



*In the Community to Serve®*

**Combined Application to the  
North Dakota Public Service Commission  
For a  
Certificate of Corridor Compatibility  
And  
Energy Transmission Facility Route Permit  
For the  
Heskett Station Natural Gas Pipeline  
Morton County, North Dakota**

**By  
Montana-Dakota Utilities Co.**

**February 2013**

**Commission Case No. PU-11-680**

**Prepared by:**

**ProSource  
TECHNOLOGIES**

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## North Dakota Public Service Commission Guideline Checklists

The North Dakota Public Service Commission (Commission) provides guidance for the completion of applications for Energy Conversion and Transmission Facility Siting as specified in Chapter 49-22 of the North Dakota Century Code (NDCC) and further specified in Article 69-06 of the North Dakota Administrative Code (NDAC). This guidance is provided individually for the Certificate of Corridor Compatibility and the Route Permit for a Transmission Facility. This application is a consolidation of the two application processes. Two separate checklists are provided to facilitate access to the required information for each application instrument.

The following table presents a Certificate of Corridor Compatibility Checklist outlining the Commission’s “Energy Conversion and Transmission Facility Siting” Guidelines for a Certificate of Corridor Compatibility dated November 1979. The table outlines the page location where the required NDCC and NDAC requirements can be found in this application.

| <b>Table 1. Certificate of Corridor Compatibility Checklist</b> |                                                                                                                                                                       |             |
|-----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| <b>PSC Guidance Section</b>                                     | <b>Description</b>                                                                                                                                                    | <b>Page</b> |
| SECTION A:                                                      | DESCRIPTION                                                                                                                                                           | 16          |
| 1. Type                                                         | Description of the type of transmission facility including the purpose of the facility and the technology to be employed.                                             | 16          |
| 2. Product                                                      | Description of the type, source, and final destination of the product to be transmitted by the proposed facility.                                                     | 17          |
| 3. Size & Design                                                | A description of the size and design of the pipeline facility.                                                                                                        | 17          |
| a.                                                              | Width of right of way.                                                                                                                                                | 17          |
| b.                                                              | Estimated distance between surface structures.                                                                                                                        | 17          |
| c.                                                              | Pipe size.                                                                                                                                                            | 17          |
| d.                                                              | Approximate length of facility.                                                                                                                                       | 18          |
| e.                                                              | Maximum design operating pressure and temperature.                                                                                                                    | 18          |
| f.                                                              | Maximum design flow rate.                                                                                                                                             | 18          |
| g.                                                              | The number and general location of compressor or pumping stations.                                                                                                    | 18          |
| 4. Time Schedule                                                | The anticipated time schedule for the accomplishment of the following.                                                                                                | 18          |
| a.                                                              | Certificate of Corridor Compatibility.                                                                                                                                | 18          |
| b.                                                              | Route application.                                                                                                                                                    | 18          |
| c.                                                              | Route Permit.                                                                                                                                                         | 18          |
| d.                                                              | Construction start date.                                                                                                                                              | 18          |
| e.                                                              | Construction complete.                                                                                                                                                | 18          |
| f.                                                              | In-service date.                                                                                                                                                      | 18          |
| SECTION B:                                                      | STUDIES: Copies of evaluative studies or assessments of the environmental impact of the proposed facility submitted to any federal, regional, state, or local agency. | 73          |
|                                                                 | Wetland Survey.                                                                                                                                                       | 73          |

| <b>Table 1. Certificate of Corridor Compatibility Checklist</b> |                                                                                                                                                                                                                                             |             |
|-----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| <b>PSC Guidance Section</b>                                     | <b>Description</b>                                                                                                                                                                                                                          | <b>Page</b> |
|                                                                 | Biological Resources Survey.                                                                                                                                                                                                                | 73          |
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| 2.                                                              | A description of any feasible alternative methods of serving the need.                                                                                                                                                                      | 19          |
| 3.                                                              | A statement justifying any deviations from the most recent Ten-Year Plan, which the proposed facility may present.                                                                                                                          | 19          |
| <b>SECTION D</b>                                                | <b>LOCATION</b>                                                                                                                                                                                                                             | <b>20</b>   |
| 1.                                                              | Select a study area, which includes the proposed corridor, of sufficient width to enable the Commission to evaluate the factors addressed in Section 49-22-09, NDCC.                                                                        | 20          |
| 2.                                                              | Policies and commitments to limit the environmental impact of its facilities.                                                                                                                                                               | 20          |
| 3.                                                              | Identify and map the criteria that led to the proposed corridor location within the study area.                                                                                                                                             | 20          |
| 4.                                                              | Discuss the relative value of each criteria and how the proposed corridor location was selected giving consideration to all criteria.                                                                                                       | 21          |
| 5.                                                              | The criteria to be evaluated shall include at a minimum all of the following which are within the study area:                                                                                                                               |             |
| a.                                                              | Exclusion areas - Geographical areas excluded in the consideration of a route. A buffer zone of a reasonable width is included to protect the integrity of the area.                                                                        | 21          |
| b.                                                              | Avoidance areas - Geographical areas not considered in the routing unless, under the circumstances, there is no reasonable alternative. A buffer zone of a reasonable width is included to protect the integrity of the area.               | 25          |
| c.                                                              | Selection criteria - Demonstration that any significant adverse effects, which will result from the location, construction, and maintenance of the following facilities, will be at, or be managed and maintained at an acceptable minimum. | 30          |
| d.                                                              | Policy criteria - Policies and practices that will maximize benefits.                                                                                                                                                                       | 57          |
| e.                                                              | Design and construction limitations.                                                                                                                                                                                                        | 61          |
| f.                                                              | Economic considerations.                                                                                                                                                                                                                    | 61          |
| 6.                                                              | Discuss the general mitigative measures that will be taken to minimize adverse impacts, which result from a route location in the proposed corridor.                                                                                        | 71          |
| 7.                                                              | List the qualifications of the people in the various disciplines that contributed to the corridor location study.                                                                                                                           | 71          |
| 8.                                                              | Exclusion and Avoidance Criteria Maps.                                                                                                                                                                                                      | 84-99       |

The following table presents a Route Permit Application Checklist outlining the Commission’s “Energy Conversion and Transmission Facility Siting” Guidelines for a Route Permit for a Transmission Facility dated November 1979. The table outlines the page location where the required NDCC and NDAC requirements can be found in this application.

| <b>Table 2. Route Permit Application Checklist</b> |                                                                                                                                                                                                           |             |
|----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| <b>PSC Guidance Section</b>                        | <b>Description</b>                                                                                                                                                                                        | <b>Page</b> |
| <b>SECTION A:</b>                                  | <b>DESCRIPTION OF TRANSMISSION FACILITY</b>                                                                                                                                                               | <b>16</b>   |
| 1. Type                                            | Describe the type of transmission facility proposed.                                                                                                                                                      | 16          |
| 2. Product                                         | Describe the product or products to be transmitted.                                                                                                                                                       | 16          |
| 3. Size and Design                                 | Provide a general description of the proposed size and design, and any alternate size or design, which was considered.                                                                                    | 17          |
| 4. Time Schedule                                   | The anticipated time schedule for the accomplishment of the following events:                                                                                                                             | 18          |
| a.                                                 | Route Permit.                                                                                                                                                                                             | 18          |
| b.                                                 | Right-of-way acquisition complete.                                                                                                                                                                        | 18          |
| c.                                                 | Construction start date.                                                                                                                                                                                  | 18          |
| d.                                                 | Construction complete.                                                                                                                                                                                    | 18          |
| e.                                                 | Test operations.                                                                                                                                                                                          | 18          |
| f.                                                 | In-service date.                                                                                                                                                                                          | 18          |
| <b>SECTION B</b>                                   | <b>LOCATION</b>                                                                                                                                                                                           | <b>20</b>   |
| 1.                                                 | Discuss the utility's policies and commitments to limit the environmental impact of its facilities, including copies of board resolutions and management directives.                                      | 20          |
| 2.                                                 | Discuss the factors listed in Section 49-22-09, NDCC to aid the Commission's evaluation of the proposed route.                                                                                            | 61          |
| a.                                                 | 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. | 61          |
| b.                                                 | The effects of new energy conversion and transmission technologies and systems designed to minimize adverse environmental effects.                                                                        | 62          |
| c.                                                 | The potential for beneficial uses of waste energy from a proposed energy conversion facility.                                                                                                             | 62          |
| d.                                                 | Adverse direct and indirect environmental effects which cannot be avoided should the proposed site or route be designated.                                                                                | 62          |
| e.                                                 | Alternatives to the proposed site, corridor, or route which are developed during the hearing process and which minimize adverse effects.                                                                  | 62          |
| f.                                                 | Irreversible and irretrievable commitments of natural resources should the proposed site, corridor, or route be designated.                                                                               | 63          |
| g.                                                 | The direct and indirect economic impacts of the proposed facility.                                                                                                                                        | 63          |
| h.                                                 | 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.                                                | 63          |

| <b>Table 2. Route Permit Application Checklist</b> |                                                                                                                                                                                                                                             |             |
|----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| <b>PSC Guidance Section</b>                        | <b>Description</b>                                                                                                                                                                                                                          | <b>Page</b> |
| i.                                                 | The effect of the proposed site or route on existing scenic areas, historic sites and structures, and paleontological or archaeological sites.                                                                                              | 63          |
| j.                                                 | The effect of the proposed site or route on areas, which are unique because of biological wealth or because they are habitats for rare and endangered species.                                                                              | 63          |
| k.                                                 | Problems raised by federal agencies, other state agencies, and local entities.                                                                                                                                                              | 63          |
| 3.                                                 | Identify and map the criteria that led to the proposed route location within the designated corridor.                                                                                                                                       | 20          |
| 4.                                                 | Discuss in detail the relative value of each criteria and how the location, construction, and operation of the facility will affect each criteria.                                                                                          | 21          |
| 5.                                                 | The criteria to be evaluated shall include at a minimum all of the following which are within the designated corridor:                                                                                                                      |             |
| a.                                                 | Exclusion areas - Geographical areas excluded in the consideration of a route. A buffer zone of a reasonable width is included to protect the integrity of the area.                                                                        | 21          |
| b.                                                 | Avoidance areas - Geographical areas not considered in the routing unless, under the circumstances, there is no reasonable alternative. A buffer zone of a reasonable width is included to protect the integrity of the area.               | 25          |
| c.                                                 | Selection criteria - Demonstration that any significant adverse effects, which will result from the location, construction, and maintenance of the following facilities, will be at, or be managed and maintained at an acceptable minimum. | 30          |
| d.                                                 | Policy criteria - Policies and practices that will maximize benefits.                                                                                                                                                                       | 57          |
| e.                                                 | Design and construction limitations.                                                                                                                                                                                                        | 61          |
| f.                                                 | Economic considerations.                                                                                                                                                                                                                    | 61          |
| 6.                                                 | List the qualifications of the people in the various disciplines that contributed to the corridor location study.                                                                                                                           | 71          |
| 7.                                                 | Exclusion and Avoidance Criteria Maps.                                                                                                                                                                                                      | 84-99       |

Table 3. Acronyms and Abbreviations

|                |                                                        |
|----------------|--------------------------------------------------------|
| BCA            | Beaver Creek Archaeology, Inc.                         |
| BMPs           | Best Management Practices                              |
| CFR            | Code of Federal Regulations                            |
| Commission     | North Dakota Public Service Commission                 |
| CRP            | Conservation Reserve Program                           |
| CWA            | Clean Water Act                                        |
| EPA            | United States Environmental Protection Agency          |
| FHWA           | Federal Highway Administration                         |
| GHG            | Greenhouse gases                                       |
| GIS            | Geographic Information System                          |
| IRP            | Integrated Resource Plan                               |
| Montana-Dakota | Montana-Dakota Utilities Co.                           |
| MW             | Megawatt                                               |
| NDAC           | North Dakota Administrative Code                       |
| NDCC           | North Dakota Century Code                              |
| NDPDES         | North Dakota Pollution Discharge Elimination System    |
| NRCS           | Natural Resources Conservation Service                 |
| ROW            | Right-of-way                                           |
| SCCT           | Simple Cycle Combustion Turbine                        |
| SPCC           | Spill Prevention, Containment, and Countermeasure Plan |
| SWPPP          | Storm Water Pollution Prevention Plan                  |
| USACE          | United States Army Corps of Engineers                  |
| USDA           | United States Department of Agriculture                |
| USDOT          | United States Department of Transportation             |
| USFWS          | United States Fish and Wildlife Service                |
| USGS           | United States Geological Survey                        |
| WBI            | Williston Basin Interstate Pipeline                    |

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**Application and Request  
to the  
North Dakota Public Service Commission  
for Waiver or Reduction of  
Procedures and Time Schedules  
For the  
Heskett Station Natural Gas Pipeline  
Morton County, North Dakota**

**By  
Montana-Dakota Utilities Co.**

**February 2013**

**Commission Case No. PU-11-680**

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## **Introduction**

In connection with its submission of a consolidated application for a Certificate of Corridor Compatibility and Route Permit for an approximately 24-mile-long, 10-inch diameter natural gas pipeline to be located in Morton County, North Dakota (Project), Montana-Dakota Utilities Co., a division of MDU Resource Group, Inc. (Montana-Dakota), submits to the North Dakota Public Service Commission (Commission) this application for a waiver or reduction of procedures and time schedules set forth in Chapter 49-22 of the North Dakota Century Code (NDCC) and Article 69-06 of the North Dakota Administrative Code (NDAC). Consistent with the Commission's Energy and Transmission Facility Siting Guidelines, Montana-Dakota provides the following information in support of its waiver requests.

### **Section A Description of Facility**

#### **1. Type**

The Project will consist of an underground 10-inch diameter, steel, natural gas pipeline, approximately 24 miles in length, originating at an interconnection with the Northern Border Pipeline system (Northern Border) and terminating at a proposed electric generating facility north of Mandan, North Dakota. The purpose of the Project is to supply the natural gas requirements for the proposed 88 megawatt (MW) Simple Cycle Combustion Turbine (SCCT) and associated facilities necessary to interconnect with Montana-Dakota's existing electric system. The heavy-duty (Frame) type SCCT requires a minimum natural gas inlet pressure of 385 pounds per square inch (psi) in order to achieve full output. This requirement resulted in selecting a site where the new SCCT could be supplied with natural gas delivered from Northern Border Pipeline. This pipeline system provides the necessary high-pressure deliveries along with the option of firm transportation contracts, eliminating the need for additional on-site gas compression equipment and dual fuel capabilities.

#### **2. Product**

The proposed pipeline will carry transmission-quality natural gas to the proposed 88 MW SCCT to be constructed approximately two miles north of Mandan, North Dakota. The natural gas will be supplied from Northern Border at a Town Border Station near St. Anthony, North Dakota.

#### **3. Size and Design**

The pipeline will consist of an underground 10-inch diameter, steel, natural gas pipeline, approximately 24 miles in length. The pipeline will originate at an interconnection with Northern Border and terminate at the Heskett Station generating facility north of Mandan, North Dakota.

#### **4. Location**

The pipeline is proposed to be initiated at a tap on the Northern Border Pipeline near St. Anthony, North Dakota and traverse approximately 24 miles (approximately 19 miles north and then 5 miles east) to the SCCT site (Appendix A).

## 5. Geographical Service Area

The purpose of the Project is to supply the gas requirements for the proposed 88 MW SCCT.

## 6. Time Schedule

Provide the anticipated time schedule for the accomplishment of the major events.

| Event                                 | Anticipated Schedule                    |
|---------------------------------------|-----------------------------------------|
| Route Application                     | February 2013                           |
| Certificate of Corridor Compatibility | April 2013                              |
| Route Permit                          | April 2013                              |
| ROW Acquisition Complete              | April 2013                              |
| Construction Start Date               | June 2013                               |
| Construction Complete                 | November 2013                           |
| Test Operations                       | No later than the first quarter of 2015 |
| In-service Date                       | No later than the first quarter of 2015 |

## 7. Future Plans

No future plans for expansion have been formalized for this Project. The natural gas delivered through the pipeline will supply the gas requirements for the proposed 88 MW SCCT.

### Section B: Need for Facility

The natural gas pipeline, for which this consolidated application for a Certificate of Corridor Compatibility and Route Permit is being requested, is a key element of the 88 MW SCCT project. The natural gas pipeline for which this current application is made will supply the fuel necessary to power the electric 88 MW SCCT. The 2011 Integrated Resource Plan (2011 IRP) filed with the Commission on May 12, 2011 (Case No. PU-11-158) describes the need for the resource addition. On April 11, 2012, the Commission issued an order in Case Nos. PU-11-395 and PU-11-396 determining the 88 MW SCCT project was prudent and issuing a certificate of public convenience and necessity for its construction and operation.

The Frame type SCCT requires a minimum natural gas inlet pressure of 385 psi in order to achieve full output. This requirement resulted in selection of a site where the new SCCT could be supplied with natural gas delivered from the Northern Border pipeline system. This pipeline system provides the necessary high-pressure deliveries along with the availability of natural gas supply contracts, eliminating the need for additional on-site gas compression equipment and dual fuel capabilities.

**Section C: Cost**

The estimated cost of the Project, excluding Allowance for Funds Used During Construction (AFUDC), is \$18.4 million.

**Section D: Waiver Request**

In accordance with Section 49-22-07.2 of the NDCC and Chapter 69-06-06 of the NDAC, Montana-Dakota requests that the Commission waive the following requirements:

1. That the Commission hold a separate hearing on a waiver request, a Certificate of Corridor Compatibility application and a Route Permit application, as may be required by Sections 49-22-07.2, 49-22-08, 49-22-08.1 and 49-22-13 of the NDCC and Chapter 69-06-01-02 of the NDAC. Montana-Dakota requests that the Commission hold a single consolidated hearing on this waiver request and its consolidated application for a Certificate of Corridor Compatibility and a Route Permit. Montana-Dakota also requests that the Commission shorten the three-month period specified in Section 49-22-08(5) of the NDCC and Section 69-06-06-02(2) of the NDAC, and the six-month period specified in Section 49-22-08.1(5) of the NDCC.

Justification: Due to the long lead-time in the construction of the pipeline necessary to fuel the SCCT, Montana-Dakota requires a waiver in order to commence construction of the pipeline facility by mid-2013.

2. That the Commission waive the requirements of Sections 49-22-08 and 49-22-08.1 of the NDCC insofar as these sections may require the separate filing of applications for a Certificate of Corridor Compatibility and a Route Permit, and insofar as they require separate publication of notices for filing said applications.

Justification: Due to the long lead-time in the construction of the pipeline necessary to fuel the SCCT, Montana-Dakota requires a waiver in order to commence construction of the pipeline facility by mid-2013.

3. That the Commission waive the requirement of Section 69-06-04-02(1)(b) of the NDAC insofar as it requires that the corridor width be at least ten percent of its length, and that the Commission approve a one-mile wide corridor for the Project.

Justification: NDAC, Section 69-06-04-02.1.b, requires “that 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 otherwise determined by the commission.” Under this requirement, the proposed route corridor would have to be 2.4 miles wide. NDCC, Chapter 49-22-07.2 allows any utility “to request a waiver of any of the procedures or time schedules set forth in this chapter or in the rules adopted pursuant to this chapter.”

Montana-Dakota has determined that a one-mile corridor width will allow for sufficient evaluation of factors required under the Energy Conversion and Transmission Facility Act and therefore requests that the Commission reduce the minimum corridor width to one mile.

4. That the Commission waives the requirements for Mylar maps and stereo-pair aerial photographs as set forth in the Commission's Energy Conversion and Transmission Facility Siting Guidelines for Certificate of Corridor Compatibility and Route Permit Applications.

Justification: Geographic Information System (GIS) maps that meet the intent of the Commission's requirements are provided in the consolidated application for a Certificate of Corridor Compatibility and a Route Permit.

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**Combined Application  
to the  
North Dakota Public Service Commission  
For a  
Certificate of Corridor Compatibility  
And  
Energy Transmission Facility Route Permit  
For the  
Heskett Station Natural Gas Pipeline  
Morton County, North Dakota**

**By  
Montana-Dakota Utilities Co.**

**February 2013**

**Commission Case No. PU-11-680**

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## Introduction

Montana-Dakota Utilities Co. (Montana-Dakota), a Division of MDU Resources Group, Inc., headquartered in Bismarck, North Dakota, provides natural gas and/or electric service to parts of Montana, North Dakota, South Dakota, and Wyoming. The Montana-Dakota service area covers approximately 168,000 square miles and serves approximately 355,000 customers. In North Dakota, Montana-Dakota provides electric service to approximately 77,000 customers and provides natural gas service to approximately 90,000 customers in approximately 150 communities.

To meet future capacity requirements, Montana-Dakota is planning to construct, own, and operate an 88 megawatt (MW) Simple Cycle Combustion Turbine (SCCT) and associated facilities necessary to interconnect with Montana-Dakota's existing electric system. The SCCT project will also include a 10-inch diameter natural gas pipeline, approximately 24 miles in length, interconnecting with Northern Border Pipeline Company's pipeline system (Northern Border), to supply the gas requirements for the SCCT. The SCCT will be located near Mandan, North Dakota adjacent to Montana-Dakota's Heskett Station. The SCCT and the natural gas pipeline require a Certificate of Site Compatibility and Route Permit respectively under North Dakota Century Code (NDCC) Chapter 49-22. Montana-Dakota submits to the North Dakota Public Service Commission (Commission) this combined application for a Certificate of Corridor Compatibility and Route Permit, for the Heskett Station Pipeline (Project), in Morton County, North Dakota, pursuant to Chapter 49-22 of the NDCC and Article 69-06 of the North Dakota Administrative Code (NDAC).

The 10-inch diameter natural gas pipeline is to be constructed, owned and operated by Montana-Dakota. The pipeline is proposed to be initiated at a tap on the Northern Border Pipeline near St. Anthony, North Dakota and traverse approximately 24 miles in a northerly and then easterly direction to the SCCT site (Appendix A). The pipeline has been sized to meet the needs of the proposed SCCT, along with the capacity to serve possible future needs at this site. The Project cost is estimated at \$18.4 million.

## SECTION 1: DESCRIPTION OF TRANSMISSION FACILITY

### 1.1. Type

The Project will consist of an underground 10-inch diameter, steel, natural gas pipeline, approximately 24 miles in length, originating at an interconnection with the Northern Border Pipeline and terminating at a proposed generating facility north of Mandan. The purpose of the Project is to supply the gas requirements for the proposed 88 MW SCCT. The Frame type SCCT requires a minimum natural gas inlet pressure of 385 psi in order to achieve full output. This requirement resulted in selecting a site where the new SCCT could be supplied with natural gas delivered through the Northern Border Pipeline system. This pipeline system provides the necessary high-pressure deliveries along with the availability of natural gas supply contracts, eliminating the need for additional on-site gas compression equipment and dual fuel capabilities.

The Project will be located completely within Morton County, North Dakota. A map illustrating the Project's general location is provided in Appendix A.

## **1.2. Product**

The proposed pipeline will carry transmission-quality natural gas to the proposed 88 MW SCCT to be constructed approximately two miles north of Mandan, North Dakota. The natural gas will be supplied from the Northern Border Pipeline system at a Town Border Station near St. Anthony, North Dakota.

Natural gas is primarily made up of methane (>90%), with some ethane and lesser quantities of other, mostly aliphatic hydrocarbons. Its primary hazard is the same property that makes it a useful commodity: its flammability. Natural gas is essentially non-toxic, meaning it has no significant short-term or long-term toxic effects on humans when breathed in, as long as there is sufficient oxygen in the atmosphere.

## **1.3. Size and Design**

The pipeline will consist of an underground 10-inch diameter, steel, natural gas pipeline, approximately 24 miles in length. The pipeline will originate at an interconnection with Northern Border and terminate at the proposed electric generating facility north of Mandan. Separate from this application, Montana-Dakota will submit one copy of the design data report to the Commission for the Project and any associated facilities.

The United States Department of Transportation (USDOT), Title 49 Code of Federal Regulations (CFR), Part 192, defines minimum federal safety standards for construction, operation and maintenance of natural gas pipelines. The design, construction, operation, and maintenance of the proposed pipeline will meet or exceed the requirements of 49 CFR Part 192.

### **1.3.1. Width of right-of-way**

The width of the majority of the Project right-of-way (ROW) is proposed to be 85 feet. This ROW includes a 15-foot temporary workspace to be used during construction for material staging, work equipment and workspace and a 70-foot-wide permanent ROW. A portion of the route will have a 75-foot ROW, with 60-foot-wide permanent and 15 foot-wide temporary workspace. The Project will use existing public roads to access the ROW, and does not expect to modify existing roads or construct new permanent access roads. Montana-Dakota is in the process of acquiring the necessary easements for the Project.

### **1.3.2. Estimated distance between surface structures**

In addition to the 10-inch diameter pipe, Montana-Dakota will install a Town Border Station header, in-line inspection tool launcher/receiver, mid-line valves, odorizer, cathodic protection and a gas delivery station, as discussed below. Pipeline markers will also be installed at various locations in accordance with applicable federal and state regulations. The estimated distance between surface structures (isolation valves) along the route is 10 miles. No other aboveground structures are anticipated at this time.

### **1.3.3. Pipe size**

The pipeline will be constructed using 10-inch diameter API 5L X52 PSL2 Steel.

#### **1.3.4. Length of facility**

The length of the Project is approximately 24 miles.

#### **1.3.5. Maximum design operating pressure and temperature**

The maximum operating pressure for the system will be 1,440 psi at a maximum discharge temperature of 114 degrees Fahrenheit (°F).

#### **1.3.6. Maximum design flow rate**

Assuming an inlet pressure of 900 pounds per square inch gauge (PSIG) and an outlet Pressure of 400 PSIG, a 10-inch diameter pipeline would be able to supply approximately 2,900 Cubic Feet per Hour (MCFH).

#### **1.3.7. The number and general location of compressor or pumping stations.**

There will be no compressor or pumping stations on this pipeline.

### **1.4. Time Schedule**

Below is the anticipated time schedule for the accomplishment of the following events:

| <b>Table 4. Project Time Schedule</b> |                                         |
|---------------------------------------|-----------------------------------------|
| <b>Event</b>                          | <b>Anticipated Schedule</b>             |
| Route Application                     | February 2013                           |
| Certificate of Corridor Compatibility | April 2013                              |
| Route Permit                          | April 2013                              |
| ROW Acquisition Complete              | April 2013                              |
| Construction Start Date               | June 2013                               |
| Construction Complete                 | November 2013                           |
| Test Operations                       | No later than the first quarter of 2015 |
| In-service Date                       | No later than the first quarter of 2015 |

## **SECTION 2: NEED FOR FACILITY**

### **2.1. Analysis of the need for the proposed facility**

The Project is needed to provide the fuel for the proposed 88 MW Frame type SCCT electricity generator north of Mandan, North Dakota. The combined system is required to meet the capacity requirements of Montana-Dakota's electric service customers served by its integrated electric system. The 2011 Integrated Resource Plan (2011 IRP) filed with the Commission on May 12, 2011 (Case No. PU-11-158) describes the need for the resource addition and the justification of this resource. On April 11, 2012, the Commission issued an order in Case Nos. PU-11-395 and PU-11-396 determining the 88 MW SCCT project was prudent and issued a certificate of public convenience and necessity for its construction and operation.

### **2.2. Feasible alternative methods of serving the need**

The Williston Basin Interstate Pipeline Co. (WBI) FERC Tariff/Service Agreements guarantees a natural gas supply pressure of 200 psi; and, under interruptible service agreements, the pipeline capacity is subject to interruption when the demand for natural gas exceeds the supply. The pressure required to achieve full output of the 88 MW SCCT is approximately 385 psi.

To reduce the risks of low natural gas supply pressure and supply interruptions, sites were selected where the referenced SCCT could be connected to the Northern Border pipeline system. The Northern Border pipeline system offers a consistent source of high pressure natural gas, the availability of natural gas supply contracts, and therefore eliminates the need for additional on-site gas compression equipment and the complexity and problems inherent with dual fuel combustion.

Several pipeline routes were evaluated to serve the 88 MW SCCT. The preferred route was selected based on criteria such as paralleling existing road and utility corridors, minimizing impacts to landowners and environmentally sensitive areas, length of route and constructability of the Project. The proposed pipeline route follows existing road corridors in the majority of the southern portion of the corridor (primarily along Morton County Road 82). The Little Heart River and its basin will be crossed using horizontal drilling to minimize impacts. At Morton County Highway 138, the corridor extends north along section lines on private properties. The crossing of the Heart River is engineered at a location where potential impacts can be minimized. This crossing impact is further mitigated by using horizontal drilling to install the pipeline beneath the riverbed. The northern portion of the corridor turns east, north of the interstate highway and the Heart River. Pipeline installation in these areas will be performed to minimize potential impacts by either using horizontal drilling or specific installation methods described in this application.

### **2.3. Deviations from the Ten-Year Plan**

Montana-Dakota filed its Ten-Year Plan for 2011-2021 with the Commission on July 15, 2011. The proposed Project is described in Schedule C and deviations from the most recent Ten-Year Plan are not expected.

## SECTION 3: LOCATION

### 3.1. Study Area

Montana-Dakota proposes to construct an approximately 24-mile long, 10-inch diameter natural gas pipeline in Morton County, North Dakota. The proposed width of the Project corridor is one mile. (Appendix B). The pipeline will originate at a new Town Border Station located northwest of the City of St. Anthony and ¼ mile west of the intersection of 54<sup>th</sup> Street and 26<sup>th</sup> Avenue. The pipeline will terminate along Township Road 3/38th Street, approximately ½ mile from the Missouri River, at the proposed 88 MW SCCT, located approximately two miles north of Mandan. The proposed route generally parallels road ROWs and utility corridors and traverses primarily across private properties.

### 3.2. Policies and commitments to limit the environmental impact of its facilities

MDU Resources Group, Inc.'s Corporate Environmental Statement communicates:

“Our 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 support environmental laws and regulations that are based on sound science and cost-effective technology; and
- To comply with or exceed all applicable environmental laws, regulations and permit requirements”.

Montana-Dakota strives to maintain compliance and operate in an environmentally proactive manner, while taking into consideration the cost to customers. Montana-Dakota actively monitors federal and state legislative and regulatory activity related to environmental issues, including air emissions, greenhouse gases (GHG), waste disposal and water discharges. The Company has also established memberships in relevant trade organizations to assist in monitoring the potential impact of proposed legislation and regulation to the Company's operations.

This corporate commitment policy is incorporated into all of the MDU Resources Group's divisions and subsidiaries including Montana-Dakota, and is applied in all aspects of the work performed for their clients and affiliates.

### 3.3. Identification and maps of siting criteria

Maps of the location of exclusion and avoidance areas along the proposed route and within the proposed corridor are presented in Appendix C and Appendix D. Maps illustrating selection criteria, including land use, are located in Appendix E. Maps relating to wetlands, cultural resources, and ecological assessments for plants, fish and wildlife, and significant habitats and ecosystems are presented as part of individual reports presented in Appendices F, G, and H.

### 3.4. Criteria identification and evaluation

The NDAC specified criteria guided and governed the preparation of the inventory and evaluation of exclusion and avoidance areas within the Project corridor. While several of these criteria are present within the corridor, they encompass a very small portion of the overall route and corridor. Selection criteria were evaluated and construction plans and routing were adjusted to ensure potential impacts would be minimized. Policy criteria were also evaluated and considered to allow for maximized benefits through the policies and practices that are to be used for the completion of the Project. The evaluation of these criteria is presented in the following sections.

#### EXCLUSION AREAS

According to NDAC Article 69-06-08-02, exclusion areas are geographical areas that shall be excluded in the consideration of a route for a transmission facility. Exclusion areas may be located within a corridor, but at no given point shall such an area encompass more than fifty percent of the corridor width unless there is no reasonable alternative. A buffer zone of a reasonable width is required to protect the integrity of the area. The exclusion areas and their presence within the corridor are addressed in the following table and in discussions in the text sections following the table.

| <b>Exclusion Area</b>                                                      | <b>Crossed by Pipeline</b> | <b>Within 1 Mile Corridor</b> | <b>Comment</b>                                                                                                                                                                                                                       |
|----------------------------------------------------------------------------|----------------------------|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <u>E.1.</u> Designated or Registered National Parks                        | No                         | No                            | The nearest listed National Park is the Theodore Roosevelt National Park which is approximately 130 miles west of Mandan, North Dakota.                                                                                              |
| <u>E.2.</u> Designated or Registered National Memorial Parks               | No                         | No                            | There are no listed designated or registered National Memorial Parks in North Dakota. The nearest listed National Memorial Park, Mount Rushmore, is located in South Dakota.                                                         |
| <u>E.3.</u> Designated or Registered National Historic Sites and Landmarks | No                         | No                            | The nearest listed National Historic Site is the Knife River Indian Villages, which is approximately 40 miles northeast of Mandan, North Dakota.                                                                                     |
| <u>E.4.</u> Designated or Registered National Natural Landmarks            | No                         | No                            | The nearest listed National Natural Landmark is Sibley Lake, which is over 50 miles northeast of Mandan.                                                                                                                             |
| <u>E.5.</u> Designated or Registered National Monuments                    | No                         | No                            | There are no listed designated or registered National Monuments in North Dakota. The nearest listed National Monuments are Devil's Tower in Wyoming and Jewel Cave in South Dakota. Both monuments are approximately 250 miles away. |
| <u>E.6.</u> Designated or Registered National Wilderness Areas             | No                         | No                            | The nearest listed officially designated wilderness area is the Chase Lake Wilderness, which is located approximately 65 miles northeast of Mandan, North Dakota.                                                                    |

| <b>Table 5. Exclusion Areas</b>                                                                                        |                            |                               |                                                                                                                                                                                                                                                                                                                 |
|------------------------------------------------------------------------------------------------------------------------|----------------------------|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Exclusion Area</b>                                                                                                  | <b>Crossed by Pipeline</b> | <b>Within 1 Mile Corridor</b> | <b>Comment</b>                                                                                                                                                                                                                                                                                                  |
| <u>E.7.</u> Designated or Registered State Parks                                                                       | No                         | No                            | The nearest listed State Park is Fort Abraham Lincoln State Park which is located over 6 miles east and south of the proposed route.                                                                                                                                                                            |
| <u>E.8.</u> Designated or Registered State Historic Sites                                                              | No                         | No                            | The nearest listed historic site is Camp Hancock which is located over six miles south and east of the proposed route.                                                                                                                                                                                          |
| <u>E.9.</u> Designated or Registered State Monuments                                                                   | No                         | No                            | The nearest State Monuments are associated with the State Capitol Grounds, which are located over five miles southeast of the proposed route.                                                                                                                                                                   |
| <u>E.10.</u> Designated or Registered State Historical Markers                                                         | No                         | No                            | The nearest listed historic marker, Steamboat Warehouse, is located over four miles southeast of the proposed route.                                                                                                                                                                                            |
| <u>E.11.</u> Designated or Registered State Archaeological Sites                                                       | No                         | Yes                           | A Class I file search at the State Historical Society of North Dakota (SHSND) revealed that a variety of cultural resources which were on file were within a one mile radius of the proposed route. None of the recorded sites will be impacted by the Project.                                                 |
| <u>E.12.</u> Designated or Registered State Nature Preserves                                                           | No                         | No                            | The nearest listed State Nature Preserves and Natural Area is the Missouri River Natural Area which is located over two miles south of the proposed 88 MW SCCT Heskett Station and the terminus of the proposed pipeline.                                                                                       |
| <u>E.13.</u> County Parks and Recreational Areas                                                                       | No                         | Yes                           | The Heskett Power Plant Public Fishing Stairway, a county park, is located within the 1-mile wide study corridor.                                                                                                                                                                                               |
| <u>E.14.</u> Municipal Parks                                                                                           | No                         | Yes                           | Roughrider Park, which is administered by the City of Mandan, is located within the 1-mile wide study corridor.                                                                                                                                                                                                 |
| <u>E.15.</u> Parks Owned or Administered by Other Governmental Subdivisions                                            | No                         | No                            | No parks owned or administered by other governmental subdivisions were listed within the proposed route corridor or along the proposed pipeline route.                                                                                                                                                          |
| <u>E.16.</u> Areas Critical to the Life Stages of Threatened or Endangered Animal or Plant Species                     | No                         | No                            | No areas critical to the life stages of threatened or endangered animal or plant species were identified within the Project corridor.                                                                                                                                                                           |
| <u>E.17.</u> Areas Where Animal or Plant Species That Are Unique or Rare To North Dakota Would Be Irreversibly Damaged | No                         | Yes                           | One significant ecological community (mixed <i>Shepherdia argenta</i> shrubland and <i>Symphoricarpos occidentalis</i> shrubland) was identified within the study area. While one significant ecological community area is present within the one-mile corridor, this area will not be crossed by the pipeline. |

**E.1. – E.6. Designated or Registered National Parks, Memorial Parks, Historic Sites and Landmarks, Monuments, and Wilderness Areas**

Designated or registered national parks, national memorial parks, national historic sites and landmarks, national monuments, and national wilderness areas are not present within the Project corridor nor crossed by the pipeline. The lack of such features was considered a significant factor favoring the selected corridor.

**E.7. – E.10. Designated or Registered State Parks, Historic Sites, Monuments and Markers**

Designated or registered state parks, state historic sites, state monuments and state markers are not present within the Project corridor nor crossed by the pipeline. The nearest National Memorial Park, Mount Rushmore, is located in South Dakota. The lack of such features was considered a significant factor favoring the selected corridor.

**E.11. Designated or Registered State Archaeological Sites**

Montana-Dakota does not anticipate impacts to identified cultural resources within the route.

**E.12. Designated or Registered National State Nature Preserves**

Designated or registered national state nature preserves are not present within the Project corridor nor crossed by the pipeline. The lack of such features was considered a significant factor favoring the selected corridor.

**E.13. County Parks and Recreational Areas**

The Heskett Power Plant Public Fishing Stairway is a county park located at the east end of Township Road 3/38th Street at the Missouri River immediately southeast of the Heskett Station (Appendix C – Map 7 of 7). The Stairway area is used for fishing with no camping or boat access to the Missouri River. The area has a gravel parking lot, no public services, and is available for day use only.

The Public Fishing Stairway is located within the one-mile corridor for the proposed pipeline near the terminus of the pipeline. However, the subsurface installation of the pipeline, its location approximately 1/2 mile from the area, and the temporary nature of the construction will have no permanent impact on the stairway structure, public access to the area, or use of the area. Once the pipeline is installed, the pipeline will not create any visual impairment to or from the area.

An adequate buffer zone of at least 1/2 mile exists between the pipeline and the Fishing Stairway. The Project will not have adverse impacts on the park. The lack of impacts on this park was considered a factor favoring the selected corridor.

**E.14. Municipal Parks and parks owned or administered by Other Governmental Subdivisions**

Roughrider Park, which is administered by the City of Mandan, is located in the northeast 1/4 of the southeast 1/4 of Section 12, Township 139 North, Range 82 West, which is located within the

1-mile wide study corridor (Appendix C – Map 6 of 7). The park is a City of Mandan community park and consists of a single tennis court area and a small play yard.

The park is located within the one-mile corridor and is approximately ¼ mile from the Project route. The construction and operation of the proposed Project will not have any impact on the park, public access to the park, or use of the area because: (1) the subsurface installation of the pipeline, (2) its location is approximately ¼ mile from the park, and (3) the temporary nature of construction. The Project route in this vicinity runs through fenced agricultural land north of the park, which provides adequate buffer from the park and residential area. The lack of adverse impacts to parks was considered a factor favoring the selected corridor.

#### **E.15. Parks Owned or Administered by Other Governmental Subdivisions**

Parks owned or administered by other governmental subdivisions are not present within the Project corridor nor crossed by the pipeline. The lack of such features was considered a significant factor favoring the selected corridor.

#### **E.16. Areas Critical to the Life Stages of Threatened or Endangered Animal or Plant Species**

Listed areas critical to the life stages of threatened or endangered animal or plant species are not present within the Project corridor nor crossed by the pipeline. No listed areas critical to the life stages of threatened or endangered animal or plant species were identified within the proposed route corridor or along the proposed pipeline route. The nearest listed designated critical habitat area is the Missouri River Basin, which is designated as critical habit for the Piping Plover (*Charadrius melodus*). The lack of such features was considered a significant factor favoring the selected corridor.

Dakota Skippers (*Hesperia dacotae*) and Sprague's pipit (*Anthus spragueii*) are currently listed as a candidate species in North Dakota. No Dakota Skippers or Sprague's pipits were seen during the on-site review, although some remnant prairie and grasslands were present along the Project route. Activities from pipeline construction may temporarily disturb some forage species of the Dakota Skipper and temporarily impact Sprague's pipit habitat, however, there appears to be a sufficient amount of habitat and forage species in the vicinity to compensate for the loss. No direct impact to Dakota Skippers or Sprague's pipit is expected. The Biological Resources Survey (Appendix G) and Section S.13 provides information on habitats present along the pipeline route.

#### **E.17. Areas Where Animal or Plant Species That Are Unique or Rare To North Dakota Would Be Irreversibly Damaged**

According to the North Dakota Parks and Recreation's review of the North Dakota Natural Heritage biological conservation database, one significant ecological community was identified within the study area (Appendix I). The community is designated in a portion of the Rock Haven Creek watershed and is located near the terminus of the pipeline west of State Highway 1806, east of Highland Road and Township Road 10, north of Township Road 3/38th Street and south of the northern section line for Section 9 (37<sup>th</sup> Street). The community contains areas of mixed *Shepherdia argenta* shrubland, *Symphoricarpos occidentalis* shrubland and, *Fraxinus*

*pennsylvanica* – *Ulmus americana*/*Symphoricarpos occidentalis* forest (mixed *Shepherdia argenta* shrubland, *Symphoricarpos occidentalis* shrubland and, *Fraxinus pennsylvanica* – *Ulmus americana*/*Symphoricarpos occidentalis* forest) and is located within the study area but is not crossed by the pipeline. The area is located near the northern terminus of the pipeline corridor and comprises a majority of the Rock Haven Creek area west of the proposed pipeline route.

The North Dakota Parks and Recreation's review also identified the presence of one plant species and one animal species of concern within the Project corridor (Appendix I). The plant species is *Dalea enneandra*. According to the United States Geological Survey (USGS 2006a), "Also called "plume dalea," "nineanther prairie clover," and "arrow-weed," this plant reaches the northern limit of its range in the North Dakota counties of Morton, Grant, and Sioux. Elsewhere, the plant can be found from northwestern Missouri southwestward to New Mexico and Texas at elevations below 4,000 feet." This plant is considered a rare plant species by the National Heritage Inventory but it was not identified within the corridor.

The review identified *Cathartes aura*, the Turkey Vulture, as the animal species of concern within the Project corridor. While this species is common across the United States, Central and South America, the listing of this animal as a species of concern is likely related to a reported nesting site in this area. According to the USGS (USGS 2006c), "In 1971, a nest located 4 miles west of Mandan in Morton County was situated in a sandstone cavity that was about 1 foot in diameter and at least 8 feet long; this nest contained a single young bird when visited on August 14 and August 26 (R. N. Randall)." Due to the rare incidence of identified nesting sites of this species in North Dakota, the area would be of particular note in the Natural Heritage Inventory and a valid concern for the Project. Thus, the pipeline has been re-routed around this area, which now places the nest site outside the proposed route. ProSource Technologies, LLC (ProSource) has completed consultations with Federal and state agencies as well as conducted field studies. A discussion of the consultations is included in Section 3.7. The Biological Resources Survey (Appendix G) provides information on habitats present along the pipeline route. No areas containing animal or plant species that are unique or rare to the state would be irreversibly damaged within the corridor. The lack of such features was considered a significant factor favoring the selected corridor.

## **AVOIDANCE AREAS**

According to NDAC Article 69-06-08-02, avoidance areas are geographical areas that shall be considered in the route selection process of a transmission facility unless it can be shown that under the circumstances there is no reasonable alternative. In determining whether an avoidance area should be designated for a facility, the commission may consider, among other things:

- The proposed management of adverse impacts;
- The orderly siting of facilities;
- System reliability and integrity;
- The efficient use of resources; and
- Alternative routes.

The avoidance areas and their presence within the corridor are addressed in the following table and in discussions in the text sections following the table.

| <b>Table 6. Avoidance Areas</b>                                                    |                            |                               |                                                                                                                                                                                                                                  |
|------------------------------------------------------------------------------------|----------------------------|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Avoidance Area</b>                                                              | <b>Crossed by Pipeline</b> | <b>Within 1 Mile Corridor</b> | <b>Comment</b>                                                                                                                                                                                                                   |
| <u>A.1.</u> Designated or Registered National Historic Districts                   | No                         | No                            | Mandan Commercial Historic District and the State Training School Historic District are both located in Mandan, North Dakota and over three miles away from the proposed Project corridor.                                       |
| <u>A.2.</u> Designated or Registered National Wildlife Areas                       | No                         | No                            | The nearest officially designated wilderness area is the Chase Lake Wilderness, which is located approximately 65 miles northeast of Mandan, North Dakota.                                                                       |
| <u>A.3.</u> Designated or Registered National Wild, Scenic, or Recreational Rivers | No                         | No                            | There are no National Wild, Scenic, or Recreational Rivers listed within North Dakota.                                                                                                                                           |
| <u>A.4.</u> Designated or Registered National Wildlife Refuges                     | No                         | No                            | The nearest National Wildlife Refuge is the Long Lake National Wildlife Refuge, which is more than 30 miles southeast of Mandan, North Dakota.                                                                                   |
| <u>A.5.</u> Designated or Registered National Grasslands                           | No                         | No                            | The nearest National Grassland is the Cedar River National Grassland, located approximately 70 miles southwest of Mandan, North Dakota.                                                                                          |
| <u>A.6.</u> Designated or Registered State Historic Districts                      | No                         | No                            | Mandan Commercial Historic District and the State Training School Historic District are both located in Mandan, North Dakota and over three miles away from the proposed Project corridor.                                       |
| <u>A.7.</u> Designated or Registered State Wild, Scenic, or Recreational Rivers    | No                         | No                            | The Little Missouri River, North Dakota's only designated State Scenic River, is located over 100 miles west of Mandan, North Dakota.                                                                                            |
| <u>A.8.</u> Designated or Registered State Game Refuges                            | No                         | No                            | No listed designated or registered state game refuges were identified within the proposed Project corridor.                                                                                                                      |
| <u>A.9.</u> Designated or Registered State Game Management Areas                   | No                         | No                            | The nearest listed designated or registered State Game Refuge is the Morton County Wildlife Management Area, which is located approximately 4 miles east of the proposed route in Section 27, Township 137 North, Range 81 West. |

| <b>Table 6. Avoidance Areas</b>                                                                         |                            |                               |                                                                                                                                                                                                                                                                                                         |
|---------------------------------------------------------------------------------------------------------|----------------------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Avoidance Area</b>                                                                                   | <b>Crossed by Pipeline</b> | <b>Within 1 Mile Corridor</b> | <b>Comment</b>                                                                                                                                                                                                                                                                                          |
| <u>A.10.</u> Designated or Registered State Management Areas                                            | No                         | No                            | The nearest designated or registered state management area is Private Land Open to Sportsmen (PLOTS), which is located in Section 32, Township 137 North, Range 82 West, which is approximately 1.7 miles west of the interconnection with the Northern Border Pipeline system.                         |
| <u>A.11.</u> Designated or Registered State Forests                                                     | No                         | No                            | The nearest State Forest is the Mouse River State Forest, which is over 120 miles northeast of Mandan, North Dakota.                                                                                                                                                                                    |
| <u>A.12.</u> Designated or Registered State Forest Management Lands                                     | No                         | No                            | No listed designated or registered state forest management lands were identified within the proposed Project corridor.                                                                                                                                                                                  |
| <u>A.13.</u> Designated or Registered State Grasslands                                                  | No                         | No                            | No listed designated or registered state grasslands were identified within the proposed Project corridor.                                                                                                                                                                                               |
| <u>A.14.</u> Historical Resources Which Are Not Specifically Designated as Exclusion or Avoidance Areas | No                         | Yes                           | A Class III cultural resources inventory of the Project area was completed and cultural resources were found and recorded. None of the newly discovered sites will be impacted by the Project.                                                                                                          |
| <u>A.15.</u> Areas Which Are Geologically Unstable                                                      | No                         | No                            | Geologically unstable areas are typically associated with areas that experience landslides, sinkholes, and earthquakes. While the Mandan – Bismarck area has experienced earthquakes, no listed geologically unstable areas were identified in the Project corridor.                                    |
| <u>A.16.</u> Within Five Hundred Feet of a Residence, School, or Place of Business                      | No                         | Yes                           | There are 20 residences and two businesses within 500 feet of proposed pipeline. Montana-Dakota will seek waivers from landowners, in accordance with Section 49-22-05.1 of the NDCC and Chapter 69-06-08-02(2)(e) of the NDAC, that have occupied residences within 500 feet of the proposed Pipeline. |
| <u>A.17.</u> Reservoirs and Municipal Water Supplies                                                    | No                         | Yes                           | The Missouri River, which is the municipal water supply for the City of Mandan, is located within the 1-mile wide study corridor.                                                                                                                                                                       |
| <u>A.18.</u> Water Sources for Organized Rural Water Districts                                          | No                         | Yes                           | The proposed corridor passes through the boundaries of the Missouri West Water System, the Missouri River, and near the Mandan Water Treatment Plant. This rural water district obtains its water from the City of Mandan, which provides treated surface water drawn from the Missouri River.          |

| <b>Table 6. Avoidance Areas</b>                                                      |                            |                               |                                                                                                         |
|--------------------------------------------------------------------------------------|----------------------------|-------------------------------|---------------------------------------------------------------------------------------------------------|
| <b>Avoidance Area</b>                                                                | <b>Crossed by Pipeline</b> | <b>Within 1 Mile Corridor</b> | <b>Comment</b>                                                                                          |
| A.19. Areas of Recreational Significance Which Are Not Designated as Exclusion Areas | No                         | No                            | There are no other areas of recreational significance within one mile of the proposed Project corridor. |

**A.1. – A.5. Designated or Registered National Historic Districts; Wildlife Areas; Wild, Scenic, or Recreational Rivers; and Grasslands**

Designated or registered national historic districts, national wildlife areas, national wild, scenic, or recreational rivers, and national grasslands are not present within the Project corridor nor crossed by the pipeline. The lack of such features within one mile of the Project route was considered a significant factor favoring the selected corridor.

**A.6. Designated or Registered State Historic Districts**

Designated or registered state national historic districts are not present within the Project corridor nor crossed by the pipeline. The lack of such features within one mile of the Project route was considered a significant factor favoring the selected corridor.

**A.7. – A.13. Designated or Registered State Wild, Scenic, or Recreational Rivers; Game Refuges; Game Management Areas; Management Areas; Forests; Forest Management Lands; and Grasslands**

Designated or registered state wild, scenic, or recreational rivers, state game refuges, state game management areas, state management areas, state forests, state forest management lands, and state grasslands are not present within the Project corridor nor crossed by the pipeline. The lack of such features within one mile of the Project route was considered a significant factor favoring the selected corridor.

**A.14. Historical Resources Which Are Not Specifically Designated as Exclusion or Avoidance Areas**

A Class III cultural resources inventory of the Project area was conducted between July 30 and August 1, and October 18 and 19, 2012. During the field survey, cultural resources were found. The pipeline has been re-routed around these areas, which now places these sites outside the proposed route. Thus, these sites will not be impacted and do not require any further avoidance measures.

**A.15. Areas Which Are Geologically Unstable**

Geologically unstable areas are typically associated with areas that experience landslides, sinkholes, and earthquakes. While the Mandan – Bismarck area has experienced earthquakes, geologically unstable areas are not present within the Project corridor nor crossed by the

pipeline. The lack of such features within one mile of the Project route was considered a significant factor favoring the selected corridor.

#### **A.16. Within Five Hundred Feet of a Residence, School, or Place of Business**

The proposed pipeline will be installed within 500 feet of 20 residences and one place of business (Appendices C and D). No schools were located within 500 feet of the pipeline or its related facilities. The reliability and integrity of the Project using tested and approved installation methods, federally mandated pipeline system and safety components, and following industrial standards for system maintenance will minimize the impact of the pipeline on these properties.

Montana-Dakota will seek waivers from all landowners and businesses, in accordance with Section 49-22-05.1 of the NDCC and Chapter 69-06-08-02(2)(e) of the NDAC, that are within 500 feet of the proposed Pipeline. For this Project, the low residential density and the agricultural, rural nature of the majority of the route serve as a factor favoring the selected route.

#### **A.17. Reservoirs and Municipal Water Supplies**

The Missouri River, which is the municipal water supply for the City of Mandan, is located within the 1-mile wide study corridor (Appendix D – Map 7 of 7). The river is a significant water resource for the State of North Dakota and for the Cities of Mandan and Bismarck as a water supply.

The majority of the Project corridor is located at a distance greater than one mile from the Missouri River. The northeast most extent of the pipeline, as it approaches and connects with the proposed generating facility, is located approximately ¼ mile from the river. One of the greatest threats to the Missouri River and its tributaries, during construction, would be from the potential of disturbed soils to enter the waterbodies. While these impacts would be localized and temporary, Montana-Dakota will minimize the adverse impacts to waterbodies by implementing mitigative measures and best management practices. A Spill Prevention, Containment, and Countermeasure (SPCC) Plan and Storm Water Pollution Prevention Plan (SWPPP) will be developed for the Project and a National Pollutant Discharge Elimination (NPDES) permit will be obtained. Temporary erosion and sediment control Best Management Practices (BMPs) will be installed across the entire width of the construction ROW after clearing and before ground surface disturbance. Montana-Dakota will employ at least one environmental inspector to monitor construction activities and ensure environmental compliance throughout the duration of the Project.

Once construction is completed, the nature of the pipeline product does not represent a threat to the Missouri River should a release of natural gas occur. The natural gas would enter into the atmosphere and disperse and pose no threat and have no impact on the river under any anticipated natural situation. This consideration was determined to be a factor favoring the selected corridor.

#### **A.18. Water Sources for Organized Rural Water Districts**

The proposed Project corridor is located within the boundaries of the Missouri West Water System (Figure 1). This rural water system and the City of Mandan derive their water from the Mandan Water Treatment Plant, which is located just south of the pipeline's northern terminus.

The water treatment plant provides treated surface water drawn from the Missouri River.



Image received from and used with permission from the North Dakota Rural Water Systems Association.  
**Figure 1. Missouri West Water System in Morton County, North Dakota**

The transport system for the district is a network of subsurface water supply pipelines. Portions of this network are within the Project corridor and are likely crossed by the pipeline. Should the pipeline installation cross any water supply pipelines for the rural water district, Montana-Dakota will follow standard local, county and state protocols by contacting the potentially affected utility owner and acquiring the required permits, clearances and approvals.

Neither the nature of the proposed pipeline, its contents, nor its proximity represents a threat to the water treatment plant, the rural water district or the Missouri River. Should a release of natural gas occur, the natural gas would enter into the atmosphere and disperse and pose no threat and have no impact on the river under any anticipated natural situation. The greatest risk from a natural gas pipeline would be a breach with ignition and fire. Such a situation would also not threaten the river. These considerations were determined to be factors also favoring the selected corridor.

#### **A.19. Areas of Recreational Significance Which Are Not Designated as Exclusion Areas**

Other areas of recreational significance are not present within the Project corridor nor crossed by the proposed pipeline. The lack of such features within one mile of the Project route was considered a significant factor favoring the selected corridor.

### **SELECTION CRITERIA**

According to NDAC Article 69-06-08-02, Selection Criteria are considerations for selected natural resources to which any significant adverse effects will result from the location, construction, and maintenance of the facility. Any significant adverse effects, which could arise from the Project on these natural resources, must be demonstrated to be at an acceptable minimum, or that those effects will be managed and maintained at an acceptable minimum. The presence of selection criteria areas and the potential impact of the Project area on them are addressed in the following table and in discussions in the text sections following the table.

| <b>Table 7. Selection Criteria</b>                                                                    |                              |                                                                                                                                                                                                                                                                                                      |
|-------------------------------------------------------------------------------------------------------|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Impact on Agriculture</b>                                                                          | <b>Potentially Impacted?</b> | <b>Comments</b>                                                                                                                                                                                                                                                                                      |
| <u>S.1.</u> Agricultural Production                                                                   | Limited                      | This is a linear Project of minimal width and impact and installed through agreed upon easements. Disturbed areas will be restored after installation.                                                                                                                                               |
| <u>S.2.</u> Family Farm and Ranches                                                                   | Limited                      | This is a linear Project of minimal width and impact and installed through agreed upon easements. Disturbed areas will be restored after installation.                                                                                                                                               |
| <u>S.3.</u> Land Economically Suitable for Irrigation                                                 | No                           | This is a linear Project of minimal width and impact and installed through agreed upon easements.                                                                                                                                                                                                    |
| <u>S.4.</u> Surface Drainage Patterns                                                                 | No                           | Disturbed areas will be restored after installation.                                                                                                                                                                                                                                                 |
| <u>S.5.</u> Groundwater Flow Patterns                                                                 | No                           | Disturbed areas will be restored after installation.                                                                                                                                                                                                                                                 |
| <b>Impact Upon Non-Agricultural Uses</b>                                                              | <b>Potentially Impacted?</b> | <b>Comments</b>                                                                                                                                                                                                                                                                                      |
| <u>S.6.</u> Noise-Sensitive Land Uses                                                                 | Limited                      | Temporary construction noise. No noise with long-term operation of underground installation.                                                                                                                                                                                                         |
| <u>S.7.</u> The Visual Effect on the Adjacent Areas                                                   | Limited                      | Installation is underground with limited aboveground structures.                                                                                                                                                                                                                                     |
| <u>S.8.</u> Extractive and Storage Resources                                                          | Limited                      | Sand and gravel resources exist within the Project corridor.                                                                                                                                                                                                                                         |
| <u>S.9.</u> Wetland                                                                                   | Limited                      | Wetland delineations were conducted in the summer 2012 to assist with route planning and preliminary engineering. A total of 26 sites were identified. Temporary impacts may occur to some of these sites. A detailed description of the sites and mitigation measures are discussed in Section S.9. |
| <u>S.10.</u> Woodlands and Wooded Areas                                                               | Limited                      | Installation and restoration methods designed to minimize disturbances to sensitive areas.                                                                                                                                                                                                           |
| <u>S.11.</u> Radio and Television Reception, and Other Communication or Electronic Control Facilities | No                           | Installation is underground with manually operated maintenance procedures.                                                                                                                                                                                                                           |
| <u>S.12.</u> Human Health and Safety                                                                  | No                           | Installation is underground with safety technology installed with scheduled, periodic maintenance and testing.                                                                                                                                                                                       |
| <u>S.13.</u> Animal Health and Safety                                                                 | No                           | Construction is temporary and installation is underground.                                                                                                                                                                                                                                           |
| <u>S.14.</u> Plant Life                                                                               | Yes                          | Temporary disturbances with restoration and revegetation.                                                                                                                                                                                                                                            |

## **SELECTION CRITERIA - THE IMPACT UPON AGRICULTURE**

### **S.1. Agricultural production**

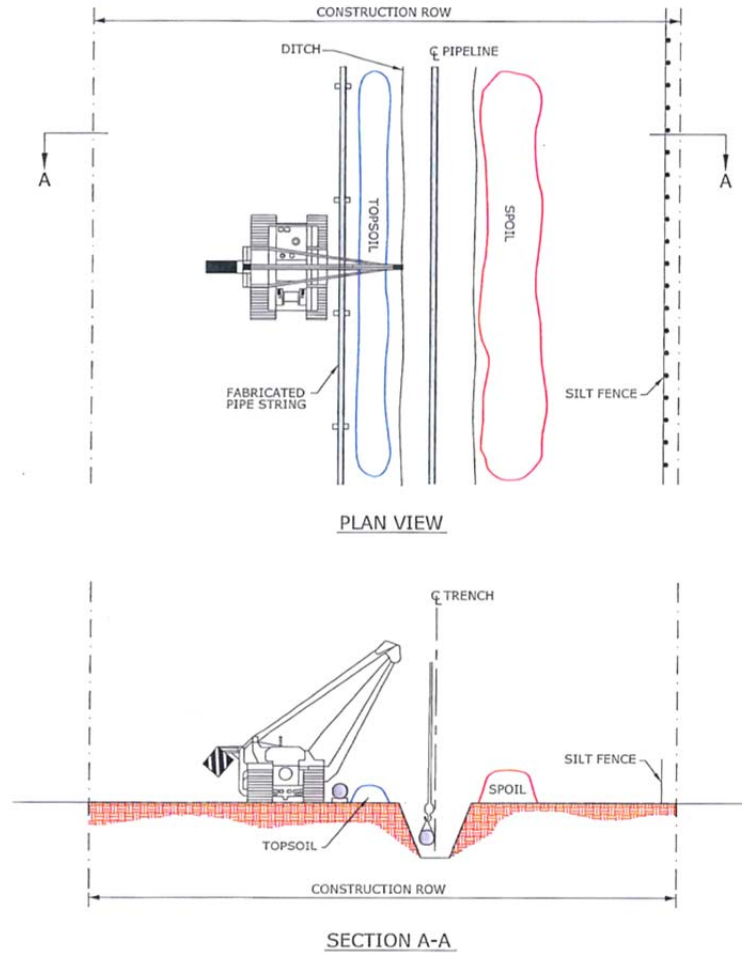
According to the Soil Survey of Morton County (NRCS 2002), three of the soil types found within the pipeline route are classified as prime farmland. These soils are Arnegard loam, 0 to 2 percent slopes, Grail silty clay loam, 0 to 2 percent slopes, and Bowbells loam, 0 to 3 percent slopes. Twenty-one soil types found within the pipeline route are considered farmland of statewide importance.

Prime farmlands consist of land that has the best combination of physical and chemical characteristics for producing food, feed, forage, and oilseed crops. According to the Natural Resources Conservation Service (NRCS), prime farmlands have “an adequate and dependable water supply from precipitation, a favorable temperature and growing season, acceptable acidity or alkalinity, acceptable salt and sodium content and few or no rocks.” This does not mean all soils listed as prime farmland produce exceptionally high crop yields. Farmland of statewide importance consists of soils that are important to the agricultural resource base but they do not meet the requirements for prime farmland. These soils are more erodible, droughty, seasonally wet, and difficult to cultivate than prime farmland. They are also usually less productive than prime farmland soils.

The effects of the Project on agriculture would be short-term and minor. During construction, the immediate impact would be the loss of the standing crop within the ROW for that growing season. Erosion and possible damage to drainage and irrigation systems, and the introduction of weeds are also considerations during the construction of the pipeline. These impacts could temporarily decrease soil productivity and resultant crop yields and are active considerations prior to and during pipeline construction. Long term or permanent impacts are not anticipated. The economic consequences of these temporary impacts are typically addressed through payments under the right of way easements.

Standard installation methods take into consideration the possible impacts to the soil and use of the land. The pipeline will be buried to a depth of at least 48 inches from the ground surface to allow full use of the land for agricultural use after construction.

To avoid soil mixing, topsoil will be removed and segregated from the underlying subsoil. Topsoil will be stored separately from subsoil and protected from construction-related activities. Montana-Dakota may use the double ditch method, which means that the topsoil is placed on one side of the trench and the subsoil is placed on the other side of the trench (Figure 2) to prevent the mixing of topsoil and subsoil. After pipeline installation is complete, the subsoil will be replaced in the pipeline trench and adjacent areas to restore the land’s natural contours. Only then is the topsoil replaced to its original location. Montana-Dakota will replace the topsoil so the upper portion of the pipeline excavation, the crowned surface and the cover layer of the area used for subsoil storage, contain only the topsoil originally removed. The depth of replaced topsoil will conform as closely as possible to the depth removed.



**Figure 2. Double-ditching method to separate top soil from spoil**

Topsoil will not be used to construct field entrances or drives or be otherwise removed from the property, without the written consent of the landowner.

Montana-Dakota may utilize deep tilling methods in agricultural land, including off ROW access roads traversed by heavy construction equipment, to alleviate soil compaction. If the topsoil was removed from the area to be tilled, the tillage will precede replacement of the topsoil. At least three passes with the deep tillage equipment will be made if necessary. Tillage will be at least 18 inches deep in land used for crop production and 12 inches deep on other lands. These activities will be performed under soil moisture conditions, which permit effective working of the soil. The landowners or tenants may elect to perform this tillage using their own equipment.

After construction of the pipeline has been completed, the slope, contour, grade, and drainage pattern of the disturbed area will be restored as nearly as practical to pre-construction conditions. If necessary, the trench may be crowned to allow for potential settlement of the trench backfill. In areas where land contours are visibly affected, or areas of undesirable altered surface drainage caused by excessive or insufficient settlement of the trench, remediation may take place by means such as regrading, and if necessary, importing of appropriate fill material.

Regrading may also take place in disturbed areas in which erosion causes the formation of rills or channels, or areas of heavy sediment deposition. Normal agricultural use of the land including future irrigation and drainage systems installation would be allowed to continue over the permanent ROW.

The only permanent impact of the pipeline on agricultural uses would be the aboveground stations for corrosion protection systems, pipeline markers, in-line inspection tool launcher/receiver ports, mid-line valves, and a Town Border Station. The aboveground features, except pipeline markers, will be located at the interconnection site, adjacent to the Northern Border Pipeline, in a fenced facility located on property leased or purchased from the landowner. Pipeline identification markers and aboveground stations for corrosion protection systems will be located along the pipeline alignment at road crossings and other areas in accordance with applicable federal and state regulations.

Montana-Dakota will work with the landowners to minimize impacts to their operations, and will compensate them for the permanent easement and reimburse the landowners for crop damages. Construction activities will create the potential for damage to property, including drainage tiles, irrigation systems and fences. If property is damaged, Montana-Dakota will restore or provide compensation for the property that is damaged or temporarily disturbed because of pipeline construction.

Montana-Dakota will implement the following mitigation measures to minimize the potential for short-term impacts on agricultural productivity:

- Separate topsoil over the trench line;
- To allow continued use of the ROW for agricultural use after completion of the installation, install the pipeline to a depth that is deeper than typical tillage depths;
- To prevent importation of weed propagules or other soil pests, remove residual soil and clean construction and installation equipment prior to use on the Project;
- Existing topsoil will be stripped and segregated, up to 12 inches or to the cultivation depth, to minimize subsoil mixing, minimize impacts on soil productivity and to maintain topsoil integrity;
- Return topsoil to its original horizon during backfilling;
- In areas where topsoil was removed from the area to be tilled, the tillage will precede replacement of the topsoil;
- Multiple passes with deep tillage equipment may be made at a depth of at least 18 inches in land used for crop production and 12 inches on other lands;
- In areas where soil compaction has been shown to have been caused by pipeline installation construction, remedy the compaction by deep tilling soil;
- Perform tillage under soil moisture conditions which permit effective working of the soil;

- Allow the landowner or tenant to elect to perform the tillage using their own equipment;
- Compensate landowners for crop loss or other related damages following construction;
- Repair, replace or compensate the landowner should drainage or irrigation systems be damaged by construction activities; and
- Compensate landowners for permanent easement on their property along the pipeline route.

## **S.2. Family farms and ranches**

Review of aerial photography indicates that the majority of the land use within the proposed Project corridor is agricultural in the form of family farms, ranches, and rangeland. Using the practices and installation methods detailed in Section S.1, pipeline construction would have short-term effects on agricultural land use within the pipeline ROW during construction.

Impacts on ranching would likely include limits to access during construction, encumbrance to livestock movement across construction zones, and decreased grazing time and forage. The short duration of construction activities and the linear nature of the installation will result in minor impacts. The standing forage material immediately in the ROW may be decreased for a season but only along the linear path of the installation. Once construction has been completed, normal grazing and livestock movement over the permanent ROW may resume.

Montana-Dakota will implement the following mitigation measures to minimize the potential for short-term impacts on family farms and ranches:

- Coordinate with landowners to keep livestock out of immediate installation access areas during construction;
- Fences encountered along the proposed route will be cut and braced on each side of the ROW to prevent damage to the remaining fence, unless the landowner requests otherwise. Temporary gates will be installed where needed to contain livestock or prohibit public access to the ROW during construction;
- In actively used agricultural land, existing topsoil will be stripped and segregated, at least 12 inches or to the cultivation depth, thereby minimizing impacts on soil productivity and maintaining topsoil integrity;
- Store the topsoil and subsoil in a manner that prevents mixing;
- Return topsoil to its original horizon during backfilling;
- When practical, coordinate with the landowner to defer grazing in installation area until vegetation becomes re-established;
- To the extent practical, restore the installation area to its preconstruction contours. Reclamation, fertilization and reseeding will be done according to the NRCS recommendations, unless otherwise specified by the landowner and approved by the Commission; and

- Compensate landowner for temporary loss of land use and permanent easement on their property.

### **S.3. Land economically suitable for irrigation**

Land that could be demonstrated to be economically suitable for irrigation is present within the Project corridor. Montana-Dakota uses standardized pipeline installation construction methods that apply the same standards to designated, active prime farmland and to such undesignated lands that could be irrigated. The methods described in Section S.1 will be used for all land along the Project route except in areas where horizontal drilling may be used (e.g., paved roads, under rivers and creeks, etc.) or other variations for depth or installation would be required by other state, federal or local authorities or utilities (e.g., under roads, railway right of ways, other underground utilities, drain tiles, etc.). Installation depth of the pipeline will be 48 inches below grade along the proposed route, except where the depth will be greater as deemed necessary by the authorizing agency or landowner. By using such methods and practices, the impact to lands described in this section is expected to be short term and minor.

### **S.4. Surface drainage patterns**

The Project corridor is located within three watersheds basins. At the northern end of the Project, the pipeline corridor is located in the Rock Haven Creek watershed, which is a part of the Painted Woods-Square Butte Creek Sub-Basin of the Lake Oahe Basin Drainage Basin. The middle section of the Project is located in the Heart River watershed, which is part of the Lower Heart River Sub-Basin of the Cannonball-Heart-Knife Rivers drainage basin. At the southern end of the Project, the corridor is located in the watersheds of the North Branch of the Little Heart and the Little Heart Rivers. The Little Heart River watershed, with its North Branch, is a part of the Lower Heart River Sub-Basin, which is located in the Lake Oahe Drainage Basin.

The Project crosses three rivers: the Little Heart River, the North Branch of the Little Heart River and the Heart River. Near the southern extent of the Project, the corridor crosses the Little Heart River approximately twelve miles from its confluence with the Missouri River. In the central portion of the Project, the pipeline crosses the North Branch of the Little Heart River approximately nine miles north-northwest of its confluence with the Little Heart River. Based on field observations and USGS Topographic Maps, this river appears to have intermittent flow. The pipeline also crosses several intermittent tributaries of this river.

Further north along the Project, the corridor crosses the Heart River approximately seven miles from the river's confluence with the Missouri River. The corridor also crosses several of the intermittent tributaries of the Heart River on the north and south sides of the river. Near the northern terminus of the corridor, the Project does not cross Rock Haven Creek but does cross several intermittent tributaries to the south and southwest of the creek.

The South Branch of the Little Heart River is not crossed, but is located within the southern leg of the Project corridor. Both the South Branch of the Little Heart River and the Heart River are "classified fisheries" by the North Dakota Game and Fish Department.

Surface water within the proposed pipeline corridor generally drains east towards the Missouri River. Wetlands are present in several areas along the Project corridor and are present throughout the described watersheds. Potential impacts to surface drainage patterns would be

within the immediate vicinity of water features through altered ground surface that could divert surface water and runoff away from its natural or existing flow pattern.

Construction of the proposed pipeline will not significantly impact surface drainage features or the geologic or topographic conditions of the rivers, intermittent drainages, wetlands or watershed within the Project corridor. Montana-Dakota will use directional drilling construction methods to minimize impacts to streambeds and banks during pipeline installation and will restore the disturbed area as close as possible to the contours, which had existed prior to installation. In the vicinity of seasonally wet ditches and intermittent tributaries, Montana-Dakota will use either directional drilling or open-cut construction techniques depending on if there is flowing water at the time of construction. Following installation, the ROW will be restored as close as possible to pre-construction conditions.

Installation construction will have short term and temporary disturbances within the surface drainage patterns and the natural topography of the Project area. However, because all disturbed areas will be restored, as close as possible, to pre-construction contours, long term impacts to the surface drainage patterns are not expected.

### **Surface water quality**

Short-term impacts to water quality are possible during construction activities but will not be likely during long-term pipeline operation. Potential short term impacts would be related to discharges of hydrostatic test water, sedimentation from uncontrolled erosion of disturbed areas, installation disturbances in wetlands, and water from dewatering during installation where required.

Hydrostatic test water will be discharged under the North Dakota Department of Health (NDDH) General Construction Permit (NDPDES Permit No. NDG-070000). Discharges will be monitored and sampled as required. Discharged water will be discharged into a dewatering structure to minimize the release of sediment and to provide energy dissipation measures to adequately protect the outlet from erosion.

Erosion control for the Project is described in the following sections:

- Selection Criteria S.1 for farmlands;
- Selection Criteria S.9 for wetlands;
- Policy Criteria P.8 for monitoring of effects;
- NDCC Section 49-22-09 Factor 4 for mitigation of adverse environmental effects that cannot be avoided; and
- 3.8. Mitigative Measures.

Minimization of short term and potential long term impacts to wetlands during and after pipeline installation is described in sections:

- Selection Criteria S.9 specifically addressing wetlands;

- Policy Criteria P.8 for monitoring impacts;
- NDCC Section 49-22-09 Factor 4 for mitigation of adverse environmental effects that cannot be avoided; and
- 3.8. Mitigative Measures.

Storm water discharges and dewatering activities during pipeline installation will be regulated under the general storm water permit issued by the State of North Dakota. The permit includes measures for erosion control. To minimize, prevent and monitor the impacts of such discharges, in addition to the measures already indicated, Montana-Dakota will:

- Obtain and comply with a general permit for Storm Water Discharges Associated with Construction Activity from the NDDH (NDPDES Permit No. NDR-10-0000);
- As part of the NDR-10-0000 permit, prepare and implement a SWPPP for the Project;
- Prepare and implement a SPCC plan for the Project that will outline procedures to control, prevent, clean-up and report spills that might occur with construction equipment or fueling operations;
- Manage dewatering or basin draining with the appropriate BMPs, such that the discharge does not adversely affect the receiving water or downstream landowners;
- Operate any discharges to minimize the release of sediment and provide energy dissipation measures to adequately protect the outlet from erosion; and
- Locate fuel handing and transfer operations away from wetlands, surface waters, and areas with immediate runoff potential.

### **S.5. Groundwater flow patterns**

The primary document used for evaluating the groundwater flow patterns in the Project area is the 1980 North Dakota State Water Commission report authored by Daniel J. Ackerman titled "Ground-Water Resources of Morton County, North Dakota." The report was published as County Ground-Water Studies 27, pt. III, and in the North Dakota Geological Survey Bulletin 72, pt. III, 51 p. This application uses the information from this report to help evaluate the potential impacts the Project may have on the local groundwater flow patterns. The report is paraphrased throughout this section. Full credit and acknowledgement is given to the author and the North Dakota State Water Commission for the information.

Groundwater in the Project area occurs within two interfingering bedrock formations and two glacial drift formations. The bedrock aquifers occur in the Cannonball and Ludlow Formations and the two glacial drift aquifers are identified as the Little Heart aquifer and the Heart River aquifer (Ackerman 1980).

The Cannonball and Ludlow Formations are not differentiated and crop out over most of southeastern Morton County and a majority of the Project area. The Ludlow Formation is composed of continental sandstones, siltstones, and shales and commonly contains thin beds of lignite, while the Cannonball Formation is composed of marine and estuarine sandstones,

siltstones, and shales. These bedrock aquifers are reportedly 5 to 129 feet thick. In the Project area north of the Heart River, groundwater movement within the aquifers is generally to the east or northeast towards the Missouri River. Along the Project corridor that is south of the Heart River, groundwater movement in the aquifers is from local topographically high areas toward local stream valleys and east towards the valley of the Missouri River. The majority of the aquifer's discharge is likely to be into the valleys of the Missouri and Heart Rivers and there may be a hydraulic connection with the Little Heart and Heart River aquifers. At the time of the report, the hydraulic gradients between the aquifers generally favored movement from the Cannonball and Ludlow aquifers into the glacial-drift aquifers with a gentle gradient (Ackerman 1980).

The Project crosses the Little Heart aquifer near the southern end of the corridor. The aquifer occupies a buried-valley system consisting of the sand and gravel portion of interbedded layers of clay, silt, sand, and gravel. The most permeable material is "found along the axes of the buried valleys and near bottoms of the buried valleys." Within the Project corridor, the aquifer is indicated to be in the range of one half mile to two miles wide (Ackerman 1980).

Within the Project area, the general direction of groundwater movement in the Little Heart aquifer is reported to tend to the east and southeast towards the Missouri River Valley. Recharge to the aquifer is from precipitation over the aquifer, from contributing tributaries and the Little Heart River, and the Little Heart aquifer hydraulic connection with the bedrock aquifers. In general, the hydraulic gradients between these aquifers are gentle and usually favor movement of water into the Little Heart aquifer (Ackerman 1980).

The Heart River aquifer in and near the Project area occupies the valley underlying the Heart River to its confluence with the Missouri River. The aquifer consists of the sand and gravel with the interbedded layers of clay, silt, sand, and gravel with the most coarse and permeable material generally occurring near the bottom of the buried valley. Within the Project area, the aquifer occupies the valley of the Heart River and is likely  $\frac{1}{4}$  to  $\frac{3}{4}$  of a mile wide (Ackerman 1980).

The general direction of groundwater movement follows the direction of the surface water flow ultimately leading to the Missouri River Valley. Within the Project area, the aquifer is recharged by precipitation over the aquifer, by the Heart River and discharge from the surrounding bedrock aquifers. The aquifer discharges water to the Heart and Missouri Rivers. In the report, Ackerman suggests that there is a hydraulic connection between the Heart River and the aquifer in the area, which would result in groundwater levels in the aquifer being similar to water levels in wells that derive their water from the Heart River aquifer (Ackerman 1980).

In general, the bedrock aquifer that is present over the majority of the Project area is located below the depth of the excavation for the pipeline. In some areas, the very top of the aquifer might be encountered but minimal impact to the aquifer will occur. Deeper installation of the pipeline will use directional drilling. As drilling mud is used in this installation method, the drilling mud will serve to seal off the aquifer in the immediate vicinity of the drill stem and the installed pipeline. Due to the construction methods that are planned to be utilized during this Project, construction, operation, and maintenance activities are not expected to have long-term impacts on groundwater resources or flow pattern. Potential short-term construction impacts to the bedrock aquifer may include increased temporary turbidity from excavation, short-term disruption of recharge, and localized flow along the pipeline trench.

Pipeline installation in the vicinity of the glacial till aquifers, at the crossing of the Heart and Little Heart Rivers, will be below the bottom of the stream beds. The linear nature of the Project, the minimal disturbance to the ground surface, and the restoration of the disturbed areas to near pre-construction conditions will result in minimal short-term impact on the groundwater flow patterns or quality of the groundwater.

In both aquifer areas, trenching will be completed using backhoes and/or trenching machines. The potential for surface activities to produce an adverse influence on groundwater quality or quantity is minimal. The need to utilize blasting for trench excavation is not anticipated. The trench will be backfilled with native material allowing the groundwater to re-establish equilibrium on either side of the trench. After backfilling, the groundwater level is expected to rapidly stabilize. Water removed from the trench during installation will be discharged in the immediate vicinity in accordance with permit requirements. Hay bale structures and/or geotextile filter bags will be used to remove sediments when trench dewatering is necessary.

During the construction of the proposed pipeline, Montana-Dakota will take steps to minimize impacts to any existing water supply wells located near the proposed Project area. These measures are primarily associated with construction activities, refueling activities or storage areas for hazardous liquids. Construction personnel will follow procedures to prevent, contain, clean-up and report spills that may occur during the course of construction, as outlined in Montana-Dakota's SPCC Plan.

### **Groundwater quality**

Impacts to groundwater are possible from accidental spills during vehicle maintenance and refueling, spills of potentially hazardous materials used during construction, and exacerbation of existing soil contamination exposed during construction. The permits being obtained to protect surface water quality also serve to protect groundwater. In addition to the steps outlined in the previous section on Surface Water Quality, Montana-Dakota will also notify landowners and the appropriate state agency of the presence of contaminated soil, if encountered, during excavations for the Project.

## **SELECTION CRITERIA - THE IMPACT UPON OTHER NON-AGRICULTURAL USES**

### **S.6. Noise-sensitive land uses**

Three noise-sensitive land uses are or could be present in the proposed Project corridor: residential, hunting, and grazing. Over 100 residences are located within the one mile corridor, 20 of which are within 500 feet of the proposed route (Appendix E). Two businesses and no schools are within 500 feet of the proposed pipeline route. Hunting and grazing occurs or can occur throughout the corridor and along the proposed route.

The Project corridor runs through rural settings that have low ambient noise levels. Approximately one-half of the route is along actively used roadways. The other half traverses agricultural areas or uncultivated land. On the northern-most segment of the route, north of Interstate 94, several multiple residence housing developments lie within the Project corridor with most lying on the edge of the 500 foot perimeter from the pipeline route. These sensitive noise receptors include single-family homes located along Township Road 3/38th Street South, Highland Road, County Road 139 (Business Loop 1-94), Mustang Drive South, 44<sup>th</sup> Street, and County Road 82. The housing development on Township Road 3/38th Street, consisting of

twelve adjacent residences near the northern terminus of the Project, is located immediately along the pipeline route.

It is anticipated that most construction activities will be confined to the hours between 7:00 am and 7:00 pm and that a number of machines could potentially be operating simultaneously. Construction noise will be temporary. The limited duration of construction activity, and the mufflers that are typically installed on construction equipment are expected to limit the potential for construction noise impacts. During construction, noise impacts from equipment will be short-term as construction progresses along the ROW.

The noise impacts will be short term and related to the construction, as the operation of a natural gas pipeline does not generate or emit noise. Vehicular noise associated with the pipeline construction will be the most prevalent impact as vehicles move about the site and travel to and from the site following normal work periods. Construction equipment, earth-moving equipment and other related equipment will create noise at the immediate installation location. In general, noise levels will increase locally during Project construction. The noise levels on and adjacent to the proposed pipeline route will vary considerably depending on the pieces of equipment being operated, equipment being operated simultaneously, the percent of time in operation, and the distance from the equipment to the receptors.

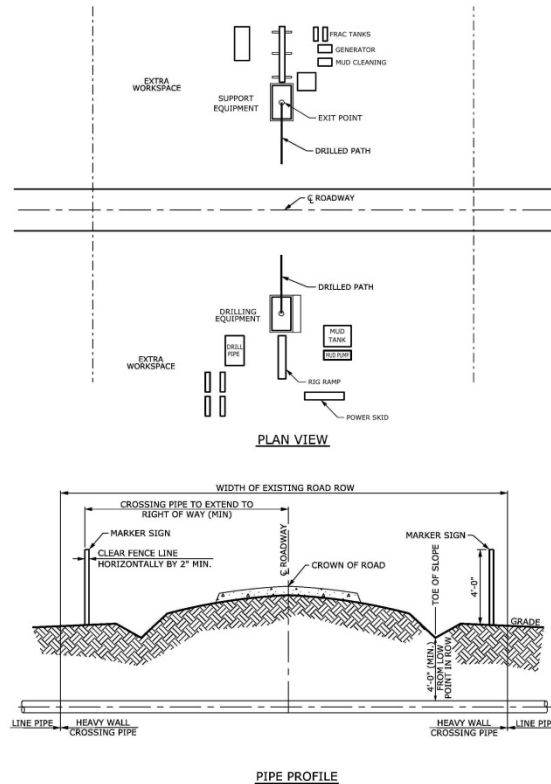
Residents residing within 500 feet of the route will be made aware of the installation through signed waivers. Grazing animals will likely react to the noise and move to quieter grazing areas. Hunting impacts will likely be the short-term avoidance of the work areas by the game animals with the return following the removal of human activities and the construction related noise. The effects of construction noise will likely be noticeable but only slightly louder and temporarily more persistent than existing noise levels from adjacent roadways. In agricultural and uncultivated areas, noise impacts will be short term but will likely be a greater disturbance, due to the lack of normal daily human activity.

### **S.7. Visual Effect on the Adjacent Area**

The Old Red/Old Ten Scenic Byway crosses the Project corridor and is crossed by the pipeline route. This is the only designated scenic roadway potentially impacted by the Project (Appendix E – Map 5 of 7). Within the Project corridor, this byway is also called I-94 Business Loop and County Road 139. Correspondence from North Dakota Parks and Recreation Department regarding this byway is presented in Appendix I. The North Dakota Parks and Recreation Department recommends that the Project be “completed with the least amount of or no visual impact to the immediate and distant views from the mentioned Backways/Byways.” The pipeline construction and ROW to the north of the Project will run through private land. To the south of the byway, the pipeline route traverses an open field and the Heart River. The pipeline will be installed using directional drilling construction methods and the ground surface over the installation will be restored, as closely as possible, to its pre-construction state. Thus, no visual impacts to the Old Red/Old Ten Scenic Byway are expected.

Montana-Dakota will use directional drilling construction methods to minimize impacts to all interstate highways, state highways, and county highways and to minimize traffic interruptions during pipeline construction. Directional drilling under road features consists of drilling a tunnel underground so as not to disturb surficial features. Figure 4 provides a plan of a typical directional drilling beneath roadways. The directional drill will be set up in-line with the pipeline

route and directionally drilled under the roadway. Workspaces for the crossing of Old Red/Old Ten Scenic Byway (I-94 Business Loop/ County Road 139) will be located outside the road ROW. All road crossings will comply with state and county permits as applicable.



**Figure 4. Typical Directionally Drilled Road Crossing**

While no designated scenic views or vistas were identified within the Project route, the topography of the land along the Heart River lends itself to scenic views. The areas on the northern and southern sides, adjacent to the river, are wooded to a degree that diminishes an overview of the river and the land beyond. Although no designated scenic views and vistas have been identified, any views that may exist would only be impacted temporarily during construction.

Short-term visual effects will be evident during construction and during site restoration for areas directly impacted by construction. Adjacent areas will not be visually impacted except for the temporary presence of the construction equipment. Long-term visual effects will not be present due to the installation being below the ground surface and because all disturbed areas will be restored as closely as possible to preconstruction conditions. The only above-ground structures will be cathodic protection equipment for corrosion protection, pipeline markers, in-line inspection tool launcher/receiver ports, mid-line valves, and the Town Border Station. The visual effect of installing new surface facilities along the proposed route will be minimal.

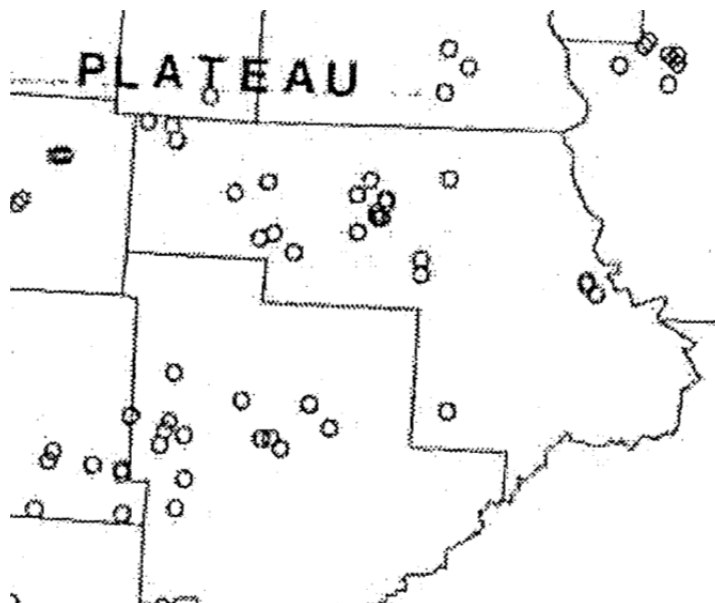
### **S.8. Extractive and Storage Resources**

The United States Geological Survey (USGS) topographic maps for the area show several sand and gravel pits surrounding the Project corridor and two gravel pits that are within the one-mile Project corridor (Appendix E – Map 5 of 7). The proposed pipeline route passes to the east of the gravel pit located in the Southwest quarter of the Northwest quarter of Section 25, Township 139 North, Range 82 West. The second sand and gravel pit is located in the South Half of the Northeast Quarter of Section 25, Township 139 North, Range 82 West, the Southeast Quarter of Section 25, Township 139 North, Range 82 West, and the Southwest Quarter of Section 30, Township 139 North, Range 81 West. The proposed pipeline route passes through the western portion of this gravel pit.

Knife River Corporation, a subsidiary of MDU Resources Group, Inc., currently has an easement and the rights to gravel in the second pit. Montana-Dakota is presently negotiating an easement that would allow for the construction of the pipeline and restrict the removal of fill in the area of the pipeline.

Lignite coal is an extractive resource that has been reported in Morton County. According to USGS publication “The New Salem Lignite Fields, Morton County, North Dakota” (Hancock 1921), “The New Salem lignite coal field is located within the great lignite region of western North Dakota, northwestern South Dakota, and eastern Montana, on its southeastern margin.” Some of these border fields contain less lignite than those located in the interior portion of the region, for the reason that as the rocks lie in a great basin dipping slightly toward the center from all directions, the upper formations, which carry the larger lignite beds, are present in the interior and the lower formations, which carry thinner and more irregular beds, are found on the margin of the basin. In the New Salem field, both groups of formations are present, and hence this field contains some thick beds and some thin ones.”

Historical coal mines exist across Morton County. The nearest such coal mines are located approximately six miles east of the Project corridor as shown in Figure 3 “Coal Mining in the Coal-Bearing Region of North Dakota, 1870-1945”, by Jeffery Hess et.al.(Hess 1992). The mines were reported to be in Township 137 North, Range 81 West in Sections 14, 23 and 25. The mines are reported to be underground mines and were active from approximately 1923 to 1941. The majority of coal mines in Morton County are in the western half of the county. Active coal mines reportedly operated up to the late 1950’s near New Salem and earlier in the areas of Glen Ullin and Hebron.



Taken from Figure 4: Map of North Dakota Lignite Mine Sites, 1908-1945 (Hess 1992)

**Figure 3. Coal mines in the Morton County area**

Historical, abandoned, or existing coal mines are not reported within the Project corridor. Coal deposits within the Project corridor are likely to exist in thin, irregular beds. These coal resources are likely to be deeper than the installation depth of the pipeline. If encountered, the coal is anticipated to be in very thin layers and will be treated as spoil as described in Section S.1.

### **S.9. Wetlands**

The U.S. Army Corps of Engineers (USACE) (Federal Register 1982) and the U.S. Environmental Protection Agency (Federal Register 1980) jointly define wetlands as: "Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions". Wetlands generally include swamps, marshes, bogs and similar areas. Wetlands were determined based on the three criteria, hydrophytic vegetation, hydric soils, and wetland hydrology, set forth by the USACE in the 1987 Environmental Laboratory publication entitled "Corps of Engineers Wetland Delineation Manual: Technical Report Y-87-1." This manual is commonly referred to as the 1987 Wetland Delineation Manual. A wetland delineation was conducted, in accordance with the USACE Regional Supplement to the COE Wetland Delineation Manual: Great Plains Region (USACE Great Plains Regional Manual Version 2.0).

Based on National Wetlands Inventory (NWI) mapping, the most common wetland type crossed by the Project corridor is emergent wetlands. The emergent wetland class is characterized by erect, rooted, non-woody, soft stemmed plants, excluding mosses and lichens. Their vegetation is present for most of the growing season in most years. These wetlands are typically dominated by perennial plants. Examples of emergent wetland plants include cattails, sedges and bulrush, which are rooted in the bottom sediments and extend above the surface of the water and sediments. Forested wetlands are also present within the Project corridor.

ProSource performed wetland delineations within a 400-foot wide survey corridor for the entire pipeline route between June 18 and June 23, 2012. Twenty-four (24) wetlands and two (2) Waters of the United States (WOUS) were identified and delineated, totaling 26 sites. On August 15, 2012, ProSource completed a review of an additional segment of the proposed corridor, because the route was altered to avoid cultural resource sites and geological rock outcrop features. Wetland delineations were completed according to USACE guidance. The location of the pipeline re-alignment is located near the crossing of 44th Street. The USACE makes all final jurisdictional determinations. Each delineated site is discussed briefly below.

#### **Site 1**

Site 1 is a depression/swale located approximately 20 feet south of 38th Street and 2,800 feet east of ND Highway 1806. This site serves the functions of water conveyance, wildlife habitat, and erosion control. Site 1 receives surface water from adjacent uplands, agricultural fields, and surface water ponds. Surface water is not visible on aerial photography. Site 1 is not mapped on the NWI. The soil is mapped as Water (W) within the survey limits. A dominance of hydrophytic vegetation exists within the site. Site 1 does appear to have a surface hydrologic connection to the nearby Missouri River, a WOUS.

#### **Site 2**

Site 2 is a depression/swale located approximately 200 feet south of 38th Street and 950 feet west of ND Highway 1806. This site serves the functions of water conveyance, wildlife habitat, source of water for cattle, and erosion control. Cattle openly graze in the vicinity of the wetland, and portions of it are disturbed. Site 2 receives surface water from adjacent uplands to the southwest, which do not appear to be agricultural. Surface water is visible on aerial photography. Site 2 is not mapped on the NWI. The soil is mapped as Dogtooth-Janesburg-Cabba complex, 6 to 30 percent slopes (42F) within the survey limits. A dominance of hydrophytic vegetation exists within the site. Site 2 does appear to have a surface hydrologic connection to the nearby Missouri River, a WOUS.

#### **Site 3**

Site 3 is a depression located approximately 600 feet east of Highland Road. This site serves the functions of groundwater recharge, wildlife habitat, and erosion control. Wetland conditions at the surface (farther east) were not apparent to connect this wetland to the Missouri River. Site 3 receives surface water from adjacent uplands to the west. Surface water is not visible on aerial photography; however a salt crust is noticeable on aerial imagery, and was also observed in the field. Site 3 is not mapped on the NWI. The soil is mapped as Dogtooth-Janesburg-Cabba complex, 6 to 30 percent slopes (42F) within the survey limits. A dominance of hydrophytic vegetation exists within the site. Site 3 does not appear to have a surface hydrologic connection to the nearby Missouri River, a WOUS. Site 3 appears to be isolated

#### **Site 4**

Site 4 is a wooded ravine located approximately 1,000 feet east of Highland Road. This site serves the functions of water conveyance and wildlife habitat. Site 4 receives surface water from adjacent uplands to the west. Surface water is not visible on aerial photography. Site 4 is not mapped on the NWI. The soil is mapped as Dogtooth-Janesburg-Cabba complex, 6 to 30 percent slopes (42F) within the survey limits. A dominance of hydrophytic vegetation exists within the site. Site 4 does appear to have a surface hydrologic connection to the Missouri River, a WOUS.

#### **Site 5**

Site 5 is a depression/swale located approximately 900 feet east of Highland Road. This site serves the functions of groundwater recharge, wildlife habitat, and erosion control. Wetland conditions at the surface (farther east) were not apparent to connect this wetland to the Missouri River. Site 5 receives surface water from adjacent uplands to the west. Surface water is not visible on aerial photography; however a salt crust is noticeable on aerial imagery, and was also observed in the field. Site 5 is not mapped on the NWI. The soil is mapped as Dogtooth-Janesburg silt loams, 0 to 6 percent slopes (47B) within the survey limits. A dominance of hydrophytic vegetation exists within the site. Site 5 does not appear to have a surface hydrologic connection to the nearby Missouri River, a WOUS. Site 5 appears to be isolated.

#### **Site 6**

Site 6 is a depression/swale located approximately 900 feet south of 37th Street. This site serves the functions of groundwater recharge, nutrient removal, wildlife habitat, and erosion control. Site 6 is located in an agricultural field. Site 6 receives surface water from adjacent agricultural upland areas. Surface water is visible on aerial photography, and was also observed in the field. Site 6 is not mapped on the NWI. The soil is mapped as Farland silt loam, 2 to 6 percent slopes (19B) within the survey limits. A dominance of hydrophytic vegetation exists within the site. Site 6 does appear to have a surface hydrologic connection to the Heart River, a WOUS.

#### **Site 7**

Site 7 is a depression/swale located approximately 1,600 feet south of 37th Street and 1,600 feet east of Township Road 5. This site serves the functions of groundwater recharge, nutrient removal, wildlife habitat, and erosion control. Site 7 is located in an agricultural field. Site 7 receives surface water from adjacent agricultural upland areas. Surface water is visible on aerial photography, and was also observed in the field. A created pond is part of Site 7, which contains eastern cottonwood trees along the perimeter. Site 7 is not mapped on the NWI. The soil is mapped as Lawther silty clay, 0 to 2 percent slopes (36) within the survey limits. A dominance of hydrophytic vegetation exists within the site. Site 7 does appear to have a surface hydrologic connection to the Heart River, a WOUS.

#### **Site 8**

Site 8 is a ravine located approximately 460 feet south of I-94 right-of-way. Wetland 8 is a dry ravine/channel toward the north end and develops into an unnamed tributary toward the south portion. This site serves the functions of water conveyance, groundwater recharge, nutrient removal, wildlife habitat, and erosion control. Site 8 is likely the most dynamic and diverse site evaluated during the wetland delineation, as it contains wooded areas, intermittent surface flow areas, inundated portions, and a variety of native plants. Some of the upland habitat surrounding the ravine is rocky talus. A beaver dam is located toward the south portion of Site 8. Site 8 receives surface water from adjacent upland areas. Surface water is visible on aerial photography, and was also observed in the field. Site 8 is not mapped on the NWI. The soil is mapped as Flasher-Vebar-Parshall complex, 9 to 35 percent slopes (51F) within the survey limits. A dominance of hydrophytic vegetation exists within the site. Site 8 does appear to have a surface hydrologic connection to the Heart River, a WOUS.

#### **Site 9**

Site 9 is a wooded ravine located in a remote area, far away from roads and structures. This site serves the functions of water conveyance and wildlife habitat. Site 9 receives surface water from adjacent uplands to the west. Surface water is not visible on aerial photography. Site 9 is not

mapped on the NWI. The soil is mapped as Flasher-Vebar-Parshall Complex, 9 to 35 percent slopes (51F) within the survey limits. A dominance of hydrophytic vegetation exists within the site. Site 9 does appear to have a surface hydrologic connection to the Heart River.

**Site 10**

Site 10 is a depression/swale located approximately 1,800 feet north of 44th Street in an agricultural field. This site serves the functions of groundwater recharge, nutrient removal, wildlife habitat, and erosion control. Site 10 receives surface water from adjacent upland areas to the west. Surface water is visible on aerial photography, but was not observed in the field at the time of the site visit. Site 10 is not mapped on the NWI. The soil is mapped as Belfield-Daglum silt loam, 0 to 2 percent slopes (28) within the survey limits. A dominance of hydrophytic vegetation exists within the site. Site 10 appears to be an isolated wetland.

**Site 11**

Site 11 is a depression/swale located approximately 700 feet south of 44th Street. This site serves the functions of groundwater recharge, water conveyance, wildlife habitat, and erosion control. Site 11 receives surface water from adjacent uplands to the northwest. Surface water is not visible on aerial photography. Site 11 is not mapped on the NWI. The soil is mapped as Belfield-Daglum silt loam, 0 to 2 percent slopes (28) within the survey limits. A dominance of hydrophytic vegetation exists within the site. Site 11 does appear to have a surface hydrologic connection to the North Branch of the Little Heart River.

**Site 12**

Site 12 is a depression/swale located approximately 1,100 feet south of 44th Street. This site serves the functions of groundwater recharge, water conveyance, wildlife habitat, and erosion control. Site 12 receives surface water from adjacent uplands to the northwest. Surface water is not visible on aerial photography. Site 12 is not mapped on the NWI. The soil is mapped as Regent-Savage silty clay loams, 6 to 9 percent slopes (30C) within the survey limits. A dominance of hydrophytic vegetation exists within the site. Site 12 does appear to have a surface hydrologic connection to the North Branch of the Little Heart River.

**Site 13**

Site 13 is a depression/swale located near the intersection of County Roads 82 and 138. This site serves the functions of groundwater recharge, water conveyance, nutrient removal, wildlife habitat, and erosion control. Site 13 receives surface water from adjacent uplands to the northeast. Surface water is visible on aerial photography, and was observed in the field. Site 13 is not mapped on the NWI. The soil is mapped as Arnegard loam, 0 to 2 percent slopes (10) within the survey limits. A dominance of hydrophytic vegetation exists within the site. Site 13 does appear to have a surface hydrologic connection to the North Branch of the Little Heart River.

**Site 14**

Site 14 is a tributary to the North Branch of the Little Heart River, located approximately 2,500 feet south of the intersection of County Roads 82 and 138. This site serves the functions of groundwater recharge, water conveyance, nutrient removal, wildlife habitat, and erosion control. Site 14 receives surface water from adjacent uplands to the northwest. Surface water is visible on aerial photography, and was observed in the field. Site 14 is mapped as PEMA on the NWI. The soil is mapped as Ekalaka-Lakota fine sandy loams, 0 to 6 percent slopes (44B) within the survey limits. A dominance of hydrophytic vegetation exists within the site. Site 14 does appear to have a surface hydrologic connection to the North Branch of the Little Heart River.

**Site 15**

Site 15 is a depression/swale located approximately 360 feet north of the intersection of County Road 82 and 46th Street. This site serves the functions of groundwater recharge, water conveyance, nutrient removal, wildlife habitat, and erosion control. Site 15 receives surface water from adjacent uplands to the west. Surface water is not visible on aerial photography, nor was it observed in the field during the time of the site visit. Site 15 is mapped as PEMC on the NWI. The soil is mapped as Daglum-Rhoades complex, 0 to 6 percent slopes (41B) within the survey limits. A dominance of hydrophytic vegetation exists within the site. Site 15 does appear to have a surface hydrologic connection to the North Branch of the Little Heart River.

**Site 16**

Site 16 is a depression/swale located approximately 3,500 feet north of the intersection of County Roads 82 and 138A. This site serves the functions of groundwater recharge, water conveyance, nutrient removal, wildlife habitat, and erosion control. Site 16 receives surface water from adjacent uplands to the west. Surface water is not visible on aerial photography, but it was observed in the field during the time of the site visit. Site 16 is mapped as PEMC/PABFh on the NWI. The soil is mapped as Williams-Zahl loams, 6 to 9 percent slopes (76C) within the survey limits. A dominance of hydrophytic vegetation exists within the site. Site 16 does appear to have a surface hydrologic connection to the North Branch of the Little Heart River.

**Site 17**

Site 17 is a tributary to the North Branch of the Little Heart River, located at a curve in County Road 82. This site serves the functions of water conveyance, nutrient transport, wildlife habitat, and erosion control. Large boulders are present, acting as riprap near the road. Site 17 receives surface water from adjacent uplands to the southwest. Surface water is visible on aerial photography, and was observed in the field during the time of the site visit. Site 17 is not mapped on the NWI. The soil is mapped as Daglum-Rhoades complex, 0 to 6 percent slopes (41B) within the survey limits. A dominance of hydrophytic vegetation exists within the site. Site 17 does appear to have a surface hydrologic connection to the North Branch of the Little Heart River.

**Site 18**

Site 18 is a forested ephemeral wetland dominated by eastern cottonwood trees, sedges, spikerush, and freshwater cord grass. It is located approximately 1,500 feet south of County Road 138A and 40 feet east of County Road 82. This site serves the functions of groundwater recharge, nutrient removal, wildlife habitat, and erosion control. Site 18 receives surface water from surrounding upland areas. Surface water was not observed at the time of the site visit. Site 18 is not mapped on the NWI. The soil is mapped as Daglum-Rhoades complex, 0 to 6 percent slopes (41B) within the survey limits. A dominance of hydrophytic vegetation exists within the site. Site 18 does appear to have a surface hydrologic connection to the North Branch of the Little Heart River.

**Site 19**

Site 19 is a depression/swale located approximately 4,200 feet south of the intersection of 49th Street and 25th Avenue. This site serves the functions of water conveyance, nutrient removal, wildlife habitat, and erosion control. Site 19 receives surface water from surrounding upland areas to the southeast. Surface water was not observed at the time of the site visit. Site 19 is not mapped on the NWI. The soil is mapped as Ekalaka-Lakota fine sandy loams, 0 to 6 percent slopes (44B) within the survey limits. A dominance of hydrophytic vegetation exists within the site. Site 19 does appear to have a surface hydrologic connection to the North Branch of the Little Heart River.

**Site 20**

Site 20 is a depression located approximately 1,500 feet north of 51st Street and 40 feet east of County Road 82. The wetland is located at the edge of an agricultural field. This site serves the functions of groundwater recharge, nutrient removal, wildlife habitat, and erosion control. Site 20 receives surface water from surrounding upland areas to the east. Surface water was not observed at the time of the site visit. Site 20 is not mapped on the NWI. The soil is mapped as Belfield-Daglum silt loam, 2 to 6 percent slopes (28B) within the survey limits. A dominance of hydrophytic vegetation exists within the site. Site 20 appears to be an isolated wetland. County Road 82 appears to dam the surface flow of water (on the west side of the wetland).

**Site 21**

Site 21 is the Little Heart River, a WOUS. This site serves the functions of water conveyance, nutrient transport, and wildlife habitat. Site 21 receives surface water from upstream. Surface water was observed at the time of the site visit. Site 21 is not mapped on the NWI. The soil is mapped as Rhoades-Slickspots-Daglum complex, 0 to 9 percent slopes (40C) within the survey limits. A dominance of hydrophytic vegetation exists within the site. Site 21 is considered jurisdictional.

**Site 22**

Site 22 is a segment of an oxbow associated with the Little Heart River. This site serves the functions of groundwater recharge, flood control, nutrient reduction, and wildlife habitat. Site 22 receives water during high stream flows, and surface flow from surrounding upland areas. Surface water was not observed at the time of the site visit. Site 22 is not mapped on the NWI. The soil is mapped as Daglum-Rhoades complex, 0 to 6 percent slopes (41B) within the survey limits. A dominance of hydrophytic vegetation exists within the site. Site 22 is considered jurisdictional.

**Site 23**

Site 23 is a segment of an oxbow associated with the Little Heart River. This site serves the functions of groundwater recharge, flood control, nutrient reduction, and wildlife habitat. Site 23 receives water during high stream flows, and surface flow from surrounding upland areas. Surface water was not observed at the time of the site visit. Site 23 is not mapped on the NWI. The soil is mapped as Rhoades-Slickspots-Daglum complex, 0 to 9 percent slopes (40C) within the survey limits. A dominance of hydrophytic vegetation exists within the site. Site 23 is considered jurisdictional.

**Site 24**

Site 24 is the Heart River, a WOUS. Site 24 includes areas within the banks of the river channel. This site serves the functions of water conveyance, nutrient transport, wildlife habitat, recreational uses, and aesthetics. Surface water was observed at the time of the site visit. Site 24 is mapped as R2UBG on the NWI. The soil is mapped as Banks loamy fine sand, 0 to 6 percent slopes (85B). A dominance of hydrophytic vegetation exists within the site. Site 24 is considered jurisdictional. A soil profile was not evaluated at the site because of the steep banks. Soil within the river channel is assumed to be hydric.

**Site 25**

Site 25 is an isolated ephemeral depression located approximately 700 feet north of 44th Street in an agricultural field. This site serves the functions of groundwater recharge, nutrient removal, wildlife habitat, and erosion control. Site 25 receives surface water from surrounding upland areas. Surface water was not observed at the time of the site visit. Site 25 is not mapped on the NWI.

The soil is mapped as Belfield-Daglum silt loams (28) within the survey limits. A dominance of hydrophytic vegetation exists within the site. Site 25 appears to be an isolated wetland.

**Site 26**

Site 26 is an isolated ephemeral depression located approximately 740 feet south of 44th Street and 870 feet west of a farm access road. This site serves the functions of groundwater recharge, nutrient removal, wildlife habitat, and erosion control. Site 26 receives surface water from surrounding upland areas. Surface water was not observed at the time of the site visit. Site 26 is not mapped on the NWI. The soil is mapped as Belfield-Daglum silt loams (28) within the survey limits. A dominance of hydrophytic vegetation exists within the site. Site 26 appears to be an isolated wetland.

It is likely that some of the wetland areas will be claimed as jurisdictional by the USACE. Montana-Dakota will comply with all USACE requirements and permits in addition to agreed upon local or state needs or concerns.

Wetlands will not be drained or permanently filled during construction/restoration of the proposed Project. However, construction of the proposed pipeline may result in minor short-term disturbances to wetlands including the following: temporary loss of wetland vegetation, wildlife habitat and aesthetics associated with clearing and other construction activities; soil disturbance associated with trenching, and equipment traffic; the limited pulling of stumps; and temporary increases in turbidity and fluctuations in wetland hydrology associated with trenching, equipment traffic and spoil storage. As a result of these temporary impacts, Montana-Dakota will obtain a permit from the USACE that will authorize and regulate the temporary wetland impacts.

To minimize impacts on wetlands, Montana-Dakota will:

- Delineate and mark wetland boundaries prior to construction;
- Implement best management practices to prevent and minimize the potential for sedimentation and erosion in and along wetlands during and after construction;
- Reduce construction work area widths within wetland areas;
- Prohibit the refueling of equipment, if possible, or the storage of hazardous substances or fuels within 100 feet of wetland areas;
- Limit and restrict, to the extent practical, all equipment working in and passing through wetland areas;
- Install temporary timber matting or equipment pads, as needed, in saturated wetlands to prevent or limit soil compaction by construction equipment during construction;
- During construction, remove and keep separate the top 12 inches of topsoil in unsaturated areas so that the topsoil can be replaced to its original horizon following construction;
- Restore the construction areas to preconstruction conditions to the extent possible;

- Re-seed at a rate and with a seed mixture as directed by the property owner or manager, as required, to re-establish and to temporarily stabilize the soils; and
- Restore all soil to preconstruction contours to prevent alterations of drainage patterns.

The duration of the temporary impacts to forested wetlands will be longer than other wetland types due to the additional time required for re-establishment of woody vegetation. These impacts will be temporary because the wetland hydrology will be restored, the hydric topsoil will be replaced, and the wetlands will be allowed to naturally revegetate.

### **S.10. Woodlands and Wooded Areas**

Forested shelterbelts associated with farmsteads, riparian forests along intermittent river tributaries and within the immediate vicinity of the Heart and Little Heart Rivers, and a few isolated patches of trees are scattered along and within the proposed corridor (Appendix E). Clearing the woody vegetation for the pipeline installation will result in long-term impacts within the temporary workspace ROW and permanent change in the permanent ROW.

Clearing of forested areas will be limited to the extent necessary to allow safe and effective use of construction equipment. In areas where timbering is required, a survey of trees and shrubs will be conducted prior to clearing. The trees will be cut in uniform lengths and stacked along the ROW or disposed of based on the landowner's preferences. Stumps will only be removed when necessitated by pipeline installation or at the request of a landowner. The permanent ROW will be maintained in an herbaceous state with periodic brush clearing and mowing in accordance with applicable regulations. The ROW will be restored also, as close as practical, to pre-construction contours and the disturbed area reseeded with either landowner or NRCS approved grass mixtures. Forested habitat (shelterbelts), especially those bordering wetlands, will be avoided wherever possible. Montana-Dakota will replace impacted trees and shrubs per the Commission's Tree and Shrub Mitigation Specifications, typically a ratio of 2:1.

Long term impacts to wooded vegetation and wooded areas along the ROW are expected to be minimal. Montana-Dakota will implement additional mitigation to minimize potential impacts to wooded vegetation and wooded areas by:

- Reducing the width of the construction work area in wooded areas, when possible;
- Leaving mature shrubs and trees in place, where practical, by selectively cutting and removing shrubs and trees within the temporary workspace; and
- Supporting re-vegetation and soil stability by allowing roots of woody vegetation to remain in place, except over the pipeline trench and grading areas or where safety concerns require their removal.

### **S.11. Radio and television reception, and other communication or electronic control facilities**

A review of current aerial photographs and of AntennaSearch.com (General Data Resources, Inc. 2011) did not reveal any radio, television, or other communication or control facilities crossed by the proposed route. However, one antenna for private communication is located

within the one-mile Project corridor (Appendix E – Map 5 of 7). An antenna associated with the Burlington Northern Santa Fe Railway is located within Section 25, Township 139 North, Range 82 West. While the pipeline will be located in close proximity to this antenna, the underground installation is not expected to have any effects on communication equipment, their reception or operation.

### **S.12. Human health and safety**

The greatest risk to human health and safety related to the natural gas pipeline is the risk of explosion and fire once the pipeline is placed into operation. Montana-Dakota has installed, maintains and operates over 8,400 miles of natural gas pipeline and maintains memberships in numerous industry associations to evaluate safety and security procedures on a regular basis for continual enhancement.

Montana-Dakota will design, construct, test, operate, and maintain the proposed pipeline in accordance with all applicable laws and standards. The USDOT, Title 49 CFR, Part 192, defines minimum federal safety standards for construction, operation and maintenance of natural gas pipelines. The proposed pipeline will comply with the USDOT pipeline safety regulations as set forth in 49 CFR, Part 192, “Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards” and other applicable regulations.

The purpose of the regulations defined in 49 CFR Part 192, Minimum Federal Safety Standards, is to ensure safe operation of pipeline and associated facilities. The safety standards in Part 192 require each pipeline operator to:

- Develop an emergency plan, working with local fire departments and other agencies to identify personnel to be contacted, equipment to be mobilized, and procedures to be followed to respond to a hazardous condition caused by the pipeline or associated facilities;
- Participate in the state One-Call system to provide for easy identification of pipeline facilities;
- Establish and maintain a liaison with the appropriate fire, police, and public officials in order to coordinate mutual assistance when responding to emergencies;
- Establish a continuing education program to enable customers, the public, government officials, and those engaged in excavation activities to recognize a natural gas pipeline emergency and report it to appropriate public officials;
- Use only qualified personnel to operate and maintain the pipeline in accordance with an approved Operator Qualification Plan;
- Have, maintain and implement a Pipeline Integrity Management Plan for transmission lines in High Consequence areas; and
- Ensure that personnel working on these facilities are part of a random drug and alcohol-testing program.

All personnel involved with operating and maintenance responsibilities for the pipeline facilities will be certified under an Operator Qualification Plan and will participate in a Drug and Alcohol Program in compliance with the USDOT regulations. Montana-Dakota will comply with all

applicable safety regulations and will work to ensure safety plans meet or exceed the applicable requirements. Once construction is completed, Montana-Dakota will insure that line markers are installed which note pipeline locations in accordance with the USDOT pipeline safety regulations, identify Montana-Dakota as the operator, and list telephone numbers for pipeline emergencies or inquiries relating to the pipeline.

### **S.13. Animal health and safety**

Fish and wildlife resources in the area of the proposed pipeline are directly related to the composition, quality, size, and connectivity of natural communities and habitats including agricultural lands, woodlands, and wetlands. Wildlife resources that exist in the area of the proposed pipeline include those species that have adapted to open lands, woodlands, and cropland habitats such as pheasant, meadowlark, field sparrow, cottontail, red fox, and white-tailed deer. Wetlands in the Project area typically attract ducks, geese, herons, muskrat, mink, beaver and several species of reptiles. The construction of the proposed subsurface pipeline will generally result in minor short-term impacts to wildlife.

It is anticipated that the proposed construction may temporarily displace avian, mammal, amphibian and reptile species. Although some loss of less mobile wildlife such as small mammals, amphibians, and reptiles may accidentally occur within the construction work area, it is anticipated that the vast majority of wildlife will relocate to suitable adjacent habitats during construction. For other wildlife, such as raptors, the open corridor may create improved hunting habitat.

Long-term effects to wildlife will be limited. The primary long-term effect will be a permanent pipeline corridor. Commonly, the displaced species will either recolonize in adjacent areas or reestablish their original habitat after construction activities have been completed. To minimize continued impacts from the necessary maintenance of the ROW, periodic maintenance will comply with any wildlife timing windows as specified by agencies. Construction and maintenance of the proposed Project will not significantly alter the long-term character of the landscape along the route. Consequently, effects on wildlife will be mostly temporary in nature.

The health and safety of endangered species and candidate endangered species is of special concern when considering impacts to natural or manmade habitats. According to the United States Fish and Wildlife Service (USFWS) Mountain-Prairie Region (USFWS 2010), the listed species occurring or potentially occurring in Morton County are the endangered black-footed ferret (*Mustela nigripes*), the endangered gray wolf (*Canis lupus*), the endangered interior least tern (*Sternula antillarum athalassos*), the endangered pallid sturgeon (*Scaphirhynchus albus*), the endangered Whooping Crane (*Grus americana*), and the threatened piping plover (*Charadrius melodus*). Sprague's pipit (*Anthus spragueii*) and Dakota skipper (*Hesperia dacotae*), candidate species, are also listed for Morton County.

#### **Black-footed Ferret**

**Federal Status:** Endangered

**Affects Determination:** No Effect

According to the USFWS (2007a), black-footed ferrets were most likely extirpated from the wild until 1991 when they were reintroduced to a prairie dog complex, which it depends on for food, in the Shirley Basin of Wyoming. Since the 1991 reintroduction to the wilds of Wyoming, the black-footed ferret has also been reintroduced to Colorado, South Dakota, Montana, Arizona,

Utah, Kansas, and New Mexico (USFWS 2007a). Since no prairie dog complexes were observed during the field survey and because it is expected that the black-footed ferret has been extirpated from North Dakota, the proposed pipeline Project will have no effect on the black-footed ferret. No black-footed ferrets were observed during the survey.

### **Gray Wolf**

**Federal Status:** Endangered

**Affects Determination:** No Effect

According to the USFWS (2011), “gray wolves, in the lower 48 states, are found mainly in the forested lands of Minnesota, Wisconsin, Michigan, Montana, Idaho and Wyoming but are also known to or are believed to occur in Colorado, Nebraska, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, and Washington.” The gray wolf is a highly mobile species, prefers low-density areas away from roads and people. The last confirmed reported sighting within North Dakota was in 1991 (USGS 2006). Based on their high mobility, tendency to avoid humans, and limited number of confirmed sightings, the proposed pipeline is expected to have no effect on the gray wolf. No gray wolves or tracks were observed during the survey.

### **Interior Least Tern**

**Federal Status:** Endangered

**Affect Determination:** No Effect

According to the USFWS (1990), the least tern was historically found throughout the Missouri River system and utilizes sparsely vegetated sandbars, in conjunction with piping plovers, on the Missouri River in North Dakota. The proposed pipeline route does not cross the Missouri River, however the Heart River is proposed to be crossed using the HDD method. The Heart River did exhibit sparsely vegetated sandbars within the river channel at the proposed pipeline crossing. Because the river will be crossed using HDD, with drilling stations being located far from the river channel, the project will have no effect on the Interior least tern. No interior least terns were observed during the survey.

### **Pallid Sturgeon**

**Status:** Endangered

**Affect Determination:** No Effect

According to the USFWS (2007b) the pallid sturgeon can be found in the main channel area of the Missouri and Mississippi Rivers from Montana to Louisiana and the Atchafalaya River in Louisiana. The proposed pipeline route does not cross the Missouri River but does cross the Heart River and several smaller tributaries that flow into the Missouri River. All rivers and streams with flowing water at the time of construction will be crossed via HDD to avoid impacts to the river/streambed and banks. In addition to directionally drilling under all rivers and streams with flowing water at the time of construction, sediment barriers such as silt fence, staked hay or straw bales, or sand bags will be installed, as needed. The sediment barriers will prevent any sedimentation from entering waterbodies. Crossing the river/streams by HDD and the use of sediment barriers will result in no effect to the pallid sturgeon. In-stream surveys (Heart River and Little Hear River) were not included as part of the field survey, and therefore no pallid sturgeons were observed.

### **Whooping Crane**

**Federal Status:** Endangered

**Affect Determination:** May Affect, Is Not Likely to be Adversely Affected

Whooping cranes would most likely be found in the croplands and shallow freshwater wetlands of Morton County during the fall and spring migration (Lewis 1995). Because both cropland and wetlands exist within the proposed Project right-of-way, the proposed Project may affect, but is not likely to adversely affect the whooping crane. Whooping cranes would avoid croplands and wetlands where pipeline construction is occurring in favor of suitable adjacent habitat. No whooping cranes were observed during the survey.

### **Piping Plover**

**Federal Status:** Threatened

**Affect Determination:** No Effect

In North Dakota, piping plovers inhabit barren sand and gravel shores of the Missouri River and natural alkaline lakes with salt-encrusted, white beaches (Elliott-Smith and Haig 2004). Because the proposed route does not cross the Missouri River or any alkaline lakes with salt-encrusted, white beaches, the project will have no effect on the piping plover. The Heart River will be crossed via HDD. No piping plovers were observed during the survey.

### **Sprague's Pipit**

**Federal Status:** Candidate

**Affect Determination:** May Affect, Is Not Likely to be Adversely Affected

Sprague's pipits are small birds that inhabit the grassland prairies of North Dakota during the breeding season and then migrate to the southern United States and northern Mexico for winter (Jones 2010). According to Jones (2010), "the principal causes for the declines in Sprague's pipit populations are habitat conversion to seeded pasture, hayfield, and cropland, as well as overgrazing by livestock." While suitable habitat does occur within the Project area, the proposed pipeline will not alter or convert any native habit to seeded pasture, hayfield, or cropland. In addition, Sprague's pipit is a highly mobile species and would most likely use suitable adjacent habitat; therefore the Project is not expected to adversely affect Sprague's pipits. No Sprague's pipits were observed during the survey.

### **Dakota Skipper**

**Federal Status:** Candidate

**Affect Determination:** May Affect, Is Not Likely to be Adversely Affected

According to the USFWS, the Dakota skipper (butterfly) is associated with high-quality prairie ranging from wet-mesic tallgrass prairie to dry-mesic mixed grass prairie. As stated in the May 18, 2012 letter, the following wildflowers are usually present within the suitable prairie habitat associated with the Dakota skipper: wood lily (*Lilium philadelphicum*), harebell (*Campanula rotundifolia*), smooth camas (*Zygadenus elegans*), pale purple coneflower (*Echinacea pallida*), upright coneflower (*Echinacea angustifolia*), and blanketflower (*Gaillardia aristata*). Although some occurrences of associated plants, as identified in Section 4.1, were observed sporadically, large intact areas of these plants were not observed. The remnant prairie locations identified in this report are relatively small patches, two of which are being avoided by re-routing the pipeline location to the west. Several plant species that the Dakota skipper favors are located on or near rock outcrops, which are being avoided by the re-route or by drilling underneath the rock features. Although some plant species and habitat for the Dakota skipper are present within the route corridor, the habitat will be mostly avoided. No Dakota skipper butterflies were observed during the field survey.

### **Bald and Golden Eagles**

**Federal Status:** Unlisted; protected under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act

**Affect Determination:** No Effect

No bald eagles, golden eagles, or nests were observed during the field survey. The Missouri River is located approximately 0.50 mile east of the pipeline terminus at Heskett Station, which is located outside of the river valley, where eagles would likely occur. At the Heart River, however, there are large cottonwood trees within the elevated floodplain that potentially provide suitable habitat. The pipeline is proposed to cross underneath the Heart River using HDD. Stations for drilling will be located several hundred yards away from the trees. The project will have no effect on the eagles because tree removal will not occur at the river crossing. No nests were observed at the location, and the drilling activities will be located a substantial distance from the trees. The Little Heart River, located toward the southern extent of the pipeline route, would not likely support eagles, because it is not as large, and is more vulnerable to seasonal variations such as dry-up and freeze-up. Also, there are no trees surrounding the Little Heart River at the crossing location. No bald or golden eagles were observed during the survey.

### **Designated Critical Habitats**

ProSource reviewed information pertaining to designated critical habitat for listed species in the Mountain-Prairie Region. According to the on-line mapper (USFWS 2011b), designated critical habitats have not been designated for any of the species listed above, except for the Piping Plover. The on-line mapper shows that the Missouri River Basin is designated as critical habitat for the piping plover as it contains barren sand and gravel shores. The proposed pipeline route does not cross the Missouri River and all rivers and streams with flowing water at the time of construction will be directionally drilled beneath the inverts of the channels to avoid impacts to the river/stream bed and banks. Therefore, the designated critical habitat for the piping plover should not be impacted as a result of construction.

### **S.14. Plant life**

Seven types of vegetative communities and habitat types are present along the pipeline route or crossed by the pipeline. These vegetative communities and habitat types are classified as: prairie remnants, forest and woodland, pasture and rangeland, agricultural fields, wetlands and rivers, rock outcrops, and noxious weeds. The vast majority of the pipeline route is agricultural croplands, pasture, and rangeland. There are three locations along the route where remnant dry-mesic mixed grass prairie exists. Shrub lands are present primarily in river valleys and along and in tributaries and intermittent tributaries. Wetlands are also primarily present along water features or intermittent tributaries but are also present occasionally in croplands and grasslands.

Impacts on plant life from the construction of the pipeline installation will be from the removal or trimming of plants to create the construction workspace. Following pipeline installation, the permanent ROW will be maintained clear of plants that could adversely impact the integrity and access to the pipeline – primarily woody plants and plants with deep roots.

In herbaceous open areas, such as croplands and grasslands, the entire ROW will be mowed prior to construction and will be restored, as close as practical, to its original contours following pipeline installation. Impacts to these areas will be short term and Montana-Dakota will minimize these impacts by implementing the following mitigation measures:

- For croplands, manage excavated soils during construction following the methods described in Section S.1 Agricultural Production;
- For grasslands, manage excavated soils during construction following the methods described in Section S.2 Family Farms and Ranches; and
- Restore the work area to, as close as practical, pre-construction contours and reseed the disturbed area with either landowner or NRCS approved grass mixtures.

Wooded areas within the corridor are limited to several narrow belts along intermittent river tributaries and within the immediate vicinity of the Heart and Little Heart Rivers, along shelterbelts associated with farmlands, and a few isolated patches of trees scattered along and within the proposed corridor. Impacts to wooded areas will be minimized using the methods described in Section S.10.

Wetlands areas are located within and along the proposed corridor. Impacts to wetlands will be minimized using the methods described in Section S.9.

Construction impacts such as the clearing of temporary ROW and workspace will be largely short-term in nature. Montana-Dakota will minimize impacts to vegetation adjacent to the ROW by restricting construction activities to only the approved work areas. After construction of the proposed Project is completed, the work areas will be restored to pre-construction conditions to the extent possible. This restoration may include revegetation with seed mixtures specified by permit conditions, land managing agencies or landowners. It is expected that the immediate restoration efforts following construction will help ensure only short-term impacts to vegetation.

After construction is completed, Montana-Dakota will maintain a corridor, which will be cleared of trees and shrubs to facilitate operation, maintenance and inspection of the pipeline. Along with pipeline markers, this corridor will also enhance pipeline safety by prominently identifying the location of the pipeline. Long-term impacts to vegetation associated with construction of the proposed pipeline will primarily include the clearing and maintenance of forest vegetation along the permanent ROW; however, Montana-Dakota will comply with the Commission's Tree and Shrub Mitigation Specifications. During construction activities, the removal of vegetative cover and exposure of soil will increase the potential for wind and water erosion, and may increase soil temperatures as a result of additional sunlight exposure. The increased sunlight exposure due to tree and shrub removal could actually benefit certain shade intolerant vegetative species, allowing these species to receive adequate amounts of light necessary for growth.

## **POLICY CRITERIA**

Montana-Dakota has evaluated the following criteria and has maximized benefits through the adoption or common use of the described policies and practices.

### **P1. Location and design**

Montana-Dakota designs and locates transmission and energy conversion facilities in such a manner as to maximize operational efficiency and economic benefits and to minimize impacts on agriculture, extractable resources, health and safety, plant and animal life, communications,

and the visual effect on the surrounding area. The proposed pipeline facility will be sited in compliance with the federal, state, and local rules, regulations and requirements.

**P2. Training and utilization of available labor in this state for the general and specialized skills required**

Because pipeline construction is a specialized skill, a large percentage of the workforce would most likely consist of temporary, non-local personnel. Montana-Dakota will use laborers from local communities to complete mainly general labor tasks. Montana-Dakota will have “permanent workforce” personnel operating the pipeline but will not add additional workforce to accomplish that task.

**P3. Economies of construction and operation**

Montana-Dakota will invest approximately \$18.4 million to develop this Project. Montana-Dakota could use a combined workforce to oversee the construction of the proposed pipeline, the 88 MW SCCT, and the associated facilities, thereby minimizing overall construction and operating costs.

The local economy will benefit from the temporary hiring of local and non-local workforce because they will utilize nearby service industries such as hotels, restaurants, department stores, and gas stations. Pipeline materials and supplies, such as consumables, fuel for construction vehicles, and equipment rental leases will be purchased from local businesses. Licensing and permitting fees, local taxes and levies will also provide additional economic prosperity to the state and local government during pipeline construction and long term operation.

**P4. Use of citizen coordinating committees**

In addition to participating in required public hearings for this site, Montana-Dakota will have direct contact with all landowners along the pipeline route, allowing them direct involvement in the development of the Project. At this time, the use of citizen coordinating committees is not anticipated.

**P5. A commitment of a portion of the transmitted product for use in this state**

As stated previously, the 10-inch diameter natural gas pipeline will be interconnected with Northern Border Pipeline to supply the gas requirements for the SCCT. The energy produced by the SCCT, for which this pipeline is being installed, will serve Montana-Dakota’s integrated electric system customers, the majority of which are located in North Dakota.

**P6. Labor relations**

It is expected that the majority of the temporary workforce constructing the pipeline will belong to labor unions. If any labor relations matters arise, the union will operate as a liaison between labor and management and will address labor relations. Labor relations will be directly served by the union’s participation in the Project.

## **P7. The coordination of facilities**

Montana-Dakota has been coordinating the planning, construction, and operation of electric facilities with other utilities and agencies serving North Dakota since 1945. Montana-Dakota has agreements for joint planning and common use of area facilities with the Basin Electric Power Cooperative (Basin Electric) and the Western Area Power Administration (WAPA). Montana-Dakota has interconnection agreements with Otter Tail Power Company, NorthWestern Energy Corporation, and Minnkota Power Cooperative, Inc. These agreements, along with the Basin Electric and WAPA agreements provide for the interconnection of Montana-Dakota's bulk transmission facilities with the Mid-Continent Area Power Pool (MAPP) and Midwest Independent Transmission System Operator (MISO) bulk transmission facilities.

For this Project, Montana-Dakota is coordinating the use of natural gas with the Northern Border pipeline. The Northern Border pipeline is a major natural gas transportation system that links the Midwestern U.S. with natural gas reserves in the Western Canadian Sedimentary Basin and receives and transports natural gas produced in the Williston and Powder River Basins in the United States and synthetic natural gas produced at the Dakota Gasification plant in North Dakota.

## **P8. Monitoring of impacts**

Monitoring of impacts includes environmental monitoring during construction, post-construction monitoring, and operations monitoring. Environmental monitoring will be performed throughout the construction, testing, and operation of the Project. Montana-Dakota will first require the contractor supervisory personnel to have environmental training prior to commencement of construction. The trained, qualified environmental personnel will provide environmental training to construction personnel, which will focus on the permit conditions, other environmental permit requirements, and Project specific mitigation plans.

Trained and qualified Environmental Inspector(s) will ensure environmental compliance throughout the duration of the Project. Environmental inspection activities will include monitoring compliance with permit requirements, inspection of erosion and sedimentation control methods, inspection of topsoil segregation procedures, compliance with stream and wetland construction and mitigation procedures and permits, spill response activities, inspection of water appropriation and dewatering activities and implementation of restoration plans. The Environmental Inspector(s) will be given the authority to issue stop-activity orders and corrective actions to maintain environmental compliance. The Environmental Inspector(s) will have peer status with all other activity inspectors. The Project contract documents will specifically address environmental compliance requirements and the construction contractor will be held responsible for mitigating any adverse impacts as identified by Montana-Dakota, applicable agencies or landowners.

Post-construction monitoring will be performed to minimize the potential for long-term impacts of the environment. Montana-Dakota will conduct post-construction monitoring of the Project area that will include:

- Conducting a post-construction inspection of areas disturbed during the construction process to determine the success of revegetation and restoration contouring; and

- Communication and coordination with affected landowners after construction to identify areas of concern and implement appropriate mitigation measures.

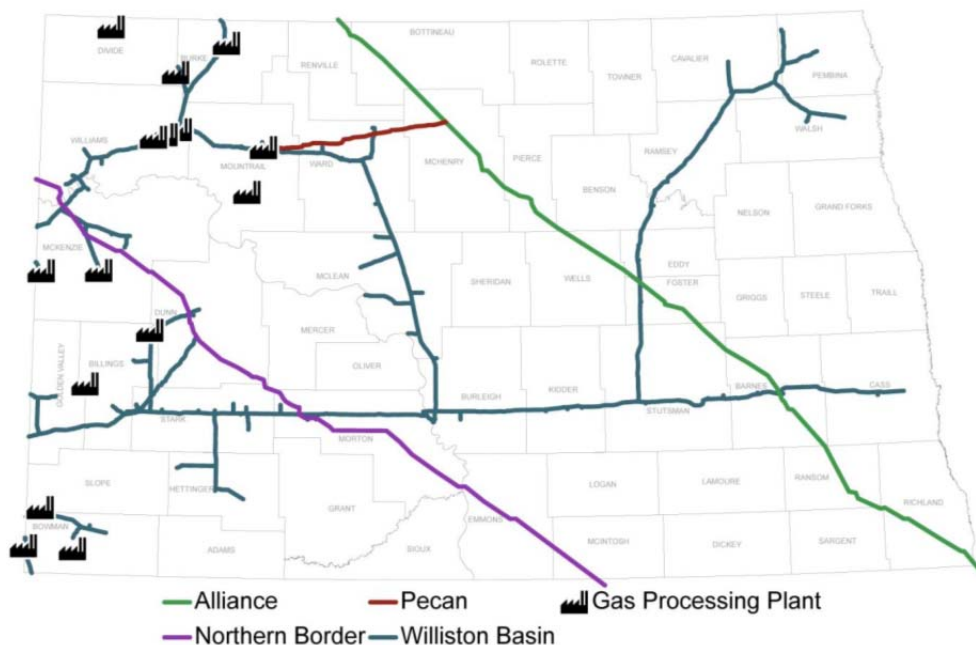
Operations monitoring will be performed to meet or exceed compliance requirements of 49 CFR 192. Montana-Dakota will note unusual conditions along the pipeline route during periodic patrols and take corrective, mitigative or preventative actions if adverse environmental conditions are observed.

**P9. Utilization of existing and proposed ROW and corridors**

The majority of the Project will be constructed in newly acquired ROW. The width of the majority of the Project ROW is proposed to be 85 feet. This ROW includes a 15-foot temporary space to be used during construction for material staging, work equipment and workspace and a 70-foot-wide permanent ROW. A portion of the route will have a 75-foot ROW, with 60 foot-wide permanent and 15 foot-wide temporary. Easements for the pipeline ROW, as well as extra workspace, are being negotiated with landowners and a mutually agreed upon amount will be paid to landowners for use of this land. Montana-Dakota will work with the landowners to minimize impacts to their operations, and will reimburse the landowners for crop damages.

**P10. Other existing or proposed transmission facilities**

According to Figure 5 (shown below) from the North Dakota Pipeline Authority’s “An Update on North Dakota’s Natural Gas Infrastructure” (Kringstad 2010), two major natural gas transmission pipelines occur in Morton County. The Williston Basin Interstate Pipeline runs from west to east through Morton County. Northern Border’s pipeline runs from the northwest corner to the southeast corner of Morton County and will be the line, which supplies the natural gas for the proposed pipeline.



Taken from “An Update on North Dakota’s natural Gas Infrastructure” Kringstad 2010.

**Figure 5. Natural Gas Pipelines in North Dakota**

### **3.5. Design and construction limitations**

The design of the proposed pipeline is detailed in Section 1. The Frame type SCCT requires a minimum natural gas inlet pressure of 385 psi in order to achieve full output. This requirement resulted in sites selected where the new SCCT could be supplied with natural gas delivered through the Northern Border pipeline system. This pipeline system provides the necessary high-pressure deliveries along with the availability of natural gas contracts, eliminating the need for additional on-site gas compression equipment and dual fuel capabilities.

### **3.6. Economic considerations**

As part of Montana-Dakota's electric supply-side resource planning, three sites were analyzed for a self-built 88 MW SCCT. Three North Dakota sites were selected with an emphasis on the availability of water, electric transmission, and natural gas supply. The sites included areas near Richardton, Linton, and Mandan. The Mandan site has the lowest estimated capital cost, the highest projected capacity, and the lowest potential operational costs if integrated with the Heskett Station operation. Based on the results of the analysis, the Mandan site was chosen, and the unit capital cost and capacity information were included with other resource options in the resource expansion analysis using the Electric Generation Expansion Analysis System (EGEAS) model.

Local and state economies will benefit from the Project. The growth and quality of life in the state and in the Mandan and Bismarck urban, suburban and rural areas is dependent on reliable and abundant energy sources. The pipeline will feed a SCCT system that will support the accessibility and use of electricity in North Dakota and directly impact the growth of business and population of the state.

During the construction of the pipeline, several economic benefits will be realized by the local community. These include:

- Increased hotel and motel rental and restaurant use for site workers;
- Increased fuel sales for construction equipment;
- Increase repair, parts and equipment sales;
- Increased sales tax revenue from local purchases;
- Sales and use tax obligations for local governments; and
- Ad valorem taxes for local governments crossed by the Project.

### **3.7. North Dakota century code section 49-22-09 factors**

North Dakota Energy Conversion and Transmission Facility Siting Act, NDCC Section 49-22-09, states that "the commission shall be guided by, but is not limited to, the following considerations, where applicable, to aid the evaluation and designation of sites, corridors, and routes". The factors are discussed in the following sections.

**Factor 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**

The Combined Application for a Certificate of Corridor Compatibility and Route Permit contains detailed discussions of the effects of the location, construction, and operation of the Project on public health and welfare, natural resources, and the environment. In addition, the information provided for Factor 11 documents all of the federal, state, and local agencies that ProSource contacted in regard to the proposed Project's potential effects on public health, welfare, natural resources, and the environment. The agencies' comments, if any, are also documented in the information provided for Factor 11.

**Factor 2. The effects of new energy conversion and transmission technologies and systems designed to minimize adverse environmental effects**

The proposed Project consists of the construction of a 10-inch diameter natural gas pipeline, thus the proposed Project does not include new energy conversion technologies, transmission technologies, or systems designed to minimize adverse environmental effects. In regards to pipeline construction, Montana-Dakota is committed to protecting the ROW and the environment and will mitigate any adverse impacts that the ROW preparation, pipeline construction, operation, and maintenance may have on the environment.

**Factor 3. The potential for beneficial uses of waste energy from a proposed energy conversion facility**

This application is for the construction of a proposed pipeline, thus no new energy conversion facilities are part of this application and no usable waste energy will result from this pipeline Project.

**Factor 4. Adverse direct and indirect environmental effects which cannot be avoided should the proposed site or route be designated**

The proposed Project may result in minor short-term direct and indirect impacts to the environment during pipeline construction activities, which cannot be avoided. These impacts could include short-term impacts to agricultural operations, roads, topography, geology, soils, water resources, vegetation, and wildlife within the area. Mitigation measures, such as Environmental Inspector(s) and implementation of construction BMPs, the SWPPP, and the Erosion and Sediment Control Plan (ESCP), will help reduce these impacts. Environmental inspection activities will include monitoring compliance with permit requirements, inspection of erosion control and sedimentation methods, inspection of topsoil segregation procedures, compliance with stream and wetland construction and mitigation procedures and permits, spill response activities, inspection of water appropriation and dewatering activities and implementation of restoration plans.

**Factor 5. Alternatives to the proposed site, corridor, or route which are developed during the hearing process and which minimize adverse effects**

Montana-Dakota has reviewed maps and performed site inspections to assist in the route selection process. Numerous factors were involved in the selection of the preferred route including length of route, minimizing impacts to landowners, paralleling road corridors, landowner concerns, environmental conditions, safety, constructability and long-term operation and maintenance.

**Factor 6. Irreversible and irretrievable commitments of natural resources should the proposed site, corridor, or route be designated**

Irreversible and irretrievable commitments of natural resources associated with the proposed Project include the use of fossil fuels for the operation of equipment, the use of steel for the construction of the pipeline, and construction materials such as sand and gravel would be expended and not retrievable following construction of the Project.

**Factor 7. The direct and indirect economic impacts of the proposed facility**

Economic benefits to the local economy will be realized during construction as a result of the Project labor workforce. These benefits will include expenditures for materials, workforce lodging, fuel sales, grocery sales and restaurant expenditures. Additional local benefits will include easement payments, permit fees and property tax revenues. The most critical of the economic impacts is the fuel supply the pipeline will provide for electric generation from the SCCT.

**Factor 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**

Montana-Dakota is unaware of any existing development plans of any governmental entity in the vicinity of the proposed Project corridor. In discussions with private landowners, Montana-Dakota learned that one private landowner, who is located within the Southeast quarter of Section 8, Township 139 North, Range 81 West, is considering a possible development on their property. Montana-Dakota is working with this landowner to mitigate any adverse impacts to the possible development.

**Factor 9. The effect of the proposed site or route on existing scenic areas, historic sites and structures, and paleontological or archaeological sites**

Due to the mainly rural nature of the proposed pipeline, the Project will cause no adverse effects on any existing scenic areas, historic sites and structures, and paleontological or archaeological sites that may be located nearby.

**Factor 10. The effect of the proposed site or route on areas which are unique because of biological wealth or because they are habitats for rare and endangered species**

Based on the nature and location of the proposed Project, Montana-Dakota does not believe the Project will negatively affect any known occurrences of rare or endangered species within the Project corridor.

**Factor 11. Problems raised by federal agencies, other state agencies, and local entities**

ProSource, on behalf of Montana-Dakota, contacted federal, state, and local agencies to notify them of the proposed pipeline Project and to request their comments with respect to the proposed Project. Copies of the letters sent to the agencies are included in Appendix I. A summary of the agencies notified, whether they responded, and if they provided comments, is

provided below in Table 8. The agencies' comments and concerns are summarized in the sections that follow.

| <b>Table 8. Agency Notifications</b>                                         |                          |                                  |
|------------------------------------------------------------------------------|--------------------------|----------------------------------|
| <b>Agency Notified</b>                                                       | <b>Agency Responded?</b> | <b>Agency Provided Comments?</b> |
| U.S. Department of Interior, Fish and Wildlife Service                       | Yes                      | Yes                              |
| U.S. Department of Interior, Bureau of Reclamation                           | No                       | NA                               |
| U.S. Department of Interior, Bureau of Land Management                       | Yes                      | No                               |
| U.S. Department of Agriculture, Natural Resources Conservation Service       | Yes                      | Yes                              |
| U.S. Department of Agriculture, North Dakota Farm Service Agency             | Yes                      | Yes                              |
| U.S. Army Corps of Engineers                                                 | Yes                      | Yes                              |
| State Historical Society of North Dakota                                     | Yes                      | Yes                              |
| Office of the Governor, State of North Dakota                                | No                       | NA                               |
| North Dakota State Water Commission                                          | Yes                      | Yes                              |
| North Dakota State Soil Conservation Committee                               | No                       | NA                               |
| North Dakota State Land Department                                           | Yes                      | No                               |
| North Dakota Public Service Commission                                       | No                       | NA                               |
| North Dakota Parks and Recreation Department                                 | Yes                      | Yes                              |
| North Dakota Indian Affairs Commission                                       | No                       | NA                               |
| North Dakota Geological Survey                                               | No                       | NA                               |
| North Dakota Game and Fish Department                                        | Yes                      | Yes                              |
| North Dakota Energy Development Impact Office - North Dakota Land Department | No                       | NA                               |
| North Dakota Economic Development and Finance                                | No                       | NA                               |
| North Dakota Department of Transportation                                    | Yes                      | Yes                              |

| <b>Table 8. Agency Notifications</b>                                   |                          |                                  |
|------------------------------------------------------------------------|--------------------------|----------------------------------|
| <b>Agency Notified</b>                                                 | <b>Agency Responded?</b> | <b>Agency Provided Comments?</b> |
| North Dakota Department of Labor                                       | No                       | NA                               |
| North Dakota Department of Human Services                              | No                       | NA                               |
| North Dakota Department of Health                                      | Yes                      | Yes                              |
| North Dakota Department of Commerce,<br>Division of Community Services | No                       | NA                               |
| North Dakota Department of Career and Technical<br>Education           | No                       | NA                               |
| North Dakota Department of Agriculture                                 | No                       | NA                               |
| North Dakota Attorney General                                          | No                       | NA                               |
| North Dakota Aeronautics Commission                                    | No                       | NA                               |
| Morton County Planning and Zoning Commission                           | No                       | NA                               |
| Morton County Highway Department                                       | No                       | NA                               |
| Morton County Emergency Services                                       | No                       | NA                               |
| Morton County Commission                                               | No                       | NA                               |
| Job Service of North Dakota                                            | No                       | NA                               |
| City of Mandan, Department of Assessing and Building<br>Inspection     | No                       | NA                               |
| City of Mandan, Public Works Department                                | No                       | NA                               |
| City of Mandan, Engineering & Planning Department                      | No                       | NA                               |

Copies of the written comments are included in Appendix I. This section responds to comments on an agency by agency basis. Responses to comments are generally confined to substantive issues.

#### **U.S. Department of Interior, Fish and Wildlife Service**

The U.S. Fish and Wildlife Service (USFWS) responded to the notification request for comments and supporting information on May 12, 2012. The USFWS stated that the “nearest designated critical habitat, which is for the piping plover (*Charadrius melodus*), is adjacent to the terminus of the proposed Project at the existing Montana-Dakota Heskett Generating Station power plant”.

As stated in Section S.13 of this Application, the proposed pipeline route does not cross the Missouri River and all rivers and streams with flowing water at the time of construction will be directionally drilled beneath the inverts of the channels to avoid impacts to the river/stream bed and banks. Therefore, the designated critical habitat for the piping plover should not be impacted as a result of construction.

In their letter, USFWS stated that suitable habitat for the Sprague's pipit (*Anthus spragueii*) and the Dakota skipper (*Hesperia dacotae*), both candidate species, may exist/occur along the proposed route. Candidate species such as the Sprague's pipit and Dakota skipper are not protected under the Endangered Species Act. However, Sprague's pipit as a migratory bird is still protected under the Migratory Bird Treaty Act (MBTA). The MBTA prohibits the taking, killing, possession, and transportation, (among other actions) of migratory birds, their eggs, parts, and nests, except when specifically permitted by regulations. While the MBTA has no provision for allowing an unauthorized take, USFWS realizes that some birds may be killed during Project construction and operation even if all known reasonable and effective measures to protect birds are used.

USFWS also stated in their letter that “there is a documented bald eagle nest approximately one-mile from the proposed route and that there may be additional eagle nests along the proposed Project route”. USFWS recommended that bald and golden eagle nest surveys be conducted prior to any on- the-ground activities.

With respect to construction activities, USFWS had the following additional comments:

- To the extent practicable, schedule construction for late summer or fall/early winter so as not to disrupt migratory birds during the breeding season (February 1 to July 15). If work is proposed to take place during the breeding season, there may be a “take” of migratory birds, their eggs, or active nests. If Project construction cannot avoid the nesting season, the USFWS suggests that the vegetation within the proposed Project area be mowed/cleared outside of the nesting season in advance of Project initiation to remove potential breeding habitat for nesting migratory birds in the Project area. Once cleared, the Project area should be maintained in a state that is unsuitable for nesting until the end of the breeding season or until construction is complete.
- The USFWS recommends that Montana-Dakota implement all practicable measures to avoid a take, such as suspending construction where necessary, and/or maintaining adequate buffers to protect the birds until the young have fledged.
- In replanting native prairie or other grassland habitat, the USFWS recommends planting a diverse mixture of native cool and warm season grasses and forbs. The USFWS recommends obtaining seed stock from nurseries within 250 miles of the Project area to ensure the particular cultivars are well adapted to the local climate.
- The USFWS recommends that all wetlands and water bodies along the proposed Project route, regardless of land ownership, be avoided through re-routing or by directionally drilling under the feature. Construction activities should be conducted in a manner that will avoid/minimize impacts to the existing habitat in the Project area.

### **U.S. Department of Agriculture, Natural Resources Conservation Service**

The Natural Resources Conservation Service (NRCS) responded to the notification request for comments and supporting information on December 21, 2011. The NRCS stated that “it appears the proposed Project is not supported by federal funding; therefore, Farmland Protection Policy Act does not apply and no further action is needed”. The NRCS also recommend “that impacts to wetlands be avoided but if construction is proposed with wetlands that the following guidelines be followed: (1) Disturbance to the wetland(s) must be temporary, (2) no drainage of the wetland(s) is allowed (temporary or permanent), (3) mechanized landscaping necessary for installation is kept to a minimum and preconstruction contours are maintained, (4) temporary side cast material must be placed in such a manner not to be dispersed in the wetland, and (5) all trenches must be backfilled to the original wetland bottom elevation.” According to the NRCS, if these guidelines are followed, the impacts to the wetland(s) will be considered minimal allowing U.S. Department of Agriculture (USDA) participants to continue to receive USDA benefits.”

As stated in Section S.9 of this application, wetlands will not be drained or permanently filled during construction/restoration of the proposed Project. However, construction of the proposed pipeline may result in minor short-term disturbances to wetlands including the following: temporary loss of wetland vegetation, wildlife habitat and aesthetics associated with clearing and other construction activities; soil disturbance associated with trenching, equipment traffic; the limited pulling of stumps; and temporary increases in turbidity and fluctuations in wetland hydrology associated with trenching, equipment traffic and spoil storage. As a result of these temporary impacts, Montana-Dakota will obtain a permit from the USACE that will authorize and regulate the temporary wetland impacts.

### **U.S. Department of Agriculture**

The U.S. Department of Agriculture responded to the notification request for comments and supporting information on January 31, 2012. The response letter noted “one small” Conservation Reserve Program (CRP) contract along the corridor. The CRP site was described but noted that it would not likely be an issue due to its location away from the center line of the corridor.

The letter provided the local contact, Todd Neurohr, for the Farm Service Agency (FSA) Farm Load Program (FLP) manager in the Mandan area. Any program borrowers who have a real estate mortgage in place and would be effected by the Project would need FSA consent or face possible non-monetary default with resultant foreclosure. The letter stated that either the Project Company or FLP customer should contact the local FSA manager to acquire the appropriate forms for approval or consent.

Based on the information in their response, the local FSA was contacted and potentially affected FLP customers were identified for notification.

### **U.S. Army Corps of Engineers**

The U.S. Army Corps of Engineers (USACE) responded to the notification request for comments and supporting information on December 16, 2011. The USACE stated that they “regulate work affecting navigable waterways under Section 10 of the Rivers and Harbors Act and the discharge of dredged or fill material into waters of the United States under Section 404 of the Clean Water Act.” USACE went on to state that “based upon the information provided, the Project would not involve work affecting navigable waterways subject to Section 10 of the Rivers and Harbors Act; however, the identified route and corridor contains numerous stream,

rivers and wetlands regulated by the USACE under the auspices of Section 404 of the Clean Water Act.”

As stated in Section S.9 of this application, wetlands will not be drained or permanently filled during construction/restoration of the proposed Project. However, construction of the proposed pipeline may result in minor short-term disturbances to wetlands including the following: temporary loss of wetland vegetation, wildlife habitat and aesthetics associated with clearing and other construction activities; soil disturbance associated with trenching, equipment traffic; the limited pulling of stumps; and temporary increases in turbidity and fluctuations in wetland hydrology associated with trenching, equipment traffic and spoil storage. As a result of these temporary impacts, Montana-Dakota will obtain a permit from the USACE that will authorize and regulate the temporary wetland impacts.

#### **State Historical Society of North Dakota**

The State Historical Society of North Dakota responded to the notification request for comments and supporting information on December 12, 2011. The State Historical Society of North Dakota stated “there is potential for unrecorded and recorded cultural resource properties in a variety of physiographic settings in the overall Project area”. The State Historical Society of North Dakota recommend a Class I Cultural Resource Inventory (file and records search with Project maps) submittal and Class III (pedestrian) surveys for all areas directly impacted by the Project.

Beaver Creek Archaeology, Inc. (BCA) of Mandan, North Dakota conducted a literature review and an intensive pedestrian Class III cultural resources inventory of the Project area between July 30 and August 1, and October 18 and 19, 2012. The results of literature review and Class III cultural resources inventory will be provided to the State Historical Society of North Dakota.

#### **North Dakota State Water Commission**

The North Dakota State Water Commission responded to the notification request for comments and supporting information on March 26, 2012. The response letter noted that there is a floodplain identified and/or mapped within the proposed pipeline route. The floodplain is designated as Zone AE. The agency stated that the permitting jurisdiction for such a floodplain was with the Floodplain Administrator in Mandan. The agency provided the contacts name. This contact is with the Morton County Highway Department to whom a notification letter had been previously sent.

The agency also stated that no sole-source aquifer had been designated for the Project area, that all waste material be properly disposed, and that it is the Project sponsor’s responsibility to contact and acquire required permits, approvals, and easements for the Project.

The response letter also stated that the North Dakota State Water Commission or State Engineer had no other concerns associated with the Project.

#### **North Dakota Parks and Recreation Department**

The North Dakota Parks and Recreation Department responded to the notification request for comments and supporting information on December 23, 2011. The North Dakota Parks and Recreation Department stated that their “scope of authority and expertise covers recreation and biological resources (in particular rare plants and ecological communities).” The North Dakota Parks and Recreation Department went on to state that “the Project as defined does not affect state park lands that they manage or state Land and Water Conservation Fund (LWCF) Project

sites that they manage.” The North Dakota Parks and Recreation Department is also responsible for coordinating the North Dakota's Scenic Byways and Backways Program. According to the North Dakota Parks and Recreation Department, the “proposed Project is along the Old Red/Old Ten Scenic Byway and as such they recommend any Project development be completed with the least amount of or no visual impact to the immediate and distant views from the above mentioned Backways/Byways.”

The North Dakota Parks and Recreation Department reviewed the North Dakota Natural Heritage biological conservation database 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 their review, several plants, animal and significant ecological community occurrences were identified within or adjacent to the Project areas. The North Dakota Parks and Recreation Department recommended “that the Project be accomplished with minimal impacts and that all efforts be made to ensure that critical habitats not be disturbed in the Project area to help secure rare species conservation in North Dakota and that any impacted areas be revegetated with species native to the Project area”.

As stated previously in this application, ProSource has consulted with Federal and state agencies as well as conducted field studies. The Biological Resources Survey (Appendix G) provides information on habitats present along the pipeline route. No areas containing animal or plant species that are unique or rare to the state would be irreversibly damaged within the corridor. Once pipeline construction is complete, the workspace will be returned as close as possible to pre-construction conditions and re-seeded. The areas will be reseeded with vegetation seed mixtures that meet the approval or recommendations of the NRCS unless otherwise specified by the landowner and approved by the Commission.

#### **North Dakota Game and Fish Department**

The North Dakota Game and Fish Department responded to the notification request for comments and supporting information on January 25, 2012. The response letter noted the presence of the Heart River and the South Branch Little Heart River within the Project Corridor and that these water bodies are classified fisheries. The department recommended that the streams be crossed by directional drilling, if feasible. If an alternative method of crossing is to be used, the department recommended that construction not be performed between April 15 and June 1 and that erosion and sedimentation controls be implemented.

The department also noted the presence of wetlands within the corridor and that any wetlands that cannot be avoided should not have their drainage patterns altered or that above-ground appurtenances should be placed elsewhere. The department also suggested that the US Army Corps of Engineers' North Dakota Regulatory Office be contacted for Section 404 permitting.

The Department stated that they do not believe the Project would have any significant adverse effects on wildlife or wildlife habitat providing their recommendations are followed and disturbed areas are reclaimed to pre-Project conditions.

#### **North Dakota Department of Transportation**

The North Dakota Department of Transportation (NDDOT) responded to the notification request for comments and supporting information on January 3, 2012. The NDDOT stated that “this Project should have no adverse effect on the North Dakota Department of Transportation highways; however, in addition to NDDOT, Federal Highway Administration (FHWA)

concurrence will also be required on I-94 right of way.” The letter also stated that if any work needs to be done on highway right-of-way, appropriate permits and risk management documents will need to be obtained from the Department of Transportation.” Montana-Dakota will obtain all required permits and authorizations before installing the pipeline under I-94.

#### **North Dakota Department of Health**

The North Dakota Department of Health (NDDOH) responded to the notification request for comments and supporting information on December 19, 2011. The NDDOH stated they “believe that environmental impacts from the proposed construction will be minor and can be controlled by proper construction methods.” The NDDOH also stated that they “own no land in or adjacent to the proposed improvements, nor does it have any projects scheduled in the area and they believe the proposed activities are consistent with the State Implementation Plan for the Control of Air Pollution for the State of North Dakota.”

With respect to construction, NDDOH had the following additional comments:

- All necessary measures must be taken to minimize fugitive dust emissions created during construction activities. Any complaints that may arise are to be dealt with in an efficient and effective manner.
- 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.
- Projects disturbing one or more acres are required to have a permit to discharge storm water runoff until the site is stabilized by the reestablishment of vegetation or other permanent cover. Projects involving temporary dewatering or hydrostatic testing are required to have a permit to discharge. 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 storm water management considerations are addressed.
- Noise from construction activities may have adverse effects on persons who live near the construction area. Noise levels can be minimized by ensuring that construction equipment is equipped with a recommended muffler in good working order. Noise effects can also be minimized by ensuring that construction activities are not conducted during early morning or late evening hours.

Prior to the initiation of its construction activities, Montana-Dakota will obtain all required permits from NDDOH for construction of the pipeline. Montana-Dakota will provide a copy of the NDDOH permits to the Commission prior to the commencement of any construction activities. In addition to the required permits, Montana-Dakota will use all necessary mitigative measures to minimize fugitive dust emissions created during construction activities, noise from construction activities, temporary impacts to any water of the state, and spills of oil and grease that may reach any water of the state.

### **3.8. Mitigative Measures**

Protection of the ROW and mitigating adverse impacts on the human and natural environment has been a focal point for Montana-Dakota during the routing phase of the Project and will continue to be a high priority during the construction and restoration phases of the Project. Montana-Dakota will implement various measures to protect the ROW or mitigate the adverse impacts of ROW preparation and pipeline construction, operation and maintenance on the human and natural environment. These measures include but are not limited to, utilizing low impact construction techniques in sensitive areas (horizontal directional drilling), installing erosion and sedimentation control measures, and restoring the ROW as closely as possible to pre-construction conditions. Montana-Dakota will work closely with the landowners and applicable agencies to ensure proper restoration of the ROW is accomplished.

Montana-Dakota will utilize Environmental Inspector(s) during construction and restoration activities to ensure environmental compliance throughout the duration of the Project. Environmental inspection activities will include monitoring compliance with permit requirements, inspection of erosion control and sedimentation methods, inspection of topsoil segregation procedures, compliance with stream and wetland construction and mitigation procedures and permits, spill response activities, inspection of water appropriation and dewatering activities and implementation of restoration plans. The Project contract documents will specifically address environmental compliance requirements and the construction contractor will be held responsible for mitigating any adverse impacts as identified by Montana-Dakota, applicable agencies or landowners.

### **3.9 List the qualifications of the people in the various disciplines that contributed to the corridor location study**

#### **David Yexley P.E., Director of Business Development and Special Projects, Montana-Dakota Utilities Co.**

Mr. Yexley has over 34 years of resourceful comprehensive construction and engineering experience with diversified energy management, automation and controls, utility, manufacturing, supply, agricultural and construction companies. Over 30 years of experience with processes, customer contact and development, relationship sales and marketing, organizational development, team building, training, proposal preparation, presentations, product pricing, negotiation, purchasing, design, installation, start-up, troubleshooting, and follow up responsibilities. In addition, Mr. Yexley has estimated and managed multiple pipeline and large utility construction projects from 2005 to present that were under construction at the same time, overseeing construction crews and inspection crews that numbered up to 80 on each project. Mr. Yexley is a Registered Professional Engineer and is currently licensed in North Dakota, South Dakota, Kansas, Iowa and Nebraska.

#### **Gene Brown, Montana-Dakota Utilities Co.**

Mr. Brown has over 15 years of experience in natural gas transmission and distribution. He has been involved in the design and construction of numerous pipeline projects since 2008. He works closely with clients, construction personnel and suppliers to ensure regulatory compliance while meeting the needs of the client.

**Nathan Sundt, Engineer III, Montana-Dakota Utilities Co.**

Nathan Sundt has more than six years of engineering and construction experience in the natural gas industry. Mr. Sundt has experience in various aspects of the design, construction, operation, and maintenance of the Montana-Dakota's natural gas distributions systems including, pipeline construction, gas measurement, and pressure regulation. Mr. Sundt has also been involved in the construction of several Montana-Dakota installed natural gas transmission lines in various states. Mr. Sundt has overseen several large Montana-Dakota construction projects, utilizing both Montana-Dakota crews and multiple contractors. In 2012, Mr. Sundt oversaw construction of several large natural gas distribution projects that included installing approximately 20 miles of 12" pipe in various locations in western North Dakota.

**David Hennen, Director of Environmental Services, ProSource Technologies, LLC**

Mr. Hennen has over 15 years of experience in environmental consulting. He specializes in regulatory and environmental permitting for linear construction projects, including pipelines, power lines, fiber optic lines, roads, and trail projects. Mr. Hennen works closely with clients and agencies to ensure regulatory compliance while meeting project expectations. He has successfully obtained federal, state and local permits and approvals for routing, stream and wetland crossings, erosion and sediment control, storm water runoff, water appropriation and discharge, threatened and endangered species and cultural resources. Mr. Hennen has managed various aspects of environmental and regulatory permitting, environmental inspection and training, and ROW acquisition for hundreds of miles of pipeline construction projects. Mr. Hennen has also managed Phase I and II environmental site assessments, pre-demolition surveys, abatement projects and demolition activities for many residential properties adjacent to pipelines.

**Thomas Nickel, Permitting/Wetland Specialist, ProSource Technologies, LLC**

Mr. Nickel has over 10 years of experience in natural resources management including wetlands, regulatory and environmental permitting, and threatened and endangered species. Mr. Nickel is a Minnesota Certified Wetland Delineator and performs wetland jurisdictional determinations and assessments, prepares environmental assessment worksheets, and state and federal environmental permit applications. He also administers and designs water quality monitoring programs, conducts compliance monitoring for industrial concerns, and other duties associated with wetlands, water resources, wildlife habitat and land use. Mr. Nickel is particularly experienced with managing large-scale, long term projects and budgets.

**Thomas Maiello, Environmental Specialist, ProSource Technologies, LLC**

Mr. Maiello has over 30 years of regulatory, project management, environmental remediation and assessment experience. He has 10 years of experience as a state environmental regulatory inspector and enforcement officer working with compliance enforcement, citizen complaint response, primary spill response and program coordination, National Pollution Discharge Elimination System (NPDES) and state permit compliance, and surface and groundwater standards development and implementation. Mr. Maiello has worked with private developers, municipalities, state regulatory agencies, and citizen action groups with regard to property transfer, development and redevelopment projects.

### **SECTION 4: STUDIES**

ProSource, on behalf of Montana-Dakota, consulted with several federal, state, and local agencies to identify environmental resources in the Project area, and determine what, if any, environmental studies or assessments would be required for the proposed Project. Field surveys focused on evaluating biological, cultural, and wetland resource within the proposed pipeline route. Summaries of these studies are included in the following paragraphs.

#### **Wetlands Survey**

ProSource performed wetland delineations within a 400-foot wide survey corridor for the entire pipeline route between June 18 and June 23, 2012. Twenty four (24) wetlands and two (2) Waters of the United States (WOUS) were identified and delineated, totaling 26 sites. On August 15, 2012, ProSource completed a review of an additional segment of proposed corridor, because the route was altered to avoid cultural resource sites and a geological rock outcrop feature. Wetland delineations were completed according to USACE guidance. A full discussion of the wetlands assessment and the report's findings can be found in Section S.9 of this application. A copy of the delineation report, including map sets showing the location of delineated wetlands and waterbodies, is included in Appendix F.

ProSource will submit a formal request for Jurisdictional Determination of these delineated features to the North Dakota Regulatory Office of the U.S. Army Corps of Engineers (COE) - Omaha District.

#### **Biological Resources Survey**

On December 9, 2011, ProSource submitted a letter to the U.S. Fish and Wildlife Service (USFWS) to initiate the Section 7 coordination of the Federal Endangered Species Act (ESA) for the proposed Project. On May 18, 2012, ProSource received written correspondence from the USFWS regarding their response to the December 9, 2011 letter (USFWS Project # 2012-CPA-0263). Additional information and recommendations were included in the USFWS letter for planning purposes, to assist Montana-Dakota with compliance of various requirements.

ProSource performed a biological survey within a 400-foot wide survey corridor for the entire pipeline route between June 18 and June 23, 2012. On August 15, 2012, ProSource completed a review of an additional segment of proposed corridor, because the route was altered to avoid cultural resource sites and a geological rock outcrop feature. There are several types of habitat and topographical features included within the route. Rolling plains, emergent wetlands, ravines, woodlands, streams/rivers, pasture, rocky outcrops/buttes, and agricultural cropland all occur within the route. The presence of primary or secondary indicators of threatened or endangered species were not observed by field biologists. A full discussion of the biological resources can be found in the Biological Assessment Report which is included in Appendix G.

#### **Cultural Resources Survey**

Beaver Creek Archaeology, Inc., (BCA) of Mandan, North Dakota conducted a literature review and an intensive pedestrian Class III cultural resources inventory of the Project area between July 30 and August 1, and October 18 and 19, 2012. The Class III inventory covered approximately 968 acres of the 1,163 acres (195 acres have been previously inventoried) of the

## SECTION 4. STUDIES

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24-mile long, 400-foot wide Project corridor. The vast majority of the Area of Potential Effect (APE) has been plowed in the past or is currently under agricultural production.

A total of forty-three previous inventories within the sections in which the APE is located had been conducted. A variety of cultural resources were on file for a one mile radius of the APE. All previously recorded unevaluated or eligible sites are avoided by this Project.

The Class III inventory covered approximately 940 acres of the 1,135 acres (195 acres have been previously inventoried) of the approximately 24-mile long, 400-foot wide Project corridor. The vast majority of the APE has been plowed in the past or is currently under production. During the field survey, cultural resources were found. Reroutes were conducted for all unevaluated or eligible sites.

The reroute of the pipeline now places these sites outside the current APE, thus they will not be impacted and do not need any further avoidance measures. BCA recommended that the Project proceed under a Finding of No Adverse Effect as surveyed, mapped and described. A copy of the Class III Cultural Resources Inventory Report is included in Appendix H.

ProSource/BCA will request concurrence, from the North Dakota State Historic Preservation Office (ND-SHPO), with the findings of the literature review and Class III cultural resources inventory conducted for the APE.

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