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PERM Workspace Added	TEMP Workspace to PERM Workspace
PERM Workspace Removed	Milepost1
PERM Workspace to TEMP Workspace	Proposed Bore Location
TEMP Workspace Added	Proposed Centerline
TEMP Workspace Removed	No Change
	Surveyed Wetland

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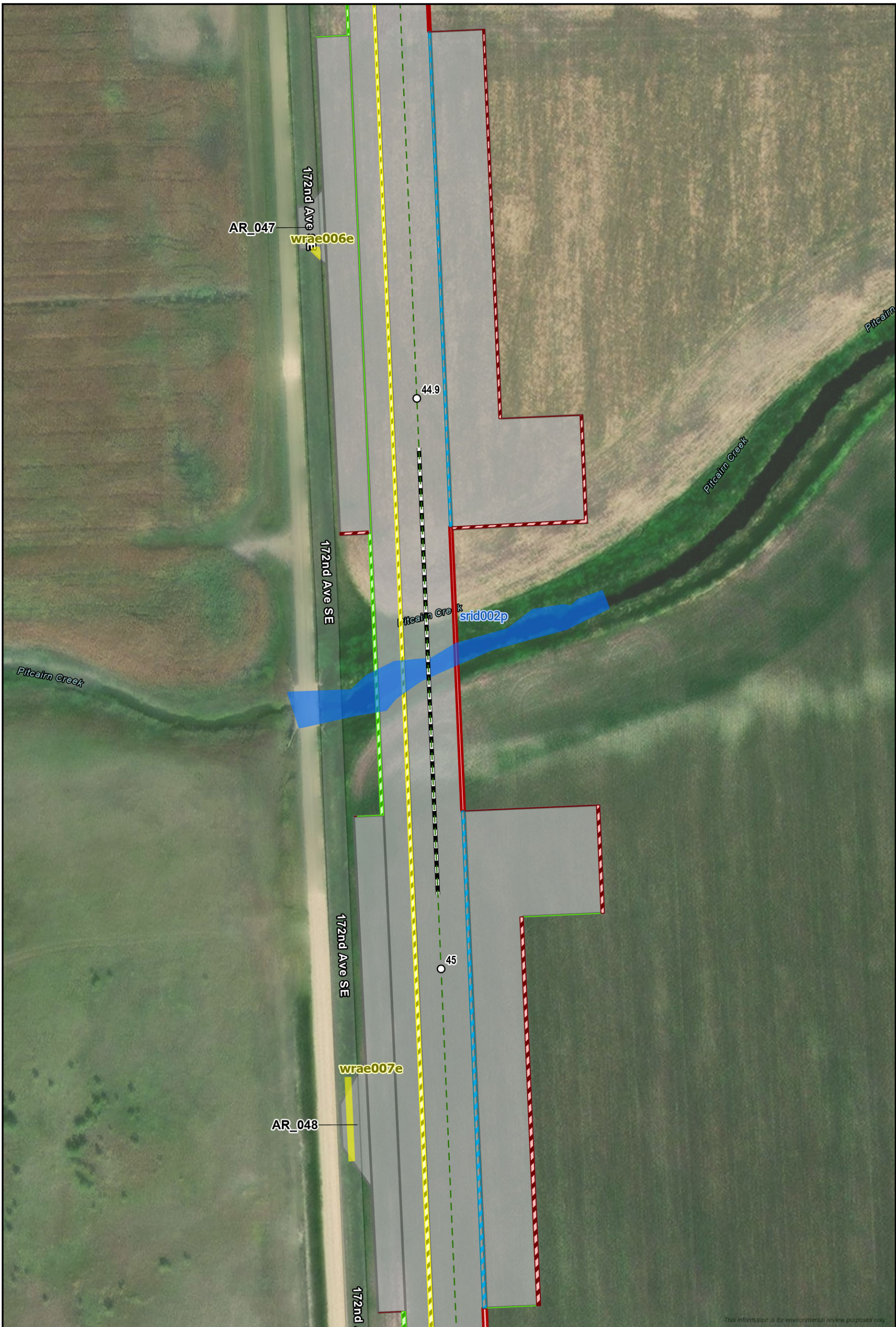
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Proposed Project Modifications with Wetland/Waterbody Impacts

V57





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TEMP Workspace to PERM Workspace	Surveyed Wetland
	Surveyed Waterbody

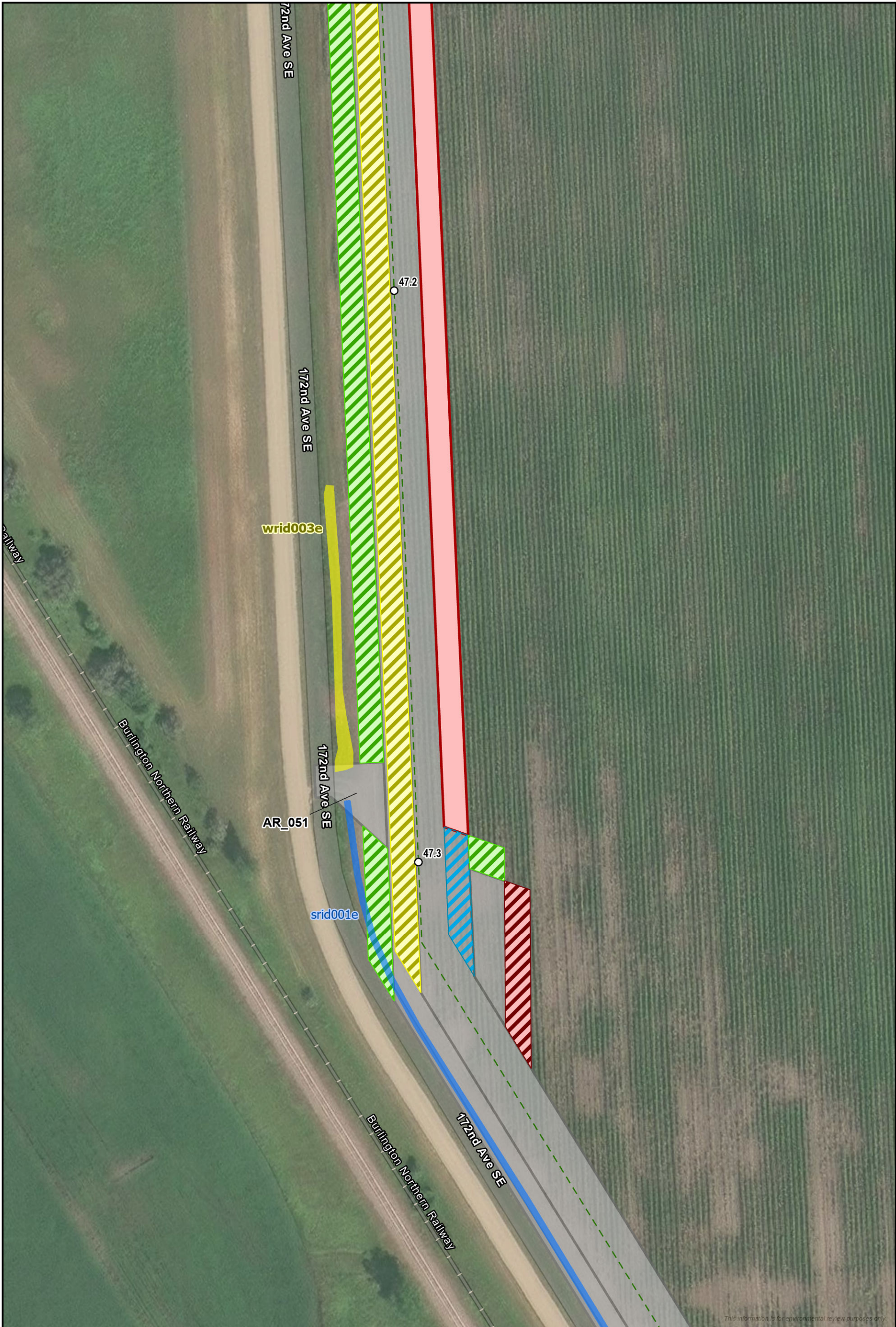
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Feet

Proposed Project Modifications with Wetland/Waterbody Impacts

V58



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TEMP Workspace to PERM Workspace	Surveyed Waterbody

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0 100 200
Feet





Proposed Project Modifications with Wetland/Waterbody Impacts

V58





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Wahpeton Expansion Project

Wetland and Waterbody Delineation
Report Addendum Addendum

PREPARED FOR
WBI Energy Transmission, Inc.

DATE
6 May 2024

REFERENCE
0611161



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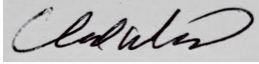
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VERSION	REVISION	AUTHOR	REVIEWED BY	NAME	DATE	COMMENTS
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Wahpeton Expansion Project

Wetland and Waterbody Delineation Report Addendum Addendum

0611161



Chad Madison
Managing Consultant



Chris Schmidt
Project Manager

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ACRONYMS AND ABBREVIATIONS

Acronyms	Description
ERM	Environmental Resource Management, 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



Acronyms	Description
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 58.5 miles of new 12-inch 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. Environmental Resource Management, Inc. (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 followed by additional field assessments in summer of 2022 and summer of 2023. In 2024, ERM completed an additional field assessment and delineation of wetlands and waterbodies along various minor route and workspace adjustments of the Project in Cass and Richland counties, North Dakota.

This report is an addendum to the original February 2022 report, October 2022, September 2023 addendums, 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 and workspace adjustments mentioned above. In this addendum report, these newly surveyed route adjustments will be referred to as the Survey Area, which are generally narrow expansions of the previous corridor, or short segments of a 300' corridor.

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, any delineated wetlands, and waterbodies, and NHD and NWI polygons utilized as reference during field surveys.

2. METHODS

Where present, wetlands and waters were identified and delineated within the Survey Area, covering the route adjustments and any extended workspaces, during Spring 2024. The Survey Area included narrow expansions of previously surveyed areas, small adjacent workspaces, and short segments of a 300' corridor, as well as the footprint of all access roads.

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. In addition to any areas identified as potential wetland 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 which either were or were not wetlands or waterbodies during field survey.

2.2 FIELD SURVEY

The field delineation was conducted in April of 2024. A field team visited the Survey Area, emphasizing areas where probable wetlands and waterbodies were 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, which include 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 Global Positional System (GPS) unit.

Each wetland or water feature documented within the Survey Area was assigned a Project-specific unique identifier (Unique ID). Specific naming conventions were followed during field surveys to catalog each wetland and waterbody documented. Table 1 Wetland and Water Resource Naming Protocol for Unique IDs

Water Resource	Type	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.

describes each part of the naming convention utilized to assign Unique IDs during field surveys.

TABLE 1 WETLAND AND WATER RESOURCE NAMING PROTOCOL FOR UNIQUE IDS

Water Resource	Type	County	Field Crew Letter	Feature Number Example	Special Designation
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^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”).

2.2.2 WATERBODIES

Waterbodies documented during field surveys were categorized according to their hydrologic 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-water mark (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.

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 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 identified no additional wetlands in the spring 2024 field survey, however two previously identified waterbodies were extended into new workspace, and two additional waterbodies were identified within the Survey Area. These waterbodies are illustrated in the Figure Set “Aquatic Resources Delineation Map” in Appendix A and listed in Table B-1 in Appendix B, including useful summary data: Project-specific Unique ID, location (latitude/longitude), linear feet within the Survey Area, and Cowardin classification or hydrology regime. Data forms and photos of waterbodies and non-water points documented during the April 2024 fieldwork are provided in Appendix C. During the survey, field conditions were “Normal” according to USACE’s Antecedent Precipitation Tool, provided in Appendix D (Deters. 2022). Due to the disjointed and sporadic nature of the areas comprising the Survey Area, only the locations found to contain wetland or waterbody features are displayed in the map figures provided in Appendix A. A full list of the Survey Area locations visited throughout the Project in April 2024 is provided in Table B-2, Appendix B.

3.1 WETLANDS

No additional wetlands were identified within the Survey Area during the spring 2024 field survey.

3.2 WATERBODIES

A total of two previously identified linear waterbody features were extended into new workspace, and two additional linear waterbody features were identified within the Survey Area. The lengths and characteristics of these waterbodies within the Survey Area are summarized in Table B-1, Appendix B.

3.3 NON-WATER POINTS

Three locations within the Survey Area were determined to have potential wetlands and were further investigated during field survey. All three locations were determined to be upland, their associated data forms and photos are provided in Appendix C.

4. CONCLUSIONS

The April 2024 wetland and waterbody delineation for the Project was completed on newly added areas of the Project due to route and workspace adjustments. This report presents the results of this survey, documenting no additional wetlands, two modified waterbodies, and two additional waterbodies.

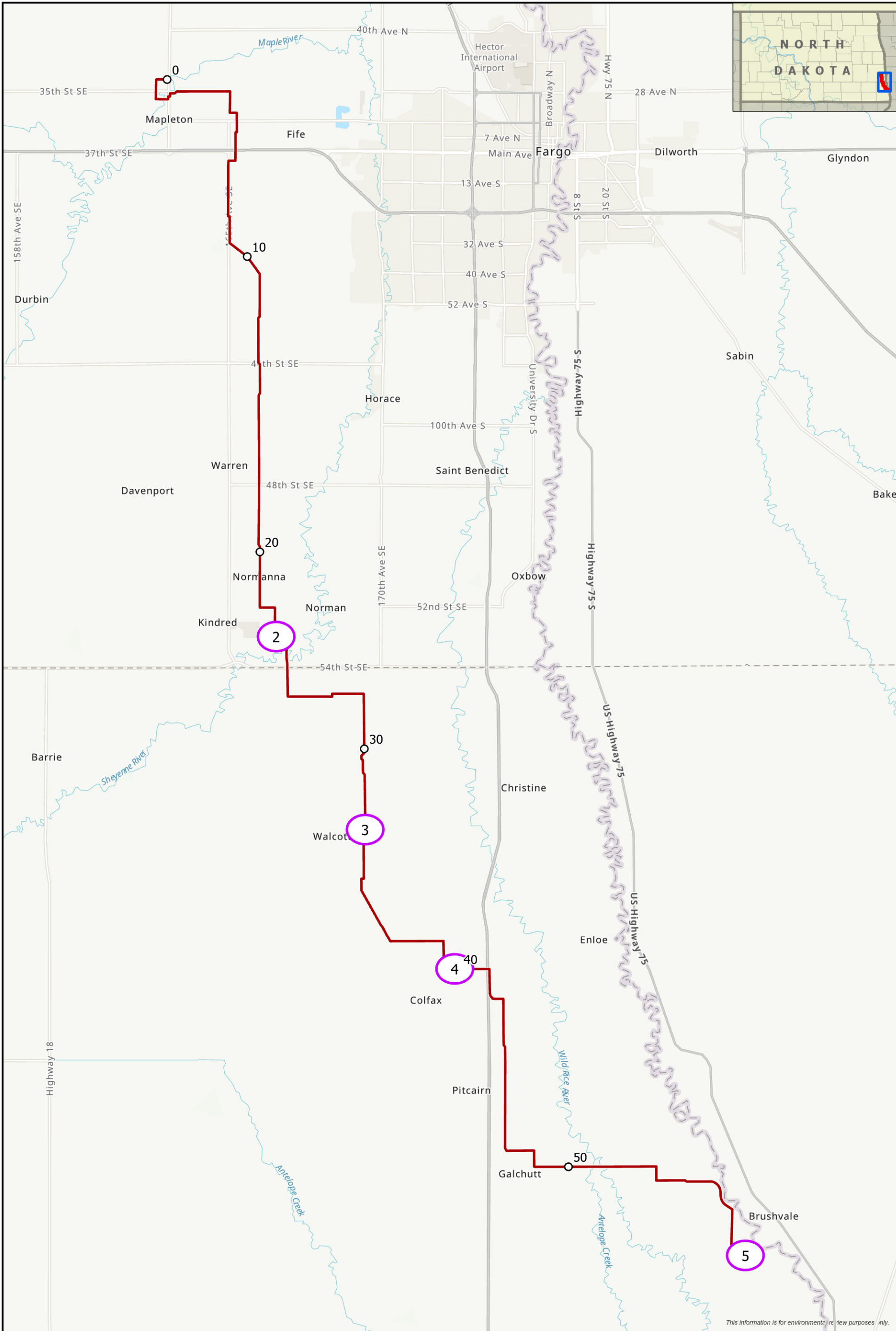
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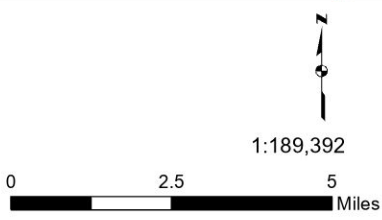
APPENDIX A AERIAL MAP SET

APPENDIX CONTENTS LIST



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- Map Page
- Proposed Centerline



2024 Aquatic Resources Delineation Map
Wahpeton Expansion Project
 WBI Energy Transmission, Inc.
 Cass and Richland County, North Dakota





- Milepost
- 2024 Surveyed Waterbody
- ▨ NWI Wetland
- Proposed Workspace



2024 Aquatic Resources Delineation Map
Wahpeton Expansion Project
 WBI Energy Transmission, Inc.
 Cass County, North Dakota





This information is for environmental review purposes only.

○ Milepost	■ Previously Surveyed Wetland
● Upland Data Point	--- NHD Flowline
● Wetland Data Point	▨ NWI Wetland
■ 2024 Surveyed Waterbody	■ Proposed Workspace

1:1,000

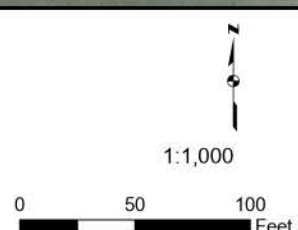
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2024 Aquatic Resources Delineation Map
Wahpeton Expansion Project
 WBI Energy Transmission, Inc.
 Richland County, North Dakota





- Milepost
- 2024 Surveyed Waterbody
- - - NHD Flowline
- ▨ NWI Wetland
- Proposed Workspace

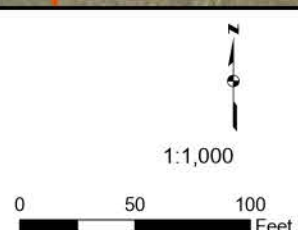


2024 Aquatic Resources Delineation Map
Wahpeton Expansion Project
 WBI Energy Transmission, Inc.
 Richland County, North Dakota





- Milepost
- ▲ Non-Water Data Point
- 2024 Surveyed Waterbody
- ▨ NWI Wetland
- Proposed Workspace



2024 Aquatic Resources Delineation Map
Wahpeton Expansion Project
 WBI Energy Transmission, Inc.
 Richland County, North Dakota

