WATERS AND WETLANDS EVALUATION REPORT

For

County	McClain	JP Number	35588(04) 35589(04)	Project Number	J3-5588(004)PM & J3-5589(004)PM	
Road Number	I-35	Water Body Name		Unnamed tributaries to the Canadian River		
ROW Date	NA	Let Date	2023	Project Length	6.9 miles	
Project General Location		0.5 miles south of Norman, Oklahoma				
Project State	ement	GRADE, DI INTERCHA CLEVELAN ROAD, EX INTERCHA	RAIN, BRIDGE NGE, EXTENE D COUNTY LIN KTEND NORT NGE	& SURFAC) NORTH JE & FROM H 4.15 N	E I-35: FROM THE SH-74 2.75 MILES TO THE 1 MILE SOUTH OF LADD 41LES TO THE SH-74	

Prepared for: Oklahoma Department of Transportation Environmental Programs Division 200 NE 21st Street Oklahoma City, OK 73105

Prepared by:					
Biologist Name	Nathan Hillis				
Company/Agency Name	Olsson				
Address	11600 Broadway Ext., Suite 300				
City, State Zip	Oklahoma City, OK 73114				
Report Date:	10/30/2022				
Field Date:	10/06/2022				

Form Date: September 15, 2022

PROJECT OVERVIEW

Project Type (Choose one)	Check √
Bridge and Approaches or bridge widening/structure extension	
Grade, Drain, Surface and Bridge	\checkmark
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 I-35 roadway has four 12ft. wide asphalt driving lanes and 10 ft. wide outside and 4 ft. wide inside asphalt shoulders, and a 35 ft wide sod median. The existing I-35 bridge, NBI 14258 is a 2-10ft.X10ft.X139ft RCB with a clear roadway width of 38 ft. and an approach roadway consisting of four 12 ft. wide driving lanes and 10 ft. wide outside and 4 ft. wide inside asphalt shoulders, and a 35 ft wide sod median. The bridge has a sufficiency rating of 65 and is functionally obsolete. The existing I-35 bridges, NBI 14298 (2-10ft.X10ft.X139ft RCB), 14335 3-10ft.X10ft.X10ft.RCB) and 14352 (12ft.X14ft.X12ft RCB.) each have a clear roadway width of 38 ft. and an approach roadway consisting of four 12 ft. wide driving lanes and 10 ft. wide outside and 4 ft. wide inside asphalt shoulders, and a 35 ft. wide sod median. The bridges have a sufficiency rating of 66 and are functionally obsolete. The existing I-35 bridges, NBI 22008 and 22007 have a clear roadway width of 52 ft. and 64 ft., respectively, and an approach roadway each consisting of four 12ft. wide asphalt driving lanes and 10 ft. wide outside and 4 ft. wide inside asphalt shoulders. The bridges have a sufficiency rating of 98 and are not at risk of becoming structurally deficient or functionally obsolete. The current Annual Average Daily Traffic (AADT) is 34,500 vehicles per day (vpd) with a future 20-year AADT of 45,000 vpd.

I-35 is a major travel corridor connecting multiple states and carrying large volumes of commercial traffic. With the growth of the Oklahoma City metropolitan area, I-35 does not meet the current traffic demand. The purpose of the project is to correct operational deficiencies of I-35, improve safety, and enhance local and regional connectivity.

Description of proposed improvements SPECIFIC TO THIS PROJECT

The proposed improvement consists of widening I-35 to the outside by adding one 12 ft. asphalt lane of traffic in each direction. Inside shoulders to be increased to at least 10 ft. asphalt shoulders with a median barrier wall running the extent of the project. Bridge-sized RCBs shall be extended to clear zone w/ wings and apron to stay within R/W. Span bridges will be left as is with design exceptions as required. Any metal cross drains will be upgraded to concrete. Improvements will occur along the existing alignment with no new R/W being acquired. The road will remain open with the project phased to maintain two lanes of traffic in each direction during construction.

Project Environmental Study Footprint

Project Location		Environmental Study Footprint		
Section Range &	Lat/Long (NAD 83)	Dimensions	Acreage	
Township				
S5 & 6 T7N R2W	97.4329787W 35.1055667N	Variable from 285 feet to 2000 feet	294.1	
S10, 11, 14, 15, 23, 24,	to	wide x 6.9 miles		
25, T8N R3W	97.4903023W 35.1878582N			
S30 & 31 T8N R2W				

Environmental Study Footprint Soils (NRCS Soil Survey Map)

Map Unit Name	Percent Slope	Drainage Class	Hydric Rating		Description
			YES	NO	
6 - Hawley fine sandy loam, rarely flooded	0 to 1	Well Drained		X	Loamy alluvium derived from sedimentary rock and/or eolian deposits derived from sedimentary rock
9 - Gaddy-Gracemore complex, occasionally flooded	0 to 1	Somewhat excessively drained		X	Calcareous sandy alluvium derived from sedimentary rock
11 - Gracemore loam, frequently flooded	0 to 1	Somewhat poorly drained		X	Calcareous sandy alluvium derived from sedimentary rock
14 - Grant silt loam, eroded	3 to 5	Well drained		X	Silty residuum weathered from sandstone and shale
15 - Grant silt loam	3 to 5	Well drained		X	Silty residuum weathered from sandstone and shale
16 - Grant silt loam, eroded	5 to 8	Well drained		X	Silty residuum weathered from sandstone and shale
17 - Grant-Port, frequently flooded, complex	0 to 12	Well drained		X	Silty residuum weathered from sandstone and shale
18 - Gullied land-Grant complex	3 to 8	Well drained		X	Clayey and loamy residuum weathered from sandstone and shale
19 - Keokuk loam, rarely flooded	0 to 1	Well drained		X	Loamy and sandy alluvium derived from sedimentary rock
26 - Miller silty clay, occasionally flooded	0 to 1	Well drained		X	Calcareous clayey alluvium derived from sedimentary rock

	-			
27 - Minco very fine sandy loam	5 to 8	Well drained	X	Loamy alluvium derived from sedimentary rock and/or eolian deposits
				derived from sedimentary rock
29 - Minco silt loam	0 to 1	Well drained	X	Eolian deposits derived from sedimentary rock
30 - Minco silt loam	1 to 3	Well drained	X	Eolian deposits derived from sedimentary rock over loamy alluvium derived from sedimentary rock
31 - Minco silt loam	3 to 5	Well drained	X	Eolian deposits derived from sedimentary rock over loamy alluvium derived from sedimentary rock
35 - Pond Creek silt loam	0 to 1	Well drained	X	Loess derived from sedimentary rock over silty sediments weathered from loess and/or alluvium silty alluvium derived from sedimentary rock
36 - Pond Creek silt loam	1 to 3	Well drained	X	Loess derived from sedimentary rock over silty sediments weathered from loess and/or alluvium silty alluvium derived from sedimentary rock
37 - Port silt loam, occasionally flooded	0 to 1	Well drained	X	Calcareous loamy alluvium derived from sedimentary rock
39 - Ashport, Port and Pulaski soils, frequently flooded	0 to 1	Well drained	X	Loamy alluvium derived from sedimentary rock
47 - Teller loam	1 to 3	Well drained	X	Calcareous loamy alluvium derived from sedimentary rock

Environmental Study Footprint General Description and Vegetation Present

The community types present within the Environmental Study Footprint include maintained rights-ofway and wooded riparian areas. The most abundant community type within the Environmental Study Footprint is maintained rights-of-way. The rights-of-way were mowed at the time of the site visit and the vegetation consisted predominantly of Bermuda grass (*Cynodont dactylon*), green foxtail (*Setaria viridis*) and Johnsongrass (*Sorghum helepense*). The wooded riparian areas are associated with the numerous intermittent streams that cross through the Environmental Study Footprint. Vegetation present in these riparian areas consists of American elm (*Ulmus americana*), black willow (*Salix nigra*), post oak (*Quercus stellata*), Hackberry (*Celtis occidentalis*) and poison ivy (*Toxidendron radicans*).

The streams present within the Environmental Study Footprint were all intermittent and most were dry at the time of the site visit. They had sandy, rocky, and silty substrates. All of these streams flowed to the east and were incised east of the roadway. According to the NWI, wetlands were associated with all the seven streams present within the Environmental Study Footprint; however, only one wetland associated with a stream was identified (W8).

WATERS AND WETLANDS EVALUATION

USGS 7.5 minute NWI Map		USACE Wetland	Additional Resources				
Quad		Regional Supplement	Reviewed				
Norman, OK 2022	NWI Online Mapper	Great Plains Region					
		(Version 2.0)					

Data Sources Reviewed (list)

Feature #	Stream Name	Mapped on 7.5 Minute USGS	Feature Type Based on Field Data	Potential Jurisdictional Status	Acres within Environmental Study Footprint
Sla	Unnamed tributary to the Canadian River #1	Yes	Intermittent	Likely	0.02
S1b	Unnamed tributary to the Canadian River #1	Yes	Intermittent	Likely	0.01
S2a	Unnamed tributary to the Canadian River #2	Yes	Intermittent	Likely	0.02
S2b	Unnamed tributary to the Canadian River #2	yes	Intermittent	Likely	0.19
S3a	Unnamed tributary to the Canadian River #3	Yes	Intermittent	Likely	0.03
S3b	Unnamed tributary to the Canadian River #3	Yes	Intermittent	Likely	0.21
S4a	Unnamed tributary to the Canadian River #4	Yes	Intermittent	Likely	0.01
S4b	Unnamed tributary to the Canadian River #4	Yes	Intermittent	Likely	0.01
S5a	Unnamed tributary to the Canadian River #5	Yes	Intermittent	Likely	0.05
S5b	Unnamed tributary to the Canadian River #5	Yes	Intermittent	Likely	0.02
S6a	Unnamed tributary to the Canadian River #6	Yes	Intermittent	Likely	0.01
S6b	Unnamed tributary to the Canadian River #6	Yes	Intermittent	Likely	0.02
S7	Unnamed tributary to the Canadian River #7	Yes	Intermittent	Likely	0.20
D1	Drainage #1	No	drainage ditch	Unlikely	NA
D2	Drainage #2	No	drainage ditch	Likely	NA
D3	Drainage #3	No	drainage ditch	Likely	NA
D4	Drainage #4	No	drainage ditch	Unlikely	NA

Streams and Drainages Summary Table

S1a&b – S1 is an unnamed, intermittent stream that flows east through the Environmental Study Footprint. The OHWM is 12 ft wide on average, 8 ft wide at a minimum and 20 ft wide at its widest. This stream is fed by runoff and has a sandy, rocky bottom. This stream was dry at the time of the site visit. The dominant vegetation is *Morus rubra, Salix nigra, Cynodon dactylon*, and *Populus deltoides*. This stream is likely jurisdictional based on it being hydrologically connected to the Canadian River.

S2a&b – S2 is an unnamed, intermittent stream that flows east through the Environmental Study Footprint. The OHWM is 10 ft wide on average, 8 ft wide at a minimum and 12 ft wide at its widest. This stream is fed by runoff and has a sandy, rocky bottom. This stream was dry at the time of the site visit. The dominant vegetation is *Ulmus americana, Salix nigra, Cynodon dactylon*, and *Toxidendron radicans*. This stream is likely jurisdictional based on it being hydrologically connected to the Canadian River.

S3a&b – S3 is an unnamed, intermittent stream that flows east through the Environmental Study Footprint. The OHWM is 10 ft wide on average, 5 ft wide at a minimum and 15 ft wide at its widest. This stream is fed by runoff and has a sandy bottom. This stream was dry at the time of the site visit. The dominant vegetation is *Ambrosia trifida, Salix nigra, Cynodon dactylon*, and *Toxidendron radicans*. This stream is likely jurisdictional based on it being hydrologically connected to the Canadian River.

S4a&b – S4 is an unnamed, intermittent stream that flows east through the Environmental Study Footprint. The OHWM is 15 ft wide on average, 10 ft wide at a minimum and 20 ft wide at its widest. This stream is fed by runoff and has a sandy, clay bottom. This stream had very little water in it at the time of the site visit. The dominant vegetation is *Morus rubra, Sorghum halepense, Vitis vinifera, Cynodon dactylon*, and *Helianthus annuus*. This stream is likely jurisdictional based on it being hydrologically connected to the Canadian River.

S5a&b – S5 is an unnamed, intermittent stream that flows east through the Environmental Study Footprint. The OHWM is 12 ft wide on average, 10 ft wide at a minimum and 15 ft wide at its widest. This stream is fed by runoff and has a concrete and rock bottom. This stream was dry at the time of the site visit. The dominant vegetation is *Ulmus americana, Quercus stellata, Salix nigra, Cynodon dactylon*, and *Populus deltoides*. This stream is likely jurisdictional based on it being hydrologically connected to the Canadian River.

S6a&b - S6 is an unnamed, intermittent stream that flows east through the Environmental Study Footprint. The OHWM is 10 ft wide on average, 5 ft wide at a minimum and 15 ft wide at its widest. This stream is fed by runoff and has a sandy, clay bottom. This stream was dry at the time of the site visit. This stream is likely jurisdictional based on it being hydrologically connected to the Canadian River.

S7 – S7 is an unnamed, intermittent stream that flows east through the Environmental Study Footprint. The OHWM is 25 ft wide on average, 10 ft wide at a minimum and 60 ft wide at its widest. This stream is fed by runoff and has a silty bottom. This stream was flowing at the time of the site visit. The dominant vegetation is *Phragmites australis, Carya ilinoinensis, Ambrosia trifida*, and *Salix nigra*. This stream is likely jurisdictional based on it being hydrologically connected to the Canadian River.

D1 - D1 is an unmapped, ephemeral drainage that flows south into S1 along the west side of I-35. This drainage is fed by runoff from I-35 and its associated right-of-way. D1 is approximately 1' wide and was dry at the time of the site visit. The dominant vegetation is *Cynodon dactylon*. While this drainage flows directly into S1, it is unlikely jurisdictional.

D2 - D2 is a mapped intermittent, ephemeral drainage that flows south into S7 along the west side of I-35. This drainage is fed by runoff from I-35 and its associated right-of-way. D2 is approximately 2' wide and was dry at the time of the site visit. The dominant vegetation is *Cynodon dactylon*. D2 is part of natural drainage area that has been modified as a result of the interstate highway. While this drainage is ephemeral, it is likely to be jurisdictional because it flows directly into S7, a likely jurisdictional stream.

D3 - D3 is a mapped intermittent, ephemeral drainage that flows south through W8, into S7 along the west side of I-35. This drainage is fed by runoff from I-35 and its associated right-of-way. D3 is approximately 3' wide. The dominant vegetation is *Typha latifolia* and *Phragmites australis*. D3 is part of natural drainage area that has been modified as a result of the interstate highway and is also associated with W8. While this drainage is ephemeral, it is likely to be jurisdictional because it is connected to W8 and flows directly into S7, a likely jurisdictional stream.

D4 – D4 is an unmapped, unlikely jurisdictional ephemeral drainage that flows east, through W2 along the east side of I-35. This drainage is fed by runoff from I-35 and its associated right-of-way. D4 is approximately 3' wide. The dominant vegetation is *Typha latifolia*.

Feature #	Type of Wetland or Pond	Cowardin Classification	Potential Jurisdictional Status	Acres within Environmental Study Footprint
W2	Emergent	PEM	Unlikely	0.18
W8	Emergent	PEM	Likely	1.57

Wetlands and Ponds Summary Table

W1 – W1 is an NWI-mapped Riverine wetland within the OHWM of S1.

W2 - W2 is an emergent wetland that runs along a small drainage within the I-35 right-of-way. Cattails (*Typha latifolia*) were the dominant vegetation with more than 90% of the total cover. Hydric soils and wetland hydrology were present. The NWI identified this wetland as a pond. This wetland is unlikely jurisdictional based on it being hydrologically not connected to a tributary of the Canadian River.

W3 – W3 is a NWI mapped freshwater forested/shrub wetland (PFO1A), associated with S2. Upon field investigation, S2 did not exhibit a fringe wetland within the Environmental Study Footprint. Data point W3 did not exhibit wetland characteristics (W3 Wetland data form).

W4 – W4 is a NWI mapped freshwater forested/shrub wetland (PFO1A), associated with S3. Upon field investigation, S3 did not exhibit a fringe wetland within the Environmental Study Footprint. Data point W4 did not exhibit wetland characteristics (W4 Wetland data form).

W5 – W5 is a NWI mapped freshwater forested/shrub wetland (PFO1A), associated with S4. Upon field investigation, S4 did not exhibit a fringe wetland within the Environmental Study Footprint. Data point W5 did not exhibit wetland characteristics (W5 Wetland data form).

W6 – W6 is an NWI-mapped Riverine wetland within the OHWM of S5.

W7 – W7 is a NWI mapped freshwater forested/shrub wetland (PFO1A), associated with S6. Upon field investigation, S6 did not exhibit a fringe wetland within the Environmental Study Footprint. Data point W7 did not exhibit wetland characteristics (W7 Wetland data form).

W8 – W8 is a large wetland/complex that runs along a drainage (D3) and stream 7 (S7). *Typha latifolia* and *Phragmites australis* dominated the vegetation present within this wetland. Hydric soils and wetland hydrology were present. The northern portion of the wetland is classified as riverine by the NWI. This wetland is likely jurisdictional based on it being hydrologically connected to a tributary of the Canadian River.

The NWI map indicated wetlands at points W1, W3, W4, W5, W6, & W7

















































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1. S1, looking upstream.



3. S3 looking downstream,



5. S4 Looking upstream



2. S2 looking upstream



4. S3 looking upstream



6. S4 looking downstream

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7. S5 looking downstream



9. S6 looking downstream



11. S7 upstream



8. S5 looking upstream



10. S6 looking upstream



12. S7 downstream

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13. View of emergent wetland, W2



14. View of emergent wetland, W8

Project/Site: McClain County - I-35	City/County: M	cClain County	Sampling Date: 2022-10-11
Applicant/Owner: <u>ODOT</u>		State: OK	Sampling Point: <u>W2 IN</u>
Investigator(s): Nathan Hillis - Hannah Clark	Section, Towns	hip, Range: <u>S31, T8N, R2V</u>	V
Landform (hillslope, terrace, etc.): Depression	Local relief (co	ncave, convex, none): <u>Concave</u>	Slope (%): <u>2-5%</u>
Subregion (LRR): Great Plains Lat:	35.118264	Long: <u>-97.443375</u>	Datum: NAD83
Soil Map Unit Name: Pond Creek silt loam, 1 to 3 percent slopes	8	NWI classifi	ication: PEM
Are climatic / hydrologic conditions on the site typical for this time	of year? Yes X	_ No (If no, explain in F	Remarks.)
Are Vegetation, Soil, or Hydrologysignification	antly disturbed?	Are "Normal Circumstances"	present? Yes X No
Are Vegetation, Soil, or Hydrology natural	ly problematic?	(If needed, explain any answe	ers in Remarks.)
SUMMARY OF FINDINGS – Attach site map show	ving sampling p	oint locations, transect	s, important features, etc.
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No	Is the Sa	ampled Area Wetland? Yes <u>X</u>	< No

 Wetland Hydrology Present?
 Yes X
 No
 No

 Remarks:
 W2-In is in a wetland that is associated with a drainage along the access ramp to I-35. Wetland hydrology, hydric soils, and hydrophytic vegetation were present at this point.

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species	
1. <u>Salix nigra</u>	15		FACW	That Are OBL, FACW, or FAC	
2			. <u> </u>	(excluding FAC-): (A)	
3				Total Number of Dominant	
4				Species Across All Strata: (B)	
	15	= Total Cov	er	Percent of Dominant Species	
Sapling/Shrub Stratum (Plot size:)				That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
1				Description of the description of the set	
2				Prevalence Index worksheet:	
3				Total % Cover of: Multiply by:	
4				OBL species <u>100</u> x 1 = <u>100</u>	
5.				FACW species x 2 = 30	
	0	= Total Cov	er	FAC species x 3 =	
Herb Stratum (Plot size:)				FACU species <u>5</u> x 4 = <u>20</u>	
1. <u>Typha latifolia</u>	90	X	OBL	UPL species x 5 =0	
2. Toxicodendron rydbergii	5		FACU	Column Totals: <u>120</u> (A) <u>150</u> (B)	
3. Eleocharis palustris	10		OBI		
4.				Prevalence Index = $B/A = 1.25$	
5			. <u> </u>	Hydrophytic Vegetation Indicators:	
6				1 - Rapid Test for Hydrophytic Vegetation	
7				2 - Dominance Test is >50%	
<i>1</i>			·	3 - Prevalence Index is ≤3.0 ¹	
8				4 - Morphological Adaptations ¹ (Provide supporting	
9			<u> </u>	data in Remarks or on a separate sheet)	
10				Problematic Hydrophytic Vegetation ¹ (Explain)	
Weedy Vine Stratum (Plot aize:	105	= Total Cov	er	¹ Indicators of hydric soil and wetland hydrology must	
				be present, unless disturbed or problematic.	
l			·		
2			·	Hydrophytic Vegetation	
% Bare Ground in Herb Stratum	0	= I otal Cov	er	Present? Yes X No	
Remarks: Understation is present at this point					
nyurophytic vegetation is present at this poin	ι.				

SOI	L
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Profile Desc	cription: (Desc	ribe to the depth ne	eded to docu	ment the i	ndicator	or confirm	n the absence of indicators.)
Depth	Mat	rix	Redo	ox Features	S1	. 2	
(inches)	Color (mois	<u>st) % C</u>	olor (moist)	%	Type'	Loc ²	Texture Remarks
0.4	_5yr4_6	100					CI
4.26	_75yr4 2	90					
	<u>.75yr 4 6</u>	10					SCL
¹ Type: C=C	oncentration, D=	=Depletion, RM=Redu	uced Matrix, C	S=Covered	d or Coate	ed Sand Gr	rains. ² Location: PL=Pore Lining, M=Matrix.
Histosol Histic E Histic E Hydroge Stratified T cm Mu Depletee Sandy M 2.5 cm M 5 cm Mu	(A1) pipedon (A2) istic (A3) en Sulfide (A4) d Layers (A5) (L uck (A9) (LRR F d Below Dark Su ark Surface (A12 Mucky Mineral (S Mucky Peat or Pea	RR F) , G, H) urface (A11) 2) S1) Peat (S2) (LRR G, H) at (S3) (LRR F)	Sandy Sandy Strippe Loamy Loamy X Deplete Redox Redox High Pl (ML	Gleyed Ma Redox (S5 d Matrix (S Mucky Mir Gleyed Ma ed Matrix (I Dark Surfa ed Dark Sur Depression lains Depre	ttrix (S4)) 66) heral (F1) atrix (F2) F3) ace (F6) urface (F7) hs (F8) essions (F 73 of LRR	16) (H)	 1 cm Muck (A9) (LRR I, J) Coast Prairie Redox (A16) (LRR F, G, H) Dark Surface (S7) (LRR G) High Plains Depressions (F16) (LRR H outside of MLRA 72 & 73) Reduced Vertic (F18) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) ³Indicators of hydrophytic vegetation and wetland hydrology must be present,
Restrictive	Laver (if preser	nt):					unless disturbed or problematic.
Type:		7					
Depth (in	ches):						Hydric Soil Present? Yes X No
Remarks: H	lydric soils were	present at this point.					
HYDROLO	GY						

Wetland Hydrology Indicators:				
Primary Indicators (minimum of one required	d; check all that apply)	Secondary Indicators (minimum of two required)		
X Surface Water (A1)	Salt Crust (B11)	Surface Soil Cracks (B6)		
High Water Table (A2)	Aquatic Invertebrates (B13)	Sparsely Vegetated Concave Surface (B8)		
X Saturation (A3)	Hydrogen Sulfide Odor (C1)	X Drainage Patterns (B10)		
Water Marks (B1)	Dry-Season Water Table (C2)	Oxidized Rhizospheres on Living Roots (C3)		
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3) (where tilled)		
Drift Deposits (B3)	(where not tilled)	Crayfish Burrows (C8)		
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)	Saturation Visible on Aerial Imagery (C9)		
Iron Deposits (B5)	Thin Muck Surface (C7)	\underline{X} Geomorphic Position (D2)		
Inundation Visible on Aerial Imagery (B	7) Other (Explain in Remarks)	\underline{X} FAC-Neutral Test (D5)		
Water-Stained Leaves (B9)		Frost-Heave Hummocks (D7) (LRR F)		
Field Observations:				
Surface Water Present? Yes X	No Depth (inches):0			
Water Table Present? Yes X	No Depth (inches):0			
Saturation Present? Yes X (includes capillary fringe)	No Depth (inches): Wetland	Hydrology Present? Yes X No		
Describe Recorded Data (stream gauge, mo	onitoring well, aerial photos, previous inspections), if a	vailable:		
Remarks: Wetland hydrology was present a	t this site.			



Wetland	Sar	nple Point w2 IN		Longitude	<u>Latitude</u>
Cowardin Classificatio	<u>on:</u>			-97.443375	35.118264
Size:					
Landform: Depression	l				
Tree Stratum: Salix nigr	а				
Sapling/Shrub:					
Herb Stratum: Typha la	tifolia Toxicodendron rydbergii	Eleocharis palustris			
Vine Stratum:					
Hydric Soil Indicators:	Depleted Matrix				
Hydrology Indicators:	Saturation;Surface Water				
Significant Nexus:	Adjacent:	Abuts:	Stream Name:		
Jurisdictional Status a	nd Comments:				



Photo 3



Photo 2



Project/Site: McClain County - I-35	City/County: McClain		Sampling Date: 2022-10-11			
Applicant/Owner: ODOT		State: OK	Sampling Point: W2 Out			
Investigator(s): Nathan Hillis - Hannah Clark	_ Section, Township, Range:	S31, T8N, R2W				
Landform (hillslope, terrace, etc.): Hillslope	Local relief (concave, conv	ex, none): <u>Convex</u>	Slope (%):			
Subregion (LRR): Great Plains Lat: 35	5.118246 Lo	ng: <u>-97.443343</u>	Datum: NAD83			
Soil Map Unit Name: <u>Pond Creek silt loam, 1 to 3 percent slopes</u>		NWI classific	ation: N/A			
Are climatic / hydrologic conditions on the site typical for this time of y	year? Yes X No	(If no, explain in R	emarks.)			
Are Vegetation, Soil, or Hydrology significant	ly disturbed? Are "Nor	mal Circumstances" p	present? Yes X No			
Are Vegetation, Soil, or Hydrology naturally p	oroblematic? (If neede	d, explain any answe	rs in Remarks.)			
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.						
Hydrophytic Vegetation Present? Yes <u>No X</u> Is the Sampled Area						

Hydric Soil Present? Wetland Hydrology Present?	Yes Yes	No <u>X</u> No <u>X</u>	within a Wetland	? Ye	es <u>X</u>	No
Remarks: W2-Out is an upland point as	sociated with a	an emergent wetla	nd. Hydric soils, wetla	and hydrology, a	and hydrophy	tic vegetation were absent
from this point.						

Tree Stratum (Plot size:) % Cover Species? Status Number of Dominant Species 1.		Absolute	Dominant	Indicator	Dominance Test worksheet:
1.	Tree Stratum (Plot size:)	<u>% Cover</u>	Species?	Status	Number of Dominant Species
2.	1				That Are OBL, FACW, or FAC
3.	2			<u> </u>	$(\text{excluding FAC}). \qquad \underline{\qquad \qquad } (A)$
4.	3				Total Number of Dominant
0 = Total Cover Percent of Dominant Species That Are OBL, FACW, or FAC:	4				Species Across All Strata: (B)
Sacing/Strub Stratum (Plot size:) That Are OBL, FACW, or FAC:000% (A/B) 1.		0	= Total Cov	rer	Percent of Dominant Species
1.	Sapling/Shrub Stratum (Plot size:)				That Are OBL, FACW, or FAC: (A/B)
2.	1			<u> </u>	Prevalence Index worksheet:
3.	2				Total % Cover of: Multiply by:
4.	3				
5. 0 x 2 = 0 Herb Stratum (Plot size: 0 = Total Cover FAC w species 0 x 3 = 0 1. Cynodon dactylon 95 X FACU FACU species 0 x 5 = 0 2. Sorghastrum nutans 5 FACU Column Totals: 105 (A) 420 (B) 3. Desmanthus illinoensis 5 FACU Column Totals: 105 (A) 420 (B) 4. -	4				
0 = Total Cover FAC species 0 x 3 = 0 Herb Stratum (Plot size:) 95 X FACU FACU species 0 x 5 = 0 2. Sorghastrum nutans 5 FACU UPL species 0 x 5 = 0 3. Desmanthus illinoensis 5 FACU Orevalence Index = B/A = 4 4 4	5				FACW species $0 \times 2 = 0$
Herb Stratum (Plot size:) 95 × FACU FACU species05 × 4 =20 1. Cynodon dactylon		0	= Total Cov	rer	FAC species 0 $x^3 = 0$
1. Cynodon dactylon 95 X FACU UPL species 0 x 5 = 0 2. Sorghastrum nutans 5 FACU Column Totals: 105 (A) 420 (B) 3. Desmanthus illinoensis 5 FACU Prevalence Index = B/A = 4	Herb Stratum (Plot size:)				FACU species <u>105</u> x 4 = <u>420</u>
2. Sorghastrum nutans 5 FACU Column Totals:105(A)420(B) 3. Desmanthus illinoensis 5 FACU Prevalence Index = B/A = 4	1. <u>Cynodon dactylon</u>	95	X	FACU	UPL species <u>0</u> x 5 = <u>0</u>
3Desmanthus illinoensis 5 FACU Prevalence Index = B/A = 4 45 6 </td <td>2. Sorghastrum nutans</td> <td>5_</td> <td></td> <td>FACU</td> <td>Column Totals: <u>105</u> (A) <u>420</u> (B)</td>	2. Sorghastrum nutans	5_		FACU	Column Totals: <u>105</u> (A) <u>420</u> (B)
4.	3. Desmanthus illinoensis	5_		FACU	Drevelence Index D/A 4
5.	4				Prevalence index = $B/A = 4$
6.	5				Hydrophytic vegetation indicators:
7	6				1 - Rapid Test for Hydrophytic Vegetation
8.	7.				2 - Dominance Test is >50%
9.	8.				3 - Prevalence Index is ≤3.0 ⁺
10	9				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
Woody Vine Stratum (Plot size:) 105 = Total Cover Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 1 0 = Total Cover Hydrophytic Vegetation % Bare Ground in Herb Stratum 0 = Total Cover Hydrophytic Vegetation Remarks: Hydrophytic vegetation is absent from this point. Yes	10				Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:) 1.		105	= Total Cov	rer	
1.	Woody Vine Stratum (Plot size:)				¹ Indicators of hydric soil and wetland hydrology must
2.	1				be present, unless disturbed of problematic.
% Bare Ground in Herb Stratum 0 = Total Cover Vegetation Remarks: Hydrophytic vegetation is absent from this point. No X	2				Hydrophytic
% Bare Ground in Herb Stratum Present? Yes No Remarks: Hydrophytic vegetation is absent from this point.		0	= Total Cov	rer	Vegetation
Remarks: Hydrophytic vegetation is absent from this point.	% Bare Ground in Herb Stratum				
	Remarks: Hydrophytic vegetation is absent from this po	int.			

Depth	Matrix Redox Features								
(inches)	Color (moist)	<u>%</u> Co	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0.36	<u>75 yr 4 3</u>	95					SCI		
	5vr 4 6						SCI		
							·		
	<u> </u>						·		
Type: C=0	Concentration, D=D	Depletion, RM=Redu	ced Matrix, C	S=Covered	or Coate	d Sand Gr	rains. ² Location: F	L=Pore Lining, M=Matrix.	
lydric Soi	I Indicators: (App	plicable to all LRRs	, unless othe	rwise notec	ł.)		Indicators for Pro	plematic Hydric Soils ³ :	
Histoso	ol (A1)		Sandy	Gleyed Matr	ix (S4)		1 cm Muck (A9) (LRR I, J)	
Histic E	Epipedon (A2)		Sandy	Redox (S5)			Coast Prairie R	edox (A16) (LRR F, G, H)	
Black H	Histic (A3)		Strippe	d Matrix (S6)		Dark Surface (S7) (LRR G)	
Hydrog	jen Sulfide (A4)		Loamy Mucky Mineral (F1)				High Plains Depressions (F16)		
Stratifie	ed Layers (A5) (LR	(R F)	Loamy Gleyed Matrix (F2)				(LKK H outside of MLRA 72 & 73)		
1 cm IV	IUCK (A9) (LRR F, O	G, H)	Depleted Matrix (F3)				Reduced Vertic (F18)		
	ed Below Dark Sur	tace (A11)	Redox Dark Surface (F6)				Red Parent Material (TF2)		
I NICK L	Dark Surface (A12)		Depleted Dark Surface (F7)				Very Shallow Dark Surface (TF12)		
Sanuy	Mucky Mineral (51) ot (S2) (I BB C H)	Redox Depressions (F8)			16)	<u>Uther (Explain in Remarks)</u>		
2.5 Cm	WUCKY Peal of Pea	at (52) (LRR G, Π)	(MI DA 72 & 72 of LDD H)			IO) LI)	maicators of hydro	phylic vegetation and	
5 CHI IV	lucky real of real	(33) (LKK F)	(MLRA 72 & 73 of LRR H)			п)		d or problematic	
Restrictive	Laver (if present):							
Type:		,							
Depth (ii	nches):						Hydric Soil Present	? Yes No_X	
Remarks:	Hydric soils are ab	sent from this point							
	i yunu sons are ab								
-									

Wetland Hydrology Indicators:						
Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (minimum of two required)					
Surface Water (A1) Salt Crust (B11 High Water Table (A2) Aquatic Inverte Saturation (A3) Hydrogen Sulfi Water Marks (B1) Drv-Season W/)					
	spheres on Living Roots (C3) (where tilled) Iled) Crayfish Burrows (C8)					
Algal Mat or Crust (B4) Presence of Ref Iron Deposits (B5) Thin Muck Surf Inundation Visible on Aerial Imagery (B7) Other (Explain Water-Stained Leaves (B9)	duced Iron (C4) Saturation Visible on Aerial Imagery (C9) ace (C7) Geomorphic Position (D2) n Remarks) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)					
Field Observations:						
Surface Water Present? Yes No Depth (inches Water Table Present? Yes No Depth (inches	: :					
Saturation Present? Yes <u>No</u> Depth (inches) (includes capillary fringe)	: Wetland Hydrology Present? Yes No X					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:						
Remarks: Wetland hydrology is absent from this point.						



Wetland		Sample Point	N2 Out	<u>Longitude</u>	<u>Latitude</u>
Cowardin Classification	:			-97.443343	35.118246
Size:					
Landform: Hillslope					
Tree Stratum:					
Sapling/Shrub:					
Herb Stratum: Cynodon c	actylon Sorghastrum	nutans Desmanthus	illinoensis		
Vine Stratum:					
Hydric Soil Indicators:					
Hydrology Indicators:			· · · · · · · · · · · · · · · · · · ·		
Significant Nexus:	Adjacent:	Abuts:	Stream Na	me:	
Jurisdictional Status an	d Comments:				

Photo 2





Photo 3

Project/Site: McClain County - I-35	City/County: McClain		Sampling Date: 2022-10-11
Applicant/Owner: ODOT		State: OK	Sampling Point: <u>W3 Out</u>
Investigator(s): Nathan Hillis - Hannah Clark	Section, Township, Range: _	S31, T8N, R2W	
Landform (hillslope, terrace, etc.): Hillslope	Local relief (concave, conve	k, none): <u>Convex</u>	Slope (%): <u>5-10%</u>
Subregion (LRR): Great Plains Lat: 35.	. <u>124820</u> Lonç	9: <u>-97.450954</u>	Datum: NAD83
Soil Map Unit Name: Ashport, Port and Pulaski soils, 0 to 1 perce	nt slopes, frequently flooded	NWI classifica	ation: N/A
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes X No	(If no, explain in Re	emarks.)
Are Vegetation, Soil, or Hydrology significantly	/ disturbed? Are "Norma	al Circumstances" p	resent? Yes X No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed,	explain any answer	s in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	y sampling point locati	ons, transects,	important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No X No X No X	Is the Sampled Area within a Wetland?	Yes	No X
Remarks: W3-out is an upland point as at this point.	ssociated with a	a intermittent stream	. Wetland hydrology, hydric so	oils, and hydroph	hytic vegetation are not pre

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1. <u>Salix nigra</u>	10		FACW	That Are OBL, FACW, or FAC
2				$(excluding FAC-): \qquad \qquad \underbrace{O} \qquad (A)$
3				Total Number of Dominant
4				Species Across All Strata: (B)
	10	= Total Cov	er	Percent of Dominant Species
Sapling/Shrub Stratum (Plot size:)				That Are OBL, FACW, or FAC: <u>000%</u> (A/B)
1				Drevelence in dev weekek eet
2				Prevalence Index worksneet:
3				I otal % Cover of:Multiply by:
4				OBL species x 1 =0
5.				FACW species <u>10</u> x 2 = <u>20</u>
	0	= Total Cov	er	FAC species x 3 =0
Herb Stratum (Plot size:)				FACU species <u>90</u> x 4 = <u>360</u>
1. <u>Sorghum halepense</u>	85	X	FACU	UPL species <u>10</u> x 5 = <u>50</u>
2. <u>Setaria adhaerens</u>	10		UPL	Column Totals: <u>110</u> (A) <u>430</u> (B)
3. Toxicodendron radicans	5		FACU	
4.				Prevalence Index = B/A = <u>3.9090909090909090</u>
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
7				3 - Prevalence Index is ≤3.0 ¹
o		·		4 - Morphological Adaptations ¹ (Provide supporting
9				data in Remarks or on a separate sheet)
10				Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vino Stratum (Plot size:	100	= Total Cov	er	¹ Indicators of hydric soil and wetland hydrology must
				be present, unless disturbed or problematic.
2				Hydrophytic Vegetation
% Bare Ground in Herb Stratum	0	= Total Cov	er	Present? Yes <u>No X</u>
Remarks: Hydrophytic vegetation is absent from this po	pint.			·

Denth	 Matr	riv	Red	v Features				
(inches)	Color (moist	t <u>) % Co</u>	olor (moist)	%	Type ¹	Loc ²	Texture Remarks	
0.30	75yr 44	75					SCI	
		25						
	·							
Type: C=C	Concentration, D=	Depletion, RM=Redu	ced Matrix, C , unless othe	S=Coverec	l or Coate	d Sand Gr	rains. ² Location: PL=Pore Lining, M=M Indicators for Problematic Hydric So	latrix. ils ³ :
Hydric Soil Indicators: (Applicable to all LRRs			 <u>Iced Matrix, CS=Covered or Coated Sand Gra</u> s, unless otherwise noted.) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) High Plains Depressions (F16) (MLRA 72 & 73 of LRR H) 				 1 cm Muck (A9) (LRR I, J) Coast Prairie Redox (A16) (LRR F, Dark Surface (S7) (LRR G) High Plains Depressions (F16) (LRR H outside of MLRA 72 & Reduced Vertic (F18) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) ³Indicators of hydrophytic vegetation an wetland hydrology must be present, uplace disturbed or problematic 	G, H) 73)
Restrictive	Layer (if presen	nt):						
Type:								
Depth (ir	nches):						Hydric Soil Present? Yes I	No <u>X</u>
Remarks: H	Hydric soils are al	bsent from this point.						

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (minimum of two required)
	1)
Water-Stained Leaves (B9)	Frost-Heave Hummocks (D7) (LRR F)
Field Observations:	
Surface Water Present? Yes <u>No X</u> Depth (inche	3):
Water Table Present? Yes No X Depth (inche	5):
Saturation Present? Yes No X Depth (inche (includes capillary fringe)	s): Wetland Hydrology Present? Yes No X
Describe Recorded Data (stream gauge, monitoring well, aerial pho	os, previous inspections), if available:
Remarks: Wetland hydrology is absent from this point.	



Wetland	San	nple Point <u>wa Out</u>		Longitude	<u>Latitude</u>
Cowardin Classification:				-97.450954	35.124820
Size:					
Landform: Hillslope					
Tree Stratum: Salix nigra					
Sapling/Shrub:					
Herb Stratum: Sorghum ha	alepense Setaria adhaerens	Toxicodendron rad	icans		
Vine Stratum:					
Hydric Soil Indicators:					
Hydrology Indicators:					
Significant Nexus:	Adjacent:	Abuts:	Stream Name:		
Jurisdictional Status and	I Comments:				

Photo 2



Photo 3

Project/Site: McClain County - I-35	City/County: McClain		Sampling Date: 2022-10-11
Applicant/Owner: ODOT		State: OK	Sampling Point: <u>W4 Out</u>
Investigator(s): Nathan Hillis - Hannah Clark	Section, Township, Range:	S25, T8N. R3W	
Landform (hillslope, terrace, etc.): Hillslope	Local relief (concave, convex	, none): <u>Concave</u>	Slope (%): <u>2-5%</u>
Subregion (LRR): Great Plains Lat: 35.	134052 Long	: <u>-97.459372</u>	Datum: NAD83
Soil Map Unit Name: Ashport, Port and Pulaski soils, 0 to 1 percent s	slopes, frequently flooded	NWI classifica	ation: N/A
Are climatic / hydrologic conditions on the site typical for this time of ye	ar? Yes X No	(If no, explain in Re	emarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Norma	Il Circumstances" pi	resent? Yes X No
Are Vegetation, Soil, or Hydrology naturally pro	oblematic? (If needed,	explain any answer	s in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	sampling point location	ons, transects,	important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	NoX NoX No _X	Is the Sampled Area within a Wetland?	Yes	_ No <u>X</u>	
Remarks: W4-Out is an upland point a this point.	ssociated with	n an intermittent stre	am. Hydrophytic vegetation,	hydric soils and w	etland hydrology is	absent from

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1. <u>Ulmus americana</u>	30	X	FAC	That Are OBL, FACW, or FAC
2. Catalpa bignonioides	30		UPL	(excluding FAC-): 1 (A)
3. Morus alba	15		FACU	Total Number of Dominant
4				Species Across All Strata: (B)
	75	= Total Cov	er	Percent of Dominant Species
Sapling/Shrub Stratum (Plot size:)				That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
1. <u>Ulmus americana</u>	15		FAC	
2				Prevalence Index worksheet:
3.				Total % Cover of: Multiply by:
4				OBL species x 1 =
5				FACW species x 2 =0
J	15	Total Cau		FAC species55 x 3 =165
Herb Stratum (Plot size:)			ei	FACU species <u>85</u> x 4 = <u>340</u>
1. Cynodon dactylon	60	×	FACU	UPL species X 5 =150
2. Euphorbia marginata	5		FACU	Column Totals: 170 (A) 655 (B)
3 Ambrosia trifida	10		<u> </u>	
	<u>10</u> 5			Prevalence Index = B/A = <u>3.852941176470</u> 5
			<u>_FACU</u>	Hydrophytic Vegetation Indicators:
5	- <u></u>			1 - Rapid Test for Hydrophytic Vegetation
0				2 - Dominance Test is >50%
<i>I</i>	·			3 - Prevalence Index is ≤3.0 ¹
8				4 - Morphological Adaptations ¹ (Provide supporting
9				data in Remarks or on a separate sheet)
10				Problematic Hydrophytic Vegetation ¹ (Explain)
	80	= Total Cov	er	
Woody Vine Stratum (Plot size:)				be present, unless disturbed or problematic.
1				
2		<u> </u>		Hydrophytic
% Bare Ground in Herb Stratum	0	= Total Cov	er	Present? Yes <u>No X</u>
Remarks: Hydrophytic vegetation is absent from this po	int.			•

Depth Matrix Redox Features									
(inches)	Color (moist)	<u>%</u> Co	lor (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0.30	75yr 44	100					_SCI		
							· ·		
		<u> </u>					·		
		<u> </u>					·		
		<u> </u>							
							·		
Type: C=0	Concentration, D=D	epletion, RM=Redu	ced Matrix, C	S=Covered	or Coate	d Sand G	rains. ² Location:	PL=Pore Lining, M=Matrix.	
lydric Soi	I Indicators: (App	licable to all LRRs	, unless othe	rwise note	ed.)		Indicators for Pr	oblematic Hydric Soils ³ :	
Histoso	ol (A1)		Sandy	Gleyed Ma	trix (S4)		1 cm Muck (A	A9) (LRR I, J)	
Histic Epipedon (A2)			Sandy Redox (S5)				Coast Prairie Redox (A16) (LRR F, G, H)		
Black H	Histic (A3)		Stripped Matrix (S6)				Dark Surface (S7) (LRR G)		
Hydrog	gen Sulfide (A4)		Loamy Mucky Mineral (F1)				High Plains Depressions (F16)		
Stratifie	ed Layers (A5) (LR	R F)	Loamy Gleyed Matrix (F2)				(LRR H o	utside of MLRA 72 & 73)	
1 cm N	1uck (A9) (LRR F, G	6, H)	Depleted Matrix (F3)				Reduced Vertic (F18)		
Deplete	ed Below Dark Surf	ace (A11)	Redox Dark Surface (F6)				Red Parent Material (TF2)		
Thick D	Dark Surface (A12)		Depleted Dark Surface (F7)				Very Shallow Dark Surface (TF12)		
Sandy	Mucky Mineral (S1))	Redox Depressions (F8)				Other (Explain in Remarks)		
2.5 cm	Mucky Peat or Pea	t (S2) (LRR G, H)) High Plains Depressions (F16)				³ Indicators of hyd	rophytic vegetation and	
5 cm N	lucky Peat or Peat	(S3) (LRR F)	(MLRA 72 & 73 of LRR H)			H)	wetland hydro	plogy must be present,	
							unless disturb	ped or problematic.	
Restrictive	e Layer (if present)	:							
Type:									
Depth (ii	nches):						Hydric Soil Prese	nt? Yes No _X	
Remarks:	Hydric soils are abs	ent from this point.					_		
	-	•							

Wetland Hydrology Indicators:				
Primary Indicators (minimum of one required; ch	Secondary Indicators (minimum of two required)			
Surface Water (A1)	Salt Crust (B11)	Surface Soil Cracks (B6)		
High Water Table (A2)	Aquatic Invertebrates (B13)	Sparsely Vegetated Concave Surface (B8)		
Saturation (A3)	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)		
Water Marks (B1)	Dry-Season Water Table (C2)	 Oxidized Rhizospheres on Living Roots (C3) 		
Sediment Deposits (B2)	Oxidized Rhizospheres on Living	Roots (C3) (where tilled)		
Drift Deposits (B3)	(where not tilled)	Crayfish Burrows (C8)		
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)	Saturation Visible on Aerial Imagery (C9)		
Iron Deposits (B5)	Thin Muck Surface (C7)	Geomorphic Position (D2)		
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	FAC-Neutral Test (D5)		
Water-Stained Leaves (B9)		Frost-Heave Hummocks (D7) (LRR F)		
Field Observations:				
Surface Water Present? Yes No	X Depth (inches):			
Water Table Present? Yes No	X Depth (inches):			
Saturation Present? Yes <u>No</u> (includes capillary fringe)	X Depth (inches):	Wetland Hydrology Present? Yes No X		
Describe Recorded Data (stream gauge, monito	ring well, aerial photos, previous inspec	tions), if available:		
Remarks: Wetland hydrology is absent from this	point.			



Wetland	Sample Point W4 Out	Longitude	<u>Latitude</u>
Cowardin Classification	<u>n</u> :	-97.459372	35.134052
<u>Size</u> :			
Landform: Hillslope			
Tree Stratum: Ulmus ame	ericana Catalpa bignonioides Morus alba		
Sapling/Shrub: Ulmus ar	mericana		
Herb Stratum: Cynodon	dactylon Euphorbia marginata Ambrosia trifida		
Vine Stratum:			
Hydric Soil Indicators:			
Hydrology Indicators: _			
Significant Nexus:	Adjacent: Abuts: Stre	eam Name:	
Jurisdictional Status an	nd Comments:		





Photo 3

Project/Site: McClain County - I-35	City/County: McClain		Sampling Date: 2022-10-11
Applicant/Owner: ODOT		_ State: OK	Sampling Point: <u>W5 Out</u>
Investigator(s): Nathan Hillis - Hannah Clark	_ Section, Township, Range:	T25, T8N, R3W	
Landform (hillslope, terrace, etc.): Hillslope	_ Local relief (concave, conv	/ex, none): <u>Convex</u>	Slope (%): <u>5-10%</u>
Subregion (LRR): Great Plains Lat: 35	5.142481 Lo	ong: <u>-97.466516</u>	Datum: NAD83
Soil Map Unit Name: Grant-Port, frequently flooded, complex, 0 to	o 12 percent slopes	NWI classific	cation: N/A
Are climatic / hydrologic conditions on the site typical for this time of y	rear? Yes X No	(If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significantly	y disturbed? Are "Nor	mal Circumstances" p	present? Yes X No
Are Vegetation, Soil, or Hydrology naturally pr	roblematic? (If neede	d, explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	g sampling point loca	itions, transects	, important features, etc.
Hydrophytic Vegetation Present? Yes No _X	In the Sompled Arr		

Hydric Soil Present?	Yes		within a Wetland?	Yes	No <u></u>
weitand Hydrology Fresent?	165				
Remarks: W5 Out is an upland point as from this point.	sociated with a	n intermittent str	ream. Hydrophytic vegetation,	hydric soils, and we	etland hydrology are absent

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1	·			That Are OBL, FACW, or FAC
2				$(excluding (AC^{-})) = (A)$
3			. <u> </u>	Total Number of Dominant
4			<u> </u>	Species Across All Strata: (B)
	0	= Total Cov	rer	Percent of Dominant Species
Sapling/Shrub Stratum (Plot size:)				That Are OBL, FACW, or FAC:000% (A/B)
1				Prevalence Index worksheet:
2			<u> </u>	Total % Cover of: Multiply by:
3				$\frac{1}{1} \frac{1}{1} \frac{1}$
4			. <u> </u>	$\frac{1}{2} = \frac{1}{2} = \frac{1}$
5			<u> </u>	FAC species x2 =
	0	= Total Cov	rer	$\frac{1}{2} = \frac{1}{2} = \frac{1}$
Herb Stratum (Plot size:)				FACU species 95 $x = 380$
1. <u>Sorghum halepense</u>	80	X	FACU	$\begin{array}{c} \text{UPL species} \underline{0} x \text{ 5} = \underline{0} \\ \text{Output the species} \underline{0} x \text{ 5} = \underline{0} \\ \text{Output the species} \underline{0} x \text{ 5} = \underline{0} \\ \text{Output the species} \underline{0} x \text{ 5} = \underline{0} \\ \text{Output the species} \underline{0} x \text{ 5} = \underline{0} \\ \text{Output the species} \underline{0} x \text{ 5} = \underline{0} \\ \text{Output the species} \underline{0} x \text{ 5} = \underline{0} \\ \text{Output the species} \underline{0} x \text{ 5} = \underline{0} \\ \text{Output the species} \underline{0} x \text{ 5} = \underline{0} \\ \text{Output the species} \underline{0} x \text{ 5} = \underline{0} \\ \text{Output the species} \underline{0} x \text{ 5} = \underline{0} \\ \text{Output the species} \underline{0} x \text{ 5} = \underline{0} \\ \text{Output the species} \underline{0} x \text{ 5} = \underline{0} \\ \text{Output the species} \underline{0} x \text{ 5} = \underline{0} \\ \text{Output the species} \underline{0} x \text{ 5} = \underline{0} \\ \text{Output the species} \underline{0} x \text{ 5} = \underline{0} \\ \text{Output the species} \underline{0} x \text{ 5} = \underline{0} \\ \text{Output the species} \underline{0} x \text{ 5} = \underline{0} \\ \text{Output the species} \underline{0} x \text{ 5} = \underline{0} \\ \text{Output the species} \underline{0} x \text{ 5} = \underline{0} \\ \text{Output the species} \underline{0} x \text{ 5} = \underline{0} \\ \text{Output the species} \underline{0} x \text{ 5} = \underline{0} \\ \text{Output the species} x \text{ 5} = \underline{0} \\ x \text$
2. <u>Helianthus annuus</u>	10		FACU	Column Iotals: <u>95</u> (A) <u>380</u> (B)
3. <u>Toxicodendron radicans</u>	5		_FACU_	Prevalence Index = B/A = 4
4				Hydrophytic Vegetation Indicators:
5			<u> </u>	1 - Rapid Test for Hydrophytic Vegetation
6	·			2 - Dominance Test is >50%
7				$3 - Prevalence Index is \leq 3.0^{1}$
8				4 - Morphological Adaptations ¹ (Provide supporting
9			. <u> </u>	data in Remarks or on a separate sheet)
10				Problematic Hydrophytic Vegetation ¹ (Explain)
	95	= Total Cov	rer	
Woody Vine Stratum (Plot size:)				be present, unless disturbed or problematic.
1				
2			<u> </u>	Hydrophytic
% Raro Ground in Harb Stratum	0	= Total Cov	rer	Present? Yes No X
Remarks:	:			
Hydrophytic vegetation is absent from this po	int.			

Depth	Matri	х	Redo	ox Features				
inches)	Color (moist) <u>%</u> Cc	lor (moist)	%	Type ¹	Loc ²	Texture	Remarks
.30	7.5yr4/6	50					SICI	
	7 5vr 4/4	50						
							·	
							·	
							······	
Type: C=C	Concentration, D=	Depletion, RM=Redu	ced Matrix, C	S=Covered	or Coate	d Sand Gr	rains. ² Location:	PL=Pore Lining, M=Matrix.
ydric Soi	I Indicators: (Ap	plicable to all LRRs	, unless othe	rwise noted	l.)		Indicators for Pro	blematic Hydric Soils ³ :
Histoso	ol (A1)		Sandy	Gleyed Matr	ix (S4)		1 cm Muck (A	9) (LRR I, J)
_ Histic E	Epipedon (A2)		Sandy	Redox (S5)			Coast Prairie	Redox (A16) (LRR F, G, H)
Black H	Histic (A3)		Strippe	d Matrix (S6)		Dark Surface	(S7) (LRR G)
_ Hydrog	en Sulfide (A4)		Loamy	Mucky Mine	ral (F1)		High Plains D	epressions (F16)
_ Stratifie	ed Layers (A5) (LF	RR F)	Loamy	Gleyed Mati	'ix (F2)		(LRR H ou	itside of MLRA 72 & 73)
_ 1 CM IV	IUCK (A9) (LRR F,	G, H)	Deplete	Dorld Curfoo	5) 5 (FC)		Reduced Vert	IC (F18)
_ Depiete	ork Surfood (A12)		Redux	Dark Suriaci	3 (FO)			Dork Surface (TE12)
Sandv	Mucky Mineral (S) 1)	Depiete Redox	Depressions	ace (F7)		Other (Explain	in Remarks)
2.5 cm	Mucky Peat or Pe	at (S2) (LRR G. H)	High Pl	ains Depres	sions (F	16)	³ Indicators of hydr	ophytic vegetation and
5 cm N	lucky Peat or Peat	t (S3) (LRR F)	<u> </u>	RA 72 & 73	of LRR	H)	wetland hydro	logy must be present.
_	,		(,	unless disturb	ed or problematic.
estrictive	Layer (if present	t):						
Type:								
Depth (ii	nches):						Hydric Soil Preser	nt? Yes <u>No X</u>
emarks:	Hydric soils are ab	sent from this point.						
•								

Wetland Hydrology Indicato	rs:		
Primary Indicators (minimum	of one required;	check all that apply)	Secondary Indicators (minimum of two required)
 Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aer 	ial Imagery (B7)	 Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living (where not tilled) Presence of Reduced Iron (C4) Thin Muck Surface (C7) Other (Explain in Remarks) 	 Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
Field Observations:	9)		
Surface Water Present?	Yes N	Depth (inches):	_
Water Table Present?	Yes N	Depth (inches):	_
Saturation Present? (includes capillary fringe)	Yes N	Depth (inches):	_ Wetland Hydrology Present? Yes No X
Describe Recorded Data (stre Remarks: Wetland hydrology	am gauge, mor is absent.	itoring well, aerial photos, previous inspe	ections), if available:



Wetland		Sample Point v	/5 Out	Lonaitua	de <u>Latitude</u>
Cowardin Classification:				-97.46651	6 35.142481
Size:					
Landform: Hillslope					
Tree Stratum:					
Sapling/Shrub:					
Herb Stratum: Sorghum halepens	e Helianthus ar	nuus Toxicodendro	on radicans		
Vine Stratum:					
Hydric Soil Indicators:					
Hydrology Indicators:					
Significant Nexus: A	djacent:	Abuts:	Stream Nar	ne:	
Jurisdictional Status and Com	ments:				

Photo 2

Photo 3

Project/Site: McClain County - I-35	City/County: McClain	<u>i</u>	Sampling Date: 2022-10-11
Applicant/Owner: ODOT		State: OK	Sampling Point: W7 Out
Investigator(s): Nathan Hillis - Hannah Clark	Section, Township, R	ange: <u>S14, T8N, R3W</u>	
Landform (hillslope, terrace, etc.): Hillslope	Local relief (concave	, convex, none): <u>Convex</u>	Slope (%):
Subregion (LRR): Great Plains Lat: 35.	.169693	Long: <u>-97.491552</u>	Datum: NAD83
Soil Map Unit Name: Port silt loam, 0 to 1 percent slopes, occasiona	Illy flooded	NWI classific	ation: N/A
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes X No	(If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significantly	/ disturbed? Are	"Normal Circumstances" p	oresent? Yes X No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If r	needed, explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	g sampling point	locations, transects	, important features, etc.

Hydrophytic Vegetation Present?	Yes	No X		Is the Sampled Area		
Hydric Soil Present?	Yes	No X		within a Wetland?	Ves	No X
Wetland Hydrology Present?	Yes	No X			163	
Remarks: W7 Out is an upland point as from this point.	sociated with a	n intermitte	ent stream	 Hydrophytic vegetation, h 	ydric soils and wet	land hydrology are absent

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1. <u>Ulmus americana</u>	70	X	FAC	That Are OBL, FACW, or FAC
2. <u>Carya illinoinensis</u>	15		FAC	(excluding FAC-): 1 (A)
3. Morus alba	10		FACU	Total Number of Dominant
4				Species Across All Strata: (B)
	95	= Total Cove	er	Percent of Dominant Species
Sapling/Shrub Stratum (Plot size:)				That Are OBL, FACW, or FAC: <u>25%</u> (A/B)
1. <u>Carya illinoinensis</u>	5		FAC	
2				Prevalence Index worksheet:
3.				Total % Cover of: Multiply by:
4.				OBL species x 1 =0
5				FACW species x 2 =0
···	5	- Total Cov	ər	FAC species <u>90</u> x 3 = <u>270</u>
Herb Stratum (Plot size:)		- 10101 0000		FACU species <u>65</u> x 4 = <u>260</u>
1. Ambrosia artemisiifolia	20	×	FACU	UPL species x 5 =0
2. Symphoricarpos orbiculatus	15	×	FACU	Column Totals: <u>155</u> (A) <u>530</u> (B)
3. Toxicodendron radicans	15	×	FACU	
4.				Prevalence Index = B/A = <u>3.4193548387096</u>
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
7				3 - Prevalence Index is ≤3.0 ¹
o				4 - Morphological Adaptations ¹ (Provide supporting
9				data in Remarks or on a separate sheet)
10				Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vino Stratum (Plot size:	50	= Total Cove	er	¹ Indicators of hydric soil and wetland hydrology must
	_		FAOL	be present, unless disturbed or problematic.
	5		FACU	
2				Hydrophytic Vegetation
% Bare Ground in Herb Stratum 95	5	= I otal Cove	ər	Present? Yes No X
Remarks: Hydrophytic vogotation is abcent from this po	int			
	11 IL.			

Depth	Matrix		Rede	ox Features				
(inches)	Color (moist)	<u>%</u> Co	lor (moist)	%	Type ¹	Loc ²	Texture	Remarks
0.30	7.5yr4/4	100					SICI	
	<u> </u>							
Type: C-C	Concentration D-De	nletion RM-Redu	ced Matrix C	S-Covered	or Coate	d Sand G	rains ² Location	PI – Pore Lining M–Matrix
lydric Soi	I Indicators: (Appl	icable to all LRRs	unless othe	rwise note	d.)		Indicators for P	roblematic Hydric Soils ³ :
Histoso	ol (A1)		Sandy	Gleved Ma	trix (S4)		1 cm Muck (A9) (LRR I, J)
Histic E	Epipedon (A2)		Sandy	Redox (S5)	(-)		Coast Prairie	e Redox (A16) (LRR F, G, H)
Black H	Histic (A3)		Strippe	d Matrix (S	6)		Dark Surface	e (S7) (LRR G)
Hydrog	jen Sulfide (A4)		Loamy	Mucky Min	eral (F1)		High Plains	Depressions (F16)
Stratifie	ed Layers (A5) (LRF	2 F)	Loamy	Gleyed Ma	trix (F2)		(LRR H c	outside of MLRA 72 & 73)
1 cm N	luck (A9) (LRR F, G	, H)	Deplete	ed Matrix (F	3)		Reduced Ve	rtic (F18)
Deplete	ed Below Dark Surfa	ace (A11)	Redox	Dark Surfa	ce (F6)		Red Parent	Material (TF2)
Thick E	Dark Surface (A12)		Deplete	ed Dark Su	face (F7)		Very Shallow	v Dark Surface (TF12)
Sandy	Mucky Mineral (S1)		Redox	Depression	is (F8)		Other (Expla	in in Remarks)
2.5 cm	Mucky Peat or Pea	t (S2) (LRR G, H)	High P	lains Depre	ssions (F	16)	³ Indicators of hyd	prophytic vegetation and
5 cm N	lucky Peat or Peat (S3) (LRR F)	(MI	_RA 72 & 7	3 of LRR	H)	wetland hydr	ology must be present,
							unless distu	rbed or problematic.
Restrictive	Layer (if present):							
Type:								
Depth (ii	nches):						Hydric Soil Pres	ent? Yes <u>No X</u>
Remarks:	Hydric soils are abse	ent from this point.					•	
	,							

Wetland Hydrology Indica	tors:				
Primary Indicators (minimur	n of one reg	uired; che		Secondary Indicators (minimum of two required)	
Surface Water (A1)			Salt Crust (B11)		Surface Soil Cracks (B6)
High Water Table (A2)			Aquatic Invertebrates (B13)		Sparsely Vegetated Concave Surface (B8)
Saturation (A3)			Hydrogen Sulfide Odor (C1)		Drainage Patterns (B10)
Water Marks (B1)			Dry-Season Water Table (C2)		Oxidized Rhizospheres on Living Roots (C3)
Sediment Deposits (B2)		Oxidized Rhizospheres on Living	g Roots (C3)	(where tilled)
Drift Deposits (B3)			(where not tilled)		Crayfish Burrows (C8)
Algal Mat or Crust (B4)			Presence of Reduced Iron (C4)		Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)			Thin Muck Surface (C7)		Geomorphic Position (D2)
Inundation Visible on A	erial Imager	y (B7)	Other (Explain in Remarks)		FAC-Neutral Test (D5)
Water-Stained Leaves	(B9)				Frost-Heave Hummocks (D7) (LRR F)
Field Observations:					
Surface Water Present?	Yes	No	Depth (inches):	,	
Water Table Present?	Yes	No	Depth (inches):		
Saturation Present? (includes capillary fringe)	Yes	No	Depth (inches):	Wetland I	Hydrology Present? Yes No X
Describe Recorded Data (st	ream gauge	e, monitori	ng well, aerial photos, previous inspe	ections), if ava	ailable:
Remarks: Wetland hydrolog	y is absent	from this p	point.		



Wetland		Sample Point	W7 Out	L	<u>ongitude</u>	<u>Latitude</u>
Cowardin Classificatio	<u>n</u> :			-9	7.491552	35.169693
<u>Size</u> :						
Landform: Hillslope						
Tree Stratum: Ulmus am	ericana Carya illinoinen	sis Morus alba				
Sapling/Shrub: Carya illi	noinensis					
Herb Stratum: Ambrosia	artemisiifolia Symphori	carpos orbiculatus	Toxicodendron radic	e		
Vine Stratum: Toxicode	ndron radicans					
Hydric Soil Indicators:						
Hydrology Indicators:						
Significant Nexus:	Adjacent:	Abuts:	Stream N	ame:		
Jurisdictional Status ar	nd Comments:					





Photo 3



Project/Site: McClain County - I-35	City/County: N	lcClain Sarr	pling Date: 2022-10-11
Applicant/Owner: ODOT		State: OK Sam	pling Point: <u>W8 In</u>
Investigator(s): Nathan Hillis - Hannah Clark	Section, Towns	ship, Range: <u>S11, T8N, R3W</u>	
Landform (hillslope, terrace, etc.): Channel	Local relief (co	ncave, convex, none): <u>Concave</u>	Slope (%): <u>2-5%</u>
Subregion (LRR): Great Plains Lat:	35.183654	Long: <u>-97.493722</u>	Datum: NAD83
Soil Map Unit Name: Keokuk loam, 0 to 1 percent slopes, rarely	flooded	NWI classification	: <u>N</u> /A
Are climatic / hydrologic conditions on the site typical for this time of	of year? Yes X	_ No (If no, explain in Remar	ks.)
Are Vegetation, Soil, or Hydrology significa	antly disturbed?	Are "Normal Circumstances" prese	nt? Yes X No
Are Vegetation, Soil, or Hydrology naturall	y problematic?	(If needed, explain any answers in	Remarks.)
SUMMARY OF FINDINGS – Attach site map show	ving sampling p	point locations, transects, im	portant features, etc.
Hydrophytic Vegetation Present? Yes X No		ampled Area	

Hydric Soil Present? Wetland Hydrology Present?	Yes <u>X</u> Yes <u>X</u>	No No	within a Wetland?	Yes_	<u>×</u>	No
Remarks: W8 - In is a wetland point ass	sociated with a	long wetland that is	associated with a drainage and	stream	n. Hydrop	ohytic vegetation, hydric soils
and wetland hydrology.						

	Absolute	Dominant	Indicator	Dominance Test worksheet:	-	
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species		
1	15	X		That Are OBL, FACW, or FAC		
2				(excluding FAC-):	2	(A)
3.				Total Number of Dominant		
4				Species Across All Strata:	3	(B)
	15	- Total Cov				
Sapling/Shrub Stratum (Plot size:)		- 10101 001		That Are OBL FACW or FAC	67%	(A/B)
1.						(,,,,,,)
2				Prevalence Index worksheet:		
3				Total % Cover of: N	fultiply by:	
3				OBL species <u>50</u> x 1 =	50	_
4				FACW species 50 x 2 =	100	
5				FAC species 0 x 3 =	0	-
Horb Stratum (Plot size:		= Total Cov	/er	FACU species 0 x 4 -		-
						-
1. <u>Typha latifolia</u>	50	<u>X</u>	OBL	$\frac{1}{2} OFL species \qquad 0 \qquad x S = 0$		- (D)
2. <u>Phragmites australis</u>	50	<u> </u>	FACW	Column rotals. 100 (A)	150	_ (D)
3			·	Prevalence Index = $B/A = 1.5$		
4				Hydrophytic Vegetation Indicator	e.	
5				1 Papid Tast for Hydrophytic V	Jagotation	
6					regetation	
7				X 2 - Dominance Test is >50%		
8.				\underline{X} 3 - Prevalence Index is ≤3.0'		
9.				4 - Morphological Adaptations	(Provide sup	porting
10						
10	100	- Total Cov		Problematic Hydrophytic Veget	ation' (Explai	n)
Woody Vine Stratum (Plot size:)				¹ Indicators of hydric soil and wetlan	d hydrology n	nust
1.				be present, unless disturbed or prol	plematic.	
2				Hydrophytic		
۲		- Total Cov		Vegetation		
% Bare Ground in Herb Stratum				Present? Yes X	۰V	
Remarks: Hydrophytic vegetation is present at this poin	t.			1		

SOIL	S	0		
------	---	---	--	--

JUL								
Profile Des	cription: (Describ	e to the de	oth needed to docu	ment the	indicator	or confirm	n the absence of ir	idicators.)
Depth	Matrix	0/	Red	ox Feature	es Trun a ¹	1.0.02	Tautura	Demerile
(inches)	<u>Color (moist)</u>	%	Color (moist)	%	Type	LOC	Texture	Remarks
0.6	_7yr 3 2	100				·		
6.24	_75yr4 3	80	_25yr56	10		_M	_SII	
6.24	75yr 42	10					SCL	
				_				
						·		
	·					·		
1							. 2	
Hydric Soil	Indicators: (Appli	epletion, RM	EReduced Matrix, C	S=Covere	d or Coate	ed Sand G	rains. Location	1: PL=Pore Lining, M=Matrix.
Histosol			Sandy	Cleved M	(S4)		1 cm Muck	
Histic E	pipedon (A2)		Sandy	Redox (St	5)		Coast Prair	rie Redox (A16) (LRR F. G. H)
Black H	listic (A3)		Strippe	ed Matrix (S6)		Dark Surfa	ce (S7) (LRR G)
Hydroge	en Sulfide (A4)		Loamy	Mucky Mi	neral (F1)		High Plains	Depressions (F16)
Stratifie	d Layers (A5) (LRR	(F)	Loamy	Gleyed M	atrix (F2)		(LRR H	outside of MLRA 72 & 73)
1 cm Mi	uck (A9) (LRR F, G	, H)	X Deplet	ed Matrix ((F3)		Reduced V	ertic (F18)
Depiete Thick D	ark Surface (A12)	ice (ATT)	Redux	ed Dark Sull	urface (F0))	Very Shall	w Dark Surface (TF12)
Sandy N	Mucky Mineral (S1)		Redox	Depressio	ons (F8)	/	Other (Exp	lain in Remarks)
2.5 cm l	Mucky Peat or Peat	t (S2) (LRR	G, H) High P	Iains Depr	essions (F	-16)	³ Indicators of hy	vdrophytic vegetation and
5 cm M	ucky Peat or Peat (S3) (LRR F)) (M I	LRA 72 &	73 of LRF	R H)	wetland hyd	trology must be present,
							unless dist	urbed or problematic.
Restrictive	Layer (if present):							
Type:								
Depth (in	iches):						Hydric Soil Pres	sent? Yes <u>X</u> No
Remarks: H	lydric soils are pres	ent.						
HYDROLO)GY							
Wetland Hy	drology Indicators	5:						
Primary Indi	cators (minimum of	one require	ed; check all that app	oly)			Secondary Ir	dicators (minimum of two required)
Surface	Water (A1)		Salt Crus	t (B11)			Surface	Soil Cracks (B6)
High Wa	ater Table (A2)		Aquatic Ir	nvertebrate	es (B13)		Sparsely	Vegetated Concave Surface (B8)
Saturati	ion (A3)		Hydroger	n Sulfide O	dor (C1)		🔀 Drainage	e Patterns (B10)
Water M	/larks (B1)		Dry-Seas	on Water	Table (C2))	Oxidized	Rhizospheres on Living Roots (C3)
Sedime	nt Deposits (B2)		Oxidized	Rhizosphe	eres on Liv	ing Roots	(C3) (where	e tilled)
Drift De	posits (B3)		(where	not tilled)		Crayfish	Burrows (C8)
Algal Ma	at or Crust (B4)		Presence	of Reduc	ed Iron (C	4)	Saturatio	on Visible on Aerial Imagery (C9)
Iron De	posits (B5)		Thin Muc	k Surface	(C7)		X Geomor	phic Position (D2)
<u> </u>	ion Visible on Aeria	I Imagery (E	37) Other (Ex	cplain in Re	emarks)		X FAC-Nei	utral lest (D5)
vvater-S	nameu Leaves (B9)	1					Frost-He	
	tor Procent?	Vec		aches).				
Water Table	Dracant?	105		nches):				
Saturation D	Procent?	Voc		nones).			and Hydrology Pr	asant? Vas V Na
SaturationP	iesent!	165		iciies).		well	and nyurology Pre	

(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Wetland hydrology is present at this point.



Wetland		Sample Point	/8 In	Longitude	<u>Latitude</u>
Cowardin Classification	<u>on:</u>	· · · · · · · · · · · · · · · · · · ·		-97.493722	35.183654
Size:					
Landform: Channel					
Tree Stratum:					
Sapling/Shrub:					
Herb Stratum: Typha la	tifolia Phragmites austra	lis			
Vine Stratum:					
Hydric Soil Indicators	Depleted Matrix				
Hydrology Indicators:	Inundation Visible on Ae	rial Imagery	· · · · · · · · · · · · · · · · · · ·		
Significant Nexus:	Adjacent:	Abuts:	Stream Nam	ne:	· · · · · · · · · · · · · · · · · · ·
Jurisdictional Status a	nd Comments [.]				



Photo 3





Photo 4