field Observ Surface Water Vater Table Saturation Pr includes cap	vations: er Present? Present? esent? variable Y variabl	es No es No	Depth (inches): Depth (inches):	
Water-Strield Observ Surface Water Vater Table Saturation Princludes cap	vations: er Present? Present? esent? variable Y variabl	es No es No	Depth (inches): Depth (inches):	
Water-Stield Observious Conference Water Table Staturation Procludes cappescribe Reconstruction Remarks:	vations: er Present?  Present?  Y resent?  Y resent.  Y	es No es No gauge, monit	Depth (inches): Depth (inches): oring well, aerial photos, previous inspection	
Water-Stield Observ urface Water /ater Table   aturation Pr ncludes cap escribe Rec	vations: er Present?  Present?  Y resent?  Y resent.  Y	es No es No gauge, monit	Depth (inches): Depth (inches):	

US Army Corps of Engineers Great Plains – Version 2.0

Project/Site: US-70 Over Lake Texoma (Roosevelt Bridge)	,	City/County	. Marshall		Sampling D	ate: 12/1/2	2021
Applicant/Owner: The Oklahoma Department of Transporta		)		State: OK	Sampling P	oint: DP 5	
Investigator(s): Megan Philips-Schaap & Lacee Stanley		Section. To	wnship. Ra	nge: Sec. 36, T6S, R6E	Camping.	<u></u>	
Landform (hillslope, terrace, etc.): hillslope		Local relief	(concave.	convex, none); slope		Slope (%)	15-20
Subregion (LRR). Southwestern Prairies (LRR J)	Lat: 33.5	997921	(,	Long: -96.634393		Datum: W	GS 84
Subregion (LRR): Southwestern Prairies (LRR J) Soil Map Unit Name: SwiE - Swink very cobbly clay loam,	2 to 15 perce	ent slopes		NWI classific	ation: NA	Datum.	
Are climatic / hydrologic conditions on the site typical for thi							
Are Vegetation, Soil, or Hydrologys				"Normal Circumstances" p		s <b>x</b>	No
Are Vegetation, Soil, or Hydrologyı	naturally pro	blematic?		eeded, explain any answe			
SUMMARY OF FINDINGS – Attach site map	showing	samplin	g point l	ocations, transects	, importa	nt feature	es, etc.
Hydrophytic Vegetation Present? Yes N	lo <b>X</b>						
Hydric Soil Present? Yes N			e Sampled		No	x	
Wetland Hydrology Present? Yes N		With	in a Wetlar	iur res	NO		
Remarks:		'					
This point was determined not to be within a wetland do	ie to the lac	k of all three	e wetland ci	riteria			
This point was determined not to be within a welland de		N OI all till Co	wettand of	nicha.			
VEGETATION – Use scientific names of plar	nte						
VEGETATION - Ose scientific fiames of plan		Desirent	Larata	I Barrella and Tarrella and Tar			
<u>Tree Stratum</u> (Plot size:)	Absolute % Cover	Dominant Species?		Dominance Test work			
1 Eastern red-cedar (Juniperus virginiana)	40	Yes	UPL	Number of Dominant S That Are OBL, FACW,			
American elm (Ulmus americana)	30	Yes	FAC	(excluding FAC-):	_	2	(A)
3.				Total Number of Domin	ant		
4.				Species Across All Stra		6	(B)
	70%	= Total Cov	/er	D			
Sapling/Shrub Stratum (Plot size:)		- 10tai 00t	701	Percent of Dominant Sp That Are OBL, FACW,		33%	(A/B)
1. Eastern red-cedar (Juniperus virginiana)	10	Yes	UPL				_ ( /
2. American elm (Ulmus americana)	10	Yes	FAC	Prevalence Index wor			
3				Total % Cover of:			
4				OBL species			
5				FACW species			
Herb Stratum (Plot size: 5' )	20%	= Total Cov	/er	FAC species			_
Herb Stratum (Plot size: 5' )  Spotted crane's-bill (Geranium maculatum)	5	Yes	FACU	FACU species			_
In				UPL species			
2				Column Totals:	(A)		(B)
3				Prevalence Index	= B/A =		
4				Hydrophytic Vegetation	n Indicator	s:	
5				1 - Rapid Test for I	- - - - - - - - - - - - - - - - - - -	/egetation	
6				2 - Dominance Tes	t is >50%		
7				3 - Prevalence Inde	ex is ≤3.0 <sup>1</sup>		
8				4 - Morphological A	Adaptations <sup>1</sup>	(Provide su	pporting
9		·		data in Remark	· ·		,
10		= Total Cov		Problematic Hydro	phytic Vegeta	ation' (Expla	ain)
Woody Vine Stratum (Plot size: 30' Southern dewberry (Rubus trivialis)	5	Yes	FACU	<sup>1</sup> Indicators of hydric soi be present, unless dist			must
2				Llydroph. 4: a			
2.	E0/	= Total Cov		Hydrophytic Vegetation			
% Bare Ground in Herb Stratum95%		- 10ta1 C0\	7 <b>C</b> I		s	No <u>x</u>	
Remarks:				1			
No positive indication of hydrophytic vegetation was ob	served (≥50	% of domina	ant species	indexed as FAC- or drie	·).		

Depth	cription: (Descril Matrix	<u> </u>	Redo	x Feature:	s			,
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u>	Remarks
0-4	10YR 4/3	100	-	-	-		clay loam	
4-12	10YR 5/8	40	-				clay loam	
	10YR 5/3	40	-	-	<u>-</u>	_	clay loam	
	white	20	-	=			clay loam	
								_
							·	
1Type: C=C	oncentration, D=D	Oppletion PM-P	aducad Matrix CS	S=Covered	d or Coate	d Sand G	rains <sup>2</sup> Locati	ion: DI -Poro Lining M-Matrix
	Indicators: (App					u Sanu G		ion: PL=Pore Lining, M=Matrix.  r Problematic Hydric Soils <sup>3</sup> :
Histosol				Gleyed Ma			1 cm Mud	ck (A9) ( <b>LRR I, J</b> )
Histic Ep	pipedon (A2)			Redox (S5				airie Redox (A16) ( <b>LRR F, G, H</b> )
_	istic (A3)			d Matrix (S				face (S7) (LRR G)
	en Sulfide (A4)	D. E.\	<del></del> .	Mucky Mir	, ,			ns Depressions (F16)
	d Layers (A5) ( <b>LR</b> l uck (A9) ( <b>LRR F, (</b>			Gleyed Ma d Matrix (I				H outside of MLRA 72 & 73) Vertic (F18)
	d Below Dark Surf			u Matrix (i Dark Surfa	,			ent Material (TF2)
	ark Surface (A12)	( )			ırface (F7)	ı		llow Dark Surface (TF12)
Sandy N	lucky Mineral (S1	)	Redox [	Depressio	ns (F8)			plain in Remarks)
	Mucky Peat or Pea				essions (F			hydrophytic vegetation and
5 cm Mu	ucky Peat or Peat	(S3) ( <b>LRR F</b> )	(ML	RA 72 & 7	73 of LRR	. <b>H</b> )		ydrology must be present,
Restrictive I	Layer (if present)	):					uniess dis	sturbed or problematic.
Type:		,.						
	ches):		_				Hydric Soil Pr	resent? Yes NoX
Remarks:			<del></del>				1.,,	<u> </u>
		., .						
ino positive ir	ndication of hydric	c solls was obse	rvea.					
HYDROLO	GY							
Wetland Hy	drology Indicator	rs:						
Primary India	cators (minimum c	of one required;	check all that appl	y)			Secondary	Indicators (minimum of two required)
Surface	Water (A1)		Salt Crust	(B11)			Surfac	e Soil Cracks (B6)
High Wa	ater Table (A2)		Aquatic In	vertebrate	s (B13)		Sparse	ely Vegetated Concave Surface (B8)
Saturation	on (A3)		Hydrogen	Sulfide O	dor (C1)		Draina	ge Patterns (B10)
Water M	larks (B1)		Dry-Seaso					ed Rhizospheres on Living Roots (C3)
	nt Deposits (B2)		Oxidized F			ing Roots		ere tilled)
	posits (B3)			not tilled)				sh Burrows (C8)
	at or Crust (B4)		Presence			<b>!</b> )		tion Visible on Aerial Imagery (C9)
	oosits (B5)	al Imaganı (D7)	Thin Muck	,				orphic Position (D2)
	on Visible on Aeri stained Leaves (B9		Other (Exp	nam in Ke	marks)			leutral Test (D5) Heave Hummocks (D7) ( <b>LRR F</b> )
Field Obser	•	9)					1103(-1	leave Hummocks (Dr) (ERRT)
Surface Wat		Yes No	Depth (in	ches).				
Water Table			Depth (in		> 12"	_		
Saturation P			Depth (in		> 12"	- Wet	and Hydrology P	Present? Yes No
(includes car	pillary fringe)							163eIII: 163 140
Describe Re	corded Data (strea	am gauge, moni	toring well, aerial <sub>l</sub>	ohotos, pr	evious ins	pections),	if available:	
Remarks								
Remarks:								
No positiv	e indication of	wetland hyd	rology was obs	served.				
1								

DP 5

Project/Site: US-70 Over Lake Texoma (Roosevelt Bridge)	(	City/County:	Bryan		Sampling Date:	12/1/2021
Applicant/Owner: The Oklahoma Department of Transporta	tion (ODOT	·)		State: OK	Sampling Point	DP 6
Investigator(s): Megan Philips-Schaap & Lacee Stanley		Section To	wnshin Ra	nge: Sec. 29, T6S, R7E	oumpling rount	·
Landform (hillslope, terrace, etc.): wooded		Local relief	(concave	convex, none): concave	SI	ope (%): 20-25
Subregion (LRR): Southwestern Prairies (LRR J)	1 at: 33.5	998769	(concave,	-96.589769	Dat	WGS 84
	_ Lat				Dat	.um
Soil Map Unit Name: 68: Pits			,	NWI classific	ation:	
Are climatic / hydrologic conditions on the site typical for this						v
Are Vegetation, Soil, or Hydrology si	gnificantly	disturbed?	Are '	'Normal Circumstances" p	resent? Yes	No
Are Vegetation, Soil, or Hydrology n	aturally pro	blematic?	(lf ne	eeded, explain any answe	rs in Remarks.)	
SUMMARY OF FINDINGS – Attach site map s	showing	sampling	g point l	ocations, transects	, important f	eatures, etc.
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No		Is th	e Sampled			
Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No		with	in a Wetlaı	nd? Yes	No <u></u>	_
Remarks:	<u> </u>					
This point was determined not to be within a wetland due	e to the lacl	k of all three	wetland c	riteria.		
						Ŧ
VEGETATION – Use scientific names of plant	ts.					
Tron Chartering (Dietoine) 30'	Absolute	Dominant		Dominance Test work	sheet:	
Tree Stratum (Plot size:)  1. Willow oak (Quercus phellos)	% Cover 2	Species? No	Status FACW	Number of Dominant S		
Company to a server (C) a three to a server a to		No No	FAC	That Are OBL, FACW, (excluding FAC-):	or FAC	1 (A)
۷			FAC		-	(//
3	-			Total Number of Domin Species Across All Stra		2 (B)
4	4%			Species Across All Stra		(В)
Sapling/Shrub Stratum (Plot size:)		= Total Cov	er	Percent of Dominant Sp		0% (A/B)
None observed				That Are OBL, FACW,	or FAC:	(A/B)
2				Prevalence Index wor	ksheet:	
3.				Total % Cover of:	<u>Multi</u>	oly by:
4				OBL species	x 1 =	
5.				FACW species	x 2 =	
· · ·		= Total Cov	er	FAC species	x 3 =	
Herb Stratum (Plot size: 5'		10101 001		FACU species	x 4 =	
1. Bushy bluestem (Andropogon glomeratus)	35	Yes	FACW	UPL species	x 5 =	
2				Column Totals:	(A)	(B)
3				Dunivalance Index	- D/A -	
4				Prevalence Index	'	
5				Hydrophytic Vegetation		. 4 . 4!
6				1 - Rapid Test for I		etation
7				2 - Dominance Tes		
8				3 - Prevalence Inde		
9				4 - Morphological A data in Remark	daptations (Pro s or on a separat	
10				Problematic Hydro	ohytic Vegetation	n¹ (Explain)
Woody Vino Stratum (Plot size: 30'	35%	= Total Cov	er	I .	_	,
Woody Vine Stratum (Plot size: 30 Southern dewberry (Rubus trivialis)  1.	60	Yes	FACU	<sup>1</sup> Indicators of hydric soi be present, unless distu		
2				Hydrophytic		
% Barrier 11 at 25 at 25 %	60%	= Total Cov	er	Vegetation Present? Ye	s No_	x
% Bare Ground in Herb Stratum				Fresent: re	s NO_	<del></del>
Remarks:						
No positive indication of hydrophytic vegetation was obs	erved (≥50	% of domina	ant species	indexed as FAC- or drie	·).	

(inches)	Matrix Color (moist)	%	Color (moist)	Features Type	Loc <sup>2</sup>	Texture	Remarks
0-3	10YR 3/3	100	<u>-</u>			clay loam	Remarks
		<del>-</del>		<u>-</u>			
3-12	5YR 5/8		-			sa cl lo	
	-						
				·			
Type: C=Cc	ncentration, D=Dep	 oletion, RM=Re	duced Matrix, CS=	=Covered or Coa	 ated Sand Gr	rains. <sup>2</sup> Location	n: PL=Pore Lining, M=Matrix.
	ndicators: (Applic						Problematic Hydric Soils <sup>3</sup> :
Histosol	• •			leyed Matrix (S4	)		(A9) ( <b>LRR I</b> , <b>J</b> )
-	ipedon (A2)		-	edox (S5)			ie Redox (A16) ( <b>LRR F, G, H</b> )
Black His				Matrix (S6)			ce (S7) ( <b>LRR G</b> )
	n Sulfide (A4)			lucky Mineral (F	•		Depressions (F16)
<del></del> '	Layers (A5) (LRR	•		leyed Matrix (F2	(1)	•	outside of MLRA 72 & 73)
	ck (A9) ( <b>LRR F, G</b> ,			Matrix (F3)		Reduced V	• •
	Below Dark Surfac	ce (A11)		ark Surface (F6)			Material (TF2)
	rk Surface (A12)			Dark Surface (F	.7)		w Dark Surface (TF12)
-	ucky Mineral (S1)	(C2) (LDD C L		epressions (F8) ns Depressions	(E16)		ain in Remarks) drophytic vegetation and
	lucky Peat or Peat ( cky Peat or Peat (S		· <del></del> -	RA 72 & 73 of LF	, ,	•	rology must be present,
3 6111 1010	cky real of real (3	3) (LKK F)	(MILIN	.A 12 & 13 01 LF	XIX II)		urbed or problematic.
Restrictive L	ayer (if present):						
Type:			_				
Depth (inc	ches):					Hydric Soil Pres	sent? Yes NoX
Remarks:	,		<del>-</del>			1	
lo positive in	dication of hydric s	oils was observ	red.				
YDROLO	GY						
Wetland Hyd	Irology Indicators:	:					
Primary Indic	ators (minimum of o	one required; ch	neck all that apply	)			dicators (minimum of two required)
Surface \	M-4 (AA)		iook all that apply			Secondary In	dicators (minimum or two required)
	water (A1)		Salt Crust (I			<u> </u>	Soil Cracks (B6)
	ter Table (A2)		Salt Crust (I			Surface S	· · · · · · · · · · · · · · · · · · ·
	ter Table (A2)		Salt Crust (I	B11)		Surface S Sparsely	Soil Cracks (B6)
High Wa Saturatio	ter Table (A2)		Salt Crust (I Aquatic Inve Hydrogen S	B11) ertebrates (B13)	)	Surface S Sparsely Drainage	Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10)
High Wa Saturatio Water Ma	ter Table (A2) on (A3)		Salt Crust (I Aquatic Inve	B11) ertebrates (B13) Sulfide Odor (C1)	2)	Surface S Sparsely Drainage Oxidized	Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3)
High Wa Saturatio Water Mater M	ter Table (A2) on (A3) arks (B1)		Salt Crust (I Aquatic Inve	B11) ertebrates (B13) Sulfide Odor (C1) Nater Table (C	2)	Surface S Sparsely Drainage Oxidized (C3) (where	Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3) tilled)
High Wa Saturatio Water Ma Sedimen Drift Dep	ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3)		Salt Crust (I Aquatic Inve Hydrogen S Dry-Season Oxidized Rh (where no	B11) ertebrates (B13) Sulfide Odor (C1) Nater Table (C nizospheres on L ot tilled)	2) Living Roots	Surface S Sparsely Drainage Oxidized (C3) (where	Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3)
High Wa Saturatio Water Mater	ter Table (A2) on (A3) arks (B1) t Deposits (B2) oosits (B3) t or Crust (B4)		Salt Crust (I Aquatic Inve Hydrogen S Dry-Season Oxidized Rh (where no	B11) ertebrates (B13) Sulfide Odor (C1) Nater Table (C nizospheres on L ot tilled) f Reduced Iron (	2) Living Roots	Surface S Sparsely Drainage Oxidized (C3) (where Crayfish Saturatio	Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3) tilled) Burrows (C8) n Visible on Aerial Imagery (C9)
High Wa Saturatio Water Mater	ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5)	Imagery (B7)	Salt Crust (I Aquatic Inve Hydrogen S Dry-Season Oxidized Rh (where no Presence of Thin Muck S	B11) ertebrates (B13) Sulfide Odor (C1) Nater Table (Cnizospheres on Lot tilled) f Reduced Iron (Surface (C7)	2) Living Roots	Surface S Sparsely Drainage Oxidized (C3) (where Crayfish Saturatio	Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3) Itilled) Burrows (C8) In Visible on Aerial Imagery (C9) Othic Position (D2)
High Wa Saturatio Water Mi Sedimen Drift Dep Algal Ma Iron Dep	ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial	<b>I</b> magery (B7)	Salt Crust (I Aquatic Inve Hydrogen S Dry-Season Oxidized Rh (where no Presence of Thin Muck S	B11) ertebrates (B13) Sulfide Odor (C1) Nater Table (C nizospheres on L ot tilled) f Reduced Iron (	2) Living Roots	Surface S Sparsely Drainage Oxidized (C3) (where Crayfish Saturatio X Geomory FAC-Neu	Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3) Itilled) Burrows (C8) In Visible on Aerial Imagery (C9) In Position (D2) Itral Test (D5)
High War Saturation Water Mater Mate	ter Table (A2) on (A3) arks (B1) ot Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial tained Leaves (B9)	<b>I</b> magery (B7)	Salt Crust (I Aquatic Inve Hydrogen S Dry-Season Oxidized Rh (where no Presence of Thin Muck S	B11) ertebrates (B13) Sulfide Odor (C1) Nater Table (Cnizospheres on Lot tilled) f Reduced Iron (Surface (C7)	2) Living Roots	Surface S Sparsely Drainage Oxidized (C3) (where Crayfish Saturatio X Geomory FAC-Neu	Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3) Itilled) Burrows (C8) In Visible on Aerial Imagery (C9) Othic Position (D2)
High Water Mater M	ter Table (A2) on (A3) arks (B1) ot Deposits (B2) osits (B3) ot or Crust (B4) osits (B5) on Visible on Aerial cained Leaves (B9) vations:		Salt Crust (I Aquatic Inve Hydrogen S Dry-Season Oxidized Rh (where no Presence of Thin Muck S Other (Expl	B11) ertebrates (B13) Sulfide Odor (C1) Nater Table (C nizospheres on L of tilled) f Reduced Iron (C) Surface (C7) ain in Remarks)	2) Living Roots	Surface S Sparsely Drainage Oxidized (C3) (where Crayfish Saturatio X Geomory FAC-Neu	Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3) Itilled) Burrows (C8) In Visible on Aerial Imagery (C9) In Position (D2) Itral Test (D5)
High Water Mater M	ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial cained Leaves (B9) vations:	′es No _	Salt Crust (I Aquatic Inve Hydrogen S Dry-Season Oxidized Rh (where no Presence of Thin Muck S Other (Expl.	B11) ertebrates (B13) Sulfide Odor (C1) Nater Table (C nizospheres on L ot tilled) f Reduced Iron ( Surface (C7) ain in Remarks)	2) Living Roots	Surface S Sparsely Drainage Oxidized (C3) (where Crayfish Saturatio X Geomory FAC-Neu	Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3) Itilled) Burrows (C8) In Visible on Aerial Imagery (C9) In Position (D2) Itral Test (D5)
High War Saturation Water Mater Mater Mater Drift Dep Algal Mater Inundation Water-St Field Observ Surface Water	ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial cained Leaves (B9) vations: er Present? Y	/es No _ /es No _	Salt Crust (I Aquatic Inve Hydrogen S Dry-Season Oxidized Rh (where no Presence of Thin Muck S Other (Expl.	B11) ertebrates (B13) Sulfide Odor (C1) Nater Table (Cnizospheres on Lot tilled) of Reduced Iron (Surface (C7) ain in Remarks) hes): hes):	2) Living Roots (	Surface S Sparsely Drainage Oxidized (C3) (where Crayfish Saturatio X Geomory FAC-Neu Frost-He	Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3) Itilled) Burrows (C8) In Visible on Aerial Imagery (C9) Inchic Position (D2) Itral Test (D5) ave Hummocks (D7) (LRR F)
High War Saturation Water Mater Mater Sedimen Drift Dep Algal Mater Iron Dep Inundation Water-St Field Observ Surface Water Water Table Saturation Pr Cincludes cap	ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial cained Leaves (B9) vations: er Present? Present? esent?	/es No_ /es No_ /es No_	Salt Crust (I Aquatic Inve Hydrogen S Dry-Season Oxidized Rh (where no Presence of Thin Muck S Other (Expl.)  X Depth (inch X Depth (inch	B11) ertebrates (B13) Sulfide Odor (C1) Nater Table (C nizospheres on L ot tilled) f Reduced Iron (Surface (C7) ain in Remarks) hes): hes):   > 12"	2) Living Roots (	Surface S Sparsely Drainage Oxidized (C3) (where Crayfish Saturatio X Geomory FAC-Neu Frost-He	Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3) Itilled) Burrows (C8) In Visible on Aerial Imagery (C9) In Position (D2) Itral Test (D5)
High War Saturation Water Mater Mater Sedimen Drift Dep Algal Mater Iron Dep Inundation Water-St Field Observ Surface Water Water Table Saturation Pr Cincludes cap	ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial ained Leaves (B9) vations: er Present? Present?	/es No_ /es No_ /es No_	Salt Crust (I Aquatic Inve Hydrogen S Dry-Season Oxidized Rh (where no Presence of Thin Muck S Other (Expl.)  X Depth (inch X Depth (inch	B11) ertebrates (B13) Sulfide Odor (C1) Nater Table (C nizospheres on L ot tilled) f Reduced Iron (Surface (C7) ain in Remarks) hes): hes):   > 12"	2) Living Roots (	Surface S Sparsely Drainage Oxidized (C3) (where Crayfish Saturatio X Geomory FAC-Neu Frost-He	Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3) Itilled) Burrows (C8) In Visible on Aerial Imagery (C9) Inchic Position (D2) Itral Test (D5) ave Hummocks (D7) (LRR F)
High War Saturation Water Mater Mater Drift Dep Algal Mater Iron Dep Inundation Water-St Field Observ Surface Water Water Table Saturation Pr (includes cap	ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial cained Leaves (B9) vations: er Present? Present? esent?	/es No_ /es No_ /es No_	Salt Crust (I Aquatic Inve Hydrogen S Dry-Season Oxidized Rh (where no Presence of Thin Muck S Other (Expl.)  X Depth (inch X Depth (inch	B11) ertebrates (B13) Sulfide Odor (C1) Nater Table (C nizospheres on L ot tilled) f Reduced Iron (Surface (C7) ain in Remarks) hes): hes):   > 12"	2) Living Roots (	Surface S Sparsely Drainage Oxidized (C3) (where Crayfish Saturatio X Geomory FAC-Neu Frost-He	Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3) Itilled) Burrows (C8) In Visible on Aerial Imagery (C9) Inchic Position (D2) Itral Test (D5) ave Hummocks (D7) (LRR F)
High War Saturatio Water May Sedimen Drift Dep Algal Ma Iron Dep Inundatio Water-St Field Observ Surface Water Water Table Includes cap Describe Reco	ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial cained Leaves (B9) vations: er Present? Present? esent?	/es No _ /es No _ /es No _ n gauge, monito	Salt Crust (I Aquatic Inve Hydrogen S Dry-Season Oxidized Rh (where no Presence of Thin Muck S Other (Expl.)  X Depth (incl.) X Depth (incl.) X Depth (incl.)	B11) ertebrates (B13) Sulfide Odor (C1) Nater Table (C nizospheres on L ot tilled) f Reduced Iron (Surface (C7) ain in Remarks) hes): hes):   > 12"	2) Living Roots (	Surface S Sparsely Drainage Oxidized (C3) (where Crayfish Saturatio X Geomory FAC-Neu Frost-He	Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3 tilled) Burrows (C8) In Visible on Aerial Imagery (C9) Inchic Position (D2) Itral Test (D5) ave Hummocks (D7) (LRR F)

Project/Site: US-70 Over Lake Texoma (Roosevelt Bridge)	,	City/County:	Bryan		Sampling Date: 12/	1/2021
Applicant/Owner: The Oklahoma Department of Transporta	ation (ODOT	-)		State: OK	Sampling Point: DP	7
Investigator(s): Megan Philips-Schaap & Lacee Stanley		Section, Tov	vnship, Ra	nge: Sec. 29, T6S, R7E		
Landform (hillslope, terrace, etc.): depression		Local relief	(concave,	convex, none): concave	Slope (	(%): <u>15-20</u>
Subregion (LRR): Southwestern Prairies (LRR J)	Lat: 33.	998740		-96.591142 Long:	Datum:	WGS 84
Soil Map Unit Name: 14: Boxville fine sandy loam, 3 to 8 p	ercent slope	s		NWI classific	ation: L1UBHh	
Are climatic / hydrologic conditions on the site typical for thi	is time of yea	ar? Yes <b>X</b>	<sup>r</sup> No	( <b>I</b> f no, explain in R	emarks.)	
Are Vegetation, Soil, or Hydrology				'Normal Circumstances" p		_ No
Are Vegetation, Soil, or Hydrologyı	naturally pro	blematic?	(If ne	eeded, explain any answe	rs in Remarks.)	
SUMMARY OF FINDINGS – Attach site map	showing	sampling	g point l	ocations, transects	, important featı	ures, etc.
Hydrophytic Vegetation Present? Yes X N	lo					
	lo		e Sampled		,	
l	lo	withi	n a Wetlar	nd? Yes <u>^</u>	No	
Remarks:		I				
This point was determined to be within a wetland due to	the presen	ce of all 3 w	etland crite	eria.		
Wetland 2	•					
VEGETATION – Use scientific names of plan						
Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?		Dominance Test work		
None observed				Number of Dominant S That Are OBL, FACW,		
2.				(excluding FAC-):	<u></u>	(A)
3.				Total Number of Domin	vant	
4.				Species Across All Stra		(B)
		= Total Cov	er	Percent of Dominant Sp	nacios	
Sapling/Shrub Stratum (Plot size:)				That Are OBL, FACW,		(A/B)
1. Common buttonbush (Cephalanthus occidentalis)	90	Yes	OBL	Dravalance Index wer	leabaati	
2				Prevalence Index wor	Ksneet: Multiply by	,,
3				OBL species		
4				FACW species		
5				FAC species		
Herb Stratum (Plot size:)	90 /6	= Total Cov	er	FACU species		
1. None observed				UPL species		
2.				Column Totals:		
3.						
4.					= B/A =	
5				Hydrophytic Vegetation		
6				1 - Rapid Test for H		n
7				2 - Dominance Tes		
8				3 - Prevalence Inde		a
9				data in Remarks	s or on a separate she	eet)
10				Problematic Hydro		
Moody Vine Status (Diet sine)	-	= Total Cov	er	<sup>1</sup> Indicators of hydric soi	il and watland bydrola	av muet
Woody Vine Stratum (Plot size:)  None observed				be present, unless distu		gy musi
1.				Herdrombertio		
2.		= Total Cov		Hydrophytic Vegetation		
% Bare Ground in Herb Stratum100%	-	TOTAL COV	OI .		s <u> </u>	_
Remarks:				•		
A positive indication of hydrophytic vegetation was obs	erved (Ranio	Test for Hy	drophytic \	Vegetation)		
7. positive indication of hydrophytic vegetation was obst	orvoa (rapic	a root for Fry	aropriyiio '	· ogotation).		

SOIL

Depth (inches)	Matrix		Redo	x Features				
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-4	7.5YR 5/1	80	5YR 4/6	20	C	М	sa cl lo	
4-16	10YR 5/1	85	5YR 5/8	15	С	M	sa cl lo	
	-							
1- 0.0							21 .	
	ncentration, D=Dendicators: (Appli					sand Gr		ion: PL=Pore Lining, M=Matrix.  or Problematic Hydric Soils <sup>3</sup> :
_		cable to all Livi						
Histosol (	ipedon (A2)		Sandy C Sandy F					ck (A9) ( <b>LRR I, J</b> ) airie Redox (A16) ( <b>LRR F, G, H</b> )
Black His			-	d Matrix (S				face (S7) ( <b>LRR G</b> )
	n Sulfide (A4)			Mucky Min	-			ins Depressions (F16)
	Layers (A5) (LRR	F)		Gleyed Ma				H outside of MLRA 72 & 73)
	ck (A9) ( <b>LRR F, G,</b>		X Deplete				•	Vertic (F18)
Depleted	Below Dark Surfa	ce (A11)	Redox [	Dark Surfa	ce (F6)			ent Material (TF2)
	rk Surface (A12)		•	d Dark Su				allow Dark Surface (TF12)
	ucky Mineral (S1)	(00) (1 == 0 11		Depression		•		xplain in Remarks)
	lucky Peat or Peat			ains Depre				hydrophytic vegetation and
5 cm Mud	cky Peat or Peat (S	53) ( <b>LRR F</b> )	(IVIL	RA 72 & 7	3 OT LKK	<b>H</b> )		nydrology must be present, sturbed or problematic.
Restrictive I	.ayer (if present):						unless un	sturbed of problematic.
	ayer (ii present).							
• • • • • • • • • • • • • • • • • • • •			=				Uvdria Sail D	resent? Yes <u>X</u> No
Depth (inc	nes)		_				Hydric Soil Pi	resent? Yes <u>*</u> No
Remarks:								
A nositiva indi								
ว คบอเนชซ แไนโ	ication of hydric so	oil was observed	<b>l</b> .					
n positive illui	cation of hydric so	oil was observed	<b>I</b> .					
		oil was observed	l.					
YDROLO(	GY		l.					
YDROLOG	GY Irology Indicators	:		v)			Secondary	Indicators (minimum of two required)
YDROLOG Wetland Hyd Primary Indica	GY Irology Indicators ators (minimum of	:	neck all that appl					Indicators (minimum of two required)
YDROLOG Wetland Hyd Primary Indica	GY Irology Indicators ators (minimum of Water (A1)	:	neck all that appl	(B11)	s (B13)		Surfac	e Soil Cracks (B6)
YDROLOG Wetland Hyd Primary Indica Surface V	GY Irology Indicators ators (minimum of Water (A1) ter Table (A2)	:	neck all that appl Salt Crust Aquatic Inv	(B11) vertebrate	' '		Surfac	e Soil Cracks (B6) ely Vegetated Concave Surface (B8)
Wetland Hyd Primary Indica Surface V High Wat Saturatio	GY Irology Indicators ators (minimum of Water (A1) ter Table (A2) in (A3)	:	neck all that appl Salt Crust Aquatic Inv Hydrogen	(B11) vertebrates Sulfide Oc	or (C1)		Surfac Sparse Draina	e Soil Cracks (B6) ely Vegetated Concave Surface (B8) ige Patterns (B10)
Wetland Hyd Primary Indica Surface V High Wat Saturatio Water Ma	GY Irology Indicators ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1)	:	neck all that appl Salt Crust Aquatic In Hydrogen Dry-Seaso	(B11) vertebrates Sulfide Oc on Water T	lor (C1) able (C2)	og Poots (	Surface Sparse Draina Oxidiz	ee Soil Cracks (B6) ely Vegetated Concave Surface (B8) age Patterns (B10) ed Rhizospheres on Living Roots (C3
Wetland Hyd Primary Indica Surface V High Wat Saturatio Water Ma X Sediment	GY Irology Indicators ators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2)	:	neck all that appl Salt Crust Aquatic Inv Hydrogen Dry-Seaso	(B11) vertebrate: Sulfide Oc on Water T Rhizosphei	lor (C1) able (C2)	ng Roots (	Surface Sparse Draina Oxidiz C3)	ee Soil Cracks (B6) ely Vegetated Concave Surface (B8) age Patterns (B10) ed Rhizospheres on Living Roots (C3 ere tilled)
Wetland Hyd Primary Indica Surface V High Wat Saturatio Water Ma X Sediment Drift Dep	GY Irology Indicators ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3)	:	neck all that appl Salt Crust Aquatic Ind Hydrogen Dry-Seaso Oxidized F	(B11) vertebrates Sulfide Oco on Water T Rhizospher not tilled)	lor (C1) able (C2) res on Livi		Surface Sparse Draina Oxidiz  C3) (whe	te Soil Cracks (B6) ely Vegetated Concave Surface (B8) tige Patterns (B10) ed Rhizospheres on Living Roots (C3 ere tilled) sh Burrows (C8)
Wetland Hyd Primary Indica Surface V High Wat Saturatio Water Ma X Sediment Drift Depr	GY Irology Indicators ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4)	:	neck all that appl Salt Crust Aquatic In Hydrogen Dry-Seaso Oxidized F (where r	(B11) vertebrates Sulfide Oc on Water T Rhizospher not tilled)	lor (C1) able (C2) es on Livi		Surface Sparse Draina Oxidiz C3) (whee Crayfis Satura	ee Soil Cracks (B6) ely Vegetated Concave Surface (B8) ege Patterns (B10) ed Rhizospheres on Living Roots (C3 ere tilled) sh Burrows (C8) etion Visible on Aerial Imagery (C9)
Wetland Hyd Primary Indica Surface V High Wat Saturatio Water Ma X Sediment Drift Depo	Irology Indicators ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5)	: one required; ch	neck all that appl Salt Crust Aquatic In Hydrogen Dry-Seaso Oxidized F (where r	(B11) vertebrates Sulfide Oc on Water T Rhizospher not tilled) of Reduce	lor (C1) able (C2) es on Livi d Iron (C4		Surface Sparse Draina Oxidiz C3) (whe Crayfis Satura X Geom	be Soil Cracks (B6) bely Vegetated Concave Surface (B8) lige Patterns (B10) bed Rhizospheres on Living Roots (C3 bere tilled) beh Burrows (C8) lition Visible on Aerial Imagery (C9) borphic Position (D2)
Wetland Hyd Primary Indica Surface V High Wat Saturatio Water Ma X Sediment Drift Depo Algal Mat Iron Depo Inundatio	Irology Indicators ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial	: one required; ch	neck all that appl Salt Crust Aquatic In Hydrogen Dry-Seaso Oxidized F (where r	(B11) vertebrates Sulfide Oc on Water T Rhizospher not tilled) of Reduce	lor (C1) able (C2) es on Livi d Iron (C4		Surface Sparse Draina Oxidiz C3) (whe Satura	see Soil Cracks (B6) sely Vegetated Concave Surface (B8) sige Patterns (B10) ed Rhizospheres on Living Roots (C3 ere tilled) sh Burrows (C8) stion Visible on Aerial Imagery (C9) orphic Position (D2) seleutral Test (D5)
Wetland Hyd Primary Indica Surface V High Wat Saturatio Water Ma X Sediment Drift Depo Algal Mat Iron Depo Inundatio Water-St	Irology Indicators ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial ained Leaves (B9)	: one required; ch	neck all that appl Salt Crust Aquatic In Hydrogen Dry-Seaso Oxidized F (where r	(B11) vertebrates Sulfide Oc on Water T Rhizospher not tilled) of Reduce	lor (C1) able (C2) es on Livi d Iron (C4		Surface Sparse Draina Oxidiz C3) (whe Satura	be Soil Cracks (B6) bely Vegetated Concave Surface (B8) lige Patterns (B10) bed Rhizospheres on Living Roots (C3 bere tilled) beh Burrows (C8) lition Visible on Aerial Imagery (C9) borphic Position (D2)
Wetland Hyd Primary Indica Surface V High Wat Saturatio Water Ma X Sediment Drift Dep Algal Mat Iron Depo Inundatio Water-St	Irology Indicators ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial ained Leaves (B9) vations:	: one required; ch	neck all that appl Salt Crust Aquatic Inv Hydrogen Dry-Seaso Oxidized F (where r Presence of the Muck Other (Exp	(B11) vertebrate: Sulfide Oco on Water T Rhizospher not tilled) of Reduce : Surface (i	lor (C1) able (C2) es on Livi d Iron (C4		Surface Sparse Draina Oxidiz C3) (whe Satura	see Soil Cracks (B6) sely Vegetated Concave Surface (B8) sige Patterns (B10) ed Rhizospheres on Living Roots (C3 ere tilled) sh Burrows (C8) stion Visible on Aerial Imagery (C9) orphic Position (D2) seleutral Test (D5)
Wetland Hyd Primary Indica Surface V High Wat Saturatio Water Ma X Sediment Drift Depo Algal Mat Iron Depo Inundatio Water-St Field Observ Surface Water	Irology Indicators ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial ained Leaves (B9) vations: er Present?	: one required; check the content of	neck all that apply Salt Crust Aquatic Inv Hydrogen Dry-Seaso Oxidized F (where r Presence of Thin Muck Other (Exp	(B11) vertebrate: Sulfide Oco on Water T Rhizosphei not tilled) of Reduce : Surface (i	lor (C1) able (C2) es on Livi d Iron (C4		Surface Sparse Draina Oxidiz C3) (whe Satura	see Soil Cracks (B6) sely Vegetated Concave Surface (B8) sige Patterns (B10) ed Rhizospheres on Living Roots (C3 ere tilled) sh Burrows (C8) stion Visible on Aerial Imagery (C9) orphic Position (D2) seleutral Test (D5)
Wetland Hyd Primary Indica Surface V High Wat Saturatio Water Ma X Sedimen Drift Depo Algal Mat Iron Depo Inundatio Water-St Field Observ Surface Water	Irology Indicators ators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial ained Leaves (B9) vations: er Present?	: one required; check the content of	Salt Crust Salt Crust Aquatic Inv Hydrogen Dry-Seaso Oxidized F (where r Presence of Thin Muck Other (Exp	(B11) vertebrates Sulfide Octon Water T Rhizospher not tilled) of Reduce s Surface (colain in Reduces):	or (C1) able (C2) es on Livi d Iron (C4 C7) marks) > 16"	) 	Surface Sparse Draina Oxidiz C3) (whe Crayfis Satura  X Geom X FAC-N Frost-I	see Soil Cracks (B6) sely Vegetated Concave Surface (B8) sige Patterns (B10) ed Rhizospheres on Living Roots (C3 ere tilled) sh Burrows (C8) stion Visible on Aerial Imagery (C9) orphic Position (D2) seutral Test (D5) Heave Hummocks (D7) (LRR F)
Wetland Hyd Primary Indica Surface V High Wat Saturatio Water Ma X Sedimen Drift Depo Algal Mat Iron Depo Inundatio Water-St Field Observ Surface Water Saturation Pro	Irology Indicators ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial ained Leaves (B9) vations: er Present? Present?	: one required; check the content of	neck all that apply Salt Crust Aquatic Inv Hydrogen Dry-Seaso Oxidized F (where r Presence of Thin Muck Other (Exp	(B11) vertebrates Sulfide Octon Water T Rhizospher not tilled) of Reduce s Surface (colain in Reduces):	or (C1) able (C2) es on Livi d Iron (C4 C7) marks)	) 	Surface Sparse Draina Oxidiz C3) (whe Crayfis Satura  X Geom X FAC-N Frost-I	see Soil Cracks (B6) sely Vegetated Concave Surface (B8) sige Patterns (B10) ed Rhizospheres on Living Roots (C3 ere tilled) sh Burrows (C8) stion Visible on Aerial Imagery (C9) orphic Position (D2) seleutral Test (D5)
Wetland Hyd Primary Indica Surface V High Wat Saturatio Water Ma X Sediment Drift Depo Algal Mat Iron Depo Inundatio Water-St. Field Observ Surface Water Water Table F Saturation Pro (includes cap	Irology Indicators ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial ained Leaves (B9) vations: er Present? Present?	: one required; check the content of	Salt Crust Salt Crust Aquatic Inv Hydrogen Dry-Seaso Oxidized F (where r Presence of Thin Muck Other (Exp	(B11) vertebrate: Sulfide Oco on Water T Rhizospher not tilled) of Reduce : Surface (i blain in Re ches): ches): ches):	or (C1) able (C2) es on Livi d Iron (C4 C7) marks)  > 16"  > 16"	_ _ _ _ Wetla	Surface Sparse Draina Oxidiz C3) (whe Crayfis Satura X Geom FAC-N Frost-l	see Soil Cracks (B6) sely Vegetated Concave Surface (B8) sige Patterns (B10) ed Rhizospheres on Living Roots (C3 ere tilled) sh Burrows (C8) stion Visible on Aerial Imagery (C9) orphic Position (D2) seutral Test (D5) Heave Hummocks (D7) (LRR F)
Wetland Hyd Primary Indica Surface V High Wat Saturatio Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundatio Water-St. Field Observ Surface Water Water Table F Saturation Pro (includes cap	Irology Indicators ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial ained Leaves (B9) vations: er Present? Present? esent? esent?	: one required; check the content of	Salt Crust Salt Crust Aquatic Inv Hydrogen Dry-Seaso Oxidized F (where r Presence of Thin Muck Other (Exp	(B11) vertebrate: Sulfide Oco on Water T Rhizospher not tilled) of Reduce : Surface (i blain in Re ches): ches): ches):	or (C1) able (C2) es on Livi d Iron (C4 C7) marks)  > 16"  > 16"	_ _ _ _ Wetla	Surface Sparse Draina Oxidiz C3) (whe Crayfis Satura X Geom FAC-N Frost-l	see Soil Cracks (B6) sely Vegetated Concave Surface (B8) sige Patterns (B10) ed Rhizospheres on Living Roots (C3 ere tilled) sh Burrows (C8) stion Visible on Aerial Imagery (C9) orphic Position (D2) seutral Test (D5) Heave Hummocks (D7) (LRR F)
Wetland Hyd Primary Indica Surface V High Wat Saturatio Water Ma X Sediment Drift Dept Algal Mat Iron Dept Inundatio Water-St Field Observ Surface Water Water Table F Saturation Pro (includes cap) Describe Rec	Irology Indicators ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial ained Leaves (B9) vations: er Present? Present? esent? esent?	: one required; check the content of	Salt Crust Salt Crust Aquatic Inv Hydrogen Dry-Seaso Oxidized F (where r Presence of Thin Muck Other (Exp	(B11) vertebrate: Sulfide Oco on Water T Rhizospher not tilled) of Reduce : Surface (i blain in Re ches): ches): ches):	or (C1) able (C2) es on Livi d Iron (C4 C7) marks)  > 16"  > 16"	_ _ _ _ Wetla	Surface Sparse Draina Oxidiz C3) (whe Crayfis Satura X Geom FAC-N Frost-l	see Soil Cracks (B6) sely Vegetated Concave Surface (B8) sige Patterns (B10) ed Rhizospheres on Living Roots (C3 ere tilled) sh Burrows (C8) stion Visible on Aerial Imagery (C9) orphic Position (D2) seutral Test (D5) Heave Hummocks (D7) (LRR F)
Wetland Hyd Primary Indica Surface V High Wat Saturatio Water Ma X Sediment Drift Dept Algal Mat Iron Dept Inundatio Water-St Field Observ Surface Water Water Table F Saturation Pro (includes cap) Describe Reco	Irology Indicators ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial ained Leaves (B9) vations: er Present? Present? esent? esent?	: one required; check the content of	Salt Crust Aquatic Inv Hydrogen Dry-Seaso Oxidized F (where r Presence of Thin Muck Other (Exp	(B11) vertebrate: Sulfide Oco on Water T Rhizospher not tilled) of Reduce : Surface (i blain in Re ches): ches): photos, pre	or (C1) able (C2) es on Livi d Iron (C4 C7) marks)  > 16" > 16" evious insp	Wetia	Surface Sparse Draina Oxidiz C3) (whe Crayfis Satura X Geom FAC-N Frost-l	see Soil Cracks (B6) sely Vegetated Concave Surface (B8) sige Patterns (B10) ed Rhizospheres on Living Roots (C3 ere tilled) sh Burrows (C8) stion Visible on Aerial Imagery (C9) orphic Position (D2) seutral Test (D5) Heave Hummocks (D7) (LRR F)

DP 7

Sampling Point:

Project/Site: US-70 Over Lake Texoma (Roosevelt Bridge)		ity/County	: Bryan		Sampling Date: 12/1/2021	l
Applicant/Owner: The Oklahoma Department of Transporta	ition (ODOT)			State: OK	Sampling Point: DP 8	
Investigator(s): Megan Philips-Schaap & Lacee Stanley	S	ection, To	wnship, Ra	nge: Sec. 29, T6S, R7E		
Landform (hillslope, terrace, etc.):lake terrace	L	ocal reliet	f (concave, o	convex, none): concave	Slope (%): <u></u>	5-20
Subregion (LRR): Southwestern Prairies (LRR J)	Lat: 33.99	98719	•	-96.592691	Datum: WGS 8	84
Soil Map Unit Name: 14: Boxville fine sandy loam, 3 to 8 pe	ercent slopes			NWI classific		
Are climatic / hydrologic conditions on the site typical for this						
Are Vegetation, Soil, or Hydrologys					oresent? Yes <b>X</b> No	
Are Vegetation, Soil, or Hydrology r				eded, explain any answe		
SUMMARY OF FINDINGS – Attach site map				, ,	,	etc.
Hydrophytic Vegetation Present? YesX N	0			_		
Hydric Soil Present? Yes X N	o		ne Sampled		, No	
Wetland Hydrology Present? Yes X N	o	With	iin a Wetlar	10? Yes	NO	
Remarks:		•				
This point was determined to be within a wetland due to	the presence	e of all 3 v	vetland crite	ria.		
Wetland 3						
VECETATION Lies esigntific names of plan	<u> </u>					
VEGETATION – Use scientific names of plan		D i 4	la dia atau	Daminana Taak wast	rah a aki	
Tree Stratum (Plot size:)	Absolute <u>% Cover</u>		Indicator Status	Dominance Test work		
1. None observed				Number of Dominant S That Are OBL, FACW,	•	
2				(excluding FAC-):	(/	(A)
3				Total Number of Domin	ant	
4				Species Across All Stra	uta: (B	3)
Copling/Chrub Stratum (Plot size: 15'	=	Total Co	ver	Percent of Dominant Sp	pecies	
Saping/Snub Stratum (Flot size)	35	Yes	FACW	That Are OBL, FACW,	or FAC: (A	A/B)
Black willow (Salix nigra)     Common buttonbush (Cephalanthus occidentalis)	30	Yes	OBL	Prevalence Index wor	ksheet:	
3.				Total % Cover of:	Multiply by:	
Δ				OBL species	x 1 =	
5				FACW species	x 2 =	
	65% =	Total Co	ver	FAC species	x 3 =	
Herb Stratum (Plot size:				FACU species		
1. Sedge (Carex spp.)*	40	Yes	OBL	· ·	x 5 =	
2				Column Totals:	(A) (	(B)
3				Prevalence Index	= B/A =	
4				Hydrophytic Vegetation		
5				X 1 - Rapid Test for I	- - - - - - - - - - - - - - - - - - -	
6				2 - Dominance Tes	st is >50%	
7				3 - Prevalence Inde	ex is ≤3.0 <sup>1</sup>	
8 9					Adaptations¹ (Provide suppor	rting
10.					s or on a separate sheet)	
10.	40% =	Total Co	ver	Problematic Hydro	phytic Vegetation <sup>1</sup> (Explain)	
Woody Vine Stratum (Plot size:) None observed 1				<sup>1</sup> Indicators of hydric soi be present, unless dist	il and wetland hydrology mus urbed or problematic.	st
2.				Hydrophytic		
% Bare Ground in Herb Stratum 60%	=	Total Co	ver	Vegetation Present? Ye	s No	
Remarks:				•		
A positive indication of hydrophytic vegetation was obse	erved (Rapid <sup>-</sup>	Test for H	ydrophytic \	/egetation).		

	Matrix Color (maint)	0/		x Features		1.552	Touture	Damarka
(inches) 0-16	Color (moist) 10YR 5/2	_ <u>%</u> 85	Color (moist) 5YR 4/6	<u>%</u> 15	Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u> _	Remarks
U-16	1011 5/2		311/4/0					
	-							
		- <u> </u>						
							<u> </u>	
	oncentration, D=Dep					d Sand G		ion: PL=Pore Lining, M=Matrix.
-	Indicators: (Applic	able to all LF			-			r Problematic Hydric Soils <sup>3</sup> :
Histosol	• •		Sandy (					ck (A9) (LRR I, J)
Histic Ep Black Hi	oipedon (A2)			Redox (S5) d Matrix (S				airie Redox (A16) ( <b>LRR F, G, H</b> ) face (S7) ( <b>LRR G</b> )
	n Sulfide (A4)			Mucky Min				ns Depressions (F16)
	l Layers (A5) ( <b>LRR</b> I	F)		Gleyed Ma				H outside of MLRA 72 & 73)
	ick (A9) ( <b>LRR F, G,</b> l		<b>X</b> Deplete	-			Reduced	Vertic (F18)
-	d Below Dark Surfac	e (A11)		Dark Surfa				ent Material (TF2)
	ark Surface (A12)		·	d Dark Su				Illow Dark Surface (TF12)
	lucky Mineral (S1) ⁄lucky Peat or Peat (	(S2) (I <b>DD C</b>		Depressior ains Depre		16)		xplain in Remarks) hydrophytic vegetation and
	icky Peat or Peat (S			.RA 72 & 7				hydrology must be present,
	,	-, (,	(			/		sturbed or problematic.
Restrictive I	_ayer (if present):							
Туре:			<u> </u>					
Depth (inc	ches):		<u>—</u>				Hydric Soil Pi	resent? Yes <u>X</u> No
Depth (ind Remarks:	ches):		_				Hydric Soil Pi	resent? Yes <u>X</u> No
Remarks:		il was absorve					Hydric Soil Pi	resent? Yes <u>X</u> No
Remarks:	ches):ication of hydric soi	il was observe	-d.				Hydric Soil Pi	resent? Yes <u>X</u> No
Remarks:	ication of hydric soi	il was observe	d.				Hydric Soil Pr	resent? Yes <u>X</u> No
Remarks:  A positive ind	ication of hydric soi		<u></u>				Hydric Soil Pr	resent? Yes <u>X</u> No
Remarks: A positive ind IYDROLO Wetland Hyd	ication of hydric soi			v)			1	
Remarks:  A positive ind  IYDROLO  Wetland Hyderimary Indice	ication of hydric soi GY drology Indicators: ators (minimum of c		check all that appl				Secondary	Indicators (minimum of two required)
Remarks:  A positive ind  IYDROLO  Wetland Hyde  Primary Indic  Surface	GY drology Indicators: cators (minimum of c		check all that appl	(B11)	c (B13)		Secondary Surface	Indicators (minimum of two required) e Soil Cracks (B6)
Remarks:  A positive ind  IYDROLO  Wetland Hyd  Primary Indic  Surface  High Wa	GY drology Indicators: eators (minimum of c Water (A1) tter Table (A2)		check all that appl Salt Crust Aquatic In	(B11) vertebrates			Secondary Surfac	Indicators (minimum of two required) e Soil Cracks (B6) ely Vegetated Concave Surface (B8)
Remarks:  A positive ind  IYDROLO  Wetland Hyd  Primary Indic  Surface  High Wa  Saturation	GY drology Indicators: eators (minimum of c Water (A1) tter Table (A2) on (A3)		check all that appl Salt Crust Aquatic In Hydrogen	(B11) vertebrates Sulfide Oc	or (C1)		Secondary Surface Sparse Draina	Indicators (minimum of two required) e Soil Cracks (B6) ely Vegetated Concave Surface (B8) ge Patterns (B10)
Remarks:  A positive ind  IYDROLO  Wetland Hyde  Primary Indic  Surface  High Water Mater	GY drology Indicators: eators (minimum of c Water (A1) tter Table (A2) on (A3) arks (B1)		check all that appl Salt Crust Aquatic In Hydrogen Dry-Seasc	(B11) vertebrates Sulfide Oc on Water T	lor (C1) able (C2)	ng Roots	Secondary Surfac Sparse Draina Oxidiz	Indicators (minimum of two required) e Soil Cracks (B6) ely Vegetated Concave Surface (B8) ge Patterns (B10) ed Rhizospheres on Living Roots (C3
Remarks:  A positive ind  IYDROLO  Wetland Hyde  Primary India  Surface  High Water Mater	GY drology Indicators: eators (minimum of c Water (A1) tter Table (A2) on (A3)		check all that appl Salt Crust Aquatic In Hydrogen Dry-Seasc	(B11) vertebrates Sulfide Oc on Water T	lor (C1) able (C2)	ng Roots	Secondary Surface Sparse Draina Oxidiz (C3) (whe	Indicators (minimum of two required) e Soil Cracks (B6) ely Vegetated Concave Surface (B8) ge Patterns (B10)
Remarks:  A positive ind  IYDROLO  Wetland Hyde  Primary India  Surface  High Wa  Saturatia  Water Mater Mater Mater Mater Drift Dep	GY drology Indicators: cators (minimum of c Water (A1) tter Table (A2) on (A3) arks (B1) nt Deposits (B2)		check all that appl Salt Crust Aquatic In Hydrogen Dry-Seasc	(B11) vertebrates Sulfide Oco on Water T Rhizospher not tilled)	lor (C1) able (C2) es on Liv		Secondary Surface Sparse Draina Oxidiz (C3) (whe	Indicators (minimum of two required) e Soil Cracks (B6) ely Vegetated Concave Surface (B8) ge Patterns (B10) ed Rhizospheres on Living Roots (C3 ere tilled)
Remarks:  A positive ind  IYDROLO  Wetland Hyd  Primary India  Surface  High Wa  Saturatia  Water M  Sedimer  Drift Dep  Algal Ma	GY drology Indicators: eators (minimum of company) water (A1) or (A3) arks (B1) at Deposits (B2) posits (B3)		check all that appl Salt Crust Aquatic In Hydrogen Dry-Seaso Oxidized F	(B11) vertebrates Sulfide Oc on Water T Rhizospher not tilled)	lor (C1) able (C2) es on Liv		Secondary Surface Sparse Draina Oxidiz (C3) (whe	Indicators (minimum of two required) e Soil Cracks (B6) ely Vegetated Concave Surface (B8) ge Patterns (B10) ed Rhizospheres on Living Roots (C3 ere tilled) sh Burrows (C8)
Remarks:  A positive ind  IYDROLO  Wetland Hyde  Primary Indic  Surface  High Wa  Saturatic  Water M  Sedimer  Drift Dep  Algal Ma  Iron Dep	GY drology Indicators: eators (minimum of company) water (A1) ter Table (A2) on (A3) arks (B1) arks (B1) on Deposits (B2) cosits (B3) at or Crust (B4)	one required; o	check all that appl Salt Crust Aquatic In Hydrogen Dry-Seasc Oxidized F (where I	(B11) vertebrates Sulfide Oc on Water T Rhizospher not tilled) of Reduces s Surface (6)	lor (C1) able (C2) es on Liv d Iron (C4		Secondary Surface Sparse Draina Oxidiz (C3) (whe Crayfis Satura	Indicators (minimum of two required) e Soil Cracks (B6) ely Vegetated Concave Surface (B8) ge Patterns (B10) ed Rhizospheres on Living Roots (C3 ere tilled) sh Burrows (C8) tion Visible on Aerial Imagery (C9)
Remarks:  A positive ind  IYDROLO  Wetland Hyde  Primary Indice  High Water Mater Ma	GY drology Indicators: eators (minimum of content of the content o	one required; o	check all that appl Salt Crust Aquatic In Hydrogen Dry-Seasc Oxidized F (where i	(B11) vertebrates Sulfide Oc on Water T Rhizospher not tilled) of Reduces s Surface (6)	lor (C1) able (C2) es on Liv d Iron (C4		Secondary Surface Sparse Draina Oxidiz (C3) (whee Satura X Geome	Indicators (minimum of two required) e Soil Cracks (B6) ely Vegetated Concave Surface (B8) ge Patterns (B10) ed Rhizospheres on Living Roots (C3 ere tilled) sh Burrows (C8) tion Visible on Aerial Imagery (C9) orphic Position (D2)
Remarks:  A positive ind  IYDROLO  Wetland Hyde  Primary Indice  High Water Mater Ma	GY drology Indicators: cators (minimum of company) water (A1) on (A3) arks (B1) on to Deposits (B2) cosits (B3) of or Crust (B4) cosits (B5) on Visible on Aerial of tained Leaves (B9)	one required; o	check all that appl Salt Crust Aquatic In Hydrogen Dry-Seasc Oxidized F (where i	(B11) vertebrates Sulfide Oc on Water T Rhizospher not tilled) of Reduces s Surface (6)	lor (C1) able (C2) es on Liv d Iron (C4		Secondary Surface Sparse Draina Oxidiz (C3) (whee Satura X Geome	Indicators (minimum of two required) e Soil Cracks (B6) ely Vegetated Concave Surface (B8) ge Patterns (B10) ed Rhizospheres on Living Roots (C3 ere tilled) sh Burrows (C8) tion Visible on Aerial Imagery (C9) orphic Position (D2) leutral Test (D5)
Remarks:  A positive ind  IYDROLO  Wetland Hyde  Primary India  Surface  High Wa  Saturatio  Water M  Sedimer  Drift Dep  Algal Ma  Iron Dep  Inundatio  Water-S	GY drology Indicators: cators (minimum of	Imagery (B7)	Sheck all that appl Salt Crust Aquatic In Hydrogen Dry-Seasc Oxidized F (where I Presence Thin Muck Other (Exp	(B11) vertebrates Sulfide Oc on Water T Rhizospher not tilled) of Reduce s Surface (i plain in Rei	or (C1) able (C2) es on Liv d Iron (C4 C7) marks)		Secondary Surface Sparse Draina Oxidiz (C3) (whee Satura X Geome	Indicators (minimum of two required) e Soil Cracks (B6) ely Vegetated Concave Surface (B8) ge Patterns (B10) ed Rhizospheres on Living Roots (C3 ere tilled) sh Burrows (C8) tion Visible on Aerial Imagery (C9) orphic Position (D2) leutral Test (D5)
Remarks:  A positive ind  IYDROLO  Wetland Hyd  Primary India  Surface  High Wa  Saturatia  Water M  Sedimer  Drift Dep  Algal Ma  Iron Dep  Inundatia  Water-S  Field Obser	GY drology Indicators: cators (minimum of	Imagery (B7)	Sheck all that appl Salt Crust Aquatic In Hydrogen Dry-Seasc Oxidized F (where I Presence Thin Muck	(B11) vertebrates Sulfide Oc on Water T Rhizospher not tilled) of Reduce s Surface (i plain in Rei	or (C1) able (C2) es on Liv d Iron (C4 C7) marks) > 16"		Secondary Surface Sparse Draina Oxidiz (C3) (whee Satura X Geome	Indicators (minimum of two required) e Soil Cracks (B6) ely Vegetated Concave Surface (B8) ge Patterns (B10) ed Rhizospheres on Living Roots (C3 ere tilled) sh Burrows (C8) tion Visible on Aerial Imagery (C9) orphic Position (D2) leutral Test (D5)
Remarks:  A positive ind  IYDROLO  Wetland Hyde  Primary Indice  High Water Mand Sedimer  Drift Dep Algal Mand Iron Dep Inundative Water-S  Field Obsert  Surface Water Table Saturation Person	ication of hydric soil  GY  drology Indicators: cators (minimum of company of	Imagery (B7)  /es No /es No	Sheck all that appl Salt Crust Aquatic In Hydrogen Dry-Seasc Oxidized F (where I Presence Thin Muck Other (Exp	(B11) vertebrates Sulfide Oc on Water T Rhizospher not tilled) of Reduces s Surface (colain in Recurrence) ches): ches):	or (C1) able (C2) es on Liv d Iron (C4 C7) marks)	-) 	Secondary Surface Sparse Draina Oxidiz (C3) (whe Satura  X Geome X FAC-N Frost-I	Indicators (minimum of two required) e Soil Cracks (B6) ely Vegetated Concave Surface (B8) ge Patterns (B10) ed Rhizospheres on Living Roots (C3 ere tilled) sh Burrows (C8) tion Visible on Aerial Imagery (C9) orphic Position (D2) leutral Test (D5)
Remarks:  A positive ind  IYDROLO  Wetland Hyden  Primary Indice  High Water Mand Hyden  Sedimer  Drift Dep  Algal Mand Hyden  Iron Dep  Inundation  Water-S  Field Obser  Surface Water Table  Saturation Per  (includes cap	ication of hydric soil  GY  drology Indicators: eators (minimum of content of	Imagery (B7)  'es No 'es No 'es No	Sheck all that appl Salt Crust Aquatic In Hydrogen Dry-Seasc Oxidized F (where I Presence Thin Muck Other (Exp	(B11) vertebrates Sulfide Oco on Water T Rhizospher not tilled) of Reduce s Surface (colain in Reduce) ches): ches): ches):	or (C1) able (C2) es on Liv d Iron (C4 C7) marks)  > 16" > 16"		Secondary  Surface Sparse Draina Oxidiz (C3) (whe Satura  FAC-N Frost-I	Indicators (minimum of two required) e Soil Cracks (B6) ely Vegetated Concave Surface (B8) ge Patterns (B10) ed Rhizospheres on Living Roots (C3 ere tilled) sh Burrows (C8) tion Visible on Aerial Imagery (C9) orphic Position (D2) leutral Test (D5) Heave Hummocks (D7) (LRR F)
Remarks:  A positive ind  IYDROLO  Wetland Hyden  Primary Indice  High Water Mand Hyden  Sedimer  Drift Dep  Algal Mand Hyden  Iron Dep  Inundation  Water-S  Field Obser  Surface Water Table  Saturation Per  (includes cap	ication of hydric soil  GY  drology Indicators: cators (minimum of company of	Imagery (B7)  'es No 'es No 'es No	Sheck all that appl Salt Crust Aquatic In Hydrogen Dry-Seasc Oxidized F (where I Presence Thin Muck Other (Exp	(B11) vertebrates Sulfide Oco on Water T Rhizospher not tilled) of Reduce s Surface (colain in Reduce) ches): ches): ches):	or (C1) able (C2) es on Liv d Iron (C4 C7) marks)  > 16" > 16"		Secondary  Surface Sparse Draina Oxidiz (C3) (whe Satura  FAC-N Frost-I	Indicators (minimum of two required) e Soil Cracks (B6) ely Vegetated Concave Surface (B8) ge Patterns (B10) ed Rhizospheres on Living Roots (C3 ere tilled) sh Burrows (C8) tion Visible on Aerial Imagery (C9) orphic Position (D2) leutral Test (D5) Heave Hummocks (D7) (LRR F)
Remarks:  A positive ind  IYDROLO  Wetland Hyde  Primary India  Surface  High Wa  Saturation  Water Mand Mand  Iron Dep  Inundation  Water-S  Field Obsert  Surface Water  Water Table  Saturation Per  (includes cap  Describe Receiver	ication of hydric soil  GY  drology Indicators: eators (minimum of content of	Imagery (B7)  'es No 'es No 'es No	Sheck all that appl Salt Crust Aquatic In Hydrogen Dry-Seasc Oxidized F (where I Presence Thin Muck Other (Exp	(B11) vertebrates Sulfide Oco on Water T Rhizospher not tilled) of Reduce s Surface (colain in Reduce) ches): ches): ches):	or (C1) able (C2) es on Liv d Iron (C4 C7) marks)  > 16" > 16"		Secondary  Surface Sparse Draina Oxidiz (C3) (whe Satura  FAC-N Frost-I	Indicators (minimum of two required) e Soil Cracks (B6) ely Vegetated Concave Surface (B8) ge Patterns (B10) ed Rhizospheres on Living Roots (C3 ere tilled) sh Burrows (C8) tion Visible on Aerial Imagery (C9) orphic Position (D2) leutral Test (D5) Heave Hummocks (D7) (LRR F)
Remarks:  A positive ind  IYDROLO  Wetland Hyden  Primary Indice  High Water Mand Hyden  Sedimer  Drift Dep  Algal Mand Hyden  Iron Dep  Inundation  Water-S  Field Obser  Surface Water Table  Saturation Per  (includes cap	ication of hydric soil  GY  drology Indicators: eators (minimum of content of	Imagery (B7)  'es No 'es No 'es No	Sheck all that appl Salt Crust Aquatic In Hydrogen Dry-Seasc Oxidized F (where I Presence Thin Muck Other (Exp	(B11) vertebrates Sulfide Oco on Water T Rhizospher not tilled) of Reduce s Surface (colain in Reduce) ches): ches): ches):	or (C1) able (C2) es on Liv d Iron (C4 C7) marks)  > 16" > 16"		Secondary  Surface Sparse Draina Oxidiz (C3) (whe Satura  FAC-N Frost-I	Indicators (minimum of two required) e Soil Cracks (B6) ely Vegetated Concave Surface (B8) ge Patterns (B10) ed Rhizospheres on Living Roots (C3 ere tilled) sh Burrows (C8) tion Visible on Aerial Imagery (C9) orphic Position (D2) leutral Test (D5) Heave Hummocks (D7) (LRR F)

Project/Site: US-70 Over Lake Texoma (Roosevelt Bridge)		City/Cour	nty: Bryan		Sampling	Date: 12/1/2	021
Applicant/Owner: The Oklahoma Department of Transportat	ion (ODOT	·)		State: OK	Sampling	Point: DP 9	
Investigator(s): Megan Philips-Schaap & Lacee Stanley	{	Section,	Township, Ra	nge: Sec. 29, T6S, R7E	<u> </u>		
Landform (hillslope, terrace, etc.): hillslope		Local rel	lief (concave,	convex, none): slope			
Subregion (LRR): Southwestern Prairies (LRR J)	_ Lat:33.9	998723		Long:		_ Datum: Wo	3S 84
Soil Map Unit Name: 14: Boxville fine sandy loam, 3 to 8 per	rcent slope:	s		NWI classif	ication: NA		
Are climatic / hydrologic conditions on the site typical for this	time of year	ar? Yes	_ <b>x</b> No _	(If no, explain in	Remarks.)		
Are Vegetation, Soil, or Hydrology signs.	gnificantly o	disturbed	I? Are "	'Normal Circumstances"	present? Y	es <b>x</b> _ N	lo
Are Vegetation, Soil, or Hydrology na	aturally prol	blematic′	? (If ne	eded, explain any answ	ers in Remai	rks.)	
SUMMARY OF FINDINGS – Attach site map s	showing	sampl	ing point l	ocations, transect	s, importa	ant feature	es, etc.
Hydrophytic Vegetation Present? Yes No	, <b>x</b>						
Hydric Soil Present? Yes No			the Sampled		NI.	x	
Wetland Hydrology Present? Yes No		w w	ithin a Wetlar	nd? Yes	No _	<del></del>	
Remarks:		1					
This point was determined not to be within a wetland due	e to the lack	c of all the	ree wetland ci	riteria.			
VEGETATION – Use scientific names of plant	·s						
VEGETATION Goe obtending names of plant	Absolute	Domino	ant Indicator	Dominance Test wor	·lroboot:		
Tree Stratum (Plot size:)			s? Status				
1. None observed				Number of Dominant S That Are OBL, FACW		_	
2.				(excluding FAC-):	_	1	(A)
3.				Total Number of Demi	inant		
				Total Number of Domi Species Across All Str		2	(B)
4			<del></del>		_		. (-)
Sapling/Shrub Stratum (Plot size:)		= rotarc	Jover	Percent of Dominant S That Are OBL, FACW		50%	(A/B)
1. None observed				That Ale OBL, I ACW	, 01 1 AC		. (٨/٢)
2.				Prevalence Index wo	rksheet:		
3.		-		Total % Cover of:		Multiply by:	
4				OBL species	x 1	=	_
5				FACW species	x 2	=	_
J				FAC species	x 3	=	
Herb Stratum (Plot size: 5' )		= rotar C	Jover	FACU species			
Tapered rosette grass (Dichanthelium acuminatum)	20	Yes	FAC	UPL species	x 5	=	
2.				Column Totals:			
3.					` ,		_
4.				Prevalence Inde	<u></u>		
5.				Hydrophytic Vegetat	ion Indicato	ors:	
6.				1 - Rapid Test for	Hydrophytic	Vegetation	
				2 - Dominance Te	est is >50%		
7				3 - Prevalence Inc	dex is ≤3.0¹		
8				4 - Morphological			
9				data in Remar			
10		= Total C		Problematic Hydro	ophytic Vege	etation' (Expla	ain)
Woody Vine Stratum (Plot size:)   Southern dewberry (Rubus trivialis)				<sup>1</sup> Indicators of hydric so			must
1	60	Yes	FACU	be present, unless dis	urbed or pro	objetnatic.	
2	60%			Hydrophytic Vegetation			
% Bare Ground in Herb Stratum 80%	60%	= Total C	Jover	_	es	No <u> </u>	
Remarks:				1			
Tromano.							
No positive indication of hydrophytic vegetation was obse	erved (≥50°	% of dom	ninant species	indexed as FAC- or dri	ər).		

SOIL

Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply)  Surface Water (A1)  Surface Water (A1)  Surface Water (A2)  Aquatic Invertebrates (B13)  Saturation (A3)  Hydrogen Sulfide Odor (C1)  Sediment Deposits (B2)  Oxidized Rhizospheres on Living Roots (C3)  Sediment Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Iron Deposits (B5)  Inundation Visible on Aerial Imagery (B7)  Water-Stained Leaves (B9)  Field Observations:  Surface Water Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Profile Desc	ription: (Describe	to the depth n	eeded to docun	nent the i	ndicator	or confirn	n the absence o	of indicators.)
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. **\frac{1}{2}\costition: PL=Pore Lining, M=Matrix, Pydris Soll Indicators: (Applicable to all LRRs, unless otherwise noted.)  Historia (A1)  Historia (A2)  Loany Marky Matrix (F2)  Loany Marky Marrix (F2)  Loany Marky Marrix (F2)  Loany Marrix (F2)  Loan	•						. 2		
Type: C-Concentration, D-Depletion, RM-Reduced Matrix, CS-Covered or Coated Sand Grains.  Typeric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosci (A1)  Histo				Color (moist)		Type'	Loc		Remarks
Hydric Soll Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histoc (A1)  Histoc (A2)  Histoc (A3)  Hydrogen Sulfide (A4)  Hydrogen Sulfide (A6)  Hydrogen Sulfide (A6)  Hydrogen Sulfide (A6)  Stratified Layers (A5) (LRR F)  Loamy Mucky Mineral (F1)  Loamy Mucky Mineral (F1)  Loamy Mucky Mineral (F1)  Loamy Gleyed Matrix (F2)  Black Histoc (A3)  Loamy Mucky Mineral (F1)  Loamy Mucky Mineral (F1)  Loamy Gleyed Matrix (F2)  Depleted Below Dark Surface (A11)  Depleted Matrix (F3)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (F1)  Loamy Gleyed Matrix (F2)  Depleted Below Dark Surface (A11)  Redox Dark Surface (F6)  Thick Dark Surface (A12)  Depleted Dark Surface (F6)  Thick Dark Surface (A12)  Some Mucky Peat or Peat (S2) (LRR G, H)  High Plains Depressions (F16)  Gorn Mucky Peat or Peat (S2) (LRR G, H)  High Plains Depressions (F16)  Mucky Peat or Peat (S2) (LRR G, H)  Mucky Peat or Peat (S2) (LRR G, H)  Mucky Peat or Peat (S2) (LRR F)  Mucky Peat or Peat (S3) (LRR F)  Mucky Peat or Peat (S3) (LRR F)  Mucky Peat or Peat (S2) (LRR G, H)  Mucky Peat or Peat (S3) (LRR F)  Mucky Peat or Peat (S3)  Muc	0-10	5YR 5/8	100					sandy clay	
Hydric Soll Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histoc (A1)  Histoc (A2)  Histoc (A3)  Hydrogen Sulfide (A4)  Hydrogen Sulfide (A6)  Hydrogen Sulfide (A6)  Hydrogen Sulfide (A6)  Stratified Layers (A5) (LRR F)  Loamy Mucky Mineral (F1)  Loamy Mucky Mineral (F1)  Loamy Mucky Mineral (F1)  Loamy Gleyed Matrix (F2)  Black Histoc (A3)  Loamy Mucky Mineral (F1)  Loamy Mucky Mineral (F1)  Loamy Gleyed Matrix (F2)  Depleted Below Dark Surface (A11)  Depleted Matrix (F3)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (F1)  Loamy Gleyed Matrix (F2)  Depleted Below Dark Surface (A11)  Redox Dark Surface (F6)  Thick Dark Surface (A12)  Depleted Dark Surface (F6)  Thick Dark Surface (A12)  Some Mucky Peat or Peat (S2) (LRR G, H)  High Plains Depressions (F16)  Gorn Mucky Peat or Peat (S2) (LRR G, H)  High Plains Depressions (F16)  Mucky Peat or Peat (S2) (LRR G, H)  Mucky Peat or Peat (S2) (LRR G, H)  Mucky Peat or Peat (S2) (LRR F)  Mucky Peat or Peat (S3) (LRR F)  Mucky Peat or Peat (S3) (LRR F)  Mucky Peat or Peat (S2) (LRR G, H)  Mucky Peat or Peat (S3) (LRR F)  Mucky Peat or Peat (S3)  Muc									
Hydric Soll Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histoc (A1)  Histoc (A2)  Histoc (A3)  Hydrogen Sulfide (A4)  Hydrogen Sulfide (A6)  Hydrogen Sulfide (A6)  Hydrogen Sulfide (A6)  Stratified Layers (A5) (LRR F)  Loamy Mucky Mineral (F1)  Loamy Mucky Mineral (F1)  Loamy Mucky Mineral (F1)  Loamy Gleyed Matrix (F2)  Black Histoc (A3)  Loamy Mucky Mineral (F1)  Loamy Mucky Mineral (F1)  Loamy Gleyed Matrix (F2)  Depleted Below Dark Surface (A11)  Depleted Matrix (F3)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (F1)  Loamy Gleyed Matrix (F2)  Depleted Below Dark Surface (A11)  Redox Dark Surface (F6)  Thick Dark Surface (A12)  Depleted Dark Surface (F6)  Thick Dark Surface (A12)  Some Mucky Peat or Peat (S2) (LRR G, H)  High Plains Depressions (F16)  Gorn Mucky Peat or Peat (S2) (LRR G, H)  High Plains Depressions (F16)  Mucky Peat or Peat (S2) (LRR G, H)  Mucky Peat or Peat (S2) (LRR G, H)  Mucky Peat or Peat (S2) (LRR F)  Mucky Peat or Peat (S3) (LRR F)  Mucky Peat or Peat (S3) (LRR F)  Mucky Peat or Peat (S2) (LRR G, H)  Mucky Peat or Peat (S3) (LRR F)  Mucky Peat or Peat (S3)  Muc				_					_
Hydric Soll Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histoc (A1)  Histoc (A2)  Histoc (A3)  Hydrogen Sulfide (A4)  Hydrogen Sulfide (A6)  Hydrogen Sulfide (A6)  Hydrogen Sulfide (A6)  Stratified Layers (A5) (LRR F)  Loamy Mucky Mineral (F1)  Loamy Mucky Mineral (F1)  Loamy Mucky Mineral (F1)  Loamy Gleyed Matrix (F2)  Black Histoc (A3)  Loamy Mucky Mineral (F1)  Loamy Mucky Mineral (F1)  Loamy Gleyed Matrix (F2)  Depleted Below Dark Surface (A11)  Depleted Matrix (F3)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (F1)  Loamy Gleyed Matrix (F2)  Depleted Below Dark Surface (A11)  Redox Dark Surface (F6)  Thick Dark Surface (A12)  Depleted Dark Surface (F6)  Thick Dark Surface (A12)  Some Mucky Peat or Peat (S2) (LRR G, H)  High Plains Depressions (F16)  Gorn Mucky Peat or Peat (S2) (LRR G, H)  High Plains Depressions (F16)  Mucky Peat or Peat (S2) (LRR G, H)  Mucky Peat or Peat (S2) (LRR G, H)  Mucky Peat or Peat (S2) (LRR F)  Mucky Peat or Peat (S3) (LRR F)  Mucky Peat or Peat (S3) (LRR F)  Mucky Peat or Peat (S2) (LRR G, H)  Mucky Peat or Peat (S3) (LRR F)  Mucky Peat or Peat (S3)  Muc			· <del></del>						_
Hydric Soll Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histoc (A1)  Histoc (A2)  Histoc (A3)  Hydrogen Sulfide (A4)  Hydrogen Sulfide (A6)  Hydrogen Sulfide (A6)  Hydrogen Sulfide (A6)  Stratified Layers (A5) (LRR F)  Loamy Mucky Mineral (F1)  Loamy Mucky Mineral (F1)  Loamy Mucky Mineral (F1)  Loamy Gleyed Matrix (F2)  Black Histoc (A3)  Loamy Mucky Mineral (F1)  Loamy Mucky Mineral (F1)  Loamy Gleyed Matrix (F2)  Depleted Below Dark Surface (A11)  Depleted Matrix (F3)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (F1)  Loamy Gleyed Matrix (F2)  Depleted Below Dark Surface (A11)  Redox Dark Surface (F6)  Thick Dark Surface (A12)  Depleted Dark Surface (F6)  Thick Dark Surface (A12)  Some Mucky Peat or Peat (S2) (LRR G, H)  High Plains Depressions (F16)  Gorn Mucky Peat or Peat (S2) (LRR G, H)  High Plains Depressions (F16)  Mucky Peat or Peat (S2) (LRR G, H)  Mucky Peat or Peat (S2) (LRR G, H)  Mucky Peat or Peat (S2) (LRR F)  Mucky Peat or Peat (S3) (LRR F)  Mucky Peat or Peat (S3) (LRR F)  Mucky Peat or Peat (S2) (LRR G, H)  Mucky Peat or Peat (S3) (LRR F)  Mucky Peat or Peat (S3)  Muc			· <del></del>						
Hydric Soll Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histoc (A1)  Histoc (A2)  Histoc (A3)  Hydrogen Sulfide (A4)  Hydrogen Sulfide (A6)  Hydrogen Sulfide (A6)  Hydrogen Sulfide (A6)  Stratified Layers (A5) (LRR F)  Loamy Mucky Mineral (F1)  Loamy Mucky Mineral (F1)  Loamy Mucky Mineral (F1)  Loamy Gleyed Matrix (F2)  Black Histoc (A3)  Loamy Mucky Mineral (F1)  Loamy Mucky Mineral (F1)  Loamy Gleyed Matrix (F2)  Depleted Below Dark Surface (A11)  Depleted Matrix (F3)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (F1)  Loamy Gleyed Matrix (F2)  Depleted Below Dark Surface (A11)  Redox Dark Surface (F6)  Thick Dark Surface (A12)  Depleted Dark Surface (F6)  Thick Dark Surface (A12)  Some Mucky Peat or Peat (S2) (LRR G, H)  High Plains Depressions (F16)  Gorn Mucky Peat or Peat (S2) (LRR G, H)  High Plains Depressions (F16)  Mucky Peat or Peat (S2) (LRR G, H)  Mucky Peat or Peat (S2) (LRR G, H)  Mucky Peat or Peat (S2) (LRR F)  Mucky Peat or Peat (S3) (LRR F)  Mucky Peat or Peat (S3) (LRR F)  Mucky Peat or Peat (S2) (LRR G, H)  Mucky Peat or Peat (S3) (LRR F)  Mucky Peat or Peat (S3)  Muc			· <del></del>						
Hydric Soll Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histoc (A1)  Histoc (A2)  Histoc (A3)  Hydrogen Sulfide (A4)  Hydrogen Sulfide (A6)  Hydrogen Sulfide (A6)  Hydrogen Sulfide (A6)  Stratified Layers (A5) (LRR F)  Loamy Mucky Mineral (F1)  Loamy Mucky Mineral (F1)  Loamy Mucky Mineral (F1)  Loamy Gleyed Matrix (F2)  Black Histoc (A3)  Loamy Mucky Mineral (F1)  Loamy Mucky Mineral (F1)  Loamy Gleyed Matrix (F2)  Depleted Below Dark Surface (A11)  Depleted Matrix (F3)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (F1)  Loamy Gleyed Matrix (F2)  Depleted Below Dark Surface (A11)  Redox Dark Surface (F6)  Thick Dark Surface (A12)  Depleted Dark Surface (F6)  Thick Dark Surface (A12)  Some Mucky Peat or Peat (S2) (LRR G, H)  High Plains Depressions (F16)  Gorn Mucky Peat or Peat (S2) (LRR G, H)  High Plains Depressions (F16)  Mucky Peat or Peat (S2) (LRR G, H)  Mucky Peat or Peat (S2) (LRR G, H)  Mucky Peat or Peat (S2) (LRR F)  Mucky Peat or Peat (S3) (LRR F)  Mucky Peat or Peat (S3) (LRR F)  Mucky Peat or Peat (S2) (LRR G, H)  Mucky Peat or Peat (S3) (LRR F)  Mucky Peat or Peat (S3)  Muc									
Hydric Soll Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histoc (A1)  Histoc (A2)  Histoc (A3)  Hydrogen Sulfide (A4)  Hydrogen Sulfide (A6)  Hydrogen Sulfide (A6)  Hydrogen Sulfide (A6)  Stratified Layers (A5) (LRR F)  Loamy Mucky Mineral (F1)  Loamy Mucky Mineral (F1)  Loamy Mucky Mineral (F1)  Loamy Gleyed Matrix (F2)  Black Histoc (A3)  Loamy Mucky Mineral (F1)  Loamy Mucky Mineral (F1)  Loamy Gleyed Matrix (F2)  Depleted Below Dark Surface (A11)  Depleted Matrix (F3)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (F1)  Loamy Gleyed Matrix (F2)  Depleted Below Dark Surface (A11)  Redox Dark Surface (F6)  Thick Dark Surface (A12)  Depleted Dark Surface (F6)  Thick Dark Surface (A12)  Some Mucky Peat or Peat (S2) (LRR G, H)  High Plains Depressions (F16)  Gorn Mucky Peat or Peat (S2) (LRR G, H)  High Plains Depressions (F16)  Mucky Peat or Peat (S2) (LRR G, H)  Mucky Peat or Peat (S2) (LRR G, H)  Mucky Peat or Peat (S2) (LRR F)  Mucky Peat or Peat (S3) (LRR F)  Mucky Peat or Peat (S3) (LRR F)  Mucky Peat or Peat (S2) (LRR G, H)  Mucky Peat or Peat (S3) (LRR F)  Mucky Peat or Peat (S3)  Muc									
Hydric Soll Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histoc (A1)  Histoc (A2)  Histoc (A3)  Hydrogen Sulfide (A4)  Hydrogen Sulfide (A6)  Hydrogen Sulfide (A6)  Hydrogen Sulfide (A6)  Stratified Layers (A5) (LRR F)  Loamy Mucky Mineral (F1)  Loamy Mucky Mineral (F1)  Loamy Mucky Mineral (F1)  Loamy Gleyed Matrix (F2)  Black Histoc (A3)  Loamy Mucky Mineral (F1)  Loamy Mucky Mineral (F1)  Loamy Gleyed Matrix (F2)  Depleted Below Dark Surface (A11)  Depleted Matrix (F3)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (F1)  Loamy Gleyed Matrix (F2)  Depleted Below Dark Surface (A11)  Redox Dark Surface (F6)  Thick Dark Surface (A12)  Depleted Dark Surface (F6)  Thick Dark Surface (A12)  Some Mucky Peat or Peat (S2) (LRR G, H)  High Plains Depressions (F16)  Gorn Mucky Peat or Peat (S2) (LRR G, H)  High Plains Depressions (F16)  Mucky Peat or Peat (S2) (LRR G, H)  Mucky Peat or Peat (S2) (LRR G, H)  Mucky Peat or Peat (S2) (LRR F)  Mucky Peat or Peat (S3) (LRR F)  Mucky Peat or Peat (S3) (LRR F)  Mucky Peat or Peat (S2) (LRR G, H)  Mucky Peat or Peat (S3) (LRR F)  Mucky Peat or Peat (S3)  Muc			· · <del></del>						
Hydric Soll Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histoc (A1)  Histoc (A2)  Histoc (A3)  Hydrogen Sulfide (A4)  Hydrogen Sulfide (A6)  Hydrogen Sulfide (A6)  Hydrogen Sulfide (A6)  Stratified Layers (A5) (LRR F)  Loamy Mucky Mineral (F1)  Loamy Mucky Mineral (F1)  Loamy Mucky Mineral (F1)  Loamy Gleyed Matrix (F2)  Black Histoc (A3)  Loamy Mucky Mineral (F1)  Loamy Mucky Mineral (F1)  Loamy Gleyed Matrix (F2)  Depleted Below Dark Surface (A11)  Depleted Matrix (F3)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (F1)  Loamy Gleyed Matrix (F2)  Depleted Below Dark Surface (A11)  Redox Dark Surface (F6)  Thick Dark Surface (A12)  Depleted Dark Surface (F6)  Thick Dark Surface (A12)  Some Mucky Peat or Peat (S2) (LRR G, H)  High Plains Depressions (F16)  Gorn Mucky Peat or Peat (S2) (LRR G, H)  High Plains Depressions (F16)  Mucky Peat or Peat (S2) (LRR G, H)  Mucky Peat or Peat (S2) (LRR G, H)  Mucky Peat or Peat (S2) (LRR F)  Mucky Peat or Peat (S3) (LRR F)  Mucky Peat or Peat (S3) (LRR F)  Mucky Peat or Peat (S2) (LRR G, H)  Mucky Peat or Peat (S3) (LRR F)  Mucky Peat or Peat (S3)  Muc	1								
Histosol (A1)							d Sand G		
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 Muckly Mineral (F1) Loamy Muckly Mineral (F1) Loamy Muckly Mineral (F1) High Plains Depressions (F16) Loamy Muckly Mineral (F1) (LRR G) Loamy Muckly Surface (A12) Depleted Dark Surface (F6) Reduced Verific (F18) Reduced Very Shallow Dark Surface (F7) Very Shallow Dark	-		able to all LRF			-			•
Black Histic (A3)					•	. ,			
Hydrogen Sulfide (A4)				-					
Stratified Layers (A5) (LRR F) Loamy Gleyed Matrix (F2) (LRR H outside of MLRA 72 & 73)   1 cm Muck (A9) (LRR F, G, H) Depleted Matrix (F3) Reduced Vertic (F18) Reduced Vertical Reduced Reduced									
1 cm Muck (A9) (LRR F, G, H)			=)						
Depleted Below Dark Surface (A11)			•					•	•
Thick Dark Surface (A12)					•	,			• •
	-		,				)		
	Sandy M	ucky Mineral (S1)		Redox D	epression	ns (F8)		Other (E	Explain in Remarks)
Restrictive Layer (If present): Type: Depth (inches): No positive indication of hydric soils was observed.    Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Sulface Water (A1) Sulface Water (A2) Aquatic Invertebrates (B13) Saturation (A3) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Iron Deposits (B3) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Sulface (C7) Geomorphic Position (D2) Inundation Visible on Aerial Imagery (B7) Water Mater Sentined Leaves (B9)  Water Mater Sentined Leaves (B9)  Water Stained Leaves (B9)  Water Stained Leaves (B9)  Water Stained Leaves (B9)  Prost-Heave Hummocks (D7) (LRR F)  Wetland Hydrology Iron Poposits (Psee In Inches): Surface Water Present? Yes No X Depth (inches): Surface Water (National Inagery (Psee Inches): Surface Water Present? Yes No X Depth (inches): Surface Wa	2.5 cm M	lucky Peat or Peat (	S2) ( <b>LRR G, H</b> )	) High Pla	ins Depre	ssions (F	16)		
Restrictive Layer (if present): Type: Depth (inches): Depth (inches): Wo positive indication of hydric soils was observed.    Proper	5 cm Mu	cky Peat or Peat (S	B) ( <b>LRR F</b> )	(MLI	RA 72 & 7	3 of LRR	<b>H</b> )		
Type: Depth (inches): NoX								unless	disturbed or problematic.
Depth (inches):	Restrictive L	ayer (if present):							
Remarks:    No positive indication of hydric soils was observed.	Туре:			•					
No positive indication of hydric soils was observed.    Swell and Hydrology Indicators:   Primary Indicators (minimum of one required; check all that apply)	Depth (inc	hes):		-				Hydric Soil F	Present? Yes NoX
Wetland Hydrology Indicators:   Primary Indicators (minimum of one required: check all that apply)   Secondary Indicators (minimum of two required)	Remarks:								
Wetland Hydrology Indicators:   Primary Indicators (minimum of one required: check all that apply)   Secondary Indicators (minimum of two required)	No positivo in	dication of hydric so	oile was obsory	od					
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply)  Surface Water (A1)  High Water Table (A2)  Aquatic Invertebrates (B13)  Saturation (A3)  Hydrogen Sulfide Odor (C1)  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  X  Depth (inches):  Saturation Present?  Yes  No  X  Depth (inches):  Secondary Indicators (minimum of two required)  Secondary Indicators (minimum of two required)  Surface Soil Cracks (B6)  Sparsely Vegetated Concave Surface (B8)  Drainage Patterns (B10)  Drainage Patterns (B10)  Drainage Patterns (B10)  Drainage Patterns (B10)  Oxidized Rhizospheres on Living Roots (C3)  (where tilled)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Inudation Visible on Aerial Imagery (B7)  Other (Explain in Remarks)  Frost-Heave Hummocks (D7) (LRR F)  Frost-Heave Hummocks (D7) (LRR F)  Frost-Heave Hummocks (D7) (LRR F)  Wetland Hydrology Present? Yes  No  X  Depth (inches):  Saturation Present? Yes  No  X  Depth (inches	INO POSITIVE III	uication of flydric st	nie was onseiv	cu.					
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply)  Surface Water (A1)  High Water Table (A2)  Aquatic Invertebrates (B13)  Saturation (A3)  Hydrogen Sulfide Odor (C1)  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  X  Depth (inches):  Saturation Present?  Yes  No  X  Depth (inches):  Secondary Indicators (minimum of two required)  Secondary Indicators (minimum of two required)  Surface Soil Cracks (B6)  Sparsely Vegetated Concave Surface (B8)  Drainage Patterns (B10)  Drainage Patterns (B10)  Drainage Patterns (B10)  Drainage Patterns (B10)  Oxidized Rhizospheres on Living Roots (C3)  (where tilled)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Inudation Visible on Aerial Imagery (B7)  Other (Explain in Remarks)  Frost-Heave Hummocks (D7) (LRR F)  Frost-Heave Hummocks (D7) (LRR F)  Frost-Heave Hummocks (D7) (LRR F)  Wetland Hydrology Present? Yes  No  X  Depth (inches):  Saturation Present? Yes  No  X  Depth (inches		~v							
Primary Indicators (minimum of one required; check all that apply)  Secondary Indicators (minimum of two required)  Surface Water (A1)  Sulface Water (A2)  Aquatic Invertebrates (B13)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Dry-Season Water Rable (C2)  Oxidized Rhizospheres on Living Roots (C3)  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  Depth (inches):  Saturation Present?  Yes  No  Depth (inches):  Saturation Present?  Yes  No  Depth (inches):  Saturation Present?  Yes  No  Depth (inches):  Secondary Indicators (minimum of two required)  Surface Soil Cracks (B6)  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)  Jaturation Visible on Aerial Imagery (B7)  Other (Explain in Remarks)  FAC-Neutral Test (D5)  Frost-Heave Hummocks (D7) (LRR F)  Field Observations:  Surface Water Present?  Yes  No  Depth (inches):  Saturation Present?  Yes  No  Depth (inches):  Saturation Present?  Yes  No  Wetland Hydrology Present?  Yes  No  Remarks:									
Surface Water (A1)									
	Primary Indic	ators (minimum of o	ne required; ch	eck all that apply	/)			<u>Secondar</u>	y Indicators (minimum of two required)
Saturation (A3)	Surface \	Nater (A1)							
Water Marks (B1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living Roots (C3) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Caylish Burrows (C8) Crayfish Burrows (C8)	High Wa	ter Table (A2)		Aquatic Inv	ertebrate:	s (B13)			
Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)	Saturatio	n (A3)							- ' '
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) 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)  Field Observations:  Surface Water Present? Yes No Depth (inches): > 10" Wetland Hydrology Present? Yes No No Public (inches): > 10" Wetland Hydrology Present? Yes No No No	·	, ,				, ,			
Algal Mat or Crust (B4)	Sedimen	t Deposits (B2)		Oxidized R	hizosphe	res on Liv	ing Roots	(C3) (wh	nere tilled)
Iron Deposits (B5)		` '		•	•				` '
						•	1)		
		` '		· · · · · · · · · · · · · · · · · · ·	•	•			
Field Observations:  Surface Water Present? Yes NoX Depth (inches): Water Table Present? Yes NoX Depth (inches): Saturation Present? Yes NoX Depth (inches): > 10" (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks:			magery (B7)	Other (Exp	lain in Re	marks)			• •
Surface Water Present? Yes NoX Depth (inches):								Frost	-Heave Hummocks (D7) (LRR F)
Water Table Present? Yes No Depth (inches): > 10" Saturation Present? Yes No Depth (inches): > 10" Wetland Hydrology Present? Yes No									
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:	Surface Water					> 10"			
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks:	Water Table	Present? Y	es No _	Depth (inc	ches):		_		
Remarks:	(includes cap	illary fringe)							Present? Yes NoX
	Describe Rec	orded Data (stream	gauge, monito	ring well, aerial p	hotos, pre	evious ins	pections),	if available:	
No positive indication of wetland hydrology was observed.	Remarks:								
	No positive ir	ndication of wetland	hydrology was	observed.					

DP 9

Sampling Point: \_

Project/Site: US-70 Over Lake Texoma (Roosevelt Bridge)	(	City/County:	Bryan		_ Sampling Dat	te: 12/2/202	21
Applicant/Owner: The Oklahoma Department of Transporta	tion (ODOT	·)	-	State: OK	Sampling Poi	DP 10	
			wnship. Ra	nge: Sec. 28, T6S, R7E			
		Local relief	(concave.	convex, none): concave	9	Slope (%):	20-25
Subregion (LRR): Southwestern Prairies (LRR J)	Lat: 33.9	998695	,	-96.572049	D	Datum: WGS	S 84
Soil Map Unit Name: 14: Boxville fine sandy loam, 3 to 8 pe	ercent slope	s		NWI classif	ication: L1UBH	.h	
Are climatic / hydrologic conditions on the site typical for this							
Are Vegetation, Soil, or Hydrologys				"Normal Circumstances"		<b>x</b> No	·
Are Vegetation, Soil, or Hydrology n				eeded, explain any answ			
SUMMARY OF FINDINGS – Attach site map			g point l	ocations, transect	s, important	t features	, etc.
Hydrophytic Vegetation Present? Yes X N	0	I- 4h	. Camania	I Avec			
Hydric Soil Present? Yes No	o <b>X</b>		e Sampled in a Wetlaı		No	(	
Wetland Hydrology Present? Yes X N	o	With	iii a vveuai	id: Tes	No		
Remarks:							
This point was determined not to be within a wetland du	e to the lacl	k of hydric s	oils.				
VEGETATION – Use scientific names of plan	ts.						
30'	Absolute	Dominant	Indicator	Dominance Test wor	ksheet:		
Tree Stratum (Plot size: 30' )	<u>% Cover</u> 15	Species? Yes		Number of Dominant			
1. Black willow (Salix nigra)			FACW	That Are OBL, FACW (excluding FAC-):	, or FAC	5	(A)
2							(, ,)
3	<u> </u>			Total Number of Dom Species Across All Str		5	(B)
4.	15%	= Total Cov	er	·			,
Sapling/Shrub Stratum (Plot size:)	·			Percent of Dominant S That Are OBL, FACW		100%	(A/B)
1. Common buttonbush (Cephalanthus occidentalis)	15	Yes	OBL	Prevalence Index wo			
2				Total % Cover of:		Iltinly by:	
3	·			OBL species			_
4	<del> </del>			FACW species			
5	15%			FAC species			
Herb Stratum (Plot size:5')		= Total Cov	er	FACU species			_
1. Heliotrope (Heliotropium spp.)*	5	Yes	FACW		x 5 = _		_
2. Speedwell (Veronica spp.)**	5	Yes	OBL	Column Totals:	(A) _		_ (B)
3. Tapered rosette grass (Dichanthelium acuminatum)	5	Yes	FAC_	Prevalence Inde	y = R/Δ =		
4				Hydrophytic Vegetat			-
5				1 - Rapid Test for			
6				x 2 - Dominance Te	, , ,	J	
7				3 - Prevalence Inc	dex is ≤3.0¹		
8				4 - Morphological	Adaptations <sup>1</sup> (F	rovide supp	orting
9					ks or on a separ		,
10	15%	= Total Cov	er	Problematic Hydr	ophytic Vegetati	ion' (Explair	1)
Woody Vine Stratum (Plot size:) None observed 1.				<sup>1</sup> Indicators of hydric so be present, unless dis			ust
2.				Hydrophytic			
		= Total Cov	er	Vegetation	os <b>Y</b> N-	_	
% Bare Ground in Herb Stratum 85%				Present? Y	es X No	<u>'—</u>	
Remarks:		0/ ( )			. F.O. **		
A positive indication of hydrophytic vegetation was obs Heliotropium are listed in the USACE State of OK 201 of Veronica are listed in the USACE State of OK 2018	8 Wetland I	Plant List. 1	00% have	a FACW (n=2) or OBL (r	n=1) indicator sta	atus. **4 spe	ecies

US Army Corps of Engineers Great Plains – Version 2.0

Profile Desc	ription: (Describe	to the depth n	eeded to docur	nent the ir	ndicator (	or confirm	n the absence o	f indicators.)
Depth (inches)	Matrix Color (moist)	<u></u> % (	Redo Color (moist)	<u>x Features</u> %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-6	10YR 4/6	100	-		- Ahe	-	sa cl lo	NGIIIAINS
6-18	10YR 5/6	100	_				sa cl lo	
0-10	10111 0/0		<u>-</u>	·			Sa Ci io	
<sup>1</sup> Type: C=Cc	oncentration, D=Dep	nletion RM=Red	duced Matrix CS	S=Covered	or Coate	d Sand Gr	rains <sup>2</sup> Loca	tion: PL=Pore Lining, M=Matrix.
	ndicators: (Applic					4 04114 01		or Problematic Hydric Soils <sup>3</sup> :
Histosol	(A1)		Sandy 0	Gleyed Mat	rix (S4)		1 cm Mu	uck (A9) ( <b>LRR I, J</b> )
	ipedon (A2)			Redox (S5)				rairie Redox (A16) ( <b>LRR F, G, H</b> )
Black His				d Matrix (Se	-			rface (S7) (LRR G)
	n Sulfide (A4)	<b>E</b> \		Mucky Mine				nins Depressions (F16) R H outside of MLRA 72 & 73)
	Layers (A5) ( <b>LRR</b> ck (A9) ( <b>LRR F, G,</b>			Gleyed Mat d Matrix (F			•	d Vertic (F18)
	Below Dark Surfac	•		Dark Surfac				rent Material (TF2)
Thick Da	rk Surface (A12)		Deplete	d Dark Sur	face (F7)			allow Dark Surface (TF12)
	ucky Mineral (S1)	(00) (1 == = 1)		Depression		10)		explain in Remarks)
	lucky Peat or Peat cky Peat or Peat (S		_	ains Depres				f hydrophytic vegetation and hydrology must be present,
5 CIII WIU	cky real of real (S	55) ( <b>LKK F</b> )	(IVIL	KA 12 & 1.	3 OI LKK	. п)		listurbed or problematic.
Restrictive L	ayer (if present):						1	
Type:			_					
Depth (inc	ches):		_				Hydric Soil P	resent? Yes NoX
Remarks:								
No positivo in	diantian of hydria s	soile was observ	and.					
No positive in	dication of hydric s	solis was observ	eu.					
HYDROLO	GY							
	Irology Indicators	•						
	ators (minimum of		eck all that appl	v)			Secondar	y Indicators (minimum of two required)
	Water (A1)	one required, on	Salt Crust	•				ce Soil Cracks (B6)
	ter Table (A2)		Aquatic In		(B13)			sely Vegetated Concave Surface (B8)
Saturatio			Hydrogen		` '			age Patterns (B10)
Water M	arks (B1)			n Water Ta				zed Rhizospheres on Living Roots (C3)
Sedimen	t Deposits (B2)		Oxidized F	Rhizospher	es on Livi	ing Roots	(C3) (wh	ere tilled)
Drift Dep	osits (B3)		(where i	not tilled)			Crayf	ish Burrows (C8)
	t or Crust (B4)		Presence			<b>l</b> )		ation Visible on Aerial Imagery (C9)
	osits (B5)		Thin Muck					norphic Position (D2)
	on Visible on Aerial	Imagery (B7)	Other (Exp	olain in Rer	marks)			Neutral Test (D5)
	ained Leaves (B9)						Frost-	Heave Hummocks (D7) (LRR F)
Field Observ		v/aa Na	X Donth (in	-h \.				
Surface Water			Depth (inc		> 18"	_		
Water Table			Depth (ind		> 18"	-	and Uselvalaris	Draggint 2 Vag X Na
Saturation Pr (includes cap		resNo_	Depth (in	unes):		_   weti	and Hydrology	Present? Yes X No No
	corded Data (stream	n gauge, monito	ring well, aerial ı	ohotos, pre	vious ins	pections),	if available:	
Remarks:								
I								
A nocitive inc	lication of wotland	hydrology was	ohsarvad (at loa	et two coc	ondary in	ndicators)		
A positive inc	lication of wetland	hydrology was	observed (at lea	st two sec	condary ir	ndicators).		

Project/Site: US-70 Over Lake Texoma (Roosevelt Bridge	·) (	City/County:	Bryan		Sampling Date: 12/2	2/2021
Applicant/Owner: The Oklahoma Department of Transpor	tation (ODOT	.)		State: OK	Sampling Point: OB	11
Investigator(s): Megan Philips-Schaap & Lacee Stanley			vnship. Ra	nge: Sec. 28, T6S, R7E		
Landform (hillslope, terrace, etc.): hillslope		Local relief	(concave,	convex, none): slope	Slope (	%): 20-25
Subregion (LRR): Southwestern Prairies (LRR J)	Lat: 33.9	998478		-96.574172	Datum: _	WGS 84
Subregion (LRR): Southwestern Prairies (LRR J) Soil Map Unit Name: 14: Boxville fine sandy loam, 3 to 8 p	percent slope	s		NWI classific	Batam _ cation: L1UBHh	
Are climatic / hydrologic conditions on the site typical for the						
Are Vegetation, Soil, or Hydrology				"Normal Circumstances" ¡		No
Are Vegetation, Soil, or Hydrology				eeded, explain any answe		
SUMMARY OF FINDINGS – Attach site map						ıres, etc.
Liberton de Venetation Procession	N.			<u> </u>	<u> </u>	
Hydrophytic Vegetation Present? Yes    Hydric Soil Present? Yes		Is the	e Sampled			
Hydric Soil Present? Yes   Wetland Hydrology Present? Yes		withi	n a Wetlar	nd? Yes	No <u></u>	
Remarks:						
Hydrophytic vegetation and wetland hydrology were no	ot observed a	t this data p	oint. Soils	were not collected at this	observation point.	
VEGETATION – Use scientific names of pla	nts.					
T 0/ / /DI / :	Absolute	Dominant		Dominance Test work	sheet:	
Tree Stratum (Plot size:)  1. None observed	% Cover	Species?	Status	Number of Dominant S		
				That Are OBL, FACW, (excluding FAC-):	or FAC	(A)
2					·	
3				Total Number of Domir Species Across All Stra		(B)
4		- Total Cov				(
Sapling/Shrub Stratum (Plot size: 15' linear )		= Total Cov	er	Percent of Dominant S That Are OBL, FACW,		(A/R)
1. Common buttonbush (Cephalanthus occidentalis)	25	Yes	OBL	That Ale Obe, 1 Aov,	0117(O	(/\b)
2				Prevalence Index wor		
3					Multiply by	
4				OBL species		
5				FACW species		
	25%	= Total Cov	er	FAC species		
Herb Stratum (Plot size:)  None observed				FACU species		
I <sub>1</sub>				UPL species		
2				Column Totals:	(A)	(B)
3				Prevalence Index	c = B/A =	
4				Hydrophytic Vegetation	on Indicators:	
5				X 1 - Rapid Test for I	Hydrophytic Vegetatio	n
6				2 - Dominance Tes	st is >50%	
7 8				3 - Prevalence Inde	ex is ≤3.0 <sup>1</sup>	
9.				4 - Morphological A	Adaptations <sup>1</sup> (Provide	supporting
10.					s or on a separate she	
		= Total Cov		Problematic Hydro	pnytic vegetation (Ex	(piain)
Woody Vine Stratum (Plot size:) None observed 1.				<sup>1</sup> Indicators of hydric so be present, unless dist		gy must
2.				Hydrophytic		
% Bare Ground in Herb Stratum 100%		= Total Cov	er	Vegetation	es <u>X</u> No	_
Remarks:				1		
A course of the second		i Tarak da 11	a 1 1	/(-P)		
A positive indication of hydrophytic vegetation was obs	served (Rapid	ı rest for Hy	arophytic \	vegetation).		

Depth	Matrix		Redox Features	_	
(inches)	Color (moist)	%	Color (moist) % Type <sup>1</sup> Loc <sup>2</sup>	<u>Texture</u>	Remarks
				<u> </u>	
			<u> </u>		
			Soils were not excavated.		
			Entire area is rock.	·	
			-t	<del></del>	
	-			<del></del>	
	_			<del>.</del>	
¹Type: C=Co	oncentration. D=De	epletion. RM=R	educed Matrix, CS=Covered or Coated Sand G	Grains. <sup>2</sup> Locatio	n: PL=Pore Lining, M=Matrix.
			RRs, unless otherwise noted.)		Problematic Hydric Soils <sup>3</sup> :
Histosol	(A1)		Sandy Gleyed Matrix (S4)	1 cm Muck	(A9) ( <b>LRR I, J</b> )
Histic Ep	pipedon (A2)		Sandy Redox (S5)		rie Redox (A16) ( <b>LRR F, G, H</b> )
Black Hi	istic (A3)		Stripped Matrix (S6)		ce (S7) ( <b>LRR G</b> )
	en Sulfide (A4)		Loamy Mucky Mineral (F1)		s Depressions (F16)
	d Layers (A5) ( <b>LRR</b>		Loamy Gleyed Matrix (F2)	•	outside of MLRA 72 & 73)
	uck (A9) ( <b>LRR F, G</b>		Depleted Matrix (F3)	Reduced V	` '
	d Below Dark Surfa	ce (A11)	Redox Dark Surface (F6)		t Material (TF2)
·	ark Surface (A12) Mucky Mineral (S1)		<ul><li>Depleted Dark Surface (F7)</li><li>Redox Depressions (F8)</li></ul>		ow Dark Surface (TF12) lain in Remarks)
	Mucky Peat or Peat	(S2) ( <b>LRR G</b> . I			ydrophytic vegetation and
	ucky Peat or Peat (		(MLRA 72 & 73 of LRR H)		drology must be present,
	`	, ,	,		urbed or problematic.
Restrictive I	Layer (if present):				
Type:			<u> </u>		
Depth (inc	ches):		<u></u>	Hydric Soil Pre	sent? Yes No
Remarks:					
C - il		-1			
Soils were no	ot collected at this	observation po	MIL.		
HYDROLO	ic.				
	drology Indicators	<b>5</b> 1			
	cators (minimum ot		Leaville III (II) of the III A	0	. P
· <del></del>	144 4 444	one required; o	check all that apply)	-	ndicators (minimum of two required)
	Water (A1)	one required; o	Salt Crust (B11)	Surface	Soil Cracks (B6)
<u> </u>	ater Table (A2)	one required; o	Salt Crust (B11) Aquatic Invertebrates (B13)	Surface Sparsely	Soil Cracks (B6)  Vegetated Concave Surface (B8)
Saturation	ater Table (A2) on (A3)	one required; o	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	Surface Sparsely Drainag	Soil Cracks (B6)  Vegetated Concave Surface (B8) e Patterns (B10)
Saturatio	ater Table (A2) on (A3) farks (B1)	one required; c	<ul> <li>Salt Crust (B11)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Dry-Season Water Table (C2)</li> </ul>	Surface Sparsely Drainage Oxidized	Soil Cracks (B6)
Saturation Water M Sedimer	ater Table (A2) on (A3) flarks (B1) nt Deposits (B2)	one required; c	<ul> <li>Salt Crust (B11)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Dry-Season Water Table (C2)</li> <li>Oxidized Rhizospheres on Living Roots</li> </ul>	Surface Sparsely Drainage Oxidized	Soil Cracks (B6)  / Vegetated Concave Surface (B8)  e Patterns (B10)  d Rhizospheres on Living Roots (C3)  e tilled)
Saturation Water M Sedimer Drift Dep	ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3)	one required; c	<ul> <li>Salt Crust (B11)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Dry-Season Water Table (C2)</li> <li>Oxidized Rhizospheres on Living Roots (where not tilled)</li> </ul>	Surface Sparsely Drainag Oxidized s (C3) (where	Soil Cracks (B6)  Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3) High tilled Burrows (C8)
Saturation Saturation Water M Sedimer Drift Dep Algal Ma	ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)	one required; c	<ul> <li>Salt Crust (B11)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Dry-Season Water Table (C2)</li> <li>Oxidized Rhizospheres on Living Roots (where not tilled)</li> <li>Presence of Reduced Iron (C4)</li> </ul>	Surface Sparsely Drainage Oxidizece (C3) (where Crayfish Saturation	Soil Cracks (B6)  Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3) Filled Burrows (C8) On Visible on Aerial Imagery (C9)
Saturation  Sedimer  Drift Dep  Algal Ma	ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)		Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living Roots	Surface Sparsely Drainage Oxidized s (C3) (where Crayfish Saturatie Geomore	Soil Cracks (B6)  Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3) Filled Burrows (C8) On Visible on Aerial Imagery (C9) Phic Position (D2)
Saturation Water M Sedimer Drift Dep Algal Ma Iron Dep Inundation	ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria	l <b>I</b> magery (B7)	<ul> <li>Salt Crust (B11)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Dry-Season Water Table (C2)</li> <li>Oxidized Rhizospheres on Living Roots (where not tilled)</li> <li>Presence of Reduced Iron (C4)</li> </ul>	Surface Sparsely Drainage Oxidized S (C3) (when Crayfish Saturatie Geomor FAC-Ne	Soil Cracks (B6)  Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3) Filled Burrows (C8) On Visible on Aerial Imagery (C9) Phic Position (D2) Utral Test (D5)
Saturation Water M Sedimer Drift Dep Algal Ma Iron Dep Inundation Water-S	ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria stained Leaves (B9)	l <b>I</b> magery (B7)	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living Roots	Surface Sparsely Drainage Oxidized S (C3) (when Crayfish Saturatie Geomor FAC-Ne	Soil Cracks (B6)  Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3) Filled Burrows (C8) On Visible on Aerial Imagery (C9) Phic Position (D2)
Saturation Water M Sedimer Drift Dep Algal Ma Iron Dep Inundation Water-S Field Observing	ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria stained Leaves (B9) vations:	I <b>I</b> magery (B7)	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living Roots	Surface Sparsely Drainage Oxidized S (C3) (when Crayfish Saturatie Geomor FAC-Ne	Soil Cracks (B6)  Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3) Filled Burrows (C8) On Visible on Aerial Imagery (C9) Phic Position (D2) Utral Test (D5)
Saturation Water M Sedimer Drift Dep Algal Ma Iron Dep Inundation Water-S Field Observation	ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria stained Leaves (B9) vations: er Present?	l Imagery (B7) ) Yes No	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living Roots	Surface Sparsely Drainage Oxidized S (C3) (when Crayfish Saturatie Geomor FAC-Ne	Soil Cracks (B6)  Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3) Filled Burrows (C8) On Visible on Aerial Imagery (C9) Phic Position (D2) Utral Test (D5)
Saturation Water M Sedimer Drift Dep Algal Ma Iron Dep Inundation Water-S Field Obser Surface Water Water Table	ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria stained Leaves (B9) vations: er Present? Present?	I <b>I</b> magery (B7) ) Yes No Yes No	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living Roots	Surface Sparsely Drainage Oxidized s (C3) (where Crayfish Saturatie Geomor FAC-Ne Frost-He	Soil Cracks (B6)  Vegetated Concave Surface (B8) Patterns (B10) Rehizospheres on Living Roots (C3) Filled Burrows (C8) On Visible on Aerial Imagery (C9) Phic Position (D2) Utral Test (D5) Fave Hummocks (D7) (LRR F)
Saturation Water M Sedimer Drift Dep Algal Ma Iron Dep Inundation Water-S Field Obser Surface Water Saturation Per	ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria stained Leaves (B9) vations: er Present? Present?	I <b>I</b> magery (B7) ) Yes No Yes No	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living Roots	Surface Sparsely Drainage Oxidized s (C3) (where Crayfish Saturatie Geomor FAC-Ne Frost-He	Soil Cracks (B6)  Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3) Filled Burrows (C8) On Visible on Aerial Imagery (C9) Phic Position (D2) Utral Test (D5)
Saturation Water M Sedimer Drift Dep Algal Ma Iron Dep Inundation Water-S Field Obser Surface Water Water Table Saturation Policiolides cap	ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria stained Leaves (B9) vations: er Present? Present? pillary fringe)	I <b>I</b> magery (B7) ) Yes No Yes No Yes No	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living Roots	Surface Sparsely Drainage Oxidized S (C3) (where Crayfish Saturatie Geomor FAC-Ne Frost-He	Soil Cracks (B6)  Vegetated Concave Surface (B8) Patterns (B10) Rehizospheres on Living Roots (C3) Filled Burrows (C8) On Visible on Aerial Imagery (C9) Phic Position (D2) Utral Test (D5) Fave Hummocks (D7) (LRR F)
Saturation Water M Sedimer Drift Dep Algal Ma Iron Dep Inundation Water-S Field Obser Surface Water Water Table Saturation Policiolides cap	ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria stained Leaves (B9) vations: er Present? Present? pillary fringe)	I <b>I</b> magery (B7) ) Yes No Yes No Yes No	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living Roots	Surface Sparsely Drainage Oxidized S (C3) (where Crayfish Saturatie Geomor FAC-Ne Frost-He	Soil Cracks (B6)  Vegetated Concave Surface (B8) Patterns (B10) Re Rhizospheres on Living Roots (C3) Patterns (C8) Re tilled) Burrows (C8) Ron Visible on Aerial Imagery (C9) Rephic Position (D2) Rever Hummocks (D7) (LRR F)
Saturation Water M Sedimer Drift Dep Algal Ma Iron Dep Inundation Water-S Field Obser Surface Water Water Table Saturation Policiolides cap	ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria stained Leaves (B9) vations: er Present? Present? pillary fringe)	I <b>I</b> magery (B7) ) Yes No Yes No Yes No	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living Roots	Surface Sparsely Drainage Oxidized S (C3) (where Crayfish Saturatie Geomor FAC-Ne Frost-He	Soil Cracks (B6)  Vegetated Concave Surface (B8) Patterns (B10) Re Rhizospheres on Living Roots (C3) Patterns (C8) Re tilled) Burrows (C8) Ron Visible on Aerial Imagery (C9) Rephic Position (D2) Rever Hummocks (D7) (LRR F)
Saturation Water M Sedimer Drift Dep Algal Ma Iron Dep Inundation Water-S Field Obser Surface Water Water Table Saturation Per (includes cap Describe Recommendation Remarks:	ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria stained Leaves (B9) vations: er Present? Present? resent? pillary fringe) corded Data (streat	I Imagery (B7) ) Yes No Yes No Yes No m gauge, monit	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living Roots	Surface Sparsely Drainage Oxidized S (C3) (where Crayfish Saturatie Geomor FAC-Ne Frost-He	Soil Cracks (B6)  Vegetated Concave Surface (B8) Patterns (B10) Re Rhizospheres on Living Roots (C3) Patterns (C8) Re tilled) Burrows (C8) Ron Visible on Aerial Imagery (C9) Rephic Position (D2) Rever Hummocks (D7) (LRR F)
Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatio Water-S Field Obser Surface Wate Water Table Saturation Pe (includes cap Describe Rec	ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria stained Leaves (B9) vations: er Present? Present? pillary fringe)	I Imagery (B7) ) Yes No Yes No Yes No m gauge, monit	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living Roots	Surface Sparsely Drainage Oxidized S (C3) (where Crayfish Saturatie Geomor FAC-Ne Frost-He	Soil Cracks (B6)  Vegetated Concave Surface (B8) Patterns (B10) Rehizospheres on Living Roots (C3) Filled Burrows (C8) On Visible on Aerial Imagery (C9) Phic Position (D2) Utral Test (D5) Fave Hummocks (D7) (LRR F)

US Army Corps of Engineers Great Plains – Version 2.0

Project/Site: US-70 Over Lake Texoma (Roosevelt Bridg		ity/County:	Bryan		Sampling	Date: 12/2/2	2021
Applicant/Owner: The Oklahoma Department of Transpo	ortation (ODOT)	)		State: OK	Sampling	Point: DP 12	
Investigator(s): Megan Philips-Schaap & Lacee Stanley	S	Section, Tov	vnship, Ra	nge: Sec. 28, T6S, R7E			
Landform (hillslope, terrace, etc.): depression	ι	_ocal relief	(concave,	convex, none): concave		Slope (%	): <u>20-25</u>
Subregion (LRR): Southwestern Prairies (LRR J)	Lat: <sup>33.9</sup>	98573		Long:		Datum: W	GS 84
Soil Map Unit Name: 68: Pits				NWI classific	ation: L1	JBHh	
Are climatic / hydrologic conditions on the site typical for	this time of yea	r? Yes <b>X</b>	, No	( <b>I</b> f no, explain in R	emarks.)		
Are Vegetation, Soil, or Hydrology	_ significantly d	isturbed?	Are "	Normal Circumstances" p	resent? `	Yes <u></u> 1	No
Are Vegetation, Soil, or Hydrology	_ naturally prob	lematic?	(If ne	eded, explain any answe	rs in Rema	arks.)	
SUMMARY OF FINDINGS – Attach site ma	p showing	sampling	g point l	ocations, transects	, import	ant feature	es, etc.
Hydrophytic Vegetation Present?  YesX	No						
Hydric Soil Present? Yes	No <b>x</b>		Sampled			x	
Wetland Hydrology Present? Yes X	No	withi	n a Wetlar	nd? Yes	No_		
Remarks:							
This point was determined not to be within a wetland	due to the lack	of hydric so	oils.				
'		•					
VEGETATION – Use scientific names of pla	ants.						
	Absolute	Dominant	Indicator	Dominance Test work	sheet:		
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant S			
				That Are OBL, FACW,	or FAC	1	(4)
2				(excluding FAC-):	•		_ (A)
3				Total Number of Domin		1	(D)
4				Species Across All Stra	ıta:		_ (B)
Sapling/Shrub Stratum (Plot size:15')	=	= Total Cov	er	Percent of Dominant S		100%	(A (D)
1. Common buttonbush (Cephalanthus occidentalis)	15	Yes	OBL	That Are OBL, FACW,	or FAC:		_ (A/B)
2.	·			Prevalence Index wor	ksheet:		
3.				Total % Cover of:		Multiply by:	
4.				OBL species	x 1	=	_
5.				FACW species			
	15%	= Total Cov	er	FAC species	x 3	3 =	
Herb Stratum (Plot size: 5' )		N.I	F40	FACU species			
1Rough cockleburr (Xanthium strumarium)		No	FAC	UPL species			
2				Column Totals:	(A)		(B)
3				Prevalence Index	= B/A =		
4				Hydrophytic Vegetation	on Indicat	ors:	
5				1 - Rapid Test for I	- - - - - - - - - - - - - - - - - - -	c Vegetation	
6				x 2 - Dominance Tes	t is >50%		
7				3 - Prevalence Inde	ex is ≤3.0 <sup>1</sup>		
8				4 - Morphological A			
9				data in Remark		•	-
10	2%	= Total Cov		Problematic Hydro	phytic Veg	etation' (Expl	ain)
Woody Vine Stratum (Plot size:)  1				<sup>1</sup> Indicators of hydric soil be present, unless dist			must
2.				Hydrophytic			
% Bare Ground in Herb Stratum	=			Vegetation	s <u>x</u>	No	
Remarks:				ı			
A positive indication of hydrophytic vegetation was ol	bserved (>50%	of dominan	t species i	ndexed as OBL, FACW, o	or FAC)		

Depth	cription: (Describ <u>Matrix</u>		Redo	x Features			·
(inches)	Color (moist)	%	Color (moist)	<u>%</u> Type	Loc <sup>2</sup>	<u>Texture</u>	Remarks
0-4	10YR 3/4	100	-			clay loam	
4-16	7.5YR 5/8	100	-			sa cl lo	
		<del>_</del>		·			
		<del>_</del>		·			
	-	<del></del>		· · <del></del>			
		<u> </u>		·			
	oncentration, D=D				ated Sand Gr		ion: PL=Pore Lining, M=Matrix
_	Indicators: (Appl	icable to all LR		•			or Problematic Hydric Soils <sup>3</sup> :
Histosol	• •			Gleyed Matrix (S4	·)		ck (A9) (LRR I, J)
Black Hi	oipedon (A2)		-	Redox (S5) I Matrix (S6)			airie Redox (A16) ( <b>LRR F, G, H</b> ) face (S7) ( <b>LRR G</b> )
	en Sulfide (A4)			Mucky Mineral (F	1)		ins Depressions (F16)
	d Layers (A5) ( <b>LRF</b>	R F)		Gleyed Matrix (F			H outside of MLRA 72 & 73)
1 cm Mu	uck (A9) ( <b>LRR F, G</b>	i, <b>H</b> )	Deplete	d Matrix (F3)		Reduced	Vertic (F18)
	d Below Dark Surfa	ace (A11)		Dark Surface (F6			ent Material (TF2)
	ark Surface (A12)		·	d Dark Surface (	<del>-</del> 7)		illow Dark Surface (TF12)
	/lucky Mineral (S1) /lucky Peat or Pea			Depressions (F8) ains Depressions	(E16)		xplain in Remarks) hydrophytic vegetation and
	ucky Peat or Peat (			RA 72 & 73 of L			nydrology must be present,
_	,	, / /	,		,		sturbed or problematic.
Restrictive I	Layer (if present):	:					
Type:			<u> </u>				
Depth (inc	ches):		<u> </u>			Hydric Soil Pr	resent? Yes No
Remarks:						•	
No positive in	ndication of hydric	soils was obser	ved.				
l position in							
HYDROLO	GY						
Wetland Hy	drology Indicator	s:					
Primary India	cators (minimum o	f one required; c	heck all that appl	y)		<u>Secondary</u>	Indicators (minimum of two required)
Surface	Water (A1)		Salt Crust	(B11)		Surfac	e Soil Cracks (B6)
High Wa	ater Table (A2)		Aquatic Inv	vertebrates (B13)	)	Sparse	ely Vegetated Concave Surface (B8)
Saturation	on (A3)		Hydrogen	Sulfide Odor (C1	)	Draina	ige Patterns (B10)
	larks (B1)			n Water Table (0			ed Rhizospheres on Living Roots (C3)
	nt Deposits (B2)			Rhizospheres on	Living Roots (		ere tilled)
	posits (B3)			not tilled)	(0.4)		sh Burrows (C8)
	at or Crust (B4)		<del></del>	of Reduced Iron	(C4)		tion Visible on Aerial Imagery (C9)
	oosits (B5) on Visible on Aeria	l Imagan, (P7)	· · · · · · · · · · · · · · · · · · ·	Surface (C7)		<del></del>	orphic Position (D2) leutral Test (D5)
	tained Leaves (B9		Other (Exp	olain in Remarks)		1 //0-1	Heave Hummocks (D7) ( <b>LRR F</b> )
Field Obser		,				110311	Teave Hammooks (B7) (ERRT)
Surface Water		Yes No.	Depth (inc	ches):			
Water Table			<b>X</b> Depth (inc	- 401			
Saturation P			Depth (inc	4.00	Wetl:	and Hydrology F	Present? Yes X No
		. 33 110					
(includes car				. 1 1		if available.	
(includes car	corded Data (strea	m gauge, monit	oring well, aerial p	onotos, previous	inspections),	ii availabic.	
(includes car Describe Re		m gauge, monit	oring well, aerial p	onotos, previous	inspections),	ii available.	
(includes car		m gauge, monit	oring well, aerial p	onotos, previous	inspections),	n available.	
(includes cap Describe Re							

Great Plains – Version 2.0

# WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: US-70 Over Lake Texoma (Roosevelt Bridge)		City/County	: Bryan		Sampling Date: 12/2/2021
Applicant/Owner: The Oklahoma Department of Transporta		.)		State: OK	Sampling Point: DP 13
			wnship, Ra	nge: Sec. 28, T6S, R7E	
Landform (hillslope, terrace, etc.): depression		Local relief	(concave,	convex, none): concave	Slope (%): 10-20
Subregion (LRR): Southwestern Prairies (LRR J)	Lat: 33.9	998795		-96.575464 Long:	Datum: WGS 84
Soil Map Unit Name: 68: Pits				NWI classific	
Are climatic / hydrologic conditions on the site typical for thi	is time of yea	ar? Yes	<b>x</b> No_	( <b>I</b> f no, explain in F	Remarks.)
Are Vegetation, Soil, or Hydrologys	significantly o	disturbed?	Are '	'Normal Circumstances"	present? Yes <b>X</b> No
Are Vegetation, Soil, or Hydrology r	-			eeded, explain any answe	
SUMMARY OF FINDINGS – Attach site map			•		,
Hydrophytic Vegetation Present? Yes X N	lo.				
Hydric Soil Present? Yes X			e Sampled		
Wetland Hydrology Present? Yes X		with	in a Wetlaı	nd? Yes <u> </u>	<u> </u>
Remarks:					
This point was determined to be within a wetland due to	the present	ce of all 3 v	vetland crite	eria.	
Wetland 4	, me b. 222		70110170 01110		
VEGETATION – Use scientific names of plan	nts.				
Tage Stratium (Diet sine)	Absolute		Indicator	Dominance Test work	ksheet:
Tree Stratum (Plot size:)  1. None observed	% Cover			Number of Dominant S	
				That Are OBL, FACW, (excluding FAC-):	(A)
2					
3				Total Number of Domir Species Across All Stra	
4		- Total Cov			
Sapling/Shrub Stratum (Plot size: 15' )		= Total Cov	ver	Percent of Dominant S That Are OBL, FACW,	
1. Common buttonbush (Cephalanthus occidentalis)	55	Yes	OBL	mat Are OBE, 1 AOW,	(/\b)
2				Prevalence Index wo	
3					Multiply by:
4					x 1 =
5				· ·	x 2 =
<u>د</u> ا	55%	= Total Co	ver		x 3 =
Herb Stratum (Plot size: 5' Sedge (Cyperus spp.)*	25	Yes	FACW	FACU species	
[	<del></del>				x 5 =
2				Column Totals:	(A) (B)
3				Prevalence Index	c = B/A =
4				Hydrophytic Vegetati	on Indicators:
5				x 1 - Rapid Test for	Hydrophytic Vegetation
6				2 - Dominance Te	st is >50%
7				3 - Prevalence Ind	ex is ≤3.0 <sup>1</sup>
8				4 - Morphological	Adaptations <sup>1</sup> (Provide supporting
9			-		s or on a separate sheet)
10	25%	= Total Cov	····	Problematic Hydro	phytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size:) None observed 1.		- Total Co	vei	<sup>1</sup> Indicators of hydric so be present, unless dist	il and wetland hydrology must urbed or problematic.
2.				Hydrophytic	
		= Total Cov	ver	Vegetation	<b>M</b>
% Bare Ground in Herb Stratum				Present? Ye	es <u>X</u> No
Remarks:					
A positive indication of hydrophytic vegetation was obset *25 species of Cyperus are listed in the USACE State of					OBL (n=5) indicator status.

Profile Desc	cription: (Describe	to the depth r	needed to docui	ment the i	ndicator o	or confirn	n the absence	of indicators.)
Depth	Matrix			x Features			T4	Damanda
(inches) 0-18	Color (moist) 10YR 4/2	<u>%</u> 80	Color (moist) 10YR 5/8	20	Type <sup>1</sup> C	Loc <sup>2</sup>	<u>Texture</u> clay loam	Remarks
<del></del>	1011 4/2		10110 3/0				— Clay Idam	
		- <del></del>						
							·	
								<u> </u>
	oncentration, D=Dep					d Sand Gi		ation: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Applic	able to all LRI	Rs, unless othe	rwise note	ed.)		Indicators	for Problematic Hydric Soils <sup>3</sup> :
Histosol			Sandy	-				luck (A9) ( <b>LRR I, J</b> )
	pipedon (A2)			Redox (S5)				Prairie Redox (A16) (LRR F, G, H)
l —	istic (A3) en Sulfide (A4)			d Matrix (S Mucky Min	•			urface (S7) ( <b>LRR G</b> ) lains Depressions (F16)
	d Layers (A5) ( <b>LRR</b> l	F)		Gleyed Ma				R H outside of MLRA 72 & 73)
l —	uck (A9) ( <b>LRR F, G,</b>	-	X Deplete				•	ed Vertic (F18)
	d Below Dark Surfac			Dark Surfa				arent Material (TF2)
	ark Surface (A12)		Deplete	d Dark Su	rface (F7)			hallow Dark Surface (TF12)
-	Mucky Mineral (S1)			Depressior				Explain in Remarks)
	Mucky Peat or Peat			ains Depre	•			of hydrophytic vegetation and
5 cm MI	ucky Peat or Peat (S	3) ( <b>LRR F</b> )	(ML	.RA 72 & 7	3 OT LKK	н)		I hydrology must be present, disturbed or problematic.
Restrictive	Layer (if present):						unless (	distarbed of problematic.
Type:	( p. ccc).							
ı	ches):		_				Hydric Soil	Present? Yes X No
Remarks:			<del>-</del>				1.,, 4	
A positive inc	dication of hydric so	il was observed	d.					
HYDROLO	GY							
Wetland Hy	drology Indicators:							
Primary Indi	cators (minimum of o	one required; ch	neck all that appl	у)			Seconda	ry Indicators (minimum of two required)
Surface	Water (A1)		Salt Crust	(B11)				ace Soil Cracks (B6)
🗶 High Wa	ater Table (A2)		Aquatic In					sely Vegetated Concave Surface (B8)
X Saturati	, ,		Hydrogen					nage Patterns (B10)
	larks (B1)		Dry-Seaso				<del></del>	ized Rhizospheres on Living Roots (C3)
	nt Deposits (B2)		Oxidized F		es on Livi	ng Roots		here tilled)
Drift De			•	not tilled)				fish Burrows (C8)
	at or Crust (B4)		Presence		•	)		ration Visible on Aerial Imagery (C9)
Iron Dep		l (DZ)	Thin Muck					morphic Position (D2)
	on Visible on Aerial	Imagery (B7)	Other (Exp	piain in Rei	marks)		·	-Neutral Test (D5)
Field Obser	Stained Leaves (B9)					1	FIOSI	t-Heave Hummocks (D7) (LRR F)
Surface Wat		/os No	X Donth (in	choc):				
			<b>X</b> Depth (in Depth (in		14"	_		
Water Table					surface	-		December Von X No
Saturation P	resent? Y pillary fringe)	res _ res _ No _	Depth (in	cnes):		_   weti	and Hydrology	Present? Yes X No
	corded Data (stream	n gauge, monito	oring well, aerial	photos, pre	evious ins	pections),	if available:	
Remarks:								
	disease 6 at 1	la alaa t						
A positive in	dication of wetland	nydrology was	observed (at lea	ist one prii	mary indic	ator).		

Project/Site: US-70 Over Lake Texoma (Roosevelt Bridge	) (	City/County	Bryan		_ Sampling Dat	e: 12/2/2021
Applicant/Owner: The Oklahoma Department of Transpor		.)		State: OK	Sampling Poi	nt: DP 14
Investigator(s): Megan Philips-Schaap & Lacee Stanley			wnship, Ra	nge: Sec. 28, T6S, R7E		
Landform (hillslope, terrace, etc.): open tall grass				convex, none): none		Slope (%): 0
Subregion (LRR): Southwestern Prairies (LRR J)	Lat: 33.9	998657	•	-96.578612	 D	atum: WGS 84
Soil Map Unit Name: 68: Pits				NWI classif		
Are climatic / hydrologic conditions on the site typical for the	nis time of vea	ar? Yes	K No	( <b>I</b> f no. explain in	Remarks.)	
Are Vegetation, Soil, or Hydrology				"Normal Circumstances"		x <sub>No</sub>
Are Vegetation, Soil, or Hydrology				eeded, explain any answ		
SUMMARY OF FINDINGS – Attach site map			,	•		•
Hydrophytic Vegetation Present? Yes	No X		<del></del>		<u> </u>	
Hydric Soil Present? Yes			e Sampled		¥	
Wetland Hydrology Present? Yes		with	in a Wetlar	nd? Yes	No	
Remarks:						
This point was determined not to be within a wetland o	ue to the lack	c of all three	wetland cr	riteria.		
VEGETATION – Use scientific names of pla	nts.					
Tana Stratum (District	Absolute	Dominant		Dominance Test wor	rksheet:	
Tree Stratum (Plot size:)  1. None observed	<u>% Cover</u>	•		Number of Dominant		
				That Are OBL, FACW (excluding FAC-):	, or FAC	1 (A)
2.						,
3				Total Number of Dom Species Across All St		2 (B)
4		= Total Cov				
Sapling/Shrub Stratum (Plot size:15')		- 10tal C01	rei	Percent of Dominant S That Are OBL, FACW		50% (A/B)
1. Common buttonbush (Cephalanthus occidentalis)	5	Yes	OBL	·		(/,02)
2				Prevalence Index wo		
3				Total % Cover of:		
4				OBL species		
5				FACW species		
Herb Stratum (Plot size: 5' )	5%	= Total Cov	er er	FAC species		
Herb Stratum (Plot size: 5' Southern dewberry (Rubus trivialis)	70	Yes	FACU	FACU species		
Pormudo graco (Cunadan daetulan)	15	No	FACU		x 5 = _	
Astar (Cumphyatrishum ann )*	15	No	FACW	Column Totals:	(A) _	(B)
J				Prevalence Inde	x = B/A =	
4				Hydrophytic Vegetat	ion Indicators:	
5 6				1 - Rapid Test for	Hydrophytic Ve	getation
7				2 - Dominance Te	est is >50%	
8.				3 - Prevalence In-	dex is ≤3.0 <sup>1</sup>	
9.				4 - Morphological	Adaptations¹ (P ks or on a separ	rovide supporting
10.				Problematic Hydr	•	•
	100%	= Total Cov	er	Problematic Hydr	opriyiic vegetati	on (Explain)
Woody Vine Stratum (Plot size:) None observed 1.				<sup>1</sup> Indicators of hydric so be present, unless dis		
2.				Hydrophytic		
00/		= Total Cov	er -	Vegetation	'00 N-	. <b>x</b>
% Bare Ground in Herb Stratum				Present? Y	es No	<u> </u>
Remarks:  No positive indication of hydrophytic vegetation was of	sconied (NEO)	// ot domi-	ant angaice	indoved as EAC as de-	or)	
*27 species of Symphyotrichum are listed in the USAC (n=6) indicator status.						3) or OBL

Profile Desc	ription: (Describ	e to the depth n	eeded to docu	ment the i	ndicator	or confirn	n the absence	e of indicators.)	
Depth	Matrix			ox Feature		12	T 4.	5	_
(inches) 0-12	Color (moist) 10YR 4/6		Color (moist)	_ <u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u> clay loam	Remark	5
	1011 4/0						Clay IDam		
-	-	<del>_</del>					·		
	-			_					
	oncentration, D=De					d Sand G		cation: PL=Pore Lining	-
_	Indicators: (Appl	icable to all LRF						s for Problematic Hydr	ic Soils³:
Histosol			Sandy	-				Muck (A9) ( <b>LRR I, J</b> )	
1	oipedon (A2)			Redox (S5	•			Prairie Redox (A16) (L	RR F, G, H)
l —	stic (A3)			d Matrix (S				Surface (S7) ( <b>LRR G</b> )	·\
	en Sulfide (A4) d Layers (A5) ( <b>LRF</b>	<b>R F</b> )		Mucky Mir Gleyed Ma				Plains Depressions (F16 RR H outside of MLRA	•
l —	ick (A9) ( <b>LRR F, G</b>	•		ed Matrix (			•	ced Vertic (F18)	. = 4.0,
	d Below Dark Surfa			Dark Surfa				Parent Material (TF2)	
	ark Surface (A12)		Deplete	ed Dark Su	ırface (F7)	)	-	Shallow Dark Surface (T	F12)
	lucky Mineral (S1)			Depressio				(Explain in Remarks)	
	Mucky Peat or Peat			ains Depre	,			of hydrophytic vegetati	
5 cm ML	ıcky Peat or Peat (	53) ( <b>LRR F</b> )	(IVIL	-RA 72 & 1	3 OT LKK	( <b>H</b> )		nd hydrology must be pr s disturbed or problema	
Restrictive	Layer (if present):	!					unies	s disturbed of problema	
Type:	-шуст (п. р. ссето).								
ı	ches):		_				Hydric Soi	l Present? Yes	No <u></u>
Remarks:			_				1.7		
No positive ir	ndication of hydric	soils was observ	red.						
HYDROLO									
1	drology Indicators								
Primary India	cators (minimum of	fone required; ch	neck all that app	ly)			<u>Second</u>	ary Indicators (minimum	of two required)
	Water (A1)		Salt Crust					face Soil Cracks (B6)	
_	iter Table (A2)		Aquatic In					arsely Vegetated Conca	ve Surface (B8)
Saturation	` '		Hydrogen				· <del></del>	ninage Patterns (B10)	
	larks (B1)		Dry-Seas					dized Rhizospheres on	Living Roots (C3)
	nt Deposits (B2)		Oxidized			ing Roots		where tilled)	
Drift Dep	. ,		•	not tilled)		1)		ayfish Burrows (C8)	Image: (CO)
Algai Ma	at or Crust (B4)		Presence		,	+)	·	turation Visible on Aeria omorphic Position (D2)	imagery (C9)
	on Visible on Aeria	l Imagony (R7)	Thin Mucl				· <del></del>	C-Neutral Test (D5)	
	tained Leaves (B9		Other (EX	piaiii iii ixe	illains)			est-Heave Hummocks (E	)7) (IRR E)
Field Obser		)					110	st-Heave Hummocks (E	(LICIT)
Surface Wat		Yes No _	X Denth (in	iches).					
Water Table		Yes No _			> 12"	_			
Saturation P		Yes No _			> 12"	—   Wetl	and Hydrolog	gy Present? Yes	No. X
(includes car	oillary fringe)							gy i resent: Tes	
Describe Re	corded Data (strea	m gauge, monito	ring well, aerial	photos, pr	evious ins	pections),	if available:		
Remarks:									
No positivo i	ndication of wetla	nd hydrology wa	s ahservad						
I hositive i	naication of Wella	na nyarology wa	ว บมวิชา ۷ธินีเ						

US Army Corps of Engineers Great Plains – Version 2.0

Project/Site: US-70 Over Lake Texoma (Roosevelt Bridge)	(	City/County:	Bryan		Sampling Dat	ie: 12/2/2021	1
Applicant/Owner: The Oklahoma Department of Transporta	ation (ODOT	·)	-	State: OK	Sampling Poi	nt. DP 15	
Investigator(s): Megan Philips-Schaap & Lacee Stanley		Section To	wnshin Ra	nge: Sec. 28, T6S, R7I	_ camping ron	n	
Landform (hillslope, terrace, etc.):forested		Local relief	(concave	convex, none): none		Slone (%). 0	)
Subregion (LRR): Southwestern Prairies (LRR J)	33.9	998848	(concave,			atum: WGS	84
Soil Map Unit Name: 42: Karma fine sandy loam, 1 to 3 pe	Lat rcent slopes				D	atum	
			·	NWI classi	nication:		
Are climatic / hydrologic conditions on the site typical for thi						~	
Are Vegetation, Soil, or Hydrologys				'Normal Circumstances			
Are Vegetation, Soil, or Hydrology r	naturally pro	blematic?	(lf ne	eeded, explain any ansv	vers in Remarks.	)	
SUMMARY OF FINDINGS – Attach site map	showing	sampling	g point l	ocations, transec	ts, important	: features,	etc.
Hudrophytia Vagatatian Propent?	lo.						
Hydrophytic Vegetation Present? Yes X N Hydric Soil Present? Yes N			e Sampled		v	,	
Wetland Hydrology Present? Yes N		withi	in a Wetlaı	nd? Yes	No		
Remarks:	<u>'</u>						
This point was determined not to be within a wetland du	ue to the lack	of hydric s	oils and we	etland hydrology.			
This point was actorning not to be within a wouldn't de		( or riyario o	ono aria we	auna nyarology.			
VEGETATION – Use scientific names of plan	ıts.						
T Ctt: (Diet si: 30' )	Absolute	Dominant		Dominance Test wo	rksheet:		
Tree Stratum (Plot size:)  American elm (Ulmus americana)	<u>% Cover</u> 45	Species? Yes	FAC	Number of Dominant			
2. Sugar-berry (Celtis laevigata)	25	Yes	FAC	That Are OBL, FACW (excluding FAC-):	, or FAC	6 (	(A)
3					-!		` '
4				Total Number of Dom Species Across All St		7 (1	(B)
	70%	= Total Cov				\	,
Sapling/Shrub Stratum (Plot size:)		- Total Cov	GI	Percent of Dominant That Are OBL, FACW		86%	(A/B)
1. American elm (Ulmus americana)	5	Yes	FAC_		·		,
2				Prevalence Index we		let I i	
3				Total % Cover of			
4				OBL species			
5				FACW species			
Herb Stratum (Plot size: 5' )	5%	= Total Cov	er	FAC species			
Herb Stratum (Plot size: 5 )  1. Sedge (Carex spp.)*	40	Yes	OBL				
2. Nodding wild rye (Elymus canadensis)	35	Yes	FACU	Column Totals:			(B)
3. Henbit deadnettle (Lamium amplexicaule)**	10	No	UPL	Column Fotalo.	( , ,		(5)
4. Common chickweed (Stellaria media)	10	No	FACU	Prevalence Inde	ex = B/A =		
5.				Hydrophytic Vegeta	tion Indicators:		
6.				1 - Rapid Test fo	r Hydrophytic Ve	getation	
7.				2 - Dominance T			
8.				3 - Prevalence In			
9.				4 - Morphologica	ıl Adaptations' (P rks or on a separ	rovide suppo	orting
10				Problematic Hyd		,	١
201	95%	= Total Cov	er	<u> </u>			
Woody Vine Stratum (Plot size: 30' Alabama supplejack (Berchemia scandens)	10	Yes	FAC	<sup>1</sup> Indicators of hydric s be present, unless di			ıst
1. Horoobrior (Smiley retunditalia)	5	Yes	FAC				
2. Thorsebiler (Sillilax rotulidilolla)	450/			Hydrophytic Vegetation			
% Bare Ground in Herb Stratum5%		= Total Cov	er		res <u>X</u> No	,	
Remarks:				1			
A positive indication of hydrophytic vegetation was obs	served (>50°	% of domina	ant species	indexed as OBL, FACV	V, or FAC)		
*83 species of Carex are listed in the USACE State of  **Plant species does not have a wetland indicator according to the control of the cont				have a FACW (n=24) of	or OBL (n=36) inc	sutator status	8.

Profile Desc	ription: (Describ	e to the dept	h needed to docu	ıment the	indicator	or confirn	n the absence of	indicators.)	
Depth	Matrix			ox Feature		. 2	<b>.</b> .	<b>.</b>	
(inches)	Color (moist)		Color (moist)	%	Type <sup>1</sup>	<u>Loc<sup>2</sup></u>	<u>Texture</u>	Remarks	<u> </u>
0-12	10YR 4/2	100	=				sandy loam		
		<u> </u>							
				_					
	-								
				_					
				_					
¹Type: C=Co	ncentration D=D	enletion RM=	Reduced Matrix, C	S=Covere	d or Coate	ed Sand G	rains <sup>2</sup> Locatio	on: PL=Pore Lining,	M=Matrix
			_RRs, unless oth			o oana o		· Problematic Hydri	
Histosol			Sandy		-			k (A9) ( <b>LRR I, J</b> )	
	ipedon (A2)			Redox (S5	, ,			irie Redox (A16) ( <b>LF</b>	RR F, G, H)
Black His			-	ed Matrix (S				ace (S7) ( <b>LRR G</b> )	,
	n Sulfide (A4)			Mucky Mi	-		High Plain	ns Depressions (F16	)
Stratified	Layers (A5) (LRF	<b>R F</b> )	Loamy	Gleyed M	atrix (F2)		(LRR H	I outside of MLRA	72 & 73)
	ck (A9) ( <b>LRR F, G</b>			ed Matrix (				Vertic (F18)	
-	Below Dark Surfa	ace (A11)	·	Dark Surfa	, ,		<del></del>	nt Material (TF2)	
	rk Surface (A12)		•	ed Dark Su	•	)	-	low Dark Surface (Ti	F12)
-	ucky Mineral (S1) lucky Peat or Pea			Depressio		(16)		plain in Remarks) nydrophytic vegetatio	on and
	cky Peat or Peat (			LRA 72 &				drology must be pre	
	ony i caroni car	(=::::)	(			,		turbed or problemati	
Restrictive L	ayer (if present)							<u> </u>	
Type:									
Depth (inc	ches):						Hydric Soil Pre	esent? Yes	NoX
Remarks:									<u> </u>
No positive in	dication of hydric	soils was obs	served.						
HYDROLO									
Wetland Hyd	Irology Indicator	s:							
Primary Indic	ators (minimum o	f one required	; check all that app	oly)			Secondary I	Indicators (minimum	of two required)
Surface \	Water (A1)		Salt Crus	t (B11)			Surface	Soil Cracks (B6)	
High Wa	ter Table (A2)			nvertebrate			Sparsel	ly Vegetated Conca	e Surface (B8)
Saturatio	on (A3)		Hydroge	n Sulfide O	dor (C1)		Drainag	ge Patterns (B10)	
Water Ma	arks (B1)		Dry-Seas	son Water <sup>-</sup>	Table (C2)	)	Oxidize	d Rhizospheres on I	_iving Roots (C3)
	t Deposits (B2)		Oxidized	Rhizosphe	res on Liv	ing Roots		re tilled)	
	osits (B3)		•	not tilled)				h Burrows (C8)	
	t or Crust (B4)			of Reduce	•	4)	·	ion Visible on Aerial	Imagery (C9)
	osits (B5)		Thin Muc					rphic Position (D2)	
	on Visible on Aeria		Other (E:	xplain in Re	emarks)		·	eutral Test (D5)	
	ained Leaves (B9	)				1	Frost-H	leave Hummocks (D	7) (LRR F)
Field Observ			v						
Surface Wate	er Present?		lo 💢 Depth (i		> 12"	_			
Water Table I	Present?		lo 🗶 Depth (i			_			
Saturation Pr		Yes N	lo 💢 Depth (i	nches):	> 12"	Wetl	and Hydrology P	resent? Yes	No <u>*</u>
(includes cap		m dalide mo	nitoring well, aeria	Inhotos no	evious ins	nections)	if available:		
Personne Met	o. dod Dala (silea	gaage, mo	insoring won, actia	. p.10103, pi	O VIOUS IIIS	,poolio113),	n avanabis.		
Domarka									
Remarks:									
No positive in	ndication of wetla	nd hydrology	was observed.						ı

US Army Corps of Engineers Great Plains – Version 2.0

Project/Site: US-70 Over Lake Texoma (Roosevelt Bridge)	(	City/County:	Bryan		_ Sampling Date:12/2	2/2021
Applicant/Owner: The Oklahoma Department of Transportation	tion (ODOT	·)		State: OK	_ Sampling Point: DP 1	6
Investigator(s): Megan Philips-Schaap	:	Section, To	wnship, Ra	nge: Sec. 29, T6S, R7E		
Landform (hillslope, terrace, etc.): depression		Local relief	(concave,	convex, none): concave	Slope (	%): <u>10-15</u>
Subregion (LRR): Southwestern Prairies (LRR J)	_ Lat:	000050		Long:	Datum: _	WGS 84
Soil Map Unit Name: 68: Pits				NWI classifi		
Are climatic / hydrologic conditions on the site typical for this	time of year					
Are Vegetation, Soil, or Hydrology si	gnificantly	disturbed?	Are "	Normal Circumstances"	present? Yes	No
Are Vegetation, Soil, or Hydrologyn	aturally pro	blematic?	(If ne	eded, explain any answe	ers in Remarks.)	
SUMMARY OF FINDINGS – Attach site map s	showing	samplin	g point l	ocations, transects	s, important featu	ıres, etc.
Hydrophytic Vegetation Present? Yes No	, <b>x</b>	1- 41-	. 6	A		
Hydric Soil Present? Yes No	<b>X</b>		e Sampled in a Wetlar		No <u></u>	
Wetland Hydrology Present? Yes No	<u> </u>	With	iii a vvetiai	id: 165		
Remarks:						
This point was determined not to be within a wetland due	e to the lack	of all three	wetland cr	iteria.		
VEGETATION – Use scientific names of plant	s					
	Absolute	Dominant	Indicator	Dominance Test worl	ksheet:	
Tree Stratum (Plot size:)		Species?	Status	Number of Dominant S		
1. None observed				That Are OBL, FACW,	or FAC 1	(A)
2				(excluding FAC-):		(A)
3				Total Number of Domin Species Across All Stra	7	(B)
4		= Total Cov		·	-	(B)
Sapling/Shrub Stratum (Plot size:15')		- Total Cov	ei	Percent of Dominant S That Are OBL, FACW,		(A/B)
1. American elm (Ulmus americana)	40	Yes	FAC	·	-	(/ " - /
2				Prevalence Index wo		
3				Total % Cover of:  OBL species		
4				FACW species		
5	40%			FAC species		
Herb Stratum (Plot size: 5' )		= Total Cov	er	TACIL anasias	x 4 =	
1. Southern dewberry (Rubus trivialis)	60	Yes	FACU		x 5 =	
2. Hogwort (Croton capitatus)*	15	No	UPL	Column Totals:	(A)	(B)
3. Aster (Symphyotrichum spp.)**	15	No	FACW	Provolence Index	ν – D/Λ –	
4. Tapered rosette grass (Dichanthelium acuminatum)	15	No	FAC	Prevalence Index  Hydrophytic Vegetati		
5					Hydrophytic Vegetation	า
6				2 - Dominance Te		
7				3 - Prevalence Ind		
8					Adaptations <sup>1</sup> (Provide s	
9 10					s or on a separate she	-
10.		= Total Cov	er	Problematic Hydro	phytic Vegetation' (Ex	plain)
Woody Vine Stratum (Plot size:)  None observed  1.		rotal cov	OI.	<sup>1</sup> Indicators of hydric so be present, unless dist	oil and wetland hydrolog turbed or problematic.	gy must
2.				Hydrophytic		
% Bare Ground in Herb Stratum 0%		= Total Cov	er	Vegetation	es No_ <i>X</i> _	
70 Bare Ground III Flerb Gratarii				Present? Ye	.5 NO	_
Remarks:  No positive indication of hydrophytic vegetation was observed wetland indicator according to USDA, assume upland. **27						
74% have a EAC (n=6). EACW (n=9) or OBI (n=6) indicate	•	- Jinpinyou	ionam aic	olda iii iilo oomol olali	J SI SIN 2010 Wellalla	ant List

Profile Desc Depth	Matrix		<u>Re</u> do	x Features				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-2	10YR 3/2	100	<u> </u>				sa cl lo	
2-12	10YR 6/3	70	10YR 5/8	30	С	M	sa cl lo	
	-							
							<u></u>	
<sup>1</sup> Type: C=C	oncentration, D=D		aduced Matrix CS	S=Covered	or Coato	d Sand Gr	rains <sup>2</sup> l ocatio	n: PL=Pore Lining, M=Matrix.
	Indicators: (Appl					u Sanu Gi		Problematic Hydric Soils <sup>3</sup> :
Histosol				Gleyed Mat	-			(A9) ( <b>LRR I, J</b> )
	oipedon (A2)			Redox (S5)				rie Redox (A16) ( <b>LRR F, G, H</b> )
Black Hi	istic (A3)		Stripped	d Matrix (S	6)		Dark Surfa	ce (S7) (LRR G)
Hydroge	en Sulfide (A4)		Loamy	Mucky Min	eral (F1)		High Plain	s Depressions (F16)
	d Layers (A5) ( <b>LRF</b>	•		Gleyed Ma			•	outside of MLRA 72 & 73)
	ıck (A9) ( <b>LRR F, G</b>			d Matrix (F	•			/ertic (F18)
	d Below Dark Surfa	ace (A11)		Dark Surfa				t Material (TF2)
	ark Surface (A12) ⁄lucky Mineral (S1)		·	d Dark Sur Depression			-	ow Dark Surface (TF12) olain in Remarks)
	Mucky Peat or Pea			ains Depre		16)		ydrophytic vegetation and
	icky Peat or Peat (			RA 72 & 7				drology must be present,
	·	, , ,	`			,		urbed or problematic.
Restrictive I	Layer (if present)							
Type:								
Depth (in	ches):		<u></u>				Hydric Soil Pre	sent? Yes NoX
Remarks:								
No positivo ir	adication of budgic	coile was abso	avad Araa is not	subject to	nonding			
no positive ii	ndication of hydric	20112 Mas onse	veu. Area is not	subject to	portuing.			
HYDROLO	GY							
	drology Indicator	s:						
	cators (minimum o		check all that appl	y)			Secondary I	ndicators (minimum of two required)
	Water (A1)	,	Salt Crust					
· · · · · · · · · · · · · · · · · · ·	ater Table (A2)						Surface	Soil Cracks (B6)
Saturation	` '			vertebrates	s (B13)			Soil Cracks (B6)  Vegetated Concave Surface (B8)
				vertebrates Sulfide Od			Sparsel	y Vegetated Concave Surface (B8)
Water M	,		Hydrogen	Sulfide Od	or (C1)		Sparsel Drainag	y Vegetated Concave Surface (B8) e Patterns (B10)
	larks (B1)			Sulfide Od on Water Ta	or (C1) able (C2)	ng Roots (	Sparsel Drainag Oxidized	y Vegetated Concave Surface (B8)
Sedimer	,		<ul><li>Hydrogen</li><li>Dry-Seaso</li><li>Oxidized F</li></ul>	Sulfide Od on Water Ta	or (C1) able (C2)	ng Roots (	Sparsel: Drainag Oxidized (C3) (where	y Vegetated Concave Surface (B8) e Patterns (B10) d Rhizospheres on Living Roots (C3) e tilled)
Sedimer Drift Dep	larks (B1) nt Deposits (B2)		<ul><li>Hydrogen</li><li>Dry-Seaso</li><li>Oxidized F</li></ul>	Sulfide Od on Water Ta Rhizospher not tilled)	or (C1) able (C2) es on Livi	_	Sparsel: Drainag Oxidizec (C3) (wher Crayfish	y Vegetated Concave Surface (B8) e Patterns (B10) d Rhizospheres on Living Roots (C3)
Sedimer Drift Dep Algal Ma	larks (B1) nt Deposits (B2) posits (B3)		Hydrogen Dry-Seaso Oxidized F (where i	Sulfide Od on Water Ta Rhizospher not tilled) of Reduce	or (C1) able (C2) es on Livi d Iron (C4	_	Sparsel: Drainag Oxidized (C3) (wher Crayfish Saturati	y Vegetated Concave Surface (B8) e Patterns (B10) d Rhizospheres on Living Roots (C3) e tilled) Burrows (C8)
Sedimer Drift Dep Algal Ma Iron Dep	larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)	al Imagery (B7)	Hydrogen Dry-Seaso Oxidized F     (where i	Sulfide Od on Water Ta Rhizospher not tilled) of Reduced Surface (0	or (C1) able (C2) es on Livi d Iron (C4	_	Sparsely Drainag Oxidized (C3) (wher Crayfish Saturati X Geomore	y Vegetated Concave Surface (B8) e Patterns (B10) d Rhizospheres on Living Roots (C3) e tilled) n Burrows (C8) on Visible on Aerial Imagery (C9)
Sedimer Drift Dep Algal Ma Iron Dep Inundati	larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)		Hydrogen Dry-Seasc Oxidized F (where I Presence Thin Muck	Sulfide Od on Water Ta Rhizospher not tilled) of Reduced Surface (0	or (C1) able (C2) es on Livi d Iron (C4	_	Sparsel; Drainag Oxidized (C3) (wher Crayfish Saturati X Geomon FAC-Ne	y Vegetated Concave Surface (B8) e Patterns (B10) d Rhizospheres on Living Roots (C3) e tilled) B Burrows (C8) on Visible on Aerial Imagery (C9) phic Position (D2)
Sedimer Drift Dep Algal Ma Iron Dep Inundati	larks (B1)  nt Deposits (B2)  posits (B3)  at or Crust (B4)  posits (B5)  on Visible on Aeria  ttained Leaves (B9		Hydrogen Dry-Seasc Oxidized F (where I Presence Thin Muck	Sulfide Od on Water Ta Rhizospher not tilled) of Reduced Surface (0	or (C1) able (C2) es on Livi d Iron (C4	_	Sparsel; Drainag Oxidized (C3) (wher Crayfish Saturati X Geomon FAC-Ne	y Vegetated Concave Surface (B8) e Patterns (B10) d Rhizospheres on Living Roots (C3) e tilled) Burrows (C8) on Visible on Aerial Imagery (C9) phic Position (D2) utral Test (D5)
Sedimer Drift Dep Algal Ma Iron Dep Inundati Water-S	larks (B1) Int Deposits (B2) Int Deposits (B2) Int Ore Crust (B4) Int Ore Crust (B4) Int Ore Crust (B5) Int Ore Crust (B5) Int Ore Crust (B9) Int	)	Hydrogen Dry-Seasc Oxidized F (where I Presence Thin Muck	Sulfide Od on Water Ta Rhizospher not tilled) of Reduced Surface (G blain in Rei	or (C1) able (C2) es on Livi d Iron (C4 C7) marks)	_	Sparsel; Drainag Oxidized (C3) (wher Crayfish Saturati X Geomon FAC-Ne	y Vegetated Concave Surface (B8) e Patterns (B10) d Rhizospheres on Living Roots (C3) e tilled) Burrows (C8) on Visible on Aerial Imagery (C9) phic Position (D2) utral Test (D5)
Sedimer Drift Dep Algal Ma Iron Dep Inundati Water-S	larks (B1) Int Deposits (B2) Int Deposits (B3) Int or Crust (B4) I	) Yes No	Hydrogen Dry-Seaso Oxidized F (where I Presence Thin Muck Other (Exp	Sulfide Od on Water Ta Rhizospher not tilled) of Reducea Surface (Colain in Rea	or (C1) able (C2) es on Livi d Iron (C4	_	Sparsel; Drainag Oxidized (C3) (wher Crayfish Saturati X Geomon FAC-Ne	y Vegetated Concave Surface (B8) e Patterns (B10) d Rhizospheres on Living Roots (C3) e tilled) Burrows (C8) on Visible on Aerial Imagery (C9) phic Position (D2) utral Test (D5)
Sedimer Drift Dep Algal Ma Iron Dep Inundati Water-S Field Obser Surface Wat	larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria tained Leaves (B9 vations: er Present?	) Yes No Yes No	Hydrogen Dry-Seaso Oxidized F	Sulfide Od on Water Ta Rhizospher not tilled) of Reducer Surface (Colain in Rer ches): ches):	or (C1) able (C2) es on Livi d Iron (C4 C7) marks)		Sparsel; Drainag Oxidized (C3) (wher Crayfish Saturati K Geomon FAC-Ne Frost-He	y Vegetated Concave Surface (B8) e Patterns (B10) d Rhizospheres on Living Roots (C3) e tilled) B Burrows (C8) on Visible on Aerial Imagery (C9) phic Position (D2) utral Test (D5) eave Hummocks (D7) (LRR F)
Sedimer Drift Dep Algal Ma Iron Dep Inundati Water-S Field Obser Surface Wat Water Table Saturation P (includes cap	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? pillary fringe)	Yes No Yes No Yes No	Hydrogen Dry-Seasc Oxidized F (where I Presence Thin Muck Other (Exp  X Depth (in X Depth (in	Sulfide Od on Water Ta Rhizospher not tilled) of Reducee Surface (Colain in Rer ches): ches):	or (C1) able (C2) es on Livi d Iron (C4 C7) marks)  > 12"  > 12"	)  Wetla	Sparsely Drainag Oxidized (C3) (wher Crayfish Saturati K Geomoi FAC-Ne Frost-He	y Vegetated Concave Surface (B8) e Patterns (B10) d Rhizospheres on Living Roots (C3) e tilled) Burrows (C8) on Visible on Aerial Imagery (C9) phic Position (D2) utral Test (D5)
Sedimer Drift Dep Algal Ma Iron Dep Inundati Water-S Field Obser Surface Wat Water Table Saturation P (includes cap	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 No Yes No Yes No	Hydrogen Dry-Seasc Oxidized F (where I Presence Thin Muck Other (Exp  X Depth (in X Depth (in	Sulfide Od on Water Ta Rhizospher not tilled) of Reducee Surface (Colain in Rer ches): ches):	or (C1) able (C2) es on Livi d Iron (C4 C7) marks)  > 12"  > 12"	)  Wetla	Sparsely Drainag Oxidized (C3) (wher Crayfish Saturati K Geomoi FAC-Ne Frost-He	y Vegetated Concave Surface (B8) e Patterns (B10) d Rhizospheres on Living Roots (C3) e tilled) B Burrows (C8) on Visible on Aerial Imagery (C9) phic Position (D2) utral Test (D5) eave Hummocks (D7) (LRR F)
Sedimer Drift Dep Algal Ma Iron Dep Inundati Water-S Field Obser Surface Wate Water Table Saturation P (includes cap Describe Re	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? pillary fringe)	Yes No Yes No Yes No	Hydrogen Dry-Seasc Oxidized F (where I Presence Thin Muck Other (Exp  X Depth (in X Depth (in	Sulfide Od on Water Ta Rhizospher not tilled) of Reducee Surface (Colain in Rer ches): ches):	or (C1) able (C2) es on Livi d Iron (C4 C7) marks)  > 12"  > 12"	)  Wetla	Sparsely Drainag Oxidized (C3) (wher Crayfish Saturati K Geomoi FAC-Ne Frost-He	y Vegetated Concave Surface (B8) e Patterns (B10) d Rhizospheres on Living Roots (C3) e tilled) B Burrows (C8) on Visible on Aerial Imagery (C9) phic Position (D2) utral Test (D5) eave Hummocks (D7) (LRR F)
Sedimer Drift Dep Algal Ma Iron Dep Inundati Water-S Field Obser Surface Wat Water Table Saturation P (includes cap	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? pillary fringe)	Yes No Yes No Yes No	Hydrogen Dry-Seasc Oxidized F (where I Presence Thin Muck Other (Exp  X Depth (in X Depth (in	Sulfide Od on Water Ta Rhizospher not tilled) of Reducee Surface (Colain in Rer ches): ches):	or (C1) able (C2) es on Livi d Iron (C4 C7) marks)  > 12"  > 12"	)  Wetla	Sparsely Drainag Oxidized (C3) (wher Crayfish Saturati K Geomoi FAC-Ne Frost-He	y Vegetated Concave Surface (B8) e Patterns (B10) d Rhizospheres on Living Roots (C3) e tilled) B Burrows (C8) on Visible on Aerial Imagery (C9) phic Position (D2) utral Test (D5) eave Hummocks (D7) (LRR F)
Sedimer Drift Dep Algal Ma Iron Dep Inundati Water-S Field Obser Surface Wate Water Table Saturation P (includes cap Describe Re	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? pillary fringe)	Yes No Yes No Yes No Im gauge, moni	Hydrogen Dry-Seaso Oxidized F (where I Presence Thin Muck Other (Exp  X Depth (in X Depth (in toring well, aerial	Sulfide Od on Water Ta Rhizospher not tilled) of Reducee Surface (Colain in Rer ches): ches):	or (C1) able (C2) es on Livi d Iron (C4 C7) marks)  > 12"  > 12"	)  Wetla	Sparsely Drainag Oxidized (C3) (wher Crayfish Saturati K Geomoi FAC-Ne Frost-He	y Vegetated Concave Surface (B8) e Patterns (B10) d Rhizospheres on Living Roots (C3) e tilled) B Burrows (C8) on Visible on Aerial Imagery (C9) phic Position (D2) utral Test (D5) eave Hummocks (D7) (LRR F)

Project/Site: US-70 Over Lake Texoma (Roosevelt Bridg	e)	City/County	: Bryan		Sampling Date: 12/	2/2021
Applicant/Owner: The Oklahoma Department of Transpo	rtation (ODOT	·)		State: OK	Sampling Point: DP	17
Investigator(s): Megan Philips-Schaap & Lacee Stanley			wnship. Ra	nge: Sec. 29, T6S, R7E		
Landform (hillslope, terrace, etc.):lake terrace		Local relief	(concave.	convex, none): concave	Slope (	(%): 25-30
Subregion (LRR): Southwestern Prairies (LRR J)	Lat: 34.	000904	,	_96.601766	Datum:	WGS 84
Soil Map Unit Name: 68: Pits				NWI classific		
Are climatic / hydrologic conditions on the site typical for	this time of yea	ar? Yes	<b>x</b> No	(If no, explain in R	emarks.)	
Are Vegetation, Soil, or Hydrology				"Normal Circumstances" p		_ No
Are Vegetation, Soil, or Hydrology	-			eeded, explain any answe		
SUMMARY OF FINDINGS – Attach site ma						ures, etc.
			<u> </u>	·	•	•
Hydrophytic Vegetation Present? Yes  Hydric Soil Present? Yes	•	ls th	e Sampled			
	No	with	in a Wetlaı	nd? Yes	No <u> </u>	
Remarks:						
This point was determined not to be within a wetland	due to the lac	of bydric s	oile			
This point was determined not to be within a wettand	due to the lac	COI HYUHC S	ouis.			
VEGETATION – Use scientific names of pla	ants.					
Table Street, use (Blat size) 30'	Absolute	Dominant		Dominance Test work	sheet:	
Tree Stratum (Plot size:)  1. Black willow (Salix nigra)	<u>% Cover</u> 45	Species? Yes	<u>Status</u> FACW	Number of Dominant S	!	
	<del></del>		<u> </u>	That Are OBL, FACW, (excluding FAC-):	or FAC	(A)
2						
3				Total Number of Domin Species Across All Stra		(B)
4	45%	- Total Co		·		(-/
Sapling/Shrub Stratum (Plot size:15')		= Total Co	/ei	Percent of Dominant Sp That Are OBL, FACW,		(A/B)
1. Common buttonbush (Cephalanthus occidentalis)	40	Yes	OBL	That Ale OBE, I AOVV,	511740	(/\/b)
2. Black willow (Salix nigra)	15	Yes	FACW	Prevalence Index wor		
3					Multiply by	
4				OBL species		
5				FACW species		
		= Total Cov	/er	FAC species		
Herb Stratum (Plot size:)  None observed				FACU species		
I <sub>1</sub>				UPL species		
2				Column Totals:	(A)	(В)
3				Prevalence Index	= B/A =	
4				Hydrophytic Vegetation	on Indicators:	
5.       6.				X 1 - Rapid Test for H	Hydrophytic Vegetatio	n
7.				2 - Dominance Tes		
8.				3 - Prevalence Inde		
9.				4 - Morphological A	Adaptations <sup>1</sup> (Provide s or on a separate she	supporting
10				Problematic Hydro		
		= Total Cov		I .		
Woody Vine Stratum (Plot size:) None observed 1				<sup>1</sup> Indicators of hydric soi be present, unless distu		gy must
2.				Hydrophytic		
% Bare Ground in Herb Stratum100%_		= Total Cov	/er	Vegetation	s_ <i>X</i> _ No	
Remarks:						
A positive indication of hydrophytic vegetation was ol	served (Rapid	Test for H	ydrophytic \	Vegetation).		

Depth	cription: (Descrit Matrix	·	Redo	x Features				,
(inches)	Color (moist)	%	Color (moist)	<u>%</u> T	ype <sup>1</sup> L	_oc²	Texture	Remarks
0-6	10YR 3/1	100	-	. <del>-</del> -			clay loam	
6-16	10YR 2/2	100	-		-	-	clay loam	
		<del></del>						
		<del></del>		· — — —				
		<del></del>		· —— —				
				· —— —				
	oncentration, D=D					and Gra		on: PL=Pore Lining, M=Matrix.
_	Indicators: (App	licable to all LR						Problematic Hydric Soils <sup>3</sup> :
Histosol	• •			Gleyed Matrix	(S4)			k (A9) (LRR I, J)
	pipedon (A2) istic (A3)		-	Redox (S5) I Matrix (S6)				iirie Redox (A16) ( <b>LRR F, G, H</b> ) ace (S7) ( <b>LRR G</b> )
	en Sulfide (A4)			Mucky Minera	al (F1)			ns Depressions (F16)
	d Layers (A5) ( <b>LRI</b>	R F)		Gleyed Matrix				Houtside of MLRA 72 & 73)
1 cm Mu	uck (A9) ( <b>LRR F, C</b>	6, H)	Deplete	d Matrix (F3)			Reduced	Vertic (F18)
	d Below Dark Surf	ace (A11)		Dark Surface				nt Material (TF2)
	ark Surface (A12)		•	d Dark Surfac				low Dark Surface (TF12)
	/lucky Mineral (S1) Mucky Peat or Pea			Depressions ( ains Depressi				plain in Remarks) nydrophytic vegetation and
	ucky Peat or Peat			RA 72 & 73 c				ydrology must be present,
	,	(,(,	,		,			sturbed or problematic.
Restrictive I	Layer (if present)	:						
Type:			<del>_</del>					
Depth (inc	ches):		<del>_</del>				Hydric Soil Pro	esent? Yes NoX
Remarks:								
No positive in	ndication of hydric	soils was obser	ved					
no posiciro ii	Taloacion of Injurie		<b></b>					
HYDROLO	GY							
Wetland Hy	drology Indicator	rs:						
Primary India	cators (minimum o	f one required; o	heck 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 Inv	vertebrates (E	313)		Sparse	ly Vegetated Concave Surface (B8)
Saturation	on (A3)		Hydrogen	Sulfide Odor	(C1)		Drainaç	ge Patterns (B10)
	larks (B1)			n Water Tabl				ed Rhizospheres on Living Roots (C3)
	nt Deposits (B2)			Rhizospheres	on Living	Roots (		re tilled)
	posits (B3)			not tilled)	(0.1)			h Burrows (C8)
	at or Crust (B4)		· · · · · · · · · · · · · · · · · · ·	of Reduced Ir				ion Visible on Aerial Imagery (C9)
	oosits (B5) on Visible on Aeria	al Imagany (P7)	<del></del>	Surface (C7)			<del></del>	orphic Position (D2) eutral Test (D5)
	stained Leaves (B9		Other (Exp	olain in Rema	iks)		1 //0-11	leave Hummocks (D7) ( <b>LRR F</b> )
Field Obser		·')					1103111	isave Hammooks (B7) (EIRCT)
Surface Water		Yes No.	Depth (inc	ches):				
Water Table			Z Depth (inc	_	16"			
			Depth (inc		16"	Wetla	and Hydrology P	resent? Yes <u>X</u> No
	resent?		Debut (IIII	J. 103).		******	a riyarology F	1000 100
Saturation P	pillary fringe)							
Saturation P			oring well, aerial լ	ohotos, previo	ous inspec	ctions), i	f available:	
Saturation Po (includes cap Describe Rea	pillary fringe)		oring well, aerial p	ohotos, previo	ous inspec	tions), i	f available:	
Saturation P	pillary fringe)		oring well, aerial p	ohotos, previo	ous insped	tions), i	f available:	7
Saturation Projection (includes cap Describe Records)  Remarks:	pillary fringe)	am gauge, monit					f available:	

Project/Site: US-70 Over Lake Texoma (Roosevelt Bridge	) (	City/County	Bryan		Sampling	Date: 12/2/2	021
Applicant/Owner: The Oklahoma Department of Transpor	tation (ODOT	·)		State: OK	Sampling	Point: DP 18	
Investigator(s): Megan Philips-Schaap & Lacee Stanley	;	Section, To	wnship, Ra	nge: Sec. 33, T6S, R7E			
Landform (hillslope, terrace, etc.): depression		Local relief	(concave.	convex, none): concave		Slope (%)	25-30
Subregion (LRR): Southwestern Prairies (LRR J)		997535	(00110010)	-96.571608 Long:		Datum: WC	SS 84
Soil Map Unit Name: 14: Boxville fine sandy loam, 3 to 8 p	ercent slope	s		NWI classific			
Are climatic / hydrologic conditions on the site typical for the			X No	(If no explain in D	omorko)		
						<b>X</b> N	1_
Are Vegetation, Soil, or Hydrology				Normal Circumstances" p			10
Are Vegetation, Soil, or Hydrology				eded, explain any answei			
SUMMARY OF FINDINGS – Attach site map	showing	samplin	g point l	ocations, transects	, import	ant feature	s, etc.
Hydrophytic Vegetation Present?	No						
Hydric Soil Present? Yes	No		e Sampled		N-		
Wetland Hydrology Present? Yes	No	With	in a Wetlar	10?	NO_		
Remarks:		· · ·					
This point was determined to be within a wetland due to	o the presen	ce of all 3 v	vetland crite	ria.			
Wetland 5							
VEGETATION – Use scientific names of pla	nto						
VEGETATION – Use scientific flames of pla	Absolute	Daminant	Indicator	Daminanaa Taat wark			
Tree Stratum (Plot size:)		Dominant Species?		Dominance Test works			
1. Black willow (Salix nigra)	30	Yes	FACW	Number of Dominant Sp That Are OBL, FACW, o		0	
2.				(excluding FAC-):	=	2	(A)
3.				Total Number of Domina	ant		
4				Species Across All Stra		3	(B)
15'	30%	= Total Cov	/er	Percent of Dominant Sp	ecies		
Sapling/Shrub Stratum (Plot size:)	20	Voc	OBL	That Are OBL, FACW, o		67%	(A/B)
1. Common buttonbush (Cephalanthus occidentalis)		Yes	OBL	Prevalence Index worl	rshoot:		
2				Total % Cover of:		Multiply by:	
3				OBL species			
4				FACW species			
5	30%			FAC species			
Herb Stratum (Plot size: 5' )		= Total Cov	/er	FACU species			_
Southern dewberry (Rubus trivialis)	5	Yes	FACU	UPL species	x 5	=	
2. Sedge (Carex spp.)*	2	No	OBL	Column Totals:			
3.							
4				Prevalence Index			
5				Hydrophytic Vegetation			
6				1 - Rapid Test for H		c Vegetation	
7				2 - Dominance Tes			
8				3 - Prevalence Inde		1.00	
9				4 - Morphological A data in Remarks			
10				Problematic Hydrop			
	7%	= Total Co	ver .				
Woody Vine Stratum (Plot size:) None observed				<sup>1</sup> Indicators of hydric soil be present, unless distu			must
2				Headara alexatic			
2		= Total Cov		Hydrophytic Vegetation			
% Bare Ground in Herb Stratum 93%		- Total Co	vei		3 <u>X</u>	No	
Remarks:					-		
A positive indication of hydrophytic vegetation was obs							
*83 species of Carex are listed in the USACE State of	OK 2018 We	etland Plant	t List. 72% h	nave a FACW (n=24) or O	BL (n=36)	indicator statu	IS.

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Profile Desc	ription: (Describe t	o the depth ne	eded to docun	nent the i	ndicator	or confirn	n the absence of in	dicators.)
Depth	Matrix			x Features	s			
(inches)	Color (moist)		olor (moist)		Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u>	Remarks
0-16	10YR 4/1	80	10YR 5/6	20	C	M/PL	clay loam	
								_
17		-ti DM DI	M - t		0 4		21 41	DI Dana Limina M Matrix
	ncentration, D=Depl					a Sana G		n: PL=Pore Lining, M=Matrix.  Problematic Hydric Soils <sup>3</sup> :
		ible to all Livix						·
Histosol	ipedon (A2)		Sandy G	Redox (S5	. ,			(A9) ( <b>LRR I, J</b> ) ie Redox (A16) ( <b>LRR F, G, H</b> )
Black His			-	l Matrix (S				ce (S7) (LRR G)
	n Sulfide (A4)			Лиску Mir				Depressions (F16)
	Layers (A5) (LRR F	)		Gleyed Ma				outside of MLRA 72 & 73)
	ck (A9) ( <b>LRR F, G, F</b>		X Depleted	-			Reduced Ve	ertic (F18)
Depleted	Below Dark Surface	e (A11)	Redox D	oark Surfa	ice (F6)		Red Parent	Material (TF2)
	rk Surface (A12)			d Dark Su	•	)	-	w Dark Surface (TF12)
	ucky Mineral (S1)			Depression		4.0\		ain in Remarks)
	lucky Peat or Peat (S		_	ins Depre			•	drophytic vegetation and
5 cm Mu	cky Peat or Peat (S3	(LRR F)	(IVILI	RA 72 & 7	3 OT LKH	( <b>H</b> )		Irology must be present, Irbed or problematic.
Restrictive I	.ayer (if present):						uniess diste	indea of problematic.
Type:	ayor (ii procont).							
Depth (inc							Hydric Soil Pres	sent? Yes <sup>X</sup> No
. ,							Tiyunc 3011 Files	Sent: 1esNO
Remarks:								1
A positive ind	cation of hydric soil	was observed.						
HYDROLO	GY							
Wetland Hyd	Irology Indicators:							
	ators (minimum of o	ne required: che	ck all that apply	<b>/</b> )			Secondary In	dicators (minimum of two required)
	Water (A1)	io roquirou, orio	Salt Crust				·	Soil Cracks (B6)
	ter Table (A2)		Aquatic Inv	` '	s (B13)			Vegetated Concave Surface (B8)
Saturatio	` '		Hydrogen :					Patterns (B10)
	arks (B1)		Dry-Seaso					Rhizospheres on Living Roots (C3)
	t Deposits (B2)		Oxidized R					
	osits (B3)			ot tilled)				Burrows (C8)
	t or Crust (B4)		Presence of	•	d Iron (C	1)		n Visible on Aerial Imagery (C9)
	osits (B5)		Thin Muck		•	- /		phic Position (D2)
	on Visible on Aerial <b>I</b> r	magery (B7)	Other (Exp					utral Test (D5)
	ained Leaves (B9)	<b>5</b> , ( )	` .		,			ave Hummocks (D7) ( <b>LRR F</b> )
Field Observ	. ,						<u> </u>	, , , , , ,
Surface Water	er Present? Ye	es No	X Depth (inc	ches):				
Water Table		esNo			> 16"	_		
Saturation Pr		es No			> 16"	- Wet	and Hydrology Pro	esent? Yes <u>X</u> No
(includes cap		INU	Dehii (iii)	лго <i>)</i>		_   well	and right blogy Pre	
	corded Data (stream	gauge, monitori	ng well, aerial p	hotos, pr	evious ins	pections),	if available:	
Remarks:								
A positive inc	lication of wetland h	ydrology was o	bserved (at leas	st two se	condary i	ndicators).	,	

Project/Site: US-70 Over Lake Texoma (Roosevelt Bridge)	,	City/County	Bryan		Sampling D	oate: 12/2/20	021
Applicant/Owner: The Oklahoma Department of Transporta		.)		State: OK	Sampling P	oint: DP 19	
			wnship, Ra	nge: Sec. 33, T6S, R7E			
Landform (hillslope, terrace, etc.):lake terrace		Local relief	(concave,	convex, none): concave		_ Slope (%):	5-10
Subregion (LRR): Southwestern Prairies (LRR J)	Lat:	997430		_ Long:		Datum: WG	SS 84
Soil Map Unit Name: 14: Boxville fine sandy loam, 3 to 8 p	ercent slope	s		NWI classifi			
Are climatic / hydrologic conditions on the site typical for thi	is time of yea	ar? Yes	<b>′</b> No	( <b>I</b> f no, explain in F	Remarks.)		
Are Vegetation, Soil, or Hydrology s	significantly	disturbed?	Are '	'Normal Circumstances"	present? Ye	s_ <b>x</b> _N	o
Are Vegetation, Soil, or Hydrology r	naturally pro	blematic?		eeded, explain any answe			
SUMMARY OF FINDINGS – Attach site map			g point l	ocations, transects	s, importa	nt feature	s, etc.
Hydrophytic Vegetation Present? Yes N	lo <b>X</b>						
Hydric Soil Present? Yes N			e Sampled		No	x	
Wetland Hydrology Present? Yes N		With	in a Wetlaı	na? res	NO	<del></del> -	
Remarks:		<u> </u>					
This point was determined not to be within a wetland du	ue to the lack	c of all three	wetland c	riteria.			
VEGETATION – Use scientific names of plan				1			
Tree Stratum (Plot size:30')	Absolute % Cover	Dominant Species?		Dominance Test work			
1. Osage-orange (Maclura pomifera)	30	Yes	FACU	Number of Dominant S That Are OBL, FACW,			
2.				(excluding FAC-):	_	2	(A)
3.			-	Total Number of Domi	nant		
4.				Species Across All Str		4	(B)
	30%	= Total Cov	er	Percent of Dominant S	nocios		
Sapling/Shrub Stratum (Plot size: 15' )				That Are OBL, FACW,		50%	(A/B)
1. Common buttonbush (Cephalanthus occidentalis)	2	No No	OBL	Dunielana a ludanina	ulan la nata		
2				Prevalence Index wo		Audtiolu bu	
3				Total % Cover of:			
4				OBL species			
5				FAC species			
Herb Stratum (Plot size: 5' )	2%	= Total Cov	er	FACU species		·	_
Aster (Symphyotrichum spp.)*	40	Yes	FACW		x 5 =		
2. Southern dewberry (Rubus trivialis)	25	Yes	FACU	Column Totals:			
3. Tapered rosette grass (Dichanthelium acuminatum)	20	Yes	FAC		(,,)		_ (=)
4				Prevalence Index	<pre>&lt; = B/A =</pre>		_
5.				Hydrophytic Vegetati	on Indicator	s:	
6.				1 - Rapid Test for	Hydrophytic \	/egetation	
7.				2 - Dominance Te			
8.				3 - Prevalence Ind			
9.				4 - Morphological data in Remark	Adaptations <sup>1</sup>	(Provide sup	porting
10.				Problematic Hydro	-	•	
	0.50/	= Total Cov	er	Problematic Hydro	priyuc vegeu	апоп (Ехріа	III 1 <i>)</i>
Woody Vine Stratum (Plot size:) None observed  1.				<sup>1</sup> Indicators of hydric so be present, unless dist			must
2.				Hydrophytic	<del></del>		
		= Total Cov	er	Vegetation		<b>v</b>	
% Bare Ground in Herb Stratum15%				Present? Ye	es l	No <u>x</u>	
Remarks:	00m/cd // F0	0/ of -!:		indoved == EAG !:	\w\		
No positive indication of hydrophytic vegetation was ob *27 species of Symphyotrichum are listed in the USACI						n=8) or OBL	
(n=6) indicator status.				ζ		, -	<b>#</b>

Profile Desc	ription: (Describe	to the depth	needed to docur	nent the inc	dicator o	or confirn	n the absence o	f indicators.)
Depth	Matrix Color (moist)	<u></u> %	Redo Color (moist)	x Features %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
(inches) 0-12	10YR 5/4	_ <u>%</u> _ 100	-	<u>70                                    </u>	<u>rype</u>		clav loam	пешакѕ
0-12	1011(3/4						- Clay Ioaiii	<u> </u>
				·				
				· —— –				
		<del></del>						
				· —— -				
				·				
	ncentration, D=Dep					d Sand G		tion: PL=Pore Lining, M=Matrix.
-	ndicators: (Applic	cable to all LF			-			or Problematic Hydric Soils³:
Histosol	` '		Sandy (	-	x (S4)			ick (A9) (LRR I, J)
	ipedon (A2)		-	Redox (S5)	١			rairie Redox (A16) ( <b>LRR F, G, H</b> ) rface (S7) ( <b>LRR G</b> )
Black His	n Sulfide (A4)			d Matrix (S6) Mucky Miner				nace (37) (LRR G) ins Depressions (F16)
	Layers (A5) ( <b>LRR</b>	F)		Gleyed Matri				H outside of MLRA 72 & 73)
	ck (A9) ( <b>LRR F, G</b> ,	•		d Matrix (F3			•	d Vertic (F18)
Depleted	l Below Dark Surfac	ce (A11)	Redox I	Dark Surface	e (F6)		Red Par	ent Material (TF2)
	rk Surface (A12)		· · · · · · · · · · · · · · · · · · ·	d Dark Surfa				allow Dark Surface (TF12)
	ucky Mineral (S1)	(00) (I <b>DD 0</b>		Depressions		40)		xplain in Remarks)
	lucky Peat or Peat o cky Peat or Peat (S			ains Depress <b>RA 72 &amp; 73</b>				f hydrophytic vegetation and hydrology must be present,
3 6111 1010	cky real of real (S	(LKK F)	(IVIL	NA 12 0 13	OI LKK	п)		isturbed or problematic.
Restrictive L	ayer (if present):							
Type:								
Depth (inc	ches):						Hydric Soil P	resent? Yes NoX
Remarks:								
No positive in	dication of hydric s	solls was obse	rved.					
HYDROLO	CV							
	Irology Indicators		-111141-4				0	.   .   .   .   .   .   .   .   .   .
	ators (minimum of o	one requirea;		• •			-	y Indicators (minimum of two required)
	Water (A1)		Salt Crust		(D40)			ce Soil Cracks (B6)
High wa Saturatio	ter Table (A2)		Aquatic In		` '			ely Vegetated Concave Surface (B8)
	arks (B1)			Sulfide Odo on Water Tab				age Patterns (B10) zed Rhizospheres on Living Roots (C3)
	t Deposits (B2)			Rhizosphere:		ina Roots		ere tilled)
· · · · · · · · · · · · · · · · · · ·	osits (B3)			not tilled)	3 OII LIVI	ing roots		sh Burrows (C8)
	t or Crust (B4)		,	of Reduced	Iron (C4	1)		ation Visible on Aerial Imagery (C9)
	osits (B5)			Surface (C7		' /	·	norphic Position (D2)
	on Visible on Aerial	Imagery (B7)		olain in Rema				Neutral Test (D5)
	ained Leaves (B9)	3 - 7 ()			• ,		_	Heave Hummocks (D7) (LRR F)
Field Observ	, ,						<u> </u>	, , , , ,
Surface Wate	er Present?	/es No	Depth (in	ches):				
Water Table			Depth (in	ches):	> 12"			
Saturation Pr			Depth (in		> 12"	Wetl	land Hydrologv	Present? Yes NoX
(includes cap	illary fringe)							
Describe Red	corded Data (stream	n gauge, moni	toring well, aerial	onotos, prev	rious ins	pections),	ıт avaılable:	
Remarks:								
Remarks:								
	ndication of wetland	d hydrology w	vas observed.					

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Project/Site: US-70 Over Lake Texoma (Roosevelt Bridge	) (	City/County:	Bryan		Sampling Date: 12	/2/2021
Applicant/Owner: The Oklahoma Department of Transport		·)			Sampling Point: DP	
Investigator(s): Megan Philips-Schaap & Lacee Stanley		Section To	wnshin Ra	Sec. 33, T6S, R7E	Camping Font.	
		Local relief	(concave	convex, none): concave	Slope	(%). 15-20
Subregion (LRR): Southwestern Prairies (LRR J)	Lat. 33.9	997556	(concave,	-96.573750	Olope Datum:	WGS 84
Soil Map Unit Name: 14: Boxville fine sandy loam, 3 to 8 p	ercent slope	·s		NWI classifica	Datum.	
Are climatic / hydrologic conditions on the site typical for th			( No	INVVI Classifica	auon	
, ,	•	· · · · · · · · · · · · · · · · · · ·				NI-
Are Vegetation, Soil, or Hydrology	-			"Normal Circumstances" p		_ NO
Are Vegetation, Soil, or Hydrology			,	eeded, explain any answer	,	
SUMMARY OF FINDINGS – Attach site map	snowing	sampling	g point i	ocations, transects,	, important reat	ures, etc.
Hydrophytic Vegetation Present? Yes Y	No	ls th	e Sampled	ΙΔτρα		
a a	No		in a Wetlaı		No	
	No					
Remarks:						
This point was determined to be within a wetland due t Wetland 6	o the presen	ce of all 3 w	etland crite	eria.		
Wedana 6						
VEGETATION – Use scientific names of plan	nts.					
Table Charters (Diet sine) 30'	Absolute	Dominant		Dominance Test works	sheet:	
Tree Stratum (Plot size:)  1. Black willow (Salix nigra)	<u>% Cover</u> 25	Species? Yes	Status FACW	Number of Dominant Sp		
			TACW	That Are OBL, FACW, of (excluding FAC-):	or FAC 2	(A)
2						
3				Total Number of Domina Species Across All Strat	- 2	(B)
4.	25%	= Total Cov	er	·		
Sapling/Shrub Stratum (Plot size: 15' )			OI .	Percent of Dominant Sp That Are OBL, FACW, or		(A/B)
1. Common buttonbush (Cephalanthus occidentalis)	50	Yes	OBL	Prevalence Index work	robeet.	
2					Multiply b	
3				OBL species		
4				FACW species		
5	50%	= Total Cov		FAC species		
Herb Stratum (Plot size: 5'		= Total Cov	er	FACU species		
1. Southern dewberry (Rubus trivialis)	25	Yes	FACU	UPL species	x 5 =	
2				Column Totals:	(A)	(B)
3				Prevalence Index	= B/A =	
4				Hydrophytic Vegetatio		
5				1 - Rapid Test for H		on
6				2 - Dominance Test	t is >50%	
7				3 - Prevalence Inde	ex is ≤3.0 <sup>1</sup>	
8 9				4 - Morphological A	daptations <sup>1</sup> (Provide	supporting
10.					s or on a separate sh	•
· · ·	25%	= Total Cov	er	Problematic Hydrop	onytic vegetation (E.	xpiain)
Woody Vine Stratum (Plot size:) None observed 1				<sup>1</sup> Indicators of hydric soil be present, unless distu		
2.				Hydrophytic		
% Bare Ground in Herb Stratum		= Total Cov	er	Vegetation Present? Yes	s <u> </u>	_
Remarks:				.1		
A positive indication of budge-budge-specific	omiod /c F00/	of do	t anni-les l	ndeved as ODL EAGING	- FAC)	
A positive indication of hydrophytic vegetation was obs	erveu (>30%	o or dominal	ii species l	nuexeu as ODL, FACW, 0	11AU).	

Profile Descr	iption: (Describe	to the depth				or confirm	ii tile abselice of i	nuicators.)
Depth (inches)	Matrix Color (moist)	<u></u> %	Redo Color (moist)	x Features %	_Type <sup>1</sup> _	Loc <sup>2</sup>	Texture	Remarks
0-4	10YR 4/2	85	5YR 4/6	15	C	M	clay loam	remarks
4-16	7.5YR 6/2	90	7.5YR 5/8	10			sandy clay	
4-10	7.0111 0/2		7.511(5/6				Salidy Clay	
<u> </u>								
· · · · · · · · · · · · · · · · · · ·		· — — —					·	
1- 0.0							21 (1	BL B. III M M III
	ncentration, D=Dep ndicators: (Applic					d Sand Gi		n: PL=Pore Lining, M=Matrix.  Problematic Hydric Soils <sup>3</sup> :
Histosol (		able to all Lr			•			•
	pedon (A2)		Sandy Sandy	Redox (S5)				( (A9) ( <b>LRR I, J</b> ) rie Redox (A16) ( <b>LRR F, G, H</b> )
Black His				d Matrix (S				ice (S7) (LRR G)
	Sulfide (A4)			Mucky Min	,			s Depressions (F16)
	Layers (A5) ( <b>LRR F</b>	•		Gleyed Ma			•	outside of MLRA 72 & 73)
	k (A9) ( <b>LRR F, G,</b> I		X Deplete					/ertic (F18)
-	Below Dark Surfac	e (A11)		Dark Surfa				nt Material (TF2)
	k Surface (A12) ucky Mineral (S1)		•	ed Dark Sui Depressior			-	ow Dark Surface (TF12) olain in Remarks)
	ucky Peat or Peat (	S2) ( <b>LRR G</b> , I	·	ains Depre	. ,	16)		ydrophytic vegetation and
	ky Peat or Peat (S		. —	RA 72 & 7	,	•		drology must be present,
							unless dist	turbed or problematic.
Restrictive La	ayer (if present):							
Туре:								
Depth (incl	nes):						Hydric Soil Pre	sent? Yes <u>X</u> No
Remarks:								
A positive indic	cation of hydric soi	l was observe	ed.					
HYDROLOG	SY							
	rology Indicators:							
	ators (minimum of o		check all that app	lv)			Secondary I	ndicators (minimum of two required)
	Vater (A1)	o .oquou	Salt Crust				<u> </u>	Soil Cracks (B6)
	er Table (A2)			vertebrates	s (B13)			y Vegetated Concave Surface (B8)
Saturation	, ,		<del></del> •	Sulfide Od			<del></del> ·	e Patterns (B10)
Water Ma	ırks (B1)			on Water T				d Rhizospheres on Living Roots (C3)
Sediment	Deposits (B2)		Oxidized	Rhizospher	es on Livi	ng Roots	(C3) (wher	e tilled)
Drift Depo	osits (B3)		(where	not tilled)			Crayfish	Burrows (C8)
Algal Mat	or Crust (B4)		Presence	of Reduce	d Iron (C4	)	<del></del>	on Visible on Aerial Imagery (C9)
Iron Depo	` '			Surface (	•		**	phic Position (D2)
	n Visible on Aerial I	magery (B7)	Other (Ex	plain in Rei	marks)		· <del></del>	eutral Test (D5)
	ained Leaves (B9)						Frost-He	eave Hummocks (D7) (LRR F)
Field Observ			<b>X</b> 5 " "					
Surface Wate			Depth (in		> 16"	-		
Water Table F			Depth (in		> 16"	-   <u></u> .		X
Saturation Pre (includes capi		es No	Depth (in	cnes):	- 10	_   Wetl	and Hydrology Pr	resent? Yes <u>X</u> No
,z.aaaa oupi		gauge, monit	toring well, aerial	photos, pre	vious ins	pections),	if available:	
Describe Rec	oraca Data (Stream							
Describe Rec	orded Data (Stream							
Describe Reco	orded Data (Stream							
Remarks:	cation of wetland l	a valena li e e	a plane and district			diagram \		

Project/Site: US-70 Over Lake Texoma (Roosevelt Bridge) City/County: Bryan Sampling Date: 12/2/2 Applicant/Owner: The Oklahoma Department of Transportation (ODOT) State: OK Sampling Point: DP 21 Investigator(s): Megan Philips-Schaap & Lacee Stanley Section, Township, Range: Sec. 33, T6S, R7E  Landform (hillslope, terrace, etc.): scrub-shrub Local relief (concave, convex, none): none Subregion (LRR): Southwestern Prairies (LRR J) Lat: 33.997488 Long: 96.574261 Datum: WC Soil Map Unit Name: 14: Boxville fine sandy loam, 3 to 8 percent slopes NWI classification: NA  Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)  Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X Nare Vegetation or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important feature  Hydrophytic Vegetation Present? Yes No X Is the Sampled Area within a Wetland? Yes No X Wetland Hydrology Present? Yes No X Wetland Hydrology Present? Yes No X Dominant Indicator Dominance Test worksheet:	0 S 84
Investigator(s):   Megan Philips-Schaap & Lacee Stanley   Section, Township, Range:   Sec. 33, T6S, R7E	S 84
Landform (hillslope, terrace, etc.): _scrub-shrub	S 84
Subregion (LRR): Southwestern Prairies (LRR J)  Lat: 33.997488  Long: -96.574261  Datum: WC  Soil Map Unit Name: 14: Boxville fine sandy loam, 3 to 8 percent slopes  NWI classification: NA  Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)  Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X N  Are 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 feature  Hydrophytic Vegetation Present? Yes X No X No X Wetland Hydrology Present? Yes No X No X No X Wetland Hydrology Present? Yes No X No	S 84
Soil Map Unit Name:	)
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? YesX No	
Are 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 feature  Hydrophytic Vegetation Present?	
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important feature    Hydrophytic Vegetation Present?	s, etc.
Hydrophytic Vegetation Present? Yes X No X Wetland Hydrology Present? Yes No X within a Wetland? Yes No X Wetland Hydrology Present? Yes No X Wetland Hydrology Present? Yes No X Within a Wetland? Yes No X Wetland? Yes No X Wetland Hydrology.  Remarks:  This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology.  VEGETATION – Use scientific names of plants.  Absolute Dominant Indicator Dominance Test worksheet:	s, etc.
Hydric Soil Present?  Wetland Hydrology Present?  Yes No within a Wetland?  Remarks:  This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology.  VEGETATION – Use scientific names of plants.  Absolute Dominant Indicator Dominance Test worksheet:	
Hydric Soil Present?  Wetland Hydrology Present?  Yes No within a Wetland?  Remarks:  This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology.  VEGETATION – Use scientific names of plants.  Absolute Dominant Indicator Dominance Test worksheet:	
Wetland Hydrology Present?  Remarks:  This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology.  VEGETATION – Use scientific names of plants.  Absolute Dominant Indicator Dominance Test worksheet:	
This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology.  VEGETATION – Use scientific names of plants.  Absolute Dominant Indicator Dominance Test worksheet:	
VEGETATION – Use scientific names of plants.  Absolute Dominant Indicator Dominance Test worksheet:	
Tree Stratum (Plot size:)	
1. None observed That Are OBL, FACW, or FAC	(A)
3 Total Number of Dominant	
4 Species Across All Strata	(B)
Sapling/Shrub Stratum (Plot size: 15' ) = Total Cover   Percent of Dominant Species   That Are OBL, FACW, or FAC: 60%   15	(A/B)
Provalence Index worksheet:	
2	_
3 OBL species x 1 =	_
5. FACW species x 2 =	
15% = Total Cover FAC species x 3 =	_
Herb Stratum (Plot size: x 4 =	_
1. Aster (Symphyotrichum spp.)*       35       Yes       FACW       UPL species       x 5 =         2. Sedge (Carex spp.)**       30       Yes       OBL       Column Totals:       (A)	
3. Southern dewberry (Rubus trivialis) 30 Yes FACU	_ (D)
Prevalence Index = B/A =	
5. Hydrophytic Vegetation Indicators:	
6 1 - Rapid Test for Hydrophytic Vegetation	
7 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹	
8 4 - Morphological Adaptations (Provide sup	norting
9 data in Remarks or on a separate sheet)	Jorning
10 Problematic Hydrophytic Vegetation <sup>1</sup> (Expla	n)
Woody Vine Stratum (Plot size: 30' ) 15 Yes FACU   Thindicators of hydric soil and wetland hydrology   be present, unless disturbed or problematic.	nust
1	
2. Hydrophytic  Toy  Total Cover  Hydrophytic  Vegetation	
% Bare Ground in Herb Stratum 5% Present? Yes X No	
Remarks: A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC) *27 species of Symphyotrichum are listed in the USACE State of OK 2018 Wetland Plant List. 74% have a FAC (n=6), FACW (n=8) or OBL (indicator status.	n=6)

<sup>\*\*83</sup> species of Carex are listed in the USACE State of OK 2018 Wetland Plant List. 72% have a FACW (n=24) or OBL (n=36) indicator status.

Depth	Matrix	<u> </u>	needed to docun Redo:	K Features	<b>;</b>		ii tiie avaelite U	i maioators.,
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u>	Remarks
0-4	10YR 4/2	98	10YR 5/8	2	С	M	sandy loam	faint
4-18	10YR 5/4	100	-	-			sandy loam	_
	-							
					-			
								_
<sup>1</sup> Type: C=Ce	oncentration, D=D	epletion. RM=F	Reduced Matrix, CS	=Covered	or Coate	ed Sand G	rains <sup>2</sup> Loca	tion: PL=Pore Lining, M=Matrix.
			RRs, unless other					or Problematic Hydric Soils <sup>3</sup> :
Histosol	(A1)		Sandy G	Bleyed Ma	trix (S4)		1 cm Mu	uck (A9) ( <b>LRR I, J</b> )
Histic Ep	pipedon (A2)		Sandy F	Redox (S5)	)		Coast P	rairie Redox (A16) ( <b>LRR F, G, H</b> )
_	istic (A3)			Matrix (S	-			rface (S7) (LRR G)
	en Sulfide (A4)			Лucky Min				ins Depressions (F16)
	d Layers (A5) ( <b>LRI</b>			Sleyed Ma			•	R H outside of MLRA 72 & 73)
	uck (A9) (LRR F, C			d Matrix (F	•			d Vertic (F18)
	d Below Dark Surf ark Surface (A12)	ace (ATT)		oark Surfa Dark Sui				ent Material (TF2) allow Dark Surface (TF12)
	//ucky Mineral (S1	)	•	epression		'		explain in Remarks)
	Mucky Peat or Pea			ins Depre		16)		f hydrophytic vegetation and
	ucky Peat or Peat			RA 72 & 7				hydrology must be present,
								listurbed or problematic.
Restrictive I	Layer (if present)	:						
Type:								
Depth (in	ches):						Hydric Soil P	resent? Yes NoX
Remarks:							1	
No positivo ir	ndication of hydric	s coile was obse	arvod					
No positive ii	idication of flydric	, sulis was unst	si ved.					
HYDROLO	GY							
Wetland Hy	drology Indicator	rs:						
			check all that apply	/)			Secondary	y Indicators (minimum of two required)
Surface	Water (A1)	-	Salt Crust	(B11)			· · · · · · · · · · · · · · · · · · ·	ce 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					ere tilled)
	posits (B3)			ot tilled)		_		ish Burrows (C8)
	at or Crust (B4)		Presence	•	d Iron (C4	1)		ation Visible on Aerial Imagery (C9)
	oosits (B5)		Thin Muck			•		norphic Position (D2)
Inundati	on Visible on Aeria	al <b>I</b> magery (B7)					X FAC-I	Neutral Test (D5)
	tained Leaves (B9							Heave Hummocks (D7) (LRR F)
Field Obser	vations:							
Surface Wat	er Present?	Yes N	o <u>X</u> Depth (ind	hes):				
Water Table	Present?		o <u>X</u> Depth (ind		> 18"			
Saturation P			o X Depth (inc		> 18"	Wet	land Hydrology	Present? Yes NoX
(includes car								
Describe Re	corded Data (strea	am gauge, mon	itoring well, aerial p	notos, pre	evious ins	pections),	, it available:	
Damarka								
Remarks:								
	ndication of wetla	and hydrology v	vas observed.					