

1250 West Century Avenue Mailing Address: P.O. Box 5601 Bismarck, ND 58506-5601 (701) 530-1600

February 10, 2023

Kimberly D. Bose, Secretary Federal Energy Regulatory Commission 888 First Street, N.E., Room 1A Washington, D.C. 20426

Re: WBI Energy Transmission, Inc. Wahpeton Expansion Project Docket No. CP22-466-000 FERC/EIS-0325D

Dear Ms. Bose:

WBI Energy Transmission, Inc. (WBI Energy), herewith offers its response to certain comments submitted to the Federal Energy Regulatory Commission regarding the November 2022 Draft Environmental Impact Statement for the Wahpeton Expansion Project in the above referenced docket.

Pursuant to 18 CFR § 385.2010 of the Commission's regulations, copies of responses are being served to each person whose name appears on the official service list for this proceeding.

Any questions regarding this filing should be addressed to the undersigned at (701) 530-1563.

Sincerely,

/s/ Lori Myerchin

Lori Myerchin Director, Regulatory Affairs and Transportation Services

Attachments

cc: via email

David Hanobic, FERC Project Manager Dawn Ramsey, FERC Douglas Mooneyhan, Stantec Lavinia DiSanto, Stantec Official Service List

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated this 10th day of February 2023.

By <u>/s/ Lori Myerchin</u> Lori Myerchin Director, Regulatory Affairs and Transportation Services WBI Energy Transmission, Inc. 1250 West Century Avenue Bismarck, ND 58503 Telephone: (701) 530-1563

Responses to Comments on the Draft Environmental Impact Statement

The Federal Energy Regulatory Commission (FERC) received comments on the Draft Environmental Impact Statement (Draft EIS) issued on November 3, 2022 from Jolene/Kelly/Brady Miller, the North Dakota Department of Water Resources (ND DWR), and the U.S. Environmental Protection Agency (USEPA). WBI Energy is responding to certain comments to provide additional information or clarity that may help FERC staff in developing the Final Environmental Impact Statement.

Miller – Pipeline Burial Depth

The Department of Transportation – Pipeline and Hazardous Materials Safety Administration's safety regulations (49 CFR 192.327) require pipelines located in Class I areas to have 30 inches of cover over the pipeline. Resource Report 8 states that in agricultural areas "the proposed pipeline will be installed with a minimum depth of cover of 48 inches to allow for continued agricultural use." WBI Energy will continue to work with landowners to consider requested alternate pipeline burial depths.

ND DWR - Floodplain Permitting

WBI Energy identified floodplain permits that would be needed from Mapleton Township and Normanna Township as shown in Table 1.8-1, Environmental Permits, Approvals and Consultations in Resource Report 1 and supplemental filing updates of this table. WBI Energy plans to work with local zoning departments/floodplain administrators to obtain applicable floodplain approvals, where needed, prior to construction.

ND DWR - Sheyenne River, Red River, and Bois De Sioux River Permitting

WBI Energy identified in section 2.2.1 of Resource Report 2 that crossing the Sheyenne River will require a Navigable Water Crossing Permit and included this permit in Table 1.8-1, Environmental Permits, Approvals and Consultations in Resource Report 1 and supplemental filing updates of this table. The Project does not cross the Red River or Bois De Sioux River, and therefore does not require a Navigable Water Crossing Permit for these waterbodies. WBI Energy plans to submit the necessary Navigable Water Crossing application to gain the necessary permit associated with the Sheyenne River prior to construction.

ND DWR - Wetlands and Surface Drainage Permit

WBI Energy has submitted a Pre-Construction Notification to the USACE for verification of coverage under Nationwide Permit 12 (NWP 12) for Oil or Natural Gas Pipeline Activities under Section 404 of the Clean Water Act associated with wetland/waterbody impacts. The Project has been designed to avoid and minimize wetland/waterbody impacts to the maximum extent practicable. Temporary wetland impacts would consist of approximately 11.09 acres that will be rehabilitated post-construction. Less than 0.1 acre of two forested wetland areas would be permanently converted to herbaceous wetlands and less than 0.01 acre of permanent wetland fill (wetland wria003e) is proposed to widen a permanent access road. Based on the temporary fill, small amount of permanent fill necessary, and the use of trench plugs,

Responses to Comments on the Draft Environmental Impact Statement

as necessary, to prevent the inadvertent draining of wetlands, it is not anticipated that a surface draining permit would be applicable.

ND DWR – Water Appropriation Permit

As discussed in Section 2.2.4 of Resource Report 2, surface water withdrawals for construction related activities (i.e. dust suppression, hydrostatic testing, drilling mud) will be needed for the Project. WBI Energy identified a Temporary Water Appropriation Permit would be needed in Table 1.8-1, Environmental Permits, Approvals and Consultations in Resource Report 1 and supplemental filing updates of this table. WBI Energy plans to obtain the necessary Temporary Water Appropriation Permit for the use of water prior to construction.

USEPA – Emissions by Construction Phase

Unlike construction of compressor stations, liquefied natural gas facilities, or other non-linear facilities, Resource Report 1 explains that construction of pipelines involves a series of discrete activities conducted in a linear sequence. These include survey and staking; right-of-way clearing and grading; pipe stringing, bending, and welding; trenching; lowering-in and backfilling; hydrostatic testing; final tie-in; commissioning; and right-of-way cleanup and restoration. As such, individual construction crews may be located in any individual location along the pipeline for just a few days or less. Consistent with FERC's minimum filing requirements, FERC's Guidance Manual for Environmental Report Preparation, and other natural gas projects reviewed by FERC, WBI Energy provided detailed construction emission estimates broken down by county and facility type and used EPA's MOVES model to estimate emissions and determined emissions estimates will not provide additional clarity of the potential extent of air quality impacts that could be expected from construction of the Project.

USEPA – Emissions from Mapleton Compressor Station

The Mapleton Compressor Station is an existing facility that was previously reviewed and authorized by FERC as part of the Valley Expansion Project under Docket No. CP17-257-000. Section 1.1.2.2 of Resource Report 1 explains that the Project begins at the existing Mapleton Compressor Station and will include minor modifications to allow for the tie-in of the Project pipeline to WBI Energy's existing transmission system within the compressor station boundaries. Section 9.1.4 of Resource Report 9 states that the Project does not include any new emission sources at the compressor station and therefore results in no change to the overall potential emissions or existing air permitting of the station. Since the Project results in no changes to operating emissions at the compressor station, none were presented in the environmental report for the Project.

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USEPA – Dispersion Modeling

WBI Energy clarifies that the reference to performing dispersion modeling in Resource Report 9 was in error. No dispersion modeling was required or has been performed associated with the Project and WBI Energy agrees with the USEPA that FERC should delete references to dispersion modeling in the Final EIS.

USEPA – Guided Bore Contingency

WBI Energy provided a Guided Bore Drilling Fluid Monitoring and Operations Plan as Appendix 1F-2 to Resource Report 1. This plan includes WBI Energy's response methods in the event of an inadvertent return and contingency measures in the event a drill fails, including selection of a new drill path or considering alternate crossing measures. WBI Energy's plan explains that abandonment procedures and alternative crossing measures will be discussed with appropriate permitting and regulatory agencies and required approvals will be obtained prior to implementing alternative crossing measures.

USEPA – Waterbody Crossing Methodology

On December 22, 2022, WBI Energy provided updated information on waterbody crossings based on additional field surveys performed in 2022 and adopted minor project workspace adjustments and a reroute included in the Draft EIS. While performing consistency checks with revised alignment sheets requested in FERC's Environmental Information Request issued on January 20, 2023, WBI Energy identified an inconsistency in crossing method for two waterbodies in Table 2.2-2 – Waterbodies Crossed by the Project. Waterbodies srie006i and srie005i at milepost 34.5 will be crossed via a guided bore. These errors are corrected in the revised Table 2.2-2 below.

Of the 19 waterbodies crossed by the Project pipeline, 18 will be bored. One waterbody (srid001e) runs parallel and within the edge of the Project construction workspace but is not crossed by the pipeline. The guided bore method will avoid most direct and indirect impacts on aquatic resources and adjacent habitats. The one minor waterbody (srid001e) within the edge of construction workspace is a roadside ditch that does not support high quality aquatic habitat or resources. Regardless, per Section V.B.7.a of FERC's *Wetland and Waterbody Construction and Mitigation Procedures* (Procedures), all instream construction activities will be completed within 24 hours and waterbody banks will be stabilized and temporary sediment barriers installed within 24 hours of completing instream construction. If the waterbodies are dry at the time of crossing, stream bed and bank stabilization will be completed before returning flow to the waterbody channel.

As identified in in Table 1.8-1, Environmental Permits, Approvals and Consultations in Resource Report 1 and supplemental filing updates of this table, WBI Energy has submitted a Pre-Construction Notification to the USACE for verification of coverage under Nationwide Permit 12 (NWP 12) for Oil or Natural Gas Pipeline Activities under Section 404 of the Clean Water Act associated with wetland/waterbody impacts and will apply with applicable provisions of the NWP 12.

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To prevent or minimize the potential impact on wetlands and waterbodies from spills/leaks, Section 2.1.2 of WBI Energy's Spill Prevention, Control, and Countermeasure Plan (provided as appendix 1F-1 to Resource Report 1), states that all machinery will arrive on the right-of-way in a clean, washed condition and free of fluid leaks. WBI Energy's *Aquatic Nuisance Species Prevention Plan* (provided as appendix 3B to Resource Report 3) and *Noxious Weed management Plan* (provided as appendix 3C to Resource Report 3), include additional measures for inspection and cleaning of construction equipment.

	TABLE 2.2-2							
Wahpeton Expansion Project Waterbodies Crossed by the Project ^a								
MP	Unique ID	Waterbody Name ^b	North Dakota Water Quality Classification °	Flow Regime	Crossing width (feet) °	Pipeline Crossing Method ^f		
HUC 12	Watershed 09020	2050704						
1.2	scad001p	Maple River	Class II	PN	79	Bore		
HUC 12	Watershed 09020	2050603						
3.9	scaa002e	Unnamed tributary to the Maple River	Class III	Е	13	Bore		
5.9	scaa003e	Roadside ditch	Class III	Е	<10	Bore		
HUC 12	Watershed 09020	2040605						
10.7	scab001e	Roadside ditch	Class III	Е	<10	Bore		
10.7	scae002i	Roadside ditch	Class III	I	<10	Bore		
15.7	scae004e	Roadside ditch	Class III	Е	<10	Bore		
HUC 12	Watershed 09020	2040604						
19.7	scab005e	Roadside ditch	Class III	Е	<10	Bore		
23.3	scae003e	Roadside ditch	Class III	E	<10	Bore		
HUC 12	Watershed 09020	1051005						
24.1	scab006p	Sheyenne River	Class IA	PN	42	Bore		
HUC 12	Watershed 09020	1051005						
29.3	sria001e	Roadside ditch	Class III	Е	<10	Bore		
34.5	srie006i	Roadside ditch	Class III	I	<10	Bore		
34.5	srie005i	Roadside ditch	Class III	I	<10	Bore		
HUC 12	Watershed 09020	1051004						
39.9	sria002e	Unnamed ditch	Class III	Е	<10	Bore		
41.0	sric002p	Unnamed tributary to Wild Rice River	Class III	PN	23	Bore		
HUC 12	Watershed 09020	1051001						
45.0	srid002p	Pitcairn Creek	Class III	PN	15	Bore		
47.4	srid001e	Roadside ditch	Class III	Е	<10	NA ^g		
HUC 12	Watershed 09020	1050907						
50.9	srie004p	Antelope Creek	Class II	PN	27	Bore		
HUC 12	Watershed 09020	1050805						
51.1	srid003p	Wild Rice River	Class II	PN	297	Bore		
HUC 12	Watershed 09020	1050805						
58.0	srie001e	Roadside ditch	Class III	Е	<10	Bore		
Access	Roads							
HUC 12	Watershed 09020	2040605						
8.8	scaa004e	Roadside ditch	Class III	Е	<10	NA		
HUC 12	Watershed 09020	2040604						

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		TABL	E 2.2-2						
	Wahpeton Expansion Project Waterbodies Crossed by the Project ^a								
19.7	scab005e	Roadside ditch	Class III	Е	<10	NA			
HUC 1	2 Watershed 09020105	1005							
29.3	sria001e	Roadside ditch	Class III	Е	<10	NA			
HUC 1	2 Watershed 09020105	1001							
47.3	srid001e	Roadside ditch	Class III	Е	<10	NA			
Facilit	ies								
Wahpe	eton City Yard								
HUC 1	2 Watershed 09020104	0401							
60.5	srie003e	Roadside ditch	Class III	Е	<10	NA			
a	Dakota State Water	om Project field surveys to date, l Commission's geographic informa re based on USGS topographic n	ation system data viewer						
с	,	low for category definitions (NDD		o Close III etr	ame are speci	fically			
	identified in the Strea	am Classifications Table located i assified as Class III as a default b	n Appendix I of the NDD	EQ Standard	s of Quality for				
d		ys, National Hydrography Datase	•			on for			
	E = Ephemeral								
	NA = Not applicable	(USACE, 2012).							
		ased on field surveys and/or estir een used to supplement areas wh							
e				features					
e f	10-feet-wide has bee	en used for all intermittent National leport 1, section 1.3.2.1, for detail	al Hydrography Dataset f		od.				

<u>USEPA – Wetland Surveys</u>

WBI Energy completed additional field surveys in 2022 covering portions of the Project workspace that had not been surveyed in 2021 and covering the adopted minor project workspace adjustments and reroute identified in WBI Energy's December 22, 2022 Supplemental Information filing. WBI Energy has now surveyed 100 percent of the project workspaces. An Addendum Wetland and Waterbody delineation report was provided to USACE and is included as Attachment 1 to this comment response filing.

USEPA – Wetland Crossings via Guided Bore

On December 22, 2022, WBI Energy provided updated information on wetland crossings based on additional field surveys performed in 2022 and adopted minor project workspace adjustments and a reroute included in the Draft EIS. While performing consistency checks with revised alignment sheets requested in FERC's Environmental Information Request issued on January 20, 2023, WBI Energy identified an inconsistency in crossing method for three wetlands in Table 2E - Wetlands Crossed or

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Otherwise Affected by the Project. Wetlands wca001e and wca006e were identified as open cut and will be crossed via guided bore, and wetland wcaa005e was identified as guided bore and will be crossed via open cut. These errors are corrected in the revised Appendix 2E table below. Acreages of impact reported are not affected by these labeling errors.

Based on the updated wetland crossing information, the Project pipeline will now cross 22 wetlands via guided bore, 20 wetlands via open cut, and 1 wetland is partially crossed via guided bore and partially crossed via open cut (see the revised Appendix 2E table below).

The Project has been designed to avoid and minimize impacts to wetlands, streams, and other waterbodies to the extent practicable. In addition, wetlands and water resource open cut crossings have been designed to meet NWP 12 permit conditions and WBI Energy will minimize impacts on wetlands by implementing measures identified in the FERC Procedures which are designed to effectively minimize and mitigate impacts on wetlands.

USEPA assumes that constraints exist necessitating open cut crossing of some wetlands. Instead, other constraints exist along the pipeline route (e.g. road crossings) supporting WBI Energy's selection of the guided bore method. In feasible instances where wetlands are adjacent to the guided bore crossing of another feature, the guided bore was beneficially extended to also encompass the wetland crossing. Use of the open cut construction method while implementing the measures identified in the FERC Procedures is an acceptable and reasonable method of crossing Project wetlands.

The majority of wetlands identified within the Project workspace consist of low-quality PEM communities. The PEM wetlands will be restored to their original grade and re-seeded per the requirements in the FERC Procedures.

The Project will cross two forested wetlands (wrib020f and wrib014f), which provide a more useful source of wildlife habitat than the PEM wetlands. Wetland wrib014f is a relatively low-quality forested wetland and tree clearing will be limited to what is necessary to access the workspace, and no stump removal will occur outside of the trench. The majority of wetland wrib020f is outside of the permanent right-of-way and will not be permanently converted to a PEM wetland as a result of pipeline installation.

APPENDIX 2E Wahpeton Expansion Project Wetlands Crossed or Otherwise Affected by the Project ^{a, b}									
Cowardin ClassificationCenterline MilepostOperationProposedWetland IDClassificationMilepostDistance Crossed (feet)Impact (acres)Impact °Crossing (acres)									
PIPELINE FACILITIES									
wcaa002e	PEM	4.9	54.1	0.09	0.00	Guided Bore			
wcaa010e	PEM	5.1	11.6	0.01	0.00	Guided Bore			
wcaa011e	PEM	5.2	10.5	0.01	0.00	Guided Bore			
wcaa003e	PEM	5.9	32.0	0.04	0.00	Guided Bore			
wcaa004e	PEM	6.0	24.0	0.04	0.00	Guided Bore			
wcaa001e	PEM	6.6	14.7	0.02	0.00	Guided Bore			
wcaa005e	PEM	8.9	48.4	0.08	0.00	Open Cut			
wcaa006e	PEM	10.0	88.4	0.11	0.0	Guided Bore			

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APPENDIX 2E Wahpeton Expansion Project Wetlands Crossed or Otherwise Affected by the Project ^{a, b}							
Wetland ID	Cowardin Classification	Milepost	Centerline Distance Crossed (feet)	Construction Impact (acres)	Operation Impact ^c (acres)	Proposed Crossing Method	
wcab001e	PEM	13.7	0.0	<0.01	0.00	Open Cut	
wcab003e	PEM	13.7	0.0	0.07	0.00	Guided Bore	
wcab002e	PEM	13.9	0.0	<0.01	0.00	Guided Bor	
wcae006e	PEM	14.7	58.6	0.06	0.00	Guided Bore	
wcab004e	PEM	14.7	21.5	0.06	0.00	Guided Bore	
wcab005e	PEM	15.7	12.0	0.02	0.00	Guided Bore	
wcab008e	PEM	18.8	29.1	0.05	0.00	Guided Bore	
wrie009e	PEM	27.6	9.4	0.02	0.00	Guided Bore	
wria002e	PEM	28.3	17.2	0.05	0.00	Guided Bore	
wria003e	PEM	31.3	11.4	0.05	0.00	Guided Bore	
wria004e	PEM	31.4	14.6	0.02	0.0	Guided Bore	
wrib001e	PEM	32.1	164.8	0.31	0.00	Open Cut	
wrae002e	PEM	32.6	0.0	0.14	0.00	Open Cut	
wrib003e	PEM	32.6	385.6	0.62	0.00	Open Cut	
wrib005e	PEM	32.9	88.1	0.13	0.00	Open Cut	
wrib006e	PEM	33.2	38.2	0.06	0.00	Open Cut	
wrib007e	PEM	33.5	376.9	0.88	0.00	Open Cut	
wrib013e	PEM	34.1	103.3	0.21	0.00	Open Cut	
wrib014f	PFO	34.2	178.3	0.25	<0.10 ^d	Open Cut	
wrib014e	PEM	34.3	214.7	0.38	0.00	Open Cut	
wrib021e	PEM	34.5	821.3	1.62	0.00	Open Cut	
wrib015e	PEM	35.6	14.4	0.02	0.00	Guided Bor	
wrib016e	PEM	35.6	22.7	0.04	0.00	Guided Bor	
wrib017e	PEM	35.7	368.0	0.67	0.00	Open Cut	
wrib018e	PEM	35.8	245.1	0.36	0.00	Open Cut	
wrib020f	PFO	36.0	0.0	0.10	<0.10 ^d	Open Cut	
wrib020e	PEM	36.0	96.3	0.09	0.00	Open Cut Guided	
wrib019e	PEM	36.0	586.2	1.18	0.00	Bore/Open Cut	
wria006e	PEM	36.3	463.4	0.81	0.00	Open Cut	
wria005e	PEM	37.8	12.4	0.02	0.00	Open Cut	
wria009e	PEM	42.4	10.8	0.02	0.00	Guided Bor	
wria008e	PEM	42.4	15.7	0.03	0.00	Guided Bor	
wrid004e	PEM	51.9	23.3	0.04	0.00	Guided Bor	
wrie010e	PEM	55.8	30.7	0.05	0.00	Open Cut	
wrie008e	PEM	60.2	0.0	0.09	0.00	Open Cut	
	SUBTOTAL	-		8.94	<0.10		
ACCESS ROADS							
wcaa009e (TAR 005)	PEM	5.1	NA	0.11	0.00	NA	
wcae008e (TAR 012)	PEM	8.8	NA	<0.01	0.00	NA	

Responses to Comments on the Draft Environmental Impact Statement

APPENDIX 2E Wahpeton Expansion Project Wetlands Crossed or Otherwise Affected by the Project ^{a, b}							
Wetland ID	Cowardin Classification	Milepost	Centerline Distance Crossed (feet)	Construction Impact (acres)	Operation Impact ^c (acres)	Proposed Crossing Method	
wcab003e (TAR 018)	PEM	13.7	NA	0.01	0.00	NA	
wcab004e (TAR 019)	PEM	14.7	NA	0.01	0.00	NA	
wcae003e (TAR 020)	PEM	16.2	NA	<0.01	0.00	NA	
wcae004e (TAR 024.1)	PEM	20.1	NA	<0.01	0.00	NA	
wria003e (PAR 034)	PEM	31.3	NA	<0.01	<0.01	NA	
wrib021e (TAR 038)	PEM	34.5	NA	0.26	0.00	NA	
wrae005e (TAR 046)	PEM	43.4	NA	<0.01	0.00	NA	
wria010e (TAR 046)	PEM	43.4	NA	<0.01	0.00	NA	
wria014e (TAR 046.1)	PEM	44.2	NA	<0.01	0.00	NA	
wrae006e (TAR 047)	PEM	44.9	NA	<0.01	0.00	NA	
wrae007e (TAR 048)	PEM	45.0	NA	<0.01	0.00	NA	
wrid001e (TAR 049)	PEM	46.3	NA	<0.01	0.00	NA	
wrid003e (TAR 051)	PEM	47.3	NA	<0.01	0.00	NA	
	SUBTOTAL	_		0.46	<0.01		
PIPE YARDS							
COMSTOCK YARD							
wrib026e	PEM	NA	NA	0.04	0.00	NA	
KOST YARD							
wcab010e	PEM	NA	NA	1.65	0.00	NA	
	SUBTOTAL	-		1.69	<0.10		
	TOTAL			11.09	<0.10		

This table is based on field survey delineation data. Operational impact acreages are based on permanent impact from fill or conversion of wetlands. This table (and other tables from Resource Report 2) is not comparable to Resource Report 3 – vegetation tables which are based on land use categorizations to identify the vegetation types that exist within the construction and operational footprint of the Project.

Also, the numbers in this table have been rounded for presentation purposes. As a result, the subtotals and totals may not reflect the exact sum of the addends in all cases.

^b NA = not applicable

PEM = Palustrine emergent wetland

PFO = Palustrine forested wetland

PSS = Palustrine scrub shrub wetland

° All PEM wetlands, with the exception of wria003e, will be restored to their herbaceous state.

^d Permanent woody vegetation removal in PFO will occur in the 10-foot wide permanent pipeline easement. The permanent removal of woody vegetation will constitute a wetland conversion of PFO to PEM wetland.

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USEPA – Wetland Monitoring

WBI Energy will comply with section VI.D. of the FERC Procedures which includes requirements to monitor and record the success of wetland revegetation annually until successful and to file a report with FERC identifying the status of wetland revegetation efforts and documenting the success.

USEPA – Ryegrass and Wetland Stabilization

Table 2.3-1 of Resource Report 2 states that PEM wetlands will be reseeded with a native emergent seed mix after construction. WBI Energy's stated that "disturbed areas within wetlands will be temporarily stabilized with a cover species such as annual ryegrass" in section 1.3.2.3 of Resource Report 1. The reference to ryegrass is an example of a temporary cover species but not a commitment to use that specific species. Throughout the Resource Reports, WBI Energy states that it will use seed mixes for the Project based on its consultation with the Natural Resources Conservation Service (NRCS).

USEPA – Compensatory Mitigation

WBI Energy included agency correspondence as Appendix 2F to Resource Report 2. This correspondence included meeting notes from a Pre-Permit Meeting between WBI Energy and USACE held on March 24, 2022. During this meeting, the USACE stated that compensatory mitigation is not likely to be required because the proposed permanent wetland conversion is less than 0.1 acre.

Attachment 1

Addendum Wetland and Waterbody Delineation Report



WBI Energy Transmission, Inc.

Wahpeton Expansion Project

Wetland and Waterbody Delineation Report

October 2022

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Date	1 October 2022
Document details	The details entered below are automatically shown on the cover and the main page footer. PLEASE NOTE: This table must NOT be removed from this document.
Document title	Wahpeton Expansion Project
Document subtitle	Wetland and Waterbody Delineation Report
Project No.	0611161
Date	October 2022
Version	1.0
Author	ERM-West, Inc.
Client Name	WBI Energy Transmission, Inc.

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Table 2-1: Wetland and Water Resource Naming Protocol for Unique IDs......2

Acronyms and Abbreviations

Name	Definition
ERM	ERM-West, Inc.
GPS	Global Positioning System
NHD	National Hydrography Dataset
NRCS	Natural Resource Conservation Service
NWI	National Wetlands Inventory
OHWM	ordinary high water mark
PEM	palustrine emergent wetland class
PFO	palustrine forested wetland class
Project	Wahpeton Expansion Project
PSS	palustrine scrub-shrub wetland class
USACE	US Army Corps of Engineers
USGS	US Geological Survey
WBI Energy	WBI Energy Transmission, Inc.

1. INTRODUCTION

WBI Energy Transmission, Inc. (WBI Energy), proposes to construct and operate the Wahpeton Expansion Project (Project) in Cass and Richland counties, North Dakota. The Project will consist of approximately 60.5 miles of new natural gas pipeline, minor modifications to the Mapleton Compressor Station, new delivery stations near Kindred and Wahpeton, block valve settings, and pig launcher/receiver settings. The Project may also include newly constructed lateral taps along the pipeline route, the locations of which have yet to be determined. ERM on behalf of WBI Energy, originally completed delineations and assessment of wetlands and waterbodies within the proposed pipeline construction corridor and other work areas during fall of 2021. During two separate mobilizations, one in June and a second in August 2022, ERM completed additional field assessments and delineations of wetlands and waterbodies along several route adjustments of the Project in Cass and Richland counties, North Dakota.

This report is an addendum to the original February 2022 report and it will be used to support permitting efforts for impacts to jurisdictional features regulated by the US Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act. This report provides a description and summary of wetlands and waterbodies documented along the reroutes described above. In this addendum report, these newly surveyed reroute segments will be referred to as the Survey Area, which was generally 300 feet wide when following the pipeline reroute segments.

For a description of the physiography, geology, geomorphology, hydrology, and soil data crossed by the Project please refer to the original report dated February 2022, which also included Figures that illustrated desktop resources evaluated, including the National Hydrography Dataset (NHD) and National Wetlands Inventory (NWI), as well a map set that illustrates Natural Resource Conservation Service (NRCS) soil mapping units. This report includes an updated version of the aerial photo base maps that includes Project route and workspace, delineated wetlands and waterbodies, as well as NHD and NWI polygons utilized as reference during field surveys.

2. METHODS

Wetlands and waters were identified and delineated within Survey Area segments that covered the route adjustment segments that required survey during summer 2022. The Survey Area included a 300-foot-wide corridor typically centered on the proposed pipeline centerline, as well as the footprint of all aboveground facilities, access roads, and contractor yards.

Additional details that outline the desktop and field components of the delineation methods followed are described in the following sections.

2.1 Desktop Review

Prior to conducting field surveys, ERM completed a desktop review, including a broad overview of the environmental setting of the Survey Area, as well as a desktop evaluation of potential wetland and water features within the Survey Area to allow for further targeted assessment during field survey. The following data sources were reviewed in ArcGIS to identify areas that should be targeted in the field: high-resolution aerial photography, US Fish and Wildlife Service NWI data, US Geological Survey (USGS) NHD, NRCS Web Soil Survey data, and USGS topographic maps.

ERM reviewed high-resolution aerial photography and land cover data sets to identify areas with possible wetland signatures, and recent disturbances on the landscape that could influence the presence and extent of wetlands. For agricultural fields with potential farmed wetlands, the desktop review included reviewing the current year of aerial photography, as well as historic aerial photographs taken during notable wet years. Visual signatures noted during review included surface water, varying color changes in

vegetation, and isolated areas within farmland that were not successfully farmed due to poor drainage. In addition to areas identified on the aerial imagery, the field assessment also targeted features mapped by NWI and NHD, and any areas of hydric or partially hydric soils. Results of the desktop assessment were utilized to verify potential water resources either were or were not wetlands or waterbodies during field survey.

2.2 Field Survey

The field delineation was conducted from June 6 through 10 and August 15 through 17, 2022. A field team visited probable wetlands and waterbodies identified during the desktop review using resources outlined in section 2.1. Where wetlands or waterbodies were not present at these locations in the field, staff documented "non-water" points, including observations and photographs at these locations. Wetland boundaries, waterbody thalweg or banks, data collection points, open waterbody boundaries, and non-water points were recorded using a Trimble® R1 model GPS unit.

Each wetland or water feature documented within the survey limits was assigned a Project-specific unique identifier (Unique ID). Specific naming conventions were followed during field surveys in order to catalog each wetland and waterbody documented. Table 2-1 describes each part of the naming convention utilized to assign Unique IDs during field surveys.

Water Resource	Туре	County	Field Crew Letter	Feature Number Example	Special Designation
Wetland	w = wetland	County initials (Cass = ca, Richland = ra)	Crew letter (e.g., a, b, c)	001, 002, 003,	f = PFO ^a e = PEM ^a s = PSS ^a u = Upland point
Waterbody	s = stream o = open waterbody	County initials (Cass = ca, Richland = ri)	Crew letter (e.g., a, b, c)	001, 002, 003,	Perennial ^b Intermittent ^b Ephemeral ^b
Non-water Point	no = non-water or non- wetland feature	County initials (Cass = ca, Richland = ri)	Crew letter (e.g., a, b, c)	001, 002, 003,	Not applicable

^a Wetland Classification / acronym based on Classification of Wetlands and Deepwater Habitats of the United States (Cowardin et al. 1979): PEM = Palustrine emergent; PFO = Palustrine forested; PSS = Palustrine scrub-shrub.

^b Flow regime was determined in accordance with 33 Code of Federal Regulations (CFR) 330.

2.2.1 Wetlands

Wetlands were delineated using the USACE 1987 Manual (USACE 1987) and the *Regional Supplement* to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (Version 2.0) (USACE 2012a). The field team completed wetland determination datasheets at sample points within each wetland community type making up the wetland or wetland complex, along with a minimum of one corresponding upland community sample point. A shared upland sample point was used for wetlands that were within close proximity to one another and had the same upland community type.

At each wetland or upland community sample point delineators documented the physical location of the sample point using the GPS, and documented observations of hydrology, soils, and vegetation at the sample point. Primary and secondary indicators of hydrology were documented according to the Regional Supplement. Soil profiles were documented to a depth to determine presence or absence of hydric soils at each sample point. Hydric soil indicators utilized to determine hydric soil presence included hydric soil

indicators described in *Field Indicators of Hydric Soils in the United States*, Version 8.2 (USDA-NRCS 2018). Observations of vegetation species and visual cover percentages were documented at each sample point. Hydrophytic vegetation indicator status was assigned using the *2020 National Wetland Plant List* (USACE 2020), and following the requirements of the Regional Supplement.

Wetland and water features were also classified using the *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et. al. 1979; referred to as the "Cowardin classification"). The following Cowardin classification types were assigned: palustrine emergent (PEM), palustrine scrub-shrub wetland (PSS), and palustrine forested (PFO).

2.2.2 Waterbodies

Waterbodies documented during field surveys were categorized according to their hydrology regimes. All waterbody data was documented on waterbody data sheets developed to document key physical and functional characteristics of waterbodies.

Linear or flowing waterbodies were identified as channelized landscape features possessing a bed and a bank in a concave landscape position where water flow resulted in a feature that possesses an ordinary high watermark (OHWM). Based on indicators of flow regime observed at the time of survey, linear waterbodies were spatially recorded with channel width and OHWM location according to the definitions provided by the USACE in the *Regulatory Guidance Letter No. 05-05: Ordinary High Water Mark Identification* (USACE 2005), and assigned a hydrology regime of perennial, intermittent, or ephemeral.

Similarly, non-flowing, open waterbody features were assigned one of the four Cowardin hydrology regime modifiers based on evidence of inundation/saturation recorded at the time of survey: permanently flooded, semi-permanently flooded, seasonally flooded, or temporarily flooded.

2.2.3 Non-Water Points

The field team documented non-water points to record NHD or NWI-mapped features that did not meet the required criteria of wetlands or waterbodies when assessed in the field (i.e., upland habitat). Non-water points were also used to document areas that were investigated as potentially meeting wetland criteria based on signatures observed during the desktop assessment, but were ultimately determined to be non-wetland areas during the field investigation. Delineators recorded observations, took photographs, and collected a GPS point at each non-water point to document that wetland biologists visited the point and determined that a wetland or waterbody was not present. USACE wetland delineation forms and waterbody data sheets were used to record information for non-water points.

3. RESULTS

ERM delineated and recorded 16 wetlands and 9 waterbodies within the Survey Area along route change segments. These wetlands and waterbodies are illustrated on Figure Set "Aquatic Resources Delineation Map" in Appendix A and listed in Tables B-1 and B-2 in Appendix B, including useful summary data: Project-specific Unique ID, location (latitude/longitude), acreage (wetlands), linear feet (waterbodies) within the Survey Area, and Cowardin classification or hydrology regime. Data forms and photographs of wetlands or waterbodies documented during the June and August 2022 fieldwork are provided in Appendix C. Photos and datasheets for non-water points can be provided upon request but are not currently included in Appendix C. During the survey, field conditions were "Normal" according to USACE's Antecedent Precipitation Tool (Deters. 2022).

3.1 Wetlands

A total of 16 wetland features (approximately 1.20 acres) were documented within the Survey Area, with all classified as palustrine emergent (herbaceous) wetlands (Table 2, Appendix B). Some of these wetlands are associated with intermittent and perennial steams, but the majority are found in depressions within agricultural fields or along roadside ditches and edges of agricultural fields. Dominant herbaceous wetland vegetation found in the Survey Area includes meadow cattail (*Alopecurus pratensis*), curly dock (*Rumex crispus*), and reed canary grass (*Phalaris arundinacea*).

3.2 Waterbodies

The acreage and characteristics of waterbodies surveyed within the Survey Area are summarized in Table 3, Appendix B. A total of 9 waterbody features (1.76 acres, 12,355 linear feet) were identified within the Survey Area, consisting of 3 intermittent and 5 ephemeral ditches, which primarily served as roadside or agricultural field drainage. One perennial waterway, Antelope Creek, was also identified. None of the waterbodies crossed by the Project are considered a Section 10 navigable water under the Rivers and Harbors Act (USACE 2012b).

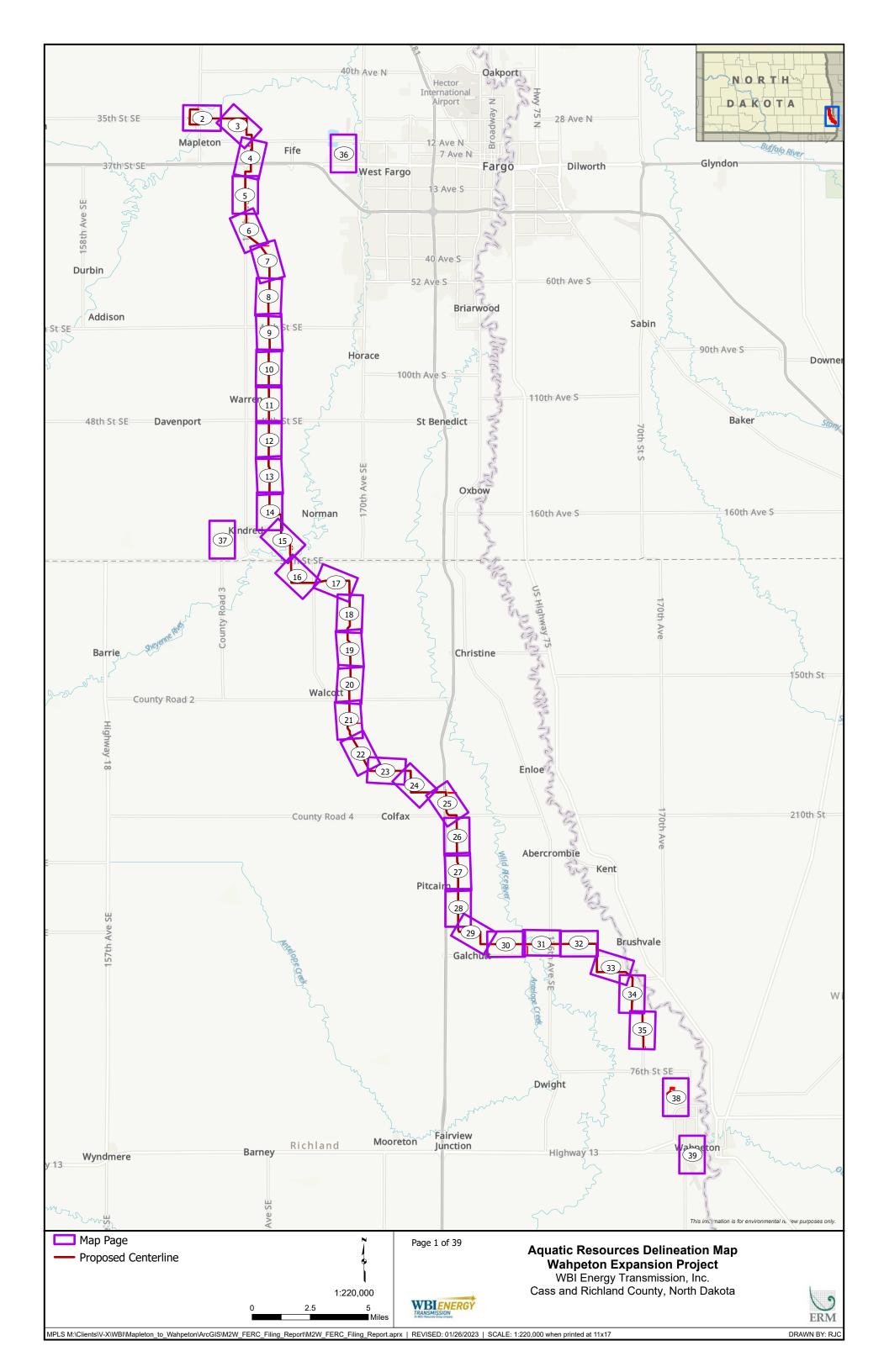
4. CONCLUSIONS

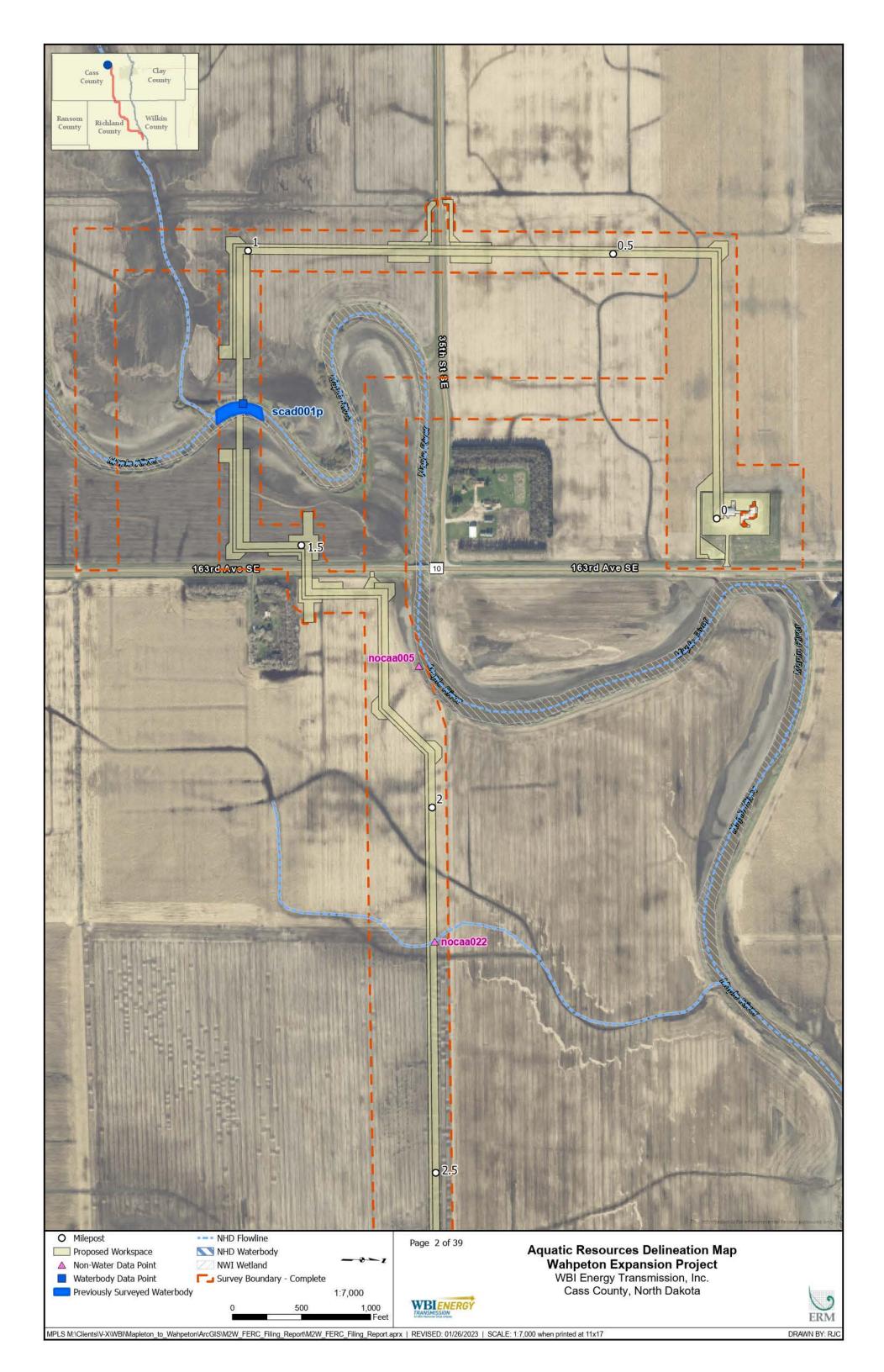
During summer 2022, wetland and waterbody delineations for the Project were completed on newly added portions of the Project due to route changes. This report presents the results of these surveys documenting 16 wetlands and 9 waterbodies.

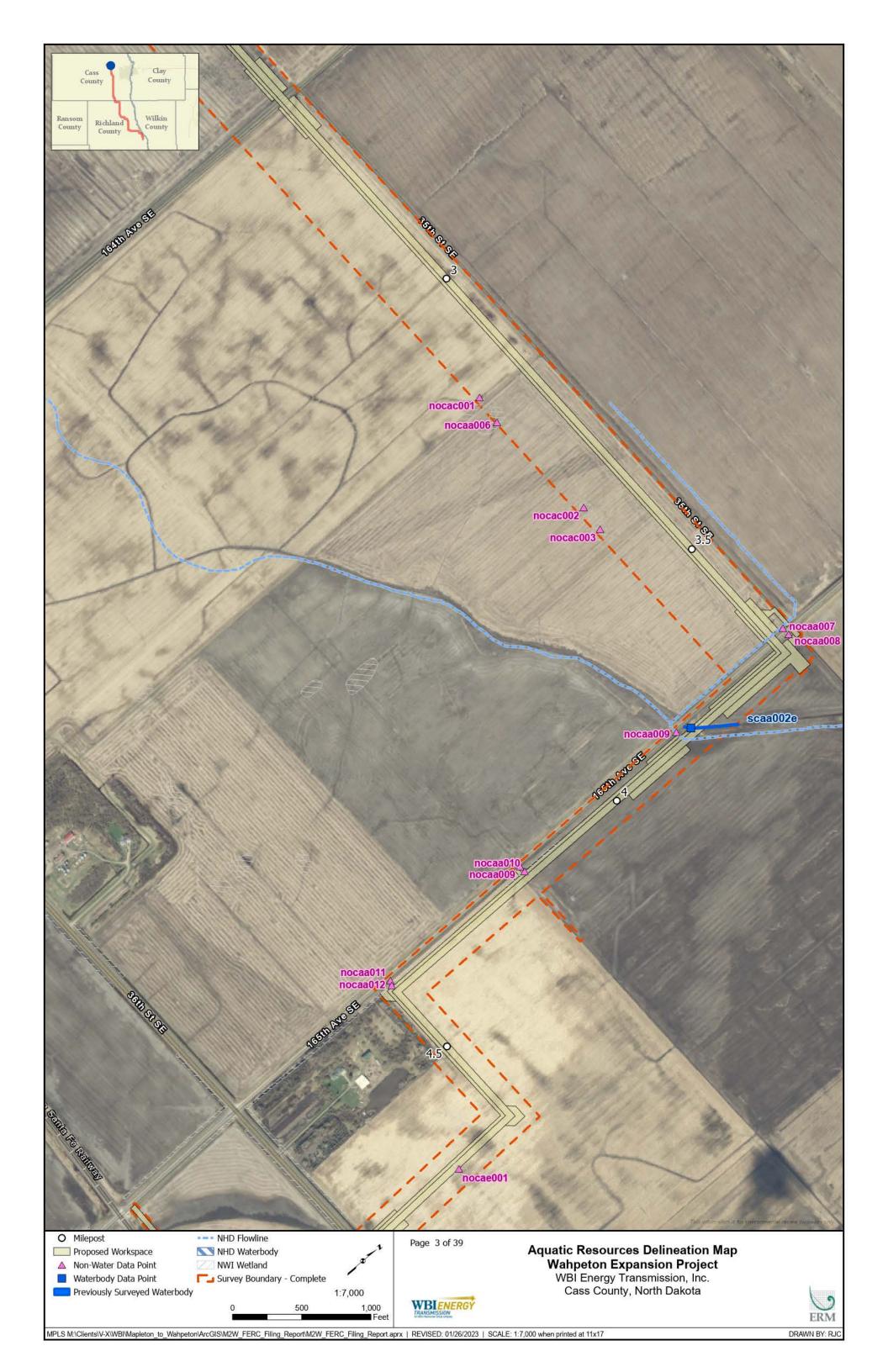
5. **REFERENCES**

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- USDA-NRCS. 2018. *Field Indicators of Hydric Soils in the United States*. A Guide for Identifying and Delineating Hydric Soils, Version 8.2. Accessed November 2021. Available online at http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf.

APPENDIX A AERIAL MAP SET





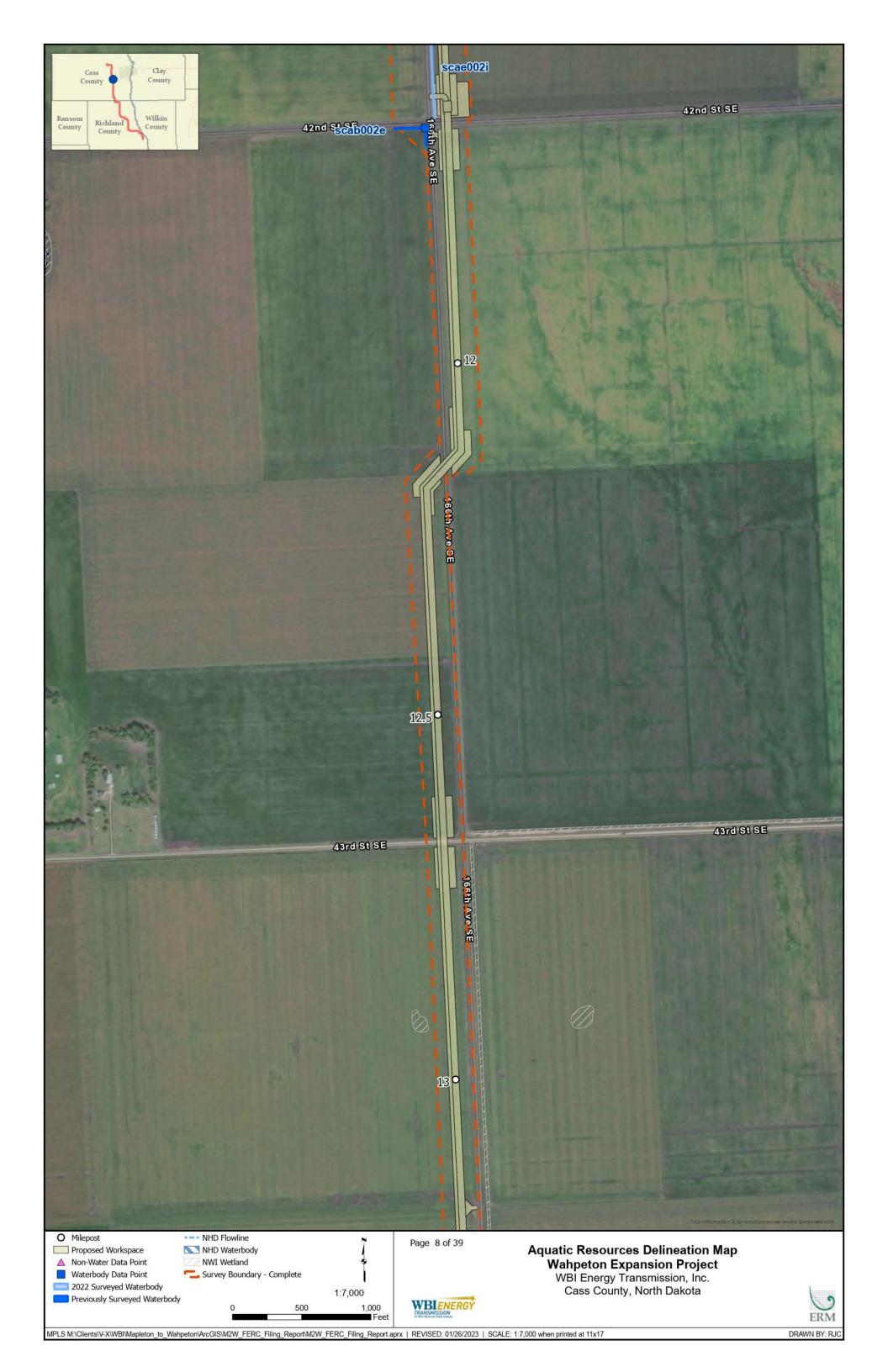




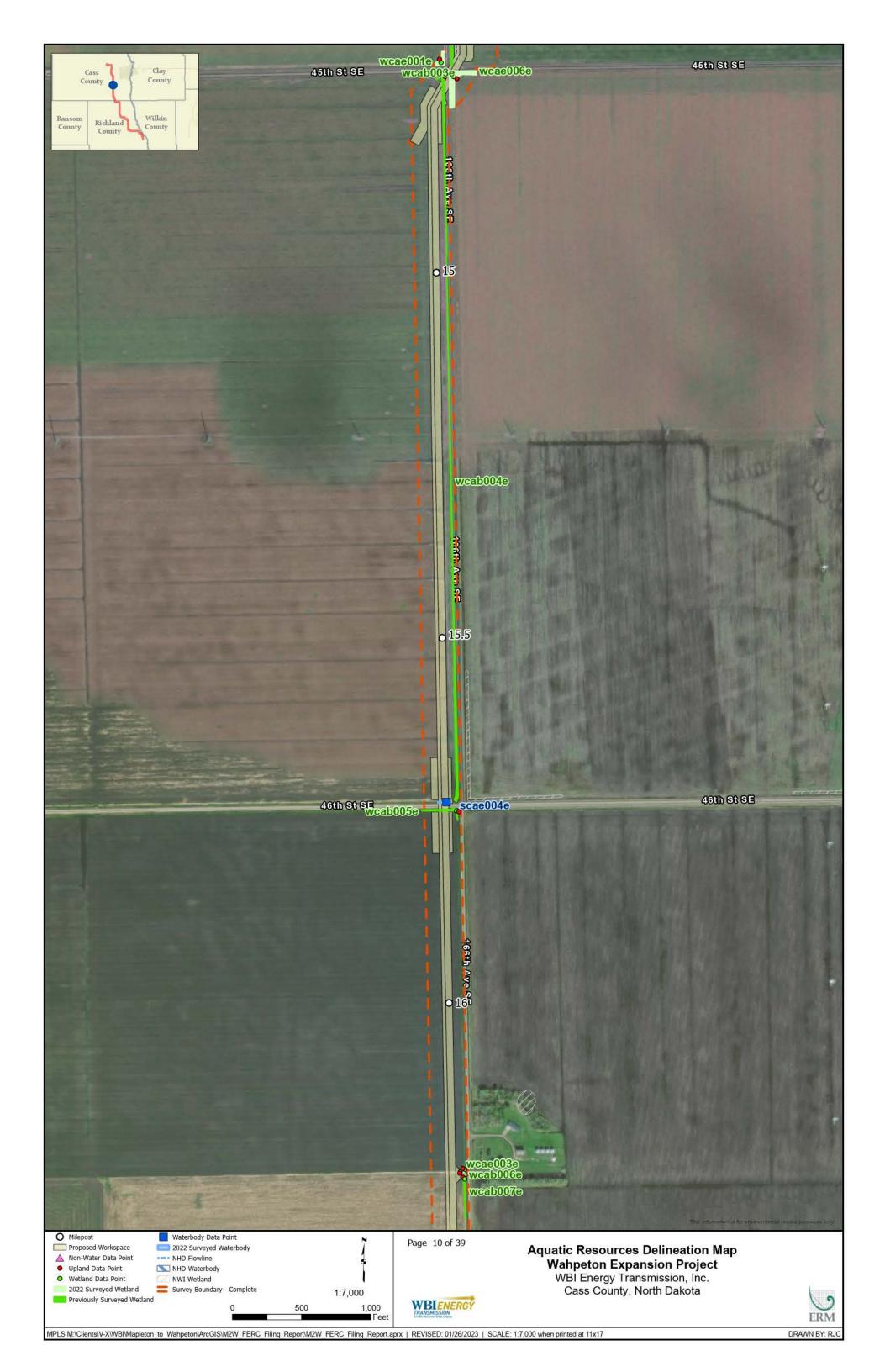




















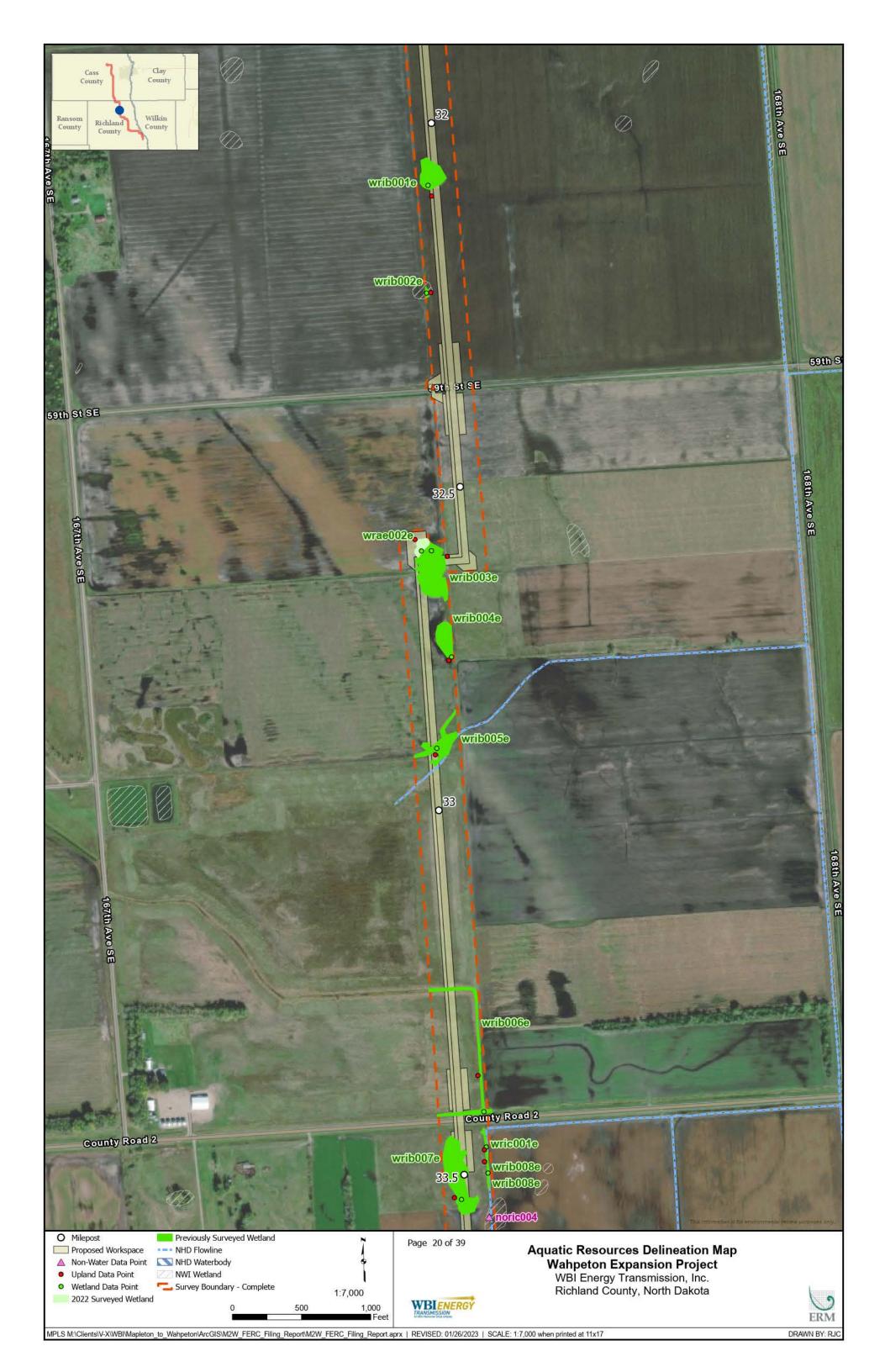




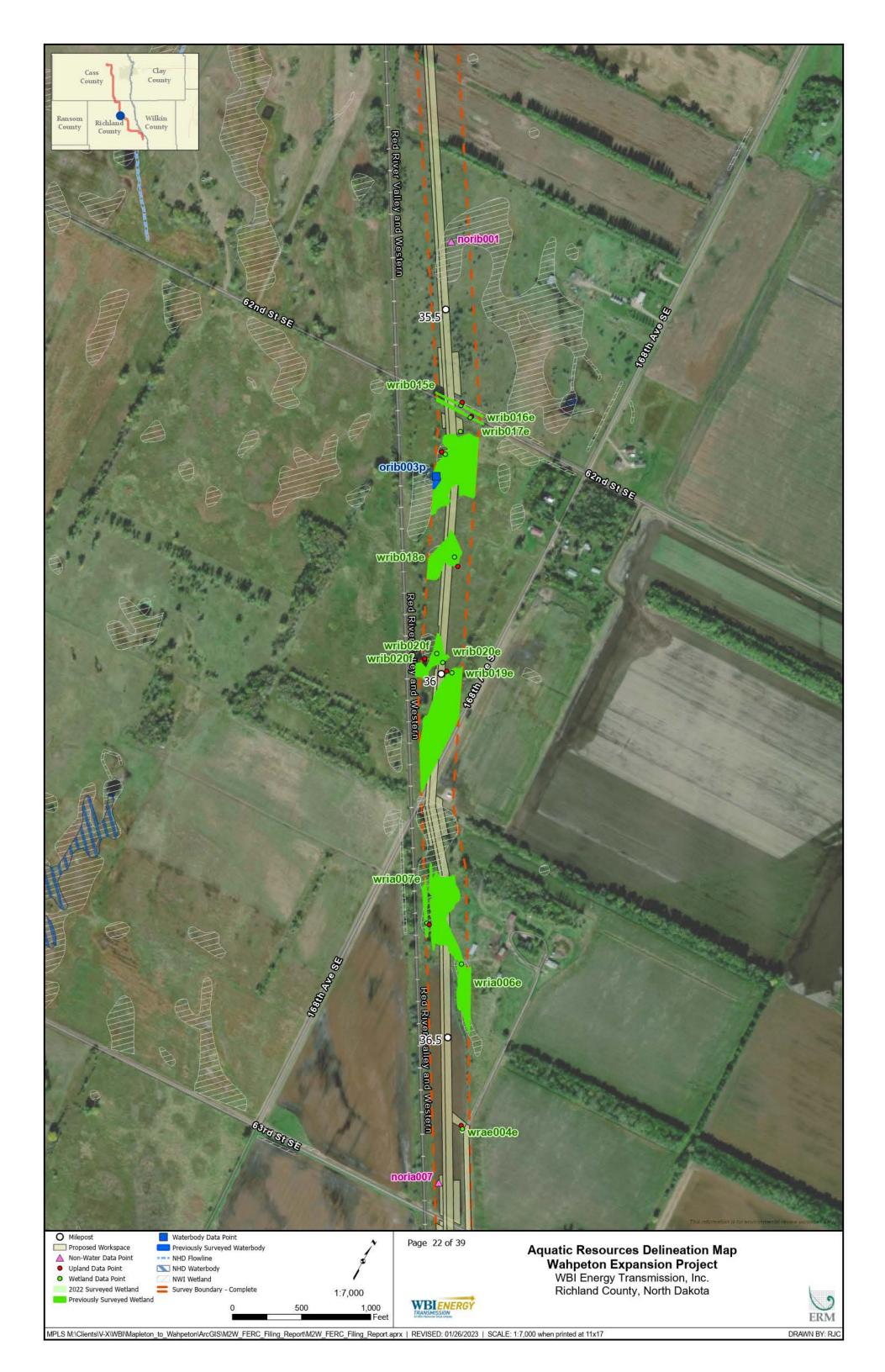


















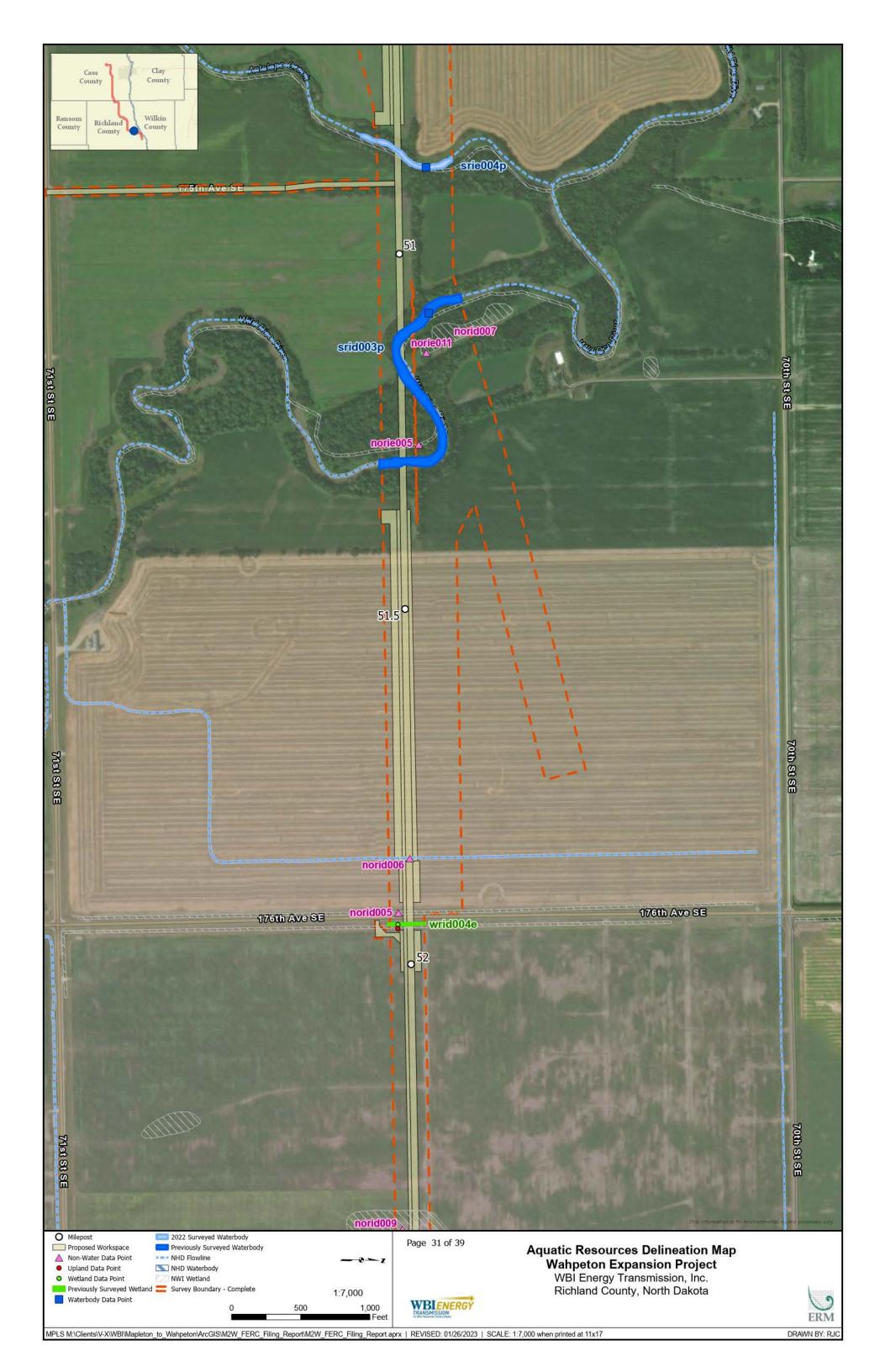












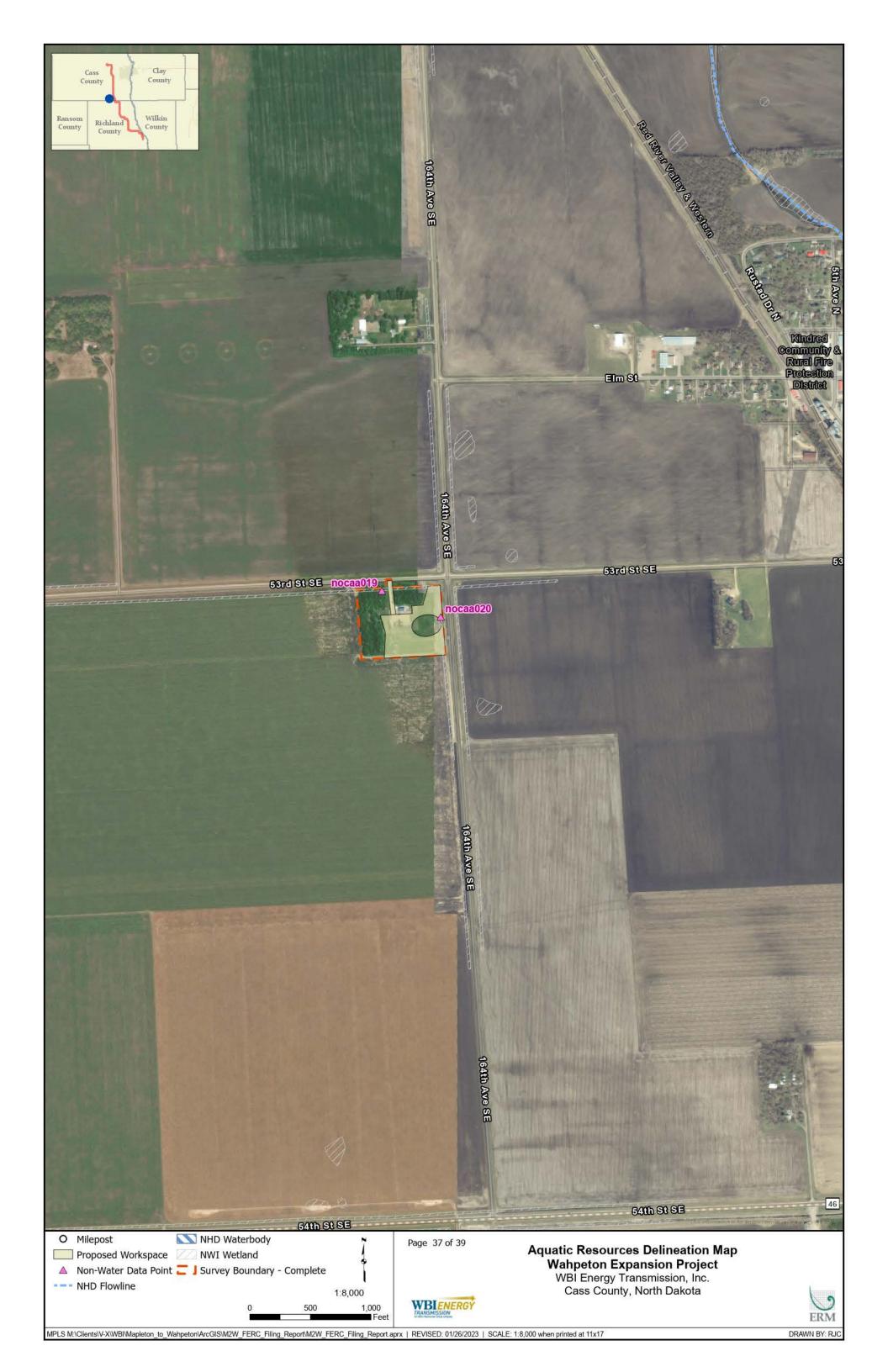


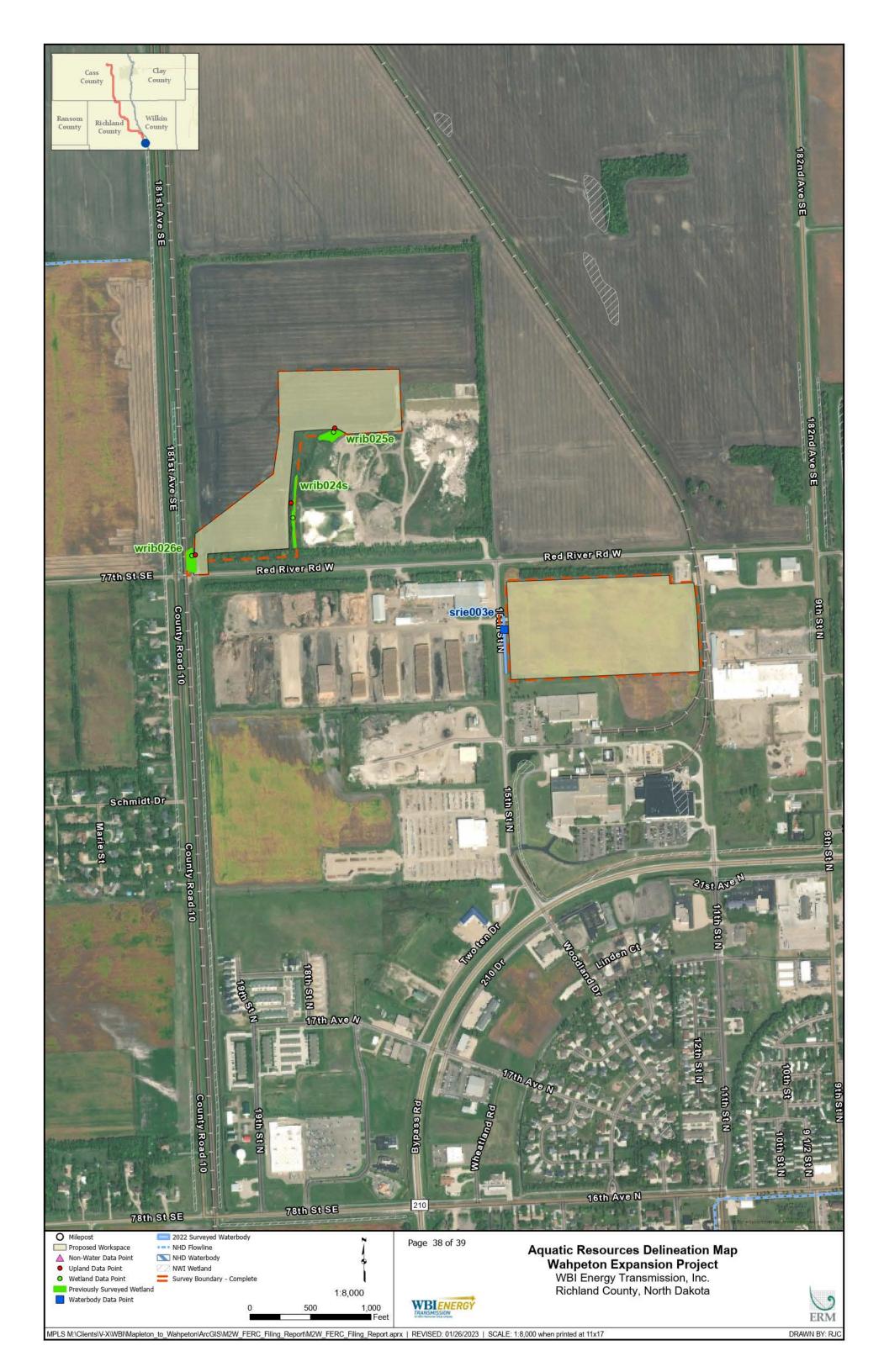


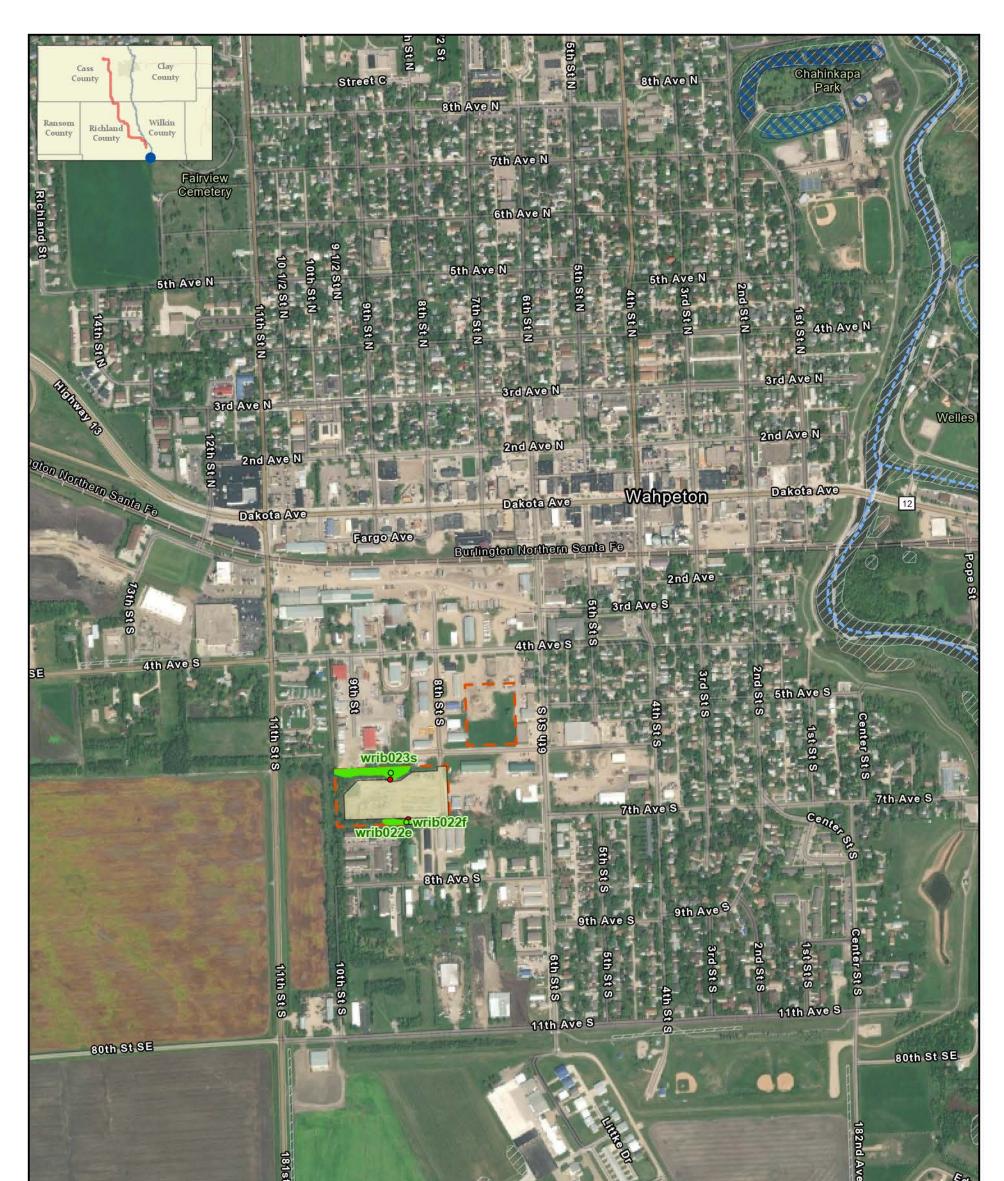


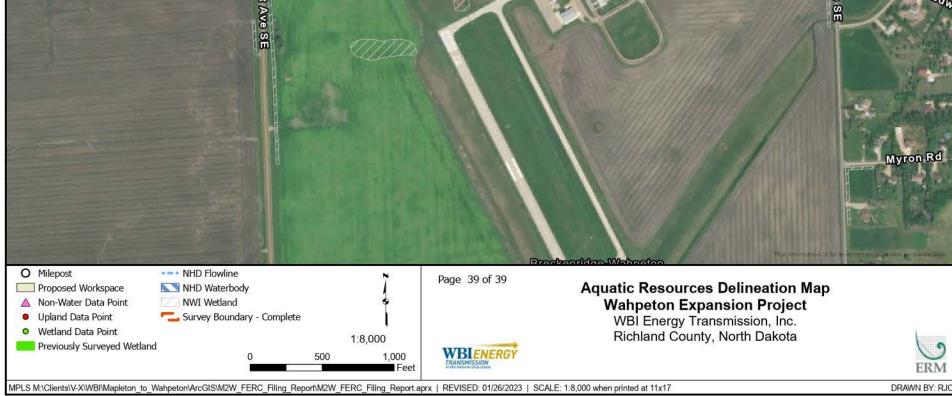














	Cowordin	Data Point	Coordinates	Acreage Within the		Page Number
Wetland ID	Cowardin Classification ^a	Latitude	Longitude	Survey Area (acres)	Milepost	in Ăppendix A (Map Book)
wcae007e	PEM	46.87215	-97.00607	0.21	6.3	4
wcae008e	PEM	46.84052	-97.01074	<0.01	8.8	6
wcae002e	PEM	46.82514	-97.00340	0.04	9.9	6
wcae001e	PEM	46.76122	-96.98980	0.05	14.7	10
wcae006e	PEM	46.76076	-96.98938	0.25	14.7	10
wcae003e	PEM	46.73920	-96.98965	<0.01	16.2	10
wcae004e	PEM	46.68454	-96.98953	<0.01	20.1	13
wrie009e	PEM	46.61734	-96.92823	0.07	27.6	17
wrae001e	PEM	46.60136	-96.91753	<0.01	29.3	18
wrae002e	PEM	46.55471	-96.91713	0.15	32.6	20
wrae004e	PEM	46.50160	-96.90024	0.01	36.6	22
wrae005e	PEM	46.45645	-96.82009	0.01	43.4	26
wrae006e	PEM	46.43538	-96.81946	<0.01	44.9	27
wrae007e	PEM	46.43324	-96.81952	<0.01	45.0	27
wrie010e ^b	PEM	46.37324	-96.68075	0.21	55.8	33
wrie008e	PEM	46.33316	-96.65299	0.10	60.2	35

Table B-1: Additional Wetlands Delineated in 2022 within the Project Survey Area

^a Based on Cowardin Classification of Wetlands and Deepwater Habitats, PEM= palustrine emergent

^b Feature was changed from an ephemeral stream to a PEM wetland after the completion of fieldwork. No USACE wetland data point is available for this feature.

Unique ID	_		Data Point	Coordinates	Acreage	Bank Length		Page Number in
(Waterbody Name)	Feature Type	Waterbody Regime ^a	Latitude	Longitude	Within the Survey Area ^b (acres)	Within Survey Area (feet, single bank)	Milepost	Appendix A (Map Book)
scaa004e	Ditch	E	46.84052	-97.01074	0.01	16	8.8	6
scae002i	Ditch	I	46.80494	-96.98979	0.49	5,340	10.7	7
scae004e	Ditch	Е	46.74653	-96.98985	0.01	87	15.7	10
scae003e	Ditch	Е	46.64481	-96.97867	0.03	299	23.3	7
srie005i	Stream	I	46.52846	-96.91682	0.35	3,081	34.5	15
srie006i	Stream	I	46.52874	-96.91386	0.30	2,609	34.5	15
srie004p (Antelope Creek)	River	Р	46.39178	-96.75741	0.48	760	50.9	31
srie001e	Ditch	Е	46.35492	-96.66334	0.05	560	58.0	34
srie003e	Ditch	Е	46.29548	-96.62180	0.04	450	N/A	38

Table B-2: Additional Waterbodies Surveyed in 2022 within the Project Survey Area

a Waterbody Regime: E = Ephemeral, I = Intermittent, P = Perennial b Acreage values represent the entire 300-foot-wide survey corridor, and do not represent the area impacted by the Project

APPENDIX C WETLAND AND WATERBODY DATASHEETS AND PHOTOS

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: WBI M2W	City/County: Cass County	Sampling Date: 2022-08-17					
Applicant/Owner: WBI	State: Nor	State: North Dakota Sampling Point: wcae001_u					
Investigator(s): Mike Eldridge, Valerie Blamer	Section, Township, Range: <u>sec 16 T138</u>	3N R050W					
Landform (hillslope, terrace, etc.): Other	Local relief (concave, convex, none): <u>h</u>	<u>√one</u> Slope (%): <u>0-2</u>					
Subregion (LRR): LRR F, MLRA 56	at: <u>46.761261</u> Long: <u>-96.9898</u>	356 Datum: NAD83					
Soil Map Unit Name: Fargo-Hegne silty clays, 0 to 1 percent slopes NWI classification:							
Are climatic / hydrologic conditions on the site typical for this time of year? Yes 🧹 No (If no, explain in Remarks.)							
Are Vegetation, Soil, or Hydrology signif	cantly disturbed? Are "Normal Circumst	tances" present? Yes No					
Are Vegetation, Soil, or Hydrology natur	ally problematic? (If needed, explain an	y answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.							
Hydrophytic Vegetation Present? Yes No	✓ Is the Sampled Area						
Hydric Soil Present? Yes No		esNo∕					
Wetland Hydrology Present? Yes No							
Remarks:	1 - h						

Sample plot is located within a roadside ditch

VEGETATION – Use scientific names of plants.

	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u>)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC
2				(excluding FAC-): (A)
3				Total Number of Dominant
4				Species Across All Strata: 0 (B)
		= Total Cov	/or	Demont of Demission (Demoise
Sapling/Shrub Stratum (Plot size: 15)				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)
1				Prevalence Index worksheet:
2				Total % Cover of: Multiply by:
3				OBL species 0.00 x 1 = 0.00
4				FACW species $0.00 \times 2 = 0.00$
5		·		FAC species $0.00 \times 3 = 0.00$
		= Total Cov	/er	
Herb Stratum (Plot size: <u>3</u>)				FACU species 0.00 x 4 = 0.00
1. <u>Zea mays</u>	0	N	UPL	UPL species x 5 =000
2				Column Totals: <u>0.00</u> (A) <u>0.00</u> (B)
3				Devertages to day D/A
4				Prevalence Index = B/A =
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
				2 - Dominance Test is >50%
7				3 - Prevalence Index is ≤3.0 ¹
8 9				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
10				Problematic Hydrophytic Vegetation ¹ (Explain)
		= Total Cov	/er	
Woody Vine Stratum (Plot size: <u>30</u>)				¹ Indicators of hydric soil and wetland hydrology must
1				be present, unless disturbed or problematic.
2				Hydrophytic
		= Total Cov		Vegetation
% Bare Ground in Herb Stratum			-	Present? Yes No ✓
Remarks:			<i>.</i> –	
Site visit was conducted after crop harv	/est. Re	mnants	of Zea	mays is strewn across the sample plot.

SOIL

Profile Des	cription: (D	Describe	to the dep	oth needed	to docur	nent the i	ndicator	or confirm	n the absence of indicat	ors.)	
Depth		Matrix		Redox Features							
(inches)	Color (%	Color (r	noist)	%	Type ¹	Loc ²	Texture	Remarks	
0-8	<u>10YR</u>	2/1	100						SIC		
8-15	<u>10YR</u>	3/3	90	<u>10YR</u>	2/1	10	C	M	SIL		
			<u> </u>						·		
									·		
¹ Type: C=C	oncentratio	n, D=Depl	etion, RM	=Reduced I	Matrix, CS	S=Covered	d or Coate	d Sand G	rains. ² Location: PL:	=Pore Lining, M=Matrix.	
Hydric Soil	Indicators:	(Applica	able to all	LRRs, unl	ess othei	wise note	ed.)			ematic Hydric Soils ³ :	
Histoso	l (A1)				Sandy C	Gleyed Ma	trix (S4)		1 cm Muck (A9) (
	pipedon (A2	2)				Redox (S5				dox (A16) (LRR F, G, H)	
	istic (A3)					d Matrix (S			Dark Surface (S7		
	en Sulfide (A d Layers (A	,	5)			Mucky Mir Gleyed Ma	, ,		High Plains Depr	de of MLRA 72 & 73)	
	uck (A9) (LF			_		d Matrix (F	. ,		Reduced Vertic (,	
	d Below Da			_		Dark Surfa			Red Parent Mate	,	
Thick D	ark Surface	(A12)					rface (F7)			rk Surface (TF12)	
	Mucky Mine				-	Depressio	. ,		Other (Explain in Remarks)		
	Mucky Peat		, ,		-		essions (F	,	³ Indicators of hydrophytic vegetation and wetland hydrology must be present,		
5 cm Mi	ucky Peat o	r Peat (S3	3) (LRR F)		(ML	RA /2 & /	73 of LRR	H)	unless disturbed		
Restrictive	Laver (if pr	esent):									
	ompacted										
	ches): <u>15</u>								Hydric Soil Present?	Yes No_√_	
Remarks:	<u> </u>										
	was co	nducte	d after	crops h	ad be	en harv	vested.	The s	oil has been uptu	Irned during the	
harvestir											
	.9 p. coc										
HYDROLO	GY										
Wetland Hy	drology Ind	dicators:									
Primary Indi	cators (mini	mum of o	ne require	d; check all	that appl	y)			Secondary Indicate	ors (minimum of two required)	
Surface	Water (A1)			S	Salt Crust	(B11)			Surface Soil C	racks (B6)	
High Wa	ater Table (/	A2)		A	quatic Inv	vertebrate	s (B13)		Sparsely Vege	tated Concave Surface (B8)	
Saturati	on (A3)			F	lydrogen	Sulfide Oc	dor (C1)		✓ Drainage Patter	erns (B10)	
Water N	/larks (B1)			C	ory-Seaso	on Water T	able (C2)		Oxidized Rhize	ospheres on Living Roots (C3)	
Sedime	nt Deposits	(B2)		C	Dxidized F	Rhizosphe	res on Livi	ng Roots	(C3) (where tilled	1)	
Drift Deposits (B3) (where not tilled)									Crayfish Burro	ws (C8)	
Algal Mat or Crust (B4) Presence of Reduced Iron (C4)							·)		ble on Aerial Imagery (C9)		
	posits (B5)					Surface (Geomorphic P	. ,	
	ion Visible c		magery (B	57) <u> </u>	other (Exp	olain in Re	marks)		FAC-Neutral T		
	Stained Leav	/es (B9)							Frost-Heave H	lummocks (D7) (LRR F)	
Field Obser				NI-		- 1)					
Surface Wat				No <u>✓</u>							
Water Table				No <u>✓</u>							
Saturation P (includes ca			es	No <u>✓</u>	Depth (in	ches):		Wet	and Hydrology Present	? Yes No∕	

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

Remarks: Site visit was conducted after crop harvest. Hydrology has been affected due to the use of heavy machinery.



wcae001e_u, looking southwest

WETLAND DETERMINATION DATA FORM – Great Plains Region

y/County: <u>Cass County</u> Sampling Date: <u>2022-08-17</u>							
State: North Dakota	Sampling Point: <u>wcae001e_w</u>						
Section, Township, Range: sec 16 T138N R050W							
Local relief (concave, convex, none): <u>Concave</u>	Slope (%): <u>0-2</u>						
761193 Long: <u>-96.989813</u>	Datum: NAD83						
NWI classifica	NWI classification:						
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)							
disturbed? Are "Normal Circumstances" pro	esent? Yes _ ✔ No						
oblematic? (If needed, explain any answers	tic? (If needed, explain any answers in Remarks.)						
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.							
Is the Sampled Area							
within a Wetland? Yes _ ✓	No						
	State: North Dakota S Section, Township, Range: sec 16 T138N R050W Local relief (concave, convex, none): Concave 761193 Long: -96.989813 NWI classifica ear? Yes ✓ No (If no, explain in Re disturbed? Are "Normal Circumstances" pro oblematic? (If needed, explain any answers g sampling point locations, transects, Is the Sampled Area						

VEGETATION – Use scientific names of plants.

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u>)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC
2				(excluding FAC-): (A)
				Total Number of Deminant
3				Total Number of Dominant Species Across All Strata: 1 (B)
4				
Configure (Charles Charles AF	0	= Total Co	ver	Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 15)				That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)
1				Prevalence Index worksheet:
2				
3				
4				OBL species 0.00 x 1 = 0.00
5				FACW species <u>10.00</u> x 2 = <u>20.00</u>
		= Total Co	ver	FAC species <u>0.00</u> x 3 = <u>0.00</u>
Herb Stratum (Plot size: <u>3</u>)		- 10101 00	VCI	FACU species 0.00 x 4 = 0.00
1. Phalaris arundinacea	10	Y	FACW	UPL species x 5 =000
				Column Totals: 10.00 (A) 20.00 (B)
2				
3				Prevalence Index = $B/A = 2.0$
4				Hydrophytic Vegetation Indicators:
5				✓ 1 - Rapid Test for Hydrophytic Vegetation
6				✓ 2 - Dominance Test is >50%
7				\checkmark 3 - Prevalence Index is $\leq 3.0^1$
8				
9				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
10				Problematic Hydrophytic Vegetation ¹ (Explain)
	10	= Total Co	ver	
Woody Vine Stratum (Plot size: 30)				¹ Indicators of hydric soil and wetland hydrology must
1				be present, unless disturbed or problematic.
2				Hydrophytic
		= Total Co		Vegetation
% Bare Ground in Herb Stratum				Present? Yes <u>√</u> No
Remarks:				

SOIL

		K Features	. 2	-			
nches) <u>Color (moist) %</u> <u>C</u>	olor (moist)	<u>%</u> <u>Type¹</u>		Texture	Remarks		
/pe: C=Concentration, D=Depletion, RM=Red			ed Sand Gr		: PL=Pore Lining, M=Matrix.		
dric Soil Indicators: (Applicable to all LRR:		,			-		
_ Histosol (A1) Histic Epipedon (A2)		Bleyed Matrix (S4) Redox (S5)			(A9) (LRR I, J) e Redox (A16) (LRR F, G, H)		
Black Histic (A3)		Matrix (S6)			e (S7) (LRR G)		
_ Hydrogen Sulfide (A4)		Aucky Mineral (F1)			Depressions (F16)		
Stratified Layers (A5) (LRR F)	,	Gleyed Matrix (F2)			outside of MLRA 72 & 73)		
1 cm Muck (A9) (LRR F, G, H)	- ·	d Matrix (F3)		Reduced Ve			
Depleted Below Dark Surface (A11)	·	Dark Surface (F6)			Material (TF2)		
Thick Dark Surface (A12)		d Dark Surface (F7))		w Dark Surface (TF12)		
Sandy Mucky Mineral (S1)		Depressions (F8)	,	Other (Explain in Remarks)			
2.5 cm Mucky Peat or Peat (S2) (LRR G, H)		ins Depressions (F	16)		drophytic vegetation and		
5 cm Mucky Peat or Peat (S3) (LRR F)	(ML	RA 72 & 73 of LRR	R H)		rology must be present, rbed or problematic.		
estrictive Layer (if present):							
Туре:							

hydric soils.

HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required; cl	neck all that apply)	Secondary Indicators (minimum of two required)
✓ Surface Water (A1)	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 F	Roots (C3) (where tilled)
Drift Deposits (B3)	(where not tilled)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	✓ Saturation Visible on Aerial Imagery (C9)	
Iron Deposits (B5)	✓ Geomorphic Position (D2)	
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	✓ FAC-Neutral Test (D5)
Water-Stained Leaves (B9)		Frost-Heave Hummocks (D7) (LRR F)
Field Observations:		
Surface Water Present? Yes _ ✓ No	Depth (inches):2	
Water Table Present? Yes _ ✓ No	Depth (inches): 0	
Saturation Present? Yes <u>✓</u> No _ (includes capillary fringe)	Depth (inches):0	Wetland Hydrology Present? Yes _ ✓ No
Describe Recorded Data (stream gauge, monito	oring well, aerial photos, previous inspect	ions), if available:
Remarks:		



wcae001e_w, looking southwest

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: WBI M2W	City/County: Cass County	Sampling Date: 2022-06-07						
Applicant/Owner: WBI	State: North D	akota Sampling Point: <u>wcae002_u</u>						
Investigator(s): Mike Eldridge, Valerie Blamer	Section, Township, Range: <u>sec 28 T139</u>	N R050W						
Landform (hillslope, terrace, etc.): Other	Local relief (concave, convex, none): <u>Non</u>	Slope (%): <u>0-2</u>						
Subregion (LRR): LRR F, MLRA 56	t: <u>46.8251766</u> Long: <u>-97.0033116</u>	Datum: <u>NAD83</u>						
Soil Map Unit Name: Overly-Bearden silt loams, 0 to 2 percent slopes NWI classification:								
Are climatic / hydrologic conditions on the site typical for this tim	Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)							
Are Vegetation, Soil, or Hydrology signif	cantly disturbed? Are "Normal Circumstanc	es" present? Yes ✔ No						
Are Vegetation, Soil, or Hydrology natura	ally problematic? (If needed, explain any ar	nswers in Remarks.)						
SUMMARY OF FINDINGS – Attach site map sho	wing sampling point locations, transe	ects, important features, etc.						
Hydrophytic Vegetation Present? Yes No	✓ Is the Sampled Area							
Hydric Soil Present? Yes No		No 🗸						
Wetland Hydrology Present? Yes No	✓							
Remarks: Sample plot is located within a roadside di	tch							

VEGETATION – Use scientific names of plants.

		Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u>)		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC
2				(excluding FAC-): (A)
3				Total Number of Dominant
4				Species Across All Strata: (B)
	0	= Total Cove	er	Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 15)				That Are OBL, FACW, or FAC: 0.00 (A/B)
1				Prevalence Index worksheet:
2				Total % Cover of: Multiply by:
3				OBL species x 1 =000
4				FACW species $0.00 \times 2 = 0.00$
5				FAC species $0.00 \times 3 = 0.00$
Harb Stratum (Plataiza: 2)		= Total Cove	er	FACU species $0.00 \times 4 = 0.00$
Herb Stratum (Plot size: <u>3</u>) 1. <u>Zea mays</u>	10	V	וסו ו	UPL species 10.00 x 5 = 50.00
-				Column Totals: 10.00 (A) 50.00 (B)
2				
3				Prevalence Index = $B/A = 5.0$
4				Hydrophytic Vegetation Indicators:
5				1 - Rapid Test for Hydrophytic Vegetation
6				2 - Dominance Test is >50%
7				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)
Woody Vine Stratum (Plot size: 30)	10	= Total Cove	ər	¹ Indicators of hydric soil and wetland hydrology must
				be present, unless disturbed or problematic.
1				Hydrophytic
2		= Total Cove		Vegetation
% Bare Ground in Herb Stratum		- 10101 0000		Present? Yes No 🗸
Remarks:			<i>.</i> –	
Site visit was conducted after crop harv	vest. Re	mnants (ot Zea I	mays is strewn across the sample plot.

Profile Desc	cription: (Des	cribe to the dep	th needed to d	ocument the	indicator	or confirm	the absence	of indicators.)	
Depth	Ma	atrix	F	Redox Features					
(inches)	Color (moi	st) %	Color (moist	:) %	Type ¹	Loc ²	Texture	Remai	ks
0-4	<u>10YR</u> 2	2/1 90	10YR 5/	/2 10	C	Μ	SIL	Distinct redox	
4-16	10YR 2	2/2 100					SIL		
					·				
					·				
						. <u> </u>			
					·				
					·				
¹ Turne: C-C	anoantration [=Depletion, RM			d or Cooto	d Sand Cr	roino ² Lo	cation: PL=Pore Linin	a M-Motrix
		pplicable to all				u Sanu Gi		for Problematic Hyd	
Histosol				ndy Gleyed Ma				Muck (A9) (LRR I, J)	
	pipedon (A2)			ndy Redox (S5				Prairie Redox (A16) (LRR F. G. H)
	istic (A3)			ipped Matrix (S				Surface (S7) (LRR G)	
	en Sulfide (A4)			amy Mucky Mi				Plains Depressions (F1	
Stratifie	d Layers (A5) (LRR F)	Loa	amy Gleyed M	atrix (F2)		(LF	RR H outside of MLR	A 72 & 73)
	uck (A9) (LRR			pleted Matrix (,			ced Vertic (F18)	
	d Below Dark S			dox Dark Surfa	. ,			Parent Material (TF2)	
	ark Surface (A1			pleted Dark Sເ dox Depressio				Shallow Dark Surface ((Explain in Remarks)	(TF12)
-	Mucky Mineral (Mucky Peat or I	ST) Peat (S2) (LRR (h Plains Depressio		16)		of hydrophytic vegeta	tion and
		eat (S3) (LRR F)		(MLRA 72 &				id hydrology must be p	
		(ee) (<u>=</u>)		()		s disturbed or problem	
Restrictive	Layer (if prese	ent):							
Type: <u>C</u>	ompacted s	oil							
Depth (in	ches): <u>16</u>						Hydric Soil	Present? Yes	No <u>√</u>
Remarks:									
Site visit	was cond	ucted after	crops had	been har	vested	. The se	oil has be	en upturned du	uring the
harvestir	ng process	6.							
	0)/								
HYDROLO									
-	drology Indica								
Primary Indi	cators (minimu	m of one require	d; check all that	apply)			<u>Seconda</u>	ary Indicators (minimu	m of two required)
	Water (A1)			Crust (B11)				face Soil Cracks (B6)	
-	ater Table (A2)			tic Invertebrate				arsely Vegetated Conc	ave Surface (B8)
Saturati				ogen Sulfide O				inage Patterns (B10)	
	larks (B1)			eason Water	. ,			dized Rhizospheres of	n Living Roots (C3)
	nt Deposits (B2	2)		zed Rhizosphe		ing Roots (where tilled)	
Drift De				ere not tilled)		n.		yfish Burrows (C8)	(00)
	at or Crust (B4)	1		ence of Reduce	,	+)		uration Visible on Aeri	••••
Iron Dep		orial Imagary (P		Muck Surface				omorphic Position (D2) C-Neutral Test (D5))
	Stained Leaves	erial Imagery (B			enarks)			st-Heave Hummocks (
Field Obser		(03)					F10;	Schleave Hummocks	
Surface Wat		Vec	No _ ✓ Dept	h (inches):					
Water Table			No <u>√</u> Dept	. ,					
Saturation P			No <u>√</u> Dept				and Hydrolog	y Present? Yes	No 1
(includes ca	pillary fringe)							Briesent: 165	110 <u></u>
		tream gauge, mo	onitoring well, a	erial photos, pi	evious ins	pections),	if available:		

Remarks: Site visit was conducted after crop harvest. Hydrology has been affected due to the use of heavy machinery.



Project/Site: WBI M2W	City/County: Cass County Sampling Date: 2022-06-							
Applicant/Owner: WBI	State: North Dakota	Sampling Point: wcae002e_w						
Investigator(s): Mike Eldridge, Valerie Blamer	Section, Township, Range: sec 28 T139N R	<u>{050W</u>						
Landform (hillslope, terrace, etc.): Other	Local relief (concave, convex, none): <u>Concav</u>	<u>e</u> Slope (%): <u>0-2</u>						
Subregion (LRR): LRR F, MLRA 56 Lat: 46	.8251504 Long: <u>-97.0033284</u>	Datum: NAD83						
Soil Map Unit Name: Overly-Bearden silt loams, 0 to 2 perc	ent slopes NWI classific	ation:						
Are climatic / hydrologic conditions on the site typical for this time of y	Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)							
Are Vegetation, Soil, or Hydrology significantly	v disturbed? Are "Normal Circumstances" p	oresent? Yes 🖌 No						
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If 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	Is the Sampled Area							
Hydric Soil Present? Yes _ ✓ No		No						
Wetland Hydrology Present? Yes _ ✓ No								
Remarks: Sample plot is located within a roadside ditch								

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u>)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC
2				(excluding FAC-): (A)
3				Total Number of Dominant
4				Species Across All Strata: (B)
		= Total Co	ver	Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 15)				That Are OBL, FACW, or FAC: 100.00 (A/B)
1				
2				Prevalence Index worksheet:
3				Total % Cover of:Multiply by:
4				OBL species <u>0.00</u> x 1 = <u>0.00</u>
5				FACW species <u>90.00</u> x 2 = <u>180.00</u>
		= Total Co		FAC species 0.00 x 3 = 0.00
Herb Stratum (Plot size: 3)			VEI	FACU species x 4 =000
1. <u>Phalaris arundinacea</u>	90	Y	FACW	UPL species 0.00 x 5 = 0.00
2				Column Totals: <u>90.00</u> (A) <u>180.00</u> (B)
3				Prevalence Index = $B/A = 2.0$
4				Hydrophytic Vegetation Indicators:
5				✓ 1 - Rapid Test for Hydrophytic Vegetation
6				✓ 2 - Dominance Test is >50%
7				✓ 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)
	90	= Total Co	ver	The discount of the data and the data at the data and the data and the data at
Woody Vine Stratum (Plot size: <u>30</u>)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1				
2				Hydrophytic Versteijer
% Dana Crawadia Ulark Stratura		= Total Co	ver	Vegetation Present? Yes ✓ No
% Bare Ground in Herb Stratum				
Remains.				

Profile Desc	cription: (Describ	e to the dept	n needed to	document the i	ndicator of	or confirm	n the absence	e of indicators.)
Depth	Matrix			Redox Feature	S			
(inches)	Color (moist)	%	Color (mois	st) %	Type ¹	Loc ²	Texture	Remarks
0-16	10YR 2/1	75	10YR 5	6/2 25	С	Μ	SIL	Distinct redox.
·								
¹ Type: C=C	oncentration, D=D	epletion, RM=l	Reduced Mati	rix, CS=Covered	d or Coate	d Sand G	rains. ² Lo	cation: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Appl	licable to all L	RRs, unless	otherwise not	ed.)		Indicators	s for Problematic Hydric Soils ³ :
Histosol	(A1)		Sa	andy Gleyed Ma	atrix (S4)		1 cm I	Muck (A9) (LRR I, J)
Histic E	pipedon (A2)		Sa	andy Redox (S5)		Coast	Prairie Redox (A16) (LRR F, G, H)
Black Hi	istic (A3)			ripped Matrix (S				Surface (S7) (LRR G)
	en Sulfide (A4)			amy Mucky Mir			-	Plains Depressions (F16)
	d Layers (A5) (LRF	,		amy Gleyed Ma				RR H outside of MLRA 72 & 73)
	uck (A9) (LRR F, G			epleted Matrix (I	,			ced Vertic (F18)
	d Below Dark Surfa	ace (A11)		edox Dark Surfa				Parent Material (TF2)
	ark Surface (A12)			epleted Dark Su				Shallow Dark Surface (TF12)
	Aucky Mineral (S1)			edox Depression		4.0)		(Explain in Remarks)
	Mucky Peat or Pea		, H) <u> </u>	gh Plains Depre				of hydrophytic vegetation and
5 cm Mi	ucky Peat or Peat ((S3) (LRR F)		(MLRA 72 & 7	3 of LRR	H)		d hydrology must be present,
Destrictive	l aver (if present)	_					uniess	s disturbed or problematic.
_	Layer (if present):							
Туре:								
Depth (in	ches):						Hydric Soi	I Present? Yes <u>√</u> No
Remarks:								
HYDROLO								
-	drology Indicator							
Primary Indi	cators (minimum o	f one required;	check all tha	t apply)			<u>Second</u>	ary Indicators (minimum of two required)
Surface	Water (A1)		Salt	Crust (B11)			Sur	face Soil Cracks (B6)
High Wa	ater Table (A2)		Aqua	atic Invertebrate	s (B13)		Spa	arsely Vegetated Concave Surface (B8)
Saturati	on (A3)		Hydr	ogen Sulfide O	dor (C1)		_∡_ Dra	inage Patterns (B10)
Water M	larks (B1)		Dry-	Season Water T	able (C2)		Oxi	dized Rhizospheres on Living Roots (C3)
Sedimer	nt Deposits (B2)		Oxid	ized Rhizosphe	res on Livi	ng Roots	(C3) (v	vhere tilled)
Drift De	posits (B3)		(w	here not tilled)			Cra	yfish Burrows (C8)
Algal Ma	at or Crust (B4)		Pres	ence of Reduce	d Iron (C4	.)	✓ Sat	uration Visible on Aerial Imagery (C9)
Iron Dep				Muck Surface (,		omorphic Position (D2)
	on Visible on Aeria	al Imagery (B7		r (Explain in Re	,			C-Neutral Test (D5)
	Stained Leaves (B9			(,			st-Heave Hummocks (D7) (LRR F)
Field Obser		/						
Surface Wat		Yes N	o √ Der	oth (inches):				
Water Table				oth (inches):				
Saturation P				oth (inches):			and Hydrolog	ıy Present? Yes _ √ No
(includes ca		103 <u>¥</u> N	o neh		5	_ 1101		
	corded Data (strea	am gauge, mor	nitoring well, a	erial photos, pr	evious ins	pections),	if available:	

Remarks:





Project/Site: WBI M2W	City/County: Cass County Sampling Date: 202	2-06-07			
Applicant/Owner: WBI	State: North Dakota Sampling Point: WCa	e003_u_			
Investigator(s): Mike Eldridge, Valerie Blamer	Section, Township, Range: <u>sec 08 T137N R050W</u>				
Landform (hillslope, terrace, etc.): Other	_ Local relief (concave, convex, none): <u>None</u> Slope (%	b): <u>0-2</u>			
Subregion (LRR): LRR F, MLRA 56 Lat: 46	.739177 Long: <u>-96.9896956</u> Datum: <u>N</u>	IAD83			
Soil Map Unit Name: Fargo silty clay, 0 to 1 percent slopes	NWI classification:				
Are climatic / hydrologic conditions on the site typical for this time of ye	rear? Yes _ ✔ No (If no, explain in Remarks.)				
Are Vegetation _ ✓ _, Soil _ ✓ _, or Hydrology significantly	y disturbed? Are "Normal Circumstances" present? Yes	No			
Are Vegetation, Soil, or Hydrology naturally pr	roblematic? (If needed, explain any answers in Remarks.)				
SUMMARY OF FINDINGS – Attach site map showing	g sampling point locations, transects, important featur	es, etc.			
Hydrophytic Vegetation Present? Yes No	Is the Sampled Area				
Hydric Soil Present? Yes No					
Wetland Hydrology Present? Yes No	· · · · · · · · · · · · · · · · · · ·				

Remarks: Sample plot is located within a roadside ditch

	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u>)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC
2				(excluding FAC-):(A)
3				Total Number of Dominant
4				Species Across All Strata: (B)
		= Total Cov		Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 15)				That Are OBL, FACW, or FAC:(A/B)
1				Prevalence Index worksheet:
2				Total % Cover of: Multiply by:
3				OBL species 0.00 x1 = 0.00
4			<u> </u>	FACW species $2.00 \times 1 = 0.00$
5				
		= Total Cov	/er	FAC species $5.00 \times 3 = 15.00$
Herb Stratum (Plot size: <u>3</u>)				FACU species <u>25.00</u> x 4 = <u>100.00</u>
1. <u>Malva neglecta</u>				UPL species $0.00 \times 5 = 0.00$
2. <u>Taraxacum officinale</u>				Column Totals: <u>32.00</u> (A) <u>119.00</u> (B)
3. <u>Ellisia nyctelea</u>	10	<u> N </u>	FACU	Prevalence Index = $B/A = 3.72$
4. <u>Rumex crispus</u>	5	<u> N </u>	FAC	
5. <i>Phalaris arundinacea</i>	2	N	FACW	Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
8				3 - Prevalence Index is ≤3.0 ¹
9				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
10				Problematic Hydrophytic Vegetation ¹ (Explain)
	107	= Total Cov	/er	
Woody Vine Stratum (Plot size:30) 1				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
				Hydrophytic
2				Vegetation
% Bare Ground in Herb Stratum		= Total Cov		Present? Yes No ✓
Remarks:				1

Profile Desc	cription: (Describe	to the depth	needed to docur	nent the i	ndicator o	or confirm	n the absence of in	ndicators.)			
Depth	Matrix		Redo	x Features	6						
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remar	ks		
0-12	<u>10YR 2/1</u>	100					SIC				
				·							
<u> </u>							<u> </u>				
				·							
<u> </u>				·			<u> </u>				
				·			<u> </u>				
¹ Type: C=C	oncentration, D=De	pletion. RM=Re	educed Matrix. CS	S=Covered	or Coate	d Sand G	rains. ² Locatio	n: PL=Pore Lining	a. M=Matrix.		
	Indicators: (Appli							Problematic Hyd			
Histosol			Sandy (1 cm Muck	(A9) (LRR I, J)			
	pipedon (A2)		Sandy F					rie Redox (A16) (L	_RR F, G, H)		
	istic (A3)			d Matrix (S				ce (S7) (LRR G)	,		
Hydroge	en Sulfide (A4)			Mucky Min				Depressions (F1	6)		
Stratifie	d Layers (A5) (LRR	F)	Loamy	Gleyed Ma	atrix (F2)		(LRR H	outside of MLRA	A 72 & 73)		
1 cm Mu	uck (A9) (LRR F, G,	H)	Deplete	d Matrix (F	-3)		Reduced V	ertic (F18)			
-	d Below Dark Surfa	ce (A11)		Dark Surfa	()			t Material (TF2)			
	ark Surface (A12)			d Dark Su	. ,			ow Dark Surface (TF12)		
	Aucky Mineral (S1)		Redox [Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and				
	Mucky Peat or Peat										
5 cm Mu	ucky Peat or Peat (S	53) (LRR F)	(ML	RA 72 & 7	'3 of LRR	H)		drology must be p			
Destrictive							Unless dist	urbed or problema	atic.		
	Layer (if present):										
	ompacted fill ma	aterial	_								
	ches): <u>12</u>		_				Hydric Soil Pres	sent? Yes	No <u>√</u>		
Remarks:											
	was conduct	ed after cr	ops had be	en harv	/ested.	I he s	oil has been	upturned du	iring the		
harvestir	ng process.										
HYDROLO	GY										
Wetland Hy	drology Indicators	:									
Primary Indi	cators (minimum of	one required; c	heck all that apply	y)			Secondary Ir	ndicators (minimur	m of two required)		
Surface	Water (A1)		Salt Crust	(B11)			✓ Surface	Soil Cracks (B6)			
	ater Table (A2)		Aquatic Inv		s (B13)			Vegetated Conca	ave Surface (B8)		
Saturati			Hydrogen					e Patterns (B10)			
								. ,	Living Roots (C3)		
Water Marks (B1) Dry-Season Water Table (C2) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3)								e tilled)	5		
							Burrows (C8)				
Drift Deposits (B3) (where not tilled) Algal Mat or Crust (B4) Presence of Reduced Iron (C4)								on Visible on Aeria	al Imagery (C9)		
	posits (B5)		Thin Muck			/		phic Position (D2)			
-	ion Visible on Aerial	Imagery (R7)	Other (Exp					utral Test (D5)			
	Stained Leaves (B9)				markaj			ave Hummocks (D7) (IRR F)		
Field Obser	()					1					
		Voc No	(Dooth (in	choc):							
Surface Wat			Depth (in								
Water Table			Depth (in								
Saturation P	resent?	Yes No	Depth (in	ches):		_ Wet	and Hydrology Pro	esent? Yes	No∕		

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

Remarks: Site visit was conducted after crop harvest. Hydrology has been affected due to the use of heavy machinery.



Project/Site: WBI M2W	City/County: <u>Cass County</u> Sampling Date: <u>2022-06-07</u>
Applicant/Owner: WBI	State: North Dakota Sampling Point: wcae003e_w
Investigator(s): Mike Eldridge, Valerie Blamer	Section, Township, Range: sec 28 T138N R050W
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, convex, none): <u>Concave</u> Slope (%): <u>0-2</u>
Subregion (LRR): LRR F, MLRA 56 Lat: 46.	7392023 Long: <u>-96.9896804</u> Datum: <u>NAD83</u>
Soil Map Unit Name: Fargo silty clay, 0 to 1 percent slopes	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes <u>√</u> No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally pro	oblematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	g sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>√</u> No	Is the Sampled Area
Hydric Soil Present? Yes _ ✓ No	within a Wetland? Yes _ ✓ No
Wetland Hydrology Present? Yes _ ✓ No	
Remarks: Sample plot is located within a roadside ditch	

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u>)		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC (excluding FAC-): 1 (A)
2				(excluding FAC-): (A)
3				Total Number of Dominant
4				Species Across All Strata: (B)
	0	= Total Cov	/er	Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 15)				That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)
1				Prevalence Index worksheet:
2				Total % Cover of: Multiply by:
3				OBL species 0.00 x 1 = 0.00
4				
5				FACW species <u>95.00</u> x 2 = <u>190.00</u>
	105	= Total Cov	/er	FAC species $0.00 \times 3 = 0.00$
Herb Stratum (Plot size: <u>3</u>)				FACU species <u>10.00</u> x 4 = <u>40.00</u>
1. <u>Phalaris arundinacea</u>				UPL species $0.00 \times 5 = 0.00$
2. <u>Poa pratensis</u>	10	<u> N </u>	FACU	Column Totals: <u>105.00</u> (A) <u>230.00</u> (B)
3				Prevalence Index = $B/A = 2.19$
4				Hydrophytic Vegetation Indicators:
5				 ✓ 1 - Rapid Test for Hydrophytic Vegetation
6				
7				\checkmark 2 - Dominance Test is >50%
8				\checkmark 3 - Prevalence Index is ≤3.0 ¹
9				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
10				Problematic Hydrophytic Vegetation ¹ (Explain)
	90	= Total Cov	/er	
Woody Vine Stratum (Plot size: 30)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1				
2				Hydrophytic
% Bare Ground in Herb Stratum		= Total Co	/er	Vegetation Present? Yes <u>√</u> No
Remarks:				1

Depth Matrix Redox Features (inches) Color (moist) % Tupel Loc ² Torture Remarks 0-2 10YR 2/1	Profile Desc	ription: (De	escribe t	o the dept	h needed	to docun	nent the i	ndicator	or confirm	n the absence	e of indicato	ors.)			
(inches) Color (moist) % Type Loc ² Texture Remarks												,			
2-6 10YR 2/1 95 10YR 3/1 5 C PL SIL Faint redox. 6-20 10YR 2/1 100 SIL SIL SIL 6-20 10YR 2/1 100 SIL SIL "Type: SIL SIL SIL SIL "Type: C-20 concentration, D=Depletion, RM-Reduced Matrix, CS-Covered or Coated Sand Grains. *Location: PL=Pore Lining, M=Matrix. Hydro Soll Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Solls': Histic Epipedion (A2) Sandy Redox (35) Coast Prairie Redox (A16) (LRR F, G, H) Black Histic (A3) Stripped Matrix (S4) I cm Muck (A9) (LRR F, G, H) Depleted Below Dark Surface (A11) Depleted Matrix (F2) ILRR H outside of MLRA 72 & 73 (LR R) I cm Muck (A9) (LRR F, G, H) Depleted Matrix (F2) ILRR H outside of MLRA 72 & 73 (LR R) 2 Som Mucky Matera (S1) Redox Dark Surface (F7) Very Shallow Dark Surface (T12) 2 Som Mucky Peat or Peat (S3) (LRR G, H) High Plains Depressions (F16) *Indicators of Mydrophytic vegetation and wetand hydrology much be present; Type:				%	Color (I				Loc ²	Texture		Remarks			
6-20 10YR 2/1 100 SIL "Type:	0-2	10YR	2/1							SIL					
6-20 10YR 2/1 100 SIL "Type:	2-6	10YR	2/1	95	10YR	3/1	5	С	PL	SIL	Faint re	edox.			
**Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. *Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils*: + Histosic (A1) Sandy Gleyed Matrix (S4) 1 orn Muck (A9) (LRR I, J) Black Histic Expland Nation (S2) Sandy Redox (S5) Coast Praine Redox (A16) (LRR F, G, H) Black Histic (A3) Stripped Matrix (S4) Learny Mucky Mineral (F1) High Plains Depressions (F16) Stratified Layers (A5) (LRR F) Learny Mucky Mineral (F2) (LRR H outside of MLRA 72 8.73) Depleted Batix (C2) Depleted Matrix (F3) Redox Dark Surface (F12) Stratified Layers (A5) (LRR F, G, H) Depleted Dark Surface (F7) Very Shallow Dark Surface (F12) 2.5 orn Mucky Peat or Peat (S2) (LRR G, H) High Bins Depressions (F18) "Other (Explain in Remarks) 7 pre: Depth (inches): Mucky Mineral (S1) Restrictive Layer (if present): Type: Depth (inches): Aquatic Invertebrates (B13) Start Crucks (B6) Surface Water (A1) Salt Cruck (B11) Salt Crucks (B13) Salt and thydrology must be present; Type: Salt Cruck (B11) Salt Cruck (B13) Salt and thydrology indicators: Salt C	6-20	10VR	2/1	100											
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ :			2/1				·								
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ :															
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ :							·								
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ :				<u> </u>											
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ :							·								
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils ³ :															
									d Sand Gr	rains. ² Lo	cation: PL=	Pore Lining, M	I=Matrix.		
Histic Epipedon (A2) Sandy Redox (S5) Coast Prairie Redox (A16) (LRR F, G, H) Black Histic (A3) Stripped Matrix (S6) Dark Surface (S7) (LRR G) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) High Plains Depressions (F16) Stratified Layers (A5) (LRR F, G, H) Depleted Matrix (F2) (LR R H outside of MLRA 72 & 73) 1 cm Muck (A9) (LRR F, G, H) Depleted Matrix (F3) Reduced Vertic (F18) Depleted Matrix (F3) Redox Dark Surface (F7) Very Shallow Dark Surface (TF12) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Very Shallow Dark Surface (TF12) Sandy Mucky Peat or Peat (S2) (LRR G, H) High Plains Depressions (F16) ³ Other (Explain in Remarks) 2.5 cm Mucky Peat or Peat (S3) (LRR F) High Plains Depressions (F16) ³ Other (Explain in Remarks) Type:	Hydric Soil	Indicators:	(Applica	ble to all	LRRs, unl	ess other	wise not	ed.)		Indicators	s for Proble	matic Hydric	Soils ³ :		
		· · ·													
Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) High Plains Depressions (F16) Stratified Layers (A5) (LRR F) Loamy Gleyed Matrix (F2) (LRR H outside of MLRA 72 & 73) 1 cm Muck (A9) (LRR F, G, H) Depleted Matrix (F2) Red vedeed Vertic (F18) 2 Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Red Parent Material (TF2) ✓ Thick Dark Surface (A12) Depleted Dark Surface (F7) Very Shallow Dark Surface (TF12) Sandy Mucky Mineral (S1) Redox Depressions (F16) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. S cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) unless disturbed or problematic. Primery Indicators (If present): Type:	-												F, G, H)		
		()	1)								, ,	· · ·			
1 cm Muck (A9) (LRR F, G, H))									2 & 73)		
✓ Thick Dark Surface (A12) Depleted Dark Surface (F7) Very Shallow Dark Surface (TF12) Sandy Mucky Mineral (S1) Redox Depressions (F8) Other (Explain in Remarks) 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) High Plains Depressions (F16) Minicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if present):								, ,		•					
				(A11)		-		. ,							
2.5 cm Mucky Peat or Peat (S2) (LRR G, H)															
			```						4.0						
unless disturbed or problematic.         Restrictive Layer (if present):         Type:					i, H)	-				, , , , ,					
Restrictive Layer (if present):         Type:		icky real of t	real (55	)(LKK F)			KA 12 Q I		п)						
Depth (inches):       Hydric Soil Present?       Yes       No         Remarks:         HYDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (minimum of one required; check all that apply)       Secondary Indicators (minimum of two required)         Surface Water (A1)       Salt Crust (B11)       Surface Soil Cracks (B6)         High Water Table (A2)       Aquatic Invertebrates (B13)       Sparsely Vegetated Concave Surface (B8)         Saturation (A3)       Hydrogen Sulfide Odor (C1)       Oxidized Rhizospheres on Living Roots (C3)         Water Marks (B1)       Dry-Season Water Table (C2)       Oxidized Rhizospheres on Living Roots (C3)         Water Marks (B1)       Oxidized Rhizospheres on Living Roots (C3)       (where tilled)         Drift Deposits (B3)       (where not tilled)       Crayfish Burrows (C8)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)       Saturation Visible on Aerial Imagery (C9)         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       Kac-Neutral Test (D5)         Water-Stained Leaves (B9)       Other (Explain in Remarks)       Frost-Heave Hummocks (D7) (LRR F)	Restrictive	Layer (if pre	sent):												
Remarks:         HYDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (minimum of one required; check all that apply)       Secondary Indicators (minimum of two required)	Туре:														
HYDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (minimum of one required; check all that apply)       Secondary Indicators (minimum of two required)	Depth (in	ches):								Hydric Soi	I Present?	Yes _√	No		
Wetland Hydrology Indicators:         Primary Indicators (minimum of one required; check all that apply)       Secondary Indicators (minimum of two required)         Surface Water (A1)       Salt Crust (B11)       Surface Soil Cracks (B6)         High Water Table (A2)       Aquatic Invertebrates (B13)       Sparsely Vegetated Concave Surface (B8)         Saturation (A3)       Hydrogen Sulfide Odor (C1)       ✓ Drainage Patterns (B10)         Water Marks (B1)       Dry-Season Water Table (C2)       Oxidized Rhizospheres on Living Roots (C3)         Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (C3)       (where tilled)         Image Patterns (B4)       Presence of Reduced Iron (C4)       Saturation Visible on Aerial Imagery (C9)         Image Inon Deposits (B5)       Thin Muck Surface (C7)       ✓ Geomorphic Position (D2)         Image Numdation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       ✓ FAC-Neutral Test (D5)         Water-Stained Leaves (B9)       Other (Explain in Remarks)       ✓ FAC-Neutral Test (D5)	Remarks:														
Wetland Hydrology Indicators:         Primary Indicators (minimum of one required; check all that apply)       Secondary Indicators (minimum of two required)         Surface Water (A1)       Salt Crust (B11)       Surface Soil Cracks (B6)         High Water Table (A2)       Aquatic Invertebrates (B13)       Sparsely Vegetated Concave Surface (B8)         Saturation (A3)       Hydrogen Sulfide Odor (C1)       ✓ Drainage Patterns (B10)         Water Marks (B1)       Dry-Season Water Table (C2)       Oxidized Rhizospheres on Living Roots (C3)         Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (C3)       (where tilled)         Image Patterns (B4)       Presence of Reduced Iron (C4)       Saturation Visible on Aerial Imagery (C9)         Image Inon Deposits (B5)       Thin Muck Surface (C7)       ✓ Geomorphic Position (D2)         Image Numdation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       ✓ FAC-Neutral Test (D5)         Water-Stained Leaves (B9)       Other (Explain in Remarks)       ✓ FAC-Neutral Test (D5)															
Wetland Hydrology Indicators:         Primary Indicators (minimum of one required; check all that apply)       Secondary Indicators (minimum of two required)         Surface Water (A1)       Salt Crust (B11)       Surface Soil Cracks (B6)         High Water Table (A2)       Aquatic Invertebrates (B13)       Sparsely Vegetated Concave Surface (B8)         Saturation (A3)       Hydrogen Sulfide Odor (C1)       ✓ Drainage Patterns (B10)         Water Marks (B1)       Dry-Season Water Table (C2)       Oxidized Rhizospheres on Living Roots (C3)         Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (C3)       (where tilled)         Image Patterns (B4)       Presence of Reduced Iron (C4)       Saturation Visible on Aerial Imagery (C9)         Image Iron Deposits (B5)       Thin Muck Surface (C7)       ✓ Geomorphic Position (D2)         Imundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       ✓ FAC-Neutral Test (D5)         Water-Stained Leaves (B9)       Other (Explain in Remarks)       ✓ FAC-Neutral Test (D5)															
Wetland Hydrology Indicators:         Primary Indicators (minimum of one required; check all that apply)       Secondary Indicators (minimum of two required)         Surface Water (A1)       Salt Crust (B11)       Surface Soil Cracks (B6)         High Water Table (A2)       Aquatic Invertebrates (B13)       Sparsely Vegetated Concave Surface (B8)         Saturation (A3)       Hydrogen Sulfide Odor (C1)       ✓ Drainage Patterns (B10)         Water Marks (B1)       Dry-Season Water Table (C2)       Oxidized Rhizospheres on Living Roots (C3)         Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (C3)       (where tilled)         Image Patterns (B4)       Presence of Reduced Iron (C4)       Saturation Visible on Aerial Imagery (C9)         Image Iron Deposits (B5)       Thin Muck Surface (C7)       ✓ Geomorphic Position (D2)         Imundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       ✓ FAC-Neutral Test (D5)         Water-Stained Leaves (B9)       Other (Explain in Remarks)       ✓ FAC-Neutral Test (D5)															
Primary Indicators (minimum of one required; check all that apply)       Secondary Indicators (minimum of two required)         Surface Water (A1)       Salt Crust (B11)       Surface Soil Cracks (B6)         High Water Table (A2)       Aquatic Invertebrates (B13)       Sparsely Vegetated Concave Surface (B8)         Saturation (A3)       Hydrogen Sulfide Odor (C1)       Drainage Patterns (B10)         Water Marks (B1)       Dry-Season Water Table (C2)       Oxidized Rhizospheres on Living Roots (C3)         Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (C3)       (where not 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)         Water-Stained Leaves (B9)       Other (Explain in Remarks)       FAC-Neutral Test (D5)															
	-														
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)       Forst-Heave Hummocks (D7) (LRR F)			num of or	ne required									two required)		
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)       Image Patterns (B1)       Frost-Heave Hummocks (D7) (LRR F)		. ,													
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)       Fost-Heave Hummocks (D7) (LRR F)       Fost-Heave Hummocks (D7) (LRR F)			2)								Surface (B8)				
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)       Fost-Heave Hummocks (D7) (LRR F)											-				
_ 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)									_				ring Roots (C3)		
			82)					res on Liv	ing Roots						
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)		. ,			-		,		I)						
Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)       FAC-Neutral Test (D5)         Water-Stained Leaves (B9)       Frost-Heave Hummocks (D7) (LRR F)	_		4)					`	•)				nagery (C9)		
Water-Stained Leaves (B9) Frost-Heave Hummocks (D7) (LRR F)	-		A												
				nagery (B/	)(	Juner (Exp	nain in Re	marks)							
			:2 (09)							Fro	isi-neave Hl	ammocks (D7)			

Field Observations:									
Surface Water Present?	Yes	No _	✓	Depth (inches):					
Water Table Present?	Yes	No _	√	Depth (inches):					
Saturation Present? (includes capillary fringe)	Yes	No _	1	Depth (inches):		Wetland Hydrology Present?	Yes _	✓	No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									
Remarks:									



Project/Site: WBI M2W	City/County: Cass County Sampling Date: 2022-06-07
Applicant/Owner: WBI	State: North Dakota Sampling Point: wcae004_u
Investigator(s): Mike Eldridge, Valerie Blamer	Section, Township, Range: <u>sec 05 T137N R050W</u>
Landform (hillslope, terrace, etc.): Other	Local relief (concave, convex, none): <u>None</u> Slope (%): <u>0-2</u>
Subregion (LRR): LRR F, MLRA 56 Lat: 46.	0.6845715 Long: <u>-96.9894784</u> Datum: <u>NAD83</u>
Soil Map Unit Name: Fargo silty clay, 0 to 1 percent slopes	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of ye	rear? Yes No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	y disturbed? Are "Normal Circumstances" present? Yes _ ✓ No
Are Vegetation, Soil, or Hydrology naturally pro	roblematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	g sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present?       Yes No         Hydric Soil Present?       Yes No         Wetland Hydrology Present?       Yes No         Permarks:       Yes No	within a Wetland? Yes No $$

Remarks: Sample plot is located within a roadside ditch

	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> )	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC
2				(excluding FAC-): (A)
3				Total Number of Dominant
4	<u> </u>			Species Across All Strata: (B)
	0	= Total Co	ver	Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 15)				That Are OBL, FACW, or FAC: <u>50.00</u> (A/B)
1				Prevalence Index worksheet:
2				Total % Cover of: Multiply by:
3				
4				OBL species <u>0.00</u> x 1 = <u>0.00</u>
5				FACW species <u>25.00</u> x 2 = <u>50.00</u>
		= Total Cov	ver	FAC species <u>5.00</u> x 3 = <u>15.00</u>
Herb Stratum (Plot size: <u>3</u> )				FACU species <u>10.00</u> x 4 = <u>40.00</u>
1. <u>Phalaris arundinacea</u>	25	Y	FACW	UPL species <u>20.00</u> x 5 = <u>100.00</u>
2. <u>Sonchus oleraceus</u>	20	Y	UPL	Column Totals: <u>60.00</u> (A) <u>205.00</u> (B)
3. <u>Poa pratensis</u>	10	N	FACU	
4. <u>Rumex crispus</u>			FAC	Prevalence Index = $B/A = 3.42$
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
				$3$ - Prevalence Index is $\leq 3.0^1$
8				4 - Morphological Adaptations ¹ (Provide supporting
9				data in Remarks or on a separate sheet)
10		Tatal Oa		Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size: 30)	50	= Total Co	ver	¹ Indicators of hydric soil and wetland hydrology must
1				be present, unless disturbed or problematic.
2				Hydrophytic
% Bare Ground in Herb Stratum	10	= Total Cov	ver	Vegetation Present? Yes No∕
Remarks:				1

Profile Desc	cription: (Describ	-				or confirm	the absence o	of indicators.)
Depth (inches)	Matrix Color (moist)	%	Redo Color (moist)	x Feature	s Type ¹	Loc ²	Texture	Remarks
	· · · ·			70	iype	LUC		remarks
0-12	<u>10YR 2/1</u>	100					SIC	
	oncentration, D=D					d Sand Gr		ation: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (App	licable to all L	RRs, unless othe	rwise not	ed.)		Indicators f	or Problematic Hydric Soils ³ :
Histosol	· · /		Sandy (					uck (A9) ( <b>LRR I, J</b> )
	pipedon (A2)			Redox (S5				Prairie Redox (A16) (LRR F, G, H)
	istic (A3)			d Matrix (S				Inface (S7) (LRR G)
	en Sulfide (A4)				neral (F1)		-	ains Depressions (F16)
	d Layers (A5) ( <b>LRF</b> uck (A9) ( <b>LRR F, G</b>			Gleyed M d Matrix (				R H outside of MLRA 72 & 73) d Vertic (F18)
	d Below Dark Surfa			Dark Surfa				rent Material (TF2)
	ark Surface (A12)				urface (F7	)		allow Dark Surface (TF12)
Sandy N	/lucky Mineral (S1)		Redox	Depressio	ns (F8)			Explain in Remarks)
	Mucky Peat or Pea		H) High Pla	ains Depre	essions (F	16)		f hydrophytic vegetation and
5 cm Mu	ucky Peat or Peat (	(S3) ( <b>LRR F</b> )	(ML	RA 72 &	73 of LRR	<b>H</b> )		hydrology must be present,
							unless o	disturbed or problematic.
	Layer (if present)							
	ompacted fill m	naterial						
	ches): <u>12</u>						Hydric Soil F	Present? Yes No _✓
Remarks:		tod ofter a	wana had ha		veeted	The e		
		ted after d	rops nad be	en nar	vested	. The so	oli nas bee	en upturned during the
harvestir	ng process.							
HYDROLO	GY							
	drology Indicator	· · ·						
-	cators (minimum o		check all that ann	V)			Secondar	y Indicators (minimum of two required)
	Water (A1)	rone required,	Salt Crust					ce Soil Cracks (B6)
	ater Table (A2)		Aquatic In		oc (B12)			sely Vegetated Concave Surface (B8)
Saturati	. ,		Aquatic III		. ,			age Patterns (B10)
	1arks (B1)		Dry-Seaso		. ,			zed Rhizospheres on Living Roots (C3)
	nt Deposits (B2)		Oxidized F					nere tilled)
	posits (B3)			not tilled)		ing roots (	, , ,	ish Burrows (C8)
-	at or Crust (B4)		Presence	,		1)		ation Visible on Aerial Imagery (C9)
-	posits (B5)		Thin Muck			.)		norphic Position (D2)
-	on Visible on Aeria	al Imagery (B7)						Neutral Test (D5)
	stained Leaves (B9				,			-Heave Hummocks (D7) (LRR F)
Field Obser	,	,						× / × /
Surface Wat		Yes N	o Depth (in	ches):				
Water Table			o <u>√</u> Depth (in					
Saturation P			o <u></u> Depth (in				and Hydrology	Present? Yes No _✓
(includes ca	pillary fringe)							
Describe Re	corded Data (strea	am gauge, mor	itoring well, aerial	photos, pr	revious ins	pections),	if available:	
Domortio								

Remarks: Site visit was conducted after crop harvest. Hydrology has been affected due to the use of heavy machinery.



46.684512°, -96.989485°



Project/Site: WBI M2W	City/County: Cass County Sampling Date: 2022-06-07							
Applicant/Owner: WBI	State: North Dakota Sampling Point: wcae004e_w							
Investigator(s): Mike Eldridge, Valerie Blamer	Section, Township, Range: sec 16 T137N R050W							
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, convex, none): <u>Concave</u> Slope (%): <u>0-2</u>							
Subregion (LRR): LRR F, MLRA 56 Lat: 46.	6845411 Long: <u>-96.9895406</u> Datum: <u>NAD83</u>							
Soil Map Unit Name: Bearden-Kindred silty clay loams, 0 to 2 percent slopes NWI classification:								
Are climatic / hydrologic conditions on the site typical for this time of ye	Are climatic / hydrologic conditions on the site typical for this time of year? Yes <u>V</u> No (If no, explain in Remarks.)							
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Normal Circumstances" present? Yes _ ✓ No							
Are Vegetation, Soil, or Hydrology naturally pro	oblematic? (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         Hydric Soil Present?       Yes _ ✓ No _ ✓         Wetland Hydrology Present?       Yes _ ✓ No	Is the Sampled Area within a Wetland? Yes No							

Remarks: Sample plot is located within a roadside ditch.

	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> )		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC (excluding FAC-): 1 (A)
2				
3				Total Number of Dominant Species Across All Strata: 1 (B)
4				
Sapling/Shrub Stratum (Plot size: 15 )	0	= Total Cov	er	Percent of Dominant Species
1				That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)
2				Prevalence Index worksheet:
				Total % Cover of: Multiply by:
3				OBL species 0.00 x 1 = 0.00
4				FACW species <u>95.00</u> x 2 = <u>190.00</u>
5		= Total Cov		FAC species x 3 =000
Herb Stratum (Plot size: <u>3</u> )		= 101al COV	ei	FACU species <u>10.00</u> x 4 = <u>40.00</u>
1. <u>Phalaris arundinacea</u>	95	Y	FACW	UPL species 0.00 x 5 = 0.00
2. <u>Poa pratensis</u>				Column Totals: 105.00 (A) 230.00 (B)
3				
4				Prevalence Index = $B/A = 2.19$
5				Hydrophytic Vegetation Indicators:
6				✓ 1 - Rapid Test for Hydrophytic Vegetation
				✓ 2 - Dominance Test is >50%
7				$\checkmark$ 3 - Prevalence Index is $\leq 3.0^{1}$
8 9				4 - Morphological Adaptations ¹ (Provide supporting
				data in Remarks or on a separate sheet)
10		= Total Cov		Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size: 30)		= 10(a) COV	er	¹ Indicators of hydric soil and wetland hydrology must
1				be present, unless disturbed or problematic.
2				Hydrophytic
		= Total Cov	er	Vegetation
% Bare Ground in Herb Stratum				Present? Yes <u>√</u> No
Remarks:				

Profile Desc	cription: (D	escribe	to the dep	oth needed	to docu	ment the i	indicator	or confirn	n the absence	e of indicators.)		
Depth		Matrix				ox Feature						
(inches)	Color (r		%	<u>Color (</u> r	noist)	%	Type ¹	Loc ²	Texture	Remarks	—	
0-8	<u>10YR</u>	2/1	100						SIL			
8-13	10YR	5/1	_50_	<u>10YR</u>	2/1	50	D	M	SIL	Distinct redox.		
							·				_	
							·					
											_	
¹ Type: C=C	oncentration	. D=Dep	letion. RM	=Reduced I	Matrix. C	S=Covere	d or Coate	d Sand G	ains. ² Lo	ocation: PL=Pore Lining, M=Matrix.	_	
Hydric Soil										s for Problematic Hydric Soils ³ :		
Histosol	(A1)				Sandy	Gleyed Ma	atrix (S4)		1 cm	Muck (A9) ( <b>LRR I, J</b> )		
Histic E	pipedon (A2	)			Sandy I	Redox (S5	5)		Coast Prairie Redox (A16) (LRR F, G, H)			
Black H	istic (A3)				Strippe	d Matrix (S	S6)		Dark	Dark Surface (S7) (LRR G)		
Hydroge	en Sulfide (A	4)				Mucky Mir			High Plains Depressions (F16)			
	Stratified Layers (A5) (LRR F) Loamy Gleyed Matrix (F2)					(LRR H outside of MLRA 72 & 73)						
	1 cm Muck (A9) (LRR F, G, H) Depleted Matrix (F3)					Reduced Vertic (F18)						
	d Below Dar		e (A11)			Dark Surfa	( )		Red Parent Material (TF2)			
	ark Surface						urface (F7)		Very Shallow Dark Surface (TF12)			
	Aucky Miner	. ,				Depressio			Other (Explain in Remarks)			
	Mucky Peat				-		essions (F		³ Indicators of hydrophytic vegetation and			
5 CM IVIU	ucky Peat or	Peat (Sa	3) (LRR F)		(INIL	.RA /2 &	73 of LRR	H)		nd hydrology must be present, s disturbed or problematic.		
Restrictive	Layer (if pro	esent):										
Туре:		,										
Depth (in	ches):								Hydric So	il Present? Yes No _✓	_	
Remarks:									•			
HYDROLO	GY											
Wetland Hy	drology Ind	licators:										
Primary Indi	cators (minir	num of o	ne require	d; check all	that app	ly)			<u>Second</u>	dary Indicators (minimum of two require	<u>d)</u>	
Surface	Water (A1)			S	alt Crust	(B11)			Su	rface Soil Cracks (B6)		
High Wa	ater Table (A	(2)		A	quatic In	vertebrate	es (B13)		Sp	arsely Vegetated Concave Surface (B8	6)	
🧹 Saturati	on (A3)			F	lydrogen	Sulfide O	dor (C1)		_√ Dra	ainage Patterns (B10)		
Water M	larks (B1)			C	ry-Seaso	on Water 1	Table (C2)		Oxidized Rhizospheres on Living Roots (C3)			
				_								

wetland Hydrology Indicators:				
Primary Indicators (minimum of one required; ch	eck all that apply)	Secondary Indicators (minimum of two required)		
Surface Water (A1)	Salt Crust (B11)	Surface Soil Cracks (B6)		
High Water Table (A2)	Aquatic Invertebrates (B13)	Sparsely Vegetated Concave Surface (B8)		
✓ Saturation (A3)	Hydrogen Sulfide Odor (C1)	✓ Drainage Patterns (B10)		
Water Marks (B1)	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 _	✓ Depth (inches):			
Water Table Present? Yes No _	✓ Depth (inches):			
Saturation Present? Yes <u>√</u> No _ (includes capillary fringe)	Depth (inches): Wetland	Hydrology Present? Yes _ ✓ No		
Describe Recorded Data (stream gauge, monitor	ring well, aerial photos, previous inspections), if av	/ailable:		
Remarks:				



Project/Site: WBI M2W	City/County: Cass County	Sampling Date:2022-08-17
Applicant/Owner: WBI	State: No	th Dakota Sampling Point: wcae006e_u
Investigator(s): Mike Eldridge, Valerie Blamer	Section, Township, Range: sec 22 T	138N R050W
Landform (hillslope, terrace, etc.): Other	Local relief (concave, convex, none):	None Slope (%): <u>0-2</u>
Subregion (LRR): LRR F, MLRA 56 Lat: 46	.760829 Long: -96.98	9399 Datum: <u>NAD83</u>
Soil Map Unit Name: Fargo silty clay, depressional, 0 to 1 p	ercent slopes NW	classification:
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes No (If no, exp	lain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Normal Circums	ances" present? Yes 🧹 No
Are Vegetation, Soil, or Hydrology naturally pro	bblematic? (If needed, explain an	y answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	sampling point locations, tra	nsects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No No No	Is the Sampled Area within a Wetland?	Yes	No∕
Remarks:					

	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC
2				(excluding FAC-): (A)
3				Total Number of Dominant
4				Species Across All Strata: (B)
		= Total Cov		Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 15 )				That Are OBL, FACW, or FAC: 33.33 (A/B)
1				、 ,
2				Prevalence Index worksheet:
3				Total % Cover of:Multiply by:
				OBL species <u>0.00</u> x 1 = <u>0.00</u>
4			·	FACW species 0.00 x 2 = 0.00
5				FAC species x 3 = 75.00
Herb Stratum (Plot size: 5 )		= Total Cov	/er	FACU species 100.00 x 4 = 400.00
1. <u>Poa pratensis</u>	75	V	FACU	UPL species $10.00 \times 5 = 50.00$
2. <u>Ambrosia artemisiifolia</u>		Y		Column Totals: $135.00$ (A) $525.00$ (B)
3. <u>Xanthium strumarium</u>			_FAC_	Prevalence Index = $B/A = 3.89$
4. <u>Hibiscus sp.</u>			<u>    Ni    </u>	Hydrophytic Vegetation Indicators:
5. <u>Zea mays</u>	10	<u>      N                              </u>	UPL	1 - Rapid Test for Hydrophytic Vegetation
6				2 - Dominance Test is >50%
7				
8				$3$ - Prevalence Index is $\leq 3.0^{1}$
9				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
10				Problematic Hydrophytic Vegetation ¹ (Explain)
	155	= Total Cov	/er	
Woody Vine Stratum (Plot size: <u>30</u> )				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1				
2				Hydrophytic
		= Total Cov	/er	Vegetation
% Bare Ground in Herb Stratum				Present? Yes No 🗸
Remarks:				

Profile Desc	cription: (Describe	o the depth ne	eded to docun	nent the i	ndicator	or confirm	the absence of inc	dicators.)	
Depth	Matrix			x Features	s				
(inches)	Color (moist)	<u>%</u> C	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-20	<u>10YR 2/1</u>	100					SIC		
				·					
				·					
				. <u></u>					
<u> </u>									
1									
	oncentration, D=Depl Indicators: (Application)					d Sand Gra		PL=Pore Lining, M=Matrix.	
-								-	
Histosol	pipedon (A2)		Sandy G Sandy F		. ,		1 cm Muck (	e Redox (A16) ( <b>LRR F, G, H</b> )	
· ·	istic (A3)			I Matrix (S					
	en Sulfide (A4)			Mucky Mir	,		Dark Surface (S7) (LRR G) High Plains Depressions (F16)		
	d Layers (A5) (LRR F	)		Gleyed Ma			(LRR H outside of MLRA 72 & 73)		
1 cm Mu	uck (A9) ( <b>LRR F, G, H</b>	1)	Deplete	d Matrix (F	F3)		Reduced Vertic (F18)		
Deplete	d Below Dark Surface	e (A11)		Dark Surfa	· · ·		Red Parent Material (TF2)		
	ark Surface (A12)				rface (F7)		Very Shallow Dark Surface (TF12)		
-	/lucky Mineral (S1)			Depression	. ,	10)	Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and		
	Mucky Peat or Peat (\$ ucky Peat or Peat (\$3	, , , ,		•	essions (F				
5 cm wit	icky real of real (53	) (LKK F)		KA 12 œ I	73 of LRR	п)		ology must be present, rbed or problematic.	
Restrictive	Layer (if present):							ibed of problematic.	
	ches):						Hydric Soil Prese	ent? Yes No √	
Remarks:									
Remains.									
HYDROLO	GY								
Wetland Hy	drology Indicators:								
Primary Indi	cators (minimum of o	ne required; che	eck all that apply	<i>y</i> )			Secondary Ind	licators (minimum of two required)	
Surface	Water (A1)		Salt Crust	(B11)			Surface S	oil Cracks (B6)	
	ater Table (A2)		Aquatic Inv	. ,	s (B13)			Vegetated Concave Surface (B8)	
Saturati			Hydrogen					Patterns (B10)	
	larks (B1)		Dry-Seaso		. ,		-	Rhizospheres on Living Roots (C3)	
	nt Deposits (B2)					ing Roots (			

- ____ Oxidized Rhizospheres on Living Roots (C3)
- (where not tilled) Presence of Reduced Iron (C4)
- _ Algal Mat or Crust (B4)
- ____ Iron Deposits (B5) ____ Thin Muck Surface (C7) ____ Inundation Visible on Aerial Imagery (B7) ____ Other (Explain in Remarks) Water-Stained Leaves (B9) Field Observations: Su

Surface Water Present?	Yes	No	✓	Depth (inches):				
Water Table Present?	Yes	No	✓	Depth (inches):				
Saturation Present? (includes capillary fringe)	Yes	No	<u>/</u>	Depth (inches):	Wetland Hydrology Present?	Yes	No _	1
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:								

Remarks:

____ Drift Deposits (B3)

Crayfish Burrows (C8)

____ FAC-Neutral Test (D5)

____

Geomorphic Position (D2)

Saturation Visible on Aerial Imagery (C9)

Frost-Heave Hummocks (D7) (LRR F)



wace006e_u, looking south.

Project/Site: WBI M2W	City/County: Cass County	Sampling Date: 2022-08-17					
Applicant/Owner: WBI	State: North Dakota	a Sampling Point: <u>wcae006e_w</u>					
Investigator(s): Mike Eldridge, Valerie Blamer	_ Section, Township, Range: <u>sec 16 T138N</u>	R050W					
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, convex, none): <u>None</u>	Slope (%): <u>0-2</u>					
Subregion (LRR): LRR F, MLRA 56 Lat: 4	6.7607623 Long: <u>-96.9893853</u>	Datum: NAD83					
Soil Map Unit Name: Fargo silty clay, depressional, 0 to 1 percent slopes NWI classification:							
Are climatic / hydrologic conditions on the site typical for this time of year? Yes 🖌 No (If no, explain in Remarks.)							
Are Vegetation _ ✓_, Soil _ ✓_, or Hydrology significan	tly disturbed? Are "Normal Circumstances"	present? Yes No					
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed, explain any answe	ers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.							
Hydrophytic Vegetation Present?       Yes _ ✓ No         Hydric Soil Present?       Yes _ ✓ No         Wetland Hydrology Present?       Yes _ ✓ No	— within a Wetland? Yes	′ No					

Remarks: Sample plot is location within a roadside ditch.

	AL 1.4	<b>D</b> · · ·		
Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover		t Indicator	Dominance Test worksheet:
				Number of Dominant Species
1				That Are OBL, FACW, or FAC (excluding FAC-):1 (A)
2				
3				Total Number of Dominant
4				Species Across All Strata: (B)
		= Total Co	ver	Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 15 )		- 10101 00	101	That Are OBL, FACW, or FAC: 100.00 (A/B)
1				
				Prevalence Index worksheet:
2				Total % Cover of: Multiply by:
3			·	OBL species x 1 =000
4			·	FACW species 95.00 x 2 = 190.00
5			·	FAC species $0.00 \times 3 = 0.00$
Lieth Christian (Distriction E		= Total Co	ver	FACU species $10.00$ x 4 = $40.00$
Herb Stratum (Plot size: <u>5</u> )			<b>EA 014</b> /	· · · · · · · · · · · · · · · · · · ·
1. <u>Alopecurus pratensis</u>				UPL species $0.00 \times 5 = 0.00$
2. <u>Phalaris arundinacea</u>	20	N	FACW	Column Totals: <u>105.00</u> (A) <u>230.00</u> (B)
3. <u>Poa pratensis</u>	10	N	FACU	Dravislance Index D/A 2.10
4				Prevalence Index = B/A = <u>2.19</u>
5				Hydrophytic Vegetation Indicators:
6				✓ 1 - Rapid Test for Hydrophytic Vegetation
				✓ 2 - Dominance Test is >50%
7				$\checkmark$ 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)
	105	= Total Co	ver	
Woody Vine Stratum (Plot size: 30)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1			·	be present, unless disturbed of problematic.
2				Hydrophytic
	= Total Cover			Vegetation
% Bare Ground in Herb Stratum				Present? Yes <u>√</u> No
Remarks:			0	
Roadside ditch has been recently mow	ed/main	tained.	Some v	regetation cannot be identified.

Profile Des	cription: (Descril	pe to the depth ne	eded to docun	nent the i	ndicator	or confir	m the absence	of indicators.)
Depth	Matrix		Redox	x Features			_	
(inches)	Color (moist)	<u>%</u> C	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks
	<u></u>							
	· · · · · · · · · · · · · · · · · · ·							
17							21	
		epletion, RM=Red				a Sana (		ation: PL=Pore Lining, M=Matrix.
-								•
Histosol Histic F	pipedon (A2)		Sandy G Sandy R					luck (A9) ( <b>LRR I, J</b> ) Prairie Redox (A16) ( <b>LRR F, G, H</b> )
	listic (A3)			Matrix (S				urface (S7) (LRR G)
	en Sulfide (A4)			Mucky Mir				lains Depressions (F16)
	d Layers (A5) (LR	R F)		Gleyed Ma			-	R H outside of MLRA 72 & 73)
1 cm M	uck (A9) ( <b>LRR F, C</b>	G, H)	Depleted	d Matrix (F	F3)		Reduc	ed Vertic (F18)
	d Below Dark Surf	ace (A11)		Dark Surfa				arent Material (TF2)
	ark Surface (A12)				rface (F7)			hallow Dark Surface (TF12)
	Mucky Mineral (S1)		Redox D			10)		Explain in Remarks)
	ucky Peat of Peat ucky Peat or Peat	at (S2) (LRR G, H)	High Pla		73 of LRR			of hydrophytic vegetation and d hydrology must be present,
5 cm with	ucky i eat of i eat	(00) (ERRT)				•••		disturbed or problematic.
Restrictive	Layer (if present)	:						
	,							
	iches):						Hvdric Soil	Present? Yes _ ✓ No
Remarks:							,	
	ne presence	of surface w	ater. no sc	oil sam	ple wa	s obta	ained: assu	ming hydric soils.
			, <u> </u>					3 9 1 1 1 1
HYDROLO	OGY							
Wetland Hy	drology Indicato	rs:						
Primary Indi	cators (minimum c	of one required; che	eck all that apply	()			Seconda	ry Indicators (minimum of two required)
✓ Surface	Water (A1)		Salt Crust	(B11)			Surf	ace Soil Cracks (B6)
_∕_ High Wa	ater Table (A2)		Aquatic Inv	vertebrate	s (B13)		Spa	rsely Vegetated Concave Surface (B8)
Saturati	ion (A3)		Hydrogen	Sulfide Oc	dor (C1)		_∡_ Drai	nage Patterns (B10)
Water N	/larks (B1)		Dry-Seaso	n Water T	able (C2)		Oxic	lized Rhizospheres on Living Roots (C3)
Sedime	nt Deposits (B2)		Oxidized R	hizosphe	res on Livi	ng Roots	s (C3) (w	here tilled)
Drift De	posits (B3)		(where n	not tilled)			Cray	/fish Burrows (C8)
Algal Ma	at or Crust (B4)		Presence of	of Reduce	ed Iron (C4	·)		ration Visible on Aerial Imagery (C9)
Iron De	posits (B5)		Thin Muck	Surface (	C7)		_√ Geo	morphic Position (D2)
	ion Visible on Aeria		Other (Exp	lain in Re	marks)			-Neutral Test (D5)
	Stained Leaves (BS	9)					Fros	t-Heave Hummocks (D7) (LRR F)
Field Obser					-			
Surface Wat	ter Present?	Yes _ ✓ No _				_		
Water Table	e Present?	Yes _✓ No _	Depth (inc	ches):	0	_		
Saturation P		Yes _ ✓ No _	Depth (inc	ches):	0	_ We	tland Hydrology	y Present? Yes ∕ No
	pillary fringe) ecorded Data (strea	am gauge, monitor	ng well, aerial p	photos, pr	evious ins	pections	), if available:	

Remarks: Plot is located in the centerline of a roadside ditch.



wace006e_w, looking northeast.

Project/Site: WBI M2W	City/County: Cas	s County	Sampling Date: 2022-08-17
Applicant/Owner: WBI		State: North Dakota	Sampling Point: wcae007e_u
Investigator(s): Mike Eldridge, Valerie Blamer	Section, Township	o, Range: <u>sec 09 T139N R</u>	050W
Landform (hillslope, terrace, etc.): Other	Local relief (conc	ave, convex, none): <u>None</u>	Slope (%): <u>0-2</u>
Subregion (LRR): LRR F, MLRA 56 Lat: 46	.872242	Long: <u>-97.006296</u>	Datum: NAD83
Soil Map Unit Name: Dovray silty clay, 0 to 1 percent slopes	3	NWI classifica	ation:
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes 🖌	No (If no, explain in Re	emarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed?	Are "Normal Circumstances" p	resent? Yes 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 poi	int locations, transects,	, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes No _ ✓ Yes No _ ✓ Yes No _ ✓	Is the Sampled Area within a Wetland?	Yes	No∕
Remarks:				

	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> )		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC
2				(excluding FAC-): (A)
3				Total Number of Dominant
4				Species Across All Strata: (B)
		= Total Cov	ver	Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 15)				That Are OBL, FACW, or FAC: 0.00 (A/B)
1				Prevalence Index worksheet:
2				Total % Cover of: Multiply by:
3				OBL species 0.00 x 1 = 0.00
4			<u> </u>	FACW species 15.00 x 2 = 30.00
5			. <u> </u>	FAC species $20.00 \times 3 = 60.00$
Horb Stratum (Diat aiza: <b>5</b> )		= Total Cov	ver	FACU species $40.00$ x 4 = $160.00$
Herb Stratum (Plot size: <u>5</u> )	50	V	וסו	UPL species $50.00 \times 5 = 250.00$
1. <u>Bromus inermis</u>				
2. <u>Ambrosia artemisiifolia</u>				Column Totals: <u>125.00</u> (A) <u>500.00</u> (B)
3. <u>Urtica dioica</u>			_FAC_	Prevalence Index = $B/A = 4.0$
4. Persicaria pensylvanica				Hydrophytic Vegetation Indicators:
5				1 - Rapid Test for Hydrophytic Vegetation
6				2 - Dominance Test is >50%
7				$3$ - Prevalence Index is $\leq 3.0^{1}$
8				
9				4 - Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet)
10				Problematic Hydrophytic Vegetation ¹ (Explain)
Weeder View Otretum (Distriction 20)	125	= Total Cov	ver	¹ Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size: <u>30</u> )				be present, unless disturbed or problematic.
1				
2				Hydrophytic Vegetation
% Bare Ground in Herb Stratum	= Total Cover		ver	Present? Yes No ✓
Remarks:				

Profile Description: (Describe to the depth nee	eded to document the indicator or confirm	the absence of indicators.)
Depth Matrix	Redox Features	
	olor (moist) % Type ¹ Loc ²	Texture Remarks
0-16 10YR 2/1		SIC
· · · · · · ·		
· · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · ·		
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· · · · · · ·		
¹ Type: C=Concentration, D=Depletion, RM=Redu		
Hydric Soil Indicators: (Applicable to all LRRs	, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Gleyed Matrix (S4)	1 cm Muck (A9) ( <b>LRR I, J</b> )
Histic Epipedon (A2)	Sandy Redox (S5)	Coast Prairie Redox (A16) (LRR F, G, H)
Black Histic (A3)	Stripped Matrix (S6)	Dark Surface (S7) (LRR G)
Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1)	High Plains Depressions (F16)
Stratified Layers (A5) (LRR F)	Loamy Gleyed Matrix (F2)	(LRR H outside of MLRA 72 & 73)
1 cm Muck (A9) ( <b>LRR F, G, H</b> )	Depleted Matrix (F3)	Reduced Vertic (F18)
Depleted Below Dark Surface (A11)	Redox Dark Surface (F6)	Red Parent Material (TF2)
Thick Dark Surface (A12) Depleted Dark Surface (F7)		Very Shallow Dark Surface (TF12)
Sandy Mucky Mineral (S1)	Redox Depressions (F8)	Other (Explain in Remarks)
2.5 cm Mucky Peat or Peat (S2) (LRR G, H)	High Plains Depressions (F16)	³ Indicators of hydrophytic vegetation and
5 cm Mucky Peat or Peat (S3) (LRR F)	(MLRA 72 & 73 of LRR H)	wetland hydrology must be present,
		unless disturbed or problematic.
Restrictive Layer (if present):		
Type: Compacted soils		
Depth (inches): <u>16</u>		Hydric Soil Present? Yes No∕
Remarks:		
HYDROLOGY		
Wetland Hydrology Indicators:		

Primary Indicators (minimum of o	one required; check all that apply)	Secondary Indicators (minimum of two required)					
Surface Water (A1)	Salt Crust (B11)	Surface Soil Cracks (B6)					
High Water Table (A2)	Aquatic Invertebrates (B13)	Sparsely Vegetated Concave Surface (B8)					
Saturation (A3)	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)					
Water Marks (B1)	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 _ ✓ Depth (inches):						
Water Table Present?	Yes No _ ✓ Depth (inches):						
Saturation Present?	Yes No Depth (inches):	Wetland Hydrology Present? Yes No					
Describe Recorded Data (stream	m gauge, monitoring well, aerial photos, previous inspe	ctions), if available:					
Remarks:							



wcae007e_u, looking northeast.

Project/Site: WBI M2W	City/County: Cass County	Sampling Date: 2022-08-17
Applicant/Owner: WBI	State: North Dakota	Sampling Point: wcae007e_w
Investigator(s): Mike Eldridge, Valerie Blamer	Section, Township, Range: sec 09 T139N F	R050W
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, convex, none): None	Slope (%): <u>0-2</u>
Subregion (LRR): LRR F, MLRA 56 Lat: 46.4	8721583 Long: <u>-97.0060790</u>	Datum: <u>NAD83</u>
Soil Map Unit Name: Dovray silty clay, 0 to 1 percent slopes	NWI classific	ation:
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes No (If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Normal Circumstances" p	oresent? Yes No
Are Vegetation, Soil, or Hydrology naturally pro	bblematic? (If needed, explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	sampling point locations, transects	, important features, etc.
Hydrophytic Vegetation Present?       Yes ✓       No         Hydric Soil Present?       Yes ✓       No         Wetland Hydrology Present?       Yes ✓       No	Is the Sampled Area within a Wetland? Yes <u>√</u>	No

Remarks: Sample plot is location within a roadside ditch.

	Absolute		Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> )		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC (excluding FAC-): 1 (A)
2				(excluding FAC-): (A)
3				Total Number of Dominant
4				Species Across All Strata: (B)
		= Total Co	ver	Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 15)				That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)
1				Prevalence Index worksheet:
2				
3				Total % Cover of: Multiply by:
4				OBL species x 1 = 25.00
5				FACW species <u>95.00</u> x 2 = <u>190.00</u>
		= Total Co		FAC species <u>0.00</u> x 3 = <u>0.00</u>
Herb Stratum (Plot size: 5)				FACU species <u>25.00</u> x 4 = <u>100.00</u>
1. <u>Persicaria pensylvanica</u>	75	Y	FACW	UPL species <u>0.00</u> x 5 = <u>0.00</u>
2. <u>Trichophorum sp.</u>	25	Ν	OBL	Column Totals: <u>145.00</u> (A) <u>315.00</u> (B)
3. <u>Ambrosia artemisiifolia</u>				
4. <u>Phalaris arundinacea</u>				Prevalence Index = B/A = <u>2.17</u>
5				Hydrophytic Vegetation Indicators:
				✓ 1 - Rapid Test for Hydrophytic Vegetation
6				✓ 2 - Dominance Test is >50%
7				$\checkmark$ 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)
Weeder/Vieg Stratum (Distainer 20	145	= Total Co	ver	¹ Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size: <u>30</u> )				be present, unless disturbed or problematic.
1				
2				Hydrophytic Vegetation
% Poro Cround in Horb Stratum		= Total Co	ver	Present? Yes <u>√</u> No
% Bare Ground in Herb Stratum				
Plot is located in the centerline of a wa	terwav.			

Profile Des	cription: (Describ	be to the depth n	eeded to docur	nent the i	ndicator	or confirm	n the absence of	f indicators.)
Depth	Matrix			x Feature		. 2		
(inches)	Color (moist)	%(	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
						·		
	·			·		·		
					. <u> </u>			
$\frac{1}{1}$ Type: C-C	Concentration, D=D	oplotion PM-Poo	Jucod Matrix C		d or Coato	d Sand Gr		tion: PL=Pore Lining, M=Matrix.
	Indicators: (App					u Sanu Gi		or Problematic Hydric Soils ³ :
Histoso			Sandy (					ck (A9) ( <b>LRR I, J</b> )
	pipedon (A2)		Sandy F					airie Redox (A16) ( <b>LRR F, G, H</b> )
	listic (A3)		Stripped					face (S7) ( <b>LRR G</b> )
Hydrog	en Sulfide (A4)			Mucky Mir				ins Depressions (F16)
Stratifie	ed Layers (A5) ( <b>LRI</b>	R F)	Loamy	Gleyed Ma	atrix (F2)		(LRR	H outside of MLRA 72 & 73)
	uck (A9) ( <b>LRR F, G</b>			d Matrix (I				l Vertic (F18)
	ed Below Dark Surf	ace (A11)		Dark Surfa				ent Material (TF2)
	Park Surface (A12)	<b>N</b>			Irface (F7)			allow Dark Surface (TF12)
	Mucky Mineral (S1) Mucky Peat or Pea			Depression		16)		xplain in Remarks) hydrophytic vegetation and
	ucky Peat or Peat			•	73 of LRR			hydrology must be present,
	uoky i out of i out	(00) (2007)	(=			••)		sturbed or problematic.
Restrictive	Layer (if present)	:						·
Type:								
Depth (ir	nches):		_				Hydric Soil P	resent? Yes _ ✓ _ No
Remarks:								
Due to the	he presence	of surface v	vater, no so	oil sam	ple wa	s obtai	ned; assum	ning hydric soils.
HYDROLO								
-	/drology Indicator							
	icators (minimum o	o one required, ch						<u>r Indicators (minimum of two required)</u>
	e Water (A1)		Salt Crust		o (D12)			ce Soil Cracks (B6)
	ater Table (A2)		Aquatic In					ely Vegetated Concave Surface (B8)
Saturat	Marks (B1)		Hydrogen Dry-Seaso					age Patterns (B10) ed Rhizospheres on Living Roots (C3)
	ent Deposits (B2)		Oxidized F			ing Poots		ere tilled)
	eposits (B3)			not tilled)		ing Roots	. , .	sh Burrows (C8)
	lat or Crust (B4)		Presence			L)		ation Visible on Aerial Imagery (C9)
-	posits (B5)		Thin Muck		,	")		orphic Position (D2)
	tion Visible on Aeria	al Imagery (B7)	Other (Exp					Veutral Test (D5)
	Stained Leaves (B9				(((((			Heave Hummocks (D7) (LRR F)
Field Obse		,						
Surface Wa	ter Present?	Yes <u>√</u> No _	Depth (in	ches):	6	_		
Water Table	e Present?	Yes _∡ No _				_		
Saturation F		Yes _ ✓ No _				Wetla	and Hydrology F	Present? Yes _ ✓ No
	pillary fringe) ecorded Data (strea	am daude monito	ring well seriel	abotos pr	avious inc	nections)	if available.	
Describe Re		an gauge, monito	ing wen, aerial	510103, pl	C 11003 115	poolions),		

Remarks: Plot is located in the centerline of a waterway.



wcae007e_w, looking northeast.

Project/Site: WBI M2W	City/County: Cass Cou	City/County: Cass County Sampling Date: 2022-06-0				
Applicant/Owner: WBI		State: North Dakota Sampling Point: wcae008_u				
Investigator(s): Mike Eldridge, Valerie Blamer	Section, Township, Range	»: <u>sec 21 T139N R05</u>	WO			
Landform (hillslope, terrace, etc.): Other	Local relief (concave, con	vex, none): <u>None</u>	Slope (%): <u>0-2</u>			
Subregion (LRR): LRR F, MLRA 56	at: 46.8404578	ong: <u>-97.0106265</u>	Datum: NAD83			
Soil Map Unit Name: Fargo-Hegne silty clays, 0 to 1 p	ercent slopes	es NWI classification:				
Are climatic / hydrologic conditions on the site typical for this time of year? Yes 🖌 No (If no, explain in Remarks.)						
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No						
Are Vegetation, Soil, or Hydrology natu	rally problematic? (If need	ed, explain any answers in	Remarks.)			
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.						
Hydrophytic Vegetation Present? Yes No _	Is the Sampled Ar	ea				
Hydric Soil Present? Yes No _		within a Wetland? Yes No				
Wetland Hydrology Present? Yes No _						
Remarks:	: t - I-					

Sample plot is located within a roadside ditch

	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> )		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC
2				(excluding FAC-): (A)
3				Total Number of Dominant
4				Species Across All Strata: (B)
		= Total Cov	/er	Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 15)				That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)
1				Prevalence Index worksheet:
2				Total % Cover of: Multiply by:
3				OBL species $0.00$ x 1 = $0.00$
4				FACW species $0.00 \times 1 = 0.00$
5				
		= Total Cov	/er	FAC species $0.00 \times 3 = 0.00$
Herb Stratum (Plot size: <u>3</u> )				FACU species $0.00$ x 4 = $0.00$
1. <u>Zea mays</u>	0	N	UPL	UPL species x 5 =000
2				Column Totals: <u>0.00</u> (A) <u>0.00</u> (B)
3				Developed Index D/A
4				Prevalence Index = B/A =
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
				2 - Dominance Test is >50%
7				3 - Prevalence Index is ≤3.0 ¹
8 9				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
10				Problematic Hydrophytic Vegetation ¹ (Explain)
		= Total Cov	/er	
Woody Vine Stratum (Plot size:30)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1				be present, unless disturbed of problematic.
2				Hydrophytic
		= Total Cov		Vegetation
% Bare Ground in Herb Stratum				Present? Yes <u>No √</u>
Remarks:				
Site visit was conducted after crop har	iest. Ke	mnants	or∠ea	mays is strewn across the sample plot.

Profile Des	cription: (D	escribe t	o the dep	oth needed	to docu	ment the i	ndicator	or confirn	n the absence	e of indicators.)	
Depth <u>Matrix</u> (inches) Color (moist) %		Redox Features			. 2						
(inches)			%	Color (r	noist)	%	Type ¹	_Loc ²	Texture	Remarks	
0-8	<u>10YR</u>	2/1	100					. <u> </u>	SIC		
8-15	10YR	3/3	90	<u>10YR</u>	2/1	10	C	M	SIL	Distinct redox.	
	oncentration							d Sand G		cation: PL=Pore Lining, M=Matrix.	
Hydric Soil	Indicators:	(Applica	able to all	LRRs, unl	ess othe	rwise not	ed.)		Indicators	s for Problematic Hydric Soils ³ :	
Histoso	· ,					Gleyed Ma				Muck (A9) ( <b>LRR I, J</b> )	
	pipedon (A2)	)				Redox (S5				Prairie Redox (A16) ( <b>LRR F, G, H</b> )	
	istic (A3)	4)				d Matrix (S				Surface (S7) (LRR G)	
	en Sulfide (A d Layers (A5		.)			Mucky Mir Gleyed Ma			-	Plains Depressions (F16)	
	uck (A9) (LR					ed Matrix (I			(LRR H outside of MLRA 72 & 73) Reduced Vertic (F18)		
	d Below Dar					Dark Surfa			Red Parent Material (TF2)		
Thick D	ark Surface (	(A12)			Deplete	ed Dark Su	rface (F7)	)	Very Shallow Dark Surface (TF12)		
	Mucky Minera					Depressio			Other (Explain in Remarks)		
	Mucky Peat of				-	ains Depre				s of hydrophytic vegetation and	
5 cm Mi	ucky Peat or	Peat (S3	5) (LRR F)	(MLRA 72 & 73 of LRR H)				<b>H</b> )		nd hydrology must be present,	
Postrictivo	Layer (if pre	sont):							unies	s disturbed or problematic.	
	ompacted	SOIL							Undria Cai	Present? Yes No (	
	ches): <u>15</u>								Hydric Sol	I Present? Yes No _✓	
Remarks:	was cor	ducto	d after	crops h	ad bo	on har	hoted	Thos	oil has he	en upturned during the	
			u allei	cropsi		ennar	vesieu	. 1116 5		en upturned during the	
harvestir	ig proce	55.									
HYDROLO	GY										
Wetland Hy	drology Ind	icators:									
Primary Indi	cators (minin	num of oi	ne require	d; check all	that app	ly)			Second	ary Indicators (minimum of two required)	
Surface	Surface Water (A1) Salt Crust (B11)					Sur	face Soil Cracks (B6)				
High Wa	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						ing Roots	(C3) (N	where tilled)			
Drift Deposits (B3) (where not tilled)						Crayfish Burrows (C8)					
Algal Mat or Crust (B4) Presence of Reduced Iron (C4)					1)	Sat	uration Visible on Aerial Imagery (C9)				
Iron Deposits (B5) Thin Muck Surface (C7)							Ge	omorphic Position (D2)			
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)							FA	C-Neutral Test (D5)			
Water-S	Stained Leave	es (B9)							Fro	st-Heave Hummocks (D7) (LRR F)	
Field Obser	vations:										
Surface Wat	ter Present?	Ye	es	No <u>√</u>	Depth (in	ches):					

 Saturation Present?
 Yes _____ No _ ✓ _ Depth (inches): ______
 Wetland Hydrole

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

Yes ____ No __ Depth (inches): _

Remarks: Site visit was conducted after crop harvest. Hydrology has been affected due to the use of heavy machinery.

Water Table Present? Saturation Present?

No_√__

Wetland Hydrology Present? Yes



Project/Site: WBI M2W	City/County: Cass County Sampling Date: 2022-06-						
Applicant/Owner: WBI	State: North Dakota Sampling Point: wcae008e_w						
Investigator(s): Mike Eldridge, Valerie Blamer	Section, Township, Range: sec 27 T139N R050W						
Landform (hillslope, terrace, etc.): Other	Local relief (concave, convex, none): <u>Concave</u> Slope (%): <u>0-2</u>						
Subregion (LRR): LRR F, MLRA 56 Lat: 46.	.8405209 Long: <u>-97.0107426</u> Datum: <u>NAD83</u>						
Soil Map Unit Name: Fargo silty clay, 0 to 1 percent slopes	NWI classification:						
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <u>V</u> No (If no, explain in Remarks.)							
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Normal Circumstances" present? Yes 🧹 No						
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (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	Is the Sampled Area						
Hydric Soil Present? Yes No							
Wetland Hydrology Present?   Yes No							
Remarks: Sample plot is located within a roadside ditch							

	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> )		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC (excluding FAC-): 1 (A)
2				
3				Total Number of Dominant
4				Species Across All Strata: (B)
	0	= Total Cov	/er	Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 15)				That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)
1				Prevalence Index worksheet:
2				Total % Cover of: Multiply by:
3				$\begin{array}{c} \hline \hline$
4				FACW species $10.00$ x 2 = $20.00$
5				FAC species $0.00 \times 3 = 0.00$
		= Total Cov	/er	FACU species $0.00 \times 4 = 0.00$
Herb Stratum (Plot size: <u>3</u> )	4.0	N/		· · · · · · · · · · · · · · · · · · ·
1. <u>Phalaris arundinacea</u>				UPL species $0.00 \times 5 = 0.00$
2				Column Totals: <u>10.00</u> (A) <u>20.00</u> (B)
3				Prevalence Index = $B/A = 2.0$
4				Hydrophytic Vegetation Indicators:
5				✓ 1 - Rapid Test for Hydrophytic Vegetation
6				✓ 2 - Dominance Test is >50%
7				$\checkmark$ 3 - Prevalence Index is $\leq 3.0^1$
8				4 - Morphological Adaptations ¹ (Provide supporting
9				data in Remarks or on a separate sheet)
10				Problematic Hydrophytic Vegetation ¹ (Explain)
	10	= Total Cov	/er	
Woody Vine Stratum (Plot size: 30)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1			<u> </u>	
2				Hydrophytic
% Bare Ground in Herb Stratum		= Total Cov	/er	Vegetation Present? Yes <u>√</u> No
Remarks:				

Profile Desc	ription: (Describe to	the depth nee	ded to docur	nent the ir	ndicator o	or confirm	the absence of	of indicators.)	
Depth	Matrix		Redox Features						
(inches)	Color (moist)	<u>%</u> Co	lor (moist)	%	Type ¹	Loc ²	Texture	Remarks	
				·					
	· ·			·	<u> </u>				
	· ·			·					
	· ·			·	<u> </u>				
	· ·			·					
		tion DM Dodu	and Matrix CC	Covered	or Coato		21.000	ation: DL Dava Lining M Matrix	
	oncentration, D=Deple Indicators: (Applical					u Sanu Gr		ation: PL=Pore Lining, M=Matrix.	
-					,			,	
Histosol	. ,			Bleyed Mat				uck (A9) (LRR I, J)	
	pipedon (A2)			Redox (S5)				Prairie Redox (A16) (LRR F, G, H)	
Black Histic (A3)				Matrix (Se	,			urface (S7) (LRR G)	
	n Sulfide (A4)			Mucky Min	( )			ains Depressions (F16)	
	Layers (A5) (LRR F)			Gleyed Ma			(LRR H outside of MLRA 72 & 73) Reduced Vertic (F18)		
1 cm Muck (A9) ( <b>LRR F, G, H</b> )				d Matrix (F	,				
Depleted Below Dark Surface (A11)			Redox Dark Surface (F6)				Red Parent Material (TF2)		
Thick Dark Surface (A12)			Depleted Dark Surface (F7) Redox Depressions (F8)				Very Shallow Dark Surface (TF12)		
	lucky Mineral (S1)			•	. ,			Explain in Remarks)	
	Aucky Peat or Peat (S	, ,		ains Depres		,		of hydrophytic vegetation and	
5 cm Mu	icky Peat or Peat (S3)	(LRR F)	(ML	RA 72 & 7	3 of LRR	H)		hydrology must be present,	
5 ( ) ( )	<i>()</i>						unless o	disturbed or problematic.	
Restrictive I	_ayer (if present):								
Туре:									
Depth (ind	ches):						Hydric Soil F	Present? Yes <u>√</u> No	
Remarks:									
The soils	were not sam	pled due to	o the loca	tion of t	he we	tland w	ithin a roa	dside ditch; assuming	

hydric soils.

# HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; ch	Secondary Indicators (minimum of two required		
<ul> <li>Surface Water (A1)</li> <li>High Water Table (A2)</li> <li>Saturation (A3)</li> <li>Water Marks (B1)</li> <li>Sediment Deposits (B2)</li> <li>Drift Deposits (B3)</li> <li>Algal Mat or Crust (B4)</li> <li>Iron Deposits (B5)</li> <li>Inundation Visible on Aerial Imagery (B7)</li> </ul>	<ul> <li>Salt Crust (B11)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Dry-Season Water Table (C2)</li> <li>Oxidized Rhizospheres on Living R (where not tilled)</li> <li>Presence of Reduced Iron (C4)</li> <li>Thin Muck Surface (C7)</li> <li>Other (Explain in Remarks)</li> </ul>		
Water-Stained Leaves (B9)		Frost-Heave Hummocks (D7) (LRR F)	
Field Observations:			
Surface Water Present? Yes <u>✓</u> No	Depth (inches):2		
Water Table Present? Yes <u>✓</u> No	Depth (inches):0		
Saturation Present? Yes <u>√</u> No _ (includes capillary fringe)	Depth (inches): 0	Wetland Hydrology Present? Yes _ ✓ No	
Describe Recorded Data (stream gauge, monito	oring well, aerial photos, previous inspecti	ons), if available:	
Remarks:			



Project/Site: WBI M2W	City/County: Cass Cou	i <mark>nty</mark> Sar	mpling Date: 2022-06-07				
Applicant/Owner: WBI		State: North Dakota Sampling Point: wrae001_u					
Investigator(s): Mike Eldridge, Valerie Blamer	Section, Township, Range	Section, Township, Range: sec 14 T137N R049W					
Landform (hillslope, terrace, etc.): Other	Local relief (concave, cor	Local relief (concave, convex, none): <u>None</u> Slope (%): <u>0-2</u>					
Subregion (LRR): LRR F, MLRA 56 La	: <u>46.6014035</u> L	.ong: <u>-96.9174832</u>	Datum: <u>NAD83</u>				
Soil Map Unit Name: Fargo silty clay, depressional, 0 to	1 percent slopes	NWI classification	n:				
Are climatic / hydrologic conditions on the site typical for this time of year? Yes 🖌 No (If no, explain in Remarks.)							
Are Vegetation _ ✓ _, Soil _ ✓ _, or Hydrology signified	cantly disturbed? Are "No	ormal Circumstances" prese	ent? Yes No				
Are Vegetation, Soil, or Hydrology natura	Ily problematic? (If need	blematic? (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	Is the Sampled A	rea					
Hydric Soil Present? Yes No		within a Wetland? Yes No ✓					
Wetland Hydrology Present? Yes No	<u>/</u>						
Remarks:							

Sample plot is located within a roadside ditch

# **VEGETATION – Use scientific names of plants.**

				•
	Absolute			Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> )		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC
2				(excluding FAC-): (A)
3				Total Number of Dominant
4				Species Across All Strata: (B)
		= Total Cov		Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 15)				That Are OBL, FACW, or FAC: 0.00 (A/B)
1	_			
2				Prevalence Index worksheet:
3.				Total % Cover of: Multiply by:
				OBL species <u>0.00</u> x 1 = <u>0.00</u>
4				FACW species <u>2.00</u> x 2 = <u>4.00</u>
5				FAC species $0.00 \times 3 = 0.00$
Herb Stratum (Plot size: <u>3</u> )		= Total Cov	/er	FACU species $0.00 \times 4 = 0.00$
1. <u>Phalaris arundinacea</u>	2	N		UPL species $0.00 \times 5 = 0.00$
				Column Totals: $2.00$ (A) $4.00$ (B)
2. <u>Zea mays</u>				$\frac{2.00}{100}$ (A) $\frac{4.00}{100}$ (B)
3				Prevalence Index = $B/A = 2.0$
4				Hydrophytic Vegetation Indicators:
5				1 - Rapid Test for Hydrophytic Vegetation
6				2 - Dominance Test is >50%
7				✓ 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)
	2	= Total Cov	/er	1. The structure of the state o
Woody Vine Stratum (Plot size: <u>30</u> )				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1				
2				Hydrophytic
	0	= Total Cov	/er	Vegetation Present? Yes <u>No √</u>
% Bare Ground in Herb Stratum				
Remarks:		Dama	into of 7	ea mays can be found throughout the

Site visit was conducted after harvest of crops. Remnants of Zea mays can be found throughout the sample plot.

	-		o the deptl	n needed to docun		or confirm	the absence of	of indicators.)
Depth (inches)	Color (m	Matrix	%	Redo: Color (moist)	x Features %Type ¹	Loc ²	Texture	Remarks
0-5	10YR	2/2					SIC	Kemano
						•		
5-20	<u>10YR</u>	2/2	100				SIL	
						·		
						·		
1	<u> </u>						. 2.	
				Reduced Matrix, CS RRs, unless other		ed Sand Gra		ation: PL=Pore Lining, M=Matrix.
-		(Applica						•
Histosol	pipedon (A2)				Bleyed Matrix (S4) Redox (S5)			uck (A9) ( <b>LRR I, J</b> ) Prairie Redox (A16) ( <b>LRR F, G, H</b> )
Black Hi					Matrix (S6)			urface (S7) ( <b>LRR G</b> )
	en Sulfide (A4	4)			Mucky Mineral (F1)			ains Depressions (F16)
	d Layers (A5)	,	)		Gleyed Matrix (F2)			R H outside of MLRA 72 & 73)
1 cm Mu	ick (A9) (LRI	R F, G, H	)		d Matrix (F3)			ed Vertic (F18)
Depleted	d Below Dark	Surface	(A11)	Redox D	Dark Surface (F6)		Red Pa	rent Material (TF2)
	ark Surface (	,			d Dark Surface (F7)	)		nallow Dark Surface (TF12)
	lucky Minera	. ,			Depressions (F8)			Explain in Remarks)
	Aucky Peat c				ins Depressions (F			of hydrophytic vegetation and
5 cm Mu	icky Peat or	Peat (S3	) (LRR F)	(ML)	RA 72 & 73 of LRR	( <b>H</b> )		hydrology must be present, disturbed or problematic.
Restrictive I	aver (if nre	sent).					uniess	disturbed of problematic.
Type:	Layer (ii pre	Senty.						
Depth (inc	abaa);						Hydric Soil I	Present? Yes No_√_
Remarks:								
	was con	ducte	d after d	rons had be	on harvested	The so	il has hee	en upturned during the
harvestin						. 1110 00		an uptumed during the
		55.						
HYDROLO	GY							
Wetland Hyd	drology Indi	cators:						
Primary Indic	cators (minim	num of or	ne required;	check all that apply	()		<u>Secondar</u>	ry Indicators (minimum of two required)
Surface	Water (A1)			Salt Crust	(B11)		_∡_ Surfa	ace Soil Cracks (B6)
High Wa	ater Table (A	2)		Aquatic Inv	vertebrates (B13)		Spar	sely Vegetated Concave Surface (B8)
Saturatio	on (A3)			Hydrogen	Sulfide Odor (C1)			nage Patterns (B10)
Water M	larks (B1)				n Water Table (C2)			ized Rhizospheres on Living Roots (C3)
Sedimer	nt Deposits (I	B2)			hizospheres on Liv			here tilled)
Drift Dep	oosits (B3)			(where r	not tilled)		Cray	fish Burrows (C8)
Algal Ma	at or Crust (B	4)		Presence of	of Reduced Iron (C4	4)		ration Visible on Aerial Imagery (C9)
-	oosits (B5)			Thin Muck	Surface (C7)		Geor	morphic Position (D2)
Inundatio	on Visible on	Aerial Ir	nagery (B7)	Other (Exp	lain in Remarks)		FAC-	Neutral Test (D5)
Water-S	tained Leave	es (B9)					Frost	-Heave Hummocks (D7) (LRR F)
Field Observ	vations:							
Surface Wate	er Present?	Ye	s N	o Depth (ind	ches):			
Water Table	Present?			o Depth (inc				
Saturation P	resent?			o <u>√</u> Depth (inc			nd Hydrology	Present? Yes No∕
(includes cap	oillary fringe)							
Describe Red	corded Data	(stream	gauge, mor	nitoring well, aerial p	photos, previous ins	pections), if	available:	
Remarks:	waa aa a	duata	d ofter a	aron hanvast			offootod	due to the use of heavy
		uucte	u alter (	sop narvest.	riyulology ha	as been	aneciea	due to the use of heavy
machine	ry.							



Project/Site: NextEra Fisher	City/County: Richla	and County	Sampling Date: <u>2022-06-07</u>			
Applicant/Owner: NextEra Energy		State: North Dakota	Sampling Point: <u>wrae001e_w</u>			
Investigator(s): Mike Eldridge, Valerie Blamer	Section, Township, F	Range: <u>sec 12 T136N R</u>	050W			
Landform (hillslope, terrace, etc.): Dip	Local relief (concave	e, convex, none): <u>Concave</u>	Slope (%): <u>0-2</u>			
Subregion (LRR): LRR F, MLRA 56 Lat: 46.	6013689	Long: <u>-96.9175317</u>	Datum: NAD83			
Soil Map Unit Name: Fargo silty clay, 0 to 1 percent slopes		NWI classifica	tion:			
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes <u>✓</u> No		marks.)			
Are Vegetation, Soil, or Hydrology significantly	disturbed? Ar	e "Normal Circumstances" pr	esent? Yes _✓ No			
Are Vegetation, Soil, or Hydrology naturally pro	oblematic? (If	needed, explain any answers	s in Remarks.)			
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.						

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes No Yes No Yes No	Is the Sampled Area within a Wetland?	Yes	No
Remarks:				

	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> )		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC (excluding FAC-): 1 (A)
2				
3				Total Number of Dominant
4				Species Across All Strata: (B)
		= Total Cov	er	Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 15)				That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)
1				Prevalence Index worksheet:
2				
3				Total % Cover of: Multiply by:
4				OBL species 0.00 x 1 = 0.00
5				FACW species <u>25.00</u> x 2 = <u>50.00</u>
		= Total Cov		FAC species X 3 =000
Herb Stratum (Plot size: 5)				FACU species <u>5.00</u> x 4 = <u>20.00</u>
1. <u>Phalaris arundinacea</u>	25	Y	FACW	UPL species <u>0.00</u> x 5 = <u>0.00</u>
2. <u>Poa pratensis</u>	5	N	FACU	Column Totals: <u>30.00</u> (A) <u>70.00</u> (B)
3				
4				Prevalence Index = $B/A = 2.33$
5				Hydrophytic Vegetation Indicators:
				✓ 1 - Rapid Test for Hydrophytic Vegetation
6				✓ 2 - Dominance Test is >50%
7				$\checkmark$ 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)
Woody Vine Stratum (Plot size: 30)	30	= Total Cov	er	¹ Indicators of hydric soil and wetland hydrology must
				be present, unless disturbed or problematic.
1				
2				Hydrophytic Vegetation
% Bare Ground in Herb Stratum		= Total Cov	er	Present? Yes <u>√</u> No
Remarks:				

Profile Desc	ription: (Describe	to the depth n	eeded to docur	nent the i	ndicator	or confirm	the absence of i	ndicators.)	
Depth	Matrix		Redo	x Feature	s				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-14	<u>10YR 2/1</u>	100		<u> </u>			SIL		
				·					
		·			·				
·									
		·							
				·					
1							. 2		
	oncentration, D=Dep					d Sand Gr		n: PL=Pore Lining, N	
-	Indicators: (Applica	able to all LRF						Problematic Hydric	50IIS :
Histosol	(A1) pipedon (A2)		Sandy ( Sandy F					k (A9) ( <b>LRR I, J</b> ) irie Redox (A16) ( <b>LRI</b>	
Black Hi				d Matrix (S				ace (S7) (LRR G)	х г, б, п)
	en Sulfide (A4)			Mucky Mir	,			s Depressions (F16)	
	d Layers (A5) (LRR F	;)		Gleyed Ma				l outside of MLRA 7	2 & 73)
1 cm Mu	uck (A9) (LRR F, G, H	H)	Deplete	d Matrix (I	F3)		Reduced \	/ertic (F18)	
-	d Below Dark Surface	e (A11)		Dark Surfa	. ,			nt Material (TF2)	
	ark Surface (A12)				Irface (F7)			ow Dark Surface (TF	12)
	lucky Mineral (S1)		Redox I			4.0		blain in Remarks)	
	Mucky Peat or Peat (							ydrophytic vegetatior	
	ucky Peat or Peat (S3	) (LKK F)		KA / Z & I	73 of LRR	п)		drology must be pres turbed or problematic	
Restrictive	Layer (if present):								<u>.</u>
_									
	ches):		-				Hydric Soil Pre	sent? Yes	No √
· · ·			-				Thyunc Son The		
Remarks:									
HYDROLO	GY								
	drology Indicators:								
-	cators (minimum of o	na raquiradu ak	a alc all that anal				Cocordon /	ndiaatoro (minimum c	of two required)
	· · · · · · · · · · · · · · · · · · ·	ne required, cr		<i>, ,</i>				ndicators (minimum o	<u>ji two required)</u>
	Water (A1)		Salt Crust		- (D40)			Soil Cracks (B6)	
-	ater Table (A2)		Aquatic In					y Vegetated Concave	Surface (B8)
✓ Saturatio	. ,		Hydrogen					e Patterns (B10)	iving Dects (C2)
	larks (B1)		Dry-Seaso			ing Boota (		d Rhizospheres on Li	Ving Rools (C3)
	nt Deposits (B2) posits (B3)		Oxidized F	not tilled)	IS ON LIV	ing Rools (		<b>e tilled</b> ) n Burrows (C8)	
-			Presence		d Iron (C/	I)		on Visible on Aerial I	magany(C0)
-	at or Crust (B4) posits (B5)		Thin Muck		```	"/		phic Position (D2)	hagery (Ca)
non Deb				Sunace (	01)				

✓	FAC-Neutral Test	t (D5)

Water-Stained Leaves (	39)	Frost-Heave Hummocks (D7) (LRR F)						
Field Observations:								
Surface Water Present?	Yes No _ ✓ Depth (inches):							
Water Table Present?	Yes _ ✓ No Depth (inches):16							
Saturation Present? (includes capillary fringe)	Yes _ ✓ No Depth (inches):2	Wetland Hydrology Present? Yes <u>√</u> No						
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:								
Remarks:								

____ Inundation Visible on Aerial Imagery (B7) ____ Other (Explain in Remarks)



Project/Site: WBI M2W	City/County: Richland County	Sampling Date: 2022-06-08						
Applicant/Owner: WBI	State: North Dakota	Sampling Point: wrae002_u						
Investigator(s): Mike Eldridge, Valerie Blamer	Section, Township, Range: sec 36 T136N F	R050W						
Landform (hillslope, terrace, etc.): Other	_ Local relief (concave, convex, none): <u>None</u>	Slope (%): <u>0-2</u>						
Subregion (LRR): LRR F, MLRA 56 Lat: 46	.5548548 Long: <u>-96.9173103</u>	Datum: NAD83						
Soil Map Unit Name: Aberdeen-Ryan silty clay loams, 0 to	2 percent slopes NWI classific	ation:						
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes No (If no, explain in R	emarks.)						
Are Vegetation, Soil, or Hydrology significantly	y disturbed? Are "Normal Circumstances" p	oresent? Yes 🧹 No						
Are Vegetation, Soil, or Hydrology naturally pl	roblematic? (If needed, explain any answe	rs in Remarks.)						
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.								
Hydrophytic Vegetation Present? Yes No	Is the Sampled Area							
Hydric Soil Present? Yes No	Is the Sampled Area within a Wetland? Yes No √							
Wetland Hydrology Present? Yes No								
Remarks: Sample plot is located within a roadside ditch								

## **VEGETATION – Use scientific names of plants.**

Tree Stratum       (Plot size:					
1.	Tree Stratum (Distaire) 20	Absolute			Dominance Test worksheet:
2.					
2.	1				
4.	2				$(\text{excluding FAC-}): \qquad \qquad \underbrace{\textbf{0}}_{(A)}$
4.	3				Total Number of Dominant
Sapling/Shrub Stratum (Plot size:15)					Species Across All Strata: (B)
Sapling/Shrub Stratum (Plot size:15)       15       That Are OBL, FACW, or FAC:0.00(A/B)         1.					
1.       2.       3.       4.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7.       7. <t< td=""><td>Sapling/Shrub Stratum (Plot size: 15)</td><td></td><td>- 10101 000</td><td></td><td></td></t<>	Sapling/Shrub Stratum (Plot size: 15)		- 10101 000		
2.					
3.       Interference       Interfer					Prevalence Index worksheet:
4.					Total % Cover of:Multiply by:
4.					OBL species $0.00 \times 1 = 0.00$
5. $=$ Total Cover       FAC species $0.00$ $x 3 =$ $0.00$ Herb Stratum (Plot size:       3. $25$ Y       FACU       FACU species $25.00$ $x 4 =$ $100.00$ UPL species $0.00$ $x 5 =$ $0.00$ $x 5 =$ $0.00$ $x 6 =$ $0.00$ $0.00$ $0.00$ $0.00$ $0.00$ $0.00$ $0.00$ $0.00$ $0.00$ $0.00$ $0.00$ $0.00$ $0.00$ $0.00$ $0.00$ $0.00$ $0.00$ $0.0$				·	
Herb Stratum (Plot size: 3) $= 1 \text{ total Cover}$ FACU species $25 \text{ y} \text{ FACU}$ 1. Ambrosia artemisiifolia25 y FACUUPL species $0.00 \text{ x} 5 = 0.00$ 2. Zea mays0NUPL3.0NUPL4	5			. <u> </u>	
1. Ambrosia artemisiifolia       25       Y       FACU       UPL species       0.00       x 5 =       0.00         2. Zea mays       0       N       UPL       Column Totals:       25.00       (A)       100.00       (B)         3.			= Total Cov	/er	
2. Zea mays       0       N       UPL       Column Totals: $25.00$ (A) $100.00$ (B)         3					·
3.       Prevalence Index = B/A = $4.0$ 4.       Hydrophytic Vegetation Indicators:         5.       1 - Rapid Test for Hydrophytic Vegetation         6.       2 - Dominance Test is >50%         7.       3 - Prevalence Index is $\leq 3.0^1$ 8.       -         9.       -         10.       -         Woody Vine Stratum (Plot size: 30)       25 = Total Cover         1.       -         2.       -         0       = Total Cover	1. <u>Ambrosia artemisiifolia</u>	25	<u>     Y     </u>	FACU	· · · · · · · · · · · · · · · · · · ·
4.       Prevalence index = $B/A = 4.0$ 5.       .         6.       .         7.       .         8.       .         9.       .         10.       .         10.       .         25.       = Total Cover         1.       .         0.       = Total Cover	2. <u>Zea mays</u>	0	N	UPL	Column Totals: <u>25.00</u> (A) <u>100.00</u> (B)
4.       Prevalence index = $B/A = 4.0$ 5.       .         6.       .         7.       .         8.       .         9.       .         10.       .         10.       .         25.       = Total Cover         1.       .         0.       = Total Cover	3				
5.					
6.					
7.					
8.					2 - Dominance Test is >50%
9.					3 - Prevalence Index is ≤3.0 ¹
9.					4 - Morphological Adaptations ¹ (Provide supporting
Woody Vine Stratum (Plot size: 30)       25 = Total Cover ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.         2.       0 = Total Cover       Hydrophytic Vegetation					data in Remarks or on a separate sheet)
Woody Vine Stratum (Plot size: 30)       1         1.       1         2.       0         0       = Total Cover	10			. <u> </u>	Problematic Hydrophytic Vegetation ¹ (Explain)
1.		25	= Total Cov	/er	The Product of the data and the data of the data are served.
2 Hydrophytic U = Total Cover Vegetation Present2 Vegetation					
0 = Total Cover Vegetation	1			. <u> </u>	
$\underline{0}$ = rotal cover <b>D</b> recent? Yes No. (	2				
		0	= Total Cov	/er	0
% Bare Ground in Herb Stratum NO	% Bare Ground in Herb Stratum				Present? Yes No ✓
Remarks:		forence	Domas	unto of 7	An move on he found throughout the
	Site visit was conducted after harvest c	t crops	Remna	nts of 7	ea mays can be found throughout the

Site visit was conducted after harvest of crops. Remnants of Zea mays can be found throughout the sample plot.

			to the dep	oth needed				or confirn	n the absence	e of indicators.)		
Depth (inches)	Color (r	<u>Matrix</u> moist)	%	Color (r		<u>x Features</u> %	Type ¹	Loc ²	Texture	Remarks		
0-3	10YR	2/1	90	7.5YR		10	С	Μ	SIL	Prominent redox.		
3-11	10YR	2/1	100						SIL			
11-17	10YR		75		2/1	25		N.4	<u> </u>	Eaint raday		
<u> </u>	IUIR	3/2	/5	<u>10YR</u>	2/1	25	C	M	SIL	Faint redox.		
¹ Type: C=Co								ed Sand G		cation: PL=Pore Lining, M=Matrix.		
Hydric Soil		(Applica	able to all	I LRRs, unl						s for Problematic Hydric Soils ³ :		
Histosol						Gleyed Ma				Muck (A9) (LRR I, J)		
	pipedon (A2	2)				Redox (S5)				Prairie Redox (A16) (LRR F, G, H)		
Black Hi	en Sulfide (A	(4)				d Matrix (S Mucky Min				Surface (S7) ( <b>LRR G</b> ) Plains Depressions (F16)		
	d Layers (At	,	;)			Gleyed Ma				RR H outside of MLRA 72 & 73)		
	ick (A9) (LR	, ,				ed Matrix (F				ced Vertic (F18)		
	d Below Dai			_		Dark Surfa			Red F	Parent Material (TF2)		
Thick Da	ark Surface	(A12)				ed Dark Su		)		Shallow Dark Surface (TF12)		
	lucky Miner				-	Depressior	. ,			(Explain in Remarks)		
	Aucky Peat		, ,		-	ains Depre				s of hydrophytic vegetation and		
5 cm Mu	icky Peat or	Peat (S3	3) (LRR F)	)	(ML	.RA 72 & 7	3 of LRR	( <b>H</b> )		wetland hydrology must be present, unless disturbed or problematic.		
Restrictive I	Laver (if pr	esent):							unies	s disturbed of problematic.		
Type:		,.										
Depth (inc	ches):								Hvdric Soi	I Present? Yes No∕		
Remarks:	,											
	was cor	nducte	d after	· crops h	ad be	en harv	/ested	. The s	oil has be	en upturned during the		
harvestin												
HYDROLO	GY											
Wetland Hy		licators:										
Primary India			ne require	d. check all	that appl	V)			Second	ary Indicators (minimum of two required)		
-	Water (A1)				Salt Crust							
	ater Table (A					vertebrates	s (B13)		Sparsely Vegetated Concave Surface (B8)			
Saturatio		·)			•	Sulfide Oc	` '			ainage Patterns (B10)		
	larks (B1)					on Water T				dized Rhizospheres on Living Roots (C3)		
	nt Deposits	(B2)				Rhizospher				where tilled)		
	posits (B3)	(22)				not tilled)	CO ON LIV	ing receic		ayfish Burrows (C8)		
-		B4)		F		,	d Iron (C4	1)		curation Visible on Aerial Imagery (C9)		
Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)         Iron Deposits (B5)       Thin Muck Surface (C7)								.,		omorphic Position (D2)		
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)										C-Neutral Test (D5)		
	tained Leav				/					st-Heave Hummocks (D7) (LRR F)		
Field Obser		(-)										
Surface Wate		Y	es	No_∡_	Depth (in	ches):						
Water Table	Present?			No ✓								
Saturation P				No ✓					and Hydroloc	gy Present? Yes No∕		
(includes cap	oillary fringe	)										
Describe Re	corded Data	a (stream	gauge, m	onitoring we	eii, aerial	photos, pre	evious ins	pections),	IT available:			
Remarks:												
	was coi	nducte	d after	crop ha	arvest.	Hydro	logy ha	as beer	n affected	due to the use of heavy		
machine				•		-				,		
	-											



Project/Site: WBI M2W	City/County: Richla	and County s	Sampling Date: 2022-06-08
Applicant/Owner: WBI		State: North Dakota	Sampling Point: <u>wrae002e_w</u>
Investigator(s): Mike Eldridge, Valerie Blamer	Section, Township, F	Range: <u>sec 36 T136N R(</u>	)50W
Landform (hillslope, terrace, etc.): Other	Local relief (concave	e, convex, none): <u>None</u>	Slope (%): <u>0-2</u>
Subregion (LRR): LRR F, MLRA 56 Lat: 46.	5547124	Long: <u>-96.9171358</u>	Datum: <u>NAD83</u>
Soil Map Unit Name: Fargo silty clay, 0 to 1 percent slopes		NWI classification	tion:
Are climatic / hydrologic conditions on the site typical for this time of ye	ar?Yes _ ✔_ No	(If no, explain in Re	marks.)
Are Vegetation _ ✓ _, Soil _ ✓ _, or Hydrology significantly	disturbed? Are	e "Normal Circumstances" pre	esent? Yes _✓ No
Are Vegetation, Soil, or Hydrology naturally pro	oblematic? (If	needed, explain any answers	in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	sampling point	locations, transects,	important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes _ ✔ No Yes No _ ✔ Yes _ ✔ No	Is the Sampled Area within a Wetland?	Yes No
Remarks:			

	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> )		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC (excluding FAC-): 1 (A)
2				
3				Total Number of Dominant Species Across All Strata: 1 (B)
4				
Sapling/Shrub Stratum (Plot size: 15)	0	= Total Cov	er	Percent of Dominant Species
				That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)
1 2				Prevalence Index worksheet:
				Total % Cover of: Multiply by:
3				OBL species X 1 =000
4				FACW species <u>40.00</u> x 2 = <u>80.00</u>
5		= Total Cov		FAC species x 3 =000
Herb Stratum (Plot size: 5)		= 101al COV	er	FACU species <u>2.00</u> x 4 = <u>8.00</u>
1. <u>Phalaris arundinacea</u>	40	Y	FACW	UPL species x 5 =000
2. <u>Taraxacum officinale</u>				Column Totals: <u>42.00</u> (A) <u>88.00</u> (B)
3				
4				Prevalence Index = B/A = <u>2.1</u>
5				Hydrophytic Vegetation Indicators:
6				_ 1 - Rapid Test for Hydrophytic Vegetation
				✓ 2 - Dominance Test is >50%
7				_ 3 - Prevalence Index is ≤3.0 ¹
8 9				<ul> <li>4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)</li> </ul>
10				Problematic Hydrophytic Vegetation ¹ (Explain)
	42	= Total Cov	er	
<u>Woody Vine Stratum</u> (Plot size: <u>30</u> ) 1.				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
				Hydrophytic
2		= Total Cov		Vegetation
% Bare Ground in Herb Stratum		- 10tal COV	51	Present? Yes <u>√</u> No
Remarks:				

	ription: (Describe	to the depth ne		nent the indicator or o	confirm the a	absence	of indicators.)
Depth (inches)	Matrix Color (moist)	% 0	Redox Color (moist)	<u>KFeatures</u> % Type ¹ L		exture	Remarks
	· · · · ·						remarks
0-19	<u>10YR 2/1</u>	100				SIL	
		<u> </u>					
				=Covered or Coated S			cation: PL=Pore Lining, M=Matrix.
-	Indicators: (Applic	able to all LRR					for Problematic Hydric Soils ³ :
Histosol				Bleyed Matrix (S4)			/luck (A9) ( <b>LRR I, J</b> ) Prairie Redox (A16) ( <b>LRR F, G, H</b> )
	oipedon (A2) stic (A3)			edox (S5) Matrix (S6)		_	Surface (S7) (LRR G)
	en Sulfide (A4)			Aucky Mineral (F1)			Plains Depressions (F16)
	d Layers (A5) (LRR F	-)		Gleyed Matrix (F2)		-	R H outside of MLRA 72 & 73)
1 cm Mu	ick (A9) (LRR F, G, I	H)	Depleted	d Matrix (F3)		_ Reduc	ed Vertic (F18)
·	d Below Dark Surface	e (A11)		Park Surface (F6)			arent Material (TF2)
	ark Surface (A12)			Dark Surface (F7)			Shallow Dark Surface (TF12)
	lucky Mineral (S1)			Pepressions (F8)	31		(Explain in Remarks)
	/lucky Peat or Peat ( icky Peat or Peat (S3	, , , , ,	-	ins Depressions (F16) RA 72 & 73 of LRR H)			of hydrophytic vegetation and d hydrology must be present,
0 0111110							disturbed or problematic.
Restrictive	Layer (if present):					4111000	
Type:							
Depth (in	ches):				Hyd	dric Soil	Present? Yes No _✓
Remarks:							
Site visit	was conducte	d after cro	ps had bee	en harvested. T	he soil h	as be	en upturned during the
harvestir	ig process.		-				
HYDROLO	GY						
-	drology Indicators: cators (minimum of o	na raquirad: ah	ook all that apply	d)		Second	any Indiactors (minimum of two required)
-							ary Indicators (minimum of two required)
	Water (A1) ater Table (A2)		Salt Crust				face Soil Cracks (B6) rsely Vegetated Concave Surface (B8)
Saturatio	( )			ertebrates (B13) Sulfide Odor (C1)		·	inage Patterns (B10)
	larks (B1)			n Water Table (C2)			dized Rhizospheres on Living Roots (C3)
	nt Deposits (B2)			hizospheres on Living	Roots (C3)		/here tilled)
	posits (B3)			ot tilled)	10003 (00)	,	yfish Burrows (C8)
-	at or Crust (B4)			of Reduced Iron (C4)			uration Visible on Aerial Imagery (C9)
-	oosits (B5)			Surface (C7)			pmorphic Position (D2)
	on Visible on Aerial I	magery (B7)		lain in Remarks)			C-Neutral Test (D5)
	tained Leaves (B9)	0 , ( )		,			st-Heave Hummocks (D7) (LRR F)
Field Obser							
Surface Wat	er Present? Y	es No _	_✓ Depth (inc	:hes):			
Water Table				:hes):			
Saturation P				:hes):	Wetland H	lydrolog	y Present? Yes ∕ No
(includes cap	oillary fringe)						
Describe Re	corded Data (stream	gauge, monitor	ning well, aerial p	hotos, previous inspec	cuons), if avai	naple:	
D							
Remarks: Site visit	was conducte	d after cro	ops had her	en harvested F	arming e	auinn	nent tracks and marks are
			•	hydrology by c	•		
	Sagnoat the h	era, ana n	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	,	. Sound I	3.0.	



Project/Site: WBI M2W	City/County: Richland County Sampling Date: 2022-06						
Applicant/Owner: WBI	State: North Dakot	a Sampling Point: wrae004_u					
Investigator(s): Mike Eldridge, Valerie Blamer	Section, Township, Range: <u>sec 15 T135N</u>	R049W					
Landform (hillslope, terrace, etc.): Other	Local relief (concave, convex, none): <u>None</u>	Slope (%): <u>0-2</u>					
Subregion (LRR): LRR F, MLRA 56 Lat:	46.5016689 Long: <u>-96.9003262</u>	Datum: NAD83					
Soil Map Unit Name: Overly silty clay loam, 0 to 2 percent slopes NWI classification:							
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <u>/</u> No (If no, explain in Remarks.)							
Are Vegetation, Soil, or Hydrology significa	ntly disturbed? Are "Normal Circumstances"	present? Yes 🧹 No					
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed, explain any answ	ers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.							
Hydrophytic Vegetation Present? Yes <u>√</u> No	is the Sampled Area						
Hydric Soil Present?       Yes No         Wetland Hydrology Present?       Yes No	within a wetland? Yes	No					
Remarks:	L.						

Sample plot is located within a roadside ditch

	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> )		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC (excluding FAC-): <u>2</u> (A)
2				()
3				Total Number of Dominant Species Across All Strata: 3 (B)
4				Species Acioss All Strata (b)
Sapling/Shrub Stratum (Plot size: 15)	0	= Total Cov	rer	Percent of Dominant Species
1				That Are OBL, FACW, or FAC:66.67 (A/B)
2				Prevalence Index worksheet:
				Total % Cover of: Multiply by:
3				OBL species 0.00 x 1 = 0.00
4				FACW species <u>40.00</u> x 2 = <u>80.00</u>
5		= Total Cov		FAC species x 3 =000
Herb Stratum (Plot size: 3)			ei	FACU species <u>10.00</u> x 4 = <u>40.00</u>
1. <u>Euphorbia cypressias</u>	25	Y	NI	UPL species x 5 =000
2. Phalaris arundinacea		Y	FACW	Column Totals: <u>50.00</u> (A) <u>120.00</u> (B)
3. <u>Equisetum hyemale</u>		Y	FACW	
4. Ambrosia artemisiifolia				Prevalence Index = $B/A = 2.4$
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7				✓ 2 - Dominance Test is >50%
8				$\checkmark$ 3 - Prevalence Index is $\leq 3.0^1$
9				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
10				Problematic Hydrophytic Vegetation ¹ (Explain)
	75	= Total Cov	rer	
Woody Vine Stratum         (Plot size:30)           1				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2				Hydrophytic
		= Total Cov	rer	Vegetation
% Bare Ground in Herb Stratum				Present? Yes <u>√</u> No
Remarks:				

Profile Desc	cription: (D	escribe	to the dep	th needed	to docur	nent the i	ndicator	or confirm	n the absence	e of indicators.)		
Depth												
(inches)	Color (I	moist)	%	Color (r	noist)	%	Type ¹	Loc ²	Texture	Remarks		
0-8	<u>10YR</u>	3/1	100						SIL			
8-10	10YR	3/1	50	10YR	7/2	50	D	M	SIL	Prominent redox.		
10-15	10YR	2/1	100						SIL			
		<u> </u>										
<u> </u>			·							· · · · · · · · · · · · · · · · · · ·		
			·					<u> </u>		·		
			·					·		·		
<u> </u>												
¹ Type: C=C	oncentratior	n, D=Dep	letion, RM	Reduced N	Matrix, CS	S=Covered	d or Coate	d Sand Gi	rains. ² Lo	ocation: PL=Pore Lining, M=Matrix.		
Hydric Soil	Indicators:	(Applic	able to all	LRRs, unle	ess other	rwise not	ed.)		Indicators	s for Problematic Hydric Soils ³ :		
Histosol	· · ·					Gleyed Ma				Muck (A9) ( <b>LRR I, J</b> )		
	pipedon (A2	:)				Redox (S5				t Prairie Redox (A16) ( <b>LRR F, G, H</b> )		
	istic (A3)					d Matrix (S				Surface (S7) (LRR G)		
	en Sulfide (A d Layers (A		=)			Mucky Mir Gleyed Ma				Plains Depressions (F16) RR H outside of MLRA 72 & 73)		
	uck (A9) (LF					d Matrix (I	• •			ced Vertic (F18)		
	d Below Da					Dark Surfa	,			Parent Material (TF2)		
Thick Da	ark Surface	(A12)			Deplete	d Dark Su	irface (F7)		Very	Shallow Dark Surface (TF12)		
	/lucky Miner					Depressio	, ,			(Explain in Remarks)		
	Mucky Peat			G, H)	-	•	essions (F	,	³ Indicators of hydrophytic vegetation and			
5 cm Mu	ucky Peat or	Peat (S3	3) ( <b>LRR F</b> )		(ML	RA 72 & 7	73 of LRR	H)		wetland hydrology must be present, unless disturbed or problematic.		
Restrictive	aver (if pr	esent):							unies	s disturbed of problematic.		
	ompacted											
	ches): <u>15</u>	1 3011							Hydric Soi	I Present? Yes No∕		
Remarks:	ciles). <u>10</u>								Tryunc Sol			
	was col	nducte	ed after	crops h	ad be	en har	vested	The s	oil has be	en upturned during the		
harvestir				or op o r		onnai				in aptained damig the		
nai room	.g p. 000											
HYDROLO	GY											
Wetland Hy	drology Inc	licators:										
Primary Indi	<u>cators (minii</u>	<u>mum of o</u>	ne require	d; check all	that appl	y)			Second	lary Indicators (minimum of two required)		
Surface	Water (A1)			S	alt Crust	(B11)			Su	rface Soil Cracks (B6)		
-	ater Table (A	42)			•	vertebrate	. ,			arsely Vegetated Concave Surface (B8)		
Saturati						Sulfide O				ainage Patterns (B10)		
Water M							Table (C2)			idized Rhizospheres on Living Roots (C3)		
Sedimer		(B2)		C			res on Livi	ng Roots	. ,	where tilled)		
Drift Deposits (B3)       (where not tilled)         Algal Mat or Crust (B4)       Presence of Reduced Iron (C4)								ayfish Burrows (C8)				
		B4)					•	.)		turation Visible on Aerial Imagery (C9)		
Iron Dep	. ,	. A a si a l l				Surface (				omorphic Position (D2)		
Inundati Water-S			magery (B	() <u> </u>	viner (Exp	plain in Re	emarks)			C-Neutral Test (D5) ost-Heave Hummocks (D7) ( <b>LRR F</b> )		
Field Obser		es (D9)										
Surface Wat		V	96	No 7 1	Denth (in	chas).						
Water Table				No <u>✓</u>								
									and Uvdralas	gy Present? Yes No √		
Saturation P (includes cap	oillary fringe	)		No <u>√</u> I				_		y 11030111: 105 NU V		
Describe Re	corded Data	a (stream	gauge, mo	onitoring we	ell, aerial p	photos, pr	evious ins	pections),	it available:			

Remarks: Site visit was conducted after crops had been harvested. Farming equipment tracks and marks are found throughout the field, and has affected hydrology by creating ruts.

Project/Site: WBI M2W	City/County: Richland County Sampling Date: 2022-06-						
Applicant/Owner: WBI State: North Dakota Sampling Point: Wr							
Investigator(s): Mike Eldridge, Valerie Blamer	_ Section, Township, Range: <u>sec 18 T135N F</u>	<u>{049W</u>					
Landform (hillslope, terrace, etc.): Other	_ Local relief (concave, convex, none): <u>None</u>	Slope (%): <u>0-2</u>					
Subregion (LRR): LRR F, MLRA 56 Lat: 46	6.5016007 Long: <u>-96.9002425</u>	Datum: <u>NAD83</u>					
Soil Map Unit Name: Mantador-Delamere-Elmville fine sandy loams, moderately saline, clayey substratum, 0 to 2 percent slopes NWI classification:							
Are climatic / hydrologic conditions on the site typical for this time of y	year? Yes No (If no, explain in R	emarks.)					
Are Vegetation, Soil, or Hydrology significant	ly disturbed? Are "Normal Circumstances" p	oresent? Yes 🧹 No					
Are Vegetation, Soil, or Hydrology naturally p	problematic? (If needed, explain any answe	rs in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.							
Hydrophytic Vegetation Present?       Yes ✓ No         Hydric Soil Present?       Yes ✓ No         Wetland Hydrology Present?       Yes ✓ No	is the Sampled Area	No					

Remarks: Sample plot is location within a roadside ditch.

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> )	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC
2				(excluding FAC-): (A)
3				Total Number of Dominant
4				Species Across All Strata:1 (B)
··		= Total Cov		
Sapling/Shrub Stratum (Plot size:15)	0	- 10101 005		Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)
1				
2.	_			Prevalence Index worksheet:
				Total % Cover of: Multiply by:
3				OBL species 0.00 x 1 = 0.00
4		·		FACW species
5				FAC species 0.00 x 3 = 0.00
Llorb Strotum (Diot cize) E		= Total Cov	/er	FACU species $5.00 \times 4 = 20.00$
Herb Stratum (Plot size: <u>5</u> )	75	Ň		· ·
1. <u>Phalaris arundinacea</u>				UPL species $0.00 \times 5 = 0.00$
2. <u>Taraxacum officinale</u>				Column Totals: <u>80.00</u> (A) <u>170.00</u> (B)
3		·		Prevalence Index = $B/A = 2.12$
4				
5	_			Hydrophytic Vegetation Indicators:
6				✓ 1 - Rapid Test for Hydrophytic Vegetation
7				✓ 2 - Dominance Test is >50%
				$\checkmark$ 3 - Prevalence Index is $\leq 3.0^1$
8				4 - Morphological Adaptations ¹ (Provide supporting
9			·	data in Remarks or on a separate sheet)
10				✓ Problematic Hydrophytic Vegetation ¹ (Explain)
Weady Vine Stratum (Plateiza)	80	= Total Cov	/er	¹ Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size: <u>30</u> )				be present, unless disturbed or problematic.
1			<u> </u>	
2				Hydrophytic
W Dave Orace dia Heat Obstan		= Total Cov	/er	Vegetation Present? Yes <u>√</u> No
% Bare Ground in Herb Stratum				
Remarks:				

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth Matrix	Redox Features							
(inches) Color (moist) %	Color (moist) % Type ¹ L	oc ² Texture Remarks						
· · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · ·								
· · · · · .								
<u> </u>								
· · · · · · ·								
¹ Type: C=Concentration, D=Depletion, RM=	Reduced Matrix CS=Covered or Coated Si	and Grains. ² Location: PL=Pore Lining, M=Matrix.						
Hydric Soil Indicators: (Applicable to all I		Indicators for Problematic Hydric Soils ³ :						
Histosol (A1)	Sandy Gleyed Matrix (S4)	1 cm Muck (A9) ( <b>LRR I, J</b> )						
Histosol (A1) Histic Epipedon (A2)	Sandy Redox (S5)	Coast Prairie Redox (A16) (LRR F, G, H)						
Black Histic (A3)	Stripped Matrix (S6)	$_$ Dark Surface (S7) (LRR G)						
Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1)	High Plains Depressions (F16)						
Stratified Layers (A5) (LRR F)	Loamy Gleyed Matrix (F2)	(LRR H outside of MLRA 72 & 73)						
1 cm Muck (A9) ( <b>LRR F, G, H</b> )	Depleted Matrix (F3)	Reduced Vertic (F18)						
Depleted Below Dark Surface (A11)	Redox Dark Surface (F6)	Red Parent Material (TF2)						
Thick Dark Surface (A12)	Depleted Dark Surface (F7)	Very Shallow Dark Surface (TF12)						
Sandy Mucky Mineral (S1)	Redox Depressions (F8)	Other (Explain in Remarks)						
2.5 cm Mucky Peat or Peat (S2) (LRR G	<b>H</b> ) High Plains Depressions (F16)	³ Indicators of hydrophytic vegetation and						
5 cm Mucky Peat or Peat (S3) (LRR F)	(MLRA 72 & 73 of LRR H)	wetland hydrology must be present,						
		unless disturbed or problematic.						
Restrictive Layer (if present):								
Туре:								
Depth (inches):		Hydric Soil Present? Yes No						
Remarks:								
	e water, no soil sample was o	btained; assuming hydric soils.						
HYDROLOGY								
Wetland Hydrology Indicators:								
Primary Indicators (minimum of one required	check all that apply)	Secondary Indicators (minimum of two required)						
Surface Water (A1)	Salt Crust (B11)	Surface Soil Cracks (B6)						
✓ High Water Table (A2)	Aquatic Invertebrates (B13)	Sparsely Vegetated Concave Surface (B8)						
✓ Saturation (A3)	Hydrogen Sulfide Odor (C1)	✓ Drainage Patterns (B10)						
Water Marks (B1)	Dry-Season Water Table (C2)	<ul> <li>Oxidized Rhizospheres on Living Roots (C3)</li> </ul>						
Sediment Deposits (B2)	Oxidized Rhizospheres on Living I							
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 _ ✓ N	lo Depth (inches):3							
	lo Depth (inches):0							
	lo Depth (inches):0	Wetland Hydrology Present? Yes No						
(includes capillary fringe) Yes $\checkmark$	••• Deptit (incries):	wenana nyarology riesent? Tes y NU						
Describe Recorded Data (stream gauge, mo	nitoring well, aerial photos, previous inspec	tions), if available:						
Remarks:								



Project/Site: WBI M2W	City/County: Richla	and County	Sampling Date: 2022-06-08			
Applicant/Owner: WBI		State: North Dakota	Sampling Point: <u>wrae005_u</u>			
Investigator(s): Mike Eldridge, Valerie Blamer	Section, Township, F	Range: <u>sec 34 T135N R</u>	049W			
Landform (hillslope, terrace, etc.): Other	Local relief (concave	e, convex, none): <u>None</u>	Slope (%): <u>0-2</u>			
Subregion (LRR): LRR F, MLRA 56 Lat: 46.	4564754	Long: <u>-96.8201146</u>	Datum: NAD83			
Soil Map Unit Name: Ryan-Fargo silty clays, 0 to 1 percent	slopes	NWI classifica	ation:			
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes <u>✓</u> No	(If no, explain in Re	emarks.)			
Are Vegetation _ ✓ _, Soil _ ✓ _, or Hydrology significantly	v disturbed? Are	e "Normal Circumstances" pr	resent? Yes No			
Are Vegetation, Soil, or Hydrology naturally pre-	oblematic? (If	needed, explain any answer	s in Remarks.)			
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.						

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes No _ ✔ Yes No _ ✔ Yes _ ✔ _ No	Is the Sampled Area within a Wetland?	Yes	No
Remarks:				

	Absolute			Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> )		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC (excluding FAC-): 1 (A)
2				
3			<u> </u>	Total Number of Dominant
4				Species Across All Strata: (B)
		= Total Cov	rer	Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 15)				That Are OBL, FACW, or FAC: <u>50.00</u> (A/B)
1				Prevalence Index worksheet:
2				Total % Cover of: Multiply by:
3				
4				OBL species <u>0.00</u> x 1 = <u>0.00</u>
5				FACW species $25.00 \times 2 = 50.00$
		= Total Cov	rer	FAC species 0.00 x 3 = 0.00
Herb Stratum (Plot size: <u>3</u> )				FACU species <u>17.00</u> x 4 = <u>68.00</u>
1. <u>Phalaris arundinacea</u>	25	Y	FACW	UPL species x 5 =000
2. <u>Poa pratensis</u>	15	Y	FACU	Column Totals: <u>42.00</u> (A) <u>118.00</u> (B)
3. <u>Taraxacum officinale</u>	2	N	FACU	
4				Prevalence Index = B/A = <u>2.81</u>
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
				$\checkmark$ 3 - Prevalence Index is $\leq 3.0^{1}$
8				4 - Morphological Adaptations ¹ (Provide supporting
9				data in Remarks or on a separate sheet)
10			<u> </u>	Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size: 30)	42	= Total Cov	rer	¹ Indicators of hydric soil and wetland hydrology must
				be present, unless disturbed or problematic.
1				- Headerschadte
2				Hydrophytic Vegetation
% Bare Ground in Herb Stratum		= Total Cov	ei	Present? Yes No ✓
Remarks:				1

Profile Desc	ription: (Describe	e to the dep				or confirm	the absence	e of indicators.)		
Depth (inches)	Matrix Color (moist)	%	F Color (moist	Redox Feature		Loc ²	Texture	Remarks		
· · · · ·				///////////////////////////////////////	туре			Remains		
0-11	<u>10YR 3/1</u>	100					SIC	——————————————————————————————————————		
<u>    11-17  </u>	<u>10YR 2/1</u>		10YR 4/	1 25	<u> </u>	M	CL	Faint redox.		
	oncentration, D=De					d Sand Gr		cation: PL=Pore Lining, M=Matrix.		
-	Indicators: (Appli	cable to all						s for Problematic Hydric Soils ³ :		
Histosol	. ,			ndy Gleyed M				Muck (A9) (LRR I, J)		
-	pipedon (A2)			ndy Redox (S				t Prairie Redox (A16) ( <b>LRR F, G, H</b> )		
Black Hi	en Sulfide (A4)			pped Matrix ( my Mucky Mi				Surface (S7) ( <b>LRR G</b> ) Plains Depressions (F16)		
	d Layers (A5) ( <b>LRR</b>	F)		amy Gleyed N			-	RR H outside of MLRA 72 & 73)		
	ick (A9) (LRR F, G			oleted Matrix			``	ced Vertic (F18)		
	d Below Dark Surfa			dox Dark Surf			Red F	Parent Material (TF2)		
	ark Surface (A12)			pleted Dark S				Shallow Dark Surface (TF12)		
	lucky Mineral (S1)			dox Depressio				(Explain in Remarks)		
	Aucky Peat or Peat	. , .		h Plains Depr			³ Indicators of hydrophytic vegetation and			
	icky Peat or Peat (S	53) ( <b>LKK F</b> )		(MLRA 72 &	13 OF LKK	п)		nd hydrology must be present, s disturbed or problematic.		
Restrictive I	Layer (if present):									
Type:										
Depth (inc							Hydric Soi	I Present? Yes No∕		
Remarks:							,			
	was conduct	ed after	crops had	been har	vested	. The so	oil has be	en upturned during the		
	ig process.		•					1 5		
HYDROLO										
-	drology Indicators									
-	cators (minimum of	one require						ary Indicators (minimum of two required)		
	Water (A1)			rust (B11)				rface Soil Cracks (B6)		
	ater Table (A2)		<u> </u>	ic Invertebrate	```			arsely Vegetated Concave Surface (B8)		
Saturatio				gen Sulfide C				ainage Patterns (B10)		
	larks (B1)			eason Water				idized Rhizospheres on Living Roots (C3)		
	nt Deposits (B2)			ed Rhizosphe		ing Roots (		where tilled)		
	bosits (B3)		,	ere not tilled	,	4)		ayfish Burrows (C8)		
-	at or Crust (B4) posits (B5)			nce of Reduc /luck Surface		+)		turation Visible on Aerial Imagery (C9) omorphic Position (D2)		
-	on Visible on Aerial	Imagery (B		(Explain in R				C-Neutral Test (D5)		
	tained Leaves (B9)	•••			emarks)			ost-Heave Hummocks (D7) (LRR F)		
Field Obser	. ,						110			
Surface Wate		Yes	No <u>√</u> Dept	h (inches).						
Water Table			No <u>√</u> Dept							
							and Hydrolog	gy Present? Yes √ No		
Saturation P (includes cap	oillary fringe)		No <u>√</u> Dept							
	corded Data (stream	m gauge, m	onitoring well, ae	erial photos, p	revious ins	pections),	if available:			
Remarks:	was conduct	ed after	crope had	haan ha	Noetod	Farmi		ment tracks and marks are		
	was conduct	eu aitei		neell ligi	VESIEU	. ганны	ng equipi	HEIR HAUNS AND MAINS ARE		

found throughout the field, and has affected hydrology by creating ruts.



Project/Site: WBI M2W	City/County: Richland County	Sampling Date: 2022-06-08							
Applicant/Owner: WBI	State: North Dakota	Sampling Point: wrae005e_w							
Investigator(s): Mike Eldridge, Valerie Blamer	Section, Township, Range: sec 34 T135N F	R049W							
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, convex, none): None	Slope (%): <u>0-2</u>							
Subregion (LRR): LRR F, MLRA 56 Lat: 46.	4564593 Long: <u>-96.8200955</u>	Datum: NAD83							
Soil Map Unit Name: Ryan-Fargo silty clays, 0 to 1 percent slopes NWI classification:									
Are climatic / hydrologic conditions on the site typical for this time of ye	ar? Yes 🧹 No (If no, explain in R	emarks.)							
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Normal Circumstances" p	oresent? Yes 🧹 No							
Are Vegetation, Soil, or Hydrology naturally pro	blematic? (If needed, explain any answe	rs in Remarks.)							
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.									
Hydrophytic Vegetation Present?       Yes _ ✓ No         Hydric Soil Present?       Yes _ ✓ No         Wetland Hydrology Present?       Yes _ ✓ No	Is the Sampled Area within a Wetland? Yes <u>√</u>	No							

Remarks: Sample plot is location within a roadside ditch.

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> )	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC
2				(excluding FAC-): (A)
3				Total Number of Dominant
4				Species Across All Strata: (B)
		= Total Cov		Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 15)				That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)
1				Prevalence Index worksheet:
2				Total % Cover of: Multiply by:
3				OBL species 0.00 x 1 = 0.00
4			<u> </u>	FACW species 50.00 x 2 = 100.00
5				FAC species $25.00 \times 3 = 75.00$
		= Total Cov	ver	FACU species $2.00 \times 4 = 8.00$
Herb Stratum (Plot size: 5_)				· · · · · · · · · · · · · · · · · · ·
1. <u>Phalaris arundinacea</u>				UPL species $0.00 \times 5 = 0.00$
2. <u>Rumex crispus</u>				Column Totals: <u>77.00</u> (A) <u>183.00</u> (B)
<ol> <li><u>Taraxacum officinale</u></li> <li></li> </ol>				Prevalence Index = $B/A = 2.38$
				Hydrophytic Vegetation Indicators:
5				1 - Rapid Test for Hydrophytic Vegetation
6				✓ 2 - Dominance Test is >50%
7				$\checkmark$ 3 - Prevalence Index is $\leq 3.0^{1}$
8 9				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
10				Problematic Hydrophytic Vegetation ¹ (Explain)
		= Total Cov	ver	
Woody Vine Stratum (Plot size: <u>30</u> )				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1			. <u> </u>	be present, unless disturbed of problematic.
2				Hydrophytic
		= Total Cov	ver	Vegetation
% Bare Ground in Herb Stratum				Present? Yes <u>√</u> No
Remarks:				

			o the dep	th needed		nent the i x Feature		or confirm	n the absence	of indicators.)
Depth (inches)	Color (r	Matrix moist)	%	Color (r		<u>x Feature</u>	<u>Type¹</u>	Loc ²	Texture	Remarks
0-4	10YR	2/1	60	10YR	5/6	40	RM	M	SIL	Prominent redox.
4-15	10YR	2/1	50	10YR	5/2	50	C	M	SIL	Distinct redox.
_ + 10_		<u> </u>		1011	5/2					Distinct redux.
								. <u> </u>		
						·				
¹ Type: C=Co	oncentration	n, D=Depl	etion, RM	=Reduced I	Matrix, CS	S=Covered	d or Coate	d Sand G	rains. ² Loo	cation: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:	(Applica	ble to all	LRRs, unl	ess other	rwise not	ed.)			for Problematic Hydric Soils ³ :
Histosol	(A1)					Gleyed Ma				/luck (A9) ( <b>LRR I, J</b> )
	pipedon (A2	.)				Redox (S5				Prairie Redox (A16) (LRR F, G, H)
Black His		(4)				d Matrix (S				Surface (S7) ( <b>LRR G</b> ) Plains Depressions (F16)
	n Sulfide (A Layers (As		)			Mucky Mir Gleyed Ma			-	R H outside of MLRA 72 & 73)
	ick (A9) ( <b>LR</b>	, .				d Matrix (I				ed Vertic (F18)
Depleted	Below Dar	rk Surface	(A11)			Dark Surfa			Red P	arent Material (TF2)
	ark Surface				- ·		rface (F7)			Shallow Dark Surface (TF12)
	lucky Miner /lucky Peat					Depression		10)		(Explain in Remarks) of hydrophytic vegetation and
	icky Peat or		, ,		-		essions (F 73 of LRR			d hydrology must be present,
	iony i out of	1 out (00	) ()		(		o or Errit	•••		disturbed or problematic.
Restrictive L	ayer (if pro	esent):								
Туре: <u>Сс</u>	ompacted	l soil								
Depth (inc	ches): <u>15</u>								Hydric Soil	Present? Yes <u>√</u> No
Remarks:										
Due to th	e prese	ence of	surfac	e water	, no so	oil sam	ple wa	s obtai	ined; assu	ming hydric soils.
HYDROLO	GY									
Wetland Hyd	drology Ind	licators:								
Primary Indic	ators (minir	mum of or	ne require	d; check all	that appl	y)			<u>Seconda</u>	ary Indicators (minimum of two required)
Surface	Water (A1)			S	Salt Crust	(B11)			Surf	face Soil Cracks (B6)
High Wa	iter Table (A	42)		A	Aquatic Inv	vertebrate	s (B13)		Spa	rsely Vegetated Concave Surface (B8)
Saturation						Sulfide O			_∕_ Drai	inage Patterns (B10)
	arks (B1)				•	on Water T	. ,			dized Rhizospheres on Living Roots (C3)
	t Deposits	(B2)					res on Livi	ng Roots		vhere tilled)
	oosits (B3)			-	•	not tilled)		`		yfish Burrows (C8)
-	it or Crust (I oosits (B5)	В4)				Surface (	ed Iron (C4	.)		uration Visible on Aerial Imagery (C9) pmorphic Position (D2)
Inundatio		n Aerial Ir	nagery (B			blain in Re				C-Neutral Test (D5)
	tained Leav		nagery (B	<i>')</i> (			markoj			st-Heave Hummocks (D7) (LRR F)
Field Observ		(-)								
Surface Wate		Ye	s	No_∡_	Depth (in	ches):				
Water Table	Present?			No ✓						
Saturation Pr	resent?			No_✓					and Hydrolog	y Present? Yes No
(includes cap		)								
Describe Rec	corded Data	a (stream	yauge, mo	unitoring we	aerial	priotos, pr	evious ins	pections),	ii available:	
Domenter										
Remarks:										



Project/Site: WBI M2W	City/County: Richland County	Sampling Date: 2022-06-08
Applicant/Owner: WBI	State: North Dakota	a Sampling Point: wrae006_u
Investigator(s): Mike Eldridge, Valerie Blamer	Section, Township, Range: sec 10 T134N I	R049W
Landform (hillslope, terrace, etc.): Other	Local relief (concave, convex, none): None	Slope (%): <u>0-2</u>
Subregion (LRR): LRR F, MLRA 56 Lat: 46.	4353783 Long: <u>-96.8193897</u>	Datum: NAD83
Soil Map Unit Name: Orthents-Aquents-Urban Land, highway co	omplex, 0 to 35 percent slopes NWI classifie	cation:
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes No (If no, explain in F	(emarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Normal Circumstances"	present? Yes No
Are Vegetation, Soil, or Hydrology naturally pro	oblematic? (If needed, explain any answe	ers in Remarks.)
SUMMARY OF FINDINGS Attach site man showing	compling point locations, transport	important factures ato

#### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes No∕_ Yes No∕ Yes No	Is the Sampled Area within a Wetland?	Yes	No∕
Remarks:				

	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> )		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC (excluding FAC-): 1 (A)
2				
3				Total Number of Dominant
4				Species Across All Strata: (B)
		= Total Cov	/er	Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 15)				That Are OBL, FACW, or FAC: <u>33.33</u> (A/B)
1				Prevalence Index worksheet:
2				Total % Cover of: Multiply by:
3				OBL species 0.00 x 1 = 0.00
4				FACW species 25.00 x 2 = 50.00
5				FAC species $0.00 \times 3 = 0.00$
Herb Stratum (Plot size: 5)		= Total Cov	/er	FACU species $15.00$ x 4 = $60.00$
1. <u>Phalaris arundinacea</u>	25	V		UPL species $25.00 \times 5 = 125.00$
				Column Totals: $65.00$ (A) $235.00$ (B)
2. <u>Zea mays</u>				(A) = 233.00 (B)
3. <u>Poa pratensis</u>			FACU	Prevalence Index = $B/A = 3.62$
4				Hydrophytic Vegetation Indicators:
5				1 - Rapid Test for Hydrophytic Vegetation
6				2 - Dominance Test is >50%
7				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)
Woody Vine Stratum (Plot size: 30)	65	= Total Cov	/er	¹ Indicators of hydric soil and wetland hydrology must
				be present, unless disturbed or problematic.
1				- Underschadte
2				Hydrophytic Vegetation
% Bare Ground in Herb Stratum		= Total Cov	/ei	Present? Yes No ✓
Remarks:				1

	ription: (D	escribe t	o the dep	th needed	to docun	nent the i	ndicator	or confirm	the absence	e of indicators.)
Depth (inches)	Color (r	Matrix moist)	%	Color (r		<u>x Features</u> %	Type ¹	Loc ²	Texture	Remarks
0-1	10YR	3/2	90	10YR	5/4	10	<u> </u>	M	SIC	Distinct redox.
1-13	10YR	3/1	75	10YR		25	C	M	SIL	Faint redox.
13-20	10YR	2/1	100	1011	0/2				SIL	
13-20	IUIK		100			·		·		
			·							
			·			·				
			·			·		·		
						·				
¹ Type: C=Co								d Sand Gr		cation: PL=Pore Lining, M=Matrix.
Hydric Soil I		(Applica	ble to all							s for Problematic Hydric Soils ³ :
Histosol	(A1) bipedon (A2	)				Gleyed Ma Redox (S5)	. ,			Muck (A9) ( <b>LRR I, J</b> ) Prairie Redox (A16) ( <b>LRR F, G, H</b> )
Black His		)				d Matrix (S				Surface (S7) (LRR G)
	n Sulfide (A	4)				Mucky Min				Plains Depressions (F16)
	Layers (At					Gleyed Ma	, ,			RR H outside of MLRA 72 & 73)
	ick (A9) ( <b>LR</b>					d Matrix (F	,			ced Vertic (F18)
	d Below Dai ark Surface		(A11)		-	Dark Surfa d Dark Sui	. ,			Parent Material (TF2) Shallow Dark Surface (TF12)
	lucky Miner					Depression				(Explain in Remarks)
2.5 cm N	lucky Peat	or Peat (S		Э, Н)		ains Depre		16)		of hydrophytic vegetation and
5 cm Mu	icky Peat or	Peat (S3	) (LRR F)		(ML	RA 72 & 7	3 of LRR	H)		id hydrology must be present,
Restrictive L	avor (if pr	ocont):							unless	s disturbed or problematic.
Type:		esentj.								
	ches):								Hydric Soil	I Present? Yes No _√
Remarks:										
Site visit	was cor	nducte	d after	crops h	had be	en har∖	ested.	The so	oil has be	en upturned during the
harvestin	g proce	SS.								
HYDROLO	GY									
Wetland Hyd		licators:								
Primary Indic	ators (minii	mum of or	e require	d; check all	that appl	y)			Second	ary Indicators (minimum of two required)
Surface	Water (A1)			s	Salt Crust	(B11)			Sur	face Soil Cracks (B6)
High Wa	iter Table (A	42)		A	Aquatic Inv	vertebrates	s (B13)		Spa	arsely Vegetated Concave Surface (B8)
Saturation	on (A3)					Sulfide Od	. ,			iinage Patterns (B10)
	arks (B1)				•	n Water T	. ,	_		dized Rhizospheres on Living Roots (C3)
	t Deposits	(B2)		C			es on Livi	ing Roots (	. ,	where tilled)
	oosits (B3) It or Crust (I	P4)		-		not tilled) of Reduce	d Iron (C4			yfish Burrows (C8) uration Visible on Aerial Imagery (C9)
-	osits (B5)	64)				Surface (		•)		omorphic Position (D2)
Inundatio	. ,	n Aerial Ir	nagerv (B			plain in Rei	,			C-Neutral Test (D5)
	tained Leav		0 ) (	,			,			st-Heave Hummocks (D7) (LRR F)
Field Observ	vations:									
Surface Wate	er Present?	Ye	s	No <u>✓</u>	Depth (ind	ches):		_		
Water Table	Present?	Ye	s	No <u>✓</u>	Depth (ind	ches):		_		
Saturation Pr			s	No <u>√</u>	Depth (ind	ches):		Wetla	and Hydrolog	y Present? Yes _ ✓ No
(includes cap Describe Red			gauge. mo	onitorina we	ell, aerial r	ohotos. pre	evious ins	pections).	if available:	
		,	J.,	3.00	, <b>.</b>	···· , F. ·				
Remarks:						_		_		
									• • •	ment tracks and marks are
found thr	oughou	t the fi	eld, an	d has a	ffected	l hydro	logy by	y creati	ng ruts.	



Project/Site: WBI M2W	City/County: Richland County	Sampling Date: 2022-06-08							
Applicant/Owner: WBI	State: North Dakota	Sampling Point: wrae006e_w							
Investigator(s): Mike Eldridge, Valerie Blamer	_ Section, Township, Range: <u>sec 11 T134N F</u>	R049W							
Landform (hillslope, terrace, etc.): Depression	_ Local relief (concave, convex, none): <u>None</u>	Slope (%): <u>0-2</u>							
Subregion (LRR): LRR F, MLRA 56 Lat: 4	5.4353831 Long: <u>-96.8194659</u>	Datum: NAD83							
Soil Map Unit Name: Aberdeen-Ryan silty clay loams, 0 to 2 percent slopes NWI classification:									
Are climatic / hydrologic conditions on the site typical for this time of	vear? Yes _ ✔ No (If no, explain in R	(emarks.)							
Are Vegetation, Soil, or Hydrology significant	y disturbed? Are "Normal Circumstances" r	present? Yes _ ✔ No							
Are Vegetation, Soil, or Hydrology naturally p	roblematic? (If needed, explain any answe	ers in Remarks.)							
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.									
Hydrophytic Vegetation Present?       Yes ✓ No         Hydric Soil Present?       Yes ✓ No         Wetland Hydrology Present?       Yes ✓ No	- within a Wetland? Yes _ ✓	′ No							

Remarks: Sample plot is location within a roadside ditch.

	Absolute	Dominan	t Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> )	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC
2				(excluding FAC-): <u>2</u> (A)
3				Total Number of Dominant
4				Species Across All Strata:3 (B)
		= Total Co		Demonst of Deminerat Creation
Sapling/Shrub Stratum (Plot size:15)		- 10101 00	VOI	Percent of Dominant Species That Are OBL, FACW, or FAC: 66.67 (A/B)
1				
2.				Prevalence Index worksheet:
				Total % Cover of: Multiply by:
3			·	OBL species 0.00 x 1 = 0.00
4			·	FACW species
5			·	FAC species 0.00 x 3 = 0.00
Herb Stratum (Plot size: 5)		= Total Co	ver	FACU species 10.00 x 4 = 40.00
1. <u>Phalaris arundinacea</u>	50	V		UPL species $25.00 \times 5 = 125.00$
				Column Totals: $110.00$ (A) $315.00$ (B)
2. <u>Alopecurus pratensis</u>				Column rotals. $110.00$ (A) $315.00$ (B)
3. <u>Symphoricarpos occidentalis</u>				Prevalence Index = $B/A = 2.86$
4. <u>Poa pratensis</u>				Hydrophytic Vegetation Indicators:
5				1 - Rapid Test for Hydrophytic Vegetation
6				
7			<u> </u>	✓ 2 - Dominance Test is >50%
8				$\checkmark$ 3 - Prevalence Index is ≤3.0 ¹
9				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
10			·	Problematic Hydrophytic Vegetation ¹ (Explain)
		= Total Co	ver	
Woody Vine Stratum (Plot size: 30)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1				be present, unless disturbed of problematic.
2				Hydrophytic
		= Total Co	ver	Vegetation
% Bare Ground in Herb Stratum				Present? Yes <u>√</u> No
Remarks:				

			o the dep	th need				or confirm	the absence	of indicators.)
Depth (inches)	Color (I	Matrix moist)	%	Colo	Redo or (moist)	<u>x Features</u> %	s Type ¹	Loc ²	Texture	Remarks
0-8	10YR	2/1	95	10YI		5	<u> </u>	 M	SIL	Faint redox.
8-14	10YR	4/2	90	10YI		10	<u> </u>	M	SIL	Distinct redox.
¹ Type: C=Co	oncentration	n. D=Depl	etion. RM:	=Reduce	ed Matrix. CS	S=Covered	d or Coate	d Sand Gra	ains. ² Lo	cation: PL=Pore Lining, M=Matrix.
Hydric Soil I										for Problematic Hydric Soils ³ :
Black His Hydroge Stratified Depleted Thick Da Sandy M 2.5 cm M	pipedon (A2	A4) 5) ( <b>LRR F</b> <b>R F, G, H</b> rk Surface (A12) ral (S1) or Peat (S	l) : (A11) 62) ( <b>LRR (</b>	G, H)	Stripped Loamy I Loamy 0 Deplete Redox I Deplete Redox I High Pla	Redox (S5) d Matrix (S Mucky Min Gleyed Ma d Matrix (F Dark Surfa d Dark Su Depressior	) 66) heral (F1) atrix (F2) F3) hce (F6) rface (F7) hs (F8) essions (F ² )		Coast Dark S High F (LF Reduc Red P Very S Other ³ Indicators wetlan	Muck (A9) ( <b>LRR I</b> , <b>J</b> ) Prairie Redox (A16) ( <b>LRR F</b> , <b>G</b> , <b>H</b> ) Surface (S7) ( <b>LRR G</b> ) Plains Depressions (F16) <b>RR H outside of MLRA 72 &amp; 73</b> ) ced Vertic (F18) Parent Material (TF2) Shallow Dark Surface (TF12) (Explain in Remarks) of hydrophytic vegetation and d hydrology must be present, s disturbed or problematic.
Restrictive L	ayer (if pr	esent):								
Туре:										
Depth (inc	ches):								Hydric Soil	Present? Yes _ ✓ No
Remarks: Due to th	e prese	ence of	surfac	e wat	er, no so	oil sam	ple wa	s obtair	ned; assu	ming hydric soils.
HYDROLO	GY									
Wetland Hyd	drology Inc	licators:								
High Wa Saturatic Water M Sedimen Drift Dep Algal Ma Iron Dep Inundation	Water (A1) ter Table (A on (A3) arks (B1) tt Deposits posits (B3) tt or Crust ( osits (B5) on Visible o tained Leav	A2) (B2) B4) n Aerial Ir			_ Salt Crust _ Aquatic Inv _ Hydrogen _ Dry-Seaso _ Oxidized F	(B11) vertebrates Sulfide Oc on Water T Rhizospher <b>not tilled</b> ) of Reduce Surface (f	dor (C1) Table (C2) res on Livi ed Iron (C4 C7)	0	Sur Spa Dra Oxi Oxi Cra Sat Gec FAC	ary Indicators (minimum of two required) face Soil Cracks (B6) arsely Vegetated Concave Surface (B8) inage Patterns (B10) dized Rhizospheres on Living Roots (C3) where tilled) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) omorphic Position (D2) C-Neutral Test (D5) st-Heave Hummocks (D7) (LRR F)
Field Observ		V	20	No (	Depth (ind	ches):				
Water Table					_ Depth (ind					
Saturation Pr (includes cap	esent?	Ye			Depth (ind				and Hydrolog	y Present? Yes No
Describe Rec			gauge, mo	onitoring	well, aerial p	photos, pre	evious ins	pections), i	if available:	
Remarks:										



Project/Site: WBI M2W	City/County: Richlan	d County	Sampling Date: 2022-06-08		
Applicant/Owner: WBI		State: North Dakota	Sampling Point: wrae007_u		
Investigator(s): Mike Eldridge, Valerie Blamer	Section, Township, Range: sec 14 T134N R049W				
Landform (hillslope, terrace, etc.): Other	Local relief (concave,	convex, none): <u>None</u>	Slope (%): <u>0-2</u>		
Subregion (LRR): LRR F, MLRA 56 Lat: 46.	.4331941	Long: <u>-96.8194877</u>	Datum: NAD83		
Soil Map Unit Name: Aberdeen-Ryan silty clay loams, 0 to 2	2 percent slopes	NWI classific	ation:		
Are climatic / hydrologic conditions on the site typical for this time of ye	ear?Yes _✔_No _	(If no, explain in R	emarks.)		
Are Vegetation _ ✓ _, Soil _ ✓ _, or Hydrology significantly	/ disturbed? Are "	'Normal Circumstances" p	oresent? Yes No		
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If ne	eded, explain any answei	rs in Remarks.)		
SUMMARY OF FINDINGS – Attach site man showing	a sampling point l	ocations transects	important features etc		

#### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes No _ ✓ Yes No _ ✓ Yes _ ✓ No	Is the Sampled Area within a Wetland?	Yes	No∕
Remarks:				

	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> )		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC (excluding FAC-): 1 (A)
2				
3				Total Number of Dominant Species Across All Strata: 3 (B)
4				()
Sapling/Shrub Stratum (Plot size:15)		= Total Cov	er	Percent of Dominant Species That Are OBL, FACW, or FAC: 33.33 (A/B)
1)				$\begin{array}{c} \text{That Are OBL, FACW, of FAC.} \\ \underline{33.33} \\ (A/B) \end{array}$
2				Prevalence Index worksheet:
				Total % Cover of: Multiply by:
3				OBL species 0.00 x 1 = 0.00
4				FACW species <u>25.00</u> x 2 = <u>50.00</u>
5		= Total Cov		FAC species x 3 =000
Herb Stratum (Plot size: 5)			ei	FACU species <u>15.00</u> x 4 = <u>60.00</u>
1. <u>Phalaris arundinacea</u>	25	Y	FACW	UPL species
2. Zea mays				Column Totals: <u>65.00</u> (A) <u>235.00</u> (B)
3. <u>Poa pratensis</u>				
4				Prevalence Index = $B/A = 3.62$
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
8				3 - Prevalence Index is $≤3.0^1$
9				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
10				Problematic Hydrophytic Vegetation ¹ (Explain)
	65	= Total Cov	er	
Woody Vine Stratum (Plot size: <u>30</u> )				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1				be present, unless disturbed of problematic.
2				Hydrophytic
% Bare Ground in Herb Stratum		= Total Cov	er	Vegetation Present? Yes No∕
Remarks:				

Profile Desc Depth		Describe 1 Matrix	o the dep	th needed		nent the i		or confirn	n the absence	of indicators.)		
(inches)	Color (I		%	Color (		<u>%</u>	Type ¹	Loc ²	Texture	Remarks		
0-2	10YR	2/1	95	10YR	4/1	5	C	M	SIL	Faint redox.		
2-16	10YR	2/1	100						SIL			
								·				
								·				
								·				
								. <u> </u>				
¹ Type: C=Co								d Sand G		cation: PL=Pore Lining, M=Matrix.		
Hydric Soil I		(Applica	able to all							for Problematic Hydric Soils ³ :		
<u> </u>	(A1) Dipedon (A2					Gleyed Ma Redox (S5			1 cm Muck (A9) ( <b>LRR I, J</b> ) Coast Prairie Redox (A16) ( <b>LRR F, G, H</b> )			
Black His		.)				d Matrix (S				Surface (S7) (LRR G)		
	n Sulfide (A	4)				Mucky Mir				Plains Depressions (F16)		
	Layers (A		)	_		Gleyed Ma			-	RR H outside of MLRA 72 & 73)		
	ick (A9) ( <b>LF</b>					d Matrix (F	,			ced Vertic (F18)		
-	Below Da		e (A11)			Dark Surfa				arent Material (TF2)		
	ark Surface lucky Miner					d Dark Su Depressior				Shallow Dark Surface (TF12) (Explain in Remarks)		
	lucky Peat	. ,	62) ( <b>LRR (</b>	G, H)		ains Depre		16)		of hydrophytic vegetation and		
	icky Peat or			· ,	(ML	RA 72 & 7	3 of LRR	H)	wetlan	d hydrology must be present,		
									unless	s disturbed or problematic.		
Restrictive L												
Type:												
Depth (inc	ches):								Hydric Soil	Present? Yes No 🗸		
Remarks: Site visit was conducted after crops had been harvested. The soil has been upturned during the												
harvestin			u antoi	000031		cirinar	vesteu.					
	• •											
HYDROLO												
Wetland Hyd												
Primary Indic			ne required						-	ary Indicators (minimum of two required)		
	Water (A1)				Salt Crust		- (D40)			face Soil Cracks (B6)		
	iter Table (A	42)				vertebrate Sulfide Oc	. ,			arsely Vegetated Concave Surface (B8) inage Patterns (B10)		
Saturation (A3)       Hydrogen Sulfide Odor (C1)         Water Marks (B1)       Dry-Season Water Table (C2)									dized Rhizospheres on Living Roots (C3)			
	t Deposits	(B2)				Rhizosphe		na Roots		vhere tilled)		
	oosits (B3)	( )				not tilled)		9		yfish Burrows (C8)		
Algal Mat or Crust (B4) Presence of Reduced Iron (C4)						.)		uration Visible on Aerial Imagery (C9)				
Iron Deposits (B5) Thin Muck Surface (C7)							Geo	omorphic Position (D2)				
_✓ Inundation	on Visible o	n Aerial Ir	magery (B	7) (	Other (Exp	plain in Re	marks)		FA0	C-Neutral Test (D5)		
	tained Leav	ves (B9)							Fro	st-Heave Hummocks (D7) (LRR F)		
Field Observ												
Surface Wate				No <u>√</u>								
	ater Table Present? Yes No _ ✓ Depth (inches):											
Saturation Present? Yes No _ ✓ Depth (inches): W (includes capillary fringe)					_ Wetl	and Hydrolog	y Present? Yes _ ✓ No					
Describe Red			gauge, mo	onitoring we	ell, aerial p	photos, pr	evious ins	pections),	if available:			
Remarks:		a al u at i	d cft -	onc = - 1			(0.04 c -					
				•					• • •	nent tracks and marks are		
found thr	ougnou	i the fi	eid, an	u nas a	intected	a nydro	logy by	/ creat	ing ruts.			



Project/Site: WBI M2W	City/County: Richland County	Sampling Date: 2022-06-08
Applicant/Owner: WBI	State: North Dakota	a Sampling Point: <u>wrae007e_w</u>
Investigator(s): Mike Eldridge, Valerie Blamer	Section, Township, Range: <u>sec 11 T134N</u>	R049W
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, convex, none): None	Slope (%): <u>0-2</u>
Subregion (LRR): LRR F, MLRA 56 Lat: 46	4332431 Long: <u>-96.8195222</u>	Datum: <u>NAD83</u>
Soil Map Unit Name: Overly silty clay loam, 0 to 2 percent s	lopes NWI classifi	cation:
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes 🖌 No (If no, explain in F	Remarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Normal Circumstances"	present? Yes No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed, explain any answe	ers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	g sampling point locations, transects	s, important features, etc.
Hydrophytic Vegetation Present?       Yes _ ✓ No         Hydric Soil Present?       Yes _ ✓ No         Wetland Hydrology Present?       Yes _ ✓ No	Is the Sampled Area within a Wetland? Yes <u>v</u>	/ No

Remarks: Sample plot is location within a roadside ditch.

	Absolute	Dominan	t Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> )	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC
2				(excluding FAC-): <u>2</u> (A)
3				Total Number of Dominant
4				Species Across All Strata: <u>3</u> (B)
		= Total Co		Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 15)		- 10101 00	101	That Are OBL, FACW, or FAC: 66.67 (A/B)
1				
2				Prevalence Index worksheet:
3				Total % Cover of: Multiply by:
4			·	OBL species <u>0.00</u> x 1 = <u>0.00</u>
			·	FACW species <u>75.00</u> x 2 = <u>150.00</u>
5				FAC species 0.00 x 3 = 0.00
Herb Stratum (Plot size: 5)		= Total Co	ver	FACU species 10.00 x 4 = 40.00
1. <u>Phalaris arundinacea</u>	50	V	FAC.W/	UPL species <u>25.00</u> x 5 = <u>125.00</u>
2. <u>Alopecurus pratensis</u>				Column Totals: <u>110.00</u> (A) <u>315.00</u> (B)
3. <u>Symphoricarpos occidentalis</u>				
				Prevalence Index = $B/A = 2.86$
4. <u>Poa pratensis</u>				Hydrophytic Vegetation Indicators:
5				1 - Rapid Test for Hydrophytic Vegetation
6				✓ 2 - Dominance Test is >50%
7				✓ 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)
	110	= Total Co	ver	
Woody Vine Stratum (Plot size: 30)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1			·	
2				Hydrophytic
	= Total Cover			Vegetation Present? Yes <u>√</u> No
% Bare Ground in Herb Stratum				
Remarks:				

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)											
Depth		Matrix Redox Features									
(inches)	Color (		%	Color (r	noist)	%	Type'	Loc ²	Texture	Remarks	
	<u>10YR</u>	2/1	100			·			SIL		
9-15	10YR	4/2	90	<u>10YR</u>	2/1	10	C	M	SIC	Faint redox.	
						·					
1									. 2.		
¹ Type: C=C Hydric Soil								d Sand Gi		ocation: PL=Pore Lining, M=Matrix. s for Problematic Hydric Soils ³ :	
Histosol		Applica				Bleyed Ma				Muck (A9) (LRR I, J)	
	pipedon (A2	2)				Redox (S5				t Prairie Redox (A16) ( <b>LRR F, G, H</b> )	
	istic (A3)	-/				Matrix (S				Surface (S7) (LRR G)	
	en Sulfide (A	,				Mucky Mir			High I	Plains Depressions (F16)	
	d Layers (A	, ,	,			Gleyed Ma	. ,		•	RR H outside of MLRA 72 & 73)	
	uck (A9) ( <b>LF</b>			√	•	d Matrix (F	,			ced Vertic (F18)	
Depleted Below Dark Surface (A11) Redox Dark Surface (F6)								Parent Material (TF2) Shallow Dark Surface (TF12)			
Thick Dark Surface (A12)       Depleted Dark Surface (F7)         Sandy Mucky Mineral (S1)       Redox Depressions (F8)								Other (Explain in Remarks)			
	Mucky Peat		62) ( <b>LRR</b>				essions (F	16)	³ Indicators of hydrophytic vegetation and		
5 cm Mu	ucky Peat o	r Peat (S3	) (LRR F)		(ML	RA 72 & 7	73 of LRR	H)		nd hydrology must be present,	
unless disturbed or problematic.											
Restrictive Layer (if present):											
Type: Depth (inches):									Hudria Sai	il Present? Yes∕ No	
Remarks:	ches).								Hyune Sol		
Due to the presence of surface water, no soil sample was obtained; assuming hydric soils.											
· · · · · · · · · · · · · · · · · · ·											
HYDROLOGY											
Wetland Hy	drology Ind	dicators:									
Primary Indi	cators (mini	mum of or	ne require	d; check all	that apply	y)			Second	lary Indicators (minimum of two required)	
	Water (A1)				alt Crust					rface Soil Cracks (B6)	
	ater Table (/	A2)				vertebrate				arsely Vegetated Concave Surface (B8)	
Saturati						Sulfide Oc				ainage Patterns (B10)	
	larks (B1)					n Water T				idized Rhizospheres on Living Roots (C3)	
	nt Deposits	(B2)		C			res on Livi	ng Roots	. , .	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)											
-	oosits (B5)	D4)				Surface (	,	)		turation Visible on Aerial Imagery (C9) omorphic Position (D2)	
Inundati		n Aerial Ir	nagery (B			blain in Re				C-Neutral Test (D5)	
	stained Leav		nagory (B	.,			mantoj			ost-Heave Hummocks (D7) (LRR F)	
Field Obser		- ()									
Surface Wat	er Present?	Ye Ye	es	No <u>√</u>	Depth (ind	ches):		_			
Water Table	Present?			No ✓							
Saturation P	resent?			No ✓					and Hydrolog	gy Present? Yes No	
(includes ca									-		

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

Remarks:



Project/Site: WBI M2W	City/County: Richland County Sampling Date: 2022-08-16
Applicant/Owner: WBI	State: North Dakota Sampling Point: wrie008e_u
Investigator(s): Mike Eldridge, Valerie Blamer	Section, Township, Range: sec 22 T133N R049W
Landform (hillslope, terrace, etc.): Other	Local relief (concave, convex, none): <u>None</u> Slope (%): <u>0-2</u>
Subregion (LRR): LRR F, MLRA 56 Lat: 46	. <u>312314</u> Long: <u>-96.830312</u> Datum: <u>NAD83</u>
Soil Map Unit Name: Orthents-Aquents-Urban Land, highway co	omplex, 0 to 35 percent slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes 🖌 No (If no, explain in Remarks.)
Are Vegetation _ ✓_, Soil _ ✓_, or Hydrology significantly	disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally pro	oblematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	g sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present?       Yes No         Hydric Soil Present?       Yes No         Wetland Hydrology Present?       Yes No	Is the Sampled Area within a Wetland? Yes No

Remarks: Sample plot is location within a roadside ditch.

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
				Number of Dominant Species That Are OBL, FACW, or FAC
1				$(\text{excluding FAC-}): \qquad \qquad 0 \qquad (A)$
2				
3				Total Number of Dominant Species Across All Strata: 2 (B)
4				
Sapling/Shrub Stratum (Plot size: 15)		= Total Cov	ver	Percent of Dominant Species
				That Are OBL, FACW, or FAC:(A/B)
1				Prevalence Index worksheet:
2				Total % Cover of: Multiply by:
3				OBL species 0.00 x 1 = 0.00
4				FACW species $0.00 \times 2 = 0.00$
5			·	FAC species $0.00 \times 3 = 0.00$
Herb Stratum (Plot size: 5)		= Total Cov	ver	FACU species $90.00 \times 4 = 360.00$
	50	V	EACU	UPL species $0.00 \times 5 = 0.00$
				Column Totals: $90.00$ (A) $360.00$ (B)
2. <u>Ambrosia artemisiifolia</u>				$\frac{90.00}{(A)}$
3. <u>Trifolium pratense</u>				Prevalence Index = $B/A = 4.0$
4				Hydrophytic Vegetation Indicators:
5				1 - Rapid Test for Hydrophytic Vegetation
6				2 - Dominance Test is >50%
7				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: 20)	90	= Total Cov	ver	¹ Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size: <u>30</u> )				be present, unless disturbed or problematic.
1				
2				Hydrophytic Vegetation
% Bare Ground in Herb Stratum		= Total Cov	ver	Present? Yes No∕
Remarks:				

#### SOIL

Depth <u>Matrix</u> (inches) Color (moist) %			Redo	x Feature	s						
(inches)	Color (	moist)	%	Color (r	noist)	%	Type ¹	Loc ²	Texture	Remarks	
0-4	<u>10YR</u>	2/1	80	10YR	3/1	20	С	Μ	SIL		
4-16	<u>10YR</u>	2/1	95	10YR	5/2	5	C	M	SIL		
			· ·								
1				Deduced	Actrix CS					n Di Daro Lining M Matrix	
	Concentration							u Sanu Gi		n: PL=Pore Lining, M=Matrix. Problematic Hydric Soils ³ :	
<ul> <li>Histosol (A1)</li> <li>Histic Epipedon (A2)</li> <li>Black Histic (A3)</li> <li>Hydrogen Sulfide (A4)</li> <li>Stratified Layers (A5) (LRR F)</li> <li>1 cm Muck (A9) (LRR F, G, H)</li> <li>Depleted Below Dark Surface (A11)</li> <li>Thick Dark Surface (A12)</li> <li>Sandy Mucky Mineral (S1)</li> <li>2.5 cm Mucky Peat or Peat (S2) (LRR G, H)</li> <li>5 cm Mucky Peat or Peat (S3) (LRR F)</li> </ul>				<ul> <li>Sandy Gleyed Matrix (S4)</li> <li>Sandy Redox (S5)</li> <li>Stripped Matrix (S6)</li> <li>Loamy Mucky Mineral (F1)</li> <li>Loamy Gleyed Matrix (F2)</li> <li>Depleted Matrix (F3)</li> <li>Redox Dark Surface (F6)</li> <li>Depleted Dark Surface (F7)</li> <li>Redox Depressions (F8)</li> <li>High Plains Depressions (F16)</li> <li>(MLRA 72 &amp; 73 of LRR H)</li> </ul>				Coast Prair Dark Surfac High Plains (LRR H Reduced V Red Parent Very Shallo Other (Expl ³ Indicators of hy wetland hyd	<ul> <li>(A9) (LRR I, J)</li> <li>ie Redox (A16) (LRR F, G, H)</li> <li>ie (S7) (LRR G)</li> <li>Depressions (F16)</li> <li>outside of MLRA 72 &amp; 73)</li> <li>ertic (F18)</li> <li>Material (TF2)</li> <li>w Dark Surface (TF12)</li> <li>ain in Remarks)</li> <li>rdrophytic vegetation and</li> <li>drology must be present,</li> <li>urbed or problematic.</li> </ul>		
Туре: <u>Н</u>	Layer (if pr lardpan/gi	avel									
Remarks:	nches): <u>16</u>								Hydric Soil Pres	sent? Yes No	
HYDROLC	DGY										
Wetland Hy	/drology Inc	licators:									
-	Primary Indicators (minimum of one required; check all that apply)							Secondary In	dicators (minimum of two required)		
	Water (A1)				Salt Crust (B11)				Surface Soil Cracks (B6)		
	gh Water Table (A2) Aquatic Invertebrates (B13)						Sparsely Vegetated Concave Surface (B8)				

Water Marks (B1)	Dry-Season Water Table (C2	2) Oxidized Rhizospheres on Living Roots (C3)
Sediment Deposits (B2)	Oxidized Rhizospheres on Li	ving Roots (C3) (where tilled)
Drift Deposits (B3)	(where not tilled)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Presence of Reduced Iron (C	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 _ ✓ Depth (inches):	
Water Table Present? Yes	No _ ✓ Depth (inches):	
Saturation Present? Yes (includes capillary fringe)	No _ ✓ Depth (inches):	Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, n	nonitoring well, aerial photos, previous in	spections), if available:

_ Hydrogen Sulfide Odor (C1)

Remarks:

_ Saturation (A3)

_ Drainage Patterns (B10)



wrie008e_u. looking south.

#### WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: WBI M2W	City/County: Richland County	Sampling Date: 2022-08-16						
Applicant/Owner: WBI	State: North Dakota	State: North Dakota Sampling Point: wrie008e_w						
Investigator(s): Mike Eldridge, Valerie Blamer	Section, Township, Range: <u>sec 18 T133N I</u>	R047W						
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, convex, none): <u>None</u>	Slope (%): <u>0-2</u>						
Subregion (LRR): LRR F, MLRA 56 Lat:	46.333164 Long: <u>-96.652991</u>	Datum: NAD83						
Soil Map Unit Name: Clearwater-Reis silty clays, loamy su	bstratum, 0 to 1 percent slopes NWI classific	cation:						
Are climatic / hydrologic conditions on the site typical for this time o	Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)							
Are Vegetation, Soil, or Hydrology significat	ntly disturbed? Are "Normal Circumstances"	oresent? Yes _✓ No						
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed, explain any answe	ers in Remarks.)						
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.								
Hydrophytic Vegetation Present?       Yes _ ✓ No         Hydric Soil Present?       Yes _ ✓ No         Wetland Hydrology Present?       Yes _ ✓ No	— within a Wetland? Yes	′ No						

Remarks: Sample plot is location within a roadside ditch.

## **VEGETATION – Use scientific names of plants.**

	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> )		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC (excluding FAC-): 1 (A)
2				
3				Total Number of Dominant Species Across All Strata: 2 (B)
4				Species Across All Strata: (B)
Sapling/Shrub Stratum (Plot size:15)	0	= Total Cov	/er	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.00</u> (A/B)
1/				
2				Prevalence Index worksheet:
3				Total % Cover of: Multiply by:
			·	OBL species <u>0.00</u> x 1 = <u>0.00</u>
4			·	FACW species <u>45.00</u> x 2 = <u>90.00</u>
5		= Total Cov		FAC species x 3 =000
Herb Stratum (Plot size: 5)			/ei	FACU species <u>35.00</u> x 4 = <u>140.00</u>
1. <u>Alopecurus pratensis</u>	40	Y	FACW	UPL species <u>0.00</u> x 5 = <u>0.00</u>
2. <u>Ambrosia artemisiifolia</u>	25	Y	FACU	Column Totals: <u>80.00</u> (A) <u>230.00</u> (B)
3. <u>Poa pratensis</u>			FACU	
4. <u>Phalaris arundinacea</u>			FACW	Prevalence Index = $B/A = 2.88$
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
				$\checkmark$ 3 - Prevalence Index is $\leq 3.0^1$
8 9				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
10				Problematic Hydrophytic Vegetation ¹ (Explain)
	115	= Total Cov	/er	
Woody Vine Stratum (Plot size: <u>30</u> )				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1				Hydrophytic
2		= Total Cov		Vegetation
% Bare Ground in Herb Stratum		- 1012100		Present? Yes _ ✓ No
Remarks:				1

#### SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)												
Depth	М	latrix			Redo	x Features	S					
(inches)	Color (mo	oist)	%	Color (n		%	Type ¹	Loc ²	Texture	Remarks		
0-9	10YR	2/1	100	СМ					SIL			
9-12	10YR	4/2	75	10YR	2/1	25	С	М	SIL			
		.,										
						·						
						. <u> </u>		. <u> </u>				
	opportunition	D-Dool		-Reduced N	Actrix CS		d or Cooto	d Sand Cr		otion: DL-Doro Lining M-Matrix		
	oncentration, Indicators: (							u Sanu Gr		ation: PL=Pore Lining, M=Matrix.		
Histosol		, applied		21110, 4111		Gleyed Ma			1 cm Muck (A9) (LRR I, J)			
	pipedon (A2)					Redox (S5				Coast Prairie Redox (A16) (LRR F, G, H)		
	istic (A3)					d Matrix (S			Dark Surface (S7) (LRR G)			
	en Sulfide (A4)	)				Mucky Mir	,		High Plains Depressions (F16)			
	d Layers (A5)	,	)	_		Gleyed Ma	. ,		(LRR H outside of MLRA 72 & 73)			
1 cm Mu	uck (A9) (LRR	F, G, H	)		Deplete	d Matrix (I	F3)		Reduced Vertic (F18)			
Deplete	d Below Dark	Surface	(A11)		Redox [	Dark Surfa	ice (F6)		Red Parent Material (TF2)			
Thick Da	ark Surface (A	(12)		√	Deplete	d Dark Su	rface (F7)		Very Shallow Dark Surface (TF12)			
Sandy N	/lucky Mineral	(S1)			Redox D	Depressio	ns (F8)		Other (Explain in Remarks)			
2.5 cm l	Mucky Peat or	Peat (S	2) (LRR (	G, H)	High Pla	ains Depre	essions (F	16)	³ Indicators	of hydrophytic vegetation and		
5 cm Mu	ucky Peat or P	Peat (S3	) (LRR F)		(ML	RA 72 & 7	73 of LRR	H)	wetland hydrology must be present,			
									unless	disturbed or problematic.		
Restrictive	Layer (if pres	ent):										
Туре: <u>Н</u>	ardpan/gra	vel										
Depth (in	ches): <u>12</u>								Hydric Soil	Present? Yes <u>√</u> No		
Remarks:									•			
	HYDROLOGY											
	Wetland Hydrology Indicators:											
-				di abaali all	that an-				Coorde	n Indiactors (minimum of two re-wined)		
Primary Indicators (minimum of one required; check all that apply)								ry Indicators (minimum of two required)				
Surface Water (A1) Salt Crust (B11)						Surfa	ace Soil Cracks (B6)					

- ___ Surface Soil Cracks (B6) ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- Oxidized Rhizospheres on Living Roots (C3) (where tilled)
- ___ Crayfish Burrows (C8)
- ____ Orayinsh Burrows (00)
- ____ 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 <u></u> √	Depth (inches):				
Water Table Present?	Yes	No <u></u> √	Depth (inches):				
Saturation Present? (includes capillary fringe)	Yes	No <u>√</u>	Depth (inches):	Wetland Hydrology Present?	Yes _	✓	No

Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)

(where not tilled)

Thin Muck Surface (C7)

____ Other (Explain in Remarks)

Dry-Season Water Table (C2)

Presence of Reduced Iron (C4)

Oxidized Rhizospheres on Living Roots (C3)

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

Remarks: Plot is located in the centerline of a roadside ditch.

High Water Table (A2)

Sediment Deposits (B2)

Algal Mat or Crust (B4)

Water-Stained Leaves (B9)

✓ Inundation Visible on Aerial Imagery (B7)

Saturation (A3)

Water Marks (B1)

Drift Deposits (B3)

Iron Deposits (B5)



wrie008e_u, looking south.

#### WETLAND DETERMINATION DATA FORM – Great Plains Region

City/County: <u>Richland County</u> Sampling Date: <u>2022-08-</u>							
State: No.	orth Dakota Sampling Point: wrie009e u						
Section, Township, Range: <u>sec 02 T</u>	136N R050W						
Local relief (concave, convex, none): <u>None</u> Slope (%): <u>0-2</u>							
6.617340 Long: <u>-96.92</u>	28239 Datum: <u>NAD83</u>						
NW	I classification:						
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)							
y disturbed? Are "Normal Circums	stances" present? Yes No						
oblematic? (If needed, explain any answers in Remarks.)							
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.							
within a Wetland?	Yes No∕						
	_ State: Normal Circums _ Section, Township, Range: <u>Sec 02 T</u> _ Local relief (concave, convex, none): _ 6.617340 Long: _96.92 Normal Circums rear? Yes No (If no, ex y disturbed? Are "Normal Circums roblematic? (If needed, explain a g sampling point locations, tra						

Remarks: Sample plot is location within a roadside ditch.

#### **VEGETATION – Use scientific names of plants.**

	Absolute	Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> )		<u>Species?</u> Status	
			Number of Dominant Species That Are OBL, FACW, or FAC
1			(excluding FAC-): $0$ (A)
2			
3			Total Number of Dominant
4			Species Across All Strata: (B)
		= Total Cover	Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 15)			That Are OBL, FACW, or FAC:(A/B)
1			
			Prevalence Index worksheet:
2			Total % Cover of: Multiply by:
3			OBL species x 1 =000
4			FACW species $0.00 \times 2 = 0.00$
5			FAC species $0.00 \times 3 = 0.00$
Herb Stratum (Plot size: 5)		= Total Cover	FACU species $0.00 \times 4 = 0.00$
	75		UPL speciesX $=X =U$
1. <u>Glycine max</u>			· <u> </u>
2			Column Totals: <u>75.00</u> (A) <u>375.00</u> (B)
3			Prevalence Index = $B/A = 5.0$
4			Hydrophytic Vegetation Indicators:
5			
6	<u> </u>		1 - Rapid Test for Hydrophytic Vegetation
7			2 - Dominance Test is >50%
8			3 - Prevalence Index is ≤3.0 ¹
			4 - Morphological Adaptations ¹ (Provide supporting
9			data in Remarks or on a separate sheet)
10			Problematic Hydrophytic Vegetation ¹ (Explain)
Weady Vine Stratum (Plateiza)	75	= Total Cover	¹ Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size: <u>30</u> )			be present, unless disturbed or problematic.
1			
2			Hydrophytic
		= Total Cover	Vegetation
% Bare Ground in Herb Stratum			Present? Yes <u>No √</u>
Remarks:			

#### SOIL

Profile Des	cription: (Describe t	o the depth ne	eded to docu	ment the i	ndicator	or confirm	n the absence of indicators.)			
Depth	Matrix		Redo	ox Features						
(inches)	Color (moist)	Co	olor (moist)	%	Type ¹	Loc ²	Texture Remarks			
0-16	10YR 2/1	100					SIC			
·										
		<u> </u>				<u> </u>				
	oncentration, D=Depl					ed Sand Gr				
Hydric Soil	Indicators: (Applica	able to all LRRs					Indicators for Problematic Hydric Soils ³ :			
Histoso				Gleyed Ma			1 cm Muck (A9) ( <b>LRR I, J</b> )			
	pipedon (A2)			Redox (S5)			Coast Prairie Redox (A16) (LRR F, G,	H)		
	istic (A3)			d Matrix (S			Dark Surface (S7) (LRR G)			
	en Sulfide (A4)	<b>`</b>		Mucky Min	· · ·		High Plains Depressions (F16)			
	d Layers (A5) (LRR F	,		Gleyed Ma ed Matrix (F			(LRR H outside of MLRA 72 & 73) Reduced Vertic (F18)			
	uck (A9) ( <b>LRR F, G, F</b> d Below Dark Surface			Dark Surfa	,		Red Parent Material (TF2)			
	ark Surface (A12)	; (ATT)		ed Dark Sulla			Very Shallow Dark Surface (TF12)			
	Mucky Mineral (S1)			Depressior			Other (Explain in Remarks)			
	Mucky Peat or Peat (\$	62) ( <b>LRR G. H</b> )	High Pl	•	. ,	16)	³ Indicators of hydrophytic vegetation and			
	ucky Peat or Peat (S3			RA 72 & 7			wetland hydrology must be present,			
	, (	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,			,	unless disturbed or problematic.			
Restrictive	Layer (if present):									
Туре:										
Depth (in	ches):						Hydric Soil Present? Yes No	$\checkmark$		
Remarks:										
HYDROLO	GY									
Wetland Hy	drology Indicators:									
Primary Indi	cators (minimum of or	ne required; che	ck all that app	ly)			Secondary Indicators (minimum of two re	equired)		
Surface	Water (A1)		Salt Crust (B11)				Surface Soil Cracks (B6)			
High Wa	High Water Table (A2)			vertebrates	s (B13)		Sparsely Vegetated Concave Surface (B8)			
Saturati	on (A3)		Hydrogen Sulfide Odor (C1)				Drainage Patterns (B10)			
Water Marks (B1) Dry-Season W				on Water T	able (C2)		Oxidized Rhizospheres on Living Ro	oots (C3)		
1							· · · · · ·			

welland Hydrology Indicate	JIS.				
Primary Indicators (minimum	of one required; cl	Secondary Indicators (minimum of two required)			
Surface Water (A1)		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 R	coots (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 Ae	rial Imagery (B7)	FAC-Neutral Test (D5)			
Water-Stained Leaves (E	39)		Frost-Heave Hummocks (D7) (LRR F)		
Field Observations:					
Surface Water Present?	Yes No	o Depth (inches):			
Water Table Present?	Yes <u>No</u>	o Depth (inches):			
Saturation Present? (includes capillary fringe)	Yes <u>No</u>	o Depth (inches):	Wetland Hydrology Present? Yes No		
Describe Recorded Data (stre	eam gauge, monito	toring well, aerial photos, previous inspecti	ons), if available:		
Remarks:					



wrie009e_w, looking west.

#### WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: WBI M2W	_ City/County: <u>Richland County</u> Sampling Date: <u>2022-08-17</u>						
Applicant/Owner: WBI	State: North Dakota Sampling Point: wrie009e_w						
Investigator(s): Mike Eldridge, Valerie Blamer	Section, Township, Range: <u>sec 02 T136N R050W</u>						
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, convex, none): <u>None</u> Slope (%): <u>0-2</u>						
Subregion (LRR): LRR F, MLRA 56 Lat: 2	46.617340 Long: <u>-96.928239</u> Datum: <u>NAD83</u>						
Soil Map Unit Name: Fargo silty clay, 0 to 1 percent slope	NWI classification:						
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)							
Are Vegetation, Soil, or Hydrology significan	ntly disturbed? Are "Normal Circumstances" present? Yes _ ✓ 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         Hydric Soil Present?       Yes _ ✓ No         Wetland Hydrology Present?       Yes _ ✓ No	— Is the sampled Area — within a Wetland? Yes ✓ No						

Remarks: Sample plot is location within a roadside ditch.

## **VEGETATION – Use scientific names of plants.**

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> )	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC
2				(excluding FAC-): (A)
3				Total Number of Dominant
4				Species Across All Strata:1 (B)
· · · · · · · · · · · · · · · · · · ·		= Total Cov		
Sapling/Shrub Stratum (Plot size:15)			EI	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)
1				$\frac{1100.00}{(\lambda B)}$
				Prevalence Index worksheet:
2				Total % Cover of:Multiply by:
3				OBL species 0.00 x 1 = 0.00
4				FACW species 50.00 x 2 = 100.00
5				FAC species $0.00 \times 3 = 0.00$
		= Total Cov	er	
Herb Stratum (Plot size: 5)				FACU species $5.00 \times 4 = 20.00$
1. <u>Phalaris arundinacea</u>				UPL species $0.00 \times 5 = 0.00$
2. <u>Poa pratensis</u>	5	N	FACU	Column Totals: <u>55.00</u> (A) <u>120.00</u> (B)
3				Drovelence Index D/A 2.19
4				Prevalence Index = $B/A = 2.18$
5				Hydrophytic Vegetation Indicators:
6				✓ 1 - Rapid Test for Hydrophytic Vegetation
7				✓ 2 - Dominance Test is >50%
				$\checkmark$ 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)
Weather Vise Chapters (Plat size)	55	= Total Cov	er	¹ Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size: <u>30</u> )				be present, unless disturbed or problematic.
1				
2				Hydrophytic
	. <u></u>	= Total Cov	er	Vegetation Present? Yes <u>√</u> No
% Bare Ground in Herb Stratum				
Remarks:				

SOIL

Denth Matela	-			or contirn	the absence of ir	idicators.)
Depth <u>Matrix</u> (inches) Color (moist)	Color (mois	<u>Redox Feature</u> t)        %	4	Loc ²	Texture	Remarks
		//			Toxtaro	Homano
	·					
	·			<u> </u>		
			d or Cooto			D Data Lining M Matrix
¹ Type: C=Concentration, D=Depletior Hydric Soil Indicators: (Applicable				a Sana Gr		n: PL=Pore Lining, M=Matrix. Problematic Hydric Soils ³ :
						•
Histosol (A1)		ndy Gleyed Ma ndy Redox (S5				(A9) ( <b>LRR I, J</b> ) ie Redox (A16) ( <b>LRR F, G, H</b> )
<ul> <li>Histic Epipedon (A2)</li> <li>Black Histic (A3)</li> </ul>		ipped Matrix (S				ce (S7) (LRR G)
Hydrogen Sulfide (A4)		amy Mucky Mi				Depressions (F16)
Stratified Layers (A5) (LRR F)		amy Gleyed Ma			-	outside of MLRA 72 & 73)
1 cm Muck (A9) ( <b>LRR F, G, H</b> )		pleted Matrix (	. ,		Reduced V	,
Depleted Below Dark Surface (A1		dox Dark Surfa				Material (TF2)
Thick Dark Surface (A12)		pleted Dark Su				w Dark Surface (TF12)
Sandy Mucky Mineral (S1)	Re	dox Depressio	ns (F8)		Other (Exp	ain in Remarks)
2.5 cm Mucky Peat or Peat (S2) (	LRR G, H) Hig	h Plains Depre	essions (F	16)	³ Indicators of hy	drophytic vegetation and
5 cm Mucky Peat or Peat (S3) (L	RR F)	(MLRA 72 &	73 of LRR	H)	wetland hyd	Irology must be present,
					unless dist	urbed or problematic.
Restrictive Layer (if present):						
Туре:						
Depth (inches):					Hydric Soil Pres	sent? Yes _ ∕ No
Remarks:					•	
Remarks: Due to the presence of su	Irface water, n	o soil sam	ple wa	s obtai	ned; assumir	ng hydric soils.
	irface water, n	o soil sam	ple wa	s obtai	ned; assumir	ng hydric soils.
Due to the presence of su	Irface water, n	o soil sam	ple wa	s obtai	ned; assumir	ng hydric soils.
Due to the presence of su	Irface water, n	o soil sam	ple wa	s obtai	ned; assumir	ng hydric soils.
Due to the presence of su HYDROLOGY Wetland Hydrology Indicators:			ple wa	s obtai		
Due to the presence of sur HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one re	equired; check all that	apply)	ple wa	s obtai	Secondary Ir	dicators (minimum of two required)
Due to the presence of survey         HYDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (minimum of one restance)         ✓       Surface Water (A1)	equired; check all that	apply) Crust (B11)		s obtai	<u>Secondary Ir</u> Surface	dicators (minimum of two required) Soil Cracks (B6)
Hydrology         Hydrology Indicators:         Primary Indicators (minimum of one regimer)         ✓       Surface Water (A1)         ✓       High Water Table (A2)	equired; check all that Salt C Aqua	apply) Crust (B11) tic Invertebrate	s (B13)	s obtai	<u>Secondary Ir</u> Surface Sparsely	dicators (minimum of two required) Soil Cracks (B6) Vegetated Concave Surface (B8)
HYDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (minimum of one red)         ✓       Surface Water (A1)         ✓       High Water Table (A2)         ✓       Saturation (A3)	equired; check all that Salt C Aqua Hydro	<u>apply)</u> Crust (B11) tic Invertebrate ogen Sulfide O	s (B13) dor (C1)	s obtai	<u>Secondary Ir</u> Surface Sparsely _∕_ Drainage	dicators (minimum of two required) Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10)
HYDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (minimum of one red)         ✓       Surface Water (A1)         ✓       High Water Table (A2)         ✓       Saturation (A3)         Water Marks (B1)	equired; check all that Salt C Aqua Hydro Dry-S	apply) Crust (B11) tic Invertebrate ogen Sulfide O Season Water T	s (B13) dor (C1) Fable (C2)		<u>Secondary Ir</u> Surface Sparsely _∕ Drainage Oxidized	dicators (minimum of two required) Soil Cracks (B6) Vegetated Concave Surface (B8)
HYDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (minimum of one reference)         ✓ Surface Water (A1)         ✓ High Water Table (A2)         ✓ Saturation (A3)         Water Marks (B1)         Sediment Deposits (B2)	equired; check all that Salt C Aqua Hydro Dry-S Oxidi	apply) Crust (B11) tic Invertebrate ogen Sulfide O Season Water T zed Rhizosphe	s (B13) dor (C1) Fable (C2) res on Livi		Secondary Ir Surface Sparsely Drainage Oxidizec (C3) (where	dicators (minimum of two required) Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3 e tilled)
HYDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (minimum of one red)         ✓       Surface Water (A1)         ✓       High Water Table (A2)         ✓       Saturation (A3)         Water Marks (B1)	equired; check all that Salt C Aqua Hydro Dry-S Oxidi	apply) Crust (B11) tic Invertebrate ogen Sulfide O Season Water T	s (B13) dor (C1) Fable (C2) res on Livi		Secondary Ir Surface Sparsely Drainage Oxidizec (C3) (where	dicators (minimum of two required) Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3)
HYDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (minimum of one reference)         ✓ Surface Water (A1)         ✓ High Water Table (A2)         ✓ Saturation (A3)         Water Marks (B1)         Sediment Deposits (B2)	equired; check all that Salt C Aqua Hydro Dry-S Oxidi. (wh	apply) Crust (B11) tic Invertebrate ogen Sulfide O Season Water T zed Rhizosphe	s (B13) dor (C1) Table (C2) res on Livi	ng Roots (	Secondary Ir Surface Sparsely Orainage Oxidized (C3) (where Crayfish	dicators (minimum of two required) Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3 e tilled)
Due to the presence of sure         HYDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (minimum of one restrict)         ✓ Surface Water (A1)         ✓ High Water Table (A2)         ✓ Saturation (A3)         Water Marks (B1)         Sediment Deposits (B2)         Drift Deposits (B3)	equired; check all that Salt C Aqua Hydro Dry-S Oxidi: Prese	apply) Crust (B11) tic Invertebrate ogen Sulfide O Season Water 7 zed Rhizosphe sere not tilled)	s (B13) dor (C1) Fable (C2) res on Livi	ng Roots (	Secondary Ir Surface Sparsely Drainage Oxidizec (C3) (where Crayfish Saturatio	dicators (minimum of two required) Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3 e tilled) Burrows (C8)
Due to the presence of sure         HYDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (minimum of one restrict)         ✓       Surface Water (A1)         ✓       High Water Table (A2)         ✓       Saturation (A3)	equired; check all that Salt C Aqua Hydro Dry-S Oxidi: Prese Thin I	apply) Crust (B11) tic Invertebrate ogen Sulfide O Geason Water T zed Rhizosphe here not tilled) ence of Reduce	s (B13) dor (C1) Fable (C2) res on Livi ed Iron (C4 (C7)	ng Roots (	Secondary Ir Surface Sparsely Drainage Oxidized (C3) (where Crayfish Saturatio Geomore	dicators (minimum of two required) Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3 tilled) Burrows (C8) n Visible on Aerial Imagery (C9)
HYDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (minimum of one reference)         ✓ 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)	equired; check all that Salt C Aqua Hydro Dry-S Oxidi: Prese Thin I	apply) Crust (B11) tic Invertebrate ogen Sulfide O Geason Water T zed Rhizosphe here not tilled) ence of Reduce Muck Surface (	s (B13) dor (C1) Fable (C2) res on Livi ed Iron (C4 (C7)	ng Roots (	Secondary Ir Surface Sparsely Drainage Oxidized (C3) (where Crayfish Saturatio Geomory FAC-Net	dicators (minimum of two required) Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3 tilled) Burrows (C8) on Visible on Aerial Imagery (C9) ohic Position (D2)
Due to the presence of sure         HYDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (minimum of one restrict)         ✓       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)       ✓	equired; check all that Salt C Aqua Hydro Dry-S Oxidi: Prese Thin I	apply) Crust (B11) tic Invertebrate ogen Sulfide O Geason Water T zed Rhizosphe here not tilled) ence of Reduce Muck Surface (	s (B13) dor (C1) Fable (C2) res on Livi ed Iron (C4 (C7)	ng Roots (	Secondary Ir Surface Sparsely Drainage Oxidized (C3) (where Crayfish Saturatio Geomory FAC-Net	dicators (minimum of two required) Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3 e tilled) Burrows (C8) In Visible on Aerial Imagery (C9) obic Position (D2) utral Test (D5)
HYDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (minimum of one regover the second secon	equired; check all that Salt C Aqua Hydro Dry-S Oxidi: Prese Thin I	apply) Crust (B11) tic Invertebrate ogen Sulfide O Geason Water T zed Rhizosphe here not tilled) ence of Reduce Muck Surface ( r (Explain in Re	s (B13) dor (C1) Table (C2) res on Livi ed Iron (C4 (C7) emarks)	ng Roots (	Secondary Ir Surface Sparsely Drainage Oxidized (C3) (where Crayfish Saturatio Geomory FAC-Net	dicators (minimum of two required) Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3 e tilled) Burrows (C8) In Visible on Aerial Imagery (C9) obic Position (D2) utral Test (D5)
Due to the presence of sure         HYDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (minimum of one restrict)         ✓ 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 Image         Water-Stained Leaves (B9)         Field Observations:         Surface Water Present?	equired; check all that Salt ( Aqua Hydro Dry-S Oxidi: Oxidi: Prese Thin I ery (B7) Other	apply) Crust (B11) tic Invertebrate ogen Sulfide O Geason Water T zed Rhizosphe nere not tilled) ence of Reduce Muck Surface ( C (Explain in Re	s (B13) dor (C1) Fable (C2) res on Livi ed Iron (C4 C7) emarks) 3	ng Roots (	Secondary Ir Surface Sparsely Drainage Oxidized (C3) (where Crayfish Saturatio Geomory FAC-Net	dicators (minimum of two required) Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3 e tilled) Burrows (C8) In Visible on Aerial Imagery (C9) obic Position (D2) utral Test (D5)
Due to the presence of sure         HYDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (minimum of one restrict)         ✓       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 Image         _       Water-Stained Leaves (B9)         Field Observations:       Surface Water Present?         Yes       Water Table Present?	equired; check all that Salt C Aqua Hydro Dry-S Oxidi: Oxidi: Prese Thin I ery (B7) Other	apply) Crust (B11) tic Invertebrate ogen Sulfide O Geason Water T zed Rhizosphe ere not tilled) ence of Reduce Muck Surface ( f (Explain in Re th (inches):	dor (B13) dor (C1) Fable (C2) res on Livi ed Iron (C4 (C7) emarks) 3 0	ng Roots ( )	Secondary Ir Surface Sparsely Drainage Oxidized (C3) (where Crayfish Saturatio Geomory FAC-Net Frost-He	dicators (minimum of two required) Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3 e tilled) Burrows (C8) In Visible on Aerial Imagery (C9) obic Position (D2) utral Test (D5)
<b>HYDROLOGY</b> Wetland Hydrology Indicators:         Primary Indicators (minimum of one regover the second sec	equired; check all that Salt C Aqua Hydro Dry-S Oxidi: Prese Thin I ery (B7) Other  ✓ No Dept _⁄ No Dept _⁄ No Dept	apply) Crust (B11) tic Invertebrate ogen Sulfide O Season Water T zed Rhizosphe here not tilled) ence of Reduce Muck Surface ( · (Explain in Re th (inches): th (inches): th (inches):	s (B13) dor (C1) Fable (C2) res on Livi ed Iron (C4 (C7) emarks) 3 0 0	ng Roots ( )  Wetla	Secondary Ir Surface Sparsely Drainage Oxidized Crayfish Saturatio FAC-Ner Frost-Her and Hydrology Pre-	dicators (minimum of two required) Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3 tilled) Burrows (C8) In Visible on Aerial Imagery (C9) obic Position (D2) Itral Test (D5) ave Hummocks (D7) (LRR F)
<b>HYDROLOGY</b> Wetland Hydrology Indicators:         Primary Indicators (minimum of one regoverned)         ✓ 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 Image         Water-Stained Leaves (B9)         Field Observations:         Surface Water Present?       Yes         Water Table Present?       Yes         Saturation Present?       Yes	equired; check all that Salt C Aqua Hydro Dry-S Oxidi: Prese Thin I ery (B7) Other  ✓ No Dept _⁄ No Dept _⁄ No Dept	apply) Crust (B11) tic Invertebrate ogen Sulfide O Season Water T zed Rhizosphe here not tilled) ence of Reduce Muck Surface ( · (Explain in Re th (inches): th (inches): th (inches):	s (B13) dor (C1) Fable (C2) res on Livi ed Iron (C4 (C7) emarks) 3 0 0	ng Roots ( )  Wetla	Secondary Ir Surface Sparsely Drainage Oxidized Crayfish Saturatio FAC-Ner Frost-Her and Hydrology Pre-	dicators (minimum of two required) Soil Cracks (B6) Vegetated Concave Surface (B8) Patterns (B10) Rhizospheres on Living Roots (C3 tilled) Burrows (C8) In Visible on Aerial Imagery (C9) obic Position (D2) Itral Test (D5) ave Hummocks (D7) (LRR F)

Remarks: Plot is located in the centerline of a roadside ditch.



wrie009e_w, looking northwest.

Description															
Project Name: Wahpeton Expansion						Date: 6/7/2022					Waterbo scae002	-	rvey ID:		
State: North Dakota		County/ Cass	Parish:								1				
<b>Company:</b> ERM		Crew Mo ME, VB	ember Initi	als:		Latitude: 46.811707	7				Longitu -96.989				
Survey Type:	Centerl	ine	🗆 Re-Rou	te		Access Roa	nd □	Facility		□Other					
Waterbody Type:	River		□ Stream		$\checkmark$	Ditch		Swale		Cana	I	□ 0	ther		
Water Appearance:	No Wa	ier	□ Clear		□-	Turbid		Sheen or	n	Surfac	ce Scum	□Al	gal Mats	□Othe	er
Feature Quality ^a :	High		Modera	te	V	Low									
Feature Description:	Natural		Artificial	l, man-made	9 □	Manipulate	d								
Flow Regime:	Ephem	eral	✓ Intermit	tent		Perennial		Connec	cting						
Sinuosity within Survey Corridor:	Straigh	t	Meande	ering											
Mud substrate, no water.	. Vegeta	ed wate	rbody botto	m.											
Measurements															
	ft.	N/A 🗆	Unknow	n 🗌 Water	Edge	e to Water I	Edge:	<u>0</u> ft		N/A 🗆	онwм	Width	4	ft.	
OHWM Indicator:	I CI	ear line o	on bank	Shelving		□Wrested	l vege	tation	□Sc	ouring			□Water	staining	
(check all that apply)		nt, matte		□Wrack lir	ne	□Litter an	ıd deb	ris	⊡Ab char		nt commu	unity	□Soil cł change	naracterist	ic
Dominant Substrate: (check all that apply)	□ Be	edrock	🗆 Bou	lder 🗌	Cobb	ole 🗌	Grav	el	□ Sa	and	□ Sil	t/ clay		Organic	
Observations															
Riparian Zone Present: (check one)	□ Ye	s	☑ N	0											
Vegetation Layers: (check all that apply)	🗆 Tr	ees	□ S	aplings/Shru	ubs	🗹 Her	bs								
<b>Dominant Bank Vegeta</b> Reed canary grass	tion (list	):													
Aquatic Habitats (ex: sub	omerged or	emerged a	quatic vegetatio	on, overhanging	banks/r	roots, leaf packs	s, large :	submerged	wood, rif	fles, deep p	ools, etc.):				
Aquatic Organisms Ob	served	(list):													
Disturbances (ex: livesto	ock acces	s, manure	in waterbod	y, waste disch	narge p	pipes):									
Observation Notes: Roadside ditch															



Downstream, looking south.

Description														
Project Name: Wahpeton Expansion						Date: 6/7/2					Waterbo scae003	-	vey ID:	
<b>State:</b> North Dakota		County/ Cass	Parish:											
<b>Company:</b> ERM		Crew M ME, VB	ember Init	tials:		<b>Latitu</b> 46.64	u <b>de:</b> 14679				Longitue -96.9785			
Survey Type:	Centerl	ine	Re-Ro	ute	[	Access	Road	□Facility		□Other				
Waterbody Type:	River		□ Stream	n	[	🗹 Ditch		□ Swale		Canal		🗆 Ot	her	
Water Appearance:	No Wat	er	□ Clear		[	□Turbid		□Sheen o Surface	n	□Surfac	e Scum	□Alg	al Mats	□Other
, ,	High			ate		Low		Gundoo						
Feature Description:	Natural		Artificia	al, man-r	made [	🗆 Manip	ulated							
Flow Regime:	Ephem	eral	Interm	ittent	[	Peren	nial	Conne Swale	cting					
· ,	Straigh	t	□ Meand	dering				Owale						
Description Notes:														
Mud substrate, no water.	vegeta													
Measurements														
Depth of Water:	ft.	N/A□	Unknov	wn 🗆 🛛 V	Vater Ed	lge to Wa	ater Ed	l <b>ge:</b> ft	t.	N/A□	OHWM \	Width:	<u>4</u> f	t.
OHWM Indicator: (check all that apply)	L CI	ear line (	on bank	□She	lving	□Wr	ested v	egetation	□Sc	ouring		[	Water	staining
		nt, matte ing vege		□Wra	ick line	□Litt	er and	debris	□Ab chan		t commu		⊒Soil ch change	aracteristic
Dominant Substrate: (check all that apply)	🗆 Be	edrock	🗆 Boi	ulder	□ Co	bble		Gravel	□ Sa	nd	□ Silt/	/ clay		Organic
Observations														
Riparian Zone Present: (check one)	□ Ye	s		No										
Vegetation Layers: (check all that apply)	🗆 Tr	ees		Saplings	/Shrubs	V	Herbs							
Dominant Bank Vegeta Reed canary grass	tion (list	):												
Aquatic Habitats (ex: sub	merged or	emerged a	quatic vegetat	tion, overha	anging banl	ks/roots, lea	f packs, la	arge submerged	wood, riff	es, deep po	ools, etc.) <b>:</b>			
Aquatic Organisms Ob	served	(list):												
Disturbances (ex: livesto	ock acces	s, manure	in waterbo	dy, waste	discharge	e pipes):								
Observation Notes: Roadside ditch														



Downstream, looking southeast.

Description													
Project Name: Wahpeton Expansion						Date: 6/7/2022				Vaterbo scae004	<b>dy Surve</b> y e	y ID:	
State: North Dakota		County/ Cass	Parish:						L				
<b>Company:</b> ERM		Crew M ME, VB	ember Initi	als:		Latitude: 46.74653				<b>.ongituc</b> 96.9898			
Survey Type:	Centerl	ine	Re-Rou	te		Access Road	I □Facility		Other				
Waterbody Type:	River		□ Stream		$\checkmark$	Ditch	Swale	•	Canal		□ Other		
Water Appearance:	No Wat	ler	□ Clear		<b>—</b> -	Turbid	□ Sheen Surface	on 🗌	Surface	Scum	□Algal I	Mats	□Other
Feature Quality ^a :	High		Moderat	te	V	Low							
Feature Description:	Natural		Artificial	l, man-made		Manipulated							
Flow Regime:	Ephem	eral	🗹 Intermit	tent		Perennial	Conne Swale	ecting					
Sinuosity within Survey Corridor:	Straigh	t	Meande	ering			onalo						
Mud substrate, no water.	. Vegeta	ed wate	rbody botto	m.									
Measurements													
	ft.	N/A 🗆	Unknow	n Water	Edge	e to Water E	dge:	ft. N		OHWM V	Vidth:	<u>4</u> ft	
OHWM Indicator:	CI	ear line o	on bank	Shelving		□Wrested	vegetation	ΩScou	uring		□V	Vater s	taining
(check all that apply)		ent, matte ing vege		□Wrack lin	e	□Litter and	l debris	□Abru change	pt plant	commur		Soil cha ange	racteristic
Dominant Substrate: (check all that apply)	□ Be	edrock	🗆 Bou	lder 🗌	Cobb	le 🗆	Gravel	□ San	d	□ Silt/	clay	I ⊂	Organic
Observations													
Riparian Zone Present: (check one)	□ Ye	s	⊠ N	0									
Vegetation Layers: (check all that apply)	🗆 Tr	ees	□S	aplings/Shru	ıbs	I Herb	S						
<b>Dominant Bank Vegeta</b> Reed canary grass	tion (list	):											
Aquatic Habitats (ex: sub	omerged or	emerged a	quatic vegetatio	on, overhanging	banks/r	oots, leaf packs	large submerge	d wood, riffles	s, deep poo	ols, etc.):			
Aquatic Organisms Ob	served	(list):											
Disturbances (ex: livesto	ock acces	s, manure	in waterbod	y, waste disch	arge p	pipes):							
Observation Notes: Roadside ditch													



Downstream, looking west.

Description											
Project Name: Wahpeton Expansion						Date: 8/16/2022			Waterboo scae004	<b>dy Survey ID:</b> ρ	
<b>State:</b> North Dakota		County/ Cass	Parish:						1		
<b>Company:</b> ERM		Crew Mo ME, VB	ember Initi	ials:		Latitude: 46.39178			Longitud -96.7574		
Survey Type: (check one)	Centerl	ine	🗆 Re-Roi	ite		Access Road	□Facility	□Othe	•		
Waterbody Type: (check one)	River		□ Stream			Ditch	□ Swale	🗆 Cana	al	□ Other	
Water Appearance: (check one)	No Wat	er	□ Clear		1	Turbid	□Sheen or Surface	n ⊡Surfa	ce Scum	□Algal Mats □Other	
	🗹 High		□ Modera	ite		Low	Oundee				
Feature Description: (check one)	Natural		□ Artificia	l, man-made		Manipulated					
Flow Regime:	Epherr	eral	🗆 Intermi	ttent	✓	Perennial	Connec Swale	ting			
Sinuosity within Survey Corridor: (check one)	□ Straigh	t	Meand	ering			Owald				
Measurements Depth of Water: 0.5	ft	N/A□	Unknow		Eda	e to Water Ed	<b>ge:</b> 10 ft.	N/A 🗆	OHWM V	Vidth: 25 ft.	
							-	,			
OHWM Indicator: (check all that apply)	Be	ear line o nt, matte	ed, or	Shelving	•	□Wrested v □Litter and	-	<ul> <li>✓ Scouring</li> <li>✓ Abrupt pla change</li> </ul>	nt commur	✓Water staining ity ✓Soil characteristic change	
Dominant Substrate: (check all that apply)		edrock		ılder 🗆 (	Cobk	ole 🗆 C	Gravel	□ Sand	□ Silt/		
Observations											
Riparian Zone Presen (check one)	it: ☑ Ye	es		10							
Vegetation Layers: (check all that apply)	🗆 Tr	ees	∎ s	Saplings/Shrub	os	Herbs					
<b>Dominant Bank Vege</b> Reed canary grass, an			adian woo	d nettle, Penn	isylv	ania knotweed	ł				
Aquatic Habitats (ex: s	ubmerged or	emerged a	quatic vegetati	on, overhanging b	anks/	roots, leaf packs, la	arge submerged v	vood, riffles, deep	pools, etc.) <b>:</b>		
Aquatic Organisms C	bserved	(list):									
Disturbances (ex: live	stock acces	s, manure	in waterboo	ly, waste discha	irge p	pipes):					
Observation Notes: Antelope River											



Downstream, looking northwest.

Description											
Project Name: Wahpeton Expansion						Date: 8/17/2022			Waterbod scae005i	ly Survey ID:	
<b>State:</b> North Dakota		County/ Richland									
<b>Company:</b> ERM		Crew Mo ME, VB	ember Initia	als:		Latitude: 46.528461			Longitude -96.91682		
Survey Type:	Centerl	ine	Re-Rou	te		Access Road	□Facility	□Other			
Waterbody Type:	River		Stream			Ditch	□ Swale	🗆 Cana		□ Other	
Water Appearance:	No Wa	ter	□ Clear			Turbid	□Sheen or Surface	n ⊡Surfac	e Scum	□Algal Mats	□Other
	High		Moderat	te		Low	Ganado				
Feature Description:	Natural		Artificial	, man-made		Manipulated					
Flow Regime:	Ephem	neral	Intermit	tent		Perennial		ting Swale			
, ,	Straigh	t	Meande	ering							
Measurements				1							_
Depth of Water:	ft.	N/A	Unknow	n Water	Edg	e to Water E	dge: ft.	. N/A <b>⊠</b>	OHWM W	/idth: <u>5</u>	ft.
OHWM Indicator: (check all that apply)		ear line o	on bank	□ Shelving		□Wrested	vegetation	Scouring		₫Water	staining
		nt, matte		□Wrack line	Э	□Litter and	debris	Abrupt plan change	t communi	ity	naracteristic
Dominant Substrate: (check all that apply)	□ Be	edrock	Boul	lder 🗆 (	Cobb	ble 🗆	Gravel	□ Sand	□ Silt/ o	clay 🗹	Organic
Observations											
Riparian Zone Present: (check one)	I Y€		□ N								
Vegetation Layers: (check all that apply)	🗹 Tr	ees	S S	aplings/Shrut	OS	□ Herb	5				
Dominant Bank Vegeta Eastern cottonwood, mul			, reed cana	iry grass, pois	son i	ivy					
Aquatic Habitats (ex: sub	merged or	emerged a	quatic vegetatic	on, overhanging b	anks/	roots, leaf packs,	large submerged v	wood, riffles, deep p	ools, etc.):		
Aquatic Organisms Ob	served	(list):									
Disturbances (ex: livesto	ock acces	s, manure	in waterbod	y, waste discha	arge p	pipes):					
Observation Notes:											



Upstream, looking west.

Description											
Project Name: Wahpeton Expansion						Date: 8/17/2022			Waterboo scae006i	dy Survey ID:	
<b>State:</b> North Dakota		County/ Richlan	<b>/Parish:</b> d								
<b>Company:</b> ERM		Crew M ME, VB	ember Init	ials:		Latitude: 46.528741			Longitud -96.91386		
Survey Type:	Centerl	ine	🗆 Re-Rou	ute		Access Road	□Facility	□Other			
Waterbody Type:	River		Stream	I		Ditch	□ Swale	🗆 Cana		□ Other	
Water Appearance:	No Wa	ter	□ Clear			Turbid	□Sheen or Surface	n ⊡Surfac	e Scum	□Algal Mats	□Other
	] High		Modera	ate		Low	Ganado				
Feature Description:	Natural		Artificia	l, man-made		Manipulated					
Flow Regime:	Ephem	neral	🗹 Intermi	ttent		Perennial		ting Swale			
, ,	Straigh	it	□ Meand	ering							
Measurements				1							
Depth of Water:	ft.	N/A	Unknow	vn⊡ Water	Edg	e to Water E	dge: ft.	. N/A <b>⊠</b>	онмм м	/idth: <u>5</u>	ft.
OHWM Indicator: (check all that apply)		ear line	on bank	□ Shelving	I	□Wrested	vegetation	Scouring	I	⊠Water	staining
		nt, matte ing vege		□Wrack line	е	□Litter and	debris	Abrupt plan change	t commun	iity	naracteristic
Dominant Substrate: (check all that apply)	□ Be	edrock	🗆 Βοι	ulder 🗌	Cobb	ole 🗆	Gravel	□ Sand	□ Silt/	clay 🗹	Organic
Observations											
Riparian Zone Present: (check one)											
Vegetation Layers: (check all that apply)	☑ Tr	ees	∎ s	Saplings/Shru	bs	□ Herb	8				
Dominant Bank Vegeta Eastern cottonwood, mu			s, reed cana	ary grass, poi	son i	ivy					
Aquatic Habitats (ex: sub	omerged or	emerged a	quatic vegetati	ion, overhanging b	oanks/	roots, leaf packs,	large submerged v	wood, riffles, deep p	ools, etc.):		
Aquatic Organisms Ob	served	(list):									
Disturbances (ex: livesto	ock acces	s, manure	e in waterboo	dy, waste discha	arge p	pipes):					
Observation Notes:											



Upstream, looking west.

Description										
Project Name: Wahpeton Expansion					Date: 8/16/202	2		Waterboo srie001_e	dy Survey ID: e	
State:		County	/Parish:							
North Dakota		Richlan								
Company:			ember Initials	:	Latitude:			Longitud		
ERM		ME, VB	•		46.35492	27		-96.66334	49	
Survey Type: (check one)	Center	line	□ Re-Route		Access Ro	ad □Facility	□Other			
Waterbody Type: (check one)	□ River		□ Stream		Ditch	□ Swale	🗆 Cana		□ Other	
Water Appearance: (check one)	🗆 No Wa	ter	□ Clear		□Turbid	□Sheen o Surface	n ⊡Surfac	e Scum	□Algal Mats	□Other
Feature Quality ^a : (check one)	□ High		□ Moderate		🗹 Low	Gunace				
Feature Description: (check one)	Natura	I	🗹 Artificial, m	an-made	□ Manipulate	ed				
Flow Regime: (check one)	Epher	neral	Intermitten	t	Perennial	□ Conneo Swale	cting			
Sinuosity within Survey Corridor: (check one)	□ Straigh	nt	Meanderin	g		Gwale				
Description Notes:										
Measurements										
Depth of Water:	ft.	N/A□	Unknown□	Water E	Edge to Water	<b>Edge:</b> 0 ft	N/A□	онмм м	Vidth: <u>4</u>	ft.
OHWM Indicator: (check all that apply)	I ⊂ C	lear line	on bank 🛛	Shelving	□Wreste	ed vegetation	Scouring		□Water	staining
		ent, matte ing vege		Wrack line	□Litter a	nd debris	d Abrupt plan Change	t commun	nity      □Soil ch change	aracteristic
Dominant Substrate: (check all that apply)	□B	edrock	□ Boulde	r 🗆 C	Cobble	Gravel	□ Sand	□ Silt/	clay 🗹	Organic
Observations										
Riparian Zone Preser (check one)	nt: 🗆 Ye	es	🗹 No							
Vegetation Layers: (check all that apply)		ees	□ Sapl	ngs/Shrub	s 🗹 He	erbs				
<b>Dominant Bank Vege</b> Reed canary grass, Ke										
Aquatic Habitats (ex:	submerged or	emerged a	equatic vegetation, o	verhanging ba	anks/roots, leaf pac	ks, large submerged	wood, riffles, deep p	ools, etc.):		
Aquatic Organisms (	Observed	(list):								
Disturbances (ex: live	stock acces	s, manure	e in waterbody, w	aste dischar	rge pipes):					
Observation Notes: Agricultural drainage c	litch									



Upstream, looking southeast.

Description														
Project Name: Wahpeton Expansion						<b>Date:</b> 8/16/	2022				Waterbo srie002_		vey ID:	
<b>State:</b> North Dakota		County/ Richland												
<b>Company:</b> ERM		Crew Me ME, VB	ember Init	ials:		<b>Latitu</b> 46.37	u <b>de:</b> 73249				L <b>ongitu</b> -96.6807			
Survey Type:	Centerl	ine	🗆 Re-Rou	ute	[	Access	Road	□Facility		Other				
Waterbody Type:	River		□ Stream	1		Ditch		🗹 Swale		∃ Canal		□ Ot	her	
Water Appearance:	No Wat	er	□ Clear		[	Turbid		□ Sheen or Surface	n 🛛	Surface	e Scum	□Alg	al Mats	□Other
Feature Quality ^a :	High			ate	N	✔ Low								
Feature Description:	Natural		Artificia	al, man-n	nade [	□ Manip	ulated							
Flow Regime:	Ephem	eral	🗆 Intermi	ittent	[	Peren	nial	□ Connec Swale	cting					
Sinuosity within Survey Corridor: (check one)	Straigh	t	Meand	lering				<u>enaie</u>						
Description Notes: Mud substrate, no water.	Vegetat	ed water:	rbody botto	om.										
Measurements														
Depth of Water: f	it.	N/A□	Unknov	vn 🗆 🛛 🛛	Vater Ed	lge to Wa	ater Ed	l <b>ge:</b> _0_ft	-	N/A□	OHWM \	Nidth:	4	ft.
OHWM Indicator: (check all that apply)		ear line o	on bank	□Shel	lving	□Wr	ested v	egetation	□Sco	ouring			□Water	staining
		nt, matte ing veget		□Wra	ck line	□Litt	er and	debris	I Abru chang	upt plant e	commu		change	aracteristic
Dominant Substrate: (check all that apply)	□ Be	edrock	🗆 Βοι	ulder	□ Col	bble		Gravel	□ Sar	nd	□ Silt/	/ clay	$\checkmark$	Organic
Observations														
Riparian Zone Present: (check one)	□ Ye	'S	<b>√</b> N	No										
Vegetation Layers: (check all that apply)	🗆 Tr	ees		Saplings/	/Shrubs	V	Herbs							
Dominant Bank Vegetat Reed canary grass, Kent			annual ra	gweed.										
Aquatic Habitats (ex: sub	merged or	emerged ac	quatic vegetat	ion, overha	anging bank	ks/roots, lea	f packs, la	arge submerged	wood, riffle	es, deep po	ols, etc.) <b>:</b>			
Aquatic Organisms Obs	served	(list):												
Disturbances (ex: livesto	ock acces	s, manure	in waterboo	dy, waste	discharge	e pipes):								
Observation Notes: Agricultural drainage ditcl	h													



Downstream, looking southeast.

Description											
Project Name:						Date:			Waterbo	ody Survey ID	:
Wahpeton Expansion						8/16/2022			srie003	e	
State:		County/	Parish:								
North Dakota		Cass									
Company:			ember Init	tials:		Latitude:			Longitu		
ERM		ME, VB				46.295485			-96.6218	801	
Survey Type:	Centerl	ine	Re-Rou	ute		Access Road	□Facility	□Other			
Waterbody Type:	River		□ Stream	ı	V	Ditch	□ Swale	🗆 Cana	1	□ Other	
Water Appearance:	No Wat	er	Clear			Turbid	□Sheen or Surface	n ⊡Surfa	ce Scum	□Algal Mat	s □Other
. ,	] High			ate		Low	Odnabe				
Feature Description:	Natural		Artificia	al, man-made	•	Manipulated					
Flow Regime:	Ephem	eral	🗆 Intermi	ittent		Perennial	□ Connec Swale	ting			
. ,	Straigh	t	□ Meand	lering			Owale				
Description Notes:											
Mud substrate, no water	. Vegetat	ied wate	rbody botto	om.							
Measurements											
	ft.	N/A 🗆	Unknov	vn 🗆 🛛 Water	Edge	e to Water Ec	<b>dge:</b> 0_ft.	N/A□	онум	Width: 4	ft.
OHWM Indicator:		ear line o	on bank	□Shelving		□Wrested \	regetation	□Scouring		⊠Wate	er staining
(check all that apply)				-			-				-
		nt, matte ing vegel		□Wrack lin	ie	□Litter and	depris	▲Abrupt plan change	it commu	change	characteristic e
Dominant Substrate: (check all that apply)	🗆 Be	edrock	🗆 Βοι	ulder 🗌	Cobb	le 🗌 🤅	Gravel	□ Sand	□ Silt	/ clay	✔ Organic
Observations											
Riparian Zone Present: (check one)	□ Ye	:S	<b>1</b>	No							
Vegetation Layers: (check all that apply)	🗆 Tr	ees	□ \$	Saplings/Shru	ıbs	🗹 Herbs	3				
Dominant Bank Vegeta	tion (list	):									
Reed canary grass, foxta	ail meado	ow grass	i								
Aquatic Habitats (ex: sub	omerged or	emerged ad	quatic vegetat	tion, overhanging	banks/r	oots, leaf packs, l	large submerged v	wood, riffles, deep p	ools, etc.):		
Aquatic Organisms Ob	served	(list):									
Disturbances (ex: liveste	ock acces	s, manure	in waterboo	dy, waste disch	narge p	ipes):					
Observation Notes:											
Roadside ditch											



Downstream, looking southeast.