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 Statement		GRADE, DRAIN, BRIDGE & SURFACE I-35: FROM THE SH-74 INTERCHANGE, EXTEND NORTH 2.75 MILES TO THE CLEVELAND COUNTY LINE & FROM 1 MILE SOUTH OF LADD ROAD, EXTEND NORTH 4.15 MILES TO THE SH-74 INTERCHANGE			

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

Prepared by:

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Report Date:	10/30/2022
Field Date:	10/06/2022

PROJECT OVERVIEW

Project Type (Choose one)	**Check √**
Bridge and Approaches or bridge widening/structure extension	
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 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.X108ft. 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 & Township	Lat/Long (NAD 83)	Dimensions	Acreage
S5 & 6 T7N R2W S10, 11, 14, 15, 23, 24, 25, T8N R3W S30 & 31 T8N R2W	97.4329787W 35.1055667N to 97.4903023W 35.1878582N	Variable from 285 feet to 2000 feet wide x 6.9 miles	294.1

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-of-way 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

Data Sources Reviewed (list)

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

Streams and Drainages Summary Table

Feature #	Stream Name	Mapped on 7.5 Minute USGS	Feature Type Based on Field Data	Potential Jurisdictional Status	Acres within Environmental Study Footprint
S1a	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

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*.

Wetlands and Ponds Summary Table

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

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

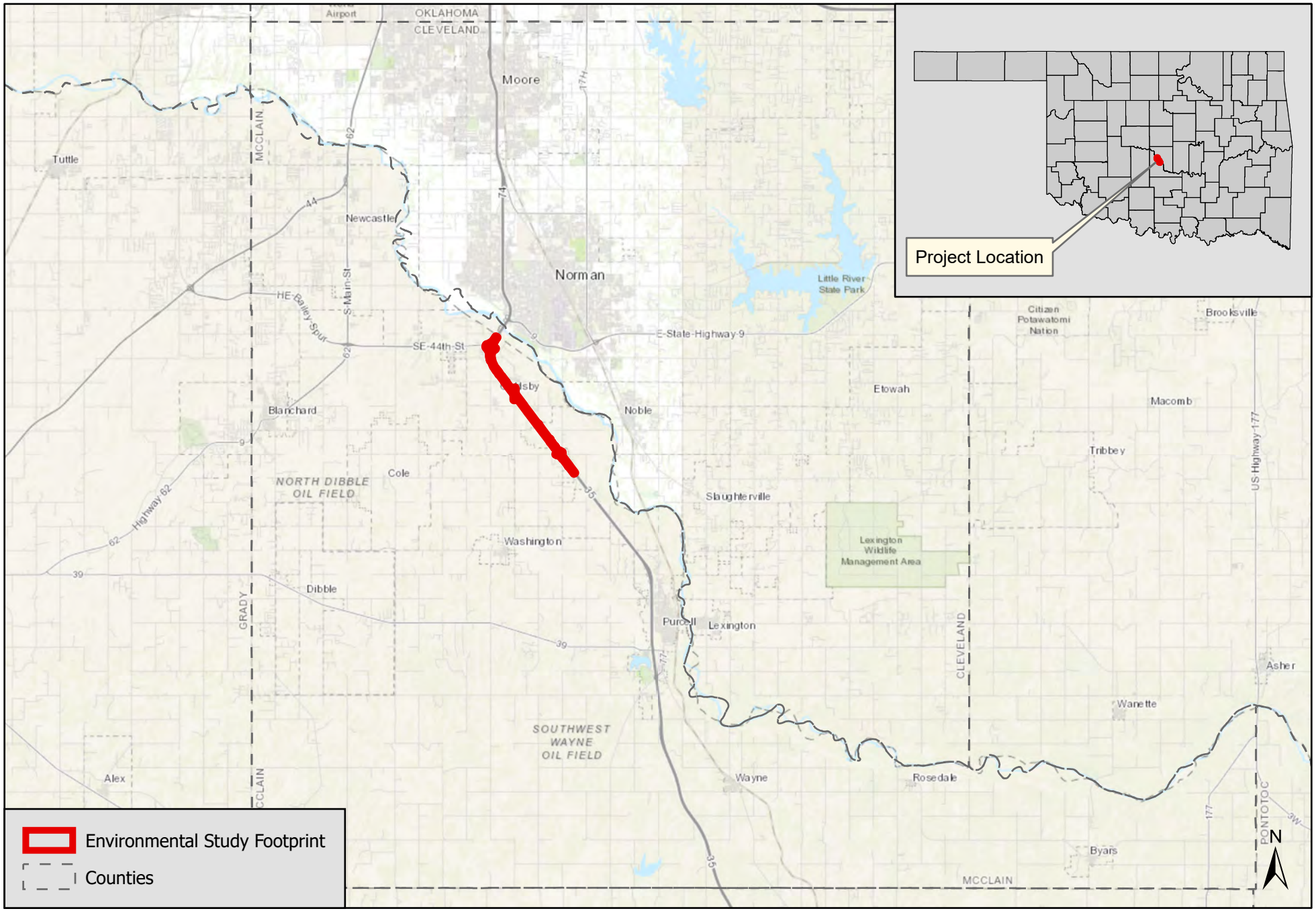

Figure 1

Project Location
McClain County JP 35588(04) & 35589(04)
I-35: GRADE, DRAIN, BRIDGE & SURFACE FROM THE SH-74 INTERCHANGE, EXTEND NORTH 2.75 MILES TO THE CLEVELAND COUNTY LINE & FROM 1 MILE SOUTH OF LADD ROAD, EXTEND NORTH 4.15 MILES TO THE SH-74 INTERCHANGE

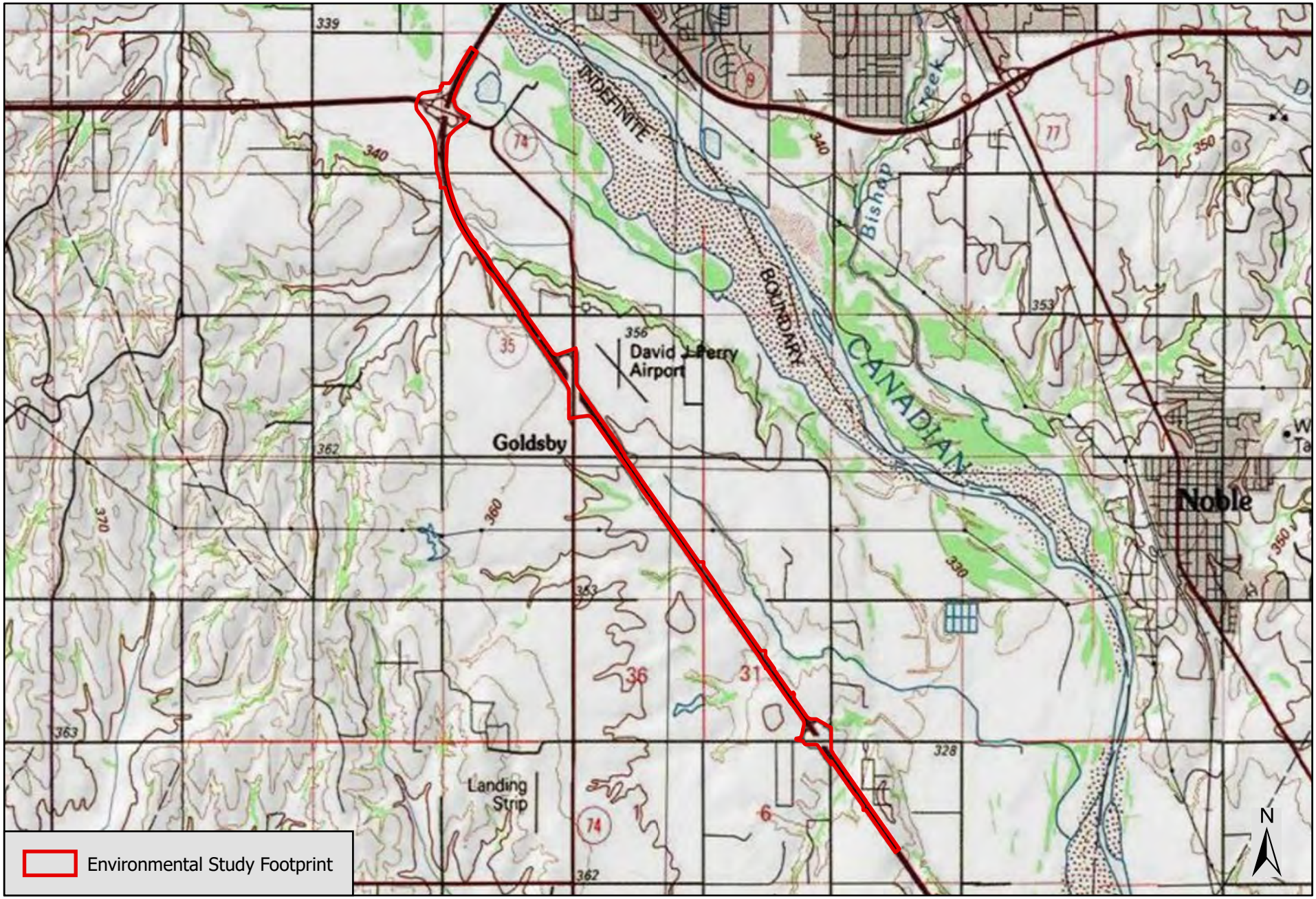

Figure 2

Environmental Study Footprint on USGS Map
McClain County JP 35588(04) & 35589(04)
I-35: GRADE, DRAIN, BRIDGE & SURFACE FROM THE SH-74 INTERCHANGE, EXTEND NORTH 2.75 MILES TO THE CLEVELAND COUNTY LINE & FROM 1 MILE SOUTH OF LADD ROAD, EXTEND NORTH 4.15 MILES TO THE SH-74 INTERCHANGE

0 0.75 1.5
Miles

Figure 3a

Soil Map Units within the Environmental Study Footprint
McClain County JP 35588(04) & 35589(04)
I-35: GRADE, DRAIN, BRIDGE & SURFACE FROM THE SH-74 INTERCHANGE, EXTEND NORTH 2.75 MILES TO THE CLEVELAND COUNTY LINE & FROM 1 MILE SOUTH OF LADD ROAD, EXTEND NORTH 4.15 MILES TO THE SH-74 INTERCHANGE

Figure 3b

Soil Map Units within the Environmental Study Footprint
McClain County JP 35588(04) & 35589(04)
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Figure 3c

Soil Map Units within the Environmental Study Footprint
McClain County JP 35588(04) & 35589(04)
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Figure 3d

Soil Map Units within the Environmental Study Footprint
McClain County JP 35588(04) & 35589(04)
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0 0.0375 0.075 0.15
Miles

Figure 3e

Soil Map Units within the Environmental Study Footprint
McClain County JP 35588(04) & 35589(04)
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0 0.0375 0.075 0.15
Miles

Figure 3f

Soil Map Units within the Environmental Study Footprint
McClain County JP 35588(04) & 35589(04)
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0 0.0375 0.075 0.15
Miles

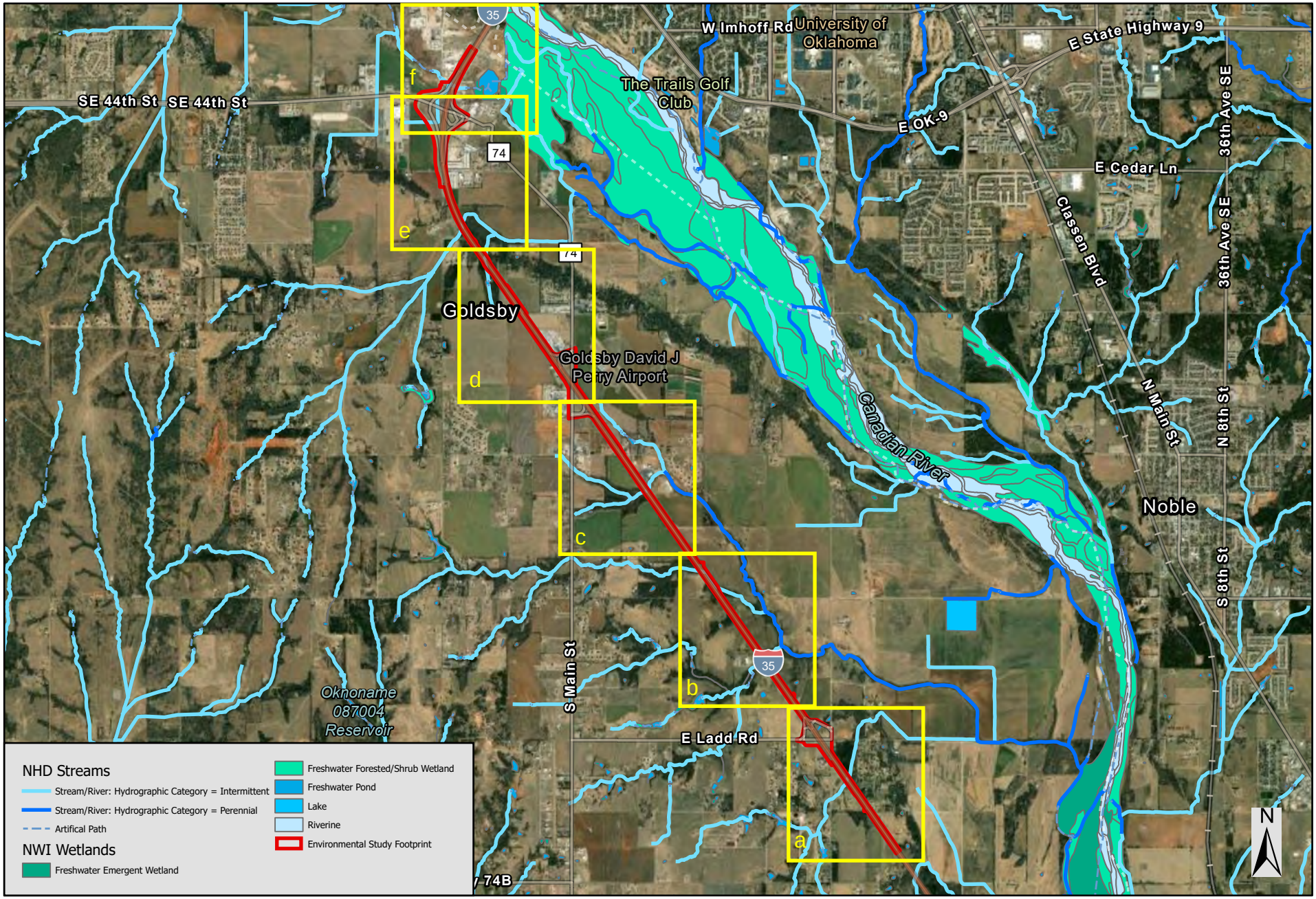

Figure 4

NHD and NWI Mapped Features within the Environmental Study Footprint
McClain County JP 35588(04) & 35589(04)
I-35: GRADE, DRAIN, BRIDGE & SURFACE FROM THE SH-74 INTERCHANGE, EXTEND NORTH 2.75 MILES TO THE CLEVELAND COUNTY LINE & FROM 1 MILE SOUTH OF LADD ROAD, EXTEND NORTH 4.15 MILES TO THE SH-74 INTERCHANGE

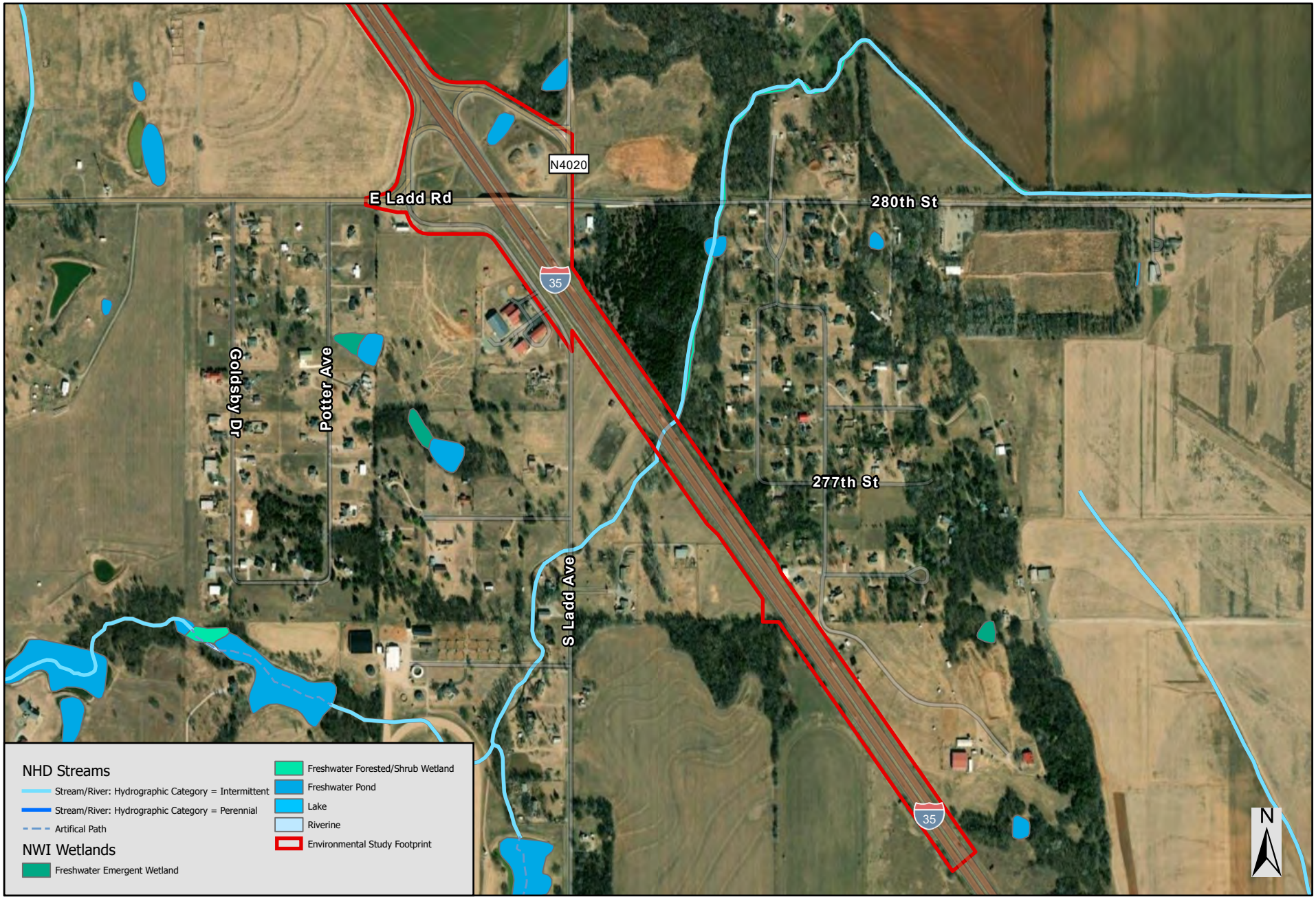

Figure 4a

NHD and NWI Mapped Features within the Environmental Study Footprint
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0 0.0375 0.075 0.15
Miles

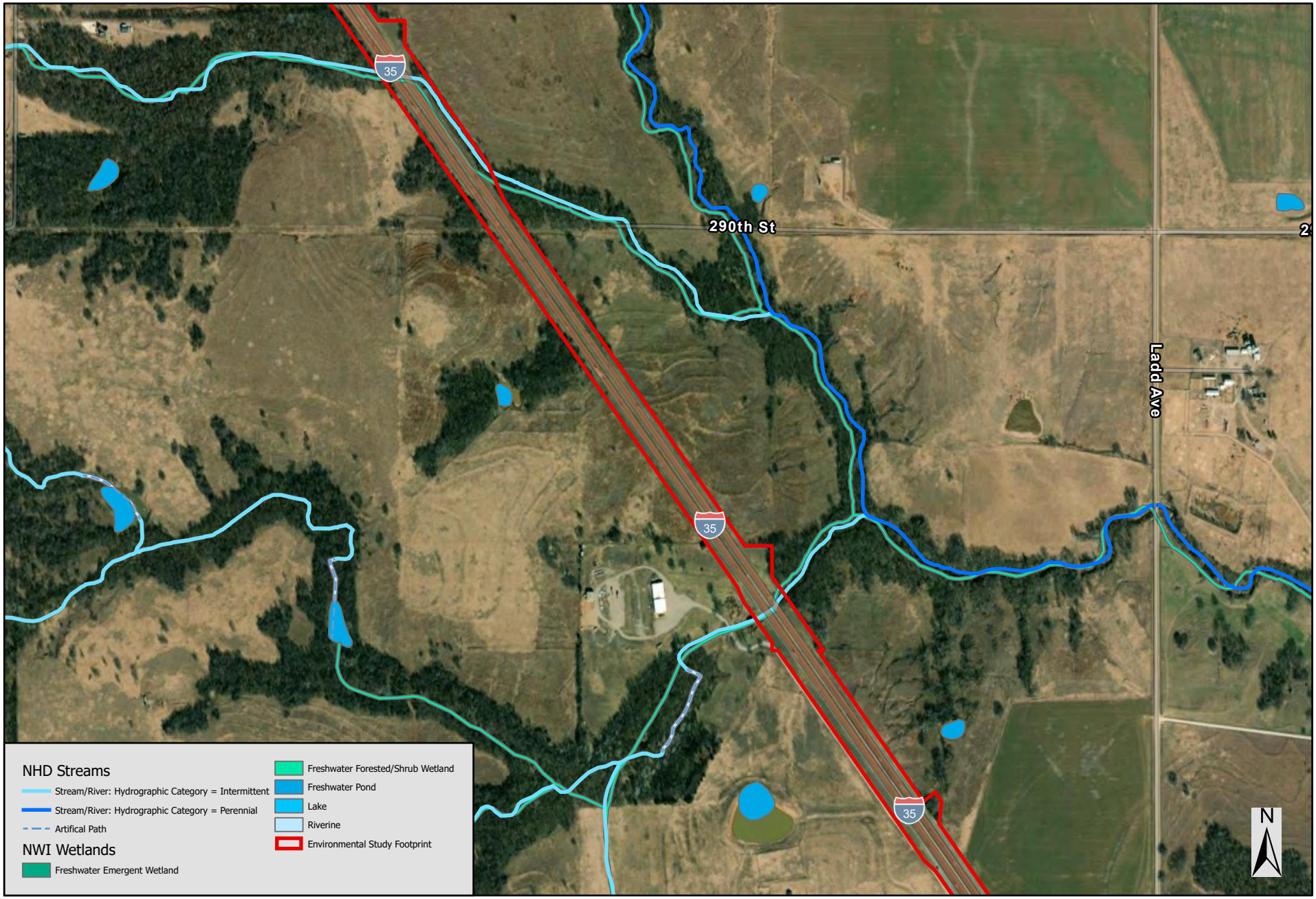

Figure 4b

NHD and NWI Mapped Features within the Environmental Study Footprint
McClain County JP 35588(04) & 35589(04)
I-35: GRADE, DRAIN, BRIDGE & SURFACE FROM THE SH-74 INTERCHANGE, EXTEND NORTH 2.75 MILES TO THE CLEVELAND COUNTY LINE & FROM 1 MILE SOUTH OF LADD ROAD, EXTEND NORTH 4.15 MILES TO THE SH-74 INTERCHANGE

0 0.0375 0.075 0.15
Miles

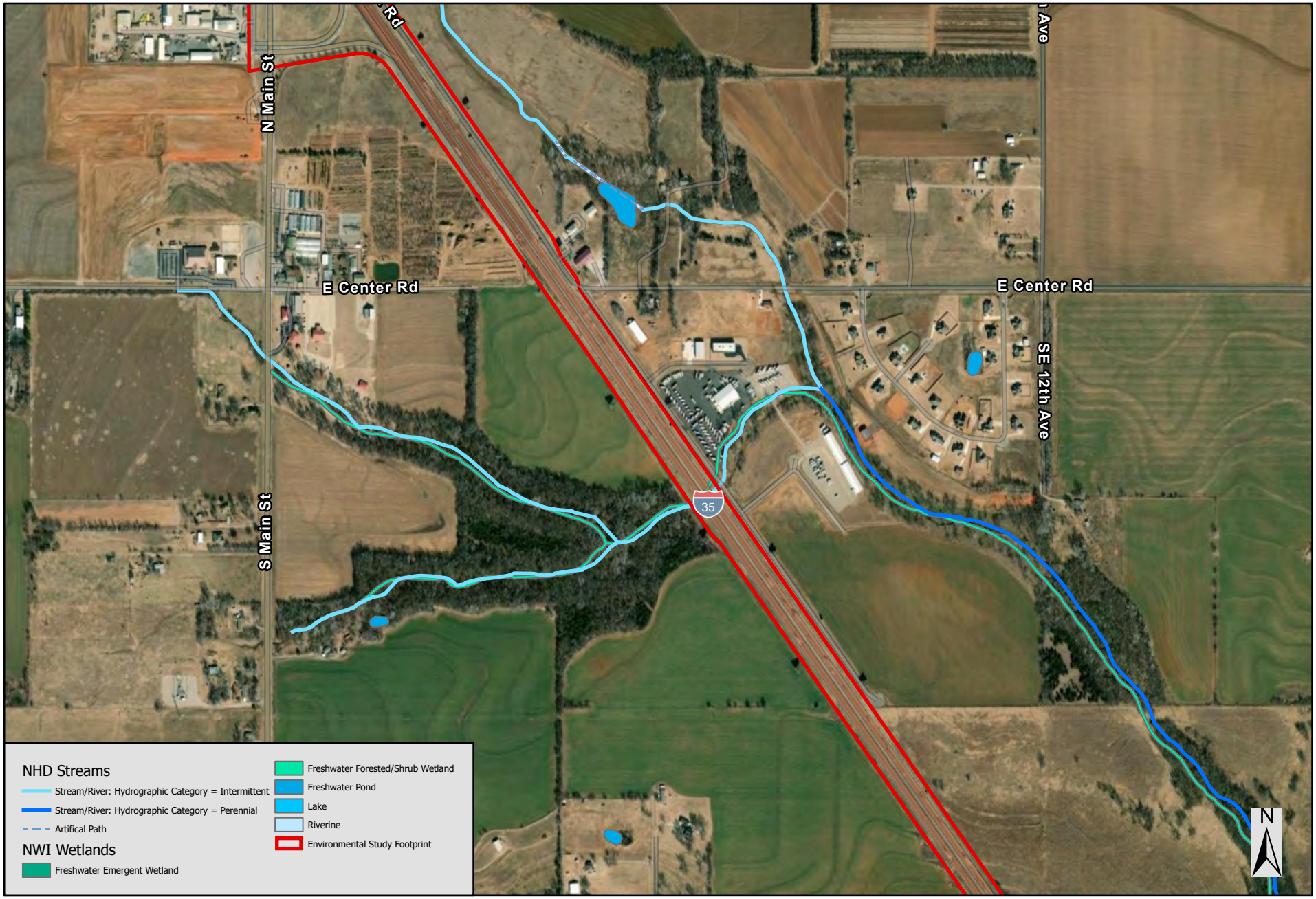

Figure 4c

NHD and NWI Mapped Features within the Environmental Study Footprint
McClain County JP 35588(04) & 35589(04)
I-35: GRADE, DRAIN, BRIDGE & SURFACE FROM THE SH-74 INTERCHANGE, EXTEND NORTH 2.75 MILES TO THE CLEVELAND COUNTY LINE & FROM 1 MILE SOUTH OF LADD ROAD, EXTEND NORTH 4.15 MILES TO THE SH-74 INTERCHANGE

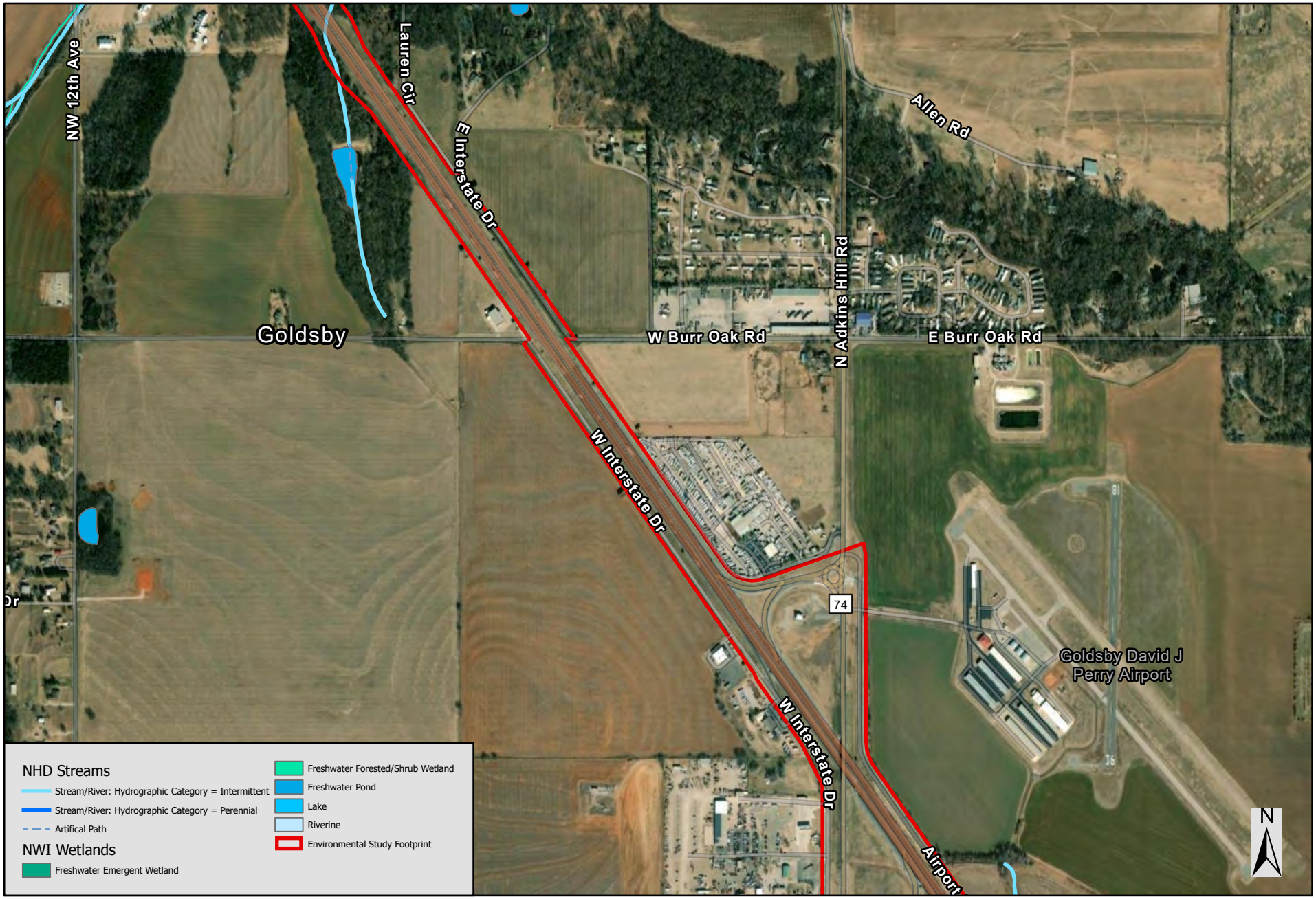

Figure 4d	NHD and NWI Mapped Features within the Environmental Study Footprint McClain County JP 35588(04) & 35589(04) I-35: GRADE, DRAIN, BRIDGE & SURFACE FROM THE SH-74 INTERCHANGE, EXTEND NORTH 2.75 MILES TO THE CLEVELAND COUNTY LINE & FROM 1 MILE SOUTH OF LADD ROAD, EXTEND NORTH 4.15 MILES TO THE SH-74 INTERCHANGE

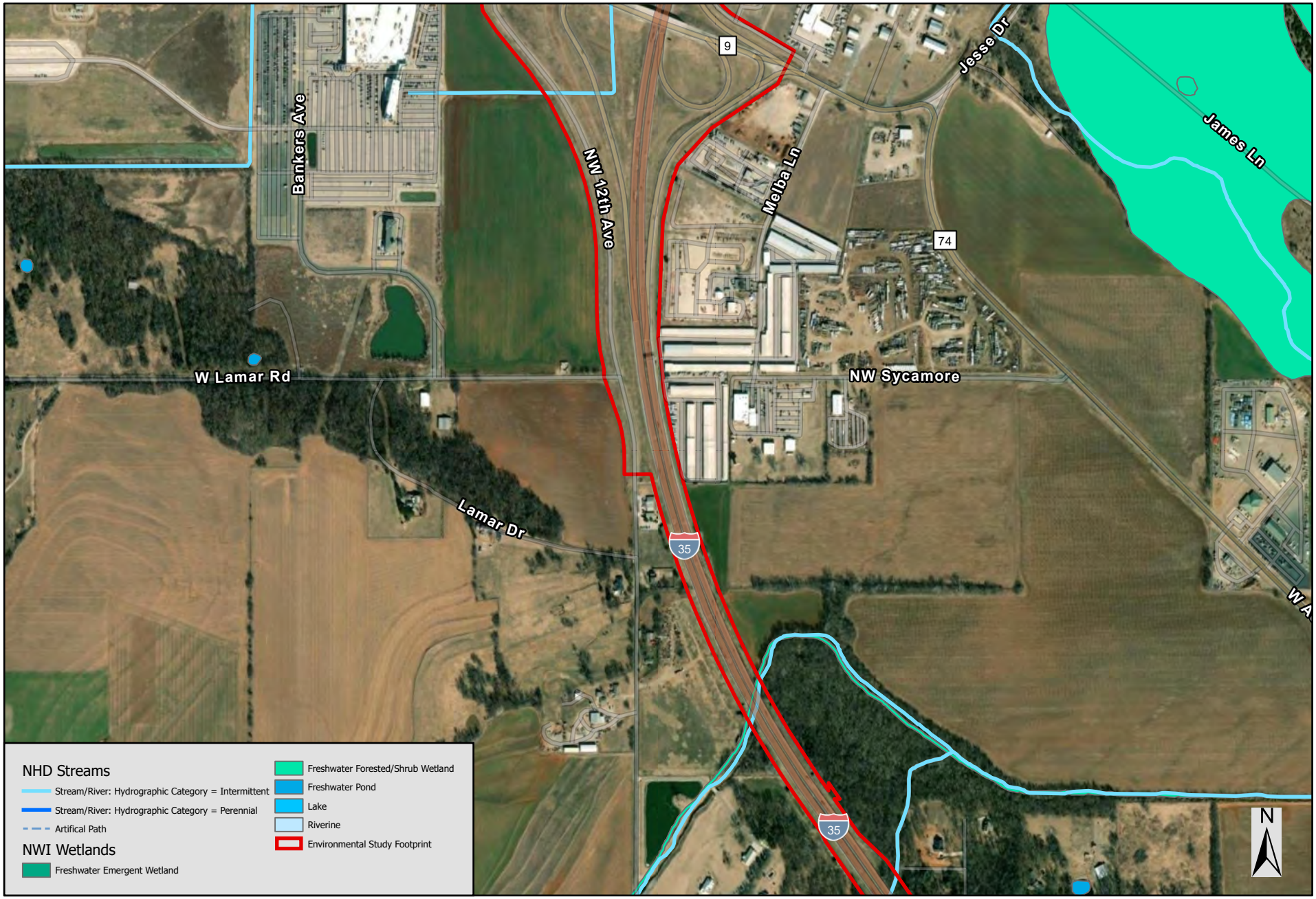

Figure 4e

NHD and NWI Mapped Features within the Environmental Study Footprint
McClain County JP 35588(04) & 35589(04)
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0 0.0375 0.075 0.15
Miles

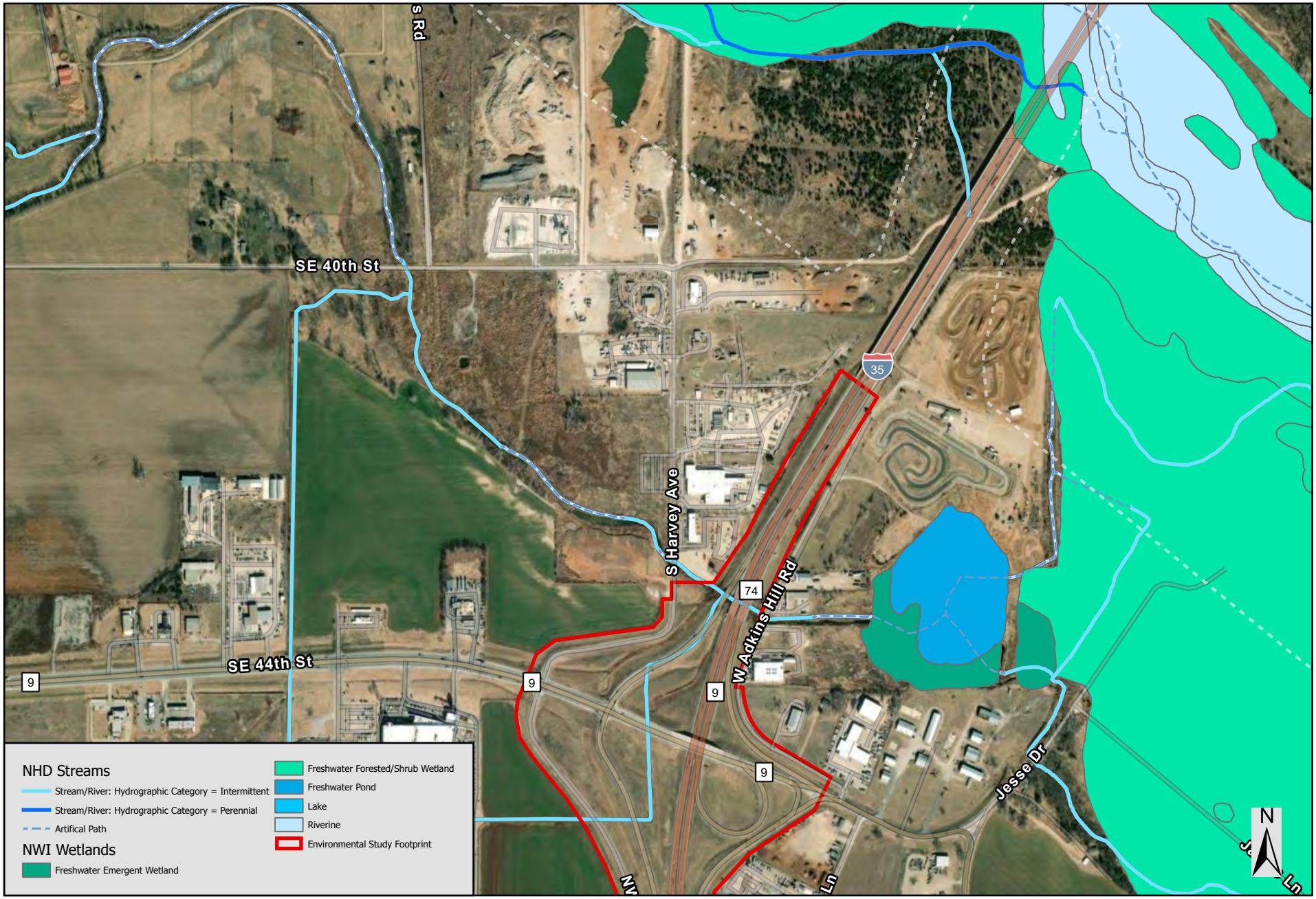


Figure 4f

NHD and NWI Mapped Features within the Environmental Study Footprint
McClain County JP 35588(04) & 35589(04)
I-35: GRADE, DRAIN, BRIDGE & SURFACE FROM THE SH-74 INTERCHANGE, EXTEND NORTH 2.75 MILES TO THE CLEVELAND COUNTY LINE & FROM 1 MILE SOUTH OF LADD ROAD, EXTEND NORTH 4.15 MILES TO THE SH-74 INTERCHANGE

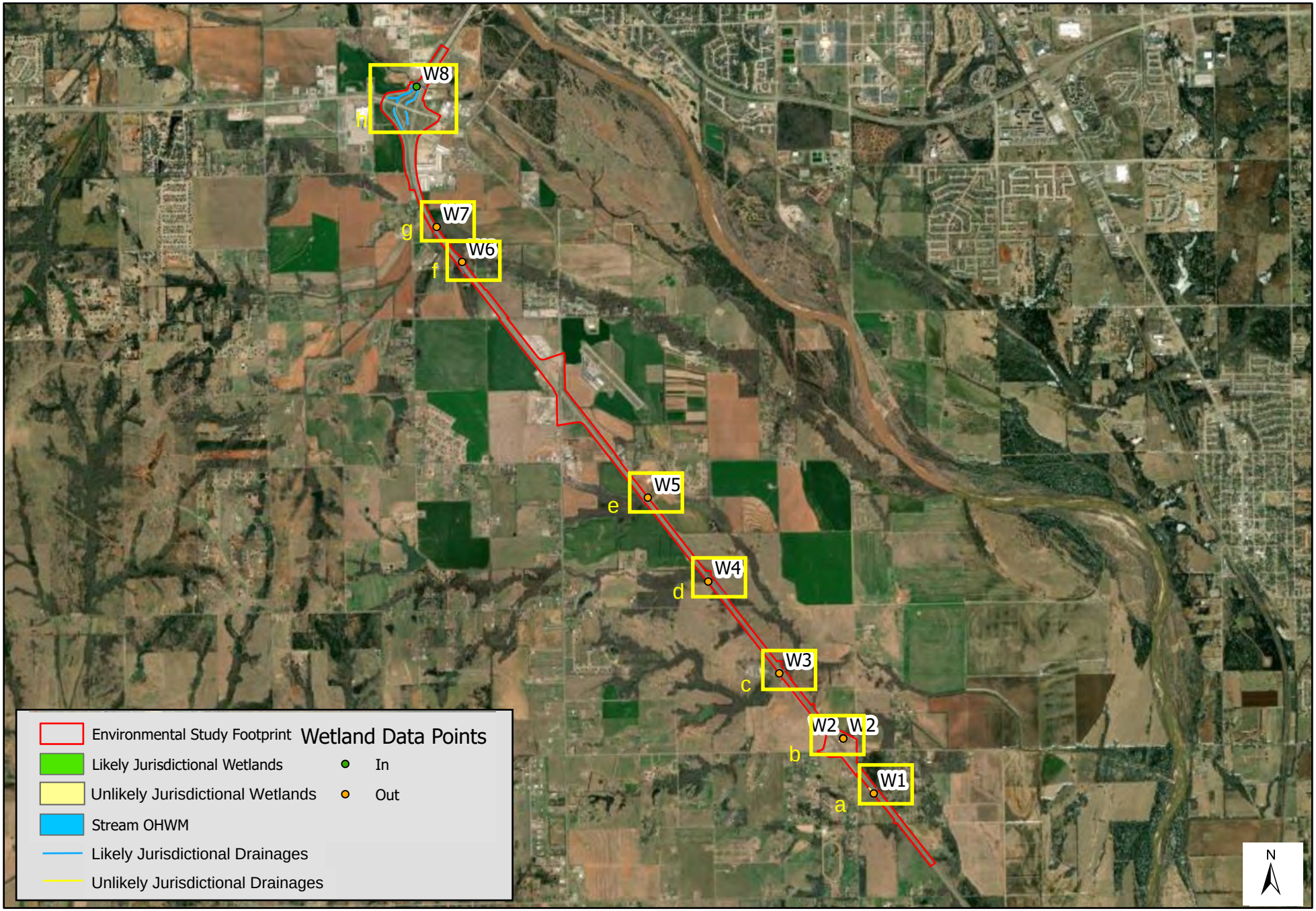


Figure 5

Aquatic Resources Observed within the Environmental Study Footprint
McClain County JP 35588(04) & 35589(04)
I-35: GRADE, DRAIN, BRIDGE & SURFACE FROM THE SH-74 INTERCHANGE, EXTEND NORTH 2.75 MILES TO THE CLEVELAND COUNTY LINE & FROM 1 MILE SOUTH OF LADD ROAD, EXTEND NORTH 4.15 MILES TO THE SH-74 INTERCHANGE

Figure 5a

Aquatic Resources Observed within the Environmental Study Footprint
McClain County JP 35588(04) & 35589(04)
I-35: GRADE, DRAIN, BRIDGE & SURFACE FROM THE SH-74 INTERCHANGE, EXTEND NORTH 2.75 MILES TO THE CLEVELAND COUNTY LINE & FROM 1 MILE SOUTH OF LADD ROAD, EXTEND NORTH 4.15 MILES TO THE SH-74 INTERCHANGE

Figure 5b

Aquatic Resources Observed within the Environmental Study Footprint
McClain County JP 35588(04) & 35589(04)
I-35: GRADE, DRAIN, BRIDGE & SURFACE FROM THE SH-74 INTERCHANGE, EXTEND NORTH 2.75 MILES TO THE CLEVELAND COUNTY LINE & FROM 1 MILE SOUTH OF LADD ROAD, EXTEND NORTH 4.15 MILES TO THE SH-74 INTERCHANGE

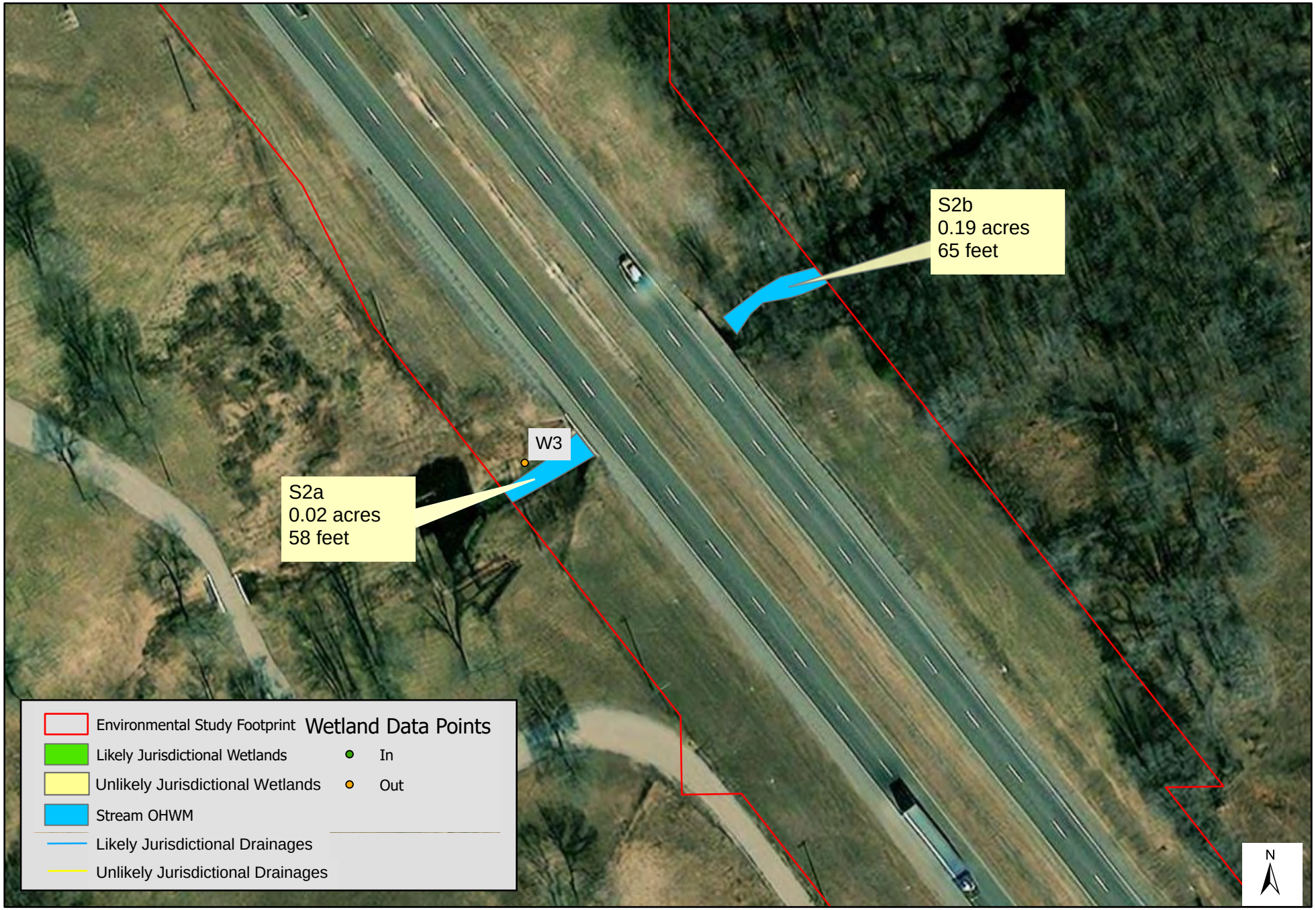


Figure 5c

Aquatic Resources Observed within the Environmental Study Footprint
McClain County JP 35588(04) & 35589(04)
I-35: GRADE, DRAIN, BRIDGE & SURFACE FROM THE SH-74 INTERCHANGE, EXTEND NORTH 2.75 MILES TO THE CLEVELAND COUNTY LINE & FROM 1 MILE SOUTH OF LADD ROAD, EXTEND NORTH 4.15 MILES TO THE SH-74 INTERCHANGE

Figure 5d

Aquatic Resources Observed within the Environmental Study Footprint
McClain County JP 35588(04) & 35589(04)
I-35: GRADE, DRAIN, BRIDGE & SURFACE FROM THE SH-74 INTERCHANGE, EXTEND NORTH 2.75 MILES TO THE CLEVELAND COUNTY LINE & FROM 1 MILE SOUTH OF LADD ROAD, EXTEND NORTH 4.15 MILES TO THE SH-74 INTERCHANGE

Figure 5e

Aquatic Resources Observed within the Environmental Study Footprint
McClain County JP 35588(04) & 35589(04)
I-35: GRADE, DRAIN, BRIDGE & SURFACE FROM THE SH-74 INTERCHANGE, EXTEND NORTH 2.75 MILES TO THE CLEVELAND COUNTY LINE & FROM 1 MILE SOUTH OF LADD ROAD, EXTEND NORTH 4.15 MILES TO THE SH-74 INTERCHANGE

Figure 5f

Aquatic Resources Observed within the Environmental Study Footprint
McClain County JP 35588(04) & 35589(04)
I-35: GRADE, DRAIN, BRIDGE & SURFACE FROM THE SH-74 INTERCHANGE, EXTEND NORTH 2.75 MILES TO THE CLEVELAND COUNTY LINE & FROM 1 MILE SOUTH OF LADD ROAD, EXTEND NORTH 4.15 MILES TO THE SH-74 INTERCHANGE

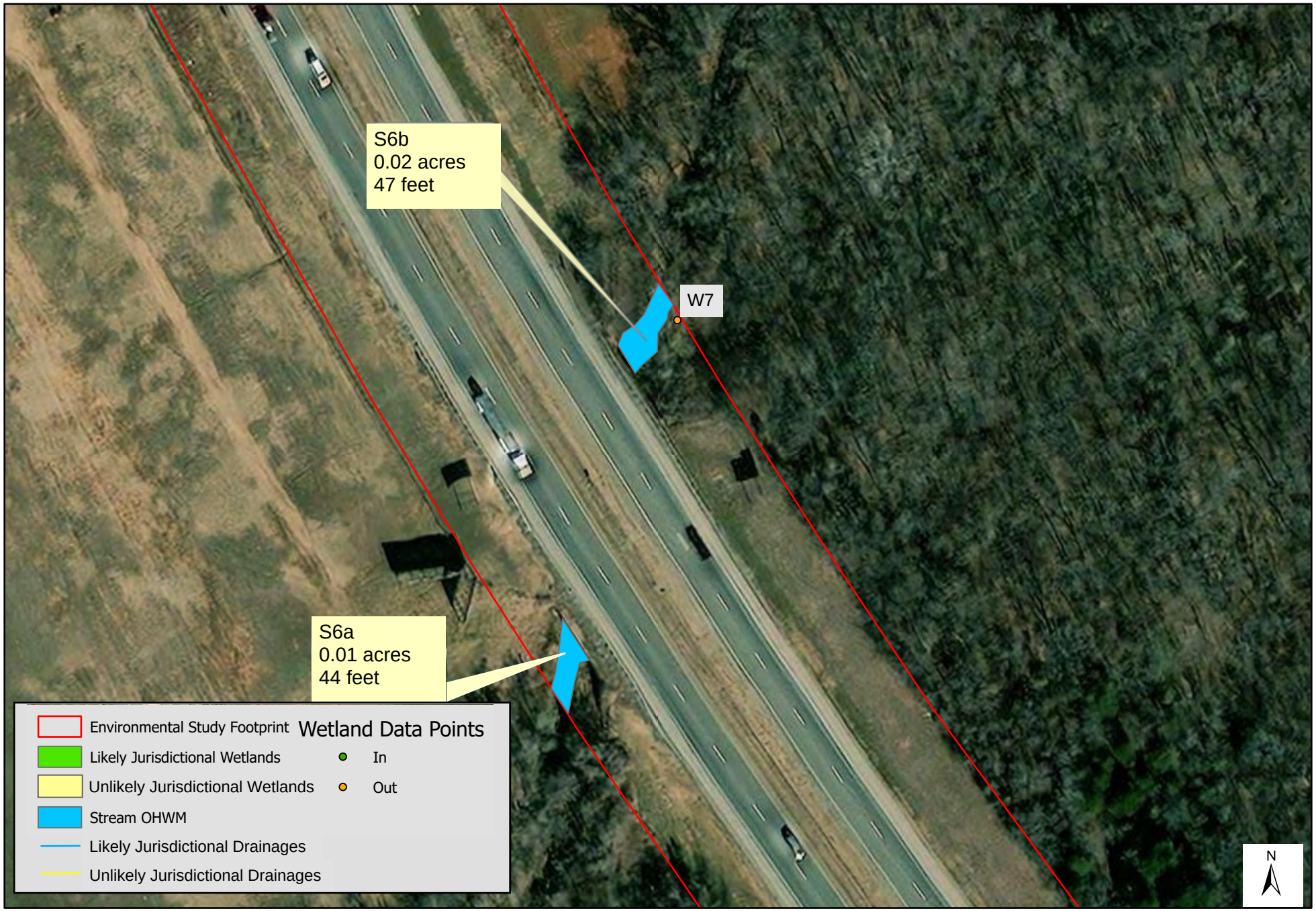


Figure 5g

Aquatic Resources Observed within the Environmental Study Footprint
McClain County JP 35588(04) & 35589(04)
I-35: GRADE, DRAIN, BRIDGE & SURFACE FROM THE SH-74 INTERCHANGE, EXTEND NORTH 2.75 MILES TO THE CLEVELAND COUNTY LINE & FROM 1 MILE SOUTH OF LADD ROAD, EXTEND NORTH 4.15 MILES TO THE SH-74 INTERCHANGE

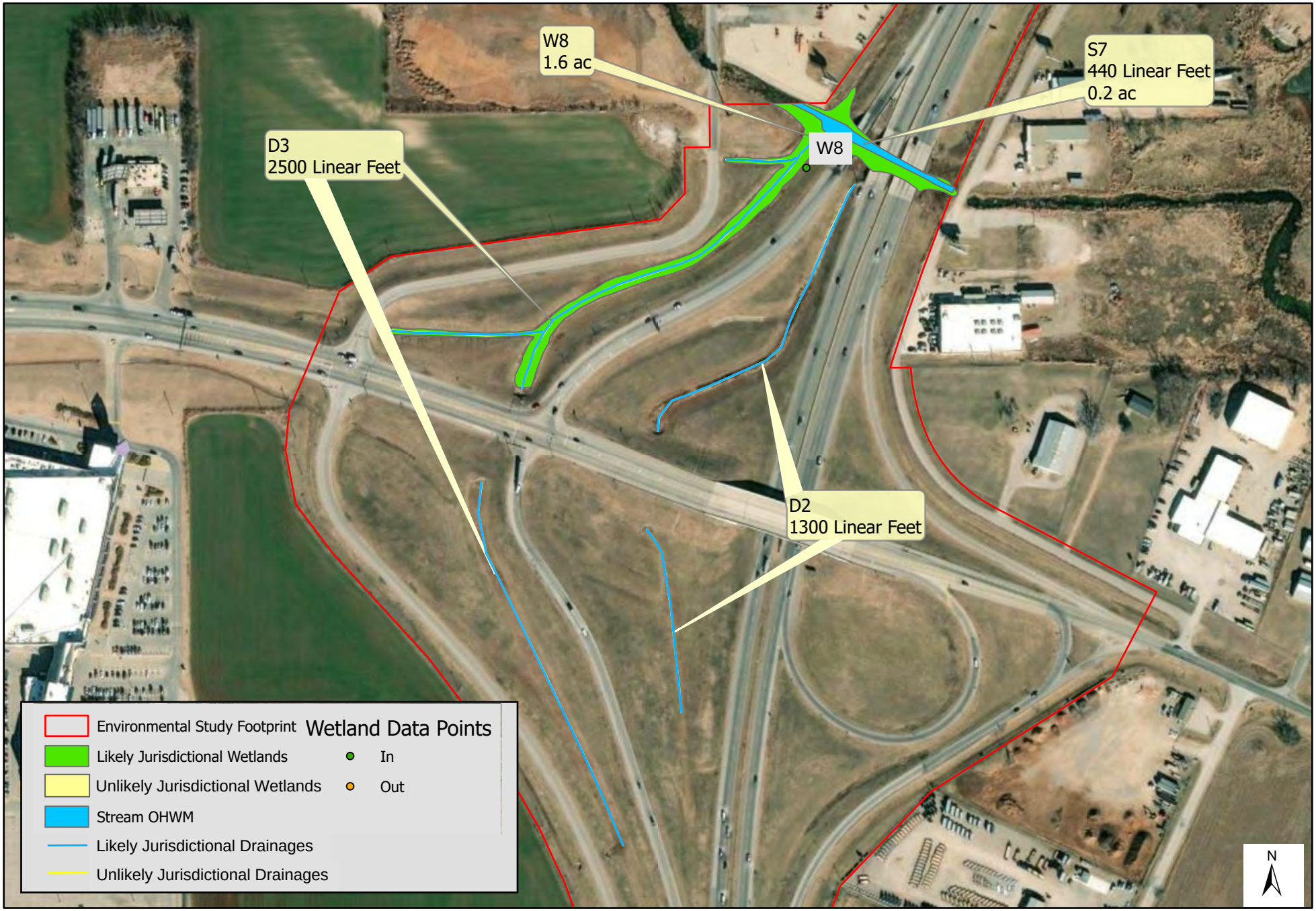


Figure 5h

Aquatic Resources Observed within the Environmental Study Footprint
McClain County JP 35588(04) & 35589(04)
I-35: GRADE, DRAIN, BRIDGE & SURFACE FROM THE SH-74 INTERCHANGE, EXTEND NORTH 2.75 MILES TO THE CLEVELAND COUNTY LINE & FROM 1 MILE SOUTH OF LADD ROAD, EXTEND NORTH 4.15 MILES TO THE SH-74 INTERCHANGE

1. S1, looking upstream.

2. S2 looking upstream

3. S3 looking downstream,

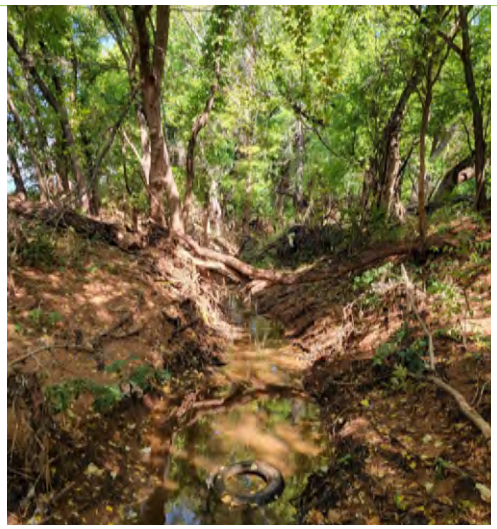
4. S3 looking upstream

5. S4 Looking upstream

6. S4 looking downstream

7. S5 looking downstream

8. S5 looking upstream



9. S6 looking downstream

10. S6 looking upstream

11. S7 upstream

12. S7 downstream

13. View of emergent wetland, W2

14. View of emergent wetland, W8

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: McClain County - I-35 City/County: McClain County Sampling Date: 2022-10-11

Applicant/Owner: ODOT State: OK Sampling Point: W2 IN

Investigator(s): Nathan Hillis - Hannah Clark Section, Township, Range: S31, T8N, R2W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 2-5%

Subregion (LRR): Great Plains Lat: 35.118264 Long: -97.443375 Datum: NAD83

Soil Map Unit Name: Pond Creek silt loam, 1 to 3 percent slopes NWI classification: PEM

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 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 features, etc.

Hydrophytic Vegetation Present?	Yes X No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X No _____	
Wetland Hydrology Present?	Yes X 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.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix nigra	15		FACW
2.			
3.			
4.			
	15 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Typha latifolia	90	X	OBL
2. Toxicodendron rydbergii	5		FACU
3. Eleocharis palustris	10		OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	105 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	100	x 1 =	100
FACW species	15	x 2 =	30
FAC species	0	x 3 =	0
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	120 (A)		150 (B)

Prevalence Index = B/A = 1.25

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks: Hydrophytic vegetation is present at this point.

SOIL

Sampling Point: W2 IN

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0 4	5yr4 6	100					CL	
4 26	75yr4 2	90					SCL	
	75yr 4 6	10					SCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** _____

Remarks: Hydric soils were present at this point.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)
- ___ 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? (includes capillary fringe) Yes X No ___ Depth (inches): 0

Wetland Hydrology Present? **Yes** X **No** _____

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

Remarks: Wetland hydrology was present at this site.

Wetland _____ **Sample Point** W2 IN

Longitude	Latitude
-97.443375	35.118264

Cowardin Classification: _____

Size: _____

Landform: Depression

Tree Stratum: Salix nigra

Sapling/Shrub: _____

Herb Stratum: Typha latifolia Toxicodendron rydbergii Eleocharis palustris

Vine Stratum: _____

Hydric Soil Indicators: Depleted Matrix

Hydrology Indicators: Saturation;Surface Water

Significant Nexus: _____ Adjacent: _____ Abuts: _____ Stream Name: _____

Jurisdictional Status and Comments:

Photo 1

Photo 2

Photo 3

Photo 4

WETLAND DETERMINATION DATA FORM – Great Plains Region

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, convex, none): Convex Slope (%): _____

Subregion (LRR): Great Plains Lat: 35.118246 Long: -97.443343 Datum: NAD83

Soil Map Unit Name: Pond Creek silt loam, 1 to 3 percent slopes NWI classification: N/A

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 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 features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	

Remarks: W2-Out is an upland point associated with an emergent wetland. Hydric soils, wetland hydrology, and hydrophytic vegetation were absent from this point.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Cynodon dactylon	95	X	FACU
2. Sorghastrum nutans	5		FACU
3. Desmanthus illinoensis	5		FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	105 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 000% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	105	x 4 =	420
UPL species	0	x 5 =	0
Column Totals:	105 (A)		420 (B)

Prevalence Index = B/A = 4

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: Hydrophytic vegetation is absent from this point.

SOIL

Sampling Point: W2 Out

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 36	75 yr 4 3	95					SCL	
	5yr 4 6						SCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ 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**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks: Hydric soils are absent from this point.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

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 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** W2 Out

Longitude	Latitude
-97.443343	35.118246

Cowardin Classification: _____

Size: _____

Landform: Hillslope

Tree Stratum: _____

Sapling/Shrub: _____

Herb Stratum: Cynodon dactylon Sorghastrum nutans Desmanthus illinoensis

Vine Stratum: _____

Hydric Soil Indicators: _____

Hydrology Indicators: _____

Significant Nexus: _____ Adjacent: _____ Abuts: _____ Stream Name: _____

Jurisdictional Status and Comments:

Photo 1

Photo 2

Photo 3

Photo 4

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: McClain County - I-35 City/County: McClain Sampling Date: 2022-10-11

Applicant/Owner: ODOT State: OK Sampling Point: W3 Out

Investigator(s): Nathan Hillis - Hannah Clark Section, Township, Range: S31, T8N, R2W

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 5-10%

Subregion (LRR): Great Plains Lat: 35.124820 Long: -97.450954 Datum: NAD83

Soil Map Unit Name: Ashport, Port and Pulaski soils, 0 to 1 percent slopes, frequently flooded NWI classification: N/A

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 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 features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	

Remarks: W3-out is an upland point associated with a intermittent stream. Wetland hydrology, hydric soils, and hydrophytic vegetation are not present at this point.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix nigra	10		FACW
2.			
3.			
4.			
	10 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Sorghum halepense	85	X	FACU
2. Setaria adhaerens	10		UPL
3. Toxicodendron radicans	5		FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 000% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	0	x 3 =	0
FACU species	90	x 4 =	360
UPL species	10	x 5 =	50
Column Totals:	110 (A)		430 (B)

Prevalence Index = B/A = 3.9090909090909

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: Hydrophytic vegetation is absent from this point.

SOIL

Sampling Point: W3 Out

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-30	75yr 4/4	75					SCL	
	75yr 4/6	25					SCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ 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**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks: Hydric soils are absent from this point.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

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** W3 Out

Longitude	Latitude
-97.450954	35.124820

Cowardin Classification: _____

Size: _____

Landform: Hillslope

Tree Stratum: Salix nigra

Sapling/Shrub: _____

Herb Stratum: Sorghum halepense Setaria adhaerens Toxicodendron radicans

Vine Stratum: _____

Hydric Soil Indicators: _____

Hydrology Indicators: _____

Significant Nexus: _____ Adjacent: _____ Abuts: _____ Stream Name: _____

Jurisdictional Status and Comments:

Photo 1

Photo 2

Photo 3

Photo 4

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: McClain County - I-35 City/County: McClain Sampling Date: 2022-10-11

Applicant/Owner: ODOT State: OK Sampling Point: W4 Out

Investigator(s): Nathan Hillis - Hannah Clark Section, Township, Range: S25, T8N. R3W

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 2-5%

Subregion (LRR): Great Plains Lat: 35.134052 Long: -97.459372 Datum: NAD83

Soil Map Unit Name: Ashport, Port and Pulaski soils, 0 to 1 percent slopes, frequently flooded NWI classification: N/A

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 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 features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	

Remarks: W4-Out is an upland point associated with an intermittent stream. Hydrophytic vegetation, hydric soils and wetland hydrology is absent from this point.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Ulmus americana	30	X	FAC
2. Catalpa bignonioides	30		UPL
3. Morus alba	15		FACU
4.			
	75 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1. Ulmus americana	15		FAC
2.			
3.			
4.			
5.			
	15 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Cynodon dactylon	60	X	FACU
2. Euphorbia marginata	5		FACU
3. Ambrosia trifida	10		FAC
4. Lespedeza cuneata	5		FACU
5.			
6.			
7.			
8.			
9.			
10.			
	80 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	55	x 3 =	165
FACU species	85	x 4 =	340
UPL species	30	x 5 =	150
Column Totals:	170 (A)		655 (B)

Prevalence Index = B/A = 3.8529411764705

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: Hydrophytic vegetation is absent from this point.

SOIL

Sampling Point: W4 Out

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-30	7.5yr 4/4	100					SCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ 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**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks: Hydric soils are absent from this point.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

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** W4 Out

Longitude	Latitude
-97.459372	35.134052

Cowardin Classification: _____

Size: _____

Landform: Hillslope

Tree Stratum: Ulmus americana Catalpa bignonioides Morus alba

Sapling/Shrub: Ulmus americana

Herb Stratum: Cynodon dactylon Euphorbia marginata Ambrosia trifida

Vine Stratum: _____

Hydric Soil Indicators: _____

Hydrology Indicators: _____

Significant Nexus: _____ Adjacent: _____ Abuts: _____ Stream Name: _____

Jurisdictional Status and Comments:

Photo 1

Photo 2

Photo 3

Photo 4

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: McClain County - I-35 City/County: McClain Sampling Date: 2022-10-11

Applicant/Owner: ODOT State: OK Sampling Point: W5 Out

Investigator(s): Nathan Hillis - Hannah Clark Section, Township, Range: T25, T8N, R3W

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 5-10%

Subregion (LRR): Great Plains Lat: 35.142481 Long: -97.466516 Datum: NAD83

Soil Map Unit Name: Grant-Port, frequently flooded, complex, 0 to 12 percent slopes NWI classification: N/A

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 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 features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	

Remarks: W5 Out is an upland point associated with an intermittent stream. Hydrophytic vegetation, hydric soils, and wetland hydrology are absent from this point.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Sorghum halepense	80	X	FACU
2. Helianthus annuus	10		FACU
3. Toxicodendron radicans	5		FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	95 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 000% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	95	x 4 =	380
UPL species	0	x 5 =	0
Column Totals:	95 (A)		380 (B)

Prevalence Index = B/A = 4

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: Hydrophytic vegetation is absent from this point.

SOIL

Sampling Point: W5 Out

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-30	7.5yr4/6	50					SICL	
	7.5yr 4/4	50						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ 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**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks: Hydric soils are absent from this point.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

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 Hydrology Present? Yes _____ No X

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

Remarks: Wetland hydrology is absent.

Wetland _____ **Sample Point** W5 Out

Longitude	Latitude
-97.466516	35.142481

Cowardin Classification: _____

Size: _____

Landform: Hillslope

Tree Stratum: _____

Sapling/Shrub: _____

Herb Stratum: Sorghum halepense Helianthus annuus Toxicodendron radicans

Vine Stratum: _____

Hydric Soil Indicators: _____

Hydrology Indicators: _____

Significant Nexus: _____ Adjacent: _____ Abuts: _____ Stream Name: _____

Jurisdictional Status and Comments:

Photo 1

Photo 2

Photo 3

Photo 4

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: McClain County - I-35 City/County: McClain Sampling Date: 2022-10-11

Applicant/Owner: ODOT State: OK Sampling Point: W7 Out

Investigator(s): Nathan Hillis - Hannah Clark Section, Township, Range: S14, T8N, R3W

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): _____

Subregion (LRR): Great Plains Lat: 35.169693 Long: -97.491552 Datum: NAD83

Soil Map Unit Name: Port silt loam, 0 to 1 percent slopes, occasionally flooded NWI classification: N/A

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 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 features, etc.

Hydrophytic Vegetation Present?	Yes _____ No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____ No X	
Wetland Hydrology Present?	Yes _____ No X	

Remarks: W7 Out is an upland point associated with an intermittent stream. Hydrophytic vegetation, hydric soils and wetland hydrology are absent from this point.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Ulmus americana	70	X	FAC
2. Carya illinoinensis	15		FAC
3. Morus alba	10		FACU
4.			
	95	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1. Carya illinoinensis	5		FAC
2.			
3.			
4.			
5.			
	5	= Total Cover	
Herb Stratum (Plot size: _____)			
1. Ambrosia artemisiifolia	20	X	FACU
2. Symphoricarpos orbiculatus	15	X	FACU
3. Toxicodendron radicans	15	X	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	50	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1. Toxicodendron radicans	5		FACU
2.			
	5	= Total Cover	

% Bare Ground in Herb Stratum 95

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	90	x 3 =	270
FACU species	65	x 4 =	260
UPL species	0	x 5 =	0
Column Totals:	155 (A)		530 (B)

Prevalence Index = B/A = 3.4193548387096

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: Hydrophytic vegetation is absent from this point.

SOIL

Sampling Point: W7 Out

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-30	7.5yr4/4	100					SICL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ 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**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks: Hydric soils are absent from this point.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) (**LRR F**)

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 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** W7 Out

Longitude	Latitude
-97.491552	35.169693

Cowardin Classification: _____

Size: _____

Landform: Hillslope

Tree Stratum: Ulmus americana Carya illinoinensis Morus alba

Sapling/Shrub: Carya illinoinensis

Herb Stratum: Ambrosia artemisiifolia Symphoricarpos orbiculatus Toxicodendron radica

Vine Stratum: Toxicodendron radicans

Hydric Soil Indicators: _____

Hydrology Indicators: _____

Significant Nexus: _____ Adjacent: _____ Abuts: _____ Stream Name: _____

Jurisdictional Status and Comments:

Photo 1

Photo 2

Photo 3

Photo 4

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: McClain County - I-35 City/County: McClain Sampling Date: 2022-10-11

Applicant/Owner: ODOT State: OK Sampling Point: W8 In

Investigator(s): Nathan Hillis - Hannah Clark Section, Township, Range: S11, T8N, R3W

Landform (hillslope, terrace, etc.): Channel Local relief (concave, convex, none): Concave Slope (%): 2-5%

Subregion (LRR): Great Plains Lat: 35.183654 Long: -97.493722 Datum: NAD83

Soil Map Unit Name: Keokuk loam, 0 to 1 percent slopes, rarely flooded NWI classification: N/A

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 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 features, etc.

Hydrophytic Vegetation Present?	Yes X No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X No _____	
Wetland Hydrology Present?	Yes X No _____	

Remarks: W8 - In is a wetland point associated with a long wetland that is associated with a drainage and stream. Hydrophytic vegetation, hydric soils and wetland hydrology.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.	15	X	
2.			
3.			
4.			
	15 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Typha latifolia	50	X	OBL
2. Phragmites australis	50	X	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index worksheet:

	Total % Cover of:	Multiply by:
OBL species	50	x 1 = 50
FACW species	50	x 2 = 100
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	100 (A)	150 (B)

Prevalence Index = B/A = 1.5

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks: Hydrophytic vegetation is present at this point.

SOIL

Sampling Point: W8 In

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 6	7yr 3 2	100					SIl	
6 24	75yr4 3	80	25yr56	10	C	M	SIl	
6 24	75yr 42	10					SCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR F**)
- ___ 1 cm Muck (A9) (**LRR F, G, H**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) (**LRR G, H**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR F**)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR I, J**)
- ___ Coast Prairie Redox (A16) (**LRR F, G, H**)
- ___ Dark Surface (S7) (**LRR G**)
- ___ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** _____

Remarks: Hydric soils are present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ 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)
- X Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)
- ___ 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? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? **Yes** X **No** _____

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

Remarks: Wetland hydrology is present at this point.

Wetland _____ **Sample Point** W8 In _____

Longitude	Latitude
-97.493722	35.183654

Cowardin Classification: _____

Size: _____

Landform: Channel _____

Tree Stratum: _____

Sapling/Shrub: _____

Herb Stratum: Typha latifolia Phragmites australis _____

Vine Stratum: _____

Hydric Soil Indicators: Depleted Matrix _____

Hydrology Indicators: Inundation Visible on Aerial Imagery _____

Significant Nexus: _____ Adjacent: _____ Abuts: _____ Stream Name: _____

Jurisdictional Status and Comments:

Photo 1

Photo 2

Photo 3

Photo 4