MONTANA-DAKOTA
UTILITIES CO.
A Subsidiary of MDU Resources Group, Inc.

400 North Fourth Street
Bismarck, ND 58501
701-222-7900

January 14, 2022

Executive Secretary
North Dakota Public Service Commission
600 East Boulevard Ave. Department 408
Bismarck, ND 58505-0480

Re: Case No. PU-22-___
Combined Application for a
Certificate of Corridor
Compatibility and Route Permit

Pursuant to North Dakota Energy Conversion and Transmission Facility Siting Act, N.D.C.C. § 49-22.1, Montana-Dakota Utilities Co. ("Montana-Dakota") herewith submits this Combined Application for a Certificate of Corridor Compatibility and Route Permit ("Application") for the proposed 12-inch diameter water pipeline (Project) to be installed from an existing City of Mandan 30-inch diameter municipal water pipeline to the Heskett Station.

An original and two copies of this Application have been provided to the Commission. In addition, an application for trade secret protection of certain information and one trade secret copy of the Class III Cultural Resources Inventory has been provided separately.

Please refer all inquiries regarding this filing to:

Mr. Jacob Hein
Power Production Engineer
Montana-Dakota Utilities Co.
400 North Fourth Street
Bismarck, ND 58501

Also please send copies of all written inquiries, correspondence and pleadings to:

Ms. Allison Mann
Attorney
MDU Resources Group, Inc.
P.O. Box 5650
Bismarck, ND 58506-5650

A check payable to the North Dakota Public Service Commission in the amount of $10,000 is enclosed based on the minimum established in N.D.C.C. § 49-22.1-21.

Please contact me at 701.222.7855 or travis.jacobson@mdu.com if you have questions.

Sincerely,

Travis R. Jacobson
Director of Regulatory Affairs

Attachments

Cc: Electronic Copy - Dawn Rhone
County Auditor
210 2nd Ave NW
Mandan, ND 58554

Combined Application to the North Dakota Public Service Commission for a Certificate of Corridor Compatibility & Route Permit

PREPARED FOR:
Montana-Dakota Utilities Co.
Bismarck, North Dakota

SUBMITTED TO:
North Dakota Public Service Commission

PREPARED BY:
KLJ
4585 Coleman St
Bismarck, ND 58503

January 2022

Montana-Dakota Heskett Water Line
MORTON COUNTY, NORTH DAKOTA

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1.0 Introduction

Montana-Dakota Utilities Co. (Montana-Dakota) is submitting this consolidated application (Application) for a Certificate of Corridor Compatibility (Certificate) and Transmission Facility Route Permit to the North Dakota Public Service Commission (Commission) for the proposed 12-inch diameter water pipeline (Project) to be installed from an existing City of Mandan 30-inch diameter municipal water pipeline to the Heskett Station. The project would be approximately 2,684 feet in length and provide approximately 1,395 gallons per minute (gpm) of fresh water to the Heskett Station. The Project is located within the City of Mandan extraterritorial area (ETA), but outside of the incorporated city limits. Water from the pipeline would be primarily utilized for fire protection activities, with a very small volume also being used for evaporative cooling for the combustion turbines. Please refer to ***Exhibit 1, Project Location Map,*** in ***Appendix A.***

Montana-Dakota has been in coordination with the City of Mandan (City) to discuss the proposed Project. Montana-Dakota has received verbal approval to connect to the 30-inch municipal water line and a water usage agreement with the City is ongoing. The City will review the final plans prior to their approval.

1.1 Compliance with the Energy Conversion and Transmission Facility Siting Act, North Dakota Century Code Chapter 49-22

The North Dakota Energy Conversion and Transmission Facility Siting Act, North Dakota Century Code (NDCC) Chapter 49-22.1 (Siting Act) requires the proponent of a liquid transmission line capable of transporting water from or to an energy conversion facility to obtain a Corridor Certificate and Transmission Facility Route Permit from the Commission in order to locate, construct, and operate the line in the state of North Dakota. An application must meet certain criteria set forth in the Siting Act, as well as in North Dakota Administrative Code (NDAC) Article 69-06 (Siting Rules). The siting of a liquid transmission facility is to be made in an orderly manner compatible with environmental preservation and the efficient use of resources (NDCC 49-22.1-02).

In this Application, Montana-Dakota presents the information required by the Siting Act and the Siting Rules. Montana-Dakota has considered the exclusion and avoidance areas, the selection criteria, and the policy criteria in the design of the Project, in accordance with NDCC 49-22.1 and NDAC 69-06-05, Chapter 69-06-06 and Chapter 69-06-08. Information regarding Project design and technical information has been included in this Application to allow a thorough understanding of the Project and to aid in review by the Commission, regulatory agencies and the public. The table below provides a summary of information included in this Application and the section of the document in which each siting requirement is addressed. Please refer to ***Table 1, Certificate and Route Permit Completion Checklist.***

Table 1, Certificate and Route Permit Completion Checklist

State Authority	Description	Section
NDCC 49-22.1-06	Description of Application Requirements	

State Authority	Description	Section
Section 1	An application for a certificate must be in such form as the commission may prescribe, containing the following information:	
a.	A description of the size and type of facility.	1.0, 4.1
b.	A summary of any studies which have been made of the environmental impact of the facility.	6.0-6.17
c.	A statement explaining the need for the facility.	2.1
d.	An identification of the location of the preferred site for any gas or liquid energy conversion facility.	Not Applicable (N/A)
e.	An identification of the location of the preferred corridor for any gas or liquid transmission facility.	1.2
f.	A description of the merits and detriments of any location identified and a comprehensive analysis with supporting data showing the reasons why the preferred location is best suited for the facility.	1.2, 3.0
g.	A description of mitigative measures that will be taken to minimize all foreseen adverse impacts resulting from the location, construction, and operation of the proposed facility.	6.0-.6.17
h.	An evaluation of the proposed site or corridor with regard to the applicable considerations set out in section 49-22.1-09 and the criteria established pursuant to section 49-22.1-03.	1.2, 3.1-3.6
NDAC 69-06-05	Transmission Facility Permit	
Section 2	Contents	
a. (1)	A description of the type of facility proposed.	1.2, 4.1
a. (2)	A description of the purpose of the facility.	2.1, 4.1
a. (3)	A description of the technology to be deployed.	1.2, 4.1
a. (4)	A description of the type of product to be transmitted.	1.2, 4.1
a. (5)	A description of the source of the product to be transmitted.	1.2, 4.1
a. (6)	A description of the final destination of the product to be transmitted.	1.2, 4.1
a. (7) a	The proposed size and design and any alternate size or design that was considered, including the width of right of way.	N/A
a. (7) b	The proposed size and design and any alternate size or design that was considered, including the approximate length of facility.	N/A
a. (7) c	The proposed size and design and any alternate size or design that was considered, including the estimated span length for electric facilities.	N/A
a. (7) d	The proposed size and design and any alternate size or design that was considered, including the anticipated type of structure for electric facilities.	N/A
a. (7) e	The proposed size and design and any alternate size or design that was considered, including the voltage for electric facilities.	N/A

State Authority	Description	Section
a. (7) f	The proposed size and design and any alternate size or design that was considered, including the requirement for and general location of any new associated facilities.	1.2, 2.2, 4.1, 4.2
a. (7) g	The proposed size and design and any alternate size or design that was considered, including the estimated distance between surface structures for pipeline facilities.	1.2, 2.2, 4.1, 4.2
a. (7) h	The proposed size and design and any alternate size or design that was considered, including the pipe size for pipeline facilities.	1.2, 2.2, 4.1, 4.2
a. (7) i	The proposed size and design and any alternate size or design that was considered, including the maximum design operating pressure and temperature for pipeline facilities.	1.2, 2.2, 4.1
a. (7) j	The proposed size and design and any alternate size or design that was considered, including the maximum design flow rate for pipeline facilities.	1.2, 2.2, 4.1
a. (7) k	The proposed size and design and any alternate size or design that was considered, including the number and general location of compressor or pumping stations.	1.2, 2.2, 4.1
b. (1)	The anticipated time schedule for accomplishing major events including obtaining the certificate of corridor compatibility.	1.3
b. (2)	The anticipated time schedule for accomplishing major events including obtaining the route permit.	1.3
b. (3)	The anticipated time schedule for accomplishing major events including completing right of way acquisition.	1.3
b. (4)	The anticipated time schedule for accomplishing major events including starting construction.	1.3
b. (5)	The anticipated time schedule for accomplishing major events including completing construction.	1.3
b. (6)	The anticipated time schedule for accomplishing major events including testing operations.	1.3
b. (7)	The anticipated time schedule for accomplishing major events including commencing operations.	1.3
c.	A copy of each evaluative study or assessment of the environmental impact of the proposed facility submitted to the agencies listed in section 69-06-01-05 and each response received.	Appendix D and G
d.	An analysis of the need for the proposed facility based on present and projected demand for the product transmitted, including the most recent system studies supporting the analysis of the need.	2.1
e.	A description of any feasible alternative methods for serving the need.	2.2
f.	The width of a corridor must be at least ten percent of its length, but not less than one mile or greater than six miles unless another appropriate width is determined by the commission.	1.2, 1.2.1

State Authority	Description	Section
g.	A study area that includes a proposed corridor of sufficient width to enable the commission to evaluate the factors addressed in North Dakota Century Code section 49-22-09.	1.2
h.	A discussion of the factors in North Dakota Century Code section 49-22-09 to aid the commission's evaluation of the proposed route.	8.1-8.11
i.	A discussion of the applicant's policies and commitments to limit the environmental impact of its facilities, including copies of board resolutions and management directives.	Appendix C
j.	Identification and map of the criteria that led to the proposed route location within the designated corridor, including exclusion areas, avoidance areas, selection criteria, policy criteria, design construction limitations, and economic considerations.	3.1-3.6, Appendix A
k.	A discussion of the relative value of each criteria and how the applicant selected the proposed corridor location, giving consideration to all criteria and how the location, construction, and operation of the facility will affect each criteria.	3.1-3.6
l.	A discussion of the general mitigative measures that the applicant will take to minimize adverse impacts that result from a route location in the proposed corridor and the construction and operation of the facility.	6.0-6.17
m.	The qualifications of each person involved in the corridor location study.	10.0
n.	A map identifying the criteria that led to the proposed route location within the designated corridor and the location of any new associated facilities. Several different criteria may be shown on each map depending on the map scale and the density and nature of the criteria.	Appendix A
o.	An eight and one-half-inch by eleven-inch black and white map suitable for newspaper publication depicting the site area.	Appendix B
p.	A discussion of present and future natural resource development in the area.	6.1-6.16
q.	Map and GIS requirements. The applicant shall provide information that is complete, current, presented clearly and concisely, and supported by appropriate references to technical and other written material available to the commission.	Appendix A, DVD
NDAC 69-06-06	Waiver of Procedures and Time Schedules	
Section 2	Contents	
a.	A description of the type of facility addressed in the application, including the purpose and the technology to be employed.	1.0, 1.2, 4.1
b.	A description of the products to be produced or transmitted by the proposed facility.	1.0
c.	The capacity and design of the proposed facility.	1.0, 1.2, 4.1
d.	The location of the proposed facility and a map showing the location of the proposed facility.	1.2, Appendix A
e.	A description of the general area to be served by the facility.	1.0, 1.2, 2.1
f.	The anticipated time schedule for major events.	1.3
g.	Any plans for future expansion of the proposed facility.	1.5

State Authority	Description	Section
h.	The need for the proposed facility based on the present and projected demand for the product or products to be produced by the proposed facility, including the most recent system studies supporting the analysis of the need.	2.1
i.	Any reasonable alternative methods of serving the need.	2.2
j.	Justification for any deviations from the applicant's most recent ten-year plan that the proposed facility may present.	NA
k.	The estimated total cost of construction of the facility.	1.4
l.	Any specific provisions of law that the applicant requests the commission waive or modify, with a separate justification for each provision.	NA
m.	The factual basis demonstrating that the proposed facility is of such length, design, location, or purpose that it will produce minimal adverse effects.	6.0-6.17
n.	The nature of the emergency justifying immediate authority, if the application is based on an emergency situation.	NA
NDCC 49-22-.1-07	Description of Application Requirements	
Section 1	An application for a route permit for a gas or liquid transmission facility within a designated corridor shall be filed no later than two years after the issuance of the certificate and shall be in such form as the commission may prescribe, containing the following information:	
a.	A description of the type, size and design of the proposed facility.	1.0, 1.2, 4.1
b.	A description of the location of the proposed facility.	1.2
c.	An evaluation of the proposed route with regard to the applicable considerations set out in section 49-22.1-09 and the criteria established pursuant to section 49-22.1-03.	3.1-3.6, 8.1-8.10
d.	A description of mitigative measures that will be taken to minimize all foreseen adverse impacts resulting from the location, construction, and operation of the proposed facility.	6.0-.6.17
e.	A description of the right-of-way preparation and construction and reclamation procedures.	4.1, 4.2, 5.1
f. (1)	A statement setting forth the manner in which the utility will inform affected landowners of easement acquisition, and necessary easement conditions and restrictions.	1.2.1, 3.6
f. (2)	A statement setting forth the manner in which the utility will compensate landowners for easements, without reference to the actual consideration to be paid.	1.2.1
g.	Any other information the utility considers relevant or the commission requires.	4.1-4.3
NDCC 49-22.1-09	Factors to be considered in evaluating applications and the designation of sites, corridors, and routes.	
1.	Available research and investigations relating to the effects of the location, construction, and operation of the proposed facility on public health and welfare, natural resources, and the environment.	8.1

State Authority	Description	Section
2.	The effects of new gas or liquid energy conversion and gas or liquid transmission technologies and systems designed to minimize adverse environmental effects.	8.2
3.	The potential for beneficial uses of waste energy from a proposed gas or liquid energy conversion facility.	8.3
4.	Adverse direct and indirect environmental effects which cannot be avoided should the proposed site or route be designed.	8.4
5.	Alternatives to the proposed site, corridor, or route which are developed during the hearing process and which minimize adverse effects.	8.5
6.	Irreversible and irretrievable commitments of natural resources should the proposed corridor or route be designed.	8.6
7.	The direct and indirect economic impacts of the proposed facility.	8.7
8.	Existing plans of the state, local government, and private entities for other developments at or in the vicinity of the proposed site, corridor or route.	8.8
9.	The effect of the proposed site or route on existing scenic areas, historic sites and structures, and paleontological or archaeological sites.	8.9
10.	The effect of the proposed site or route on areas which are unique because of biological wealth or because the site or route is a habitat for rare and endangered species.	8.10
11.	Problems raised by federal agencies, other state agencies, and local entities.	8.11, 9.0-9.8, Appendix D

1.2 Project Summary

The Project would be located in northeastern Morton County. See ***Exhibit 1, Project Location Map,*** in ***Appendix A***. The pipeline would be approximately 2,684 feet in length and span from an existing City of Mandan 30-inch municipal water pipeline in Section 15, Township 139 North, Range 81 West to the Heskett Station located in Section 10, T139 North, Range 81 West.

Terminology associated with the Project and impact analysis are defined in ***Table 2, Project Terminology.***

Table 2, Project Terminology

Term	Definition	Description
Project	The 12-inch diameter freshwater pipeline.	NA
Project Route	The Project Route is a 100-foot corridor centered on the proposed pipeline, where the project would be constructed.	100-foot-wide corridor
Project Corridor	The Project Corridor is an area of land in which a designated route may be established for the proposed pipeline. The width of a corridor must be at least ten (10) percent of the Project's linear length, but not less than one (1) mile or greater than six (6) miles, unless another appropriate width is determined by the Commission. The Project Corridor serves as the study area to enable the Commission to evaluate the factors addressed in NDCC 49-22-09.	One (1) mile

1.2.1 Project Corridor

The Project Corridor includes portions of three sections (spanning approximately 803 acres) of agricultural, residential, industrial, and recreational land in south-central North Dakota, near the city of Mandan. Marathon Petroleum, which owns a majority of the land within the Project Route, will be compensated as part of easement acquisition. Please refer to ***Table 3, Corridor Location,*** for a list of the sections that are included in the Project Corridor as well as ***Exhibit 1, Project Location Map,*** in ***Appendix A***.

Table 3, Corridor Location

County	Township	Range	Section(s)
Morton	139N	81W	10, 14, and 15

1.2.2 Project Route

The Project Route was selected to provide municipal water from an existing City of Mandan municipal pipeline to the Heskett station. The Project Route also represents an alignment through which Marathon Petroleum was willing to allow construction of the pipeline across their property.

Based on publicly available data, data received through agency agreements, agency feedback, literature reviews, and environmental studies, the Project Route has been sited to provide the least amount of impacts, in accordance with the Energy Conversion and Transmission Facility Siting Act (NDCC Chapter 49-22.1) and NDAC 69-06-08-02.

The Project Route is located in Sections 10 and 15, Township 139 North, Range 81 West in Morton County, North Dakota. Please refer ***Exhibit 1, Project Location Map,*** in ***Appendix A***.

1.3 Project Schedule

The proposed Project schedule is as follows:

- **Land Acquisition**: All land that is proposed to house Project facilities will be under long-term lease agreements allowing for construction and operation of the Project. Currently in process.

- **Certificate of Corridor Compatibility & Route Permit**: Montana-Dakota anticipates the Certificate and Route Permit would be issued by the Commission in early 2022.

- **Other Permits**: Montana-Dakota would acquire all other permits necessary for construction of the Project prior to conducting the work for which the permit is required. Please refer to ***Table 15, Potential Permits/Approvals,*** in ***Section 7.0***.

- **Construction**: Project construction is anticipated to begin in spring 2022 and end in summer of 2022.

- **Testing Operations**: Project testing will be completed in summer 2022.

- **Commercial Operations**: Montana-Dakota plans to have the Project commercially operational by summer 2022.

1.4 Project Cost

The estimated total cost to construct the Project is approximately $1.6 million.

1.5 Project Expansion

Montana-Dakota does not have any plans for addition or expansion at this time. However, should the need arise for expansion or addition to the proposed Project, Montana-Dakota would take appropriate actions to permit and site the expansion.

2.0 Need for Facility

2.1 Need Analysis

The need for the project is driven by safety concerns associated with firefighting operations and lack of adequate cooling capacity for the Montana-Dakota Heskett Station. The additional water would be utilized for firefighting activities and cooling operations on an as needed basis. Energy generated at the Heskett Station is transferred to the electrical grid, where it is then transferred to customers throughout the region.

2.2 Alternatives

Slight deviations from the existing alignment were evaluated as part of the Project and various factors influenced the location of the Project Corridor and Project Route. These factors included existing utilities, wetland locations, railroad or road crossing, and future proposed Montana-Dakota projects.

In addition, a no-action alternative was considered. This alternative would not supply the Heskett Station with the additional water it needs to continue operations safely; therefore, was discarded from further consideration.

2.3 Ten-Year Plan

This Application for a Certificate is consistent with Montana-Dakota's current 2020 Ten-Year Plan.

3.0 Site Selection Criteria

Montana-Dakota evaluated the Project Corridor to determine the best location for the Project. Location was based on landowner support, as well as an assessment of area technical and environmental characteristics. Site selection for the Project was also based upon the criteria described in NDAC 69-06-08. These criteria are discussed further below.

3.1 Exclusion Areas

Per NDAC 69-06-08-02(1), certain geographical areas shall be excluded from transmission facility siting consideration[1]. Please refer to ***Exhibit 2, Exclusion/Avoidance Areas,*** in ***Appendix A*** and ***Table 4, Summary of Exclusion Areas.***

[1] As defined in NDAC 69-06-01-01, exclusion criteria are "criteria that remove areas from consideration for energy conversion facility sites and transmission facility routes." Exclusion areas are composed of these limiting criteria.

Table 4, Summary of Exclusion Areas

Exclusion Area	Present within Project Corridor	Description	Section Addressed
Designated or registered national: parks; memorial parks; historic sites and landmarks; natural landmarks; monuments; and wilderness areas.	None	NA	6.2
Designated or registered state: parks; historic sites; monuments; historical markers; archaeological sites; and nature preserves.	None	NA	6.2
County parks and recreation areas; municipal parks; parks owned or administered by other governmental subdivisions.	None	NA	6.2
Areas critical to the life stages of threatened or endangered animal or plant species.	Present	Designated Critical Habitat for Piping Plover would be avoided.	6.16
Areas where animal or plant species that are unique or rare to this state would be irreversibly damaged.	None	NA	6.16
Areas within one thousand two hundred feet of the geographic center of an intercontinental ballistic missile (ICBM) launch or launch control facility.	None	NA	6.2
Areas within thirty feet on either side of a direct line between ICBM launch or launch control facilities to avoid microwave interference.	None	NA	6.2

3.2 Avoidance Areas

Per NDAC 69-06-08-02(2), certain geographical areas may not be approved in the routing of a transmission facilities unless the applicant shows that, under the circumstances, there is no reasonable alternative[2]. In determining whether an avoidance area should be designated for a facility, the Commission may consider, among other things, the following: the proposed management of adverse impacts; the orderly siting of facilities; system reliability and integrity; the efficient use of resources; and alternative sites. Economic considerations alone will not justify approval of these areas. In addition, a buffer zone of a reasonable width to protect the integrity of the area will be included unless a distance is specified in the criteria. Natural screening may be considered in determining the width of the buffer zone. Please refer to ***Exhibit 2, Exclusion/Avoidance Areas,*** in ***Appendix A*** and ***Table 5, Summary of Avoidance Areas.***

[2] As defined in NDAC 69-06-01-01, avoidance criteria are “criteria that remove areas from consideration for energy conversion facility sites and transmission facility routes unless it is shown that under the circumstances there are no reasonable alternatives.” Avoidance areas are composed of these limiting criteria.

Table 5, Summary of Avoidance Areas

Avoidance Area	Present within Project Corridor	Description	Section Addressed
Designated or registered national: historic districts; wildlife areas; wild, scenic, or recreational rivers; wildlife refuges; and grasslands.	None	NA	6.2
Designated or registered state: wild, scenic, or recreational rivers; game refuges; game management areas; management areas; forests; forest management lands; and grasslands.	None	NA	6.2
Historical resources which are not specifically designated as exclusion or avoidance areas.	None	NA	6.7
Areas that are geologically unstable.	None	NA	6.11
Within five hundred feet of a residence, school, or place of business. This criterion shall not apply to a water pipeline transmission facility.	NA	NA	6.1
Reservoirs and municipal water supplies.	Present	Missouri River would be avoided.	6.3
Water sources for organized rural water districts.	None	NA	6.3
Irrigated land. This criterion shall not apply to an underground transmission facility.	NA	NA	6.3
Areas of recreational significance which are not designated as exclusion areas.	Present	NDGF fishing facility and Missouri River would be avoided.	6.8

3.3 Selection Criteria

Per NDAC 69-06-08-02(3), a corridor or route shall be designated only when it is demonstrated to the Commission by the applicant that any significant adverse effects resulting from the location, construction, and operation of the facility in that area, as they relate to specified selection criteria, will be at an acceptable minimum, or that those effects will be managed and maintained at an acceptable minimum[3]. Please refer to ***Table 6, Summary of Selection Criteria***.

[3] As defined in NDAC 69-06-01-01, selection criteria is defined as “criteria” that guide and govern the selection of energy conversion facility sites and transmission facility corridors and routes in order to minimize adverse human and environmental impact after the exclusion and avoidance criteria have been applied.

Table 6, Summary of Selection Criteria

Selection Criteria	Potential Adverse Effects from Project	Section Addressed
The impact upon agriculture:		
(1) Agricultural production.	No permanent impacts to prime farmland or farmland of statewide importance are anticipated. Areas temporarily disturbed would be restored to native grassland pending original condition and landowner preference. Impacted landowner(s) would be compensated.	4.1, 6.10
(2) Family farms and ranches.	The Project would comply would local and state setbacks. No farms or ranches are located within the Project Route.	4.1, 4.3, 6.9
(3) Land which the owner demonstrates has soil, topography, drainage, and an available water supply that cause the land to be economically suitable for irrigation.	Landowners have not expressed concerns related to irrigation on their property, and no known crop irrigation is present within the Project Corridor.	6.3
(4) Surface drainage patterns and ground water flow patterns.	The Project would be constructed to avoid impacts on wetlands and water bodies. Temporarily disturbed areas would be restored to pre-construction conditions. No adverse impacts are anticipated to surface drainage or groundwater flow patterns.	6.11, 6.12, 6.13
The impact upon:		
(1) Sound-sensitive land uses.	Sound sensitive land uses within the Project Corridor include residences within and adjacent to the Project Corridor. The nearest residence is approximately 1,600 feet from the Project Route. Noise from operation of the Project is not anticipated to impact residences.	6.5
(2) The visual effect on the adjacent area.	The project would introduce new structures; however, the structures would not be considered significant or substantial and would match surrounding environment within the Project Corridor.	6.6
(3) Extractive and storage resources.	No adverse impacts anticipated for any type of extractive or storage resources.	NA
(4) Wetlands, woodlands, and wooded areas.	The Project would avoid impacts on wetlands, woodlands, and wooded areas.	6.13, 6.14
(5) Radio and television reception, and other communication or electronic control facilities.	Interference with radio or television reception and microwave transmission is not anticipated. Additionally, the Project is not anticipated to impact first responder, land mobile sites, area-wide public safety, and commercial E911 communication.	6.3

Selection Criteria	Potential Adverse Effects from Project	Section Addressed
(6) Human health and safety.	No impacts on human health and safety are anticipated. Regular maintenance and inspections would be performed during the life of the Project to ensure its continued integrity.	5.2, 6.4
(7) Animal health and safety.	Generally, no adverse impacts on domestic or wild animal health or safety concerns are anticipated.	5.1, 6.15
(8) Plant life.	Temporary and permanent vegetation impacts would occur during construction. Following construction, temporarily disturbed areas would be re-vegetated with a seed mixture free of noxious weeds, in accordance with Commission requirements. Impacts to trees and shrubs are not anticipated.	6.14

3.4 Policy Criteria

Per NDAC 69-06-08-02(4), the Commission may give preference to an applicant that will maximize benefits that result from the adoption of 10 specified criteria related to the applicant's policies and practices (the Commission may also require the adoption of such policies and practices)[4]. ***Table 7, Summary of Policy Criteria,*** identifies those ten criteria and describes how Montana-Dakota's policies and practices are consistent with these policy criteria. In addition, the Commission may give preference to an applicant that will maximize interstate benefits.

Table 7, Summary of Policy Criteria

Policy Criteria	**Applicant's Policies and Practices**	Section Addressed
Location and design.	Montana-Dakota has conducted studies to select the optimal location for the Project. Montana-Dakota is committed to minimizing and mitigating environmental impacts and constructing facilities in the most effective and efficient way.	1.0, 1.2, 4.1
Training and utilization of available labor in this state for the general and specialized skills required.	Local contractors, suppliers, and laborers would be utilized for the Project as applicable and feasible during construction and operations.	6.1

[4] As defined in NDAC 69-06-01-01, policy criteria are "criteria" that guide and govern the selection of energy conversion facility sits and transmission facility corridors and routes in order to maximize benefits during the construction and operation of a facility.

Policy Criteria	**Applicant's Policies and Practices**	Section Addressed
Economies of construction and operation.	The Project Route was selected to minimize impacts on the social, economic and natural environmental to the greatest extent practicable. The Project Route was designed to be as straight as possible while considering landowner participation, constructability, exclusion areas, avoidance areas, and selection and policy criteria. Minimizing the length of a transmission line decreases its costs because it requires fewer materials, land easements, and less maintenance.	3.6, 6.1
Use of citizen coordinating committees.	All lands impacted by this project are either owned by Montana-Dakota (project proponent) or Marathon Petroleum, or fall within County right of way. No citizen coordinating committees have been established.	1.2.1
A commitment of a portion of the transmitted product for use in this state.	The transmitted product (water) would assist with producing safe and efficient energy at the Heskett Station. Energy generated at the Heskett Station is transferred to the electrical grid, where it is then transferred to customers throughout the region.	2.1
Labor relations.	No impacts on labor relations are anticipated.	NA
The coordination of facilities.	Existing infrastructure and infrastructure corridors were considered in the location of the Project and its associated facilities.	1.2.2, 6.3, 6.4
Monitoring of impacts.	Montana-Dakota would monitor construction activities and use Best Management Practices (BMPs) throughout Project construction. During Project operation and restoration, Montana-Dakota would monitor the Project and assess impacts as well as comply with all requirements set forth in the Certificate and Route Permit.	5.1, 5.2, 6.17
Utilization of existing and proposed rights of way and corridors.	Due to the Project location, utilization of existing and proposed transmission right of way was not feasible.	1.2.2, 3.5
Other existing or proposed transmission facilities.	The Project Route parallels existing utility lines to the extent practicable.	1.2.2, 3.5

3.5 Design and Construction Limitations

Pursuant to NDAC 69-06-05-01(2)(j), the proposed approximately 2,684-foot-long Project Route was the most direct route that minimized impacts on exclusion areas, avoidance areas, selection and policy criteria identified in NDAC 69-06-08-02. The Project Route parallels existing utility lines to the extent practicable. The Project was routed based on the following constricting factors; location of existing utilities, location of natural resources, railroad/road crossings, future Montana-Dakota projects, and economics. Avoidance of sensitive ecological features such as wetlands were utilized as key design constraints during Project siting to avoid and minimize impacts where feasible.

3.6 Economic Considerations

Montana-Dakota considered many economic factors when deciding the Project Route. Minimizing the length of a pipeline decreases its costs because it requires fewer materials, land easements, less maintenance, and it reduces the need for supplementary pumps. The Project Route was designed to be as straight as possible while considering landowner participation, constructability, exclusion areas, avoidance areas, and selection and policy criteria.

4.0 Description of Proposed Facility

4.1 Project Design

The project would span approximately 2,684 feet, from the City municipal water line to the Heskett Station, and include installation of a pipeline, electric and communications conduits, a meter building, water meter, two gate valves, and a hydrant. The permanent right of way for the Project would be approximately 30 feet wide, with an additional 20-foot construction easement. Minimal right of way preparations are anticipated, due to few obstructions.

The Project would be constructed using conventional, open-cut construction practices. Portions of the Project would be constructed by boring using HDD technology, leaving no surface disturbance between the drill entrance and exit points. Construction of the trench would likely be completed using a combination of bulldozers and excavators. The trench would be excavated wide enough to allow for lowering and installing the pipeline. The pipeline would have a minimum of 4-inches of bedding material below and 6-inches of bedding material above the pipe, with the remainder of the trench being filled in with excavated material. The two conduits would be installed within the same trench. The depth of the trench would provide at least 8 feet of cover to the top of the pipeline and 3 feet of cover to the top of the conduits. Work occurring in or adjacent to the trench would be completed in compliance with all Occupational Safety and Health Administration (OSHA), state, and Montana-Dakota safety regulations.

The pipeline would be primarily constructed using a combination of 12-inch diameter high-density polyethylene schedule dimension ratio 9 (HDPE DR 9) and 12-inch diameter Class 350 ductile iron pipe (DIP CL 350). The HDPE DR 9 would be utilized for a majority of the Project, with the DIP CL 350 being utilized for connection with the City municipal water line. In addition, an 18-inch diameter steel casing would be utilized as part of the HDD bores.

A water meter, 12-inch gate valve, and backflow preventer would be installed near the pressure connection and enclosed in the meter building. An additional 12-inch gate valve and fire hydrant would be installed approximately halfway between the pressure connection and Heskett Station. A gravel pad would be constructed around the gate valve and fire hydrant.

An electric utility line (4-inch conduit) and fiber optic cable (2-inch conduit) would be installed parallel to the proposed Project to provide electric and communication services to the meter building. The electric service would be utilized for items such as an electric

heater, exhaust fan, lights, sump pump, etc, and the use of pumps to transfer water to the Heskett Station is not anticipated.

The meter building (approximately 35-foot by 12-foot) would be a precast concrete structure, installed on a concrete foundation with slab. Gravel surfacing would be placed around the slab and provide an access to the adjacent gravel road.

4.1.1 Temporary Workspace

During construction, equipment and worker vehicles would travel to and from site. Temporary access roads, where existing public roads cannot be utilized, would be limited to the construction easement within the Project Route. No permanent access roads would be built to maintain the Project. Temporary access roads would generally require little to no grading or vegetation clearing and consist of driving vehicles across land from the nearest existing gravel road.

Launch and receiving pits would be required for the HDD bores. In addition, a job trailer would likely be left on site for the duration of construction activities. All work would remain within the proposed permanent right of way and temporary construction easement or within the existing Heskett Station.

Areas temporarily disturbed would be revegetated and returned to preconstruction conditions.

4.2 Estimated Project Facility Impacts

For approximate acreage of temporary and permanent impacts, please refer to ***Table 8, Estimated Impacts from Project Facilities.***

Table 8, Estimated Impacts from Project Facilities

Project Facility	Description of and Approximate Acreage of Temporary Impacts	Description of and Approximate Acreage of Permanent Impacts
Pipeline Corridor	Temporary impacts associated with the approximate 2,684-foot-long pipeline would be limited to the 50-foot-wide construction easement. Launching/receiving pits and pull-back areas associated with HDD bores would be limited to the construction easement. Total impacts are anticipated to be less than one (1) acre.	No permanent impacts associated with the construction of the pipeline. Permanent impacts are limited to the meter building and fire hydrant/valve set.
Meter Building	All temporary impacts associated with this feature are included as part of the pipeline corridor.	Permanent impacts associated with the meter building include the gravel pad that would be approximately 1,200 square feet (40 feet by 30 feet) and the access/gravel approach that would be approximately 300 square feet (20-foot by 15-foot). Approximately 0.034-acre total.
Fire Hydrant and Valve Set	All temporary impacts associated with this feature are included as part of the pipeline corridor.	Permanent impacts associated this feature would span an area approximately 400 square feet (20-foot by 20-foot gravel pad). Approximately 0.009-acre total.

4.3 Setback Requirements

The Project's final layout and associated facility locations would be sited to comply with the Commission's setback requirements. Setbacks were measured from the edge of the associated facility or pipeline centerline to the applicable feature. Please refer to ***Table 9, Setback Distances as Designated by the Commission.***

Table 9, Setback Distances as Designated by the Commission

Setback Type	Distance
The geographic center of an ICBM launch or launch control facility	NA
Thirty feet on either side of a direct line between ICBM launch or launch control facilities to avoid microwave interference	NA
Residence, school, or place of business	NA*

* This criterion shall not apply to a water pipeline transmission facility.

5.0 Project Construction, Operation and Maintenance

5.1 Project Construction

A variety of activities must be completed to carry the Project through construction. Pre-construction, construction, and post-construction activities for the Project include:

Pre-construction

- Land surveys and environmental studies: initial line-survey consisting of aerial photography, profile surveys, access surveys, cultural resource surveys, wetland surveys.
- Land procurement.
- Underground utility discovery.
- Design Project.
- Procure all necessary Project components.

Construction

- Erosion control measures would be installed and maintained to minimize sedimentation transportation to nearby waters.
- Measures, such as temporary fencing would be installed, as necessary.
- Delivery and assembly: Meter building would be installed. Pipeline segments would be placed adjacent to the trench, assembled, then placed in the trench. Valves and fire hydrant would be installed. The trench would be backfilled.

Post-Construction

- Disturbed areas would be graded and/or leveled to their approximate preconstruction conditions and reseeded, consistent with surrounding vegetation.
- Temporary erosion control measures would be removed once soil stabilization is achieved.

5.2 Project Operation and Maintenance

The Project would be serviced and maintained by the same staff that operates and maintains the Montana-Dakota Heskett Station. Maintenance activities along the Project Route include upkeep of infrastructure and maintenance of vegetation.

6.0 Environmental Analysis

This section describes the existing conditions within the Project Corridor. The existing conditions, or affected environment, are the baseline conditions that may be affected by

the Project. This section discusses the potential direct environmental impacts of the Project. Potential indirect impacts are identified in the resource discussions where applicable. Measures to avoid, minimize, or mitigate impacts are discussed where appropriate.

Impacts discussed in the following sections are related to the construction and installation of approximately 2,684 feet of 12-inch diameter freshwater pipeline, electric, and communication lines, meter building, and fire hydrant/valve set. The discussion assumes the greatest possible impacts associated with the Project. Impacts for features were calculated based on the parameters presented in ***Table 8, Estimated Impacts from Project Facilities***. This analysis is based on the best available information.

Montana-Dakota's Policies and Commitments to Limit Environmental Impacts

Montana-Dakota strives to maintain compliance and operate in an environmentally proactive manner, while taking into consideration the cost to customers. The company has an overarching Environmental Policy that supports and provides direction on environmental compliance. The policy states:

"The Company will operate efficiently to meet the needs of the present without compromising the ability of future generations to meet their own needs. Our environmental goals are:

- To minimize waste and maximize resources;
- To be a good steward of the environment while providing high quality and reasonably priced products and services; and
- To comply with or surpass all applicable environmental laws, regulations and permit requirements."

The Company also has directives and/or procedures for other environmental compliance areas including, but not limited to, water discharge and infrastructure permitting, hazardous materials transportation, hazardous materials management and disposal, and spill response and remediation.

6.1 Demographics

The Project Corridor is located in an unorganized township within the City of Mandan ETA. The City of Mandan incorporated boundary is located immediately adjacent the Project Corridor (approximately 300 feet), or approximately 3,000 feet from the Project Route, at the nearest point.

Please refer to ***Table 10, Demographic Trends,*** for population, income, and poverty information for Morton County compared to North Dakota. Major employment industries within Morton County include educational services, and healthcare and social assistance; retail trade; construction; and manufacturing (U.S. Census Bureau, American Community Survey, 2019).

Table 10, Demographic Trends

Community	Population	Per Capita Income	People Below Poverty Level
Morton County	30,868	$39,384	7.4%
North Dakota[5]	756,717	$36,062	10.7%

6.1.1 Demographic Impacts/Mitigation

The Project would not require relocations. The Project Route would avoid all residences by at least 500 feet.

The Project is designed to be socioeconomically beneficial to local governments and communities. Construction of the Project could potentially provide temporary revenue increases in the vicinity of the Project due to the purchase of fuel, and general supplies.

Due to the relatively small nature of the project the Project is unlikely to overwhelm or have an adverse effect on the local services. Overall, the project is anticipated to be socioeconomically beneficial to the local population and would not impact long-term population trends. Further, no relocation of residences would occur. Therefore, no mitigation measures are proposed.

6.2 Land Use

The Project Corridor is located on the north edge of Mandan, North Dakota in an area predominantly comprised of grasslands and developed land with an abundance of wetlands and open water (Missouri River). Please refer to ***Exhibit 3, Land Use,*** in ***Appendix A.***

The City of Mandan has retained zoning authority, which has zoned this area as industrial.

Through coordination with the US Fish and Wildlife Service (USFWS), it was identified that no wetland and grassland easements are located within the Project Corridor. The USFWS also administers the National Wildlife Refuge System, which includes National Wildlife Refuges (NWR) and Waterfowl Production Areas (WPA). NWRs serve to preserve and protect land for fish and wildlife, and their habitat, while WPAs serve to protect land for waterfowl production. The nearest NWRs to the Project Corridor are Lake Patricia NWR, located approximately 29 miles southwest, and Long Lake NWR, located approximately 30 miles southeast. The nearest WPA (Brian Mohler WPA) is located approximately 12.5 miles east-southeast of the Project Route.

Private Land Opened to Sportsman (PLOTS) are areas administered through an agreement between the North Dakota Game and Fish Department (NDGFD) and individual landowners to provide hunting opportunities to outdoor enthusiasts. There are no PLOTS areas currently within the Project Corridor. While these areas are subject to

[5] 2015-2019: American Community Survey 5-Year Estimate

change on an annual basis, it is unlikely either Marathon Petroleum or Montana-Dakota would enroll lands crossed by the Project into PLOTS for safety purposes.

NDGFD Wildlife Management Areas (WMA) are typically available to the public for hunting, fishing, and trapping. The nearest WMA to the Project Route is the Crown Butte Dam WMA, located approximately 9.5 miles west.

Lands held in trust by the North Dakota Department of Trust Lands (NDDTL) are utilized for various purposes such as grazing, agriculture, and mining to generate income for public education in the state. There are no Trust Lands parcels within the Project Corridor. The nearest Trust Lands are located approximately 7.5 miles east-southeast of the Project Route.

No known U.S. Department of Defense (USDOD) assets are located within or near the Project Corridor.

6.2.1 Land Use Impacts/Mitigation

The Project would result in temporary and permanent land use impacts. Please refer to ***Table 11, Land Use*****,** for permanent land use impacts compared to existing land use within the Project Corridor and Route. Permanent impacts would occur where existing land uses are converted into a transmission facility. Temporary impacts would occur during construction as a result of ground disturbance, including staging areas. Temporarily disturbed areas would be reclaimed at the conclusion of construction activities and returned to preexisting conditions.

The Project is not anticipated to result in a trend toward modification of existing land use patterns. All necessary land use permits would be obtained prior to construction of the Project. Conflicts with the existing development plans of state, local, or private entities within the Project Corridor are not anticipated, as the Project is located primarily on industrial lands owned by either Marathon Petroleum or Montana-Dakota.

Table 11, Land Use

Land Classification	Existing Land Use in Project Corridor (Acres)	Existing Land Use in Project Route (Acres)	Permanent Impact (Acres)
Barren	2	0.00	0.00
Cultivated	8	0.00	0.00
Developed	200	0.13	0.00
Grasslands	245	1.55	0.04
Open Water	185	0.00	0.00
Shrubland	1	0.02	0.00
Wetlands	156	1.25	<0.01*
Woodlands	6	0.00	0.00
TOTAL	803	2.95	0.04

*USDA National Agricultural Statistics land use data identifies this as wetlands; however, the field wetland delineation classified this area as an upland. No wetland impacts are anticipated.

The Project would avoid impacts to all USFWS wetland/grassland easements, NWRs, WPAs, PLOTS, NDGFD WMAs, NDDTL, CRP lands/USDA-NRCS easements, and USDOD assets.

6.3 Public Services

Please refer to ***Exhibit 4, Infrastructure***, in ***Appendix A*** for public services in the Project Corridor.

Local Services

Due to the rural nature of the Project Corridor, there are no local services within the Project Corridor. The nearest urban area, the city of Mandan, is located to the south and west of the Project Corridor, with ND Highway 1806 being the eastern incorporated boundary (west of the Project Corridor) and Old Red Trail NE being the northern incorporated boundary (south of the Project Corridor). Mandan offers a variety of services, including medical facilities, public schools, churches, hotels, restaurants, museums, and stores.

Electrical Service

Electrical service near the Project Corridor is provided by Montana-Dakota. Since the Project corridor encompasses both the Montana-Dakota Heskett Station and Marathon Petroleum, there are numerous overhead transmission and distribution lines. Pursuant to NDCC 49-23, the North Dakota One Call (NDOC) must be notified of any excavation at least 48 hours prior (excluding weekends and holidays).

Transportation

Public roadways within the Project Corridor include Morton County Road 3/38th Street (paved), with ND Highway 1806 being located just west of the Project Corridor. The 2019 average annual daily traffic (AADT) for ND Highway 1806 near the Project Corridor was 5,320 vehicles; the AADT for the other roadways within the Project Corridor are not available. Other highways near the Project Corridor include:

- Interstate 94 (I94) is located approximately 0.8 mile south of the Project Corridor. The 2019 AADT for I94 in near the Project Corridor is 21,275 vehicles.

- Morton County Highway 10/Old Red Trail is located approximately 0.6 mile south of the Project Corridor. The 2019 AADT for Morton County Highway 10 near the Project Corridor is 7,785 vehicles.

Oversize/overweight loads require permits from the North Dakota Highway Patrol (NDHP) on state-maintained roads. Morton County, City of Mandan, and/or the North Dakota Department of Transportation (NDDOT) also require approach, haul road, oversize/overweight, utility and/or right of way permits for work associated with their respective roadways.

Additionally, an approximate 1.25-mile-long segment of the Burlington Northern Santa Fe (BNSF) railway and an associated rail yard are located within the Project Corridor.

There are no airports or landing strips within the Project Corridor. Airports and airstrips are discussed further in ***Section 6.4***.

Water Supply

A 30-inch diameter municipal water line is located at the south end of the Project, which would be utilized by the Project. Coordination with the City is ongoing; however, verbal approval has been provided to Montana-Dakota. Final approval would occur after plans have been submitted to the City.

A 2.5-inch rural water main is located at the north end of the project along 38th Street. This pipeline is likely associated with the Missouri West Water System, which supplies potable water to residences and businesses through much of Morton County (NDDWR, 2021a).

The North Dakota Department of Environmental Quality stated the Project is located within the Bismarck Source Water Protection Area. This means the project is located in a watershed that ultimately feeds the water source for the City of Bismarck's municipal water intake facility. Please refer to ***Appendix D, Scoping Package and Responses***, for a copy of the correspondence.

In addition, it is common for rural residences/businesses in the area to utilize private wells. There are 3 domestic and 2 industrial water wells located within the Project Corridor. The Missouri River surficial aquifer is located within the Project Corridor. There are no sole source aquifers within or near the Project Corridor. Based on review of aerial photography and water well purposes within the Project Corridor, agricultural irrigation does not appear to occur within the Project Corridor (NDDWR, 2021b).

Communications

There are no tower structures, cell towers, microwave sites, AM/FM stations, or other public communication systems located within the Project Corridor; however, there is a fiber optic line that parallels 38th Street. The closest tower is located on the southwest corner of the Marathon property, located approximately 0.5 miles south of the Project Corridor.

6.3.1 Public Service Impacts/Mitigation

Local Services

The Project is not anticipated to have direct impacts on local services. The Project may indirectly impact local services via increased business associated with the Project's workforce; however, impacts are not anticipated to exceed capacity and are anticipated to be economically beneficial.

Electrical Service

Impacts on existing electrical infrastructure would be avoided. The project would improve safety at the Heskett Station and would provide additional cooling benefits, as needed, during operation.

Transportation

The Project would utilize existing roadways and temporary travel routes within the Project Corridor. Construction activities would result in a temporary increase in AADT due to workers' passenger vehicles and truck traffic transporting materials to the and from the Project Corridor. Oversize/overweight load permit would be obtained from the NDHP, if necessary, prior to construction. In addition, approach, haul road, oversize/overweight, utility and/or right of way permits would be obtained, as necessary, from Morton County, City of Mandan, and/or the NDDOT for work associated with their respective roadways. Construction traffic plans, road use and maintenance agreements, and mitigation measures would be developed in coordination with the applicable permitting entities. Following construction, traffic generated by maintenance activities would be minor.

Water Supply

The Project is not anticipated to adversely impact rural water supply, wells, or the Bismarck Source Water Protection Area. Should the project spill material that may have an adverse effect on water quality, the North Dakota Department of Environmental Quality (NDDEQ) would be notified immediately, and appropriate remedial actions would be performed. Notification prior to excavation would be provided to NDOC. Coordination with the City is ongoing to establish a water use agreement. The City has verbally agreed to the project but will review the plans prior to final approval. The Project is not anticipated to impact any aquifers.

Communications

The Project is not anticipated to impact communications equipment. Fiber optic lines located along 38th Street would be avoided by HDD. Notification prior to excavation would be provided to NDOC.

6.4 Human Health and Safety

Air Traffic

The nearest public airport to the Project Route is the Mandan Municipal Airport (Y19) located approximately 6 miles south. The Bismarck International Airport (BIS) is located approximately 7.5 miles southeast. There are no private landing strips within the Project Corridor.

Hazardous Materials/Hazardous Waste

There are two known U.S. Environmental Protection agency (USEPA) regulated hazardous waste facilities within the Project Corridor, Montana-Dakota Heskett Station and the Marathon Petroleum Refinery. According to the NDDEQ Spill Investigation Program Environmental Incident Reports, there were 13 spills reported between 1975 and 2021, with 9 being reported from the Marathon Petroleum property and 4 being reported by Montana-Dakota. There are two landfills located within or adjacent to the Project Corridor: one within each Marathon Petroleum Refinery and Montana-Dakota Heskett Station. There are no known underground storage tanks (UST) present within the Project Corridor. (NDDEQ, 2021a; NDDEQ, 2021b; NDDEQ, 2021c; USEPA, 2021a).

Security

While the project is located within the City of Mandan Extraterritorial Area (ETA) and several residences are located within the Project Corridor, the Project Route would be located primarily on lands owned by Marathon Petroleum. The property is closed to the public, with fencing and signs to prevent unauthorized access. The remaining portion of the project is either on lands owned by Montana-Dakota or within the 38th Street road right of way. Safety measures associated with the Project would include signage, and locks, as appropriate.

6.4.1 Human Health and Safety Impacts/Mitigation

Air Traffic

The Project is not anticipated to result in impacts to air traffic.

Hazardous Materials/Hazardous Waste

The Project is not anticipated to impact any landfills or known UST sites. In addition, the project primarily occurs outside of the Montana-Dakota Heskett Station and Marathon Petroleum Refinery industrial facilities; therefore, the project is not anticipated to encounter hazardous materials during construction. If unknown hazardous waste sites are encountered during construction, construction activities would be suspended and coordination with the NDDEQ would occur to determine the proper course of action.

Security

The Project is not anticipated to impact the security of surrounding residents or communities due to existing security and rural setting.

6.5 Sound

Existing sound contributors in the Project Corridor include industrial equipment, roadway traffic, and aircraft. Existing sound levels in the Project Corridor are approximately 35 to 41 A-weighted decibels (dBA) (National Park Service, 2017).

6.5.1 Sound Impacts/Mitigation

The Project would introduce more sound to the Project Corridor particularly during construction; however, it is anticipated that sound levels at residences would be consistent with existing conditions. No pumps or other internal combustion engines would be utilized during operation of the freshwater line.

6.6 Visual

Visual resources within the Project Corridor include relatively flat, gentle rolling topography; wetlands; tree rows and scattered wooded areas; roadways; overhead electricity transmission and distribution lines, and other industrial facilities. These visual resources contribute to a visual character typical of a rural/industrial area in North Dakota. Assessing visual quality is a subjective exercise, whereby it can be assumed that some viewers perceive this relatively natural setting as having high visual quality, while others

may perceive the area to have low visual quality. There are no protected visual resources (e.g., National Parks, Wilderness Areas) within or adjacent to the Project Corridor.

6.6.1 Visual Impacts/Mitigation

The Project would introduce limited additional visual resources into the Project Corridor in the form of valve sites and a small structure at the south end of the project. The extent to which the visual character would be impacted would depend on the vantage points of individual viewers. The extent to which the visual quality would be impacted would depend on the preferences of the viewers.

6.7 Cultural and Archaeological Resources

In their response to a scoping letter, the State Historical Society of North Dakota (SHSND) recommended a Class III pedestrian survey for the project. Please refer to ***Appendix D, Scoping Package and Responses***, for a copy of the correspondence. A Class I and Class III cultural resource investigation for the Project were conducted August 2021 for an area of potential effect (APE) pertaining to the Project. Please refer to ***Appendix G, Class III Cultural Resource Inventory (Redacted)***.

The Class I record search involved a review of site files and survey reports maintained by the North Dakota State Historic Preservation Office for a one (1)-mile radius centered around the survey area. The file search revealed fourteen previously recorded cultural resources. These resources included sites that are *Eligible*, *Not Eligible,* or *Unevaluated* for listing on the National Register of Historic Places (NRHP) (KLJ, 2021). Please refer to ***Table 12, Previously Recorded Sites within 1-mile of APE***.

Table 12, Previously Recorded Sites within 1-mile of APE

Resource	Resource Type	Description	NRHP Status
32MO35	Archaeological	Village Site	Eligible
32MO1354	Archaeological	Cultural Material Scatter	Unevaluated
32MOx8	Archaeological	Projectile Point	Not Eligible
32MOx80	Historical	Harbor	Not Eligible
32MOx497	Archaeological	Cultural Material Scatter	Not Eligible
32MOx498	Archaeological	Cultural Material Scatter	Not Eligible
32MOx630	Architectural	Cultural Material Scatter	Not Eligible
32MO33	Archaeological	Village Site	Eligible
32MO34	Archaeological	Village Site	Not Eligible
32MOx81	Historical Archaeological	Lewis and Clark Site Lead	Unevaluated
32BLx171	Historical Archaeological	Lewis and Clark Site Lead	Unevaluated
32MOx492	Archaeological	Flake	Not Eligible
32MOx493	Archaeological	Flake	Not Eligible
32MO1370	Archaeological	Farmstead	Not Eligible

The Class III inventory involved an intensive pedestrian survey of the APE. During the cultural resource inventory, no new cultural resources were identified within the survey

area. In addition, one previously recorded isolated find was revisited (32MOx493), but unable to be relocated during the survey and formal testing found no indication of intact buried cultural deposits in the surrounding area; therefore, the site was recommended *Not Eligible* for inclusion on the NRHP. (KLJ, 2021).

6.7.1 Cultural and Archaeological Resources Impacts/Mitigation

The Project would avoid impacts to all known cultural resources. The State Historic Preservation Office concurred with a *No Historical Properties Affected* determination on September 8, 2021 (ND SHPO Ref.: 21-0523). Please refer to ***Appendix D, Scoping Package and Responses***, for a copy of the correspondence.

6.8 Recreational Resources

There are unimproved lands within the Project Corridor available for public recreational activities such as fishing, wildlife viewing, and general recreational activities along the Missouri River. Recreational facilities within the Project Corridor consist of shore fishing access along the bank of the Missouri River at the east end of 38th Street (NDGFD, 2021).

6.8.1 Recreational Resources Impacts/Mitigation

The Project would not directly impact areas open to the public for recreation within the Project Corridor or any recreation areas outside the Project Corridor. The adjacent fishing facilities and Missouri River would be avoided. Recreationists within the vicinity of the Project Corridor would be subject to the sound and visual impacts discussed in ***Section 6.5*** and ***Section 6.6***, respectively.

6.9 Effects on Land-based Economics

Agriculture

There are approximately 781 farms operating in Morton County as of 2017. Animal sales (e.g., cattle, hogs, sheep) make up most of the market value in Morton County (56 percent), with the remainder from crop sales (e.g., wheat, soybean, sunflower, corn) (44 percent). The market value of products sold in 2017 in Morton County was approximately $146 million, with averages per farm approximately $187,000 (USDA, 2017).

Woodlands

Wooded areas within the Project Corridor consist of tree rows and scattered woodlands. As such, there are no economically significant forestry resources within the Project Corridor.

6.9.1 Land-based Economics Impacts/Mitigation

Agriculture

The Project would permanently convert a total 0.04 acre of exiting land uses, whereby most existing land use in the Project Corridor is classified as grasslands. Permanent impacts would occur where existing land would be utilized for the fire hydrant and valve set and the small structure at the southern end of the Project. Temporary impacts would

occur during construction as a result of ground disturbance. Temporarily disturbed areas would be reclaimed at the conclusion of construction activities and returned to prior conditions. Impacted landowners would be compensated as necessary.

Woodlands

Because there are no economically significant forestry resources within the Project Corridor, economic impacts on these resources are not anticipated.

6.10 Soils

There are 19 soil map units within the Project Corridor. Most of these soil map units are loamy textured soils ranging from loam to silty clay loam. Most of the soil map units are well drained, with depth to the water table exceeding 78 inches. Flooding is not probable within the Project Corridor except for two map units where flooding is frequent or occasional. One map unit is characterized by rare ponding and the remaining do not generally experience ponding (USDA, 2019).

The Farmland Protection Policy Act protects prime and unique farmland. Prime farmland is “land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is also available for these uses.” Unique farmland is “land other than prime farmland that is used for the production of specific high-value food and fiber crops.” Farmland of statewide importance generally “include those that are nearly prime farmland and that economically produce high yields of crops.” Similarly, farmland of local importance is designated by a local agency where “there is concern for certain additional farmlands for the production of food, feed, fiber, forage, and oilseed crops” (USDA, 2012). A total of ten map units within the Project Corridor are classified as *farmland of statewide importance*, while one is classified as *all areas are prime farmland*. The remaining 8 map units are not classified as prime farmland or farmland of statewide importance. Please refer to ***Exhibit 6, Prime, Unique and Statewide Important Farmland,*** in ***Appendix A***. Federal undertakings for corridor projects impacting prime and/or unique farmland are required to submit a Farmland Impact Conversion Rating (Form CPA-106) to the USDA-NRCS.

Construction projects disturbing more than one (1) acre of land are required to obtain an North Dakota Pollutant Discharge Elimination System (NDPDES) permit from the NDDEQ, including a storm water pollutant prevention plan (SWPPP).

6.10.1 Soils Impacts/Mitigation

The Project would impact soils during construction activities. Soils disturbed by construction would be prone to erosion, and operation of heavy equipment would compact soils. BMPs would be implemented to minimize impacts on soils, such as implementation of erosion and sediment control measures, segregating topsoil from subsurface materials, reseeding of disturbed areas, use of construction equipment appropriately sized to the scope and scale of the Project, proper on-site disposal of excess soil, and maintaining proper drainage.

The Project would result in temporary impacts to farmland of statewide importance; however, no permanent impacts to either farmland of statewide importance or prime farmland are anticipated. Please refer to ***Table 13, Farmland Classification Summary***,

for farmland impacts compared to existing farmland within the Project Corridor. Because the Project is not a federal undertaking, a Farmland Impact Conversion Rating (Form CPA-106) would not be required.

Table 13, Farmland Classification Summary

Farmland Classification	Project Corridor (Acres)	Project Route (Acres)	Permanent Impact (Acres)
Prime Farmland	19	0.00	0.00
Farmland of Statewide Importance	462	1.55	0.00
Not Prime Farmland or Farmland of Statewide Importance	302	1.40	0.04
Not Classified (Missouri River)	20	0.00	0.00
Total	803	2.95	0.04

Dust Control

It is anticipated that project related disturbances would remain under one (1) acre; therefore, a SWPPP would not be developed. In lieu of a SWPPP, the following control measures would be implemented to control fugitive dust.

The prevailing winds in central North Dakota are generally from the northwest, although a southeasterly wind direction occurs occasionally. Project impacts are anticipated to be minimal with limited cut or topsoil removal. Any excavated topsoil, ground cover, or overburden materials resulting from project construction will be stockpiled for use in final site reclamation. If necessary, any stockpiles would be laid out perpendicular to the predominant wind direction to serve as wind breaks, and vegetated cover would be established to minimize erosion.

During construction, disturbed areas, excavated materials, soil piles, and stockpiled materials will be watered to minimize fugitive dust.

6.11 Geologic and Groundwater Resources

Surface geology within the Project Corridor is considered part of the Coleharbor Group. The Coleharbor Group consists of various formations deposited by glaciers and associated water, whereby sediments in the region consist of till, sand and gravel, or silt and clay. Many of the landforms, including the “pothole” flood-plain deposits were formed by the collapse of glacial sediment as glaciers melted (Carlson, 1983).

The Coleharbor Group is classified by the Bureau of Land Management (BLM) Potential Fossil Yield Classification system as having a moderate potential to contain fossils, whereby the potential for impacting significant paleontological resources is considered low-to-moderate. Paleontological resources (i.e., fossils) are protected by the Paleontological Resources Preservation Act and state law on federal and state lands, respectively (BLM, 2016; BLM, 2015).

There are no active oil and gas wells within the Project Corridor (NDIC, 2021).

It is common for rural residences/businesses in the area to utilize private wells. There are 3 domestic and 2 industrial water wells located within the Project Corridor. The Missouri River surficial aquifer is located within the Project Corridor. There are no sole source aquifers within or near the Project Corridor. Please refer to ***Exhibit 5, Geologic and Groundwater Resources,*** in ***Appendix A.***

6.11.1 Geologic and Groundwater Impacts/Mitigation

The Project would result in minimal permanent impacts to construct the project, with a majority of the route being reclaimed upon project construction. Impacts on the overall nature of geological resources is not anticipated. The Project would have a low-to-moderate potential to impact significant paleontological resources within the Coleharbor Group.

The Project is not anticipated to adversely impact water wells. Should access to or impacts on wells become necessary during construction or maintenance activities, coordination with the respective owner (e.g., private individuals, NDDWR) would occur.

The Project is not anticipated to impact groundwater.

6.12 Surface Water and Floodplain Resources

The Project Corridor occurs within the Painted Woods-Square Butte Sub-basin of the Lake Oahe Basin, whereby surface water flows toward the Missouri River. The Project Corridor is situated within the Prairie Pothole Region, which is characterized by grasslands and cropland punctuated by a multitude of shallow depressional wetlands. There are two drainages that cross the Project Corridor, Rock Haven Creek and an unknown intermittent drainage. Please refer to ***Exhibit 7, Surface Waters and Wetlands,*** in ***Appendix A***.

The Project Corridor occurs in both floodplain and regulatory floodway areas mapped as part of the Federal Emergency Management Agency (FEMA) Floodplain Insurance Rate Map (FIRM). The floodplain is identified as Zone AE, area with identified base flood elevation, whereas the regulatory floodway is also identified as Zone AE. Only the floodplain would cross the Project Route.

6.12.1 Surface Water and Floodplain Resources Impacts/Mitigation

The Project would avoid and minimize impacts on surface water to the maximum extent practicable. Existing drainage patterns would be maintained. Temporarily disturbed areas would be restored to preconstruction conditions. Impacts to wetlands are discussed in ***Section 6.13.*** Waterbodies would not be drained, and waters of the state would not be appropriated.

In their response to a scoping letter, the NDDWR indicated that there are both mapped floodplains and a regulatory floodway within the area where the project would take place; however, a review of the FEMA FIRM identified the project would only result in impacts to the floodplain. A permit from local (i.e., county) floodplain administrator would be required for development. Please refer to ***Appendix D, Scoping Package and Responses***, for a copy of the correspondence.

6.13 Wetlands

Pothole wetlands provide habitat for over half of North American waterfowl during migration, provide hunting and wildlife viewing opportunities, and regulate flooding by storing runoff water. Wetlands identified on the USFWS National Wetland Inventory (NWI) and wetland mapping survey conducted for the project in 2021 are shown on ***Exhibit 7, Surface Waters and Wetlands,*** in ***Appendix A*** (USEPA, 2021b; Burns & McDonnell, 2021). Please refer to ***Appendix F, Wetland Mapping Survey.***

Section 404 of the Clean Water Act (CWA) regulates discharges into waters of the U.S. (i.e., wetlands and other waters under the jurisdiction of the U.S. Army Corps of Engineers [USACE]), with Section 401 regulating water quality. In their response to a scoping letter, the USACE indicated that Nationwide Permit 58, Utility Line Activities for Water and Other Substances, authorizes placement of utility lines, "provided the utility line can be placed without any change to pre-construction contours and all other proposed construction activities and facilities are in compliance with the Nationwide's permit conditions and 401 Water Quality Certification." The Project may or may not require notification to the USACE for the Nationwide Permit. Should the Project fall outside the Nationwide Permit conditions, a standard or Individual Permit would be required. Please refer to ***Appendix D, Scoping Package and Responses***, for a copy of the correspondence.

6.13.1 Wetland Impacts/Mitigation

The Project will avoid impacts to all wetlands. Valves would be situated in upland areas and the one wetland crossing would be bored to avoid impacts. No Section 404 or 401 permits would be required. Indirect water quality impacts would be avoided and minimized as described in ***Section 6.12.***

6.14 Vegetation

The Project Corridor occurs within the River Breaks Level IV Ecoregion within the Northwestern Great Plains Level III Ecoregion. The Northwestern Great Plains ecoregion consists of scattered badlands and buttes across a rolling landscape of shale, siltstone, and sandstone. Much of the native shortgrass prairie vegetation has been converted to spring wheat and alfalfa. Land use is dominated by cattle grazing and dryland farming (Bryce et al. 1996).

As discussed in ***Section 6.2***, the Project Corridor is primarily comprised of grasslands and developed land with an abundance of wetlands and open water (Missouri River).

According to NDCC 4.1-47-02, all individuals are responsible for controlling the spread of noxious weeds. The North Dakota Department of Agriculture (NDDA) has identified 13 plant species that are included on the state's noxious weed list (NDDA, 2021). Counties and cities have the option to add noxious weeds to the list to be regulated in their jurisdiction. Morton County and the City of Mandan have not added any additional species (NDDA, 2020).

6.14.1 Vegetation Impacts/Mitigation

As discussed in ***Section 6.2***, the Project would have minimal permanent impacts to grasslands, but would avoid impacts to aquatic resources and wooded areas.

Temporarily disturbed areas will be re-vegetated with a grassland seed mixture consistent with surrounding vegetation and free of noxious weeds. Tree removals are not anticipated.

6.15 Wildlife

Avian Species

The Project Corridor occurs within the Central Flyway, a migration route for over 400 species of birds as they travel between wintering and breeding areas across the Great Plains of North America. Birds utilizing the Central Flyway depend on abundant grasslands and wetlands for resting and foraging as they migrate (Johnsgard, 2012). Migratory birds and eagles are protected by the Migratory Bird Treaty Act (MBTA) and Bald and Golden Eagle Protection Act (BGEPA), respectively. Both laws prohibit, without a permit, causing harm to protected species, including their nests and eggs. Species protected by the Endangered Species Act (ESA) are discussed in ***Section 6.16***. Resource agencies have assigned various special statuses to numerous avian species. While these designations lack legal protection, many of these species are also designated as migratory birds that are protected by the MBTA. These special statuses include:

- Birds of Conservation Concern (BCC) are identified pursuant to the Fish and Wildlife Conservation Act as those that may become candidates for listing under the ESA (USFWS, 2021a).

- NDGFD species of conservation priority (SCP) are those that may exhibit low or declining populations within North Dakota (Dyke et al., 2015).

The North American Breeding Bird Survey is a joint venture by the U.S. Geological Survey (USGS) and Canadian Wildlife Service (CWS) to collect ongoing roadside avian breeding population data across the U.S. and Canada. The nearest survey route to the Project Corridor is the Solen route, approximately 22 miles south. Between 2005 and 2019 (a survey did not occur in 2016), a total of 108 avian species have been identified along this survey route, whereby 574 to 1,992 individuals have been counted each year (USGS and CWS, 2021).

The NDGFD maintains a database of historically observed bald and golden eagle nests within the state. The nearest historically documented eagle nest was recorded on the east side of the Missouri River, within 1-mile of the Project Route. Please refer to ***Appendix D, Scoping Package and Responses***, for a copy of the correspondence.

Mammalian Species

The Project Corridor contains wildlife habitat in the form of cropland; grassland; tree rows and scattered woodlands; prairie pothole wetlands, and drainages. Common mammals that may occur within the Project Corridor include several species of bats; carnivores such as badgers, coyotes, long-tailed weasels, racoons, and red fox; various rodents and shrews; and ungulates such as white-tailed deer. (NDGFD, 2019; Dyke et al., 2015).

6.15.1 Wildlife Impacts/Mitigation

The NDGFD reviewed the project as part of the solicitation process and in their response stated, “We do not believe it will have significant adverse effects on wildlife or wildlife

habitat based on the information provided." Please refer to ***Appendix D, Scoping Package and Responses***, for a copy of the correspondence.

As discussed in ***Section 6.13*** and ***Section 6.14***, the Project would have minimal permanent and temporarily impact to upland habitats; however, wetland habitats would be avoided; applicable avoidance, minimization, and mitigation measures for these impacts are also discussed.

Avian Species

The Project would avoid direct impacts on known raptor nests. The NDGFD reviewed the project with regards to bald and golden eagle impacts and determined that no historically documented eagle nests occur within 0.5 mile of the Project Route; therefore, impacts are not anticipated.

Mammalian Species

It is anticipated that mammalian species would be temporarily or permanently displaced during construction activities as a result of ground disturbance, operation of heavy machinery, and human presence. Due to the abundance of habitat in the region and lack of specialized habitat within the Project Corridor, this displacement is not anticipated to result in population-level impacts on wildlife. Impacts to bats are anticipated to be negligible, due to avoidance of suitable habitat within the Project Corridor.

6.16 Rare and Unique Natural Resources

Natural Heritage Inventory

The North Dakota Parks and Recreation Department (NDPRD) Natural Heritage Inventory (NHI) program was established pursuant to North Dakota's Nature Preserves Act, which is intended to protect nature preserves and natural areas in the state. The purpose of the NHI is to identity and establish priorities for the protection of important species and habitats within North Dakota. In their response to a scoping letter, the NDPRD indicated there are "no known rare species or significant ecological communities documented within or immediately adjacent to the project site". The resource map provided as part of their response indicates several historical observations of animal species of concern (piping plover and interior least tern) and a significant ecological community (western floodplain forest) occurring within the Project Corridor; however, the construction disturbance would be limited to the project route, which would not result in impacts to any of the identified wildlife species or significant ecological communities. Please refer to ***Appendix D, Scoping Package and Responses***, for a copy of the correspondence.

Endangered Species Act

Section 10 of the ESA prohibits activities by non-federal entities that affect species and critical habitats listed under the ESA unless a permit is granted by the USFWS.

The USFWS Environmental Conservation Online System – Information for Planning and Conservation (ECOS-IPaC) identified the following federally protected resources that may occur within Morton County: northern long-eared bat (threatened), whooping crane (endangered), piping plover (threatened), piping plover critical habitat, rufa red knot

(threatened), Dakota skipper (threatened), and monarch butterfly (candidate). These resources are addressed individually in the subsections below. Please refer to ***Appendix E, USFWS Resource List***.

Northern Long-eared Bat (*Myotis septentrionalis*)

The western extent of the northern long-eared bat's range spans most of North Dakota. During summer months, the species roosts in the trees of forested areas, and to a lesser extent in caves, mines and the built environment. Foraging for insects occurs at night near forested areas. The home range is typically within 1.5 miles of a known suitable roost tree or within three (3) miles of a known occurrence of the species. From mid-summer to fall, bats move to hibernacula (i.e., overwintering sites such as caves, abandoned mines, or similar constructions) to breed and hibernate. The distance between roosts and hibernacula can range from five (5) to 168 miles. There are no known hibernacula or maternity roost trees within the Project Corridor. The main factor affecting recovery of the species is dramatic population decline due to the fungal disease, white-nose syndrome (USFWS, 2020c; USFWS, 2020d; USFWS, 2021c).

Potential habitat for the northern long-eared bat occurs within the Project Corridor in the form of woodlands, scattered trees, and various structures. In a statewide survey of bat distribution, the species was recorded in the Missouri River Valley, Turtle Mountains and Badlands (Gillam and Barnhart, 2012).

The USFWS published a final 4(d) rule for the northern long-eared bat that went into effect on February 16, 2016. The rule identifies prohibitions that aim to protect the bat's sensitive life stages in areas affected by white-nose syndrome. The 4(d) rule focuses on protecting bats when and where they are most vulnerable: maternity roost trees during pup-rearing in June and July, and at hibernation sites, within the White-nose Syndrome Zone. According to the July 26, 2020 USFWS White-nose Syndrome Zone map, the entire state of North Dakota is located within the white-nose syndrome zone; however, there are no known maternity roost trees or hibernaculum in the state. (USFWS, 2016a; USFWS 2021b).

Whooping Crane (*Grus americana*)

Whooping cranes are documented annually in North Dakota during spring and fall migrations. Migration stopover habitat consists of palustrine wetlands for roosting and croplands for feeding. In addition, whooping cranes are often recorded in riverine habitats. Suitable migratory stopover habitat for whooping cranes includes areas of shallow water without visual obstructions (e.g., high or dense vegetation). Feeding and roosting sites are typically less than 0.6 miles apart, but can occasionally be separated by more than five miles. On average, migrating whooping cranes avoid roads by approximately 0.3 miles and avoid human habitation by approximately 0.8 miles (USFWS, 2021e; Lewis and Slack, 2008).

The Project Corridor occurs within the whooping crane migration corridor, whereby 75 percent of observations occur. Suitable migration stopover habitat for the whooping crane occurs within the Project Corridor in the form of wetlands and cropland. Between 1955 and 2019, no whooping cranes have been recorded within the Project Corridor. The nearest recorded sighting is located approximately 2.5 miles southeast of the Project

Corridor, whereby eight adults were recorded in 2018 (USFWS, 2019b). Please refer to ***Exhibit 8, Whooping Crane Migration Corridor,*** in ***Appendix A.***

Piping Plover (*Charadrius melodus*)

In North Dakota, piping plovers breed on vegetated sandbars, gravel beaches, and alkali lakes and wetlands. During the breeding season, piping plovers typically remain in close proximity to the nesting site for feeding. The piping plover commonly nests along Lake Sakakawea/Missouri River, which is located within the Project Corridor. The nearest historically recorded piping plover nest occurred within the Project Corridor, approximately 0.38 mile from the Project Route, and was recorded in 2002. (USFWS, 1988; USFWS, 2021d, USACE, 2017).

Piping Plover Critical Habitat

Critical habitat for the northern Great Plains population of piping plovers has been designated on alkali lakes and wetlands, as well as along the Missouri River and Lake Sakakawea in North Dakota. The physical and biological features that are essential to the conservation of the species, referred to as the primary constituent elements, require special consideration for protection. Primary constituent elements for piping plover critical habitat include both "the dynamic ecological processes that create and maintain piping plover habitat," as well as, for reservoir systems, "sparsely vegetated shoreline beaches, peninsulas, islands composed of sand, gravel, or shale, and their interface with the water bodies." Critical habitat does not include "existing developed areas such as mainstem dam structures, buildings, marinas, boat ramps, bank stabilization and breakwater structures, row cropped or plowed agricultural areas, roads and other lands (e.g., high bank bluffs along Missouri River) unlikely to contain primary constituent elements." Approximately 137 acres of piping plover designated critical habitat is located within the Project Corridor; however, the Project Route would not impact any designated critical habitat (USFWS, 2021d).

Rufa Red Knot (*Calidris canutus rufa*)

While most red knots follow migration routes along the east or west coasts of North America, small numbers of the species follow an inland migration route, which may include stopovers in the Great Plains, including North Dakota. Preferred stopover habitat includes sandy or gravely beaches, tidal mudflats, salt marshes, shallow coastal impoundments and peat banks. The red knot has been observed in North Dakota along the Missouri River, which is located within the Project Corridor (USFWS, 2014; Dyke, et al. 2015; eBird, 2021)).

Dakota Skipper (*Hesperia dacotae*)

In North Dakota, the most significant Dakota skipper populations occur in the north-central portion of the state. Preferred habitat includes two grassland types comprised of specific plant species: Type A, low (i.e., wet) grassland, and Type B, upland (i.e., dry) grassland on ridges and hillsides. The Dakota skipper remains in the larval stage throughout most of its life cycle, including overwintering. They are most visible during the brief adult flight stage occurring from mid-June to early July, which is also the only time during their lifecycle in which the species can reproduce and disperse. The Dakota skipper can

migrate over 0.62 miles (one [1] km) per year between suitable habitat patches that are connected by structurally similar, though not necessarily suitable, habitat.

The project is located in an area heavily disturbed by industrial, residential, and commercial properties. Potentially suitable habitat for the Dakota skipper is not likely present within the Project Corridor. Due to the wide expanse of disturbances, the Project Corridor likely does not contain native habitat which would be suitable for the species. (USFWS, 2021b).

Monarch Butterfly (*Danaus plexippus*)

The monarch butterfly, a designated candidate species, is a large brightly colored orange and black butterfly. The species relies heavily on milkweed species (*Asclepias sp*.) for both forage and life cycle. The monarch butterfly lays their eggs on the milkweed host plant, with larvae typically emerging within 2 to 5 days. The larvae will feed on the milkweed for approximately 9 to 18 days, at which point it pupates into a chrysalis (cocoon). Approximately 6 to 14 days later, the adult butterfly emerges from the cocoon. The monarch range spans the entire continental United States, with suitable habitat including areas where milkweed species thrive (e.g. road side ditches, farmlands, prairies, wetlands, etc.). Suitable habitat, in the form of milkweed species, may be present within the Project Corridor. (USFWS, 2020a)

6.16.1 Rare and Unique Natural Resources Impacts/Mitigation

Natural Heritage Inventory

While there are several known NHI resources within the Project Corridor, the Project Route was sited to avoid impacts to identified NHI resources. Therefore, impacts on known species and habitats are not anticipated.

Endangered Species Act

Northern Long-eared Bat

As discussed in ***Section 6.15***, the Project is not likely to impact bats and their habitat, including the northern long-eared bat. Pursuant to the final Section 4(d) rule for the northern long-eared bat, incidental take of the species is not currently prohibited within the Project Corridor.

Whooping Crane

As discussed in ***Section 6.15***, the Project has the potential to impact whooping crane and/or their habitat. While the Project has the potential to impact the whooping crane and/or their habitat, the Project Corridor encompasses a significant amount of industrial, residential, and municipal development, which would likely prevent utilization by the whooping crane. In addition, approximately 98.7 percent of Project disturbances (2.95 acre temporary and 0.04 acre permanent) would be restored upon completion of the project. It is anticipated that the whooping crane would not be impacted by the Project.

Piping Plover

As discussed in ***Section 6.15***, the Project has the potential to impact birds and their habitat, including piping plovers that may utilize habitat within the Project Corridor; however, historical observation of the species occurred in 2002 when the Heskett Station, Marathon Petroleum Refinery, BNSF railroad, and City of Mandan water treatment plant were operational. These facilities are located between the Project and historical observations; therefore, the Project is not anticipated to impact the species.

Piping Plover Critical Habitat

While designated critical habitat for the piping plover occurs within the Project Corridor, impacts associated with the project would be limited to the Project Route, which has been sited to avoid designated critical habitat. Therefore, the Project is not anticipated to impact piping plover critical habitat.

Rufa Red Knot

As discussed in ***Section 6.15***, the Project has the potential to impact birds and their habitat, including rufa red knots that may be migrating through the Project Corridor; however, the Heskett Station, Marathon Petroleum Refinery, BNSF railroad, and City of Mandan water treatment plant all occur between the Project and suitable habitat; therefore, the Project is not anticipated to impact the species.

Dakota Skipper

Due to a lack of suitable native prairie, it is assumed that the Dakota skipper is not present within the Project Corridor. It is anticipated that the Dakota skipper would not be impacted by the Project.

Monarch Butterfly

Construction activities associated with the Project would result in both permanent and temporary disturbance of vegetative species; however, permanent impacts would account for less than 0.01% of the land within the Project Corridor. Due to the negligible amount of permanent impacts within the Project Corridor, it is anticipated that the monarch butterfly would not be impacted by the Project.

6.17 Summary of Impacts

Please refer to ***Table 14, Summary of Impacts and Mitigation.***

Table 14, Summary of Impacts and Mitigation

Resource Category	Potential Impact	Proposed Mitigation
Demographics	Socioeconomically beneficial: increased employment opportunities, temporary revenue increases in the vicinity of the Project.	No mitigation proposed.

Resource Category	Potential Impact	Proposed Mitigation
Land Use	Temporary conversion of approximately 2.95 acres and permanent conversion of approximately 0.04 acres of existing land uses into a transmission facility;	Reclamation of temporarily disturbed areas and payments to affected landowners.
Public Services	Potential indirect beneficial impact on local services via increased business associated with the Project's workforce; temporary increase in AADT during construction activities; potential impacts on utilities..	Mitigation for impacts on utility infrastructure in coordination with utility companies, if necessary; NDOC notification prior to excavation; mitigation measures would be developed in coordination with the applicable permitting entities.
Human Health and Safety	No impacts anticipated	No mitigation is proposed
Sound	Introduction of additional noise.	No mitigation is proposed.
Visual	Introduction of additional visual resources creating a more developed visual character, which may reduce visual quality depending on viewer preference.	No mitigation is proposed.
Cultural and Archaeological Resources	No impacts anticipated.	No mitigation is proposed.
Recreational Resources	Potential sound and visual impacts for recreationists as described in *Sound* and *Visual*, above.	No mitigation is proposed.
Land Based Economics	Temporary conversion of approximately 2.95 acres and permanent conversion of approximately 0.04 acre of existing land uses into a transmission line, whereby most of the land uses converted are grasslands.	Compensation to impacted landowners; reclamation of temporarily disturbed areas.
Soils	Soils disturbed by construction prone to erosion; soil compaction due to operation of heavy equipment; temporary impacts on soils classified as farmland of statewide importance.	BMPs such as erosion and sediment control, segregating topsoil, reseeding of disturbed areas, use of appropriately sized construction equipment, and maintaining proper drainage.
Geologic and Groundwater Impacts	Low-to-moderate potential to impact significant paleontological resources.	No mitigation is proposed.
Surface Water and Floodplain Resources	Potential indirect impacts on water quality due to ground disturbance.	Existing drainage patterns would be maintained, temporarily disturbed areas would be restored to preconstruction conditions.
Wetlands	The project will not result in permanent or temporary impacts to wetlands.	No mitigation proposed

Resource Category	Potential Impact	Proposed Mitigation
Vegetation	Temporary grassland impacts.	Re-vegetation of temporarily disturbed areas.
Wildlife	Potential impacts due increased human presence, habitat displacement, barriers to movement, migration route impacts, and habitat degradation.	Habitat avoidance, minimization; mitigation measures as described in *Vegetation*, *Surface Water and Floodplain Resources*, and *Wetlands*, above.
Rare and Unique Natural Resources	NHI: No impacts anticipated. ESA: Potential impacts as described in *Wildlife*, above.	ESA: Mitigation measures as described in *Wildlife*, above.

7.0 Identification of Potential Permits/Approvals

Please refer to ***Table 15, Potential Permits/Approvals***, for a list of potential federal, state, and local permits associated with the Project.

Table 15, Potential Permits/Approvals

Agency	Permit/Approval	Applicability	Status and Timing
ND Public Service Commission	Certificate of Corridor Compatibility and Route Permit	Construction of gas or liquid transmission facility.	To be obtained prior to construction.
NDDEQ	NDPDES General Permit for Stormwater Discharge Related to Construction (including SWPPP)	Construction activities with disturbances greater than one (1) acre.	To be obtained prior to construction, if necessary.
NDDWR	Surface Drainage Permit	Draining waterbodies with a with a watershed of 80 acres or more.	Not anticipated at this time.
NDHP	Oversize/Overweight Permit	Oversize or overweight loads on state-maintained roads.	To be obtained prior to construction, if necessary.
City of Mandan	Building Permit and Mandan Architectural Review Commission Approval	New construction or alterations to commercial properties	To be obtained prior to construction.
	Floodplain Development Application	Construction within FEMA Floodplain	To be obtained prior to construction.

Agency	Permit/Approval	Applicability	Status and Timing
Morton County	Utility Occupancy	Work occurring with highway right-of-way	Currently Obtained
NDDOT/ Counties/ Townships	Haul Road Permits	Hauling on roadways.	To be obtained prior to construction, if necessary.
	Oversize/Overweight Permits	Oversize or overweight loads.	To be obtained prior to construction, if necessary.

8.0 Factors Guiding the Commission

The Siting Act (see NDCC 49-22-09) lists the factors in the following subsections as those that guide the Commission in evaluating applications and designations of corridors and routes.

8.1 Available Research and Investigations pertaining to Public Health and Welfare, Natural Resources, and the Environment

Available research and investigation were utilized throughout ***Section 6.0*** to assess the effects of the Project on public health and welfare, natural resources, and the environment. Project-specific research and investigation reports include: Wetland Mapping Survey and Class III Cultural Resource Inventory.

8.2 New Transmission Technologies and Systems

The Project has utilized or will utilize the most current technologies and systems available to site, construct, and operate the Project to optimize transmission while minimizing potential adverse environmental effects.

8.3 Potential for Beneficial Uses of Waste Energy

The Project is not anticipated to generate waste energy. As such, there would be no use of waste energy, beneficial or otherwise, associated with the Project.

8.4 Unavoidable Adverse Direct and Indirect Environmental Effects

Unavoidable adverse direct and indirect environmental effects are discussed throughout ***Section 6.0***, with a summary of impacts and associated mitigation measures provided in ***Section 6.17***.

8.5 Alternatives to the Proposed Corridor or Route

Alternatives to the Project are discussed in ***Section 2.2***.

8.6 Irreversible and Irretrievable Commitment of Natural Resources

The Project would result in the irreversible and irretrievable commitment of resources due to utilization of construction materials (e.g., PVC pipe and concrete) as well as hydrocarbon fuel consumed by construction equipment and vehicles transporting workers and materials to and from the Project Corridor. Consumption of materials and fuel during

maintenance of the Project would be minor. Some of the resources utilized during construction may be reclaimed upon decommissioning of the Project; however, consumption of most of these resources would be irreversible and irretrievable. The resources that would be utilized are not in short supply and their use would not have an adverse effect on their overall availability.

8.7 Direct and Indirect Economic Impacts

Direct and indirect impacts and mitigation associated with demographics and land-based economics are discussed in ***Section 6.1*** and ***Section 6.9***, respectively.

8.8 Existing Development Plans

Known land use plans and considerations applicable to development within and adjacent to the Project Corridor are discussed in ***Section 6.2***.

8.9 Scenic Areas, Historic Sites and Structures, and Paleontological or Archaeological Sites

The effect of the Project on visual (including scenic areas), cultural and archaeological (including historical sites and structures), and paleontological resources are discussed in ***Section 6.6***, ***Section 6.7***, and ***Section 6.11***, respectively.

8.10 Areas of Unique Biological Wealth or Habitats for Rare and Endangered Species

The effect of the Project on rare and unique natural resources is discussed in ***Section 6.16***.

8.11 Problems Raised by Federal, State and Local Entities

Comments from Federal, State and Local Entities are summarized in ***Section 9.0*** and have been referenced and incorporated throughout this Application where appropriate.

9.0 Agency Comments

On August 9, 2021, a scoping package was distributed to 32 local, state, and federal agencies pursuant to NDAC 69-06-01-05. This scoping package included information on the Project and a project location map. To date, 8 agencies have provided responses. These comments, which are summarized below, have been referenced and incorporated where appropriate within the document. Please refer to ***Appendix D, Scoping Package and Responses,*** for the scoping letters, mailing list, and responses.

9.1 U.S. Department of Defense – Army Corps of Engineers, North Dakota Regulatory Office

In a letter dated August 23, 2021, the USACE noted that if the Project results in the discharge of dredged or fill materials into waters of the U.S. (Section 404 Clean Water Act), a Section 404 permit will need to be acquired from the North Dakota Regulatory Office. If applicable, utility lines are authorized under Nationwide Permit 58 provided the utility line can be placed without any change to pre-construction contours and all other

proposed construction activities and facilities are in compliance with the Nationwide's permit conditions and 401 Water Quality Certification.

9.2 U.S. Department of the Interior – U.S. Fish and Wildlife Service, Audubon Wetland Management District

In an email dated August 20, 2021, the USFWS indicated there are no USFWS easements or Fee title lands within the project area.

9.3 U.S. Department of the Interior – U.S. Fish and Wildlife Service, North Dakota Field Office

In a letter dated August 30, 2021, the USFWS noted that actions authorized, funded, or carried out by Federal agencies need to comply with Section 7 of the Endangered Species Act[6]. Additionally, all projects, federal and private, need to comply with the BGEPA and MBTA.

9.4 North Dakota Department of Environmental Quality

In a letter dated August 26, 2021, the NDDEQ stated that they believed the environmental impacts from the proposed construction will be minor and can be controlled by proper construction methods. These methods included minimizing adverse effects to water bodies and obtaining an NDPDES permit. A portion of the study area overlies a sensitive groundwater area and care should be taken to avoid spills of any materials. All solid waste must be handled and disposed in accordance with State rules. The project will need the appropriate equipment to prevent backflow and protect City of Mandan drinking water. Included in the letter were the NDDEQ's construction and environmental disturbance requirements. The NDDEQ further stated that it owns no land in or adjacent to the study area and that the Project is consistent with the State Implementation Plan for the Control of Air Pollution for the State of North Dakota.

9.5 North Dakota Game and Fish Department

In an email dated September 7, 2021, the NDGFD stated they do not believe the project would have a significant adverse effect to wildlife or wildlife habitat based on information provided.

9.6 North Dakota Department of Water Resources

In a letter dated August 30, 2021, the NDDWR identified the Project is located in a floodplain and coordination with local floodplain administrators should occur. No drainage/construction permit or conditional/temporary permit for water appropriation are likely required; however, if surface water or groundwater will be diverted for construction, a water permit would be required.

[6] The Project would not receive federal funding or have a federal nexus; therefore, the project would fall under Section 10 of the Endangered Species Act.

9.7 North Dakota Parks and Recreation Department

In a letter dated August 27, 2021, the NDPRD stated that no known rare species or significant ecological communities have been documented within or immediately adjacent the project. Additionally, the NDPRD does not own, lease, or manage any properties that may be affected by the project, nor would the project affect properties protected under Section 6(f) of the Land and Water Conservation Fund.

9.8 State Historical Society of North Dakota

In a letter dated August 23, 2021, the SHSND recommended that a Class III Cultural Resource Inventory be completed for the Project. In a letter dated September 8, 2021, the SHSND concurred with a finding of "No Historic Properties Affected" (ND SHPO Ref.: 21-0523).

10.0 Qualifications of Contributors to Siting Study

Andy McDonald – Montana-Dakota

Mr. McDonald is responsible for natural resource, water and waste related environmental permitting and compliance for Montana-Dakota's electric distribution, electric transmission, and power production systems. He has experience with construction stormwater permitting, state and federal natural resource permitting, DOT Hazmat compliance, nonhazardous and hazardous waste management and disposal, property transfers and associated environmental due diligence, as well as spill prevention, response, and remediation management. Mr. McDonald has served in this role for the past seven years. Prior to working for Montana-Dakota, Mr. McDonald has five years of experience working in source water protection while working for North Dakota Rural Water Systems Association, and three years of surface water quality experience while working for the North Dakota Department of Health.

Ashley Ross - KLJ

Ashley is an environmental planner that holds a B.S. in Natural Resources Management from Dickinson State University. She has 13 years of experience in conservation and environmental planning which has allowed her to work in coordination with private landowners and entities, local, state, federal and tribal agencies. Ashley has experience in identifying and completing impact assessments, public and agency coordination, permitting, and biological and botanical surveys. She has authored numerous technical reports including National Environmental Policy Act (NEPA) documents such as Environmental Assessments, Categorical Exclusions and Environmental Impact Statements.

Nick Anderson - KLJ

Nick is an environmental planner and Certified Professional Wetland Delineator (Minnesota Wetland Delineator Certification Program) with more than 11 years of natural resources experience ranging from field data collection to obtaining final approvals. He has completed NEPA documentation, agency coordination, public involvement, wetland delineation, biological/botanical reporting, and permitting for a multitude of projects. This experience has included extensive coordination with and on behalf of various federal,

state, local and private entities across North Dakota, Montana, and South Dakota. He holds a BA in Natural Resources Management from the University of Minnesota, Crookston.

Christopher Davis – KLJ

Chris is an archaeologist with more than 12 years of experience conducting fieldwork and research in the US, Africa, and Europe. Chris has broad training in archaeology and biological anthropology and holds a Ph.D. in Anthropology from the University of Texas at Austin. Chris has worked in various capacities on academic excavation and survey projects in Ethiopia, Austria, and Colorado, as well as for federal agencies, non-profit research organizations, and private CRM firms in Colorado, Wyoming, California, Nevada, and South Carolina. Chris first conducted fieldwork in the western US in 2012, and is well-versed in the archaeology, geology, and ecology of the northern Great Plains and Rocky Mountains. Throughout his academic and professional career, Chris has been involved in all stages of an archaeological project, including project design and management; supervision of survey and excavation crews; site recording, testing, and large-scale research and data recovery excavations; faunal and lithic analysis; Class I literature review and background research; eligibility assessment and NRHP recommendations; and manuscript/report preparation. Chris has authored multiple technical reports, academic papers, and grant proposals, and his research has been presented at regional, national, and international meetings, and published in American Journal of Physical Anthropology, The Anatomical Record, The Medico-Legal Journal, and Southwestern Lore.

Charles Peliska – KLJ

Charles is an archaeologist with more than 15 years of cultural resource management experience throughout various parts of the United States including the Great Plains, the Midwest, the Gulf Coast, and Mid-Atlantic. He holds a Bachelor of Arts in History and Archaeology from the University of Evansville, and a Master of Science degree from Saint Cloud State University in Cultural Resource Management Archaeology. His primary focus is the historic and cultural resources of the upper Midwest. He has experience working in various capacities in a multitude of projects in both the public and private sectors and has been involved in all stages of archaeological research from project design and tribal coordination, and fieldwork from survey, to testing and data recovery, to lab analysis and report authorship. He has authored a multitude of technical reports, academic papers and has presented at local and regional conferences and has contributed to presentations at national meetings and publications.

Jeff Price - KLJ

Jeff is a GIS Analyst with more than 20 years of experience. He received his B.S. in Geography from the University of North Dakota in 1993. He is responsible for GIS analysis, impact quantification and map production for a variety of clients. Jeff is also responsible for maintaining and updating geodatabases and other GIS raster and vector datasets used companywide.

Angelina Woehler – Burns & McDonnell

Angelina Woehler is a Biologist and Environmental Scientist for Burns & McDonnell Engineering Company, Inc. with over six years of experience. She specializes in

environmental permitting, wetlands, wildlife biology, ArcGIS, and National Environmental Policy Act (NEPA) compliance. In 2016, Angelina received a Master's of Science in Environmental Biology, graduating at the top of her class. She is experienced in site selection and conducting environmental studies for a wide variety of projects, including oil and gas development, electric transmission and distribution lines, power generation facilities, and water resource projects. Angelina has conducted wetland and waterbody delineations in Colorado, Nebraska, North Dakota, South Dakota, Kansas, Washington and Oregon. She has regular communication with the Army Corps of Engineers and has successfully permitted numerous projects.

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12.0 Acronyms and Abbreviations

A-weighted decibel (dBA)

Above ground level (AGL)

Advisory Circular (AC)

Area of potential effect (APE)

Average annual daily traffic (AADT)

Bald and Golden Eagle Protection Act (BGEPA)

Best Management Practices (BMPs)

Birds of Conservation Concern (BCC)

Bureau of Land Management (BLM)

Canadian Wildlife Service (CWS)

Clean Water Act (CWA)

Conservation Reserve Program (CRP)

Electromagnetic field (EMF)

Endangered Species Act (ESA)

Farm Service Agency (FSA)

Federal Aviation Administration (FAA)

Federal Emergency Management Agency (FEMA)

Flood Insurance Rate Map (FIRM)

Migratory Bird Treaty Act (MBTA)

National Environmental Policy Act (NEPA)

National Register of Historic Places (NRHP)

National Wetland Inventory (NWI)

National Wildlife Refuge (NWR)

Natural Heritage Inventory (NHI)

Natural Resources Conservation Service (NRCS)

North Dakota Administrative Code (NDAC)

North Dakota Century Code (NDCC)

North Dakota Department of Agriculture (NDDA)

North Dakota Department of Environmental Quality (NDDEQ)

North Dakota Department of Transportation (NDDOT)

North Dakota Department of Trust Lands (NDDTL)

North Dakota Department of Water Resources (NDDWR)

North Dakota Game and Fish Department (NDGFD)

North Dakota Highway Patrol (NDHP)

North Dakota One Call (NDOC)

North Dakota Parks and Recreation Department (NDPRD)

North Dakota Pollutant Discharge Elimination System (NDPDES)

Not applicable (N/A)

Private Land Opened to Sportsman (PLOTS)

Species of conservation priority (SCP)

State Historical Society of North Dakota (SHSND)

Storm water pollution prevention plan (SWPPP)

Underground storage tank (UST)

U.S. Army Corps of Engineers (USACE)

U.S. Department of Agriculture (USDA)

U.S. Department of Defense (USDOD)

U.S. Environmental Protection Agency (USEPA)

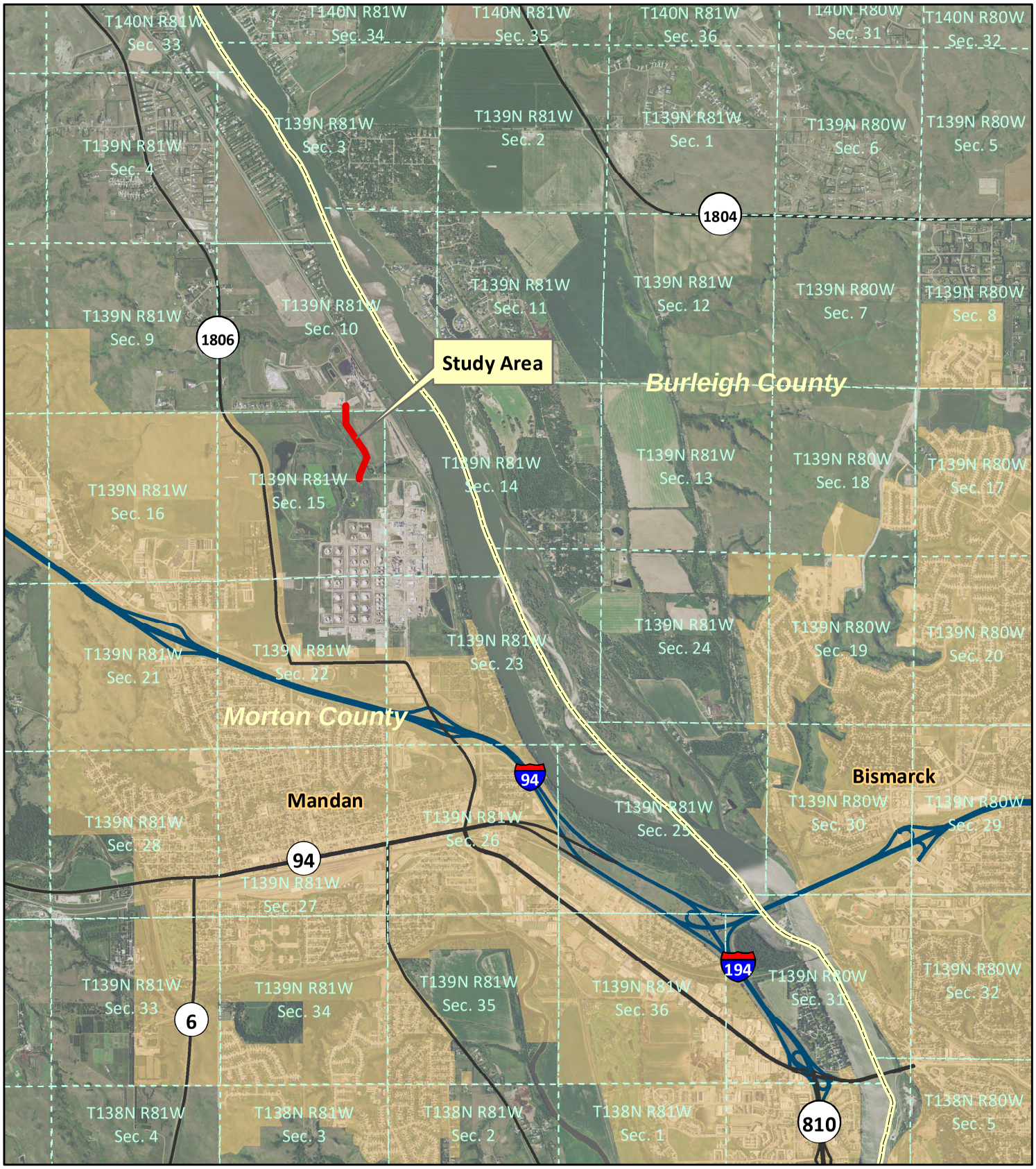
U.S. Geological Survey (USGS)

Waterfowl Production Area (WPA)

Wildlife Management Area (WMA)

Appendix A

Exhibits



KLJ

Heskett Water Line
Montana-Dakota Utilities Co.
Morton County, ND

Exhibit 1: Project Location Map

Imagery Source: ©2020 USDA-FSA-APFO

KLJ Project Number:	2109-01109
Date Created:	9/28/2021
Created By:	jeffprice

0 0.25 0.5 1 Miles

0 0.5 1 2 Kilometers

N W E S

1:50,000

- Study Area
- County Boundary
- Interstate
- State Highway
- Incorporated City Boundaries

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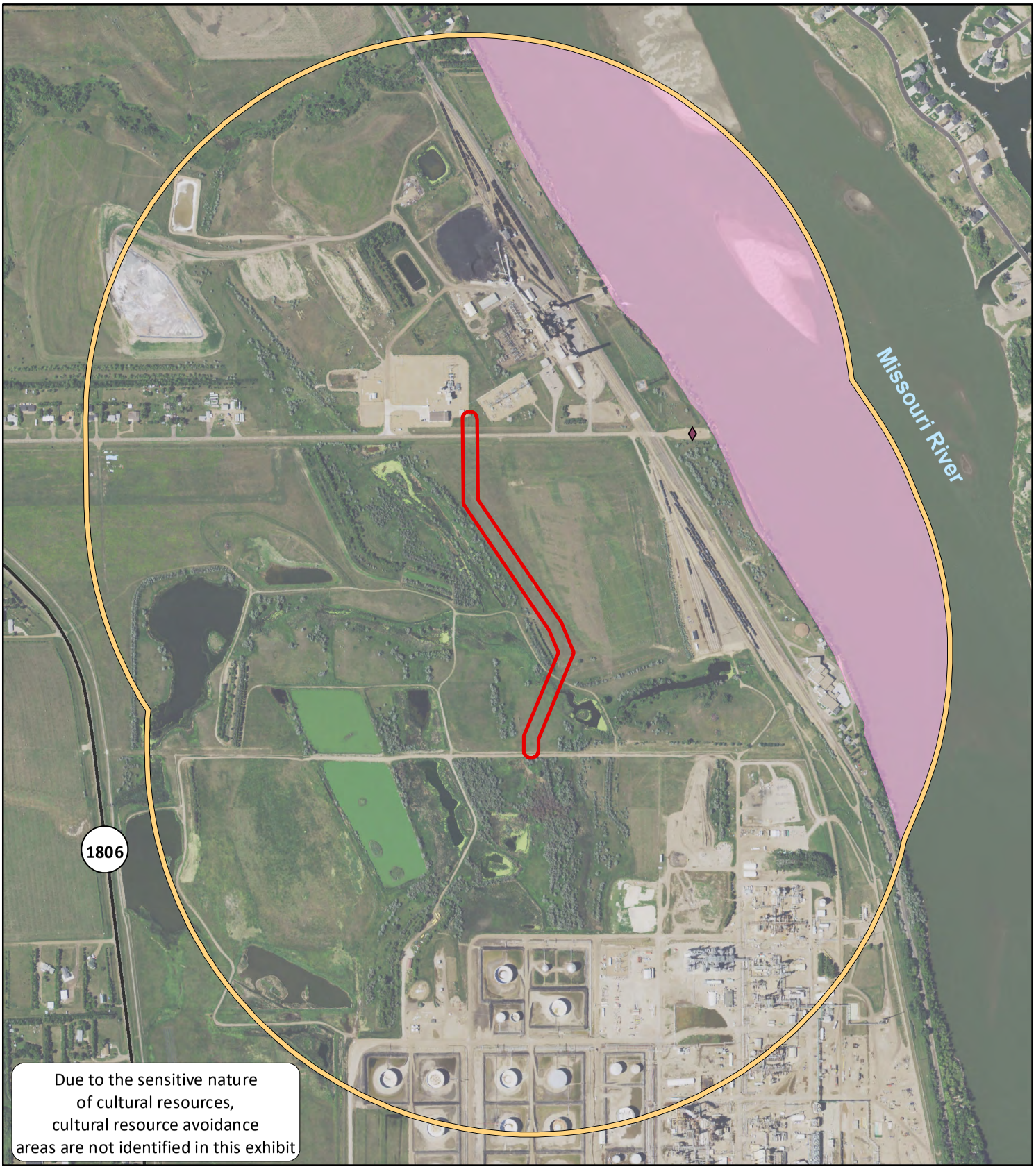

KLJ

Heskett Water Line
Montana-Dakota Utilities Co.
Morton County, ND

Exhibit 2: Avoidance/Exclusion Areas

Imagery Source: ©2020 USDA-FSA-APFO

KLJ Project Number: 2109-01109
Date Created: 11/10/2021
Created By: nickanderson

0 500 1,000 2,000 Feet

0 100 200 400 Meters

N W E S

1:11,000

- Project Route
- Project Corridor (1 Mile)
- State Highway

Exclusion Area

- Piping Plover Critical Habitat

Avoidance Area

- Fishing Facility

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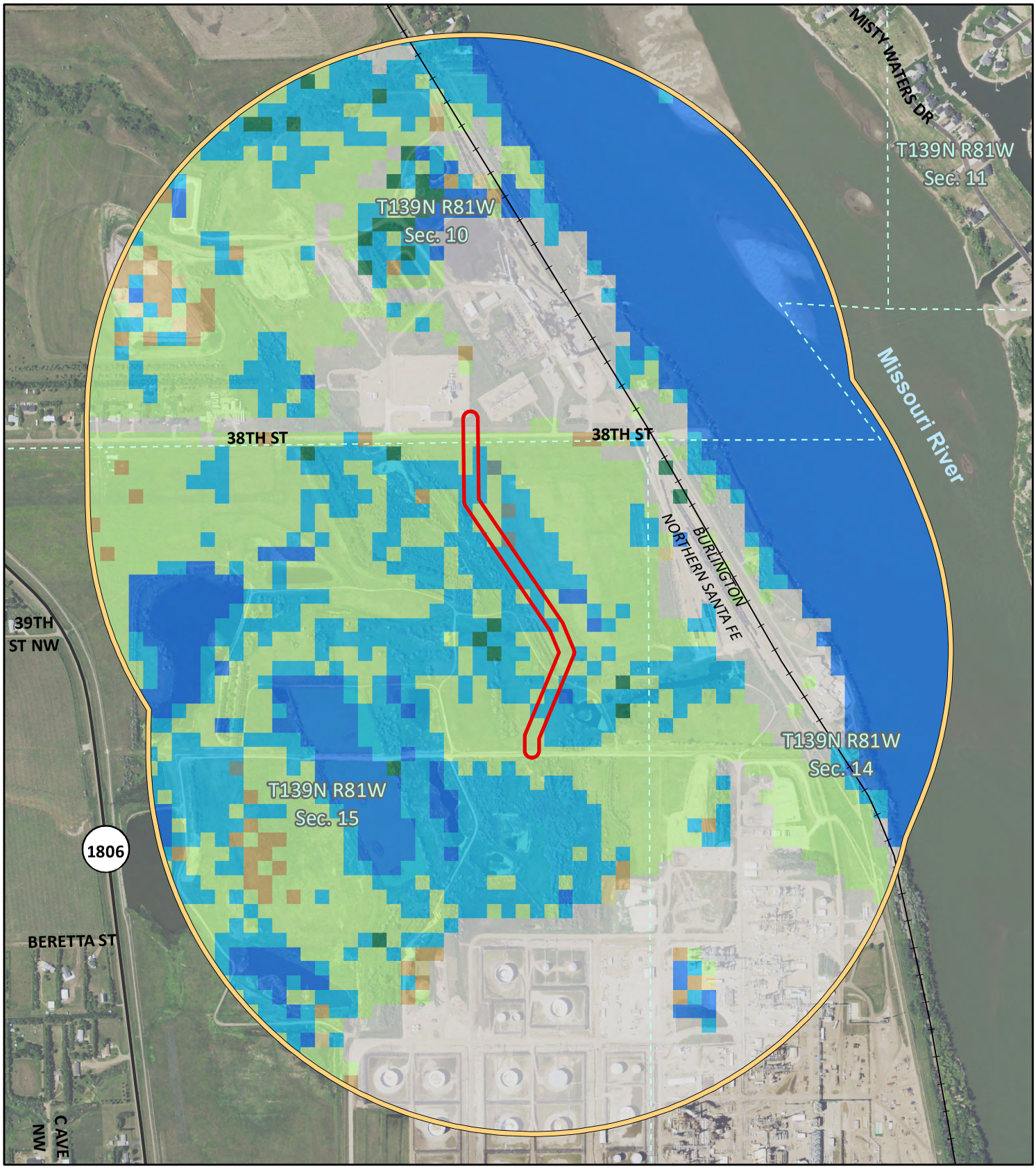

KLJ

Heskett Water Line
Montana-Dakota Utilities Co.
Morton County, ND

Exhibit 3: Land Use

Imagery Source: ©2020 USDA-FSA-APFO

KLJ Project Number: 2109-01109
Date Created: 9/30/2021
Created By: jeffprice

0 500 1,000 2,000 Feet

0 100 200 400 Meters

N W E S

1:11,000

- Project Route
- Project Corridor (1 Mile)
- Railroads
- State Highway
- Cultivated
- Fallow/Idle Cropland
- Developed/Open Space
- Grasslands
- Shrubland
- Woodlands
- Wetlands
- Open Water

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KLJ

Heskett Water Line
Montana-Dakota Utilities Co.
Morton County, ND
Exhibit 4: Infrastructure

Imagery Source: ©2020 USDA-FSA-APFO

KLJ Project Number: 2109-01109	
Date Created: 9/30/2021	
Created By: jeffprice	

0 500 1,000 2,000 Feet

0 100 200 400 Meters

N W E S

1:11,000

- Project Route
- Project Corridor (1 Mile)
- Railroads
- State Highway
- Utility Pole
- 16-in Gas
- 3-in Gas
- Waterline
- 6-in Irrigation
- Overhead Wires
- Water Well
- Gauging or Pumping Station
- Power Substation

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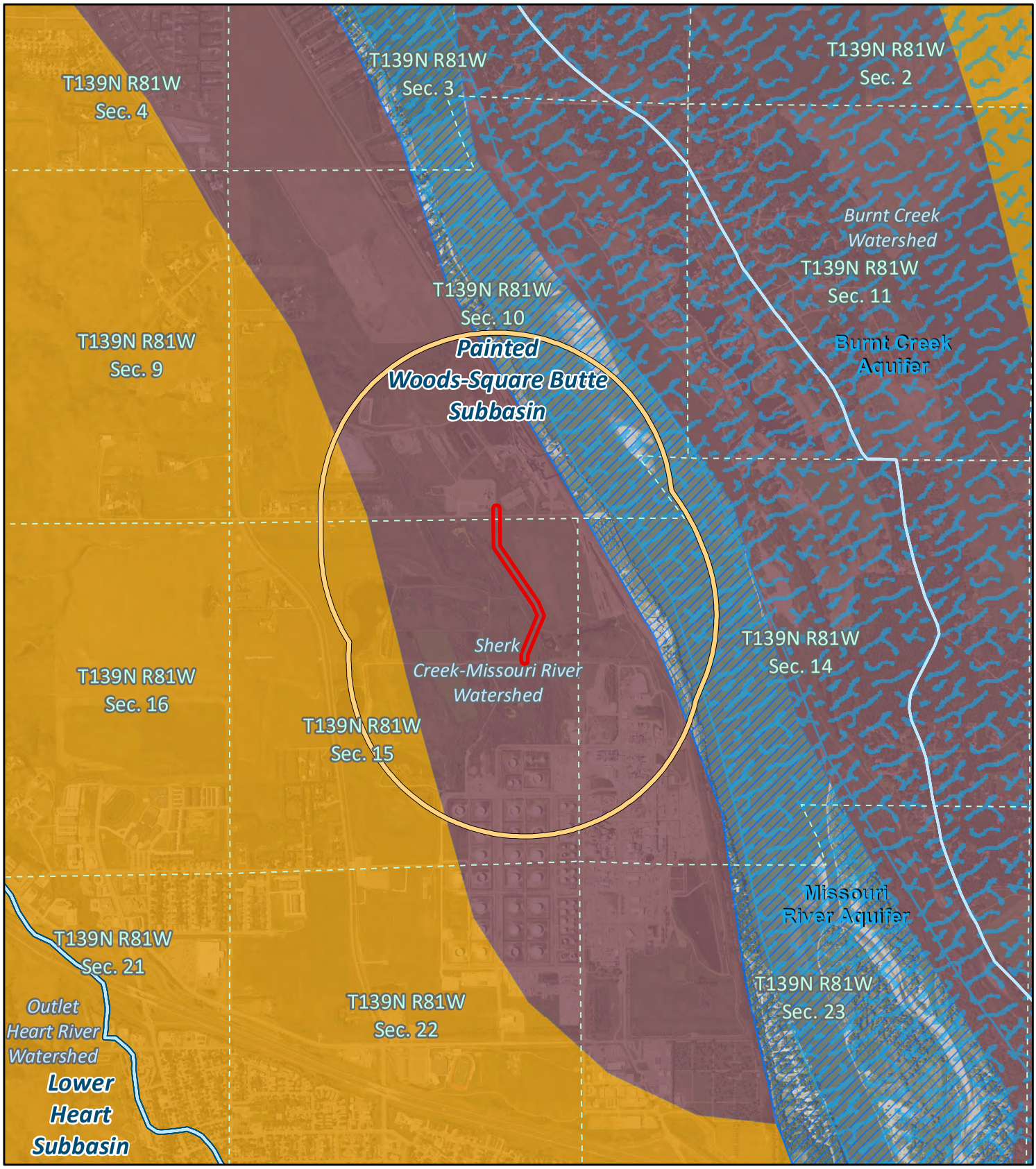

KLJ

Imagery Source: ©2020 USDA-FSA-APFO

KLJ Project Number:	2109-01109
Date Created:	9/30/2021
Created By:	jeffprice

Heskett Water Line
Montana-Dakota Utilities Co.
Morton County, ND

Exhibit 5: Geologic and Groundwater Resources

0 0.25 0.5 1 Miles

0 0.25 0.5 1 Kilometers

N W E S

1:24,000

- Project Route
- Project Corridor (1 Mile)
- Watershed (10 digit)
- Watershed (8 digit)
- Surficial Aquifers

Surface Geology Formation

- Water
- Cannonball
- Coleharbor

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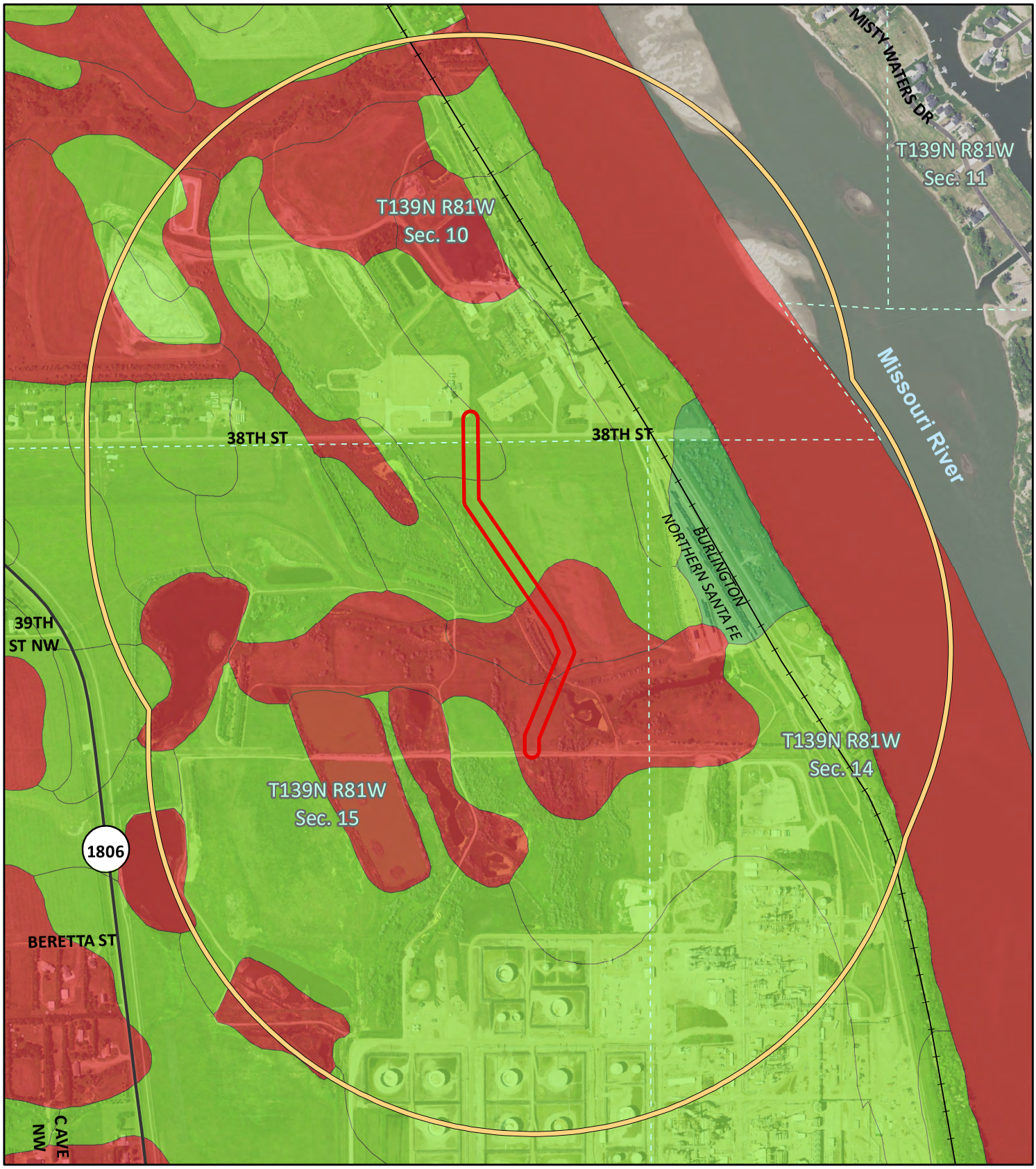


KLJ

Heskett Water Line
Montana-Dakota Utilities Co.
Morton County, ND

Exhibit 6: Prime and Unique Farmlands

Imagery Source: ©2020 USDA-FSA-APFO

KLJ Project Number: 2109-01109
Date Created: 9/30/2021
Created By: jeffprice

0 500 1,000 2,000 Feet

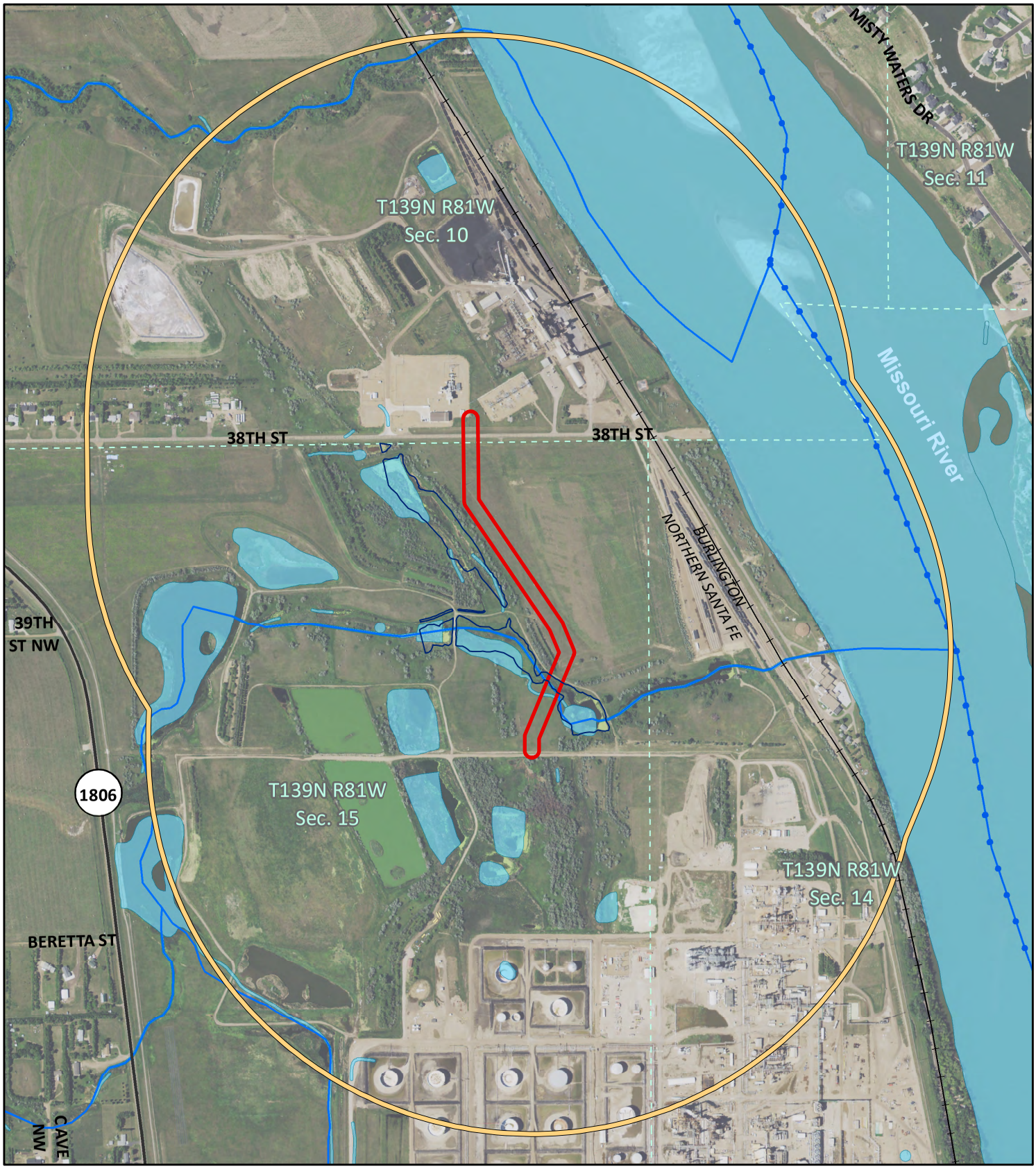
0 100 200 400 Meters

N W E S

1:11,000

- Project Route
- Project Corridor (1 Mile)
- Railroads
- State Highway
- Not prime farmland
- All areas are prime farmland
- Farmland of statewide importance

Document Location: K:\Projects\Power\MDU\2109-01109\GIS\Environmental\2109_01109_MDU_Heskett_Exh6_Farmlands.mxd



KLJ

Heskett Water Line
Montana-Dakota Utilities Co.
Morton County, ND

Exhibit 7: Surface Waters and Wetlands

Imagery Source: ©2020 USDA-FSA-APFO

KLJ Project Number:	2109-01109
Date Created:	9/30/2021
Created By:	jeffprice

0 500 1,000 2,000 Feet

0 100 200 400 Meters

N W E S

1:11,000

- Project Route
- Project Corridor (1 Mile)
- State Highway
- Railroads
- Stream (Class 1, 2, 3)
- NHD Flowline
- USFWS NWI Wetlands
- Field Delineated Wetlands

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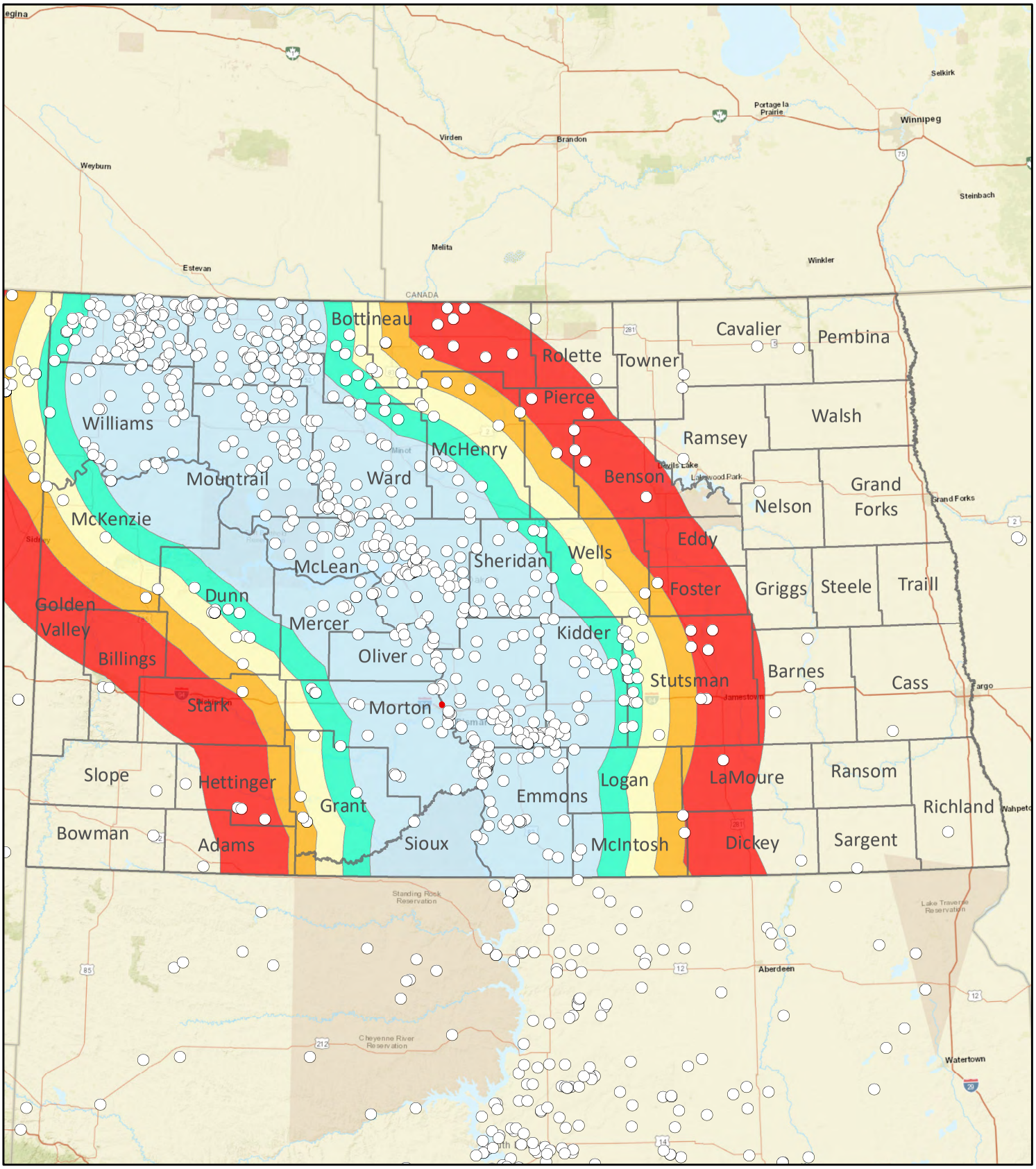

Heskett Water Line
Montana-Dakota Utilities Co.
Morton County, ND

Exhibit 8: Whooping Crane Migration Corridor

Project Route
County Boundary
Confirmed Whooping Crane Sightings

Whooping Crane Migration Corridor

75%
80%
85%
90%
95%

0 20 40 80 Miles
0 30 60 120 Kilometers

1:3,100,000

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

KLJ Project Number: 2109-01109
Date Created: 9/30/2021
Created By: jeffprice

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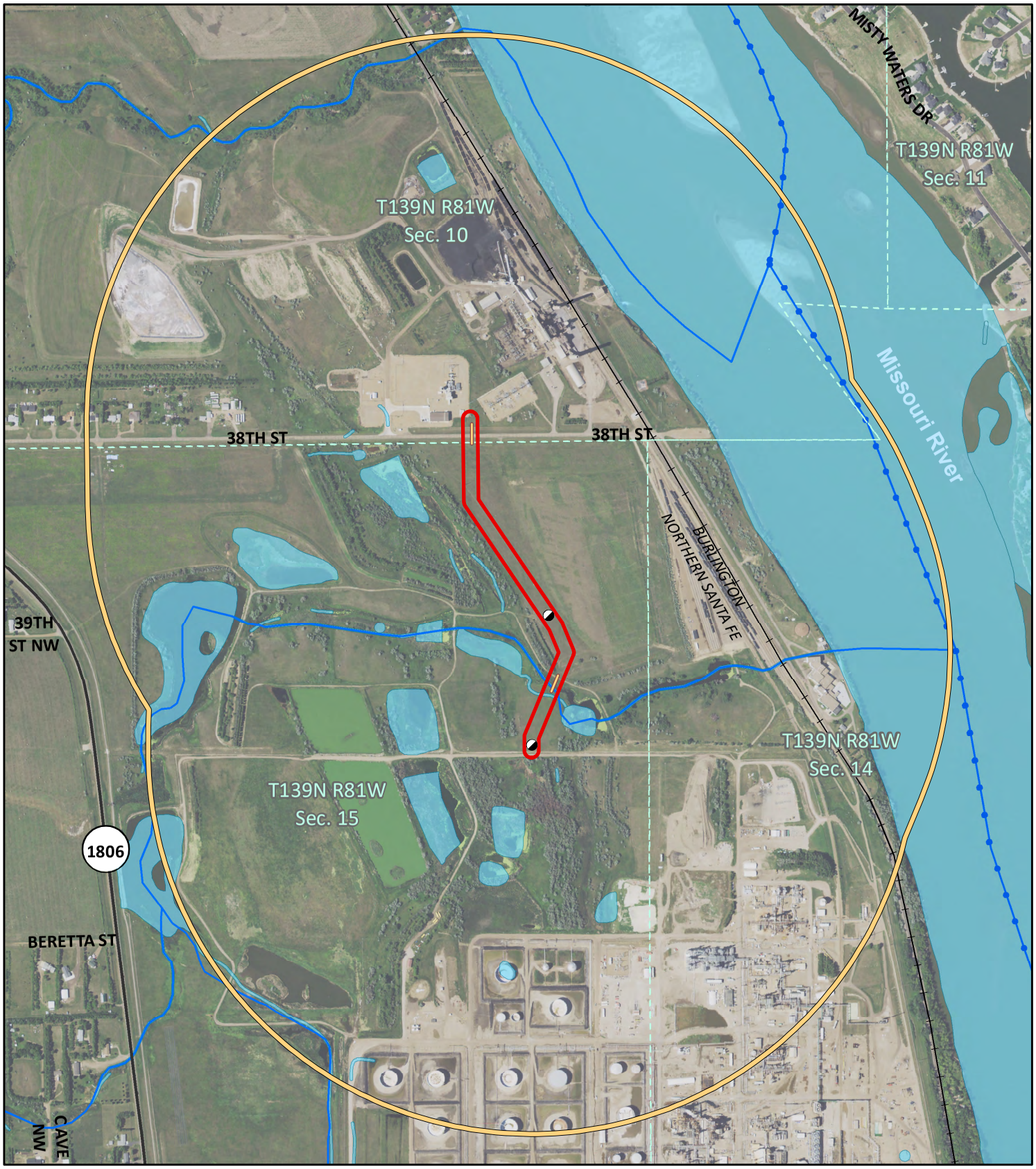


KLJ

Heskett Water Line
Montana-Dakota Utilities Co.
Morton County, ND
Exhibit 9: Proposed HDD

Imagery Source: ©2020 USDA-FSA-APFO

KLJ Project Number: 2109-01109
Date Created: 9/30/2021
Created By: jeffprice

0 500 1,000 2,000 Feet

0 100 200 400 Meters

N W E S

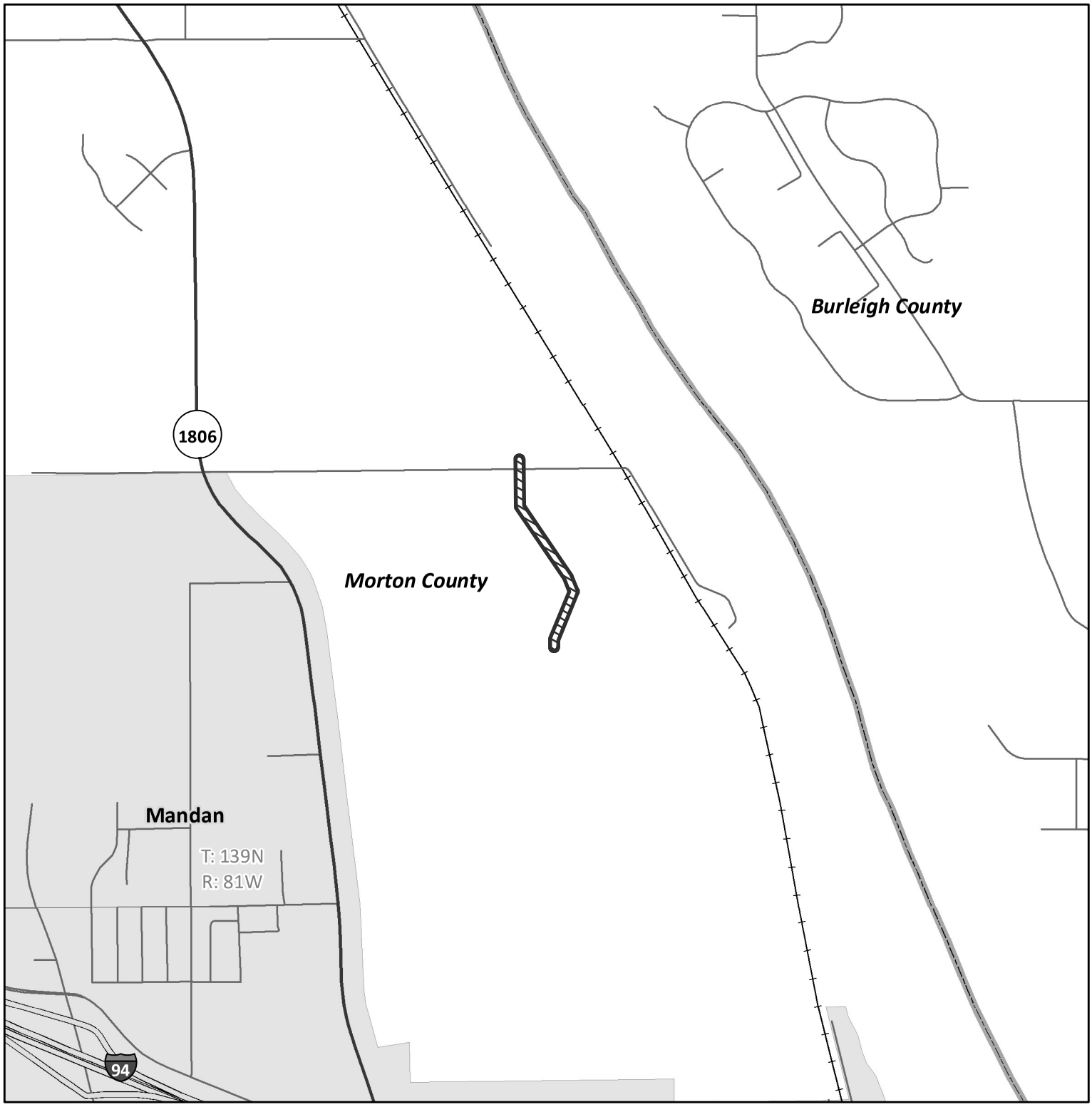
1:11,000

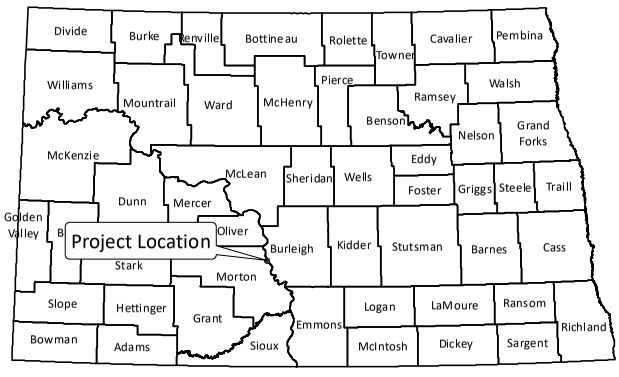
- Project Route
- Project Corridor (1 Mile)
- Railroads
- State Highway
- Valve
- HDD Bore
- Stream (Class 1, 2, 3)
- NHD Flowline
- USFWS NWI Wetlands

Document Location: K:\Projects\Power\MDU\2109-01109\GIS\Environmental\2109_01109_MDU_Heskett_Exh9_ProposedHDD.mxd

Appendix B

Black and White Project Location Map





Heskett Water Line
Montana-Dakota Utilities Co.
Morton County, ND

Project Corridor
State Highway
Interstate
Mandan City Boundary

N
W E
S

0 1,000 2,000 4,000 Feet

KLJ

KLJ Project Number: 2109-01109
Date Created: 10/11/2021 | Created By: JDP

Appendix C

Project Control Documents

Revegetation Plan

Reclamation/Restoration Procedures

During construction, crews will attempt to limit ground disturbance wherever possible and will employ appropriate erosion control measures. Disturbed areas will be restored to their pre-construction condition to the maximum extent practicable and as negotiated with the landowner. Post-construction reclamation activities include removing and disposing of debris, dismantling all temporary facilities (including laydown areas), leveling or filling tire ruts, and reseeding areas disturbed by construction activities with vegetation similar to that which was removed.

Erosion control measures will be implemented as necessary to minimize runoff during construction. Specific measures will be determined once a field review is made to determine any areas of concern. Erosion control measures such as silt fencing, straw wattle, mulching, seeding, or mesh fabric overlay will be installed as appropriate. Access routes to and within the project site will be reviewed prior to the mobilization of equipment so erosion concerns can be avoided or minimized. Construction crews will exercise caution when equipment is within 50 feet of delineated wetlands and will not drive equipment through the stream near the south end of the project.

Erosion Control Plan

The following commonly used erosion controls and practices will be implemented, as appropriate.

- Grade or extend terraces across slopes to prevent stormwater from flowing onto the construction area and plant open areas with vegetation similar to that which was removed soon after work is completed.
- Place energy dissipating material, such as riprap, check dams, straw bales, wattles, and/or gabions, at stormwater outfalls to slow water runoff, thereby minimizing erosion and preventing entrained sediments from entering water ways.
- Prevent erosion damage by using geotextiles or energy-dissipating devices such as check dams, gabions, or riprap along stream courses or their banks that are impacted by the construction.
- Protect culverts with inlet controls to prevent suspended particles from entering stormwater drainages.
- Maintain gravel entrance/exit pads at each construction site entrance/exit location to provide a buffer to reduce the amount of mud and soil transported on vehicle tires from the site to paved public roadways.
- Temporary or permanent erosion protection and stabilization (e.g., cover crop or mulching) will be implemented immediately for all exposed soil surface areas where activities have been completed or temporarily stopped.

Weed Management

Montana-Dakota will limit vegetative disturbance during construction. Disturbance resulting in the loss of vegetation is anticipated to be minimal for the project, and typically limited to the pipeline trench. For areas immediately adjacent the trench, topsoil stripping is not proposed. Temporary BMPs implemented during and after construction, such as fiber rolls or mulch, will be weed free. After construction, Montana Dakota will use a weed-free regionally specific seed mix for revegetation in non-agricultural areas. During operation, Montana Dakota will employ standard monitoring and maintenance procedures to limit the spread of noxious weeds.

Environmental Training Plan

The Environmental Training Plan addresses construction aspects of the Montana-Dakota Utilities Co. Heskett Water Line project. Operation of the line is not anticipated to have any environmental impacts; hence this plan is only applicable to construction activities. Given the limited scope of the project, contractors will only be trained in areas that are pertinent to normal construction practices associated with installation of a water pipeline.

1. Aquatic Resources

   The contractor will be provided a map (or shapefiles upon request) of delineated aquatic resource areas within the project corridor. Contractor will be instructed to maintain a 50'buffer from those areas whenever possible. Contractor will use construction matting when working in saturated areas within aquatic resource areas if avoidance is not attainable.

2. Cultural Resources

   The contractor will be provided a copy of the Unanticipated Discovery Plan. Contractor will review and understand the aspects of the plan prior to beginning construction activities.

3. Storm Water and Dust Control

   The construction activities are not anticipated to result in greater than or equal to one acre of disturbance. Montana-Dakota will instruct the contractor to provide water for dust control as needed and revegetate any areas of disturbance that were previously vegetated and utilize BMPs as necessary.

Safety/Emergency Plan for Montana-Dakota Heskett Water Line

Contractors and Montana-Dakota personnel will rely on the following two documents to address safety and emergency actions for this project: Heskett Station Emergency Action Plan and Marathon Safety Requirements.

SAFETY PROCEDURES	Emergency Action Plan Heskett Station	881-06 Version 2 6/16/2017

Approved By _____ Date 6/28/19 Revision 2
(Director, Generation)

This Emergency Action Plan (EAP) is to be used in conjunction with Company Policy SF 404; Crisis Management and MDU Utilities Group Natural Gas Emergency Response Procedure 3010.1.

The Heskett Station Manager is responsible for the overall administration of the plan.

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Purpose

The purpose of the Heskett Station Emergency Action Plan (EAP) is to provide guidance to personnel for prompt mobilization and proper utilization of manpower, materials, equipment and all other resources in the event of emergency situations. Emergency situations include, but are not limited to, severe weather, flood, fire, chemical release, natural gas release, explosions, civil disorder, bomb threats, or other events which threaten or result in serious injury or loss of life, or loss to essential service, station equipment or facility structures.

Refer to Company Policy SF 404, Crisis Management, for those emergencies not specifically identified in this procedure.

Scope

The provisions of this plan apply to all operations at the Heskett Station Units 1, 2, and 3 located at **2025 38TH St., Mandan, ND 58554**.

The plan is intended to document and provide remedial procedures to allow Heskett Station employees to conduct business and operations on an ongoing and uninterrupted basis in an emergency situation.

Emergency Information

To report an emergency, contact the on duty Operator 1 in the station control room. The Operator 1 will immediately contact the Shift Supervisor. The Shift Supervisor will determine whether to call 911 or other appropriate agency. As soon as practical, the Shift Supervisor will contact the Station Manager to inform him of the situation.

Operator 1, Main Control Room

Phone:
Alternate Phone:
Alternate:
Alternate:

[redacted]

Shift Supervisor

Phone:
Alternate:

[redacted]

EAP Administrator

Station Manager (Cory Zentner)
Phone:
Cell:

[redacted]

Emergency

Police, Fire, Medical Emergency and Hazardous Materials Incident	911
MDU Customer Service Center	1-800 MDU FAST (1-800-638-3278)
ND Department of Health	(701) 328-2372
Morton County Emergency Mgmt.	(701) 667-3307
BNSF Railroad	1-800-832-5452
Crossing to Intake DOT# 92618P	
Crossing to the county fishing area – Mandan Water Plant DOT#92617H	

Gas Pipeline Emergency

MDU	1-800-MDU-FAST (1-800-638-3278)

Non-Emergency

Mandan Police	(701) 667-3455
Bismarck Police	(701) 223-1212
Mandan Fire	(701) 667-3288
Bismarck Fire	(701) 355-1400
National Weather Service	(701) 222-0614
Morton County Sheriff	(701) 667-3330
Sanford Health	(701) 323-6000
St. Alexius Medical Center	(701) 530-7000
Tesoro Refinery	(701) 663-2400
Mandan Water Treatment	(701) 667-3278

Executive & Senior Management/Safety/System Operations/Communications & Public Affairs

Executive	Nicole Kivisto
Executive	Jay Skabo
Power Production	Joe Geiger
Environmental	Abbie Krebsbach
Safety	Josh Hocker
Electric Systems Operations	Darcy Neigum
Electric Systems Operations	Electric System Oper
Public Affairs	Mark Hanson

Procedure

This EAP enables preparation for potential emergencies ranging from small incidents to area-wide disasters. Advance planning and application of this EAP is intended to reduce the risk to affected Heskett Station personnel and facilities. Successful implementation of the EAP requires the full support of all personnel.

To protect personnel and Heskett Station facilities, the on-duty Shift Supervisor or designated alternate has authority to make decisions and take necessary actions to ensure success of the EAP.

Upon official declaration of an emergency situation, the EAP shall be activated automatically.

At the direction of the Shift Supervisor, the Operator 1 will use both the plant intercom (Gaitronics) and the FM radio system to broadcast that an emergency has been declared. The announcement shall provide information about what the emergency is and what action should be taken (shelter in place, move to the designated safe area, evacuate, etc.). The announcement should begin by stating "Emergency, Emergency, Emergency." Then, information about what action to take should be repeated three times.

As deemed necessary, emergency agencies will be notified of the situation by the Shift Supervisor.

As deemed necessary, the Company Executive & Senior Management, Environmental, Safety, and the Communications & Public Affairs Department will be notified of the situation.

As deemed necessary, notification to public service commissioners and/or staff, and other governmental agencies of the emergency situation will be made by Company Executive & Senior Management.

Electric Systems Operations will be notified of any emergency events that impact or may impact electric generation and /or the transmission system.

External telephone lines, Gaitronics, and plant FM radio system should be restricted to emergency communications only. Personal cell phone use shall be kept to a minimum during plant emergencies.

To the extent necessary, normal operations shall be curtailed or suspended until the emergency situation is declared terminated.

Evacuation

Heskett Station has designated primary and secondary evacuation points. In the event of an emergency requiring an evacuation of the facility, all employees are to immediately report to the assigned primary evacuation point. Upon arrival to the evacuation point, employees must report to their supervisor. In the event their supervisor is not present, they will report to the Shift Supervisor.

Evacuation Assembly Area:

- Primary: The assembly area for the facility is located at the vehicle parking area south of the administrative building.
- Secondary: If the primary assembly area is deemed not prudent for safety or other reasons, the alternate assembly area is located at the Fuel & Grounds Equipment Warehouse.
- Heskett employees in the process of performing duties located at Heskett Station Unit 3 will report to Unit 3 vehicle parking area.

Each supervisor and employee has a responsibility to ensure that all personnel evacuate from the facility in a timely and safe manner and that all personnel are accounted for. Supervisors will update the Shift Supervisor as to the status of on-site personnel with the following information:

- All company and contracted personnel have been accounted for
- Names of missing personnel and location last seen

Shelter in Place

In the event of an emergency where it would be prudent to remain indoors (severe weather, etc.), an announcement over the plant Gaitronics intercom system and the FM radio system will be made for all personnel to take "shelter in place." In the event of a severe weather announcement, employees and contract personnel are to assemble at the nearest "shelter in place" location to their work.

- Lower level of Administrative Building
- Plant I/O Room
- Control Room
- Intake Building
- Coal Dumper Building Control Room
- Heskett 3 Service Building

All employees are to report to their Supervisor once they reach a shelter in place. Supervisors are responsible to account for employees and contracted employees under their work direction and report to the Shift Supervisor.

Off-site Evacuation

In the event that an emergency poses a safety/health threat an off-site evacuation may be necessary. The Shift Supervisor shall initiate an off-site evacuation and contact 911. Wind direction and speed are critical to the decision of the evacuation

- 911 will be notified
- Morton County Emergency Management will be notified
- Senior Executive & Senior Management will be notified
- Safety Manager will be notified
- Attempts will be made to notify local residents and local businesses

Critical Operations Personnel

During certain emergencies, critical operations personnel (for example, Operator 1 in main control room) will remain at their duty station to operate critical plant equipment and/or processes. Affected critical operations personnel must maintain communications with the Shift Supervisor. If personnel safety is in question, the Shift Supervisor will authorize evacuation of critical operations personnel. However, if communication between employees who remain at their duty station and the Shift Supervisor is lost, the decision to evacuate will be determined by the critical operations employee. Should evacuation of critical operations personnel be necessary, personnel must contact the MDU Electric System Operator and notify them of the total evacuation of premises.

Fire Emergency

All fires are to be reported immediately to the Shift Supervisor. The person reporting the fire must provide the following information:

- Your name
- Size of the fire
- Location of the fire
- What is burning
- Explosive hazards near the fire
- Injuries
- Action being taken

The person reporting the fire is not to hang up until released by the Shift Supervisor.

Attempt to extinguish a fire only if you are trained. Employees are limited to using a fire extinguisher or a fire hose no larger than 1½" under the following conditions:

- Shift Supervisor has been notified
- The fire is in its initial phases, "incipient stage"
- Smoke is avoidable
- Exit is clear of obstruction and close by
- Proper fire extinguisher is nearby
- Protective firefighting clothing and/or respirator is not needed

The Shift Supervisor will determine if the fire warrants an evacuation.

Do not use the elevator during a fire evacuation.

Once the decision to evacuate has been made the Shift Supervisor will call 911.

When 911 is notified, arrangements will be made to meet the emergency personnel at an agreed to location to brief them of the situation and provide direction to the fire location.

External telephone lines, Gaitronics, and plant FM radio system should be restricted to emergency communications only. Personal cell phone use shall be kept to a minimum during plant emergencies.

The Shift Supervisor will notify the Station Manager of the situation.

Medical Emergency

All medical emergencies shall be reported immediately to the Shift Supervisor. The person reporting the emergency must provide the following information:

- Your name
- Exact location(s) of the incident and number of victims
- Nature of the injury or illness (part of body, symptoms, etc.)
- Severity of the injury or illness
- If known, list any pertinent medical or health conditions (i.e. allergies, diabetes, etc.)
- Any dangers present in the area
- Action being taken

Do not move an injured person unless remaining at the present location presents a greater danger.

Remain with the injured person until help arrives.

Administer First Aid/CPR/AED if trained to do so.

The Shift Supervisor will determine the need to call 911.

When 911 is notified, arrangements will be made to meet the emergency personnel at an agreed to location to brief them of the situation and provide direction to location.

External telephone lines, Gaitronics, and plant FM radio system should be restricted to emergency communications only. Personal cell phone use shall be kept to a minimum during plant emergencies.

The Shift Supervisor will notify the Station Manager of the situation.

Severe Weather

During severe weather conditions the Shift Supervisor will direct the Operator 1 to monitor the weather conditions and warn employees of potentially hazardous weather in the area.

If a tornado or severe weather is fast approaching the plant site, the Shift Supervisor is responsible to declare a weather emergency.

- A TORNADO WATCH is given when weather conditions are favorable to the formation of tornadoes.

- A TORNADO WARNING is given when a tornado funnel is sighted or indicated by radar. You will be instructed to take shelter immediately.

During weather emergencies an alert will be broadcast over the Gaitronics and plant FM radio system directing personnel to go to the designated areas.

Heskett safe areas:

- I/O room in the center of the plant
- Coal System Dumper Building Control Room

If a weather emergency is declared, stay inside or proceed quickly to the nearest safe area. Do not attempt to drive to a safe area if visibility is poor or high winds are present.

If personnel are located in outside areas and away from a safe area, they are to move to the lowest point on the ground and lie down.

Do not use the elevator as there is a chance the power supply may be interrupted. The nearest stairway is to be used.

Do not stand in front of windows or doors.

External telephone lines, Gaitronics, and plant FM radio system should be restricted to emergency communications only. Personal cell phone use shall be kept to a minimum during plant emergencies.

Group near an inside wall and protect your head with your arms.

Remain quiet and listen for instructions.

Each supervisor and employee has a responsibility to ensure that all personnel evacuate and/or shelter in place in a timely and safe manner and that all personnel are accounted for. Supervisors will update the Shift Supervisor as to the status of on-site personnel with the following information:

- All company and contracted personnel have been accounted for
- Names of missing personnel and the location they were last seen

When the severe weather has passed, the Shift Supervisor will announce the all clear. Do not leave the safe area until the all clear has been announced.

The Shift Supervisor will coordinate damage assessment and request any emergency assistance. Do not attempt to make repairs or clean up until the site has been assessed for safety.

Emergency drills will be held periodically to acquaint employees with the procedures to follow when severe weather is approaching.

Natural Gas Release

MDU Utilities Group Natural Gas Emergency Response Procedure 3010.1 shall be utilized for all natural gas emergencies up to and including the Heskett Unit 3 Coalescing Inlet Filter valve and all emergencies up to and including the gas meter outlet valves for Heskett Unit 1&2 located in the gas house west of Heskett Unit 3.

For this procedure an emergency is defined as a fire or explosion near or directly involving natural gas facilities, a hazardous concentration of gas detected inside or near a building, or any significant leak. All leaks are to be considered hazardous until the leak is secured.

In the event of a natural gas release the Shift Supervisor will be notified immediately. The person reporting the release must provide the following information.

- Your name
- Exact location of the release
- Injuries

Attempt to isolate the natural gas supply only if you are trained and able to so do in a safe manner.

Do not turn electrical switches or any equipment on or off.

Do not attempt repairs to a leak. Evacuate the building immediately and/or move to a safe location upwind of the incident.

Do not attempt to extinguish a natural gas fire.

The Shift Supervisor will notify the Station Manager of the incident.

The Shift Supervisor will contact MDU Customer Service Center for natural gas emergencies upstream of and including the Heskett Unit 3 Coalescing Inlet Filter valve and upstream of and including the Heskett Unit 1&2 gas meter outlet valves.

The Shift Supervisor will determine the need to call 911. When 911 is notified, arrangements will be made to meet the emergency personnel at an agreed to location to brief them of the situation and provide directions to the release location.

The Shift Supervisor will determine if the release warrants an evacuation and communicate the decision accordingly. The wind direction shall be taken into account when initiating a site evacuation.

The Shift Supervisor will make arrangements to secure the area to prevent entry.

Personnel must not enter areas or buildings until they are deemed safe using testing devices or other means to determine the presence of gas.

Hazardous Material Emergency

All chemical releases must be reported immediately to the Shift Supervisor. The person reporting the release must provide the following information:

- Size of the spill
- Location of the spill
- Product released if available
- Injuries
- Nearby ignition sources
- Plant equipment that is affected

Evacuate the area if instructed to do so.

The Shift Supervisor will make arrangements to secure the area to prevent entry.

The Shift Supervisor will determine the need to call 911. When 911 is notified, arrangements will be made to meet the emergency personnel at an agreed to location to brief them of the situation and provide directions to the release location.

The Shift Supervisor will determine if the release warrants an evacuation and communicate the decision accordingly. The wind direction shall be taken into account when initiating a site evacuation.

External telephone lines, Gaitronics, and plant FM radio system should be restricted to emergency communications only. Personal cell phone use shall be kept to a minimum during plant emergencies.

Railroad Emergency

R. M. Heskett Station is located adjacent to the Burlington Northern Santa Fe (BNSF) railway main line. A railroad emergency on BNSF property may affect station personnel or operations. The purpose of this section is to establish procedures designed to protect life and property in the event of a rail emergency.

A railway emergency could involve fire, explosion, chemical release, or other hazards. A rail incident must be reported to the Shift Supervisor.

When reporting a railroad emergency to the Shift Supervisor, the following information should be provided:

- Location of the incident
- Injuries to personnel and their location, if known
- Size of the spill; number of rail cars involved, etc.
- Product released, if known
- Nearby ignition sources
- Plant equipment that is affected
- Direction of plume travel (smoke, chemical, etc.)

The Shift Supervisor will report the incident to BNSF Railroad and/or 911.

When 911 is notified, arrangements will be made to meet the emergency personnel at an agreed to location to brief them of the situation and provide direction to location.

The Shift Supervisor will make arrangements to secure site access points to prevent unauthorized entry.

The Shift Supervisor will determine if the release warrants an evacuation and communicate the decision accordingly. The wind direction shall be taken into account when initiating a site evacuation.

Circumstances present during a rail emergency may require the Shift Supervisor to appoint an alternative location that is deemed safe.

External telephone lines, Gaitronics, and plant FM radio system should be restricted to emergency communications only. Personal cell phone use shall be kept to a minimum during plant emergencies.

Bomb Threat

Bomb threats are to be reported to the Shift Supervisor immediately.

Most bomb threats are received by phone. If you receive a telephone call reporting a bomb threat, try to transfer them to the Shift Supervisor. If not possible, remain calm and obtain information per the Bomb/Threat Checklist at the end of this section.

Have someone call 911 immediately from another line.

Bomb/Threat Checklist

Keep the Caller on the Line - Do Not Interrupt – Do Not Hang Up

Date: _____ Time Call Began: _____ Time Call Ended: _____

Number and/or letters on the window phone display: _____

Exact Words of Caller_____
_____

___ Male	___ Female	___ Normal	___ Faked	___ Lisp	___ Cracking voice
___ Angry	___ Excited	___ Calm	___ Distinct	___ Crying	___ Soft
___ Accent	___ Deep breathing	___ Slurred	___ Nasal	___ Laughter	___ Raspy
___ Clearing throat	___ Loud	___ Rapid	___ Disguised	___ Slow	___ Stutter

Background Noises:

___ Street noise	___ Animal Noise	___ Mall Noises	___ Voices	___Music
___ Airplanes	___ PA system	___ House Noises	___ Clear	___ Cars
___ Motors	___ Local Call	___ Long Distance	___ Office Machines	___ Static

Other Noises _____

Name of Employee Receiving Call _____

Other Information _____

Training

The Emergency Action Plan will be reviewed on an annual basis or as significant changes occur. Changes shall be submitted to the Safety Manager and the Heskett Station Manager for review.

Supervisors will:

- Be familiar and adhere with the requirements of this plan.
- Ensure that personnel assigned to their area(s) are aware of the EAP requirements as it relates to them and procedures to following during an emergency.

All employees will:

- Be familiar with and adhere to their responsibilities in the event of an emergency.
- Provide assistance as needed for the safety of other employees and visitors.

Marathon Safety Requirements

- Safety
  - Follow all MDU and OSHA rules and procedures
  - Notify Marathon Oil Movements Supervisor prior to starting and ending work each shift. (i.e. let them know you are onsite and exchange contact information)
  - Secure an Excavation permit from Marathon Petroleum Company prior to digging/excavating/boring
  - **Essential PPE Requirements** – At a minimum, all employees, contractors, vendors, and visitors shall wear:
    - FRC, safety glasses, gloves, protective footwear, personnel H2S monitor, and hard hats and goggles on person.
  - MPC Safety Visitor Vendor Video – Personnel not fully vetted to work on the Mandan refinery must complete this RefineryPass visitor/vendor CBT.

Mandan Visitor Orientation – Refinery Pass

- Emergency
  - Project Emergency
    - Minor Injuries
      - Follow MDU and each specific companies' emergency procedures
    - Major Injuries (After calling 911)
      - Call 701.667.2333 - report emergency
      - Give specifics about your emergency
        - Your Name
        - Location and Nature of Emergency
        - How many affected personnel
        - Type of Assistance needed

Security Requirements

- Refinery Access Requirements –
  - Notify Security to open and close refinery gates. Call 701-667-2423
  - Vehicle access for Project
    - Remain in easement boundaries
  - Anyone outside of Easement and vehicle area subject to immediate removal from the Mandan Refinery.

Project Contact list – Marathon

Name	Title
Emergency Onsite	Emergency Phone #
David Boeshans	Products Controls -Day Forman
Nicolette Hersch	Project Engineer
Doug Scheetz	Safety
Will Vance	Security Supervisor
Refinery Security	Gate 2

[redacted]

Project Contact List – Contractor

Jake Hein	MDU

[redacted]

/s/ Doug Scheetz

UNANTICIPATED DISCOVERY PLAN OF CULTURAL RESOURCES AND HUMAN REMAINS FOR THE HESKETT WATER LINE IN MORTON COUNTY, NORTH DAKOTA

For
Montana-Dakota Utilities Co.

January 2022

I. DESCRIPTION

Montana-Dakota Utilities Co. (Montana-Dakota) has set forth this unanticipated discovery plan of cultural resources and human remains for the proposed Heskett Water Line in Morton County, North Dakota. The proposed project is a 12-inch diameter water pipeline to be installed from an existing City of Mandan 30-inch diameter municipal water pipeline to the Heskett Station. The project would be approximately 2,684 feet in length and provide approximately 1,395 gallons per minute (gpm) of fresh water to the Heskett Station. The project is located within the City of Mandan extraterritorial area (ETA), but outside of the incorporated city limits. Water from the pipeline would be primarily utilized for fire protection activities, with a very small volume also being used for evaporative cooling for the combustion turbines.

KLJ completed a Class III inventory for the proposed project in 2021 (ND SHPO ref:. 21-0523). No new cultural resources were identified within the inventory area. Previously recorded isolated find 32MOx493 was updated and is recommended Not Eligible for inclusion on the National Register of Historic Places (NRHP). KLJ recommended a finding of No Historic Properties Affected for the proposed project.

The intent of this plan is to establish procedures to be followed by Montana-Dakota and their contractors in the unanticipated event of previously undocumented cultural resources and human remains discovered during the Heskett Water Line project under the authority of the Public Service Commission (PSC).

II. CULTURAL RESOURCE

Per the *North Dakota State Historic Preservation Office Guidelines* (SHPO), a cultural resource consists of a defined location of past human activity that took place over 50 years ago. This could consist of, but not limited to five historic or prehistoric artifacts or less (defined as an isolated find); six or more historic or prehistoric artifacts within a 60-meter/200-foot area (defined as a site), and/or a single or multiple historic or prehistoric cultural feature(s) (surface or subsurface).

In addition, burials and burials goods are a protected classification of cultural resources. A burial could consist of, but not limited to human remains including bones, teeth, hair, and

other preserved tissues; items associate with the burial including clothing, casket/coffin, or headstone, and/or the burial pit or grave shaft.

III. UNANTICIPATED DISCOVERY PLAN

This discovery plan will apply to all surface and subsurface cultural resources or burials discovered during the Heskett Water Line construction process by Montana-Dakota personnel or contractors.

If non-burial cultural resources are believed to be uncovered during the project, the following steps shall be taken:

1. The contractor shall cease work in the immediate area to avoid disturbing the find and notify the onsite Montana-Dakota or contractor person-in-charge (PC).
    a. Ground-disturbing activities will cease and a KLJ archaeologist will be contacted immediately to establish a sufficient buffer zone. The buffer zone would protect the discovery and provide a safe and adequate area for archaeologists to investigate the find.
    b. No cultural materials are to be removed or moved from their original location.
2. The PC will notify the Montana-Dakota project lead and KLJ archaeologists of the find.
    a. At the discretion of the KLJ archaeologists, photographs of the find, including artifacts, features, bones, and general vicinity photographs of finding area shall be taken also noting the location tract, milepost, and/or stationing. The information will be emailed to the KLJ archaeologist.
3. If the find is confirmed to be a cultural resource, the Montana-Dakota project lead, or a KLJ archaeologist at the discretion of the Montana-Dakota project lead, shall notify the PSC and the SHPO to discuss and determine a course of action for the cultural resource.

A. Burials

Intentional, unauthorized disturbance of a human burial site under North Dakota State law is a Class C felony:

> *"Any person who knows or has reasonable grounds to believe that a human burial site, human remains, or burial goods, found in or on any land, shall refrain from any activity which might disturb or immediately cease any continued activity which might cause further disturbance of such burial, remains, or goods and shall, as soon as practicable, report the presence or discovery of the burial, remains, or goods, to the local law enforcement agency with jurisdiction in the area in which the burial, remains, or goods are located. A person is guilty of a class B misdemeanor who is required to make such report and willfully, as defined in section 12.1-02-02, fails to make the same. The requirements imposed in this subsection do not apply to any person*

engaged in the salvaging excavation or other disinterment of a human burial under authority of law." (23-06-27.5).

If a contractor or PC believes human remains are discovered during construction, the following will take place in accordance with procedures defined in North Dakota Administrative Code (NDAC) 40-02, in accordance with North Dakota Century Code (NDCC) 23-06-27 (Protection of human burial sites, human remains, and burial goods- Unlawful Acts-Penalties-Exceptions):

1. Work will immediately cease in the vicinity of the burial and a minimum of a 100-foot buffer zone would be created. The Montana-Dakota project lead and KLJ archaeologist will be contacted immediately.
2. The Montana-Dakota project lead, or a KLJ archaeologist at the discretion of the Montana-Dakota project lead, will contact the Morton County Sheriff's Office and County Coroner.
3. If the remains are determined to be human and not be a crime scene, the SHPO and PSC will be notified within 24-hours. The SHPO and PSC may also be notified at the same time as the County Sheriff's office.
4. The SHPO shall inform the North Dakota State Health Department and Intertribal Reinterment Committee (ITRC).
5. All appropriate respect will be shown for any burial discovered on the project including efforts to ensure that the burial is protected from on-lookers and potential looting.
6. At the discretion of the SHPO, PSC, and/or the ITRC, the human remains, and the immediate burial area may be protected by carefully placed back fill or tarps.
7. All areas within 50 feet of the burial will be protected from further disturbance until the above listed parties are notified, they consult on the project, and they devise a scope of work under which the project may proceed.

IV. CONTACTS

- **KLJ Archaeologists**
  Andrew Robinson – 701-934-5507; Andrew.Robinson@KLJeng.com
  Chris Davis – 720-415-6558; Chris.David@KLJeng.com
  Corey Yates – 605-939-9583; Corey.Yates@KLJeng.com

- **SHSND**
  Andrew Clark - 701-328-3574; AndrewClark@nd.gov
  Lisa Steckler – 701-328-3577; Lsteckler@nd.gov

- **Morton County Sheriff**
  Kyle Kirchmeier
  205 1st Ave NW
  Mandan, ND 58554
  707-667-3330

- **Morton County Medical Examiner & Coroner**
  2008 Twin City Drive
  Mandan, ND 58554
  701-667-1000

- **Montana – Dakota**
  Jacob Hein – Project Lead/Engineering – 701-222-7793; Jacob.hein@mdu.com
  Andy McDonald – Environmental – 701-222-7941; andy.mcdonald@mdu.com
  Tim Nottestad – Onsite Contact – 701-221-1913; tim.nottestad@mdu.com

- **Contractor (TBD)**
  Person in Charge - TBD

Appendix D

Scoping Package and Responses

4585 Coleman Street
Bismarck, ND 58503-0431
701 355 8400
KLJENG.COM

August 9, 2021

«First_Name» «Last_Name», «Title»
«Department»
«Agency»
«Address»
«City», «State» «Zip»

Re: Heskett Fire Water Line
Montana-Dakota Utilities Co.
Morton County, North Dakota

Dear «Salutation» «Last_Name»:

On behalf of Montana-Dakota Utilities Co. (Montana-Dakota), KLJ is preparing an application for the Heskett Fire Water Line pursuant to the North Dakota Energy Conversion and Transmission Facility Siting Act for consideration by the North Dakota Public Service Commission. The application includes the development of a freshwater pipeline in Morton County, North Dakota. Please refer to the enclosed ***Project Location Map***.

The Heskett Fire Water Line Project is expected to include installation of approximately 2,500 feet of 12-inch diameter pipeline, transferring water from an existing City of Mandan 30-inch diameter municipal water pipeline to the Heskett Station. The municipal water pipeline receives water from the adjacent City of Mandan Water Treatment Facility. The water would be primarily utilized for fire protection activities, with a very small volume also being used for evaporative cooling for the combustion turbines. Construction of the project is expected to begin during the spring of 2022, with the pipeline expected to become operational by the summer of 2022. No federal funding is anticipated.

We are soliciting your views and comments on the proposed project. We are particularly interested in any property within the project area that your agency may own or have an interest in. We would also appreciate being made aware of any proposed development your agency may be contemplating within or near the project area. Any information that might help us with the application would be appreciated.

We request that you please provide any comments or information you may have regarding the Heskett Fire Water Line Project to our office on or before September 9, 2021. If you have any questions or need further information, please contact me at 701-250-5961 or ashley.ross@kljeng.com. Thank you for your time and cooperation.

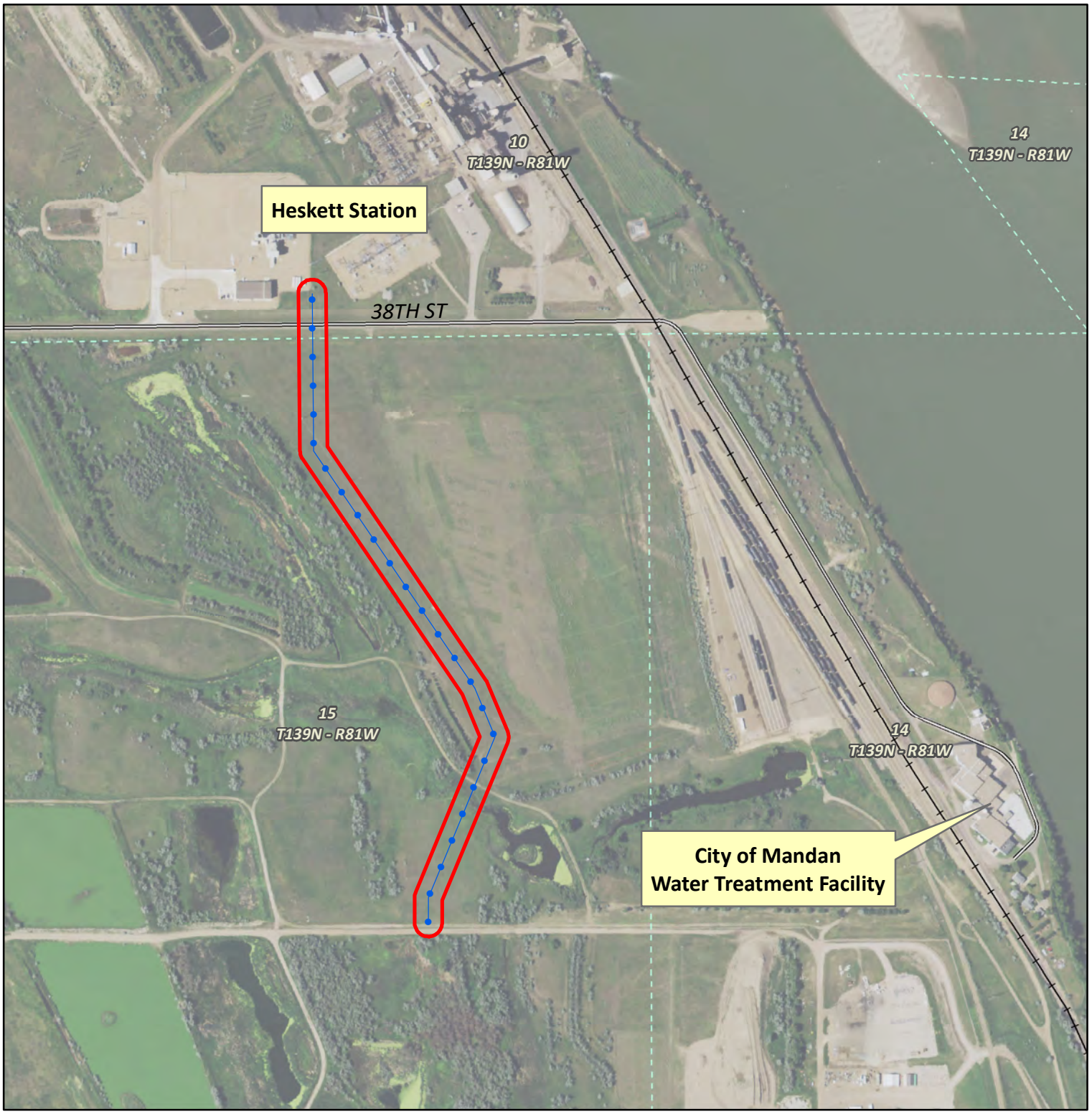
Sincerely,

KLJ

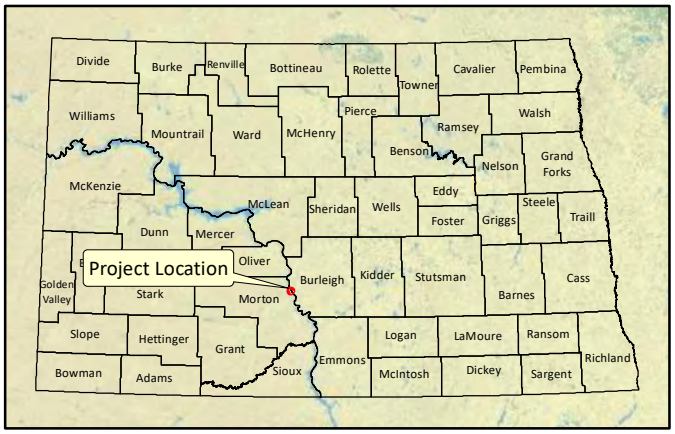
Ashley Ross

Ashley Ross, Project Manager

Enclosure: Project Location Map



Document Location: K:\Projects\Power\MDU\2109-01109\GIS\Environmental\2109_01109_MDU_Heskett_Location.mxd



Heskett Fire Water Line Project
Morton County, North Dakota
Project Location Map

Heskett Fire Water Line Route

Study Area

0 50 100 200 Meters

0 200 400 800 Feet

N
W E
S

KLJ

KLJ Project Number: 2109-01109
Date Created: 8/6/2021
Created By: nickanderson

Heskett Fire Water Line Project Scoping Letter Mailing List

Type	Agency Required by NDAC 69-06-01-05	Salutation	First Name	Last Name	Title	Department	Agency	Address	City	State	Zip
STATE	1	Mr.	Kyle	Wanner	Director		ND Aeronautics Commission	PO Box 5020	Bismarck	ND	58502-5020
STATE	2	Mr.	Wayne	Stenehjem	Attorney General		Office of Attorney General	600 E Boulevard Ave, Dept 125	Bismarck	ND	58505
STATE	3	Mr.	Doug	Goehring	Agriculture Commissioner		ND Department of Agriculture	600 E Boulevard Ave, Dept 602	Bismarck	ND	58505-0020
STATE	4	Mr.	Dave	Glatt	Director		ND Department of Environmental Quality	918 E Divide Ave	Bismarck	ND	58501-1947
STATE	5	Mr.	Christopher	Jones	Executive Director		ND Department of Human Services	600 E Boulevard Ave, Dept 325	Bismarck	ND	58505-0250
STATE	6	Ms.	Erica	Thunder	Commissioner of Labor		ND Department of Labor & Human Rights	600 E Boulevard Ave, Dept 406	Bismarck	ND	58505-0340
STATE	7	Mr.	Wayde	Sick	Director and Executive Officer		ND Department of Career & Technical Education	600 E Boulevard Ave, Dept 270	Bismarck	ND	58505-0610
STATE	8	Mr.	James	Leiman	Commissioner		ND Department of Commerce	1600 E Century Ave, Suite 2	Bismarck	ND	58503
STATE	9 & 17	Ms.	Jodi	Smith	Land Commissioner		ND Department of Trust Lands	PO Box 5523	Bismarck	ND	58506-5523
STATE	10	Mr.	Steve	Dyke	Conservation Supervisor	Conservation Section	ND Game & Fish Department	100 N Bismarck Expressway	Bismarck	ND	58501-5095
STATE	11	Ms.	Karlene	Fine	Executive Director		ND Industrial Commission	600 E Boulevard Ave, Dept 405	Bismarck	ND	58505-0840
STATE	12	Governor	Doug	Burgum	Governor		Office of Governor	600 E Boulevard Ave	Bismarck	ND	58505-0001
STATE	13	Mr.	Larry	Gangl	District Engineer	Bismarck District Office	ND Department of Transportation	218 Airport Road	Bismarck	ND	58504-6003
STATE	14	Mr.	Bill	Peterson	Director		State Historical Society of ND	612 E Boulevard Ave	Bismarck	ND	58505
STATE	15	Mr.	Scott	Davis	Executive Director		ND Indian Affairs Commission	600 E Boulevard Ave	Bismarck	ND	58505
STATE	16	Mr.	Bryan	Klipfel	Executive Director		Job Service ND	PO Box 5507	Bismarck	ND	58506-5507
STATE	18	Mr.	Paul	Taylor	Interim Director		ND Parks & Recreation Department	PO Box 5594	Bismarck	ND	58506-5594
STATE	19	Mr.	Barton	Schott	Chairperson		ND State Soil Conservation Committee	7047 County Road 33	Kulm	ND	58456
STATE	20	Mr.	John	Paczkowski	Interim State Engineer		ND Department of Water Resources	900 E Boulevard Ave, Dept 770	Bismarck	ND	58505-0850
FEDERAL	21	Sir or Madam			Deputy Base Civil Engineer	319 CES/CD	Grand Forks Air Force Base	525 Tuskegee Airmen Blvd.	Grand Forks AFB	ND	58205-6434
FEDERAL	21	Mr.	Daniel	Lewis	PE	Chief Missile Engineering	Minot Air Force Base	445 Peacekeeper Pl	Minot AFB	ND	58705
FEDERAL	21	Mr.	Cy	Munos	Cable Affairs Officer	91st Missile Maintenance Squadron	Minot Air Force Base	300 Minuteman Dr	Minot AFB	ND	58705
FEDERAL	22	Ms.	Kathy	Baer	Refuge Manager	Lake Ilo Wetland Management District	US Fish & Wildlife Service	489 102 Ave SW	Dunn Center	ND	58626
FEDERAL	22	Mr.	Jared	Newton	Refuge Manager	Long Lake Wetland Management District	US Fish & Wildlife Service	12000 353rd St. SE	Moffitt	ND	58560-9740
FEDERAL	22	Mr.	Drew	Becker	Supervisor	ND Field Office	US Fish & Wildlife Service	3425 Miriam Ave	Bismarck	ND	58501-7926
FEDERAL	23	Ms.	Patricia	McQueary	ND State Regulatory Program Manager	ND Regulatory Office	US Army Corps of Engineers	3319 University Drive	Bismarck	ND	58504
FEDERAL	24	Mr.	Dave	Anderson	Assistant Manager	Dakota-Minnesota Airports District Office, BIS-ADO-600	Federal Aviation Administration	2301 University Dr, Bldg 23B	Bismarck	ND	58504
COUNTY	25	Mr.	Ron	Leingang	Chairman		Morton County Commission	210 2nd Ave NW	Mandan	ND	58554-3124
CITY	25	Mr.	Justin	Froseth	Director	Engineering & Planning	City of Mandan	205 2nd Ave NW	Mandan	ND	58554
STATE	26	Mr.	John	Weeda	Director	ND Transmission Authority	ND Industrial Commission	PO Box 2277	Bismarck	ND	58502-2277
STATE	27	Mr.	Justin	Kringstad	Director	ND Pipeline Authority	ND Industrial Commission	600 E Boulevard Ave, Dept 405	Bismarck	ND	58505-0840
STATE	28	Mr.	Edward	Murphy	State Geologist		ND Geological Survey	600 E Boulevard Ave.	Bismarck	ND	58505-0840

Solicitation Letter Responses

Federal

US Army Corps of Engineers – Bismarck Regulatory Office

US Fish and Wildlife Service – Audubon Wetland Management District

US Fish and Wildlife Service – ND Field Office

State

North Dakota Department of Environmental Quality

North Dakota Department of Water Resources

North Dakota Game and Fish Department

North Dakota Parks and Recreation Department

State Historical Society of North Dakota

Local

None

From: Nygard, Jeremy S CIV USARMY CENWO (USA)
To: Ashley Ross
Subject: NWO-2021-01483-BIS, KLJ; MDU Heskett Fire Water Line Project
Date: Monday, August 23, 2021 3:50:36 PM
Attachments: NWO-2021-01483_20210823_SOV NWP 58.pdf
Eng_Form_6082_2019Jun.pdf
NWP 58 Fact Sheet 2021.pdf

Hi Ashley,

Our office has reviewed the information you provided regarding the proposed MDU Heskett Fire Water Line Project and determined that a U.S. Army Corps of Engineers Section 404 permit may be required for your project. Please see attached letter, blank application form, and fact sheet for Nationwide Permit 58. Thank you,

v/r

Jeremy Nygard
Regulatory Permit Assistant
U.S. Army Corps of Engineers
North Dakota Regulatory Office
3319 University Drive
Bismarck, ND 58504
701-255-0015 ext. 2006

Due to precautions taken in response to the COVID-19 pandemic, email is currently the best way to contact me. I am mostly teleworking from home so if you call my office phone extension and leave a voicemail, I'll receive it via email and I'll respond as soon as possible.

The North Dakota Regulatory office prefers that all submissions are sent electronically to the following email address: CENWO-OD-RND@usace.army.mil instead of a hard copy by mail. Please split large attachments (>25 MB) into multiple emails if needed.

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
NORTH DAKOTA REGULATORY OFFICE
3319 UNIVERSITY DRIVE
BISMARCK, NORTH DAKOTA 58504-7565

August 23, 2021

NWO-2021-01483-BIS

Kadrmas Lee & Jackson
Attn: Ms. Ashley Ross
4585 Coleman Street
Bismarck, North Dakota 58503-0431

Dear Ms. Ross:

This is in response to your solicitation letter received on August 12, 2021 requesting Department of the Army (DA), United States Army Corps of Engineers (Corps) comments on the proposed MDU Heskett Fire Water Line Project project. The project is located in the SE¼ of Section 10 and NE¼ of Section 15, Township 139 North, Range 81 West, City of Mandan, Morton County, North Dakota.

Corps Regulatory Offices administers Section 404 of the Clean Water Act. Section 404 of the Clean Water Act regulates the discharge of dredge or fill material (temporarily or permanently) in waters of the United States. Waters of the United States may include, but are not limited to, rivers, streams, ditches, coulees, lakes, ponds, and their adjacent wetlands. Fill material includes, but is not limited to, rock, sand, soil, clay, plastics, construction debris, wood chips, overburden from mines or other excavation activities and materials used to create any structure or infrastructure in waters of the United States.

Enclosed for your information is the fact sheet for Nationwide Permit 58, Utility Line Activities for Water and Other Substances. Utility lines are already authorized by Nationwide Permit 58 provided the utility line can be placed without any change to pre-construction contours and all other proposed construction activities and facilities are in compliance with the Nationwide's permit conditions and 401 Water Quality Certification. On Tribal Lands, Water Quality Certification is denied for all Nationwide Permits. Applicants must work with EPA to obtain individual water quality certification. Please note the pre-construction notification requirements on page 3 of the fact sheet. If a project involves any one of the three notification requirements, the project proponent must submit a DA application. Furthermore, a project must also be in compliance with the "Regional Conditions for Nationwide Permits within the State of North Dakota", found on pages 23 thru 30 of the fact sheets.

In the event your project(s) requires approval from the U.S. Army Corps of Engineers and cannot be authorized by Nationwide Permit(s), a Standard or Individual Permit will be required. A project that requires a Standard or Individual Permit is intensely reviewed and will require the issuance of a public notice. A Standard or Individual Permit generally requires a minimum of 120 days for processing but based on the

project impacts and comments received through the public notice may extend well beyond 120 days.

This correspondence letter does not approve the proposed construction work or does not verify the proposed project complies with the Nationwide Permit(s).

If any of these projects require a Section 404 permit, please complete and submit the enclosed Department of the Army permit application (ENG Form 6082) to the U.S. Army Corps of Engineers, North Dakota Regulatory Office, 3319 University Drive, North Dakota 58504 or to the email address below. If you are unsure if a permit is required, you may submit an application; include a project location map, description of work, and construction methodology.

Due to precautions taken in response to the COVID-19 pandemic, The North Dakota Regulatory office prefers that all submissions are sent electronically to the following email address: CENWO-OD-RND@usace.army.mil instead of a hard copy by mail. Please split large attachments (>25 MB) into multiple emails if needed.

Please refer to identification number NWO-2021-01483-BIS in any correspondence concerning this project. If you have any questions, please contact Jeremy Nygard at U.S. Army Corps of Engineers, North Dakota Regulatory Office, 3319 University Drive, Bismarck, North Dakota 58504-7565, by email at Jeremy.S.Nygard@usace.army.mil, or telephone at (701) 255-0015, extension 2006. For more information regarding our program, please visit our website at http://www.nwo.usace.army.mil/Missions/RegulatoryProgram/NorthDakota.aspx.

Sincerely,

Toni R. Erhardt
Senior Project Manager
North Dakota Regulatory Office

Enclosure

US Army Corps of Engineers
Omaha District

Nationwide Permit 58: Utility Line Activities for Water and Other Substances (2021)

Activities required for the construction, maintenance, repair, and removal of utility lines for water and other substances, excluding oil, natural gas, products derived from oil or natural gas, and electricity. Oil or natural gas pipeline activities or electric utility line and telecommunications activities may be authorized by NWPs 12 or 57, respectively. This NWP also authorizes associated utility line facilities in waters of the United States, provided the activity does not result in the loss of greater than 1/2-acre of waters of the United States for each single and complete project.

Utility lines: This NWP authorizes discharges of dredged or fill material into waters of the United States and structures or work in navigable waters for crossings of those waters associated with the construction, maintenance, or repair of utility lines for water and other substances, including outfall and intake structures. There must be no change in pre-construction contours of waters of the United States. A “utility line” is defined as any pipe or pipeline for the transportation of any gaseous, liquid, liquescent, or slurry substance, for any purpose that is not oil, natural gas, or petrochemicals. Examples of activities authorized by this NWP include utility lines that convey water, sewage, stormwater, wastewater, brine, irrigation water, and industrial products that are not petrochemicals. The term “utility line” does not include activities that drain a water of the United States, such as drainage tile or french drains, but it does apply to pipes conveying drainage from another area.

Material resulting from trench excavation may be temporarily sidecast into waters of the United States for no more than three months, provided the material is not placed in such a manner that it is dispersed by currents or other forces. The district engineer may extend the period of temporary side casting for no more than a total of 180 days, where appropriate. In wetlands, the top 6 to 12 inches of the trench should normally be backfilled with topsoil from the trench. The trench cannot be constructed or backfilled in such a manner as to drain waters of the United States (*e.g.,* backfilling with extensive gravel layers, creating a french drain effect). Any exposed slopes and stream banks must be stabilized immediately upon completion of the utility line crossing of each waterbody.

Utility line substations: This NWP authorizes the construction, maintenance, or expansion of substation facilities associated with a utility line in non-tidal waters of the United States, provided the activity, in combination with all other activities included in one single and complete project, does not result in the loss of greater than 1/2-acre of waters of the United States. This NWP does not authorize discharges of dredged or fill material into non-tidal wetlands adjacent to tidal waters of the United States to construct, maintain, or expand substation facilities.

Foundations for above-ground utility lines: This NWP authorizes the construction or maintenance of foundations for above-ground utility lines in all waters of the United States, provided the foundations are the minimum size necessary.

Access roads: This NWP authorizes the construction of access roads for the construction and maintenance of utility lines, including utility line substations, in non-tidal waters of the United States, provided the activity, in combination with all other activities included in one single and complete project, does not cause the loss of greater than 1/2-acre of non-tidal waters of the United States. This NWP does not authorize discharges of dredged or fill material into non-tidal wetlands adjacent to tidal waters for access roads. Access roads must be the minimum width necessary (see Note 2, below). Access roads must be constructed so that the length of the road minimizes any adverse effects on waters of the United States and must be as near as possible to pre-construction contours and elevations (*e.g.,* at grade corduroy roads or geotextile/gravel roads). Access roads constructed above pre-construction contours and elevations in waters of the United States must be properly bridged or culverted to maintain surface flows.

This NWP may authorize utility lines in or affecting navigable waters of the United States even if there is no associated discharge of dredged or fill material (see 33 CFR part 322). Overhead utility lines constructed over section 10 waters and utility lines that are routed in or under section 10 waters without a discharge of dredged or fill material require a section 10 permit.

This NWP authorizes, to the extent that Department of the Army authorization is required, temporary structures, fills, and work necessary for the remediation of inadvertent returns of drilling fluids to waters of the United States through sub-soil fissures or fractures that might occur during horizontal directional drilling activities conducted for the purpose of installing or replacing utility lines. These remediation activities must be done as soon as practicable, to restore the affected waterbody. District engineers may add special conditions to this NWP to require a remediation plan for addressing inadvertent returns of drilling fluids to waters of the United States during horizontal directional drilling activities conducted for the purpose of installing or replacing utility lines.

This NWP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to conduct the utility line activity. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges of dredged or fill material, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. After construction, temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if: (1) A section 10 permit is required; or (2) the discharge will result in the loss of greater than 1/10-acre of waters of the United States. (See general condition 32.) (Authorities: Sections 10 and 404)

Note 1: Where the utility line is constructed, installed, or maintained in navigable waters of the United States (*i.e.,* section 10 waters) within the coastal United States, the Great Lakes, and United States territories, a copy of the NWP verification will be sent by the Corps to the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), for charting the utility line to protect navigation.

Note 2: For utility line activities crossing a single waterbody more than one time at separate and distant locations, or multiple waterbodies at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. Utility line activities must comply with 33 CFR 330.6(d).

Note 3: Access roads used for both construction and maintenance may be authorized, provided they meet the terms and conditions of this NWP. Access roads used solely for construction of the utility line must be removed upon completion of the work, in accordance with the requirements for temporary fills.

Note 4: Pipes or pipelines used to transport gaseous, liquid, liquescent, or slurry substances over navigable waters of the United States are considered to be bridges, not utility lines, and may require a permit from the U.S. Coast Guard pursuant to the General Bridge Act of 1946. However, any discharges of dredged or fill material into waters of the United States associated with such pipelines will require a section 404 permit (see NWP 15).

Note 5: This NWP authorizes utility line maintenance and repair activities that do not qualify for the Clean Water Act section 404(f) exemption for maintenance of currently serviceable fills or fill structures.

Note 6: For activities that require pre-construction notification, the PCN must include any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings that require Department of the Army authorization but do not require pre-construction notification (see paragraph (b)(4) of general condition 32). The district engineer will evaluate the PCN in accordance with Section D, “District Engineer's Decision.” The district engineer may require mitigation to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see general condition 23).

General Conditions

1. Navigation.

(a) No activity may cause more than a minimal adverse effect on navigation.

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his or her authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. Aquatic Life Movements.

No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species. If a bottomless culvert cannot be used, then the crossing should be designed and constructed to minimize adverse effects to aquatic life movements.

3. Spawning Areas.

Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (*e.g.,* through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. Migratory Bird Breeding Areas.

Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. Shellfish Beds.

No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.

6. Suitable Material.

No activity may use unsuitable material (*e.g.,* trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see section 307 of the Clean Water Act).

7. Water Supply Intakes.

No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. Adverse Effects From Impoundments.

If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. Management of Water Flows.

To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization, storm water management activities, and temporary and permanent road crossings, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (*e.g.,* stream restoration or relocation activities).

10. Fills Within 100-Year Floodplains.

The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. Equipment.

Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. Soil Erosion and Sediment Controls.

Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow, or during low tides.

13. Removal of Temporary Structures and Fills.

Temporary structures must be removed, to the maximum extent practicable, after their use has been discontinued. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance.

Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

15. Single and Complete Project.

The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

16. Wild and Scenic Rivers.

(a) No NWP activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status.

(b) If a proposed NWP activity will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, the permittee must submit a pre-construction notification (see general condition 32). The district engineer will coordinate the PCN with the Federal agency with direct management responsibility for that river. Permittees shall not begin the NWP activity until notified by the district engineer that the Federal agency with direct management responsibility for that river has determined in writing that the proposed NWP activity will not adversely affect the Wild and Scenic River designation or study status.

(c) Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (*e.g.,* National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service). Information on these rivers is also available at: *http://www.rivers.gov/*.

17. Tribal Rights.

No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

18. Endangered Species.

(a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify designated critical habitat or critical habitat proposed for such designation. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless ESA section 7 consultation addressing the consequences of the proposed activity on listed species or

critical habitat has been completed. See 50 CFR 402.02 for the definition of “effects of the action” for the purposes of ESA section 7 consultation, as well as 50 CFR 402.17, which provides further explanation under ESA section 7 regarding “activities that are reasonably certain to occur” and “consequences caused by the proposed action.”

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA (see 33 CFR 330.4(f)(1)). If pre-construction notification is required for the proposed activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation has not been submitted, additional ESA section 7 consultation may be necessary for the activity and the respective federal agency would be responsible for fulfilling its obligation under section 7 of the ESA.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat or critical habitat proposed for such designation, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation), the pre-construction notification must include the name(s) of the endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or that utilize the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the proposed activity. The district engineer will determine whether the proposed activity “may affect” or will have “no effect” to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. For activities where the non-Federal applicant has identified listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) that might be affected or is in the vicinity of the activity, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification that the proposed activity will have “no effect” on listed species (or species proposed for listing or designated critical habitat (or critical habitat proposed for such designation), or until ESA section 7 consultation or conference has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(d) As a result of formal or informal consultation or conference with the FWS or NMFS the district engineer may add species-specific permit conditions to the NWPs.

(e) Authorization of an activity by an NWP does not authorize the “take” of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (*e.g.,* an ESA Section 10 Permit, a Biological Opinion with

"incidental take" provisions, etc.) from the FWS or the NMFS, the Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word "harm" in the definition of "take" means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

(f) If the non-federal permittee has a valid ESA section 10(a)(1)(B) incidental take permit with an approved Habitat Conservation Plan for a project or a group of projects that includes the proposed NWP activity, the non-federal applicant should provide a copy of that ESA section 10(a)(1)(B) permit with the PCN required by paragraph (c) of this general condition. The district engineer will coordinate with the agency that issued the ESA section 10(a)(1)(B) permit to determine whether the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation conducted for the ESA section 10(a)(1)(B) permit. If that coordination results in concurrence from the agency that the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation for the ESA section 10(a)(1)(B) permit, the district engineer does not need to conduct a separate ESA section 7 consultation for the proposed NWP activity. The district engineer will notify the non-federal applicant within 45 days of receipt of a complete pre-construction notification whether the ESA section 10(a)(1)(B) permit covers the proposed NWP activity or whether additional ESA section 7 consultation is required.

(g) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the FWS and NMFS or their world wide web pages at *http://www.fws.gov/* or *http://www.fws.gov/ipac/* and *http://www.nmfs.noaa.gov/pr/species/esa/* respectively.

19. Migratory Birds and Bald and Golden Eagles.

The permittee is responsible for ensuring that an action authorized by an NWP complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting the appropriate local office of the U.S. Fish and Wildlife Service to determine what measures, if any, are necessary or appropriate to reduce adverse effects to migratory birds or eagles, including whether "incidental take" permits are necessary and available under the Migratory Bird Treaty Act or Bald and Golden Eagle Protection Act for a particular activity.

20. Historic Properties.

(a) No activity is authorized under any NWP which may have the potential to cause effects to properties listed, or eligible for listing, in the National Register of Historic Places until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)(1)). If pre-construction notification is required for the proposed NWP activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation is not submitted, then additional consultation under section 106 may be necessary. The respective federal agency is responsible for fulfilling its obligation to comply with section 106.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the NWP activity might have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties might have the potential to be affected by the proposed NWP activity or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of, or potential for, the presence of historic properties can be sought from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or designated tribal representative, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts commensurate with potential impacts, which may include background research, consultation, oral history interviews, sample field investigation, and/or field survey. Based on the information submitted in the PCN and these identification efforts, the district engineer shall determine whether the proposed NWP activity has the potential to cause effects on the historic properties. Section 106 consultation is not required when the district engineer determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). Section 106 consultation is required when the district engineer determines that the activity has the potential to cause effects on historic properties. The district engineer will conduct consultation with consulting parties identified under 36 CFR 800.2(c) when he or she makes any of the following effect determinations for the purposes of section 106 of the NHPA: No historic properties affected, no adverse effect, or adverse effect.

(d) Where the non-Federal applicant has identified historic properties on which the proposed NWP activity might have the potential to cause effects and has so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects to historic properties or that NHPA section 106 consultation has been completed. For non-federal permittees, the district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA section 106 consultation is required. If NHPA section 106 consultation is required, the district engineer will notify

the non-Federal applicant that he or she cannot begin the activity until section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(e) Prospective permittees should be aware that section 110k of the NHPA (54 U.S.C. 306113) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

21. Discovery of Previously Unknown Remains and Artifacts.

Permittees that discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by an NWP, they must immediately notify the district engineer of what they have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal, and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

22. Designated Critical Resource Waters.

Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, 52, 57 and 58 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, 38, and 54, notification is required in accordance with general condition 32, for any activity

proposed by permittees in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after she or he determines that the impacts to the critical resource waters will be no more than minimal.

23. Mitigation.

The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (*i.e.,* on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects.

(d) Compensatory mitigation at a minimum one-for-one ratio will be required for all losses of stream bed that exceed 3/100-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. This compensatory mitigation requirement may be satisfied through the restoration or enhancement of riparian areas next to streams in accordance with paragraph (e) of this general condition. For losses of stream bed of 3/100-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects. Compensatory mitigation for losses of streams should be provided, if practicable, through stream rehabilitation, enhancement, or preservation, since streams are difficult-to-replace resources (see 33 CFR 332.3(e)(3)).

(e) Compensatory mitigation plans for NWP activities in or near streams or other open waters will normally include a requirement for the restoration or enhancement,

maintenance, and legal protection (*e.g.,* conservation easements) of riparian areas next to open waters. In some cases, the restoration or maintenance/protection of riparian areas may be the only compensatory mitigation required. If restoring riparian areas involves planting vegetation, only native species should be planted. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to restore or maintain/protect a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or maintaining/protecting a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (*e.g.,* riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of minimization or compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(f) Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.

(1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in no more than minimal adverse environmental effects. For the NWPs, the preferred mechanism for providing compensatory mitigation is mitigation bank credits or in-lieu fee program credits (see 33 CFR 332.3(b)(2) and (3)). However, if an appropriate number and type of mitigation bank or in-lieu credits are not available at the time the PCN is submitted to the district engineer, the district engineer may approve the use of permittee-responsible mitigation.

(2) The amount of compensatory mitigation required by the district engineer must be sufficient to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see 33 CFR 330.1(e)(3)). (See also 33 CFR 332.3(f).)

(3) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, aquatic resource restoration should be the first compensatory mitigation option considered for permittee-responsible mitigation.

(4) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) through (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory

mitigation (see 33 CFR 332.3(k)(3)). If permittee-responsible mitigation is the proposed option, and the proposed compensatory mitigation site is located on land in which another federal agency holds an easement, the district engineer will coordinate with that federal agency to determine if proposed compensatory mitigation project is compatible with the terms of the easement.

(5) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan needs to address only the baseline conditions at the impact site and the number of credits to be provided (see 33 CFR 332.4(c)(1)(ii)).

(6) Compensatory mitigation requirements (*e.g.,* resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan (see 33 CFR 332.4(c)(1)(ii)).

(g) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any NWP activity resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that an NWP activity already meeting the established acreage limits also satisfies the no more than minimal impact requirement for the NWPs.

(h) Permittees may propose the use of mitigation banks, in-lieu fee programs, or permittee-responsible mitigation. When developing a compensatory mitigation proposal, the permittee must consider appropriate and practicable options consistent with the framework at 33 CFR 332.3(b). For activities resulting in the loss of marine or estuarine resources, permittee-responsible mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.

(i) Where certain functions and services of waters of the United States are permanently adversely affected by a regulated activity, such as discharges of dredged or fill material into waters of the United States that will convert a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse environmental effects of the activity to the no more than minimal level.

24. Safety of Impoundment Structures.

To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with

established state or federal, dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. Water Quality.

(a) Where the certifying authority (state, authorized tribe, or EPA, as appropriate) has not previously certified compliance of an NWP with CWA section 401, a CWA section 401 water quality certification for the proposed discharge must be obtained or waived (see 33 CFR 330.4(c)). If the permittee cannot comply with all of the conditions of a water quality certification previously issued by certifying authority for the issuance of the NWP, then the permittee must obtain a water quality certification or waiver for the proposed discharge in order for the activity to be authorized by an NWP.

(b) If the NWP activity requires pre-construction notification and the certifying authority has not previously certified compliance of an NWP with CWA section 401, the proposed discharge is not authorized by an NWP until water quality certification is obtained or waived. If the certifying authority issues a water quality certification for the proposed discharge, the permittee must submit a copy of the certification to the district engineer. The discharge is not authorized by an NWP until the district engineer has notified the permittee that the water quality certification requirement has been satisfied by the issuance of a water quality certification or a waiver.

(c) The district engineer or certifying authority may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

26. Coastal Zone Management.

In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). If the permittee cannot comply with all of the conditions of a coastal zone management consistency concurrence previously issued by the state, then the permittee must obtain an individual coastal zone management consistency concurrence or presumption of concurrence in order for the activity to be authorized by an NWP. The district engineer or a state may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. Regional and Case-By-Case Conditions.

The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its CWA section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. Use of Multiple Nationwide Permits.

The use of more than one NWP for a single and complete project is authorized, subject to the following restrictions:

(a) If only one of the NWPs used to authorize the single and complete project has a specified acreage limit, the acreage loss of waters of the United States cannot exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

(b) If one or more of the NWPs used to authorize the single and complete project has specified acreage limits, the acreage loss of waters of the United States authorized by those NWPs cannot exceed their respective specified acreage limits. For example, if a commercial development is constructed under NWP 39, and the single and complete project includes the filling of an upland ditch authorized by NWP 46, the maximum acreage loss of waters of the United States for the commercial development under NWP 39 cannot exceed 1/2-acre, and the total acreage loss of waters of United States due to the NWP 39 and 46 activities cannot exceed 1 acre.

29. Transfer of Nationwide Permit Verifications.

If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

“When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.”

(Transferee)

(Date)

30. Compliance Certification.

Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and implementation of any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:

(a) A statement that the authorized activity was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;

(b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and

(c) The signature of the permittee certifying the completion of the activity and mitigation.

The completed certification document must be submitted to the district engineer within 30 days of completion of the authorized activity or the implementation of any required compensatory mitigation, whichever occurs later.

31. Activities Affecting Structures or Works Built by the United States.

If an NWP activity also requires review by, or permission from, the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers (USACE) federally authorized Civil Works project (a “USACE project”), the prospective permittee must submit a pre-construction notification. See paragraph (b)(10) of general condition 32. An activity that requires section 408 permission and/or review is not authorized by an NWP until the appropriate Corps office issues the section 408 permission or completes its review to alter, occupy, or use the USACE project, and the district engineer issues a written NWP verification.

32. Pre-Construction Notification.

(a) *Timing.* Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or are in the vicinity of the activity, or to notify the Corps pursuant to general condition 20 that the activity might have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is “no effect” on listed species or “no potential to cause effects” on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)) has been completed. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) *Contents of Pre-Construction Notification:* The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed activity;

(3) Identify the specific NWP or NWP(s) the prospective permittee wants to use to authorize the proposed activity;

(4) (i) A description of the proposed activity; the activity's purpose; direct and indirect adverse environmental effects the activity would cause, including the anticipated amount of loss of wetlands, other special aquatic sites, and other waters expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; a description of any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed activity; and any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings for linear projects that require Department of the Army authorization but do not require pre-construction notification. The description of the proposed activity and any proposed mitigation measures should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal and to determine the need for compensatory mitigation or other mitigation measures.

(ii) For linear projects where one or more single and complete crossings require pre-construction notification, the PCN must include the quantity of anticipated losses of wetlands, other special aquatic sites, and other waters for each single and complete

crossing of those wetlands, other special aquatic sites, and other waters (including those single and complete crossings authorized by an NWP but do not require PCNs). This information will be used by the district engineer to evaluate the cumulative adverse environmental effects of the proposed linear project, and does not change those non-PCN NWP activities into NWP PCNs.

(iii) Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the activity and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (*e.g.,* a conceptual plan), but do not need to be detailed engineering plans);

(5) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial and intermittent streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. Furthermore, the 45-day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;

(6) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands or 3/100-acre of stream bed and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse environmental effects are no more than minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(7) For non-federal permittees, if any listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat (or critical habitat proposed for such designation), the PCN must include the name(s) of those endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or utilize the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the proposed activity. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with the Endangered Species Act;

(8) For non-federal permittees, if the NWP activity might have the potential to cause effects to a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, the PCN must state which historic property might have the potential to be affected by the proposed activity or include a vicinity map indicating the location of the historic property. For NWP activities that require pre-construction notification, Federal permittees must provide

documentation demonstrating compliance with section 106 of the National Historic Preservation Act;

(9) For an activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, the PCN must identify the Wild and Scenic River or the “study river” (see general condition 16); and

(10) For an NWP activity that requires permission from, or review by, the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, the pre-construction notification must include a statement confirming that the project proponent has submitted a written request for section 408 permission from, or review by, the Corps office having jurisdiction over that USACE project.

(c) *Form of Pre-Construction Notification:* The nationwide permit pre-construction notification form (Form ENG 6082) should be used for NWP PCNs. A letter containing the required information may also be used. Applicants may provide electronic files of PCNs and supporting materials if the district engineer has established tools and procedures for electronic submittals.

(d) *Agency Coordination:* (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the activity's adverse environmental effects so that they are no more than minimal.

(2) Agency coordination is required for: (i) All NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States; (ii) NWP 13 activities in excess of 500 linear feet, fills greater than one cubic yard per running foot, or involve discharges of dredged or fill material into special aquatic sites; and (iii) NWP 54 activities in excess of 500 linear feet, or that extend into the waterbody more than 30 feet from the mean low water line in tidal waters or the ordinary high water mark in the Great Lakes.

(3) When agency coordination is required, the district engineer will immediately provide (*e.g.,* via email, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (FWS, state natural resource or water quality agency, EPA, and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to notify the district engineer via telephone, facsimile transmission, or email that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse environmental effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms

and conditions of the NWPs, including the need for mitigation to ensure that the net adverse environmental effects of the proposed activity are no more than minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(4) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(5) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre-construction notifications to expedite agency coordination.

District Engineer's Decision

1. In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If a project proponent requests authorization by a specific NWP, the district engineer should issue the NWP verification for that activity if it meets the terms and conditions of that NWP, unless he or she determines, after considering mitigation, that the proposed activity will result in more than minimal individual and cumulative adverse effects on the aquatic environment and other aspects of the public interest and exercises discretionary authority to require an individual permit for the proposed activity. For a linear project, this determination will include an evaluation of the single and complete crossings of waters of the United States that require PCNs to determine whether they individually satisfy the terms and conditions of the NWP(s), as well as the cumulative effects caused by all of the crossings of waters of the United States authorized by an NWP. If an applicant requests a waiver of an applicable limit, as provided for in NWPs 13, 36, or 54, the district engineer will only grant the waiver upon a written determination that the NWP activity will result in only minimal individual and cumulative adverse environmental effects.

2. When making minimal adverse environmental effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. He or she will also consider the cumulative adverse environmental effects caused by activities authorized by an NWP and whether those cumulative adverse environmental effects are no more than minimal. The district engineer will also consider site specific factors, such as the environmental setting in the vicinity of the NWP activity, the type of resource that

will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent that aquatic resource functions will be lost as a result of the NWP activity (*e.g.,* partial or complete loss), the duration of the adverse effects (temporary or permanent), the importance of the aquatic resource functions to the region (*e.g.,* watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional or condition assessment method is available and practicable to use, that assessment method may be used by the district engineer to assist in the minimal adverse environmental effects determination. The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns.

3. If the proposed activity requires a PCN and will result in a loss of greater than 1/10-acre of wetlands or 3/100-acre of stream bed, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for NWP activities with smaller impacts, or for impacts to other types of waters. The district engineer will consider any proposed compensatory mitigation or other mitigation measures the applicant has included in the proposal in determining whether the net adverse environmental effects of the proposed activity are no more than minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse environmental effects are no more than minimal, after considering mitigation, the district engineer will notify the permittee and include any activity-specific conditions in the NWP verification the district engineer deems necessary. Conditions for compensatory mitigation requirements must comply with the appropriate provisions at 33 CFR 332.3(k). The district engineer must approve the final mitigation plan before the permittee commences work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the proposed compensatory mitigation plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure that the NWP activity results in no more than minimal adverse environmental effects. If the net adverse environmental effects of the NWP activity (after consideration of the mitigation proposal) are determined by the district engineer to be no more than minimal, the district engineer will provide a timely written response to the applicant. The response will state that the NWP activity can proceed under the terms and conditions of the NWP, including any activity-specific conditions added to the NWP authorization by the district engineer.

4. If the district engineer determines that the adverse environmental effects of the proposed activity are more than minimal, then the district engineer will notify the applicant either: (a) That the activity does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (b) that the activity is authorized under the NWP subject to the applicant's

submission of a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal; or (c) that the activity is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse environmental effects, the activity will be authorized within the 45-day PCN period (unless additional time is required to comply with general conditions 18, 20, and/or 31), with activity-specific conditions that state the mitigation requirements. The authorization will include the necessary conceptual or detailed mitigation plan or a requirement that the applicant submit a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal. When compensatory mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation.

Further Information

1. District engineers have authority to determine if an activity complies with the terms and conditions of an NWP.

2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.

3. NWPs do not grant any property rights or exclusive privileges.

4. NWPs do not authorize any injury to the property or rights of others.

5. NWPs do not authorize interference with any existing or proposed Federal project (see general condition 31).

US Army Corps of Engineers
Omaha District

Regional Conditions
Omaha District
State of North Dakota

The following Nationwide permit (NWP) regional conditions will be used in the State of North Dakota for NWP 12, 21, 29, 39, 40, 42, 43, 44, 48, 50, 51, 52, 55, 56, 57, and 58. Regional conditions are placed on NWPs to ensure projects result in no more than minimal adverse impacts to the aquatic environment to address local resources concerns.

A. PRECONSTRUCTION NOTIFICATION REQUIREMENTS APPLICABLE TO ALL NWPS FOR LIMITED REVOCATION OF NWPS

For all NWPs, permittees must notify the Corps in accordance with General Condition 32 Preconstruction Notification (PCN) requirements for regulated activities located within or comprised of the following:

1. **Wetlands Classified as Peatlands:**
   For purposes of this condition, peatlands are permanently or seasonally waterlogged areas with a surface accumulation of peat (organic matter) 30 centimeters (12-inches) or more thick. Under cool, anaerobic, and acidic conditions, the rate of organic matter accumulation exceeds organic decay. Any peat-covered areas, including fens, bogs, and muskegs, are all peatlands.

   a. Reserved
   b. All NWPs listed above are revoked for use in peatlands.

2. **Waters Adjacent to Natural Springs:**
   PCN required for any regulated activity located within 100 feet of the water source in natural spring areas. For purposes of this condition, a spring source is defined as any location where there is flow emanating from a distinct point at any time during the growing season. Springs do not include seeps and other groundwater discharge areas where there is no distinct point source. Springs do not include drain tile outlets.

3. **Bank Stabilization Activities:**
   PCN required for any regulated activity that involves bank stabilization impacting an area greater than 1/10 of an acre below the Ordinary High Water Mark or includes features that extend out from the existing bank line greater than 25% of the bankfull channel width.

4. **Specific Waterways:**
   PCN required for any regulated activity occurring in or under the Missouri River, including Lake Sakakawea and Lake Oahe. In addition, a PCN is required for any activity occurring in an off channel area (e.g. marinas and bays) of any of these waterways.

B. PRECONSTRUCTION NOTIFICATION REQUIREMENTS APPLICABLE TO SPECIFIC NWP.

5. Reserved

C. BEST MANAGEMENT PRACTICES

Best Management Practices

In addition to Regional Conditions 1 through 5, additional required best management practices apply to NWPs within the Omaha District. These follow and are available at: https://www.nwo.usace.army.mil/Missions/Regulatory-Program/Nation-Wide-Permit-Information/

US Army Corps of Engineers
Omaha District

2021 Nationwide Permits
Regional Conditions
Omaha District
Required Best Management Practices

The following Nationwide Permit (NWP) regional condition best management practices are required for Montana, Nebraska, North Dakota, South Dakota, and Wyoming in the Omaha District for NWP 12, 21, 29, 39, 40, 42, 43, 44, 48, 50, 51, 52, 55, 56, 57, and 58. Regional conditions are placed on Nationwide Permits to ensure projects result in no more than minimal adverse impacts to the aquatic environment and to address local resources concerns.

A. REQUIRED BEST MANAGEMENT PRACTICE APPLICABLE TO MONTANA, NEBRASKA, NORTH DAKOTA, SOUTH DAKOTA, AND WYOMING

1. **Suitable Material**
   Permittees are reminded of General Condition No. 6 which prohibits use of unsuitable material. A list of materials prohibited or restricted as fill material in waters of the United States can be found at:
   http://www.nwo.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/2034/Article/12320/prohibited-restricted-materials.aspx

B. NORTH DAKOTA REQUIRED BEST MANAGEMENT PRACTICES

2. **Minimum Culvert Width:**
   For all NWPs in jurisdictional streams, the culvert opening width of a stream crossing shall not be less than the mean bank to bank width as measured from the Ordinary High Water Mark in the affected stream reach. In stabile stream channels, the Ordinary High Water Mark is often found at the point where over-bank flow begins during a flood event. In incised stream channels that do not frequently access a floodplain or upper terrace, the Ordinary High Water Mark is generally located within the entrenched channel. The Ordinary High Water Mark may be identified by observing indicators such as a distinct change in slope, a change in vegetation characteristics, or a change in sediment characteristics, see 33 CFR 328.3(e).

3. **Culvert Countersink Depth:**
   For all NWPs in jurisdictional streams and a stable stream bed, culvert stream crossings shall be installed with the culvert invert set below the natural stream channel flow line according to the table below. This regional condition does not apply in instances where lowing of the culvert invert would allow a headcut to migrate upstream of the project into an unaffected stream reach or the result in lowering the elevation of the stream reach.

Culvert Type	Drainage Area	Minimum Distance Culvert Invert Shall Be Lowered Below Stream Flow Line
All culvert types	<100 acres	Not required
Pipe diameter <8.0 ft	100 to 640 acres	0.5 ft
Pipe diameter <8.0 ft	>640 acres	1.0 ft
Pipe diameter >8.0 ft	All drainage sizes	20% of pipe diameter
Box culvert	All drainage sizes	1.0 ft

a. The stream flow line shall be defined as the longitudinal average of the low flow stream channel.

b. The slope of the culvert should be parallel to the slope of the stream flow line.

c. The culvert invert depression depth shall be measured at the culvert for culverts installed at a slope less than the slope of the stream flow line.

4. **Spawning Areas:**
Spawning areas and seasons can be accessed on the North Dakota Game and Fish Department's website at: http://gf.nd.gov/gnf/conservation/docs/spawning-restriction-exclusions.pdf

5. **Intake Structures:**
a. Intake screens with a maximum mesh opening of ¼-inch must be provided, inspected annually, and maintained. Wire, Johnson-like, screens must have a maximum distance between wires of 1/8-inch. Water velocity at the intake screen shall not exceed ½-fot per second.

b. Pumping plant sound levels will not exceed 75 dB at 50 feet.

c. Intakes located in Lake Sakakawea, above river mile 1519, and on the Yellowstone River, are subject to the following conditions:

i. The intakes shall be floating.

ii. At the beginning of the pumping season, the intake shall be placed over water with a minimum depth of 20 feet.

iii. If the 20-foot depth is not attainable, then the intake shall be located over the deepest water available.

iv. If the water depth falls below six feet, the intake shall be moved to deeper water or the maximum intake velocity shall be limited to ¼-foot per second.

d. Intakes located in Lake Sakakawea, below river mile 1519, and the Missouri River below Garrison Dam are subject to the following conditions:

i. The intakes shall be submerged.

ii. At the beginning of the pumping season, the intake will be placed at least 20 vertical feet below the existing water level.

iii. The intake shall be elevated 2 to 4 feet off the bottom of the river or reservoir bed.

iv. If the 20-foot depth is not attainable, then the intake velocity shall be limited to ¼-foot per second with intake placed at the maximum practicable attainable depth.

e. Intakes and associated Utility lines that are proposed to cross sandbars in areas designated as piping plover critical habitat are prohibited.

f. Any temporary open trench associated with utility lines are to be closed within 30 days of excavation. This time limit may be extended by notifying the North Dakota Regulatory Office and receiving a written response that the extension is acceptable.

6. <u>Boat Docks:</u>

To ensure that the work or structure shall not cause unreasonable obstruction to the free navigation of the navigable waters, the following conditions are required:

a. No boat dock shall be located on a sandbar or barren sand feature. The farthest point riverward of a dock shall not exceed a total length of 30 feet from the Ordinary High Water Mark. Information Note: Issuance of this permit does not supersede authorization required by the North Dakota State Engineer's Office.

b. Any boat dock shall be anchored to the top of the high bank.

c. Any boat dock located within an excavated bay or marina that is off the main river channel may be anchored to the bay or marina bottom with spuds.

d. Section 10 Waters located in the State of North Dakota area:

i. Bois de Sioux River

ii. James River Missouri River

iii. Red River of the North

iv. Upper Des Lacs Lake

v. Yellowstone River

US Army Corps of Engineers
Omaha District

2021 Nationwide Permits
Regional Conditions
State of North Dakota
Section 401 Water Quality Certification

The following Nationwide permit (NWP) regional conditions pertaining to Section 401 Water Quality Certification (WQC) will be used in the State of North Dakota for NWP 12, 21, 29, 39, 40, 42, 43, 44, 48, 50, 51, 52, 55, 56, 57, and 58.

The Environmental Protection Agency is responsible for providing WQC for activities that occur on Indian Lands in the State of North Dakota.

The North Dakota Department of Environmental Quality is responsible for providing WQC for Section 404 activities that occur in the State of North Dakota, excluding Indian Lands.

WQC by NWP follows:

- **NWP 12 – Oil or Natural Gas Pipeline Activities**
  -EPA denied for all activities.
  -NDDEQ denied for activities affecting Class I, IA, II and III rivers and streams, and classified lakes listed in Appendixes I and II of the State Water Quality Standards and certified for activities affecting all other waters in the State.

- **NWP 21 – Surface Coal Mining Activities**
  -EPA denied for all activities.
  -NDDEQ certified for all activities.

- **NWP 29 – Residential Developments**
  -EPA denied for all activities.
  -NDDEQ certified with the condition that the project will not result in a stream bank loss exceeding 300 linear feet in Class I, IA, II and III rivers and streams. Projects that cannot meet the condition will require an individual certification.

- **NWP 39 – Commercial and Institutional Developments**
  -EPA denied WQC for all activities.
  -NDDEQ certified with the condition that the project will not result in a stream bank loss or relocation of 150 linear feet of any river or stream. Projects that cannot meet the condition will require an individual certification.

- **NWP 40 – Agricultural Activities**
  -EPA denied WQC for all activities.
  -NDDEQ certified with the condition that the project will not result in a stream bank loss or relocation of 150 linear feet of any river or stream. Projects that cannot meet the condition will require an individual certification.

- **NWP 42 – Recreational Facilities**
  -EPA denied WQC for all activities.

-NDDEQ certified with the condition that the project will not result in a stream bank loss or relocation of 150 linear feet of any river or stream. Projects that cannot meet the condition will require an individual certification.

- **NWP 43 – Stormwater Management Facilities**
  -EPA denied WQC for all activities.
  -NDDEQ certified for all activities.

- **NWP 44 – Mining Activities**
  -EPA denied WQC for all activities.
  -NDDEQ certified for all activities.

- **NWP 48 – Commercial Shellfish Mariculture Activities**
  -EPA waived WQC for all activities.
  -NDDEQ certified for all activities.

- **NWP 50 – Underground Coal Mining Activities**
  -EPA denied WQC for all activities.
  -NDDEQ certified for all activities.

- **NWP 51 – Land-Based Renewable Energy Generation Facilities**
  -EPA denied for all activities.
  -NDDEQ certified for all activities.

- **NWP 52 – Water-Based Renewable Energy Generation Pilot Projects**
  -EPA denied WQC for all activities.
  -NDDEQ certified with the condition that a copy of the PCN is provided to NDDEQ for projects in, over or under Class I, IA, II and III rivers and streams, and classified lakes for compliance purposes.

- **NWP 55 – Seaweed Mariculture Activities**
  -EPA denied WQC for all activities.
  -NDDEQ N/A

- **NWP 56 – Finfish Mariculture Activities**
  -EPA denied WQC for all activities.
  -NDDEQ N/A

- **NWP 57 – Electric Utility Line and Telecommunications Activities**
  -EPA denied for all activities.
  -NDDEQ certified for all activities.

- **NWP 58 – Utility Line Activities for Water and Other Substances**
  -EPA denied WQC for all activities.
  -NDDEQ certified with the condition that the lines do not carry oil and gas production water, produced water, or brine water. Pipelines that carry oil or gas production water,

produced water, or brine water, collectively called saltwater pipelines, in, over or under Class I, IA, II and III rivers and streams, and classified lakes require individual certification with conditions based on the specific waterbody, location on the water, type of construction, and safety controls applied prior, during, or after construction.

From: Baer, Kathy
To: Ashley Ross
Subject: Heskett Fire Water Line
Date: Friday, August 20, 2021 11:23:08 AM

Ashley,

Thank you for your recent letter about the Heskett Fire Water Line Project in Morton County.

There are no FWS easements or Fee title lands in that area.

If you have any questions, please feel free to contact me at this email or 701-442-5474 ext. 114.

KB

Kathy Baer
Wetland District Manager
Audubon Wetland Management District

"And onto the prairie I must go,
To lose my mind and find my soul."
Adapted from John Muir

From:	Toivonen, Lauren K
To:	Ashley Ross
Subject:	USFWS response to Heskett Fire Water Line
Date:	Monday, August 30, 2021 3:52:18 PM
Attachments:	HeskettFireWaterLine_USFWSresponse.pdf

Hello,

Attached is the USFWS comment to the Heskett Fire Water Line application. Please let me know if you have any questions or need additional information.

Thank you!
-Lauren

Lauren Toivonen
Fish & Wildlife Biologist, Ecological Services
North Dakota Field Office
3425 Miriam Ave.
Bismarck, ND 58501
e: lauren_toivonen@fws.gov
c: 314-799-2936, on telework status
pr: she/her

United States Department of the Interior

FISH AND WILDLIFE SERVICE
North Dakota Ecological Services
3425 Miriam Avenue
Bismarck, North Dakota 58501

IN REPLY PLEASE REFER TO:
Porcupine Waste Water Treatment System

August 30, 2021

Ashley Ross
Project Manager
KLJ
4585 Coleman Street
Bismarck, North Dakota 58503

Dear Ms. Ross:

Thank you for your letter of August 9, 2020, requesting comments on Montana-Dakota Utilities Company's proposed application for the Heskett Fire Water Line located in Morton County, North Dakota. The U.S. Fish and Wildlife Service (FWS) has the following comments.

Section 7 of the Endangered Species Act

Section 7 of the Endangered Species Act of 1973 (ESA) (16 U.S.C. 1531 *et seq.*) requires that actions authorized, funded, or carried out by Federal agencies not jeopardize federally threatened or endangered species or adversely modify designated critical habitat. To fulfill this mandate, Federal agencies (or their designated non-federal representative) must consult with the FWS *if they determine their project and associated actions "may affect" listed species or critical habitat*. If Federal agencies or their non-federal representatives determine their project and associated actions will have "no effect" on listed species, their habitats, or designated critical habitat, consultation is not required. However, if a "no effect" is determined, we recommend that you maintain a written record in support of your conclusion.

Consultations on IPaC

We invite you to use a new tool the FWS has designed to help with the consultation process – the Information for Planning and Consultation (IPaC) database (http://ecos.fws.gov/ipac). The database provides guidance to help you determine what your action area is, whether endangered species may be found within the action area, and if your project and associated actions may affect listed species. Additionally, the Section 7(a)(2) Technical Assistance webpage (https://www.fws.gov/midwest/endangered/section7/s7process/index.html) contains step-by-step guidance for the Section 7(a)(2) consultation process as well as informal consultation letter examples templates for documenting your findings related to threatened and endangered species.

Bald and Golden Eagle Protection Act and Migratory Bird Treaty Act

Additionally, while not all are listed as threatened or endangered, eagles and migratory birds have protections under the Bald and Golden Eagle Protection Act (BGEPA) and the Migratory Bird Treaty

Act (MBTA). The BGEPA prohibits take which is defined as, "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, destroy, molest, or disturb" (50 CFR 22.3). Disturb is defined in regulations as, "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior." The MBTA makes it unlawful without a waiver to pursue, hunt, take, capture, kill, or sell birds listed as migratory birds, including eagles. The statute does not discriminate between live or dead birds and also grants full protection to any bird parts including feathers, eggs, and nests.

Service Property Interests

As part of the National Wildlife Refuge System, the FWS administers fee title Refuge and Waterfowl Production Areas, as well as wetland and grassland easements, throughout North Dakota. For exact locations of FWS interest lands, please contact the appropriate Wetland Management Districts (WMD) for guidance regarding FWS easements.
Morton County: Audubon Complex, Kathy Baer, (701) 442-5474

Conclusion

These comments provide technical assistance only and do not constitute the report of the Secretary of the Interior on the project within the meaning of Section 2(b) of the Fish and Wildlife Coordination Act, do not fulfill the requirements under the Endangered Species Act, the Bald and Golden Eagle Protection Act, or the Migratory Bird Treaty Act, nor do they represent the review comments of the U.S. Department of the Interior on any forthcoming environmental statement. Thank you for the opportunity to provide comments early in the planning process. If you have any additional questions or comments, please contact Lauren Toivonen of my staff at (701) 355-8573 or via email at Lauren_Toivonen@fws.gov, or contact me at (701) 355-8512 or Drew_Becker@fws.gov.

Sincerely,

DREW BECKER Digitally signed by DREW BECKER Date: 2021.08.30 13:57:02 -05'00'

Drew Becker
ND Ecological Services Supervisor

NORTH Dakota | Environmental Quality
Be Legendary.

August 26, 2021

Ashley Ross
Project Manager
KLJ
4585 Coleman Street
Bismarck, ND 58503-0431

Re: Heskett Fire Water Line Montana-Dakota Utilities Co In Morton County

Dear Ms. Ross:

The North Dakota Department of Environmental Quality has reviewed the information concerning the above-referenced project received at the department on August 11, 2021 with respect to possible environmental impacts.

This department believes that environmental impacts from the proposed construction will be minor and can be controlled by proper construction methods. With respect to construction, we have the following comments:

1. Care is to be taken during construction activity near any water of the state to minimize adverse effects on a water body. This includes minimal disturbance of stream beds and banks to prevent excess siltation, and the replacement and revegetation of any disturbed area as soon as possible after work has been completed. Caution must also be taken to prevent spills of oil and grease that may reach the receiving water from equipment maintenance, and/or the handling of fuels on the site. Guidelines for minimizing degradation to waterways during construction are attached.

2. Projects disturbing one or more acres are required to have a permit to discharge stormwater runoff until the site is stabilized by the reestablishment of vegetation or other permanent cover. Further information on the stormwater permit may be obtained from the department's website or by calling the Division of Water Quality (701-328-5210). Also, cities may impose additional requirements and/or specific best management practices for construction affecting their storm drainage system. Check with the local officials to be sure any local stormwater management considerations are addressed.

3. The proposed construction project is within Bismarck's source water protection area.. Care should be taken to avoid spills of any materials that may have an adverse effect on groundwater quality. All spills must be immediately reported to this department and appropriate remedial actions performed.

4. All solid waste materials must be managed and transported in accordance with the state's solid and hazardous waste rules. Appropriate efforts to reduce, reuse and/or recycle waste materials are strongly encouraged. As appropriate, segregation of inert waste from non-inert waste can

generally reduce the cost of waste management. Further information on waste management and recycling is available from the department's Division of Waste Management at (701) 328-5166.

5. Please ensure the Heskett Fire Water Line Project is appropriately valved to prevent backflow and protect the drinking water for the city of Mandan according to the Safe Drinking Water Act and the 'Recommended Standards for Water Works' (Ten States Standards).

These comments are based on the information provided about the project in the above-referenced submittal. The U.S. Army Corps of Engineers may require a water quality certification from this department for the project if the project is subject to their Section 404 permitting process. Any additional information which may be required by the U.S. Army Corps of Engineers under the process will be considered by this department in our determination regarding the issuance of such a certification.

The department owns no land in or adjacent to the proposed improvements, nor does it have any projects scheduled in the area. In addition, we believe the proposed activities are consistent with the State Implementation Plan for the Control of Air Pollution for the State of North Dakota.

If you have any questions regarding our comments, please feel free to contact this office.

Sincerely,

L. David Glatt, P.E., Director
North Dakota Department of Environmental Quality

LDG:csc
Attach.

Construction and Environmental Disturbance Requirements

The following are the minimum requirements of the North Dakota Department of Environmental Quality for projects that involve construction and environmental disturbance in or near waters of the State of North Dakota. They ensure that minimal environmental degradation occurs as a result of construction or related work which has the potential to affect waters of the state. All projects must be constructed to minimize the loss of soil, vegetative cover, and pollutants (chemical or biological) from a site.

Soils

Prevent the erosion and sediment loss using erosion and sediment controls. Fragile and sensitive areas such as wetlands, riparian zones, delicate flora, and land resources must be prohibited against compaction, vegetation loss and unnecessary damage.

Surface Waters

All construction must be managed to minimize impacts to aquatic systems. Follow safe storage and handling procedures to prevent the contamination of water from fuel spills, lubricants, and chemicals. Stream bank and stream bed disturbances must be contained to minimize silt movement, nutrient upsurges, plant dislocations, and any physical chemicals, or biological disruption. The use of pesticides or herbicides in or near surface waters is allowed under the department's pesticide application permit with notification to the department.

Fill Material

Any fill material place below the ordinary high-water mark must be free of topsoil, decomposable materials, and persistent synthetic organic compounds; including, but not limited to, asphalt, tires, treated lumber, and construction debris. The department may require testing of fill material. All temporary fills must be removed. Debris and solid waste must be properly disposed or recycled. Impacted areas must be restored to near original condition.

NORTH Dakota | Water Resources

Be Legendary.

August 30, 2021

Ashley Ross, Project Manager
KLJ
4585 Coleman Street
Bismarck, ND 58503-0431

Dear Ms. Ross:

This is in response to your request for a review of the environmental impacts associated with the Heskett Fire Water Line project located in Morton County, ND.

The proposed project has been reviewed by State Water Commission staff, and the following comments are provided:

- There are floodplains identified and/or mapped where this proposed project is to take place. Areas are designated to be in Zone AE. North Dakota has no formal 'permitting' authority as a state entity in NFIP identified floodplain areas. The permitting is always done by the local entity, which has jurisdiction in the area in question. Please work closely with the local Floodplain Administrator.

This project also appears to take place in the regulatory floodway, which carries additional requirements per North Dakota Century Code Chapter 61-16.2. Before authorizing any development, the community responsible for permitting such use shall request a floodway review from the State Engineer.

- The Department of Water Resources (DWR) Engineering and Permitting Section reviewed the Project and determined that no drainage or construction permits are likely required. However, any changes to a watercourse may require a DWR permit. North Dakota Stream Crossing Standards will apply to any culvert or bridge placed within a drainageway. For more information on these requirements, please visit the Regulation & Appropriation tab on the DWR's website (dwr.nd.gov) or contact the DWR's Regulatory Division at 701-328-2752 or swcregpermits@nd.gov.

- Upon initial review, the proposed project does not appear to require a construction permit from the Department of Water Resources. However, if the project results in the storage of water or the modification of any lagoon cells, a construction permit may be required. Please contact the DWR Regulatory Division at 701-328-2752 if you have any questions.

- Initial review indicates the project does not require a conditional or temporary permit for water appropriation. However, if surface water or groundwater will be diverted for construction of the project, a water permit will be required per North Dakota Century Code § 61-04-02. Please consult with the Department of Water Resources Water Appropriation Division if you have any questions at (701) 328-2754 or appropinfo@nd.gov.

Thank you for the opportunity to provide review comments. Should you have further questions, please contact me at 701-328-4970 or stevebest@nd.gov.

Sincerely,

Steven Best
Planner III

SB:dm/1570

From: Baker, Cole.
To: Nick Anderson
Subject: Re: Proposed MDU Heskett Fire Water Line Project
Date: Wednesday, October 13, 2021 1:02:54 PM
Attachments: image001.png
image002.png
image003.png
image004.png
image005.png

Good Afternoon Nick,

Thank you for being patient. You are correct it does not affect the regulatory floodway, but does pass through the floodplain of the Terra Vallee Coulee. If you have any more questions please feel free to contact.

Thank you.

From: Best, Steve L. <stevebest@nd.gov>
Date: Friday, October 8, 2021 at 7:50 AM
To: Baker, Cole. <mcbaker@nd.gov>
Subject: FW: Proposed MDU Heskett Fire Water Line Project

Cole,

Can you follow-up with Nick Anderson from KLJ regarding this?

Thanks,

-Steve

Steve Best
Planner III

701.328.4970 • 701.328.3696 (f) • stevebest@nd.gov • www.dwr.nd.gov

NORTH Dakota | Water Resources
Be Legendary.

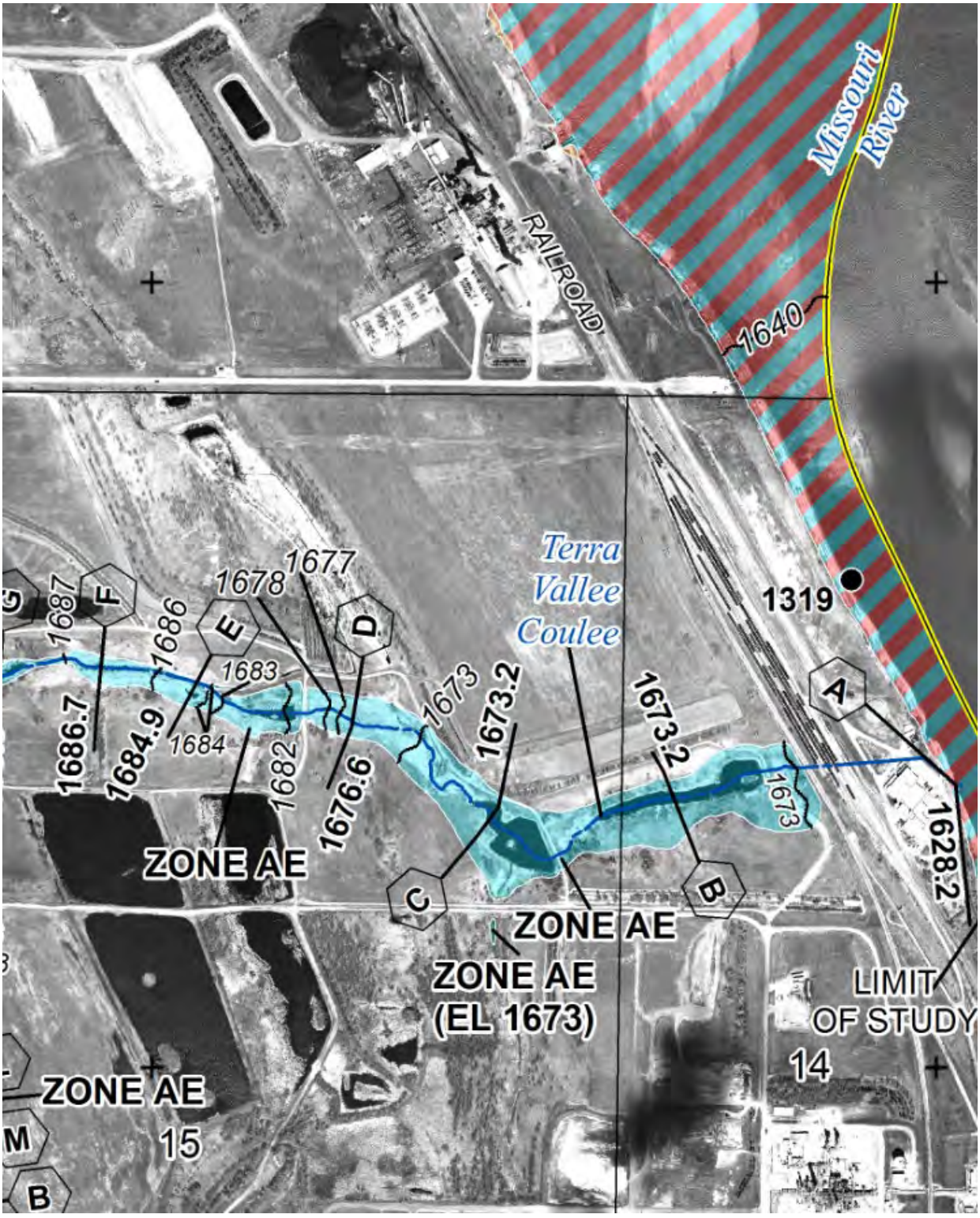
701.328.2750 • dwr@nd.gov • 900 East Boulevard Avenue • Bismarck, ND 58505

From: Nick Anderson <nick.anderson@kljeng.com>
Date: Thursday, October 7, 2021 at 12:07 PM
To: Steve Best <stevebest@nd.gov>
Subject: Proposed MDU Heskett Fire Water Line Project

Hey Steve,

I was reviewing your attached letter regarding the proposed Heskett Station Fire Water Line Project in Morton County and noticed that you identified potential impacts to the regulatory floodway. After reviewing the FEMA FIRM (Panel #38059C0485E) it appears the project would impact the floodplain (Zone AE), but would avoid impacts to the regulatory floodway. Also attached is a map depicting the location of the project. Can you confirm whether the project would or would not be located in the regulatory floodway? Below is a snip of the FIRM panel covering the proposed project.

Thanks,


Missouri River
RAILROAD
1640
Terra Vallee Coulee
1319
1687
1686
1678
1677
1683
1684
1682
1686.7
1684.9
1676.6
1673
1673.2
1673.2
1673
1628.2
A
B
C
D
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F
G
ZONE AE
ZONE AE
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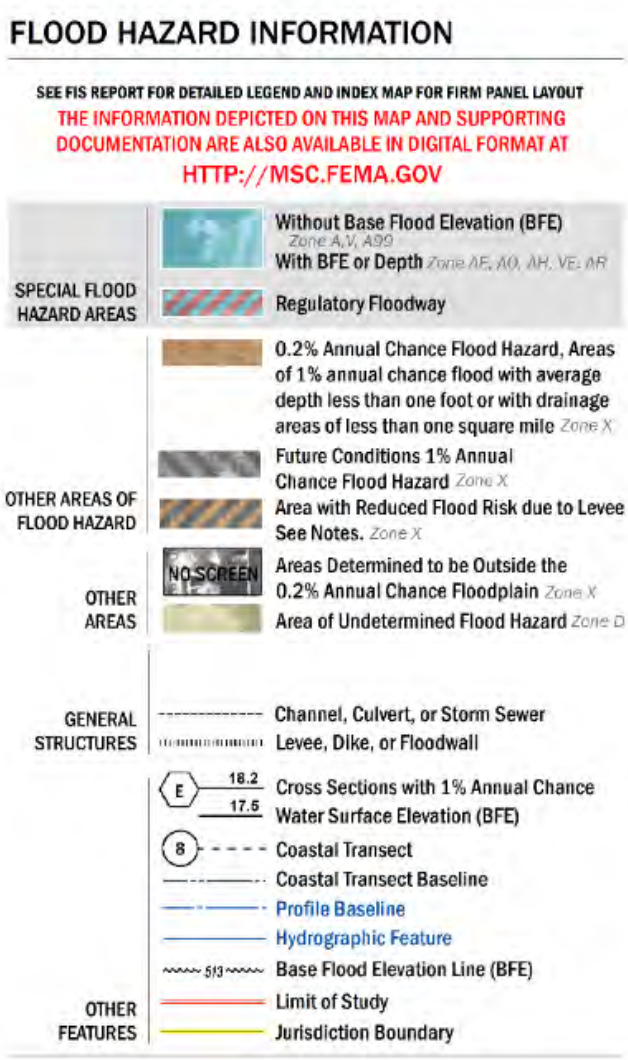
(EL 1673)
ZONE AE
15
14
LIMIT
OF STUDY
M
B



Nick Anderson

701-271-4884 Direct
701-318-6752 Cell
300 23rd Ave E, Suite 100
West Fargo, ND 58078-7820
kljeng.com

From: Schumacher, John D.
To: Ashley Ross
Subject: RE: Heskett Fire Water Line Project
Date: Tuesday, September 7, 2021 6:24:22 PM
Attachments: image001.png

Ashley Ross
Project Manager
KLJ

RE: Heskett Fire Water Line – Montana-Dakota Utilities Co.

The North Dakota Game and Fish Department has reviewed this project for wildlife concerns. We do not believe it will have significant adverse effects on wildlife or wildlife habitat based on the information provided.

J.D. Schumacher
Resource Biologist

701.328.6321 • jdschumacher@nd.gov • gf.nd.gov

NORTH Dakota | Game and Fish
Be Legendary.™

From: Schumacher, John D.
To: Nick Anderson
Subject: RE: Heskett Fire Water Line Project
Date: Monday, October 11, 2021 7:20:05 AM
Attachments: image002.png

> **CAUTION:** This email originated from outside the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Nick,

Yes, our review includes bald and golden eagles. There is a bald eagle nest located on the east side of the Missouri River that appears to be within 1-mile of the project area, however I did not include it as it is outside of the ½-mile construction buffer the Department recommends be maintained around eagle nests.

john

J.D. Schumacher
Resource Biologist

701.328.6321 • jdschumacher@nd.gov • gf.nd.gov

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From: Nick Anderson <nick.anderson@kljeng.com>
Sent: Friday, October 8, 2021 15:27
To: Schumacher, John D. <jdschumacher@nd.gov>
Subject: Heskett Fire Water Line Project

> ***** **CAUTION:** This email originated from an outside source. Do not click links or open attachments unless you know they are safe. *****

JD,

Thanks for your earlier response (attached) in regards to a solicitation letter we sent out regarding this project. For clarification, did your review include bald and golden eagles? Are you aware of any historic nests within 1-mile of the project?

Thanks,

Nick Anderson
KLJ
701-271-4884 Direct

701-318-6752 Cell
300 23rd Ave E, Suite 100
West Fargo, ND 58078-7820
kljeng.com

From:	Duttenhefner, Kathleen G.
To:	Ashley Ross
Subject:	Heskett Fire Water Line – MDU Co. – Morton County
Date:	Friday, August 27, 2021 3:04:41 PM
Attachments:	KLJ_MDU_Freshwater_Pipeline_Morton_County_KD_Responce_Letter_DL9.9.2021.pdf KLJ_Heskett_Fire_WaterLine_MDU_Morton_Co_DL9.9.2021_HERITAGE.pdf KLJ_Heskett_Fire_WaterLine_MDU_Morton_Co_DL9.9.2021_MAP.pdf

Re: Heskett Fire Water Line – MDU Co. – Morton County

Attached is North Dakota Parks and Recreation environmental review response letter for the above-referenced project.

Kathy Duttenhefner

Natural Resources Coordinator/Biologist II

701.328.5370 • 701.220.3377 • parkrec.nd.gov

NORTH Dakota | Parks & Recreation
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NORTH Dakota | Parks & Recreation
Be Legendary.

August 27, 2021

Ashley Ross
KLJ
4585 Coleman Street
Bismarck, ND 58503-0431

Re: Heskett Fire Water Line – MDU Co. – Morton County

Dear Ms. Ross:

The North Dakota Parks and Recreation Department (NDPRD) has reviewed the above-referenced development of a freshwater pipeline in Morton County, North Dakota. NDPRD's scope of authority and expertise covers properties that NDPRD owns, leases, or manages; properties protected under Section 6(f) of the Land and Water Conservation Fund (LWCF); rare plants and ecological communities established through the Natural Heritage Program.

The project does not appear to affect properties that NDPRD owns, leases, or manages.

The project does not appear to affect any properties protected under Section 6(f) of the LWCF.

The North Dakota Natural Heritage biological conservation database has reviewed the project to determine if any current or historical plant or animal species of concern or other significant ecological communities are known to occur within an approximate one-mile radius of the project area. Based on this review, we have no known rare species or significant ecological communities documented within or immediately adjacent to the project site. Because the Natural Heritage information is not based on a comprehensive inventory. There may be species of concern or otherwise significant ecological communities in the area not represented in the database. The absence of data may indicate that the project area has not been surveyed rather than confirm that it lacks natural heritage resources.

We appreciate your commitment to rare plant, animal, and ecological community conservation, management, and inter-agency cooperation to date. For additional information, please get in touch with Natural Resources Coordinator Kathy Duttenhefner at 701-328-5370, 701-220-3377 (cell), or kgduttenhefner@nd.gov.

Thank you for the opportunity to comment on the proposed project.

Sincerely,

Kathy Duttenhefner

Kathy Duttenhefner, Coordinator/Biologist II
Natural Resources Division

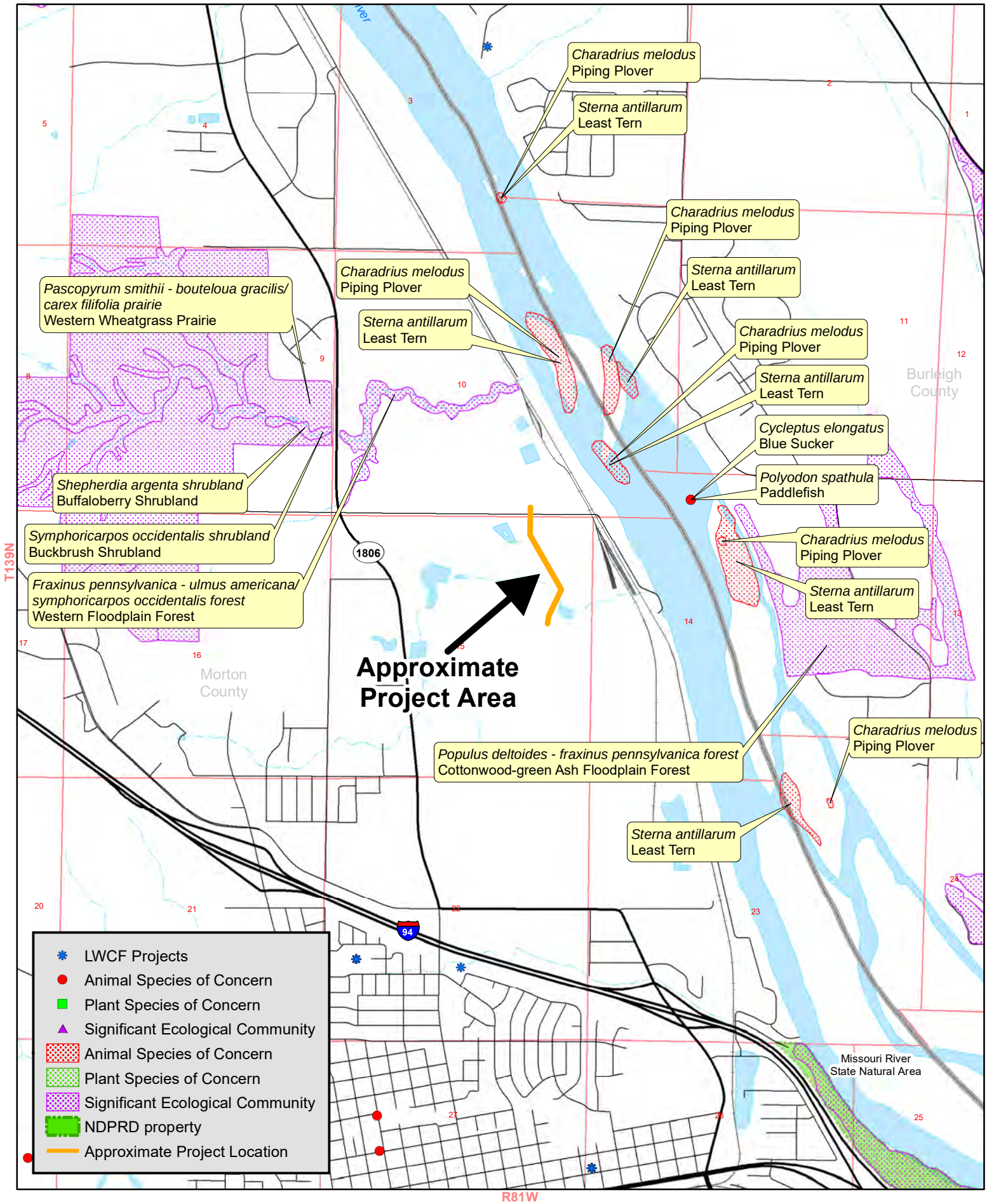
1600 East Century Ave. Ste. 3 | Bismarck, ND 58503
PHONE: 701-328-5357 | FAX: 701-328-5363 | EMAIL: parkrec@nd.gov | WEBSITE: www.parkrec.nd.gov

North Dakota Natural Heritage Inventory

Rare Animal and Plant Species and Significant Ecological Communities

State Scientific Name	State Common Name	State Rank	Global Rank	Federal Status	Township Range Section	County	Last Observation	Estimated Representation Accuracy	Precision
Charadrius melodus	Piping Plover	S1S2	G3	LE,LT	139N081W - 03; 139N081W - 10	Burleigh, Morton	1991	High	S
Charadrius melodus	Piping Plover	S1S2	G3	LE,LT	139N081W - 10	Morton	2003-05-28	Medium	S
Charadrius melodus	Piping Plover	S1S2	G3	LE,LT	139N081W - 10	Morton	2003-06-09	Medium	
Charadrius melodus	Piping Plover	S1S2	G3	LE,LT	139N081W - 10	Burleigh, Morton	2002-06-11	Medium	
Charadrius melodus	Piping Plover	S1S2	G3	LE,LT	139N081W - 14	Burleigh	1999-06-22	Medium	S
Charadrius melodus	Piping Plover	S1S2	G3	LE,LT	139N081W - 23	Burleigh	1998-06-22	High	S
Cycleptus elongatus	Blue Sucker	S3	G3G4		139N081W - 14	Burleigh	1994-08-17		S
Fraxinus pennsylvanica - ulmus americana/symphoricarpos occidentalis forest	Western Floodplain Forest	S3	GNR		139N081W - 10	Morton	2007-06-22	Very High	
Pascopyrum smithii - bouteloua gracilis/carex filifolia prairie	Western Wheatgrass Prairie	S3S4	GNR		139N081W - 09; 139N081W - 17; 139N081W - 04; 139N081W - 16; 139N081W - 08	Morton	2007-06-22	Medium	
Polyodon spathula	Paddlefish	SNR	G4		139N081W - 14	Burleigh	1994-06-15		S
Populus deltoides - fraxinus pennsylvanica forest	Cottonwood-green Ash Floodplain Forest	S3	GNR		139N081W - 14; 139N081W - 11; 139N081W - 13	Burleigh	2007-09-18	Medium	
Shepherdia argenta shrubland	Buffaloberry Shrubland	S4	GNR		139N081W - 09; 139N081W - 04; 139N081W - 16; 139N081W - 08	Morton	2007-06-22	Medium	
Sterna antillarum	Least Tern	S1	G4	PS:LE	139N081W - 03; 139N081W - 10	Burleigh, Morton	1993-07-14	Medium	S
Sterna antillarum	Least Tern	S1	G4	PS:LE	139N081W - 10	Burleigh	1993-07-14	Medium	S
Sterna antillarum	Least Tern	S1	G4	PS:LE	139N081W - 10	Morton			
Sterna antillarum	Least Tern	S1	G4	PS:LE	139N081W - 10	Morton			
Sterna antillarum	Least Tern	S1	G4	PS:LE	139N081W - 14	Burleigh	1998	Medium	S
Sterna antillarum	Least Tern	S1	G4	PS:LE	139N081W - 23	Burleigh	1998-06-22	Medium	S
Symphoricarpos occidentalis shrubland	Buckbrush Shrubland	S4	GNR		139N081W - 08; 139N081W - 16; 139N081W - 09; 139N081W - 04	Morton	2007-06-22	Medium	

North Dakota Parks and Recreation Department
North Dakota Natural Heritage Inventory



August 2021

August 23, 2021

Ashley Ross
KLJ
4585 Coleman St
Bismarck, ND 58503-0431

ND SHPO Ref.: 21-0523 MDU Heskett Fire Water Line in portions of [T139N R81W Sections 10 & 15] in Morton County, North Dakota

Dear Ms. Ross,

We reviewed ND SHPO Ref.: 21-0523 MDU Heskett Fire Water Line in portions of [T139N R81W Sections 10 & 15] in Morton County, North Dakota. We recommend a Class III (pedestrian survey) of archaeological resources in the project area as previous surveys near this high probability area were not done at transect intervals that meet current standards.

Thank you for the opportunity to review this project to date. We look forward to review of the Class III survey for archaeological resources.

Thank you for the opportunity to review this project. If you have any questions please contact Lorna Meidinger, Historic Preservation Specialist at (701) 328-2089 or lbmeidinger@nd.gov

Sincerely,

for William D. Peterson PhD
State Historic Preservation Officer
(North Dakota)

21-0523

September 8, 2021

Mr. Ryan Wendel
KLJ
4585 Coleman Street
Bismarck, ND 58503-0431

ND SHPO Ref.: 21-0523 "Montana-Dakota Utilities Co. Heskett Fire Water Line: A Class III Cultural Resource Inventory in Morton County, North Dakota" in portions of [T139N R81W Sections 10 & 15] KLJ ROI 2986

Dear Mr. Wendel,

We reviewed ND SHPO Ref.: 21-0523 "Montana-Dakota Utilities Co. Heskett Fire Water Line: A Class III Cultural Resource Inventory in Morton County, North Dakota" in portions of [T139N R81W Sections 10 & 15] KLJ ROI 2986 and find the report by Charles Peliska acceptable. We concur with a determination of "No Historic Properties Affected" for this project provided it takes place in the location and in the manner described in the documentation and provided all borrow comes from an approved source.

Thank you for the opportunity to review this project. Please include the ND SHPO Reference number listed above in further correspondence for this specific project. If you have any questions please contact Lisa Steckler, Historic Preservation Specialist at (701) 328-3577 or lsteckler@nd.gov

Sincerely,

for William D. Peterson, PhD
State Historic Preservation Officer
(North Dakota)

21-0523

Appendix E

USFWS Resource List

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Morton County, North Dakota

Local office

North Dakota Ecological Services Field Office

(701) 250-4481

(701) 355-8513

3425 Miriam Avenue
Bismarck, ND 58501-7926

http://www.fws.gov/northdakotafieldoffice/endspecies/endangered_species.htm

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

---

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an

office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Northern Long-eared Bat Myotis septentrionalis Wherever found No critical habitat has been designated for this species. http://ecos.fws.gov/ecp/species/9045	Threatened

Birds

NAME	STATUS
Piping Plover Charadrius melodus There is **final** critical habitat for this species. Your location overlaps the critical habitat. http://ecos.fws.gov/ecp/species/6039	Threatened
Red Knot Calidris canutus rufa Wherever found There is **proposed** critical habitat for this species. The location of the critical habitat is not available. http://ecos.fws.gov/ecp/species/1864	Threatened
Whooping Crane Grus americana There is **final** critical habitat for this species. The location of the critical habitat is not available. http://ecos.fws.gov/ecp/species/758	Endangered

Insects

NAME	STATUS
Dakota Skipper Hesperia dacotae Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. http://ecos.fws.gov/ecp/species/1028	Threatened

Monarch Butterfly Danaus plexippus Wherever found No critical habitat has been designated for this species. http://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

This location overlaps the critical habitat for the following species:

NAME	TYPE
Piping Plover Charadrius melodus http://ecos.fws.gov/ecp/species/6039#crithab	Final

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the

USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
American Golden-plover Pluvialis dominica This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Baird's Sparrow Ammodramus bairdii This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. http://ecos.fws.gov/ecp/species/5113	Breeds May 20 to Aug 15

Bald Eagle *Haliaeetus leucocephalus* — Breeds Dec 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
http://ecos.fws.gov/ecp/species/1626

Black Tern *Chlidonias niger* — Breeds May 15 to Aug 20

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
http://ecos.fws.gov/ecp/species/3093

Black-billed Cuckoo *Coccyzus erythropthalmus* — Breeds May 15 to Oct 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
http://ecos.fws.gov/ecp/species/9399

Bobolink *Dolichonyx oryzivorus* — Breeds May 20 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Chestnut-collared Longspur *Calcarius ornatus* — Breeds May 1 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Clark's Grebe *Aechmophorus clarkii* — Breeds Jun 1 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Ferruginous Hawk *Buteo regalis* — Breeds Mar 15 to Aug 15

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
http://ecos.fws.gov/ecp/species/6038

Franklin's Gull *Leucophaeus pipixcan* — Breeds May 1 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Golden Eagle Aquila chrysaetos — Breeds Jan 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
http://ecos.fws.gov/ecp/species/1680

Hudsonian Godwit Limosa haemastica — Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Lark Bunting Calamospiza melanocorys — Breeds May 10 to Aug 15

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Lesser Yellowlegs Tringa flavipes — Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
http://ecos.fws.gov/ecp/species/9679

Lewis's Woodpecker Melanerpes lewis — Breeds Apr 20 to Sep 30

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
http://ecos.fws.gov/ecp/species/9408

Long-eared Owl asio otus — Breeds Mar 1 to Jul 15

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
http://ecos.fws.gov/ecp/species/3631

Marbled Godwit Limosa fedoa — Breeds May 1 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
http://ecos.fws.gov/ecp/species/9481

Red-headed Woodpecker Melanerpes erythrocephalus — Breeds May 10 to Sep 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Short-billed Dowitcher Limnodromus griseus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. http://ecos.fws.gov/ecp/species/9480	Breeds elsewhere
Sprague's Pipit Anthus spragueii This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. http://ecos.fws.gov/ecp/species/8964	Breeds May 10 to Aug 31
Willet Tringa semipalmata This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 20 to Aug 5

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative

probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

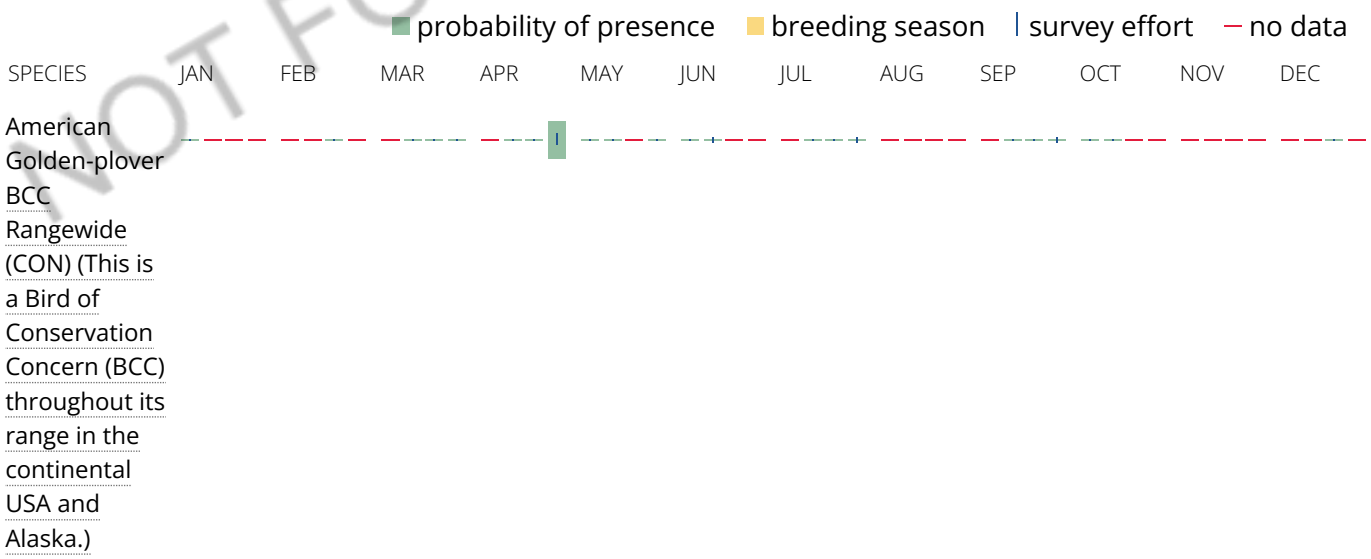
Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

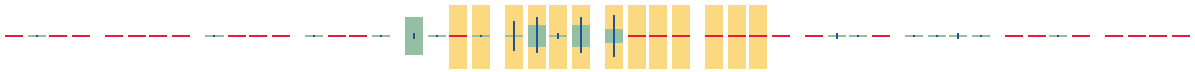
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

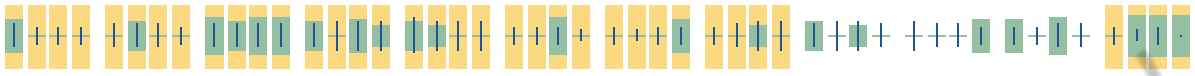
Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



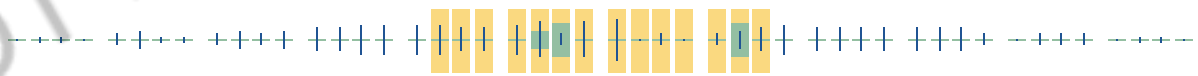
Baird's Sparrow BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Bald Eagle Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)



Black Tern BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



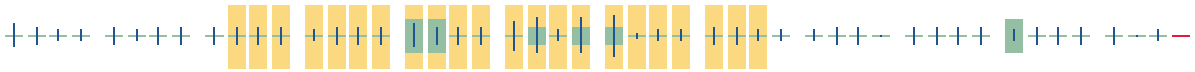
Black-billed Cuckoo BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Bobolink BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

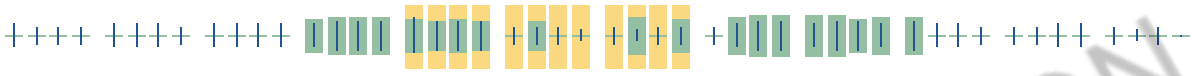
Chestnut-collared Longspur BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Clark's Grebe BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

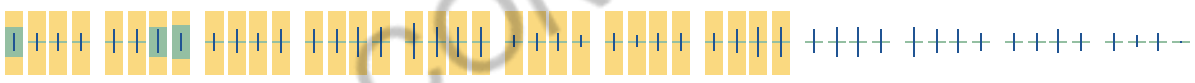
Ferruginous Hawk
BCC - BCR
(This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



Franklin's Gull
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



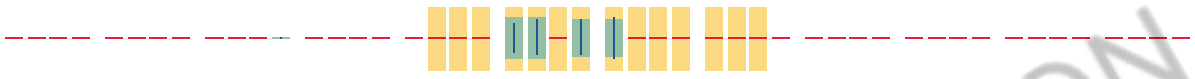
Golden Eagle
Non-BCC Vulnerable
(This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)



Hudsonian Godwit BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

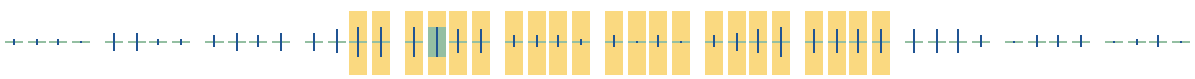
SPECIES JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

Lark Bunting BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

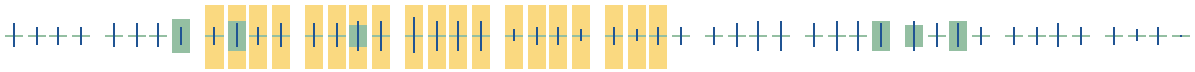


Lesser Yellowlegs BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

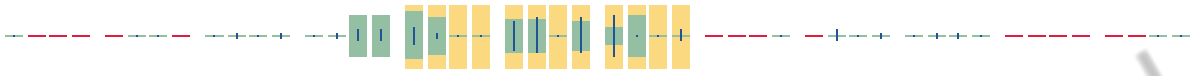
Lewis's Woodpecker BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



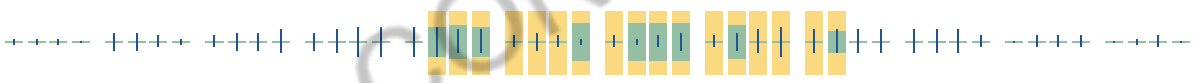
Long-eared Owl BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Marbled Godwit BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

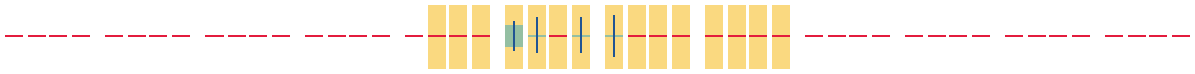


Red-headed Woodpecker BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

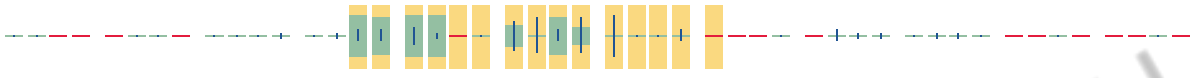


Short-billed Dowitcher BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Sprague's Pipit BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Willet BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds

potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files

underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

This location overlaps the following National Wildlife Refuge lands:

LAND	ACRES
FARM SERVICE AGENCY INTEREST OF ND	5,164.54 acres
LAKE PATRICIA NATIONAL WILDLIFE REFUGE	801.22 acres

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

WETLAND INFORMATION IS NOT AVAILABLE AT THIS TIME

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the NWI map to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Appendix F

Wetland Mapping Survey

June 7, 2021

Mr. Jake Hein
Engineer – Power Production
Montana-Dakota Utilities Co.
400 North Fourth Street
Bismarck, ND 58501-4092

Re: Fire-Water Line Wetland and Waterbody Delineation Report
Mandan, Morton County – North Dakota
BMCD Project No. 125283

Dear Mr. Hein:

Burns & McDonnell Engineering Company, Inc. (Burns & McDonnell) was retained by Montana-Dakota Utilities Co. (Montana-Dakota) to provide wetland delineation services for the proposed Heskett Phase II, New Fire Protection Water Line Project (Project). The project is located within the City of Mandan, Morton County, North Dakota (Figure 1, Appendix A). The following sections provide information on the proposed Project and summarize the completed wetland delineation.

INTRODUCTION

Due to the retirement of the Heskett station intake structure, an alternate source of fire protection water is required. The city of Mandan has a 30-inch diameter transmission main that supplies water from the city water treatment plant to the Sunset Reservoir. For the Heskett water supply, a new HDPE pipe will be installed below frost depth (estimated 12-inch diameter, 2,700 feet long) to route from the tie-in point to the Heskett fire protection loop.

The Project has the potential to impact wetlands or other water bodies that may be under the jurisdiction of the U.S. Army Corps of Engineers (USACE) as designated by Section 404 of the Clean Water Act. Burns & McDonnell conducted a wetland delineation for the Project to evaluate for the presence of wetlands and water bodies, including streams, drainages, and ponds. The wetland delineation encompassed a total of 50.9 acres (Survey Area).

METHODS

The following discussion summarizes the methods used to review existing data and conduct the wetland delineation.

Existing Data Review

Burns & McDonnell reviewed available background information for the Survey Area prior to conducting the site visit. Available background information included:

1. U.S. Geological Survey (USGS) 7.5-minute topographic map (Mandan, ND [2020] quadrangle),

2. U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Soil Survey Geographic (SSURGO) digital data for Morton County,

3. Federal Emergency Management Agency (FEMA) flood insurance rate map (2015).

4. U.S. Fish & Wildlife Service (USFWS) National Wetland Inventory (NWI) map, and

5. National Agriculture Imagery Program (NAIP) aerial photography (2019).

Maps generated from this available data are included as Figures 2 through 4 in Appendix A.

Wetland presence based only on NWI maps cannot be assumed to be an accurate assessment of potentially occurring jurisdictional wetlands. Wetland identification criteria differ between the USFWS and the USACE. As a result, wetlands shown on an NWI map may not be under the jurisdiction of the USACE, and all USACE-jurisdictional wetlands are not always included on NWI maps. Therefore, a field visit was conducted to identify any wetlands or other water bodies that may be present.

Wetland Delineation

On May 18, 2021, Burns & McDonnell wetland scientists conducted a wetland delineation of the Survey Area. The delineation was completed in accordance with the 1987 *Corps of Engineers Wetlands Delineation Manual* (1987 Manual) and the 2010 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region* (Version 2.0) (Regional Supplement). Sample plots were established at multiple locations, and Wetland Determination Data Forms from the Great Plains Regional Supplement were completed to characterize the Survey Area (Appendix B). Vegetation, soil conditions, and hydrologic indicators were recorded at each sample plot. Vegetation nomenclature was derived from the 2020 *National Wetland Plant List*. The National Wetland Plant List assigns a wetland indicator status for plant species that are typical in the region. Locations of sample plots and other identified features were surveyed using a real-time sub-meter accurate global positioning system (GPS) unit. Natural color photographs were taken onsite and are included in Appendix C (Photographs C-1 through C-17).

RESULTS

Existing Data Review

The following information, pertaining to the Survey Area, was gathered from the review of available data sources:

1. USGS Topographic map review: The topographic map shows the Survey Area as generally flat with areas of elevation toward the southern portion and draining southeast within the Survey Area (Figure 2, Appendix A).

2. USDA soil map review: No hydric soil is mapped within the Survey Area according to the USDA soil map (Figure 3, Appendix A).

3. FEMA map review: The Survey Area is located within a FEMA mapped Zone AE floodplain associated with an unnamed tributary to the Missouri River (Figure 4, Appendix A).

4. USFWS NWI map review: The NWI displayed one freshwater emergent wetland, two freshwater ponds, two riverine habitats, and two artificial paths mapped within the Survey Area (Figure 4, Appendix A).

5. NAIP aerial photography review: The Survey Area is in an historically mowed grassland area.

Wetland Delineation

On May 18, 2021, two Burns & McDonnell wetland scientists conducted a wetland delineation of the Survey Area. The Survey Area is composed of four palustrine emergent (PEM) wetlands, one of which is a constructed stormwater features (ditches), and three palustrine unconsolidated bottom (PUB) wetlands (Figure 5, Attachment A). A description of the identified wetlands are included in the following section and summarized below in Table 1.

Identified Areas: Wetlands

Eight wetlands were delineated within the Survey Area for the Project as summarized in Table 1 and detailed below.

Table 1: Wetlands Identified within the Survey Area

Wetland Number[a]	Wetland Type[b]	Area of Wetland Delineated in Survey Area (acres)
W-1	PEM	4.40
W-2	PUB	0.84
W-3	PEM	0.70
W-4	PUB	0.14
W-5	PEM	0.12
W-6	PEM	4.07
W-7	PUB	0.15

W-8	PEM	0.06

[a] Assigned by Burns & McDonnell staff during the site investigation; W = Wetland
[b] Classification follows the Federal Geographic Data Committee, 2013; PEM = Palustrine Emergent, PUB = Palustrine Unconsolidated Bottom

Wetland 1 (W-1, Sample Plot [SP] -1 and SP-2): W-1 (4.40 acre) is a PEM wetland located in the central to southeastern section of the Survey Area (Figure 5, Photographs C-1 and C-2). Dominant vegetation at the time of the site investigation included reed canary grass (*Phalaris arundinacea*) and broadleaf cattail (*Typha latifolia*). The Dominance Test and Rapid Test confirmed hydrophytic vegetation at the time of the site visit. Thick Dark Surface (A12) confirmed hydric soil at the time of the site visit. Wetland hydrology was confirmed by Saturation (A3) and Oxidized Rhizospheres on Living Roots (C3), and FAC-Neutral Test (D5). W-1 is a fringe wetland surrounding PUB W-2.

Wetland 2 (W-2): W-2 (0.84 acre) is a PUB wetland located in the southeastern section of the Survey Area (Figure 5, Photographs C-1 and C-2). W-2 was surrounded by PEM fringe wetland W-1.

Wetland 3 (W-3, SP-4 and SP-5): W-3 (0.70 acre) is a PEM wetland located in the west-central section of the Survey Area (Figure 5, Photographs C-4 and C-5). Dominant vegetation at the time of the site investigation included reed canary grass and broadleaf cattail. The Dominance Test and Rapid Test confirmed hydrophytic vegetation at the time of the site visit. Black Histic (A3) confirmed hydric soil at the time of the site visit. Wetland hydrology was confirmed a High Water Table (A2), Saturation (A3), and FAC-Neutral Test (D5). W-3 is a fringe wetland surrounding PUB W-4.

Wetland 4 (W-4): W-4 (0.14 acre) is a PUB wetland located in the west-central section of the Survey Area (Figure 5, Photograph C-13). W-4 was surrounded by PEM fringe wetland W-3.

Wetland 5 (W-5, SP-5): W-5 (0.12 acre) is a PEM wetland located in the central section of the Survey Area (Figure 5, Photograph C-14). A formal sample plot was not taken as W-5 is a constructed feature with steep incised slopes not conducive to a soil plot. Dominant vegetation at the time of the site investigation included broadleaf cattail, which confirms hydrophytic vegetation. Intermittent stream (S)-3 flows into W-5.

Wetland 6 (W-6, SP-6 and SP-7): W-6 (4.07 acre) is a PEM wetland located in the central and northwest sections of the Survey Area (Figure 5, Photographs C-6 and C-7). Dominant vegetation within the wetland included reed canary grass and broadleaf cattail. The Dominance Test and Rapid Test confirmed hydrophytic vegetation at the time of the site visit. The area also

included willow shrubs (*Salix* spp.), though they were not within the sample plot. Thick Dark Surface (A12) confirmed hydric soil at the time of the site visit. Wetland hydrology was confirmed a High Water Table (A2), Saturation (A3), Hydrogen Sulfide Odor (C1), and FAC-Neutral Test (D5). W-6 is a fringe wetland surrounding PUB W-7 and intermittent S-3.

Wetland 7 (W-7): W-7 (0.15 acre) is a PUB wetland located in the northwest section of the Survey Area (Figure 5, Photograph C-6). W-7 was surrounded by PEM fringe wetland W-6.

Wetland 8 (W-8, SP-7 and SP-8): W-8 (0.06 acre) is a PEM wetland located in the northwest sections of the Survey Area (Figure 5, Photographs C-7 and C-8). Dominant vegetation at the time of the site investigation included broadleaf cattail and Russian olive (*Elaeagnus angustifolia*). The Prevalence Index confirmed hydrophytic vegetation at the time of the site visit. Thick Dark Surface (A12) confirmed hydric soil at the time of the site visit. Wetland hydrology was confirmed a High Water Table (A2), Saturation (A3), and Hydrogen Sulfide Odor (C1).

Identified Areas: Surface Waters

Three intermittent streams totaling 5,476 linear feet, were identified within the Survey Area for the Project as summarized in Table 2 and detailed below.

Table 2: Type and Length of Streams Delineated

Stream Number[a]	Stream Type	Length of Stream Delineated in Survey Area (feet)
S-1	Intermittent	168
S-2	Intermittent	1,505
S-3	Intermittent	3,803

Stream 1 (S-1): S-1 (168 feet delineated) is an intermittent stream located in the southeast portion of the Survey Area (Figure 5, Photograph C-10). S-1 flows north from a culvert into PUB W-2. S-1 averaged 8 feet wide and approximately 1.0 foot deep at the ordinary high-water mark (OHWM), with banks averaging 2.5 feet high. Vegetation along S-1 included Russian olive, smooth brome (*Bromus inermis*), and reed canary grass. The substrate of S-1 consisted of silt and gravel.

Stream 2 (S-2): S-2 (1,505 feet delineated) is an intermittent stream located in the central portion of the Survey Area (Figure 5, Photograph C-12). S-2 flows southeast from a culvert connecting

PUB W-4 into PUB W-2. S-2 averaged 2 feet wide and 1.0 foot deep at the ordinary high-water mark (OHWM), with banks averaging 1.5 feet high. Vegetation along S-2 included reed canary grass and broadleaf cattail. The substrate of S-2 consisted of silt and rock.

Stream 3 (S-3): S-3 (3,803 feet delineated) is an intermittent stream located in the central and western portions of the Survey Area (Figure 5, Photographs C-15, C-16, and C-17). S-3 flows northwest connecting PEM W-5 to PEM W-6. S-3 averaged 5 feet wide and 0.5 feet deep at the ordinary high-water mark (OHWM), with banks averaging 3.5 feet high. Vegetation along S-2 included reed canary grass and smooth brome. The substrate of S-3 consisted of silt.

SUMMARY OF FINDINGS

Burns & McDonnell conducted a wetland delineation of the Survey Area to identify wetlands and surface waters. Eight wetlands and three streams were identified within the Survey Area.

The Survey Area is entirely within the City of Mandan, Morton County and within the jurisdiction of the USACE Omaha District. Avoidance of wetlands and surface waters should be considered in project planning. If avoidance is not possible, permits for impacts and alterations may be required. Permits for impacts to waterways and wetlands within Morton County, North Dakota are regulated by the USACE in compliance with Section 404 of the Clean Water Act, and the Morton County Stormwater Management Plan in compliance with the North Dakota Department of Health.

If you have any questions or would like additional information, please contact Angie Woehler at (720) 464-2586 or apwoehler@burnsmcd.com.

Sincerely,

A. Woehler

Angie Woehler
Staff Environmental Scientist

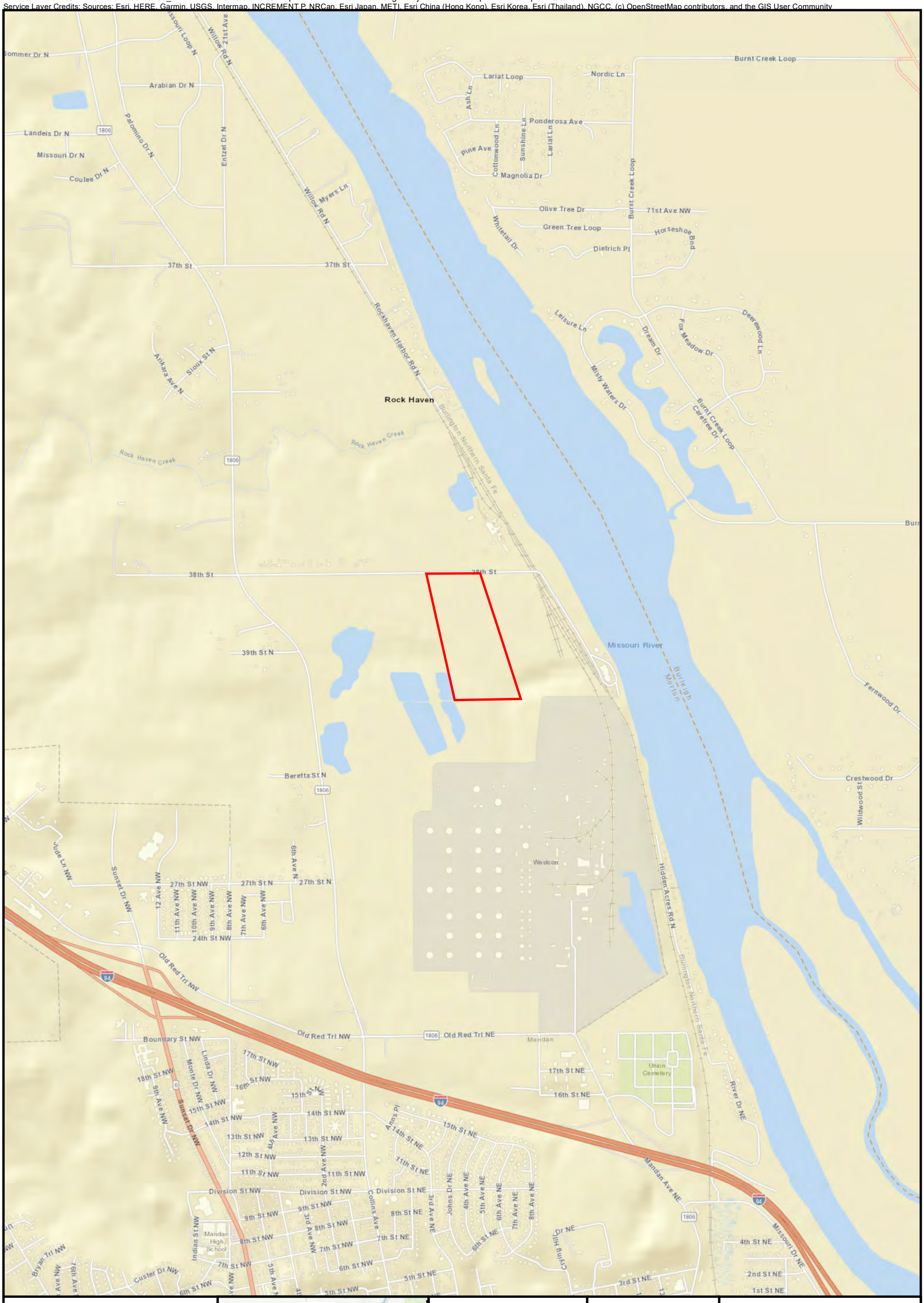
Attachments:

Appendix A - Figures
Appendix B - Wetland Determination Data Forms
Appendix C - Photographs

cc: Luke Krooswyk, Burns & McDonnell

APPENDIX A - FIGURES

Path: \\bmcd\dfs\Clients\ENS\MDU\125283_HeskettDemoOE\Studies\Geospatial\DataFiles\ArcDocs\Fig1 Project Location Map.mxd vakarpov 6/3/2021
Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community



Source: ESRI; Burns and McDonnell Engineering Company

Issued: 6/3/2021

Path: \\bmcd\dfs\Clients\ENS\MDU\125283_HeskettDemoOE\Studies\Geospatial\DataFiles\ArcDocs\Fig2 Project Topo Map.mxd vakarpov 6/3/2021

Survey Area

CANADA
MT
ND
MN
SD

NORTH

0 500 1,000
Scale in Feet

BURNS McDONNELL

Figure 2
Project Topographic Map
MDU Fire Water Line
Morton County, ND

Source: ESRI; Burns and McDonnell Engineering Company

Issued: 6/3/2021

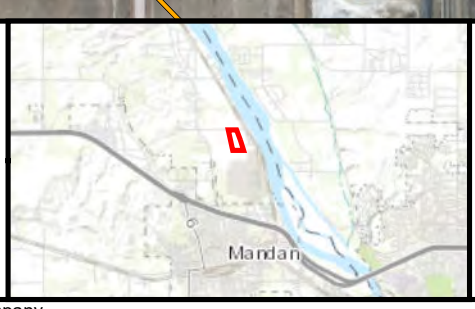
Path: \\bmcd\dfs\Clients\ENS\MDU\125283_HeskettDemoOE\Studies\Geospatial\DataFiles\ArcDocs\Fig3 NRCS Soils Map.mxd vakarpov 6/3/2021

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Soil Map Unit	Description	Acreage
E2737C	Chama-Cabba-Sen silt loams, 6 to 9 percent slopes	8.963
E2741D	Cabba-Chama-Sen silt loams, 9 to 15 percent slopes	12.653
E3755A	Temvik-Wilton silt loams, 0 to 3 percent slopes	4.018
E3801A	Mandan-Linton silt loams, 0 to 2 percent slopes	9.317
E3802B	Linton-Mandan silt loams, 2 to 6 percent slopes	14.774
E4997	Miscellaneous water	0.096
E4999	Water	1.031

Survey Area

Soil Boundary



NORTH

0 250 500

Scale in Feet

BURNS McDONNELL

Figure 3
NRCS Soils Map
MDU Fire Water Line
Morton County, ND

Source: ESRI; USGS; Burns and McDonnell Engineering Company

Issued: 6/3/2021

Path: \\bmcd\dfs\Clients\ENS\MDU\125283_HeskettDemoOE\Studies\Geospatial\DataFiles\ArcDocs\Fig4 Surface Waters Map.mxd vakarpov 6/3/2021

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Missouri River

Survey Area
Stream/River
Artificial Path
100-Year Floodplain

Wetland Type

Freshwater Emergent Wetland
Freshwater Pond
Riverine
Other

Mandan

NORTH

0 250 500
Scale in Feet

BURNS McDONNELL

Figure 4
Surface Waters Map
MDU Fire Water Line
Morton County, ND

Source: ESRI; NWI; USFWS; NHD; FEMA; Burns and McDonnell Engineering Company

Issued: 6/3/2021

Path: \\bmcd\dfs\Clients\ENS\MDU\125283_HeskettDemoOE\Studies\Geospatial\DataFiles\ArcDocs\Fig5 Delineation Map.mxd vakarpov 6/3/2021

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Survey Area

Stream (S)

Wetland (W) Type

Photo Point (PP)

PEM

Sample Plot

PUB

Culvert Location

NORTH

0 100 200

Scale in Feet

BURNS McDONNELL

Figure 5
Delineation Map
MDU Fire Water Line
Morton County, ND

Source: ESRI; NWI; Burns and McDonnell Engineering Company

Issued: 6/3/2021

APPENDIX B - WETLAND DETERMINATION DATA FORMS

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: MDU Fire Water line City/County: Mandan/ Morton County Sampling Date: May 18, 2021

Applicant/Owner: Montana-Dakota Utilities State: ND Sampling Point: SP-1

Investigator(s): Woehler & O'Hare Section, Township, Range: S15, T139N, 81W

Landform (hillslope, terrace, etc.): pond bank Local relief (concave, convex, none): concave Slope (%): 3

Subregion (LRR): W Lat: 46.8600006 Long: -100.8830032 Datum: NAD83

Soil Map Unit Name: Cabba-Chama-Sen silt loams, 9 to 15 percent slopes (E2741D) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: SP-1 is located in PEM W-1.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 30 feet)			
1. Phalaris arundinacea	65	x	FACW
2. Typha latifolia	20	x	OBL
3. Euphorbia esula	2		UPL
4. Carex spp.	13		OBL
5.			
6.			
7.			
8.			
9.			
10.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- X 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

Remarks:
Rapid and dominance test passed

SOIL

Sampling Point: _____

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 2/1	97	2.5YR 3/6	3	C	PL	SCL	redox feature

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: compact soil

Depth (inches): 16

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

Remarks:

Soil meets indicator A12, thick dark surface.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

Saturation Present? (includes capillary fringe) Yes X No _____ Depth (inches): 1

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

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

Remarks:

Hydrology meets indicators A3, C3, and D5.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: MDU Fire Water line City/County: Mandan/ Morton County Sampling Date: May 18, 2021

Applicant/Owner: Montana-Dakota Utilities State: ND Sampling Point: SP-2

Investigator(s): Woehler & O'Hare Section, Township, Range: S15, T139N, 81W

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): W Lat: 46.8600998 Long: -100.8830032 Datum: NAD83

Soil Map Unit Name: Cabba-Chama-Sen silt loams, 9 to 15 percent slopes (E2741D) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: SP-2 is located in an upland adjacent to PEM W-1.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5 feet)			
1. Bromus inermis	95	x	UPL
2. Euphorbia esula	5	x	UPL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No X

Remarks:
Hydrophytic vegetation not present.

SOIL

Sampling Point: _____

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-10	7.5YR 3/3	100					SCL	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: compact soil

Depth (inches): 10

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

Remarks:

Not hydric

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

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

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

Remarks:

No hydrology indicators

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: MDU Fire Water line City/County: Mandan/ Morton County Sampling Date: May 18, 2021

Applicant/Owner: Montana-Dakota Utilities State: ND Sampling Point: SP-3

Investigator(s): Woehler & O'Hare Section, Township, Range: S15, T139N, 81W

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 4

Subregion (LRR): W Lat: 46.8591003 Long: -100.8830032 Datum: NAD83

Soil Map Unit Name: Cabba-Chama-Sen silt loams, 9 to 15 percent slopes (E2741D) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: SP-3 is an upland confirmation plot.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5 feet)			
1. Bromus inermis	90	x	UPL
2. Phalaris arundinacea	10	x	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No X

Remarks:
Hydrophytic vegetation not present.

SOIL

Sampling Point: _____

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-15	7.5YR 2/3	100					Loamy sand	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: compact soil

Depth (inches): 15

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

Remarks:

Not hydric

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

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

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

Remarks:

No hydrology indicators

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: MDU Fire Water line City/County: Mandan/ Morton County Sampling Date: May 18, 2021

Applicant/Owner: Montana-Dakota Utilities State: ND Sampling Point: SP-4

Investigator(s): Woehler & O'Hare Section, Township, Range: S15, T139N, 81W

Landform (hillslope, terrace, etc.): pond bank Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): W Lat: 46.8611984 Long: -100.887001 Datum: NAD83

Soil Map Unit Name: Cabba-Chama-Sen silt loams, 9 to 15 percent slopes (E2741D) NWI classification: freshwater pond

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: SP-4 is located in PEM W-3.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix amygdaloides	10	x	FACW
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 feet)			
1. Phalaris arundinacea	50	x	FACW
2. Typha latifolia	50	x	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 3 (A)

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- X 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

Rapid and dominance test passed

SOIL

Sampling Point: _____

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	Gley 1 2.5/N	100					mucky peat	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: compact soil

Depth (inches): 16

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

Remarks:

A hemic, mucky peat soil with approximatly 60% fibers visible. Soil meets indicator A3, Black Histic.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Water Table Present? Yes X No _____ Depth (inches): 12

Saturation Present? (includes capillary fringe) Yes X No _____ Depth (inches): 1

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

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

Remarks:

Hydrology meets indicators A2, A3, and D5.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: MDU Fire Water line City/County: Mandan/ Morton County Sampling Date: May 18, 2021

Applicant/Owner: Montana-Dakota Utilities State: ND Sampling Point: SP-5

Investigator(s): Woehler & O'Hare Section, Township, Range: S15, T139N, 81W

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 3

Subregion (LRR): W Lat: 46.8614006 Long: -100.887001 Datum: NAD83

Soil Map Unit Name: Cabba-Chama-Sen silt loams, 9 to 15 percent slopes (E2741D) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: SP-5 is located in upland adjacent to PEM W-3 and PEM W-5.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5 feet)			
1. Bromus inermis	90	x	UPL
2. Cirsium arvense	10		FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No X

Remarks:
Hydrophytic vegetation not present.

SOIL

Sampling Point: _____

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-15	7.5YR 3/4	100					SCL	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: compact soil

Depth (inches): 15

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

Remarks:

Not hydric

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

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

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

Remarks:

No hydrology indicators

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: MDU Fire Water line City/County: Mandan/ Morton County Sampling Date: May 18, 2021

Applicant/Owner: Montana-Dakota Utilities State: ND Sampling Point: SP-6

Investigator(s): Woehler & O'Hare Section, Township, Range: S15, T139N, 81W

Landform (hillslope, terrace, etc.): pond bank Local relief (concave, convex, none): concave Slope (%): 3

Subregion (LRR): W Lat: 46.864399 Long: -100.8889999 Datum: NAD83

Soil Map Unit Name: Mandan-Linton silt loams, 0 to 2 percent slopes (E3801A), Linton-Mandan silt loams, 2 to 6 percent slopes (E3802B), Chama-Cabba-Sen silt loams, 6 to 9 percent slopes (E2737C), Water NWI classification: freshwater pond

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:
SP-6 is located within PEM W-6.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5 feet)			
1. Phalaris arundinacea	20	x	FACW
2. Typha latifolia	80	x	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC−): 3 (A)

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- X 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

Remarks:
Rapid and dominance test passed

SOIL

Sampling Point: _____

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-16	7.5 YR 2.5/1	100					SCL	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: compact soil

Depth (inches): 16

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

Remarks:

Soil meets indicator A12, thick dark surface.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

Saturation Present? (includes capillary fringe) Yes X No _____ Depth (inches): 1

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

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

Remarks:

Hydrology meets indicators A2, A3,C1, and D5.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: MDU Fire Water line City/County: Bismarck/ Burleigh County Sampling Date: May 18, 2021

Applicant/Owner: Montana-Dakota Utilities State: ND Sampling Point: SP-7

Investigator(s): Woehler & O'Hare Section, Township, Range: S15, T139N, 81W

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): convex Slope (%): 0

Subregion (LRR): W Lat: 46.8644981 Long: -100.8889999 Datum: NAD83

Soil Map Unit Name: Mandan-Linton silt loams, 0 to 2 percent slopes (E3801A) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:
SP-7 is an upland confirmation plot located between PEM W-3 and PEM W-8.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5 feet)			
1. Bromus inermis	70	x	UPL
2. Poa pratensis	20	x	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	90 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 10

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No X

Remarks:
Hydrophytic vegetation not present.

SOIL

Sampling Point: _____

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-9	7.5YR 3/4	100					Sand loam	road fill

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: gravel

Depth (inches): 10

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

Remarks:

Not hydric, likley underlaid with road fill.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

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

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

Remarks:

No hydrology indicators

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: MDU Fire Water line City/County: Mandan/ Morton County Sampling Date: May 18, 2021

Applicant/Owner: Montana-Dakota Utilities State: ND Sampling Point: SP-8

Investigator(s): Woehler & O'Hare Section, Township, Range: S15, T139N, 81W

Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 2

Subregion (LRR): W Lat: 46.8647003 Long: -100.8880005 Datum:

Soil Map Unit Name: Mandan-Linton silt-loams, 0 to 2 percent slopes (E3801A) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:
SP-8 is located in PEM W-8.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1. Elaeagnus angustifolia	10	x	FACU
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 feet)			
1. Phalaris arundinacea	10		FACW
2. Typha latifolia	90	x	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 90	x 1 = 90
FACW species 10	x 2 = 20
FAC species ____	x 3 = ____
FACU species 10	x 4 = 40
UPL species ____	x 5 = ____
Column Totals: 110 (A)	150 (B)

Prevalence Index = B/A = 1.36

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

_X_ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:
Prevalence index test passed

SOIL

Sampling Point: _____

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	Gley 1 2.5/N	100					SCL	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: compact soil

Depth (inches): 16

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

Remarks:

Soil meets indicator A12, thick dark surface.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

Saturation Present? (includes capillary fringe) Yes x No _____ Depth (inches): 1

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

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

Remarks:

Hydrology meets indicators A2, A3 and C1, strong hydrogen sulfide odor.

APPENDIX C - PHOTOGRAPHS

Photograph C-1: View of Sample Plot (SP)-1 located in palustrine emergent (PEM) Wetland (W)-1 and showing palustrine unconsolidated bottom (PUB) W-2, facing southeast.

Photograph C-2: View of SP-2 located in upland adjacent to PEM W-1 and PUB W-2, facing south.

Photograph C-3: View of SP-3 located in an upland confirmation plot, facing north.

Photograph C-4: View of SP-4 located in PEM W-3, facing south.

Photograph C-5: View of SP-5 located in upland adjacent to PEM W-3 and PEM W-5, facing southeast.

Photograph C-6: View of SP-6 located in PEM W-6 and showing PUB W-7, facing southeast.

Photograph C-7: View of SP-7 located in an upland adjacent to PEM W-6 and PEM facing west.

Photograph C-8: View of SP-8 located in PEM W-8 facing west.

Photograph C-9: View of Photo Point (PP)-1 towards a stream located outside of Survey Area, facing northeast.

Photograph C-10: View of PP-2 showing intermittent Stream (S)-1, facing north.

Photograph C-11: View of PP-3 showing typical upland mowed habitat, facing northeast.

Photograph C-12: View of PP-4 showing intermittent S-2, facing north.

Photograph C-13: View of PP-5 showing PUB W-4, facing west.

Photograph C-14: View of PP-6 showing PEM W-5, facing east.

Photograph C-15: View of PP-7 showing intermittent S-3, facing northwest.

Photograph C-16: View of PP-8 showing intermittent S-3 and PEM W-6, facing southeast.

Photograph C-17: View of PP-9 showing intermittent S-3 and PEM W-6, facing southeast.

Appendix G

Class III Cultural Resource Inventory (Redacted)