NORTH DAKOTA PUBLIC SERVICE COMMISSION

APPLICATION OF

NORTH DAKOTA PIPELINE COMPANY LLC

for

ROUTE PERMIT

DOCKET NO. PU-13-848

SANDPIPER PIPELINE PROJECT

***REVISED* – FEBRUARY 2014**

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DESCRIPTION OF PROPOSED FACILITY

A.1 TYPE OF FACILITY

This is a Consolidated Application for a Certificate of Corridor Compatibility and Route Permit. These matters are discussed in Section A.1 of the Certificate of Corridor Compatibility portion of this Application.

A.2 PRODUCT

This is a Consolidated Application for a Certificate of Corridor Compatibility and Route Permit. These matters are discussed in Section A.2 of the Certificate of Corridor Compatibility portion of this Application.

A.3 SIZE AND DESIGN

This is a Consolidated Application for a Certificate of Corridor Compatibility and Route Permit. These matters are discussed in Section A.3 of the Certificate of Corridor Compatibility portion of this Application.

A.4 TIME SCHEDULE

This is a Consolidated Application for a Certificate of Corridor Compatibility and Route Permit. These matters are discussed in Section A.4 of the Certificate of Corridor Compatibility portion of this Application.

APPLICATION FOR ROUTE PERMIT
SECTION B
LOCATION

B.1 APPLICANT'S POLICIES AND COMMITMENTS TO LIMIT ENVIRONMENTAL IMPACT

Enbridge Pipelines (North Dakota) LLC ("EPND")[1] is committed to environmental protection and stewardship. EPND's Environmental Policy states that protection of the environment is an integral element in the conduct of company business. EPND recognizes that pollution prevention, biodiversity and resource conservation are key to a sustainable environment, and effectively integrates these concepts into its business decision-making. All employees are responsible for operating in an environmentally responsible manner.

Environmental protection goals will govern the entire Sandpiper Pipeline Project ("Project" or "Sandpiper"), from planning and construction through restoration and operation. EPND's internal environmental staff is dedicated to monitoring compliance with various federal and state environmental regulations, permits, and company policy. EPND's determination of the proposed route is driven by its commitment to limit environmental impacts, mitigate impact on municipalities and landowners, avoid sensitive resource areas to extent practicable, and reduce its footprint. In addition EPND is committed to conserving energy and using engineering controls to reduce our environmental impacts during construction and operations.

Co-locating and paralleling existing rights-of-way affords opportunities to confine the Projects construction right-of-way to areas of previous ground disturbance and clearing. Of the total ~~299~~300miles, approximately 62 miles of the new 24-inch diameter pipeline will be co-located with the EPND's existing Line 81, or Line 82, and Line 87 pipelines, thus, no new right-of-way will be required in those areas. An additional ~~77~~90 miles will be co-located with third party utilities.

EPND is committed to early and regular communication with municipalities, landowners and federal, state and county agencies to gather data regarding sensitive environmental resources that can be taken into account during the routing process.

[1] Due to a name change any reference to Enbridge Pipeline (North Dakota) LLC or EPND in this document should now be considered North Dakota Pipeline Company or NDPL LLC.

EPND along with other Enbridge affiliates has set a voluntary goal to work toward a neutral footprint for new projects. The goal attempts to limit Enbridge's environmental footprint to 2009 levels despite the fact that continue to expand operations. Enbridge intends to achieve this by conserving an acre of wilderness land for every acre we permanently impact, planting a tree for every merchantable tree that must be removed to build new facilities, and generating one kWh of renewable energy for every kWh of energy that pipeline operations consumes. Enbridge intends to fulfill its commitment as soon as practicably possible, but no later than five years after the in-service date of the projects making the impacts. Enbridge will work with key land-trust organizations within the United States which work for the direct protection of biodiversity through the purchase, donation or establishment of conservation easements on ecologically significant land. Enbridge's conservation efforts will not always take place in the right-of-way or impacted area for new projects.

Energy conservation is a major objective for EPND as energy/power costs represent the largest single recurring expense in pipeline operation. Managing energy costs, including conservation of energy usage, is a high priority in EPND's operations. EPND's energy conservation goal is to minimize power/energy unit costs through the implementation of internal programs directed at continuous improvement of energy utilization efficiency.

For new pump installations, EPND purchases high efficiency pumps and motors at a premium initial cost in an effort to conserve long range energy requirements. Specifically, a high polish is used on the pump impeller, and motors are custom designed for high efficiency.

The installation of variable frequency induction ("VFD") motor drives is a program that has been in place for approximately 18 years. VFDs allow the pipeline operator to vary the pump rotation speed thereby controlling the pressure produced to match the desired flow rate. This eliminates the need to dissipate or waste pressure (energy) with pressure control valves. Ideally, under constant operating conditions, the pump would deliver constant pressures eliminating the need for pressure dissipation. Therefore, operating conditions play a key role in designing the pumping stations for optimum efficiency. VFDs will be specified to control the operating speed of the new mainline pumps at EPND's Beaver Lodge, Berthold, and Lakota Station sites and additional injection pumps at Stanley Station.

B.2 DISCUSS THE FACTORS LISTED IN SECTION 49-22-09 NDCC TO AID THE COMMISSION'S EVALUATION OF THE PROPOSED PIPELINE ROUTE

B.2.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

A detailed discussion of the effects of the location, construction, and operation of the proposed pipeline on public health and welfare, natural resources, and the environment is included in Section B.4. Research and investigation relating to these effects have been identified through cultural resource reviews, wetland delineation surveys, and protected species and sensitive habitat area reviews. Field surveys are ongoing and final reports ~~will be filed~~ for the 2013 field season are included as exhibits in this supplemental filing with ND-PSC.

At the time of ~~this~~ the original filing on October 30, 2013, EPND completed approximately ~~97~~ 91 percent of cultural resource surveys and 84 percent of its wetland field surveys. This supplemental application discusses field data that has been acquired through ~~September 14,~~ December 2013. ~~The remaining field survey work will continue through the 2013 field season with a small percentage of~~ The remaining survey work ~~being~~ will be completed ~~by the~~ in Spring and Summer of 2014 because an updated proposed pipeline centerline was issued on December 3, 2013, which resulted in some areas where additional survey is necessary. All applicable permits specified on Table 21 of the Application for a Route Permit, including the related supporting documentation, will be submitted as a supplemental filing.

B.2.b The Effects of New Energy Conversion and Transmission Technologies and Systems Designed to Minimize Adverse Environmental Effects

As described in EPND's Environmental Protection Plan ("EPP" provided as Exhibit J), current construction techniques and mitigation measures will be employed to minimize the effect of construction on environmental resources. These measures are also discussed in Section B.6 of this application. As a result, the Project does not include new energy conversion or transmission technologies that are expressly designed to minimize adverse environmental effects.

B.2.c The Potential for Beneficial Uses of Waste Energy from a Proposed Energy Conversion Facility

The Project does not involve new energy conversion facilities; no usable waste energy will result from the Project.

B.2.d Adverse Direct and Indirect Environmental Effects, Which Cannot be Avoided Should the Proposed Site or Route be Designated

Unavoidable adverse direct and indirect environmental effects may include short-term or temporary effects on vegetation, wildlife, agricultural operations, transportation, and noise

levels as described in Section B.4. EPND will implement mitigation measures to minimize these impacts as described in Section B.6 and in EPND's EPP (see Exhibit J).

B.2.e Alternatives to the Proposed Site, Corridor or Route, Which are Developed During the Hearing Process and Which Minimize Adverse Effects

EPND's practice is to co-locate with new and existing pipelines, existing utility corridors, or existing railroad right-of-way to the extent practicable. The route described herein was selected to maximize co-location with these existing rights-of-way by conducting surveys and researching publically available information to identify a route that achieves Project objectives, is technologically and economically feasible to construct, and minimizes impacts on landowners and the environment. Route alternatives and variants were developed to mitigate safety concerns, avoid congested utility corridors and/or facility encroachments, avoid population centers, improve road crossing angles or poor waterbody crossing points or alignments, or avoid environmentally sensitive areas. Route alternatives were minimized to the extent practicable. Several shorter route variants were evaluated and incorporated into the final route design.

The following generally describes the proposed route and alternatives that were considered:

From existing Beaver Lodge Station to existing Minot Station (Mile Post 0 to Mile Post 80)

- **Co-located with existing pipelines and utility corridors**

Between EPND's Beaver Lodge and Berthold Station (Mileposts ["MPs"] 0 – 57), the Project is generally co-located with EPND's existing Line 87 (and/or Line 82) pipeline(s). In this segment of the Project, the route generally avoids populated areas and municipalities. However, east of Berthold Station (approximate MPs ~~57.0~~ 56.6-57.4), many rural towns have grown and encroached on both Line 82[2] and on Line 81[3], over time. Today, an additional 16 rural towns or communities are located within 1 mile of Line 81. In an effort to avoid sensitive environmental resources and reduce impacts to these rural communities, EPND shifted the route approximately 12 miles to the north and co-located it with other utility corridors or linear features (e.g., roads) where feasible, effectively avoiding most rural communities.

[2] Line 82 begins at EPND's existing Beaver Lodge Station near Tioga, North Dakota and ends at Minot, North Dakota.
[3] Line 81 begins at Minot, North Dakota and ends at Clearbrook, Minnesota.

- **Route Alternatives**

A route alternative around the City of Stanley was considered in the early stages of project planning and routing processes. Discussions with local and county officials during the Beaver Lodge Loop Project (BLLP Line) revealed concerns about the pipeline route following the existing EPND system. As a result, EPND filed a route alternative and received approval from this Commission in PU-11-613 to install its new BLLP Line (referred to as Line 87) south of the City to address their concerns. Since that time, the pipeline corridor along Line 87 has become more congested with third-party pipelines and utility corridors as development has moved south of the City. For that reason, EPND has developed an alternative route that is located further south of its Line 87, which avoids congested utility corridors, population centers, and commercial development.

From the existing Minot Station to North Dakota/Minnesota state line near Grand Forks (Mile Post 80_ to Mile Post ~~299~~300)

- **Co-located with existing pipelines and utility corridors**

In early pre-project planning, EPND considered co-locating the Sandpiper pipeline with its existing Line 81 east of Minot. Line 81 was built in 1962 and generally runs west to east across the state of North Dakota, starting at the Minot Station and terminating near Crookston, Minnesota. While the route starts out following the Line 81 corridor several route deviations were identified as preferable and have been incorporated into the proposed route in order to accommodate requests from municipalities and environmental issues as described below.

- **Route Alternatives**

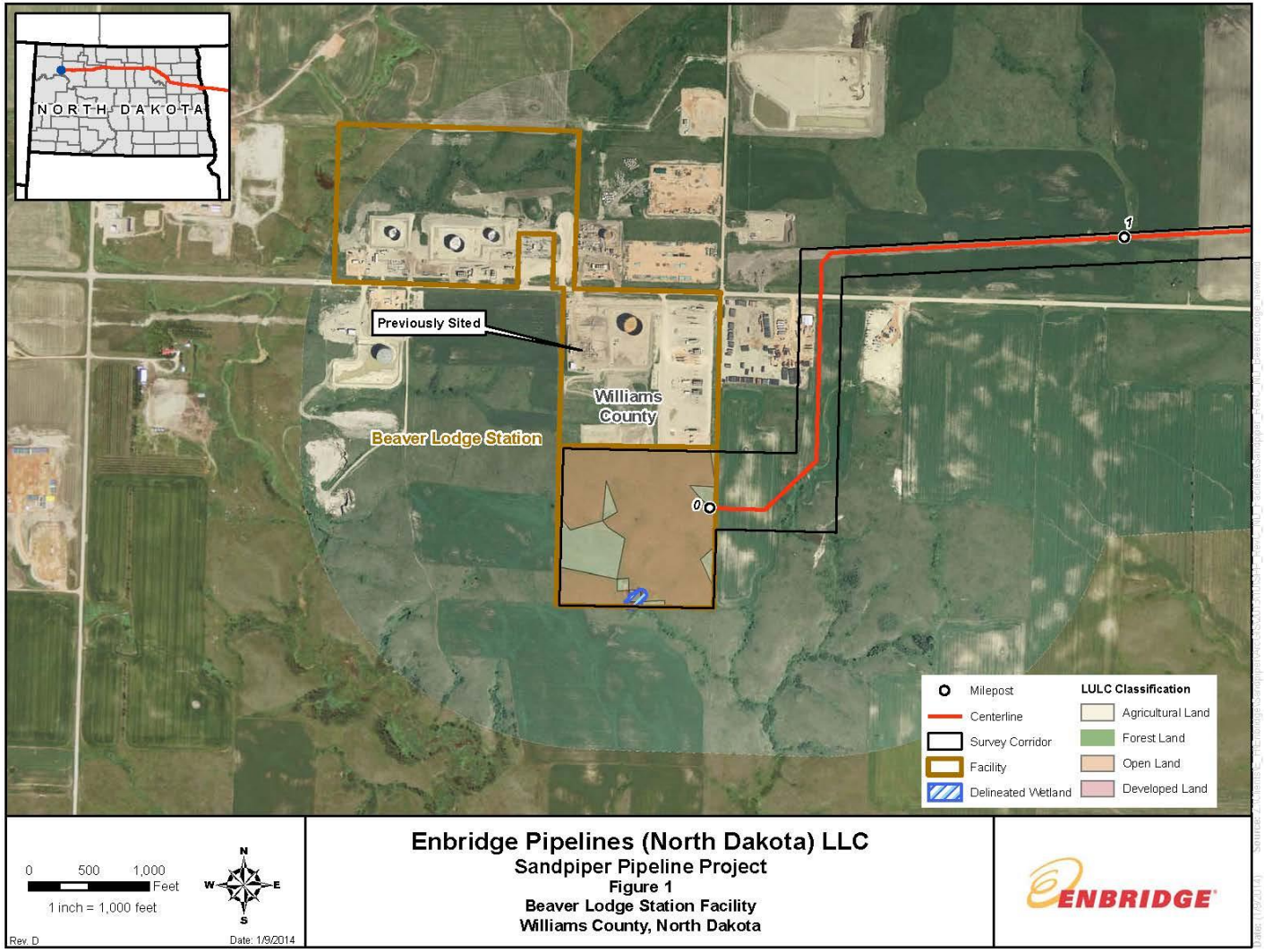
In the Devil's Lake area in Benson and Ramsey counties, Line 81 is located in proximity to numerous sensitive wildlife resources, including federal Waterfowl Production Areas ("WPA") and state Wildlife Management Areas ("WMAs"). Line 81 also crosses several rural municipalities in this segment and passes the City of Devil's Lake approximately 2 miles to the north. Line 81 is generally co-located with railroads and roads, and consequently travels through or near several rural communities.

During discussions with Grand Forks city officials, EPND was made aware that Sandpiper's preliminary routing traversed land that was identified in city planning documents for other land uses within the next 10 years. As a result, EPND selected an alternative route that arrives approximately 2 miles west of the City of Grand Forks and then veers south, approximately 3 miles beyond city limits.

B.2.f Irreversible and Irretrievable Commitments of Natural Resources Should the Proposed Site, Corridor or Route be Designated

EPND's practice is to co-locate new pipelines within an existing pipeline, utility, road or railroad corridor where practicable to do so. Where co-location is possible, minimal irreversible or irretrievable commitments of natural resources would result from construction of the pipeline portion of the Project because land use along the operational right-of-way will be returned to prior use following construction. In some locations where co-location is not possible, the Project will result in creating a new open corridor in wooded areas where the permanent right-of-way will need to be maintained in an herbaceous state free of trees. Approximately ~~7.6~~ 7.5 acres (or 0.3 percent of the total route) of wooded areas along the pipeline would be converted to open land.

As described in EPND's Certificate of Corridor Compatibility in Section A.3.b.(7)(i) and Section A.3.b.(7)(ii), this Project will acquire and develop new land adjacent to the existing Beaver Lodge and Stanley stations. These areas are referred to as Beaver Lodge Station Expansion Area and the Stanley Station Expansion Area. The Project would result in an irreversible commitment of natural resources where existing stations would be expanded and construction of the new Lakota Station would occur. Collectively, approximately ~~106.5~~ 101.0 acres of land acquired at the Beaver Lodge, Stanley and the new Lakota Station locations would be converted from agricultural, open space, and/or herbaceous rangeland ~~and/or wetlands~~ to industrial. Figures 1, 2, and 3 show the land uses that would be impacted by these stations.


NORTH DAKOTA
Previously Sited
Williams County
Beaver Lodge Station
0
1
Milepost
Centerline
Survey Corridor
Facility
Delineated Wetland
LULC Classification
Agricultural Land
Forest Land
Open Land
Developed Land
0 500 1,000 Feet
1 inch = 1,000 feet
N
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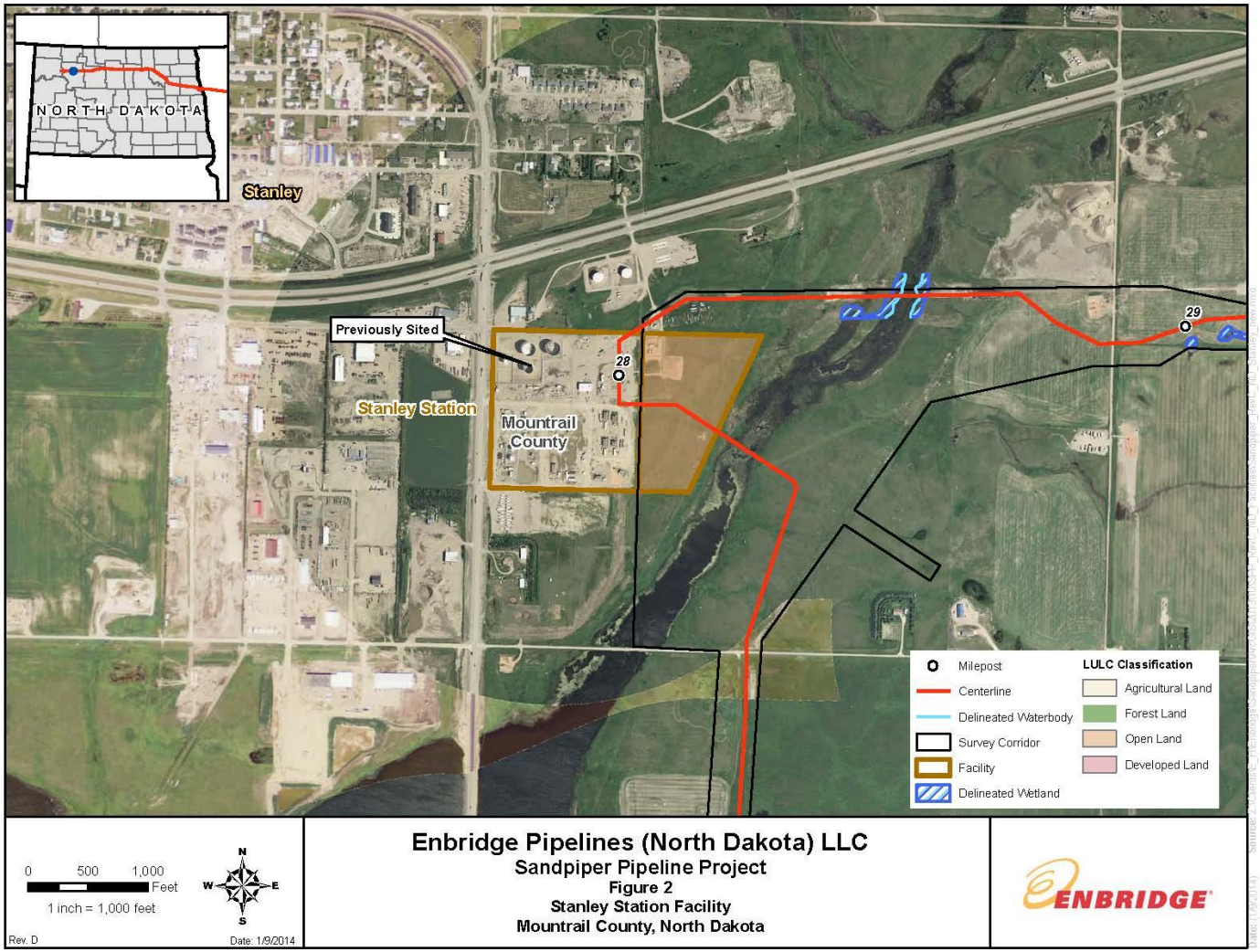
Rev. D
Date: 1/9/2014
Enbridge Pipelines (North Dakota) LLC
Sandpiper Pipeline Project
Figure 1
Beaver Lodge Station Facility
Williams County, North Dakota


NORTH DAKOTA
Stanley
Previously Sited
Stanley Station
Mountrail County
28
29
Milepost
Centerline
Delineated Waterbody
Survey Corridor
Facility
Delineated Wetland
LULC Classification
Agricultural Land
Forest Land
Open Land
Developed Land
0 500 1,000 Feet
1 inch = 1,000 feet
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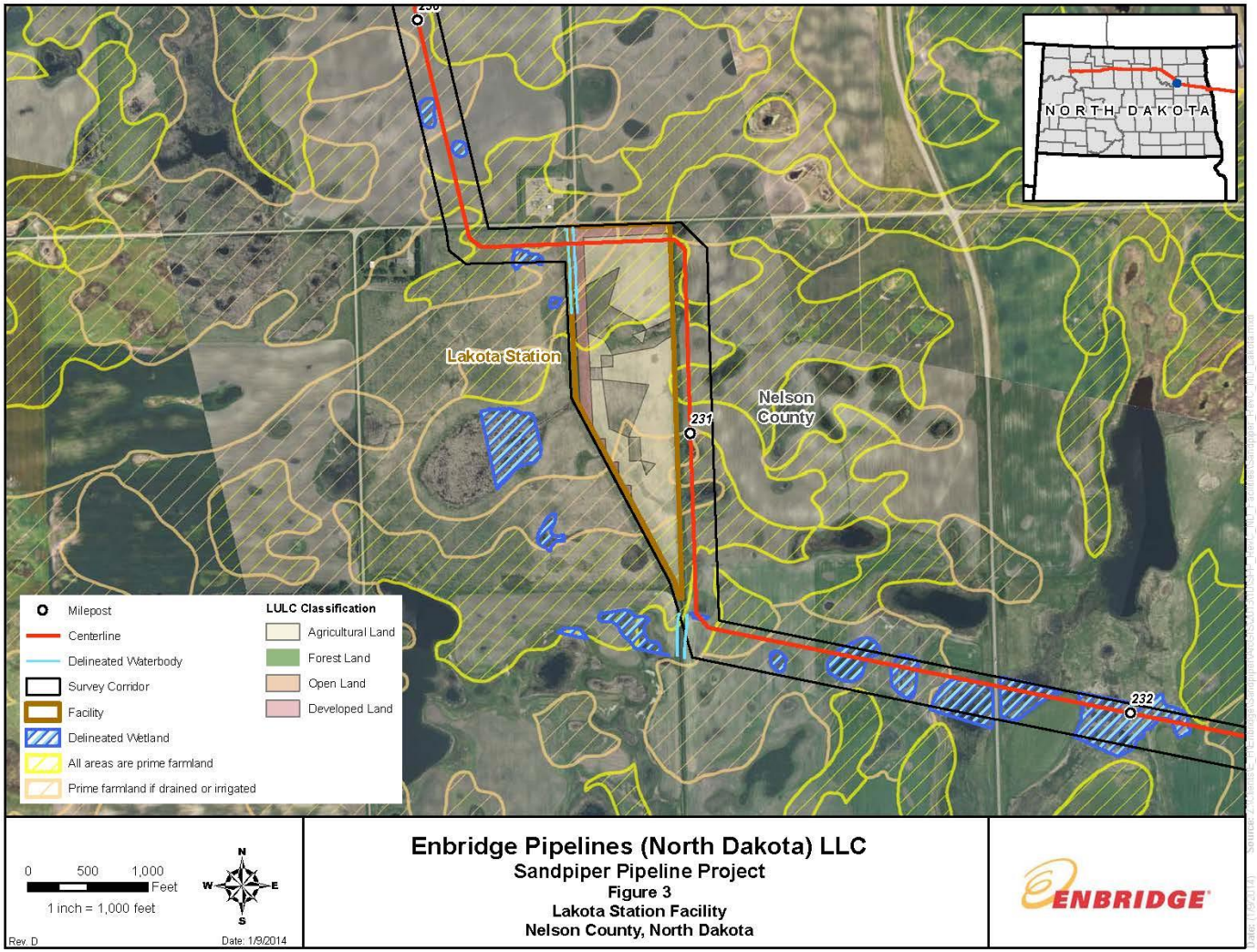
Rev. D
Date: 1/9/2014
Enbridge Pipelines (North Dakota) LLC
Sandpiper Pipeline Project
Figure 2
Stanley Station Facility
Mountrail County, North Dakota


NORTH DAKOTA
Lakota Station
Nelson County
231
232
Milepost
Centerline
Delineated Waterbody
Survey Corridor
Facility
Delineated Wetland
All areas are prime farmland
Prime farmland if drained or irrigated
LULC Classification
Agricultural Land
Forest Land
Open Land
Developed Land
0 500 1,000 Feet
1 inch = 1,000 feet
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S
Rev. D
Date: 1/9/2014
Enbridge Pipelines (North Dakota) LLC
Sandpiper Pipeline Project
Figure 3
Lakota Station Facility
Nelson County, North Dakota

B.2.g The Direct and Indirect Economic Impacts of the Proposed Facility

Crude oil and natural gas are North Dakota's leading mineral products, and North Dakota is the second largest producer of crude oil in the country. The proposed Project would boost the state's economy and allow the state to capitalize on tax revenue gathered from production and extraction taxes.

Based on economic modeling by the Federal Bureau of Economic Analysis[4] and consultation with EPND's economic expert, EPND anticipates that the Project will have beneficial impacts on the local economy both during and after construction in North Dakota (*see* Table 1). This activity will be concentrated in the nine counties crossed by the Sandpiper Project. EPND estimates that approximately 10,827 person-years (the equivalent of one person working full-time for one year) of temporary construction jobs will be created for the duration of construction. Depending on the availability of local skilled workers, the general pipeline contractor typically draws workers for projects of this type from North Dakota and surrounding states.

The total economic benefit of the Project is estimated at $1.5 billion during construction. Table 1 (below) summarizes the local economic benefits generated by this Project. Unemployment in the area would be temporarily reduced and payroll taxes would temporarily rise. Local businesses would also benefit from the temporary demand for goods and services generated by the workforce's need for food, lodging and supplies.

EPND expects to purchase some of the materials necessary for construction of the Project locally, including consumables, fuel, equipment, and miscellaneous construction-related materials.

EPND estimates that the total cost of the Project will be approximately $2.6 billion. The estimated cost for the North Dakota portion of the Project is $1.3 billion. Based on the anticipated cost of the Project in North Dakota and current tax schedules, EPND estimates it could pay as much as approximately $8.5 million in additional annual property taxes in North Dakota beginning in 2016 (maximum estimated taxes are $12.3 million occurring in 2026), subject to assessments by local government units.

Operations are expected to begin in 2016, with the Project yielding another 1,441 person-years of jobs and generating another $350 million in economic impact. Typical operations from 2017 to 2025 are estimated to lead to 2,340 full-time-equivalent jobs and create an additional $550 million per year in economic impact.

[4] Regional Input-Output Modeling System (http://www.bea.gov/regional/rims/) as developed and maintained by the United States Department of Commerce, Bureau of Economic Analysis

Table 1				
Local Economic Benefits generated from Project				
Component	**Estimated Total Project Costs ***	**Estimated Tax Benefits* 1/**	**No. of Temporary or Permanent Jobs Created**	**Total Economic Benefits***
During construction work of proposed facilities as described in Section A of Corridor Certificate	$2.6 B	$3.1 M	10,827 person-years[5]	$1.5 B
During Operation of the Sandpiper Project				
2016		$8.5 M	1,441 person years	$350 M
2017 - 2025		$9.5 - $12.2 M	2,340 full-time equivalent[6]	$550 M

[5] The term "person-years" is defined as the equivalent of one person working full-time for one year.
[6] Full time equivalent job is defined is the equivalent of one person working full-time (typical 40-hour work week).

B.2.g.(1) The Sandpiper Pipeline Project has Significant Economic Benefits

The Project has significant economic benefits, including:

- New capital investment in the United States energy infrastructure to help meet the current and future generations' energy needs;
- Increased access by North American refineries to long-term, reliable and economical supplies of crude oil produced in the United States;
- Increased pipeline capacity to transport growing volumes of North American crude oil to fulfill a larger portion of the country's domestic energy needs, thus reducing reliance on imports from less stable areas of the world;
- Increased flexibility for shippers to the U.S. Midwest and beyond, benefiting regional refineries and consumers;
- Provides employment opportunities for independent construction workers and new business to specialized consulting firms and contractors hired to assist in the design, survey, environmental assessment and Project planning processes;
- Local and regional economic boost from the purchase of local products and materials during construction and into operation as workers use local hotels, restaurants, and services; and
- Long-term economic activity from ongoing pipeline operation

B.2.g.(2) EPND is solely a transportation company

EPND owns and operates an interstate common carrier crude oil pipeline, and is solely a transportation company. EPND does not own any production wells upstream of its pipeline system nor does EPND own any refineries downstream of its pipeline system. EPND does not determine markets or destinations for the crude oil transported. EPND is a transportation service provider for hire that strictly moves a commodity from a point of receipt or entry into its pipeline system to a point of delivery where the shipper-owned commodity exits its pipeline system for receipt by a third-party pursuant to a shipper's monthly nominations. EPND's interstate common carrier transportation tariff and rates are filed and approved pursuant to the rules and regulations of the Federal Energy Regulatory Commission ("FERC") under the Interstate Commerce Act. Such tariffs and rates are published and on file with FERC.

EPND's interstate pipeline transportation business, including the facilities described in this Project, is to provide transportation service to shippers tendering commodities for transportation. Thus, EPND relies on forecasts and reports as described in Section C of the Application for a Certificate of Corridor Compatibility.

B.2.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

EPND met with the City of Grand Forks officials and discussed a route north and south of the city. This meeting was held to identify the City's current and future growth plans that could be incompatible with additional pipeline development. City officials identified one future arterial development corridor and current residential development that Sandpiper has rerouted around to avoid these developments.

Development plans south of the City of Stanley were identified during the Beaver Lodge Loop Project, thus, the Sandpiper Pipeline Project was routed further south of its existing Line 87 to avoid congested utility corridors, population centers, and commercial development.

B.2.i The Effect of the Proposed Site or Route on Existing Scenic Areas, Historic Sites and Structures, and Paleontological or Archaeological Sites

EPND conducted a desktop review for scenic areas, historic sites and structures, and archaeological and paleontological sites.

No designated scenic outlooks or viewing areas were identified within the 2-mile wide study area. The 2-mile wide study area and proposed pipeline traverse a landscape consisting primarily of grasslands and agricultural fields where the line of sight is broken by rolling hills and the occasional wooded draw or shelterbelt.

North Dakota has 56 historic sites across the state; however, none of these sites are located within the 2-mile wide study area. EPND is conducting cultural resources inventory surveys to locate previously recorded archaeological and historic architecture sites, and identify unrecorded sites within a generally 250-450-foot environmental survey corridor, ancillary facilities, and off-corridor yards. Section B.4.b.(3) discusses cultural resources further.

No recorded paleontological sites exist along the Project route. Paleontological resources are embedded in deposits of the Jurassic period and found primarily in the southwestern portion of the state. The bedrock of the region where Sandpiper is located is covered with quaternary glacial till, which only rarely contains fossilized material dating to the Quaternary Period.

EPND has prepared an Unanticipated Discoveries Plan ("UDP") (Exhibit K), which describes the actions taken in the unlikely event that previously unrecorded paleontological

or cultural resource sites are discovered during construction activities, specifically calling for work to stop until the correct authority or agency can be contacted, and the find can be properly evaluated.

As requested by the North Dakota State Historic Preservation Office ("NDSHPO"), to protect sensitive resources, EPND will not submit information about the specific locations of cultural sites or historic properties with this application. For all public filings, only the title page and abstract of cultural resources reports will be submitted as documentation of the studies having occurred. NDSHPO review and comment letters related to survey reports will also be submitted.

B.2.j The Effect of the Proposed Route on Areas which are Unique because of Biological Wealth or Because they are Habitats for Rare and Endangered Species

Eight federally listed, proposed, or ~~and~~ candidate species under the Endangered Species Act ("ESA") have records of occurrence in the counties through which the Project crosses ~~are located within the 2-mile wide study area~~. The occurrence of these species was identified by researching U.S. Fish and Wildlife Service ("USFWS") county-specific lists of federally listed, proposed, and candidate species on the USFWS website and by evaluating, via desktop analysis, the availability of potential habitat within the 2-mile wide study area. EPND conducted a field survey within a generally 250-450-foot environmental survey corridor. A more detailed discussion is provided in Section B.4.a.

B.2.k Problems Raised by Federal Agencies, Other State Agencies, and Local Entities

EPND consulted with several federal, state, and local agencies to identify potential environmental resources in the 2-mile wide study area that may be affected. Resource issues raised by agencies included threatened and endangered species, wetland protection, erosion control, and restoration and reseeding procedures. These consultations are described in Section B of EPND's Application for a Certificate of Corridor Compatibility, and a summary is presented in Table 2 of this Application. As a result of these consultations, EPND has made route adjustments to avoid or minimize impacts to sensitive environmental resources and developed mitigation measures where avoidance is not practicable.

TABLE 2
Federal, State and County Agency Concerns

Agency	Details of Concern
ND Game and Fish Department	• Minimize disturbances of native prairie and wooded draws • Protection of wetlands and streams crossed
ND Parks and Recreation Department	• Minimize impacts on critical habitats and rare species within the Project and construction area • Revegetate disturbed prairie area with native species
ND State Historic Preservation Office	• Safeguard the disclosure of cultural resource location information
U. S. Army Corps of Engineers	• Cumulative impacts on wetlands • NWI inventory data confirmation in the form of field surveys
U.S. Fish and Wildlife Service	• Avoid impacts to federally-listed threatened and endangered species • Avoid impacts to wetland and grassland easement features

Further discussion of agency consultations and concerns is found in Section B of the Application for a Certificate of Corridor Compatibility, and discussions of proposed avoidance and mitigation measures are found in Section B.6 of this application and in EPND's EPP (Exhibit J).

B.3 IDENTIFY AND MAP CRITERIA LEADING TO PROPOSED PIPELINE ROUTE LOCATION WITHIN CORRIDOR

This section presents EPND's inventory of environmental and land use information consistent with North Dakota Administrative Code (North Dakota Rules) Chapter 69-06-08-02 for evaluating siting criteria, including areas referred to as exclusion and avoidance areas, and the Project's compatibility with selection and policy criteria. Project components evaluated here include the proposed pipeline, the Beaver Lodge Expansion Area, the Stanley Station Expansion Area, and the new Lakota Station.

The existing Beaver Lodge, Stanley and Berthold Stations and Terminals have not been included in this assessment. These existing stations sites have been previously approved and permitted by this Commission as follows:

- The Beaver Lodge Station, consisting of 29 acres, was originally sited and approved by the ND-PSC on August 23, 2006 in Docket No. PU-06-317; and ND-PSC sited and approved an additional 69 acres on May 18, 2011 in Docket No. PU-10-613.
- Stanley Station was original sited and approved by the ND-PSC on August 23, 2006 in Docket No. PU-06-317.

- The Berthold Station (Classic), consisting of 106 acres, was originally sited and approved by the ND-PSC on August 4, 2010 in Docket No.PU-10-130. An additional 92 acres at Berthold (Berthold West) was sited and approved by the ND-PSC on May 30, 2012 in Docket No. PU-11-232.

Detailed discussions of siting criteria, including descriptions, potential impacts, and mitigation measures where appropriate are provided in Sections B.4 and B.6 of this Application for the new Lakota Station and expansion of both the existing Beaver Lodge and Stanley Pump Stations. Route alternatives and variants adopted to avoid identified criteria were discussed in Section B.2.e. Siting criteria identified within the 2-mile wide study area or along the proposed route are shown on route maps enclosed as Exhibits I.1, I.2 and I.3.

B.4 RELATIVE VALUE AND EFFECTS UPON EACH CRITERION INCLUDING LOCATION, CONSTRUCTION, AND OPERATION OF THE FACILITY

In accordance with North Dakota Rules Section 69-06-08-02, the proposed pipeline route has been chosen after consideration of its impact on humans and the environment.

B.4.a Exclusion Areas (North Dakota Rules Section 69-06-08-02.1)

The ND-PSC has identified certain sensitive or otherwise important environmental features that must be considered during the selection of a route for transmission facilities. These features have been classified as “Exclusion Areas”. As defined in North Dakota Rules Chapter 69-06-08-02.1, “Exclusion Areas” are areas that are to be excluded from consideration for energy conversion sites and transmission facility routes. Table 3 lists each Exclusion Area and indicates whether the route crosses that siting criteria

TABLE 3
North Dakota Public Service Commission Exclusion Areas – Transmission Facility Siting

Exclusion Area	Located within the environmental survey corridor	Crossed By Route	Administering Agency
National Parks	No	No	National Park Service ("USNPS")
National Memorial Parks	No	No	USNPS
National Historic Sites and Landmarks	No	No	USNPS
National Natural Landmarks	No	No	USNPS
National Wilderness Areas	No	No	USNPS and U.S. Forest Service ("USFS")
National Monuments	No	No	USNPS and State Historical Society
State Parks	No	No	State Park Service
State Historic Sites	No	No	State Historical Board
State Monuments	No	No	State Historical Board
State Historical Markers	No	No	State Historical Society
State Archaeological Sites	No	No	State Historical Board
State Nature Preserves	No	No	State Park Service
County Parks and Recreation Areas, Municipal Parks, and Parks under other Governmental Jurisdiction	No	No	Various
Areas Critical to the Life Stages of Threatened or Endangered Animal or Plant Species	No	No	USFWS
Areas Where Animal or Plant Species Unique or Rare to the State Would be Irreversibly Damaged	No	No	Various
Intercontinental Ballistic Missile Launch or Launch Control Facilities	Yes	Yes	U.S. Department of Defense

Exhibit I.1 contains maps depicting Exclusion Areas located within the 2-mile-wide study area and the environmental survey corridor, which is generally defined as approximately 250-450 foot wide environmental survey corridor, along the proposed pipeline route within the 2-mile wide study area. EPND has also widened its environmental survey corridor beyond 450 feet in certain locations to address any known environmental and encroachment issues or additional temporary workspace requirements. Additional

discussion regarding the environmental survey corridor is provided in Section D of the Application for a Certificate of Corridor Compatibility.

B.4.a.(1) Designated or Registered National: Parks; Memorial Parks; Historic Sites and Landmarks; Natural Landmarks; Monuments; and Wilderness Areas

No designated or registered national parks, memorial parks, historic sites or landmarks, national landmarks, monuments, or wilderness areas are crossed by the environmental survey corridor or the route.

B.4.a.(2) Designated or Registered State: Parks; Historic Sites; Monuments; Historical Markers; Archaeological Sites; and Nature Preserves

No designated or registered state parks, historic sites, monuments, historical markers, archaeological sites, or nature preserves are crossed by the environmental survey corridor or the route.

B.4.a.(3) County Parks and Recreation Areas, Municipal Parks, and Parks under other Governmental Jurisdiction

No county parks or recreation areas, municipal parks, or parks under other governmental jurisdiction are crossed by the environmental survey corridor or the route.

B.4.a.(4) Areas Critical to the Life Stages of Threatened or Endangered Animal or Plant Species

Eight federally listed, proposed, or candidate~~, or under review~~ species have been identified in the nine counties crossed by the Project (see Table 4). Designated critical habitat for the piping plover occurs in five of the nine counties crossed by the Project. ~~The Dakota skipper and~~ Sprague's pipit ~~are~~ is currently a candidate species, and the Dakota skipper and northern long-eared bat ~~is under review~~ are proposed for listing by USFWS to become ~~a listed species~~ federally threatened and endangered, respectively. The USFWS also proposed the designation of critical habitat for the Dakota skipper in one of the counties crossed by the Project. While no legal requirement exists to protect candidate species, ~~or under review~~ proposed species, or proposed critical habitat, these ~~all~~ three ~~of these~~ species may be listed ~~as threatened or endangered~~ and the critical habitat designated prior to the completion of construction of the Project; thus, EPND is evaluating them as though they are currently listed species and designated critical habitat.

TABLE 4
Status and Occurrence of Federally Listed, Proposed, or Candidate~~, or Under Review~~ Species and ~~Designated~~ Critical Habitat

Species	Status	County								
		Williams	Mountrail	Ward	McHenry	Pierce	Towner	Ramsey	Nelson	Grand Forks
Interior Least Tern	Endangered	X	X							
Pallid Sturgeon	Endangered	X	X							
Gray Wolf	Endangered	X	X	X						
Whooping Crane	Endangered	X	X	X	X	X	X	X	X	X
Piping Plover	Threatened	X	X	X	X	X				
Dakota Skipper	~~Candidate~~ **Proposed - Threatened**		X	X	X					
Sprague's Pipit	Candidate	X	X	X	X	X	X	X		
Northern Long-eared Bat	~~Under Review~~ Proposed - Endangered	X	X	X	X	X	X	X	X	X
Species	**Designated Critical Habitat**	**County**								
		Williams	**Mountrail**	**Ward**	**McHenry**	**Pierce**	**Towner**	**Ramsey**	**Nelson**	**Grand Forks**
Piping Plover	Threatened	X	X	X	X	X				
Dakota Skipper	Proposed				X					

Sources: http://ecos.fws.gov; and http://www.fws.gov/endangered/improving_ESA/FY13-18_ESA_Listing_workplan.pdf

As discussed in the Application for a Certificate for Corridor Compatibility, during initial discussions with the USFWS, they indicated the need for a lead federal agency to be identified prior to ~~conducting~~ commencing informal Section 7 consultation and communicating about the Project. USFWS resumed consultation discussions with EPND in November, 2013 after the Corps of Engineers ("COE") became involved in the Project. USFWS and EPND are currently discussing protected species survey protocols, results of the field surveys and the Section 7 consultation process.

EPND analyzed the potential for Project-related impacts under the ESA, while recognizing that ultimately the USFWS and the COE will make the final effects determination. The data presented in the following discussions is based on ~~informal~~ preliminary information exchanges between EPND and USFWS or publicly available datasets. ~~EPND anticipates that USFWS will be in a position to consult on the Project in December 2013.~~

EPND assessed the effects for each federally listed, proposed, and candidate ~~and under review~~ species in the 2-mile wide study area by evaluating historic and present occurrences, availability of potential habitat within the 2-mile wide study area, the species' natural history, and results of desktop and field-based habitat assessments and surveys. Following USFWS terminology, EPND characterized the direct, indirect, and cumulative effects of the proposed activities on each species based on experience from past pipeline projects and USFWS interactions on those projects. Potential determination ~~outcomes~~ reached for federally listed species under the ESA include:

- No effect;
- May affect, but is not likely to adversely affect; or
- May affect, and is likely to adversely affect.

Interior Least Tern and the Pallid Sturgeon

Suitable habitat for the interior least tern (*Sterna antillarum*) and the pallid sturgeon (*Scaphirhynchus albus*) is limited to the Missouri River system. As the Project does not cross, nor is it near, the Missouri River, EPND believes the COE and USFWS will conclude that the proposed Project will have *no effect* on the interior least tern or the pallid sturgeon.

Gray Wolf

Gray wolves (*Canis lupus*) were historically found throughout much of North America, including the Upper Great Plains; however, human activities have restricted their present range to the northern forests of Minnesota, Wisconsin, and Michigan as well as the Northern Rocky Mountains of Idaho, Montana, and Wyoming. They now only occur as occasional visitors in North Dakota.

These individuals are highly mobile and any individual that did happen to stray close to the 2-mile wide study area would most likely retreat from the area upon hearing or seeing any construction activity. Due to the fragmented nature of the small amount of forested area, restricted numbers in the state and the mobile nature of this species, it is reasonable to expect that the COE and USFWS will conclude that the proposed Project *may affect, but is not likely to adversely affect* this species.

Whooping Crane

The primary nesting area for the whooping crane (*Grus ~~A~~americana*) west of the Mississippi River is in Canada's Wood Buffalo National Park. The primary wintering area for whooping cranes is in Aransas National Wildlife Refuge in Texas. In the spring and fall, the cranes migrate primarily along the Central Flyway, an approximate 90-mile-wide corridor that serves as a major bird migration route. During the migration, cranes make numerous stops, roosting in large shallow marshes, and feeding and loafing in harvested grain fields. Approximately 75 percent of the whooping crane state sightings in North Dakota occur within the Central Flyway. The primary threats to whooping cranes are power lines, illegal hunting, and habitat loss.

In North Dakota, the western portion of the proposed pipeline route is located within the Central Flyway. The Project environmental survey corridor is adjacent to large wetlands that may serve as possible roost areas during migration.

Construction activities may cause migratory cranes to divert from the area, but ~~is~~ are not likely to result in any fatalities. USFWS typically recommends that construction be stopped if whooping cranes are sighted within 1 mile of construction activities and not resume until the birds have left the area. As such, if a whooping crane is sighted by the contractor(s) or environmental inspector(s) within the construction corridor or if USFWS notifies EPND of a whooping crane sighting, construction activities within 1 mile of the sighting will be stopped until the birds have left the area. Any sightings by the contractor(s) or environmental inspector(s) within the construction corridor will be immediately reported to USFWS and NDGF.

Following these guidelines, it is reasonable to expect that the COE and USFWS will conclude that the proposed Project *may affect, but is not likely to adversely affect* whooping cranes.

Piping Plover

Piping plovers (*Charadrius melodus*) are shore birds that may nest along the Missouri and Yellowstone River systems and in large wetlands. According to USFWS, prairie freshwater and alkali wetlands and surrounding shoreline may provide primary courtship, nesting, foraging, sheltering, brood-rearing, and dispersal habitat for the piping plover. In particular, piping plovers typically use wetlands that are a minimum of 3 hectares ~~ranging from 7 to 6,000 acres~~ in size.

Based on known occurrence information from the USFWS website, the piping plover has been recorded in Williams, Mountrail, Ward, McHenry, and Pierce counties. ~~In conjunction with the wetland delineation field survey,~~ EPND conducted a desktop assessment using aerial imagery and a field-based habitat assessment ~~survey~~ for piping plover during the 2013 field season. ~~Survey crews recorded wetland features that are or may contain potentially suitable piping plover habitat as identified through the desktop analysis and examination of aerial imagery performed prior to the field assessment.~~

Results of the habitat assessment ~~will be~~ are documented in a 2013 Piping Plover Habitat Assessment Report, which ~~will be submitted to the ND PSC in a supplemental filing after completion of the 2013 surveys~~ is included as Exhibit G.1. EPND will also use the data presented in the report to evaluate potential construction related impacts and to develop appropriate conservation measures as necessary in future discussions with the USFWS.

If appropriate conservation measures are employed, it is reasonable to expect that the COE and USFWS will conclude that the proposed Project *may affect, but is not likely to adversely affect* piping plovers.

The USFWS has designated critical habitat for the piping plover in Williams, Mountrail, Ward, McHenry, and Pierce counties. The pipeline route is within approximately 0.16 miles (845 feet) from an area of piping plover designated critical habitat near MP ~~32.2~~ 32.0 in Mountrail County. ~~Construction activities may cause piping plovers to temporarily divert from the area upon hearing or seeing construction equipment, but this will not harm individual birds.~~ If piping plover individuals are documented in this unit of critical habitat during construction, EPND will consult with the USFWS and implement conservation measures to ensure that the birds are not disturbed. Based on previous communications with USFWS, EPND understands their concern surrounding potential impacts during operations. However, ~~due to an~~ the probability of a release occurring near ~~unlikely release on~~ this unit of piping plover critical habitat during operations is exceptionally unlikely. EPND's integrity program, including its plan for release prevention, detection, and

response plans, further decrease the risk of a release at this location (see Section B.9.d.(9)). Because the potential for a release during operations is extremely unlikely, this potential impact is ~~negligible~~ discountable. It is reasonable that the COE and USFWS will conclude a *may affect, not likely to adversely affect* determination for piping plover critical habitat under the ESA.

Dakota Skipper

The USFWS proposed to list the Dakota skipper (*Hesperia dacotae*) as threatened under the ESA on October 24, 2013; a listing is tentatively planned for fall of 2014. Until the species is listed, it is not afforded any protections under the ESA. However, EPND is assessing the potential impacts of the Project on the Dakota skipper.

The Dakota skipper ~~(*Hesperia dacotae*)~~ is ~~currently listed as a candidate~~ butterfly species in North Dakota and has been documented in Mountrail, Ward, and McHenry counties. Larvae of the Dakota skipper feed on grasses, favoring little bluestem. Adults emerge in mid-June, feeding on the nectar of flowering native forbs; harebell, wood lily, and purple coneflower are common components of their diet.

Native untilled prairie ~~and non-native grasslands are~~ is the preferred habitat for the Dakota skipper as ~~these areas~~ this habitat provides foraging, sheltering, breeding and dispersal habitat. EPND completed a field survey of grassland areas to evaluate the potential for suitable habitat for Dakota skippers. In preparation for field survey, a desktop assessment of the environmental survey corridor was completed to identify grasslands using high-resolution aerial photography in counties where Dakota skippers are known to occur. Potential habitats identified in the desktop assessment were then surveyed in the field to confirm the suitability for successful habitat.

Results of the habitat assessment ~~will be~~ are documented in a 2013 Grassland ~~and Native Prairie~~ Habitat Assessment Report, which ~~will be submitted~~ is included as Exhibit G.2 ~~to NDPSC in a supplemental filing after completing 2013 surveys~~.

Potential impacts to the Dakota skipper may include temporary displacement due to construction activities and temporary loss of ground cover in native ~~and planted grassland~~ prairie areas. These effects are not likely to cause long-term declines in populations in the area. EPND will use the data presented in the habitat report to evaluate potential impacts, determine if surveys for individuals are necessary in 2014, and to develop appropriate conservation measures, as necessary in future discussions with USFWS.

Sprague's Pipit

The Sprague's pipit (*Anthus spragueii*) is currently ~~listed as~~ a candidate bird species in Williams, Mountrail, Ward, McHenry, Pierce, Towner, and Ramsey counties. Sprague's pipits' habitats are large patches of grassland; the species is endemic to mixed-grass prairie in the northern Great Plains of North America. While the birds prefer native grassland, non-native planted grasslands and cultivated lands will be used, though it is uncommon. The birds are short- to medium-distance migrants, with the range stretching from breeding grounds in southern Canada and northern U.S. to wintering grounds in southern U.S and northern Mexico. ~~Sprague's pipits' diets primarily include arthropods with some vegetable matter during breeding. Nests are built on the ground in grasslands with native grasses, and entrances to the nests can be up to 15 centimeters in length.~~

EPND completed a field survey of grassland areas to evaluate the potential for suitable habitat for Sprague's pipit. A desktop assessment of the 2-mile wide study area was also completed to identify grasslands using high-resolution aerial photography in counties where Sprague's pipits are known to occur.

Results of the habitat assessment ~~will be~~ are documented in a 2013 Grassland ~~and Native Prairie~~ Habitat Assessment Report, which ~~will be submitted~~ is included as Exhibit G.2 ~~to NDPSC in a supplemental filing after completing 2013 surveys~~.

Potential impacts to the Sprague's pipit may include temporary displacement due to construction activities and temporary loss of ground cover in native and planted grassland areas. These effects are not likely to cause long-term declines in populations in the area. EPND will use the data presented in the habitat report to evaluate potential impacts, determine if surveys for individuals are necessary in 2014, and to develop appropriate conservation measures, as necessary in future discussions with the USFWS.

Northern Long-eared Bat

The USFWS proposed to list the northern long-eared bat (*Northern myotis*) as endangered under the ESA on October 2, 2013; a listing is tentatively planned for fall of 2014. Until the species is listed, it is not afforded any protections under the ESA. However, EPND is assessing the potential impacts of the Project on the northern long-eared bat.

The northern long-eared bat uses a variety of sizes and species of trees for roosting during the summer, roosting both under bark and in crevices. Northern long-eared bats may also roost during the summer in manmade structures such as abandoned barns and sheds. Although intact interior forests (such as old growth) are used by the species for summer

roosting, it does not appear to select intact interior forests over road corridors or stands where the largest trees have been harvested. However, some studies have shown that northern long-eared bats may select stands with larger diameter trees. Because of its use of a variety of types of roosts during the summer, the species' summer habitat may not be limiting. The species is non-migratory and hibernates in caves and mines during the winter.

EPND is assessing the potential for suitable habitat initially through desktop analysis of forested areas along the Project route. Because the vast majority of the route in North Dakota is grasslands, the impact on northern long-eared bats in the state will not be substantial. Potential impacts to individual bats may occur if clearing or construction occurs when the species is occupying its summer habitat. Bats may be disturbed due to noise or human presence or may be killed or injured if the tree that they are occupying is felled. Potential mitigation measures may include clearing trees or constructing while the species is in hibernation. These effects are not likely to cause long-term declines in populations in the area. EPND will use the data from the desktop analysis to inform surveys, evaluate potential impacts and develop appropriate conservation measures, as necessary, based on future discussions with USFWS.

B.4.a.(5) Areas Where Animal or Plant Species Unique or Rare to this State Would be Irreversibly Damaged

No areas where animal or plant species unique or rare in the state would be crossed by the environmental survey corridor or the route and be irreversibly damaged.

B.4.a.(6) Intercontinental Ballistic Missile Launch or Launch Control Facilities as Exclusion Areas

The environmental survey corridor and route cross or is in close proximity to two cables that are associated with an intercontinental ballistic missile launch and launch control facility. EPND has documentation from the U.S. Air Force that this will not interfere with their operations. The U.S. Air Force stated that no areas of the route will encroach on restricted easement areas surrounding the ICBM sites, and that they do not see a conflict with the route proximity to the cable system. This criterion is not depicted on the exclusion maps for purposes of confidentiality.

B.4.b Avoidance Areas (North Dakota Rules Section 69-06-08-02.2)

As defined in North Dakota Rules Chapter 69-06-08-02.2, "Avoidance Areas" are areas not to be considered in the routing of a transmission facility unless it is shown that, under the circumstances, there are no reasonable alternatives. Table 5 lists each Avoidance Area and indicates whether the route crosses that siting criteria or whether such sitting criteria is located within the environmental survey corridor.

TABLE 5
North Dakota Public Service Commission Avoidance Areas – Transmission Facility Siting

Avoidance Area	Located within Environmental Survey Corridor	Crossed By Route	Administering Agency
National Historic Districts	No	No	State Historic Society
National Wildlife Areas	No	No	USFWS
National Wild, Scenic, or Recreational Rivers	No	No	Heritage Conservation Recreation Service, State Outdoor Recreation Agency
National Wildlife Refuges	No	No	USFWS
National Grasslands	No	No	USFS
State Wild, Scenic or Recreational Rivers	No	No	State of North Dakota Legislative Assembly
State Game Refuges	No	No	North Dakota Game and Fish Department
State Game Management and Management Areas	Yes	~~No~~ Yes	North Dakota Game and Fish Department
State Forests	No	No	State Forest Service
State Forest Management Lands	No	No	State Forest Service
State Grasslands	No	No	State Park Service
Historical Resources which are not specifically designated as Exclusion or Avoidance Areas	~~No~~ Yes	Yes	State and County Historical Society
Areas which are Geologically Unstable	No	No	State Geological Survey
Within 500 Feet of a Residences, School, or Place of Business	~~No~~ Yes	Yes	Landowner
Reservoirs	No	No	U.S. Army Corps of Engineers and State Water Commission

TABLE 5 North Dakota Public Service Commission Avoidance Areas – Transmission Facility Siting			
Avoidance Area	Located within Environmental Survey Corridor	Crossed By Route	Administering Agency
Municipal Water Supplies	Yes	Yes	State Water Commission
Water Sources for Organized Rural Water Districts	No	No	State Water Commission
Irrigated Land	No	No	State Water Commission
Areas of Recreational Significance	No	No	Various

Exhibit I. 2 contains maps depicting Avoidance Areas located within the 2-mile wide study area, environmental survey corridor (which is generally 250-450 wide), and the centerline route. Additional discussion regarding the environmental survey corridor is provided in Section D of the Application for a Certificate of Corridor Compatibility.

B.4.b.(1) Designated or Registered National: Historic Districts; Wildlife Areas; Wild, Scenic, or Recreational Rivers; Wildlife Refuges; or Grasslands

No designated or registered national historic districts; ~~wildlife areas;~~ wild, scenic, or recreational rivers; wildlife refuges; or grasslands are crossed by the route. EPND identified a USFWS-Waterfowl Production Area ("WPA"), which intersects the environmental survey corridor at approximate MP 156 (*see* Sheet No. 31 of Exhibit I.2 – Avoidance Area Maps). The WPA is located on the north side of a section line, whereas construction will occur on the south side of a section line. EPND confirmed that the northern extent of construction work would be bounded by the southern edge of the section line in this area. Thus, the WPA will not be affected by the Project.

B.4.b.(2) Designated or Registered State: Wild, Scenic, or Recreational Rivers; Game Refuges; Game Management and Management Areas; Forests; Forest Management Lands; or Grasslands

~~EPND identified a USFWS-Waterfowl Protection Area ("WPA"), which intersects the environmental survey corridor at approximate MP 156 (*see* Sheet No. 31 of Exhibit I.2).~~

~~The WPA is located on the north side of a county road, whereas construction will occur on the south side of a county road. Thus, the WPA will not be affected by the Project.~~

No designated or registered state wild, scenic, or recreational rivers; game refuges;; forests; forest management lands; or grasslands are crossed by the route.

North Dakota state wildlife management areas, school trust land, and private land open to sportsmen (PLOTS) were identified within the 2-mile wide study area and are discussed in the following subsections.

B.4.b.(2)(i) Wildlife Management Areas ("WMAs")

Four WMAs were identified within the 2-mile wide study area including: Palermo in Mountrail County, Sand Hill in McHenry County, Horseshoe Lake in Pierce County, and Crawford in Grand Forks County. However, none of the WMAs are crossed by the environmental survey corridor or the route. NDGF confirmed that no further consultation is necessary and no permits are required as discussed in Section B.3.b of the Application for a Certificate of Corridor Compatibility.

B.4.b.(2)(ii) School Trust Land

EPND identified ~~49~~ 50 parcels of North Dakota School Trust Lands within the 2-mile wide study area. Of the ~~49~~ 50 parcels, EPND identified 11 parcels that are located within the environmental survey corridor, ~~but not~~ and are crossed by the proposed pipeline route, (see Exhibit I.2, Sheet Nos. 30 and 57). Construction efforts on school trust lands will be temporary, and parcels affected by the Project will be restored to preconstruction conditions after construction is completed as discussed in Section B.6. EPND's Land Department is coordinating with the North Dakota Department of Trust Lands to confirm that the construction and operation of a pipeline will not preclude the continued use of the land for the school trust lands' purpose.

B.4.b.(2)(iii) Private Land Open to Sportsmen ("PLOTS")

EPND identified 31 PLOTS parcels within the 2-mile wide study area with 5 of the 31 parcels being located within the defined environmental survey corridor, ~~but not~~ and 3 are crossed by the pipeline (see Sheet Nos. 21 and 50).Construction effects on PLOTS lands will be temporary. Parcels affected by the Project will be restored to pre-construction conditions after construction has been completed as discussed in Section B.6.

B.4.b.(3) Historical Resources not Specifically Designated as Exclusion or Avoidance Areas

EPND began conducting cultural resource surveys within the 250-450 foot environmental survey corridor in May 2013. ~~As of September 14,~~ Through November 2013, archaeological and historic structure inventories have occurred over approximately ~~87~~ 91 percent of the route requiring survey to identify previous historical resources that have not been identified. EPND ~~will~~ reported findings to the NDSHPO in January 2014. ~~And the Commission upon completion of the 2013 field season.~~

Numerous cultural resource survey inventories have been completed along portions of the Sandpiper 2-mile wide study area over the last 30 years, including six inventories that were completed by EPND since 2006. Details on these inventories as well as previously identified archaeological and historic site structures are included in Section B.1.a.(1) of the Application for a Certificate of Corridor Compatibility.

For portions of the route lacking sufficient survey coverage from previous projects, EPND initiated Class III inventory surveys along the environmental survey corridor with professional cultural resource contractor Metcalf Archaeological Consultants ("MAC"). EPND directed MAC to apply standard methodologies and utilize the guidelines provided by

the NDSHPO in 2012. The primary focus of the 2013 Class III inventory survey was the identification of resources and an initial assessment of their boundaries and research potential. EPND directed MAC to classify resources according to the criteria utilized by federal agencies when evaluating eligibility for listing on the NRHP. Standard field survey methods included pedestrian survey along the entire environmental survey corridor and subsurface shovel testing at specific locations determined by ground surface visibility and other factors.

In order to maximize resources and minimize inefficiency, EPND used the latest GIS technology and landscape modeling tools to design the Class III field survey. Foth Engineering ("Foth") prepared a statistically-based GIS predictive model that assisted the design of the field survey for the Project. The predictive model resulted in a classification system to identify high, moderate, and low sensitivity potential for containing archaeological sites and historic structures that may be eligible for the NRHP. EPND determined survey targets for each of the three zones, which included 100 percent of the moderate and high sensitivity zones and at least 10 percent of the low sensitivity zones. Periodically, Foth reviewed MAC's completed survey data and provided additional model outputs to reflect the supplemented datasets. EPND will utilize this information during archaeological site and historic structure studies throughout the Project into construction.

During the surveys, MAC identified approximately 100 archaeological sites, historic structure sites, isolates, and site leads. EPND ~~will continue field surveys through the fall of 2013, and~~ will complete the surveys on any outstanding parcels in 2014. Additional studies may involve the formal evaluation of some archaeological sites and historic structures for their eligibility for listing on the NRHP.

During this process, EPND identified a cemetery close to the route at approximately MP ~~118.~~6 118.8. Although not specifically listed as a specific exclusion or avoidance area, EPND adjusted the route to avoid this historical resource.

EPND prefers to avoid inventoried archaeological sites and historic structures. In the event that EPND is unable to avoid project impacts to a site through engineering controls, EPND will conduct formal evaluations in consultation with the NDSHPO and seek resolution through mitigation for those sites that meet the criteria for listing on the NRHP.

EPND ~~will~~ prepared a technical report~~s~~ for the Project's cultural resources studies and has submitted it ~~them~~ to the NDSHPO for their review and comment. EPND will use the data presented in the report to evaluate potential impacts and to develop appropriate avoidance or mitigation measures as necessary in future discussions with the SHPO. In order to

protect these sensitive resources EPND will not submit information about the location of historic properties with this application, unless specifically requested by the Commission. For this application and any other public filings, only the title page and abstract of cultural resources technical reports ~~will be~~ are submitted as documentation of the surveys and evaluations, see Exhibit E.1. NDSHPO review and comment letters for technical reports will be submitted as supplemental filings to this application.

B.4.b.(4) Areas which are Geologically Unstable

No areas of geological instability are crossed by the environmental survey corridor or the route.

B.4.b.(5) Within Five Hundred Feet [152.4 Meters] of a Residence, School, or Place of Business

EPND has identified ~~43~~38 inhabited structures within 500 feet of the new pipeline. Of that total, ~~37~~ 33 are residences and ~~6~~5 are businesses. No schools are located within 500 feet of the new pipeline. EPND ~~is working to~~ has secured the waivers that are needed and ~~plans to~~ has ~~submit them in a supplemental filing prior to the hearings~~ included them as Exhibit L.

No residences or other occupied structures will be razed due to construction. Future residential development will not be precluded following construction of the pipeline, except as required by state and/or local setback ordinances and easement restrictions. Construction could temporarily restrict access to residences along the pipeline route. EPND will either limit the time such restrictions are in place or will make arrangements to accommodate the landowner's needs.

During construction, residences in close proximity to construction activities will be exposed to short-term increases in construction-related noise and dust. Some minor dust production is unavoidable in any construction project; however, if excessive, the construction right-of-way and access roads near residential areas will be watered down to control dust during construction. After construction is complete, measures to stabilize and revegetate the right-of-way will prevent further dust production.

The heavy construction equipment needed to install the pipeline will generate unavoidable short-term increases in ambient noise levels. Increases in ambient noise levels due to equipment operation will be limited to the period of construction and will generally be limited to daylight hours. Disturbance of these areas will be temporary and short-term; long-term incremental impacts will be minimal.

B.4.b.(6) Reservoirs and Municipal Water Supplies

The environmental survey corridor crosses a Wellhead Protection Area ("WHPA") at approximately MP ~~91.5~~ 91.7 near the City of Deering. EPND ~~adjusted~~ was able to adjust the route to avoid crossing the WHPA with the pipeline, thus discussion regarding this matter was not pursued with city officials.

The environmental survey corridor and the route cross two locations where the City of Grand Forks has a defined WHPA, and a summary is provided in Table 6.

TABLE 6
Public Water Systems/Wellhead Protection Areas Along the Pipeline Route

Wellhead Protection Area	Water Source	Mileposts	Community served	Susceptibility to Contamination
City of Grand Forks	Surface Water (Elm Coulee & Cole Creek)	~~296.11 – 297.66~~ 297.0 – 298.2	City of Grand Forks	Moderately Susceptible
City of Grand Forks	Surface Water (Red River)	~~298.92 – 299.66~~ 299.5 – 299.7	City of Grand Forks	Moderately Susceptible

EPND has been in active discussion with the City of Grand Forks regarding the routing of the Sandpiper Project and has adjusted its route to accommodate known concerns. EPND will continue to work with the City of Grand Forks to address concerns and solicit recommendations related to protecting these municipal water supplies.

Construction and staging areas within the WHPAs would be confined to the smallest necessary area and clearly marked. Parking of equipment and storage of materials would be confined to designated areas. EPND's contractor would be required to adhere to the conditions detailed in its EPP regarding release prevention and response (see Exhibit J). The EPP also provides additional protective measures that would be implemented near sensitive water resources. An environmental inspector would conduct on-site monitoring during construction to ensure that public water supply areas are protected as planned.

EPND also identified where Sandpiper may cross a portion of the constructed and operational Northwest Area Water Supply project, a water supply project piping water from Lake Sakakawea to Minot and other northern cities. Another water supply project, the Western Area Water Supply project may also be crossed where it has already been constructed or where pipelines may be planned. EPND will continue to work with the State Water Commission to address concerns and solicit recommendations related to protecting these projects.

B.4.b.(7) Water Sources for Organized Rural Water Districts

No water sources for organized rural water districts are crossed by the environmental survey corridor or the route.

B.4.b.(8) Areas of Recreational Significance which are not Designated as Exclusion Areas

No areas of recreational significance are crossed by the environmental survey corridor or the route which are not designated as exclusion areas.

B.4.C Selection Criteria (North Dakota Rules Section 69-06-08-02.3)

The State of North Dakota Rules' specify several selection criteria to be considered in designating a pipeline corridor or route. Specifically, ND-PSC considers whether adverse effects from the location, construction, and maintenance of the facility as they relate to these criteria, will be at an acceptable minimum, or whether these effects will be managed and maintained at an acceptable minimum. Table 7 identifies the selection criteria that were considered for the Project. Potential impacts and measures to minimize these impacts, as they relate to each of the selection criteria, are discussed in the following subsections.

TABLE 7
Sandpiper Pipeline Project
Selection Criteria Considered

SELECTION CRITERIA	CROSSED BY ROUTE
Agricultural Production	Yes
Family Farms and Ranches	Yes
Land Suitable for Irrigation	Yes
Surface Drainage and Groundwater Flow Patterns	Yes
Sound Sensitive Areas	Yes
Visual Effects	Yes
Extractive and Storage Resources	Yes
Wetlands	Yes
Woodlands and Wooded Areas	Yes

TABLE 7 Sandpiper Pipeline Project Selection Criteria Considered	
SELECTION CRITERIA	**CROSSED BY ROUTE**
Communication or Electric Control Facilities	Yes
Human Health and Safety	Yes
Animal Health and Safety	Yes
Plant Life	Yes

B.4.c.(1) Impact Upon Agriculture

B.4.c.(1)(i) Agricultural Production

Agriculture is the predominant land use, comprising approximately 62.8 percent of the 2-mile wide study area. Agricultural land use includes pasture land and crop land. Some agricultural land is actively enrolled in various voluntary conservation programs administered by the:

- U.S. Department of Agriculture ("USDA") Natural Resource Conservation Service ("NRCS");
- USDA Farm Service Agency ("FSA"); and
- USFWS.

The owners of these parcels receive compensation in return for placing tillable lands into non-agriculture conservation programs. EPND continues to work to identify lands enrolled in USDA and USFWS programs along the route, including the Conservation Reserve Program ("CRP"), Conservation Reserve Enhancement Program ("CREP"), Grassland Reserve Program ("GRP"), Wetland Reserve Program ("WRP"), and the grassland and wetland easement programs.

CRP and CREP Lands

The USDA FSA administers the CRP and CREP. To date, EPND has not identified lands crossed by the route that are enrolled in these programs. For landowner privacy reasons, the USDA FSA has elected to withhold disclosing this land information to EPND (see discussion in Section B.4.e of the Application for a Certificate of Corridor Compatibility).

EPND continues to actively engage landowners along the route to determine if their land is enrolled in these programs.

GRP and WRP Lands

The USDA NRCS administers the GRP and WRP. USDA NRCS shared parcel information for lands currently enrolled in the WRP (see discussion in Section B.2.b of the Application for a Certificate of Corridor Compatibility). EPND has made minor route variations to avoid these lands for their recognized conservation value. No data was provided for lands enrolled in GRP. Although parcel information was obtained from NRCS enrolled in WRP, the data does not include lands in transition into these programs, therefore, EPND continues to actively engage landowners along the route to determine if lands are enrolled in these programs.

USFWS Grassland and Wetland Easements

The USFWS holds multiple wetland and grassland conservation easements on private land within the 2-mile wide study area and crossed by the route. The Project is generally co-located with EPND's existing Line 82 pipeline between Beaver Lodge and Berthold Stations. In these areas, EPND currently holds existing pipeline right-of-way easements, which were acquired prior to the USFWS wetland and grassland easement programs. EPND plans to exercise its easement rights along this portion of the route.

For portions of the route not located along Line 82 and 81 east of ~~Minot~~ Berthold, EPND routed the pipeline to avoid USFWS-owned lands entirely, and ~~wetland~~ and a grassland ~~conservation~~ easement~~s where practicable~~ at MP 105.1 by boring underneath the easement. Upon receiving detailed wetland locations on wetland easement properties from USFWS in October and November 2013, EPND adjusted the pipeline route to avoid wetlands. EPND ~~is currently~~ continues~~ing~~ to work with USFWS on crossing methods and/or avoidance measures at locations where features within the easement may be unavoidable.

Maps showing the proposed pipeline route in relation to USFWS easements are included as Exhibit I.3

Crop Production

Generally, land suitable for cultivation within the 2-mile wide study area, regardless of whether it is actually cultivated or not, is designated as "prime farmland" or "farmland that is of statewide or local importance." The USDA NRCS has defined prime farmland and farmland that is of statewide or local importance as land that has the best combination of

physical and chemical characteristics for producing food, feed, fiber, and oilseed crops. These designations include cultivated land, pasture, woodland, and other land that is either used for food or fiber crops or are available for these uses. Urbanized land and open water are generally excluded from prime farmland and farmland that is of statewide or local importance.

Prime farmland and farmland that is of statewide or local importance typically contains few or no rocks; is not subject to excessive erosion; is relatively permeable to air and water; and is not subject to prolonged periods of flooding during the growing season. Soils that do not meet these criteria may be considered prime or important farmland if the limiting factor is mitigated (e.g., artificial drainage). NRCS defines the specific criteria for determining prime farmland. State and local government agencies define the criteria for determining farmland that is of statewide or local importance.

Prime farmland (including areas of prime farmland, if drained) and farmland that is of statewide or local importance occurs within the proposed 2-mile wide study area and along the proposed pipeline route. Approximately ~~64~~ 48 percent of the 2-mile wide study area contains prime farmland or farmland that is of statewide or local importance.

A number of factors used to designate prime farmland and farmland that is of statewide or local importance would not be affected by the Project. For example, rainfall and the length of the growing season would not change.

Tables 8, 9, and 10 list the soil characteristics, depth, and slope along the pipeline route. Approximately ~~42.5~~ 44.9 percent of the soils crossed by the pipeline route are NRCS-classified prime farmland, provided there is sufficient artificial drainage to remove excess surface water.

TABLE 8
Soil Characteristics in the Pipeline Survey Corridor [a]

Total Acres within Survey Corridor	Prime Farmland[a]	Hydric Soils	Compact. Prone	Highly Erodible		Stony/ Rocky	Shallow to Bedrock[b]
				Water	Wind		
	Acres (percent)						
~~12,488.7~~ 12,794.1	~~42.5~~ 44.9	~~93.2~~ 93.8	~~30.5~~ 15.5	14.3	~~60.1~~ 18.2	N/A	0.3

[a] Prime farmland includes soils that are designated as prime farmland or prime farmland if drained or irrigated. "Farmlands of Statewide or Local Importance" were not included in this estimate.

[b] The value above includes soils which had a depth to a restrictive layer (e.g., bedrock, cemented layers, heavy clay, and frozen layers) of 60 inches or less.

TABLE 9
Topsoil Depths and Slope Class in the Pipeline Survey Corridor [a]

	Topsoil Depth (inches)				Slope Class (percent)				
	0-6	~~>6-12~~ 0 - 12	~~>12-18~~ 0 - 18	~~>18~~ 0 - >18	0-5	>5-8	>8-15	>15-30	>30
Total Acres	Acres (percent)				Acres (percent)				
~~12,488.7~~ 12,794.1	~~21.3~~ 22.2	~~72.8~~ 72.4	4.7	0.3	~~87~~ 86.1	~~7~~ 6.7	~~1~~ 5.0	~~4~~ 1.5	~~1~~ 0.8

TABLE 10
Topsoil Depths on Prime Agricultural Land in the Sandpiper Pipeline Survey Corridor [a]

	Topsoil Depth (inches)			
	0-6	~~>6-12~~ 0 - 12	~~>12-18~~ 0 - 18	~~>18~~ 0 - >18
Total Acres	Acres (percent)			
~~6429.7~~ 6,714.4	~~3~~ 3.4	~~93~~ 93.4	~~3~~ 2.9	~~1~~ 0.3

Crop production will be temporarily disrupted in cases where the construction period overlaps with the growing season. Landowners will be compensated for crop loss or reduced yields caused by construction of the pipeline. Deep tillage or other measures will be implemented as necessary to mitigate effects of soil compaction.

Table 11 presents the major crops farmed in each county crossed by the Sandpiper route.

TABLE 11

Major Crop or Land Feature Acreages by County

County	Grassland	Durum Wheat	Spring Wheat	Hay (Alfalfa)	Other Major* Crop Types
Williams	475,832	409,876	54,838	28,249	Lentils, Peas, Winter Wheat, Barley
Mountrail	557,843	133,759	144,223	27,167	Canola, Flaxseed, Peas, Winter Wheat
Ward	384,265	33,754	301,631	<20,000	Canola, Winter Wheat, Flaxseed, Soybeans, Sunflower, Barley, Corn, Alfalfa
McHenry	526,130	<20,000	153,282	77,179	Corn, Soybeans, Canola, Sunflower
Pierce	199,785	<20,000	114,451	37,064.1	Soybeans, Corn, Canola, Barley
Towner	109,445	<20,000	179,826.8	<20,000	Canola, Soybeans, Barley
Ramsey	126,865	<20,000	121,224	<20,000	Soybeans, Canola, Corn, Barley, Dry Beans
Nelson	111,924	<20,000	102,471	<20,000	Soybeans, Corn, Canola, Dry Beans, Barley
Grand Forks	52,390	<20,000	163,537	82,928	Soybeans, Corn, Dry Beans, Sugar beets

*Major Crops are defined as crop acreages greater than 20,000 Acres. Major Crop Types are listed in order greatest to least

Source: USDA, 2012

The effects of construction on agriculture would be minor and short term. The primary impact would be the loss of standing crops within the construction work area for the growing seasons during which Project-related activities occur. It is possible for construction to result in soil compaction; mixing of topsoil and subsoil, including introduction of rocks into the topsoil from the subsoil; erosion; the introduction of weeds; and damage to irrigation and

drainage systems. These impacts may lower soil productivity and reduce crop yields following construction.

Impacts to agricultural production during construction would be mitigated by the following measures including, but not limited to:

- bury the pipeline deeper than typical tillage depths to allow continued use of the land for agriculture after construction;
- clean heavy equipment that is capable of transporting weed propagules or soil pests prior to use on the Project;
- prohibit construction during periods of prolonged or heavy rainfall to minimize the potential for soil compaction;
- alleviate soil compaction caused by construction by deep tilling or chisel plowing soils (or alternative methods approved by the landowner or land management agency) where compaction has been shown to have been caused by construction;
- strip the existing amount of topsoil, up to a maximum depth of 12 inches, from the full width of the right-of-way (subsoil storage area, trench line, and travel lane) to maintain topsoil integrity and minimize impacts on soil productivity (where there is less than 12 inches of topsoil, strip the existing amount or to the bottom of the plow layer, whichever is deepest);
- store topsoil and subsoil in a manner that prevents mixing, and return topsoil to its original horizon during backfilling;
- implement temporary erosion best management practices to minimize the potential for soil loss due to wind or water erosion during construction;
- compensate landowners for crop loss and other associated damages for the year of construction;
- coordinate with landowners to assess crop productivity following construction and provide compensation where crop yields show decline;
- coordinate the interruption of irrigation and drainage systems with each landowner and compensate the landowner for damages and lost production that result from interruption of irrigation and/or drainage systems;
- repair, replace, or compensate landowners where irrigation and/or drainage systems are removed from service by construction; and
- compensate landowners for a permanent easement on their property.

Following construction, EPND will restore the right-of-way to its pre-construction contours to the extent reasonably practicable and stabilize the ground until the next growing season.

Planting and harvesting would be allowed to continue over the operational right-of-way; fields are expected to return to normal yields within 1 to 2 years following construction.

Long-term impacts on prime farmland and farmland that is of statewide or local importance would be minor. Following construction, the work area would be restored to its pre-construction condition and stabilized. Permanent impacts on agricultural production would be limited to the expansion of the Beaver Lodge Station and the new Lakota aboveground station. Approximately ~~69.4~~ 51.8 acres of land would be permanently removed from agricultural production.

B.4.c.(1)(ii) Family Farms and Ranches

The effects of construction on family farms and ranches within the 2-mile wide study area would be minor and short term. The primary impact on family farms would be the loss of standing crops within the work area for the growing seasons during which Project-related activities occur, as well as potential diminished yields for 1 to 2 years following construction. EPND proposes to implement mitigation measures to minimize these potential impacts as described in the EPP (Appendix J).

Herbaceous rangeland suitable for livestock grazing comprises approximately 21.2 percent of the 2-mile wide study area. The primary impact on family ranches would be temporary prohibition of livestock grazing in the construction right-of-way and workspace areas and restrictions on livestock movement across the construction right-of-way and workspace areas during construction. Given the narrow, linear nature of the Project and the alignment of the pipeline along property boundaries, livestock grazing reductions and livestock movement restrictions would be minor.

Long-term or permanent impacts on family farms and ranches are not anticipated. The Project will result in changes of land ownership for the small expansion at Beaver Lodge and Stanley Stations and the new Lakota Station, where EPND will acquire land in fee to expand or build new station facilities. Following construction, the work area would be restored and farming and ranching would be allowed to continue over the operational right-of-way. Landowners would be compensated for temporary loss of land use. Grazing activities would return to normal after revegetation.

B.4.c.(1)(iii) Lands Suitable for Irrigation

As discussed in B.4.c (1) (i), agriculture is the predominant land use within the 2-mile wide study area.

EPND has not received information from any landowner along the route (where the land use is not currently agriculture) stating they believe their land could be suitable for irrigation, or that they plan to improve their land for an irrigated crop or install an irrigation system.

B.4.c.(1)(iv) Surface Drainage and Groundwater Flow Patterns

Surface Water

There are a total of 117 ~~93~~ waterbody crossings of which ~~eight~~ nine are perennial waterbodies, and 81 ~~74~~ are intermittent waterbodies~~, and 11 are undefined according to the National Hydrography Dataset~~. No state or federally designated wild or scenic rivers are crossed by the pipeline route. Waterbodies crossed by the Project centerline are listed in updated Exhibit F.2.

EPND is presently working with applicable permitting agencies to determine the best crossing methodology for each of the waterbodies. Construction methods to be utilized for waterbody crossings are detailed in the Project's EPP (Exhibit J).

Temporary, incremental increases in sediment load can be expected downstream of waterbody crossings during the excavation and backfilling phases of construction. Additionally, some incremental increase in surface run-off sedimentation may be expected to occur at each of the crossings due to the close proximity of exposed soils. No significant or long-term increase in sedimentation is expected from construction of the waterbody crossings.

EPND will obtain applicable permits for waterbody crossings. One or more environmental inspector(s) will be retained to monitor compliance with applicable permit requirements and specifications required by EPND's EPP (see Exhibit J).

Surface Water Runoff

Potential construction-related effects on surface waters are primarily related to sedimentation from uncontrolled erosion of disturbed areas. Much of the pipeline route is level or only gently sloping, which limits the potential for runoff effects. Because the right-of-way will be restored to preconstruction conditions to the extent reasonably practicable, area runoff following construction will generally reflect surrounding land use and pre-existing conditions.

EPND will obtain authorization under a general permit for Storm Water Discharges Associated with Construction Activity from NDDH (North Dakota Pollutant Discharge Elimination System ("NDPDES") Permit No. NDR-10-0000). EPND's EPP (see Exhibit J),

which was developed in part to meet requirements of this permit, describes best management practices ("BMPs") EPND will implement to minimize offsite erosion from site stormwater runoff.

Discharges to Surface Waters

During construction, point source wastewater discharge will be generated from hydrostatically testing the new pipeline prior to placing it in service. Discharges will also occur as needed for trench dewatering during construction. NDDH has developed a General Permit (NDPDES Permit No. NDG-070000), which authorizes the discharge of waters related to temporary dewatering and hydrostatic testing. EPND will obtain authorization for construction-related discharges and will conduct trench dewatering and hydrostatic test water discharges in a manner consistent with the NDPDES General Permit.

Testing and discharge is anticipated to be consistent with past practices and experience. Discharges of hydrostatic test water typically are controlled discharges directly to the ground surface or occasionally into Waters of the State. Specific discharge point(s) for hydrostatic test water for the pipeline have not been determined at this time. In most cases, it is anticipated that this water will be acquired from a river crossed by the pipeline route and discharged back to the original source.

Groundwater

Aquifers underlying the 2-mile wide study area are comprised of both bedrock and overlying unconsolidated deposits. Unconsolidated glacial aquifers occur above the bedrock, and are typically comprised of sand and gravel deposits, and include alluvial outwash, beach-ridge, valley train, and ice-contact stratified drift sediments. Such deposits may occur as surficial phreatic aquifers or as buried aquifers, which are typically confined as a result of the overlying sediments deposited during subsequent glaciations. The uppermost water table aquifer tends to be a subdued replica of land surface topography, with recharge occurring in upland areas and discharge occurring to surface waters.

Unconsolidated deposits constitute the most productive aquifers in North Dakota. These tend to be linear in shape with tributary branches that somewhat resemble surface water drainages. Significant bedrock aquifers include the Tertiary Fort Union Group (western half of North Dakota), the Cretaceous Hell Creek Formation and Fox Hills Sandstone (western two-thirds of the state), and the Cretaceous Dakota Sandstone (underlies most of the state).

Ground disturbance associated with pipeline construction is generally limited to 6 feet or less below the ground surface. Most construction activity would occur above surficial

aquifers. Construction activities, such as trenching, blasting, drilling, dewatering, and backfilling, which encounter shallow aquifers, could cause minor fluctuations in groundwater levels and/or increased turbidity within the aquifer adjacent to the activity. EPND will avoid direct impact to any of the water wells located within the vicinity of the construction right-of-way. If the functionality of a well is impacted, EPND will implement mitigation by installing an additional well(s) that will restore the impacted well's functionality.

Dewatering activities, if necessary, are not expected to have a significant effect on regional groundwater flow patterns. Shallow aquifers would quickly reestablish equilibrium if disturbed, and turbidity levels would rapidly subside. Consequently, the effects of construction would be minor and short term. Impacts on deeper aquifers are not anticipated given their depth and separation from surficial materials. Moreover, deeper aquifers are commonly confined and hydraulically insulated from overlying formations.

A potential source of adverse impacts on groundwater is the introduction of contaminants resulting from accidental releases of construction-related chemicals, fuels, or hydraulic fluid. If a release of petroleum-based liquids occurs, deeper aquifers are not as likely to be impacted owing to their depth and hydraulic separation from the surface. EPND's EPP (see Exhibit J) describes preventative measures EPND will implement to prevent accidental discharges of fuels or other hazardous substances, including specific storage and handling requirements. The EPP also describes response, containment, reporting, and cleanup procedures. With the implementation of these protection measures, contamination of groundwater due to construction activities is not anticipated.

Water Use

Sandpiper will not significantly affect water use patterns. Following construction, drains, swales, creeks and rivers will be restored to preconstruction conditions to the extent practicable to minimize disruption of water resources.

The Project will require temporary appropriations of water (typically surface water) for use in the hydrostatic testing of the newly installed pipeline. Additionally, some temporary trench dewatering may be required, particularly during road bores. No significant effect on existing and future water uses is anticipated.

Discharge of water used to hydrostatically test the new pipeline is not expected to have an impact on the environment or receiving waters. The discharge is regulated by the NDDH under a NDPDES general permit issued for discharge, temporary trench dewatering and hydrostatic testing activities (Permit No. NDG-07-0000). Water appropriated for hydrostatic

testing will be subject to regulation by the North Dakota State Water Commission ("NDSWC") and appropriation will be conducted within acceptable limits and parameters.

B.4.c.(2) Impact Upon Sound-Sensitive Land Uses

The 2-mile wide study area and environmental survey corridor are located in a predominately rural setting characterized by an inherently low ambient noise level. Most of the noise generated in any given area is due to human activity: mainly vehicle traffic, train traffic, and agricultural machinery. Lesser amounts of noise can be attributed to natural causes, such as wind, birds, and insects. The effects of noise on people, livestock, and wildlife is strongly influenced by the level and timing of the noise.

The heavy equipment needed to construct the pipeline is expected to generate between 80 and 90 decibels within 50 feet of the equipment. Noise-sensitive receptors close to construction would be exposed to temporary increases in noise. People living, working or otherwise occupying areas near the work area may be temporarily impacted, and livestock and wildlife may relocate to adjacent areas. The effects of noise would be diminished where the Project is adjacent to existing railroad and roads because these areas already experience increased noise levels from train and car/truck traffic (estimated between 60 and 95 decibels when cars, trucks, and/or trains are traveling on roads/railroads at higher speeds). Nighttime noise levels would normally be unaffected by construction, as most construction is typically restricted to daylight hours.

EPND plans to perform pre- and post-construction noise surveys at its existing Beaver Lodge, Stanley, and Berthold Pump Stations, as well as at the new Lakota Pump Station. Table 12 presents summary information pertaining to the pump stations.

TABLE 12
List of Pump Stations and Nearest Sensitive Areas (NSA)

Name of Pump Station	County	Distance to Nearest NSA	Noise Study Planned
Beaver Lodge	Williams	3,750 feet – residence	Yes
Stanley	Mountrail	1,000 feet – residence	Yes
Berthold	Ward	3,000 feet – residence	Yes
Lakota	Nelson	1500 feet - residence	Yes

B.4.c.(3) Impact Upon Visual Effect on the Adjacent Area

Temporary visual effects would exist during active construction at which time heavy equipment, open trenches, and spoil piles would change the colors and textures of the landscape. The duration of visual impacts would be short term as the reestablishment of vegetation on grasslands and agricultural land following construction would occur relatively quickly. The majority of the Project will result in below ground installation of pipeline, which will not be visible and will not permanently affect the gently rolling vista. Permanent impacts on visual resources would include additional structures built in association with Beaver Lodge Station Expansion Area, Stanley Station Expansion Area,, and the new Lakota Pump Station . Beaver Lodge and Stanley Stations are already in existence, and located in rural agricultural areas where the additional structures would have a negligible visual effect on adjacent areas. The new Lakota Pump Station will be located approximately ~~1.5~~ one mile~~s~~ outside of the community of Lakota in a rural agricultural area. ~~where few people will see it.~~ Visual impacts associated with this new facility will consist of the conversion of agricultural land to industrial use.

B.4.c.(4) Impact Upon Extractive and Storage Resources

A review of the Project 2-mile wide study area identified three types of actively extracted mineral resources at various locations within the 2-mile wide study area: oil and gas, sand and gravel, and lignite. None of these extractive resources would be affected by the proposed Project. Although these resources may exist within the 2-mile wide study area, no active mines for these resources were identified within the 2-mile wide study area. Additionally, no gas storage resources were identified within the proposed 2-mile wide study area.

B.4.c.(4)(i) Oil and gas

Known oil and gas reserves in North Dakota are associated with the structural Williston Basin in the western half of the state. The Williston Basin is roughly circular and deepest at its center, with strata becoming shallower and thinner moving radially towards its margins. The Williston Basin covers approximately 300,000 square miles over parts of North Dakota, South Dakota, Montana, and the adjacent Canadian provinces of Saskatchewan and Manitoba.

Approximately 180 miles of the westernmost portion of the pipeline route will pass over the Bakken Formation, a thin but widespread unit within the central and deeper portions of the Williston Basin. Approximately 145 oil and/or gas wells are located within the 2-mile wide study area. Of these, four wells are within the environmental survey corridor. Table 13

provides the approximate MPs and distance from the proposed centerline where these wells can be found.

TABLE 13
Oil or Gas Wells Near the Pipeline

Approximate MP	Distance from Centerline (feet)
~~15.4~~ 15.2	55
~~29.7~~ 29.8	199
59.2	~~115~~ 98
85.6	~~44~~ 3

Typically, the pipeline trench would be less than 6 feet deep to account for the pipe and adequate cover. Because oil and gas is generally produced from depths in excess of 1,000 feet, construction of the pipeline would not be expected to affect the ability of the wells to produce petroleum and/or natural gas. Rather, any construction-related damage that could occur would be limited to surface or near-surface components of the wells and gathering systems, which could temporarily disrupt production until repairs are made. To minimize the potential for impacting surface and near-surface components, EPND would:

- avoid direct impact to the 4 wells located within the environmental survey corridor; and
- identify any associated underground gathering lines along the proposed route and take appropriate precautions to protect the integrity of such facilities.

B.4.c.(4)(ii) Gravel and Sand Resources

U.S. Geological Survey [“USGS”] 1:24,000 topographic coverage maps and recent aerial photographic coverage were reviewed to identify potential sand and gravel pits within the 2-mile wide study area along the Project route. A total of 56 pits were identified. There are 13 active pits that have been identified by aerial photographs within the 2-mile wide study area. The Project is not expected to result in any short- or long-term impacts on any of the active sand/gravel pits within the 2-mile wide study area.

B.4.c.(4)(iii) Lignite

A review of maps of lignite deposits found the presence of lignite within the 2-mile wide study area from approximately MP ~~3.5~~ 3.4 to MP ~~5~~ 4.4. However, the deposit lies outside of the environmental survey corridor.

B.4.c.(5) Impact Upon Wetlands

EPND ~~is~~ conducted ~~ing~~ field assessments of wetlands and waterbodies within the environmental survey corridor. ~~Following completion of the assessments,~~ Results of the delineations are ~~will be~~ summarized and submitted as a supplemental filing and is included in Exhibit F.1. According to the USGS land use classification, wetlands and waterbodies comprise approximately ~~5.5~~ 5.2 percent of the land along the pipeline route. Table 14 presents the miles of wetlands crossed by the route in each county.

TABLE 14
Wetlands Crossed by the Sandpiper Pipeline Project Route

County	Approximate Distance (miles)
Grand Forks	~~2.52~~ 2.48
McHenry	~~8.38~~ 7.46
Mountrail	~~3.75~~ 3.78
Nelson	~~5.27~~ 4.26
Pierce	~~6.05~~ 5.37
Ramsey	~~2.80~~ 2.01
Towner	~~6.34~~ 5.71
Ward	~~3.44~~ 3.37
Williams	~~0.0~~ 0.03
Total	**~~38.60~~ 34.48**

EPND will implement the measures identified in its EPP (see Exhibit J) to minimize adverse effects on wetlands during construction and restore wetlands following construction; therefore, effects on wetlands are expected to be short-term and minor. During trenching, water quality of inundated wetlands will be temporarily affected due to the suspension of sediments and organic matter. Project construction will result in temporary disturbance to some of the existing vegetation along the pipeline route and within the construction right-of-way.

EPND commissioned Carlson McCain, Inc. ("Carlson McCain") to complete a wetland and waterbody assessment based on the pipeline route in May 2013. Carlson McCain classified the wetlands per the wetland survey protocols presented in Exhibit F.1, which are based on the Cowardin Classification System, a comprehensive system that provides uniformity to the classification of wetlands and deepwater habitats throughout the United States. Carlson McCain completed field delineations along ~~94~~ 98 percent of the pipeline route through ~~September 14,~~ November 2013. ~~Upon completion,~~ EPND ~~will~~ provided the ~~final~~ wetland delineation report to the ND-PSC as a supplemental filing.

EPND will obtain the necessary permit for wetland crossings. Work in wetlands will be conducted in accordance with applicable permit conditions and the measures specified in the EPP (Exhibit J).

During construction in unsaturated wetlands, topsoil will be segregated from the trench line to preserve natural sources of seed and rootstock. During trenching, water quality of inundated wetlands adjacent to the construction area could be temporarily affected due to the suspension of sediments and organic matter. Silt fence or similar appropriate measures will be installed as needed to minimize this effect. Although wetland vegetation will be cleared for pipeline construction, these areas will be allowed to revegetate to their preconstruction structure and function. After the trench is backfilled, the topsoil will be replaced to facilitate the natural revegetation process in unsaturated wetlands.

Unsaturated wetlands may be revegetated with a temporary cover crop if specified by permitting agencies. No fertilizer, lime, or mulch would be applied in wetlands. The long-term operation and maintenance of the pipeline will not have adverse effects on wetland function or value.

To minimize impacts to wetlands along the pipeline route, EPND is planning to reduce its construction right-of-way width to 95 feet in wetlands (see EPP in Exhibit J). Actual temporary disturbance to wetlands will be determined upon completion of the wetland delineation surveys.

B.4.c.(6) Impact Upon Woodlands and Wooded Areas

USGS National Land Cover Data Set (~~2001~~ 2006) identified a small amount of wooded areas within the 2-mile wide study area. Approximately ~~7.6~~ 7.5 acres or ~~0.2~~ 0.3 percent of the total construction impact is considered to be temporary as vegetation will be allowed to return to its original land use. No wooded areas will be permanently impacted by above ground facility construction.

Temporary impacts may consist of clearing of woody vegetation within the construction right-of-way and areas of additional temporary workspace as required. It is anticipated that re-growth of trees to mature conditions could take up to 50 years, depending on the species. Permanent impacts would be limited to the EPND's operational right-of-way, which would be cleared to facilitate aerial patrol of the pipeline. EPND is also proposing to implement additional mitigation to minimize impacts on wooded areas as outlined in the EPP (Exhibit J). Irreversible and irretrievable commitments of natural resources are discussed in B.2.f.

B.4.c.(7) Impact Upon Radio and Television Reception, and Other Communication of Electronic Control Facilities

A desktop review of the Project 2-mile wide study area did not identify radio, television, or other communication or control facilities within the proposed corridor or route. Thus, no effects on radio or television reception, or other communication or electronic control facilities are expected.

B.4.c.(8) Impact on Human Health and Human Safety

Presently, EPND owns and operates a 970-mile existing underground petroleum gathering and mainline pipeline system that extends from eastern Montana through North Dakota to Clearbrook, Minnesota and to the international boundary between the U.S. and Canada. EPND has successfully completed and placed into operation a number of expansion projects since 2006, and is experienced in managing construction and operating pipeline systems that protect the public's health and safety.

EPND will design, construct, test, operate, and maintain the described Project in accordance with all applicable laws and standards. The U.S. Department of Transportation's ("USDOT") pipeline standards are published in Parts 194 and 195 of Title 49 of the Code of Federal Regulations. The regulations are intended to ensure adequate protection of the public and to prevent accidents and failures. Part 195 specifically addresses petroleum pipeline safety issues. It specifies material selection and qualification; minimum design requirements; and protection from internal, external, and atmospheric corrosion. Part 194 prescribes emergency planning to prepare for prompt shutdown, containment and cleanup to minimize the effects of a pipeline release, should one occur. Also, EPND plans to install release detection devices at every mainline valve located on the new 24-inch and 30-inch pipeline.

B.4.c.(8)(i) Air Permitting Requirements

As discussed in Section B.4.b.(2) of the Certificate of Corridor Compatibility, EPND will be required to obtain air pollution control Permits to Construct from the North Dakota Department of Health ("NDDH") for construction of new floating roof storage tanks and associated equipment at its Beaver Lodge and Stanley Terminals.

The Beaver Lodge, Stanley, and Berthold Terminals currently operate under air pollution control minor source Permits to Operate. As a condition of the Permit to Construct, EPND will notify NDDH within 15 days after completing the Project to allow for an inspection by NDDH. Once the Permit to Construct requirements are verified, the NDDH will issue revised Permits to Operate that will incorporate the new equipment constructed at each terminal.

Air permitting will not be required for the new pump station at Lakota.

B.4.c.(8)(ii) Causes and Prevention of Accidents on Pipelines

The major causes of pipeline releases in the U.S. are excavation damage, corrosion (both internal and external), pipe or weld failure, incorrect operations, or natural causes.

To prevent these categories of failures, the following standards will be implemented.

- EPND will construct and maintain Sandpiper to meet or exceed industry and governmental requirements and standards.
- Specifically, the steel pipe will meet USDOT, Pipeline and Hazardous Material Safety Administration ("PHMSA") federal codes under 49 CFR Part 195, and follow standards issued by the American Society of Mechanical Engineers, National Association for Corrosion Engineers and American Petroleum Institute ("API").
- All pipe is inspected and integrity-tested at the factory and transported per the highest technical standards.
- All of the pipe will be manufactured with fusion-bonded epoxy coating to protect against corrosion.
- The actual installation of the pipeline and all construction and testing records will be subject to regulatory inspection, including by PHMSA inspectors.
- PHMSA also conducts regularly scheduled field inspections of the pipeline facilities to ensure compliance with federal regulatory requirements, including the integrity testing of the pipeline through the use of internal inspection devices.

Once installed, the pipeline will be subjected to thorough testing to verify its integrity and compliance with specifications. Such testing will include checking coating integrity, using X-ray to examine 100 percent of field welds (over and above the 10 percent required by regulations), internally inspecting the entire length of each line by using an in-line inspection tool known as a caliper pig, and hydrostatically testing the line to qualify the maximum allowable operating pressure. Sandpiper will only be placed into service after all construction standards and requirements are met and confirmed.

Sandpiper will be maintained and inspected according to PHMSA regulations, industry codes and prudent pipeline operating techniques. All of EPND's mainline liquids pipelines are externally coated to resist corrosion, internally inspected at regular intervals using in-line inspection technology, and equipped with a cathodic-protection system to prevent external corrosion. EPND's cathodic protection system and internal inspection program were implemented prior to these techniques becoming a regulatory standard.

EPND's pipeline system is aerially patrolled and inspected biweekly to survey for abnormal conditions or dangerous activities, e.g., unauthorized excavation along the pipelines' routes. EPND also conducts extensive public education and outreach programs that exceed industry (API Recommended Practice 1162) and federal (49 CFR 195.440) requirements concerning public awareness of pipelines and pipeline-safety matters. All EPND lines are marked with signage and warnings, per federal regulations, at road and highway crossings, railroad crossings, navigable rivers, and other locations to alert the public to the presence of underground lines and to provide information, contact numbers, and emergency data.

Pipeline workers and contractors performing critical tasks are qualified under OSHA safety standards and PHMSA "operator qualification" rules and are subjected to federal drug and alcohol testing requirements. EPND meets, and often exceeds, these requirements so that human error in construction and operation is avoided.

B.4.c.(8)(iii) Baseline Transportation Accident Rates

Releases from interstate liquid petroleum pipelines, including the station facilities described in this Project, must be reported to PHMSA as required by 49 C.F.R. Part 195, Subpart B. Currently, federal regulations require reporting of all petroleum releases greater than 5 gallons (if other threshold reporting criteria are met).

Pipelines operate more safely than any other mode of oil transportation. Table 14 (*see* Certificate of Corridor Compatibility) shows the accident rates of other modes of transportation in comparison to a hazardous liquid pipeline. According to the Manhattan

Institute,[1] road and rail have higher rates of serious incidents and injuries than pipelines, even though more road and rail incidents go unreported. Hazardous liquid pipelines transport 94% more billion ton-miles[2] of shipments than are transported by road and 96% more billion ton-miles of shipments than are transported by rail but have the lowest incident rate. Road transport has the highest rate of incidents, with 19.95 per billion ton-miles per year followed by rail, with 2.08 per billion ton-miles per year. Hazardous liquid pipelines were the safest, with 0.58 serious incidents per billion ton-miles. (For more details, *see* Table 14 of the Application for a Certificate of Corridor Compatibility.)

B.4.c.(8)(iv) Crude Oil Pipeline Accident Rates

An analysis of the historical record shows that the liquid petroleum pipeline industry's safety performance has improved significantly over the last 20 years. These improvements correlate with advancements in technology as well as increased environmental awareness. Over the last 20 years the number of significant7 incidents has decreased by nearly 25% from an industry average of 162 in the first five years (1993 - 97) to the recent five year (2008 – 12) running average of 121 incidents nationwide.8] According to data on PHMSA's website, the median size of a release has also greatly decreased. The annual volume of oil released from pipeline systems has fallen by about 30%, based on five year running averages.9]

B.4.c.(8)(v) EPND Pipeline Incidents and Public Safety

According to available records or knowledge of EPND staff, there have been no deaths or major injuries of landowners or members of the public as a direct result of a pipeline release on the EPND's North Dakota Pipeline System since the system began operations in 1965 (previously named Portal Pipeline Company).

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[1] Manhattan Institute. Pipelines Are Safest for Transportation of Oil and Gas. Issue Brief No. 23. June 2013. http://www.manhattan-institute.org/html/ib_23.htm

[2] A unit of freight transportation measurement equivalent to a ton of freight transported one mile.

[7] PHMSA defines Significant Incidents as those incidents reported by pipeline operators when any of the following specifically defined consequences occur: 1) fatality or injury requiring in-patient hospitalization; 2) $50,000 or more in total costs, measured in 1984 dollars; 3) highly volatile liquid releases of 5 barrels or more or other liquid releases of 50 barrels or more, or 4) liquid releases resulting in an unintentional fire or explosion.

[8] http://primis.phmsa.dot.gov/comm/reports/safety/PSI.html

[9] Comparison of the past 20 years of significant release incidents utilizing five year averages (1993-1997 and 2008-2012) http://primis.phmsa.dot.gov/comm/reports/safety/PSI.html

B.4.c.(9) Impact Upon Animal Health and Safety

B.4.c.(9)(i) Domestic Animals and Wildlife

Construction-related effects on domestic animals and wildlife will result primarily from activity in the 2-mile wide study area during construction. The clearing of herbaceous and woody vegetation will temporarily reduce cover, nesting, and foraging habitat for some wildlife species. Clearing may also result in the loss of some members of small, slower moving species. However, most will move into adjacent undisturbed habitats until construction and restoration are complete. Overall habitat availability is not expected to change in the long term.

Pipeline trenching activities and associated spoil piles may result in a short-term barrier to movement of some wildlife species (typically 2 to 4 weeks at any one area). Except for short-term interruptions during construction, existing public roads, farm lanes, and livestock crossings will be kept open, providing crossing access. Shelter belts and trees will be protected to the extent practicable in a manner compatible with the safe operation, maintenance, and inspection of the pipeline. Mitigation measures will be implemented to avoid or minimize potential adverse impacts on animal health and safety as described in EPND's EPP (see Exhibit J).

B.4.c.(9)(ii) Migratory Birds

Migratory birds are federally protected by the Migratory Bird Treaty Act ("MBTA"). Native prairie and non-native grasslands provide courtship, nesting, foraging, sheltering, brood-rearing, and dispersal habitat for many species of migratory birds. EPND conducted field surveys in July and August 2013 of grassland habitat for migratory birds. Potential impacts to migratory birds may include temporary displacement due to construction activities and temporary loss of groundcover in native and planted grassland areas. These effects are not likely to cause long-term declines in populations in the area.

In consultation with relevant state and federal agencies EPND will develop conservation measures to avoid, minimize, or mitigate for potential impacts on migratory birds. Possible conservation measures that EPND may implement include narrowing the right-of-way in sensitive habitats, restoration of habitats that are impacted during construction, developing a Migratory Bird Conservation Plan, and pre-clearing selected forested or scrub-shrub habitat in the construction right-of-way prior to the migratory bird breeding season. If construction occurs during the migratory bird breeding season and pre-clearing is not possible throughout the Project route, EPND may mitigate or provide environmental

stewardship funds for migratory bird habitat that is within the construction right-of-way in non-cleared areas, in lieu of mitigating for individual birds that may be disturbed during construction in these areas.

EPND has found that resources spent on pre-construction surveys, buffering of the nests, and implementing construction skips around these buffers is significant, yet the conservation benefit that is realized is insignificant in that the nests that are protected are typically of common birds. In comparison, mitigation or environmental stewardship funds can be used by conservation organizations to preserve habitat of imperiled migratory birds in perpetuity or to conduct key research focused on conservation of rare species. Thus, the conservation benefit of these funds far exceeds the conservation benefit of pre-construction surveys, buffers, and construction skips. If EPND chooses to mitigate for habitat in lieu of mitigation for birds that may be disturbed, EPND will determine the mitigation cost by tailoring past methods for determining mitigation costs for habitat to this Project.

B.4.c.(9)(iii) Eagles

Bald and golden eagles are protected by both the MBTA and the Bald and Golden Eagle Protection Act ("BGEPA"). Under BGEPA, adults, juveniles, fledglings, chicks and eggs are protected from harm which includes prohibitions on disturbance. In addition, both active and inactive eagle nests are protected. EPND has confirmed golden eagles are not known to nest in the project area.

EPND will conduct aerial surveys by helicopter of eagle nests along the route in February or March, 2014. On-the-ground observations ~~will~~ may be conducted at specific locations if nests are observed during the aerial survey within the bald eagle disturbance distance of pipeline construction. If eagle nests are documented in the construction right-of-way or outside of the construction right-of-way but within the disturbance distance for eagles, EPND will implement avoidance measures. EPND will buffer active nests and avoid construction activities within the buffer until after the nest has fledged. In the unlikely circumstance that a nest is found within the construction area, EPND will micro-route around the nest. By implementing these avoidance measures during construction, EPND will achieve compliance with BGEPA.

B.4.c.(10) Impact Upon Plant Life

B.4.c.(10)(i) Vegetation

As discussed in Section B.3 in the Application for a Certificate of Corridor Compatibility, EPND consulted with the North Dakota Game and Fish ("NDGF") and the North Dakota

Parks and Recreation Department ("NDPR") to obtain known locations of state unique or protected species within the 2-mile wide study area. Only one location was noted that is crossed by the route, a northern wet-mesic tallgrass prairie identified by the NDPR at approximate MP 250 ~~249~~. The construction corridor crosses an outside edge of this prairie. Based on ongoing discussions with NDPR, the mitigation measures for this prairie location will include revegetating the construction workspace with an NDPR-recommended prairie seed mix.

As discussed in Section B.4.c.(1), the 2-mile wide study area is comprised predominantly of agricultural land (i.e., cropland and pasture) and grasslands (i.e., herbaceous rangeland). Approximately ~~0.4~~ 0.3 percent of the area affected by the construction right-of-way will involve wooded forest land, consisting of upland forests and forested wetlands. The construction right-of-way will also affect wetlands (approximately ~~9.0~~ 4.1 percent) and commercial land (approximately ~~7.0~~ 0.6 percent). The wetlands are comprised of emergent marshes and scrub-shrub wetlands, and the open lands consist of maintained right-of-ways and fallow fields. There are several different types of crops that may be encountered on the Project route such as wheat, corn, canola, barley, soybeans, peas, flaxseed, sunflower, dry beans, and sugar beets.

The primary impact on vegetation will result from construction-related removal or disturbance of vegetation on the right-of-way. Vegetation will also be removed from areas where additional temporary workspace is required (e.g., road and waterbody crossings). EPND will clear the right-of-way only to the extent necessary to assure suitable access for construction, safe operation, and maintenance of the pipeline.

In areas that require permanent revegetation, EPND will specify appropriate seed mixes, application rates, and seeding dates, taking into account recommendations of appropriate state and federal agencies and landowner requests. Additional mitigation is discussed in the EPP in Exhibit J.

During construction, vegetation will be removed from within the construction right-of-way and temporary workspace areas. In general, clearing of herbaceous vegetation during construction is anticipated to have a short-term impact to plant life.

In nonagricultural areas, trees and shrubs cleared from additional temporary workspace will be allowed to reestablish after construction, and the implementation of revegetation measures will take into account recommendations from applicable regulatory agencies and arrangements with landowners. Overall, significant change in plant life is not anticipated.

B.4.c.(10)(ii) Invasive and Noxious Weeds

The state of North Dakota has 11 state-listed noxious and invasive weeds ("Invasive Species"). The species listed are Russian knapweed (*Acroptilon repens*), absinth wormwood (*Artemisia absinthium*), musk thistle (*Carduus nutans*), diffuse knapweed (*Centaurea diffusa*), yellow starthistle (*Centaurea solstitialis*), spotted knapweed (*Centaurea maculosa*), Canadian thistle (*Cirsium arvense*), field bindweed (*Convolvulus arvensis*), leafy spurge (*Euphorbia esula*), dalmatian toadflax (*Linaria dalmatica*), purple loosestrife (*Lythrum salicaria*), and saltcedar (*Tamarix chinensis*). The previously listed state invasive species are controlled and regulated under North Dakota Statute 4.1-47-01.

Each county in North Dakota has a County Weed Board which consists of a regulation committee to manage noxious and invasive weeds. Each county board is responsible for the addition of county-specific Invasive Species to the state-listed species. Table 15 contains county-listed noxious and invasive weeds for the counties crossed by the Project.

TABLE 15
County Listed Additional Noxious and Invasive Weeds

County	Listed Species Common Name	Listed Species Scientific Name
Williams	None	None
Mountrail	Common Tansy Houndstounge	*Tanacetum vulgare* *Cynoglossum officinale*
Ward	False chamomile Houndstounge	*Matricaria perforata* *Cynoglossum officinale*
McHenry	None	None
Pierce	None	None
Towner	None	None
Ramsey	Annual sowthistle False chamomile Common milkweed	*Sonchus oleraceus* *Matricaria perforata* *Asclepias syriaca*
Nelson	Perennial sowthistle	*Sonchus arvensis*
Grand Forks	Kochia	*Kochia scoparia*

Each county weed board is responsible for implementation of noxious weed control programs and providing control of noxious weeds along county and township roads, including county highways. EPND sent courtesy notifications to each County Weed Board describing the Project and requesting any guidance regarding the known locations of noxious and invasive weeds pertaining to that county. The Nelson County Weed Board provided a response concerning the locations of known invasive species. Responses are pending from the other eight counties.

B.4.d Policy Criteria (North Dakota Rules Chapter 69-06-08-02.4)

ND-PSC may give preference to an applicant that will maximize benefits resulting from the adoption of policies and practices of ND-PSC. These policies, and the extent to which the Project aligns with or reinforces these policies, are described below.

B.4.d.(1) Location and Design

EPND has designed the described Project to take advantage of its existing facilities to the extent practicable. No designated Exclusion Areas are crossed by the route. Mitigation measures will be implemented to avoid or minimize potential adverse impacts on Avoidance Areas that would be crossed.

The Project is designed and will be operated in a manner that meets or exceeds state and federal engineering, safety and operational design standards.

B.4.d.(2) Training and Utilization of Available Labor in this State for the General and Specialized Skills Required

During construction of the proposed facility, skilled and unskilled labor, both local and non-local workers will be employed by EPND or by the General Contractor selected to construct the Project. Applicable environmental training and instructions will be given to each construction worker to ensure environmental compliance is met during construction work activities.

B.4.d.(3) Economies of Construction and Operation

EPND's Project presents an opportunity to meet the immediate and future transportation requirements of its shippers in the most timely and efficient manner through the use of existing and new pipeline facilities. By design, this Project provides additional pipeline capacity and system flexibility of 250,000 bpd between EPND's existing Beaver Lodge and Berthold Stations, adds an incremental 225,000 bpd of export pipeline capacity to its existing North Dakota pipeline system from Berthold to Clearbrook, Minnesota, and expands its pipeline system from Clearbrook to Superior, Wisconsin. EPND will be able to use existing station sites for the majority of its station facilities. New land will be required and purchased in fee immediately adjacent to its existing Beaver Lodge and Berthold Station sites, and will be used to accommodate the installation of new station facilities for this Project. Also new land will be acquired in fee for its new Lakota Pump Station in Nelson County, North Dakota and for its new station and terminal facility in Clearbrook,

Minnesota. (For more details on the station facility requirements for this Project, see Section A.3.b.(7) of the Application for a Certificate of Corridor Compatibility.)

B.4.d.(4) Use of Citizen Coordinating Committees

No citizen coordinating committee is anticipated as a result of the Project.

B.4.d.(5) Commitment of a Portion of the Transmitted Product for Use in this State

EPND does not own any of the crude oil in its system, and does not determine the destinations for the products transported by its system. The nature of EPND's business is to provide transportation service to its customers as an interstate common carrier crude oil pipeline, and to receive a fee for that service pursuant to tariffs authorized by the Federal Energy Regulatory Commission under the Interstate Commerce Act. However, EPND does currently serve, and will continue to serve through this Project, three local refineries that provide refined products to the residents of North Dakota and Minnesota: the Tesoro Mandan refinery (North Dakota); and Flint Hills and St. Paul refineries (Minnesota).

B.4.d.(6) Labor Relations

The Project will have no anticipated effect on labor relations within North Dakota.

B.4.d.(7) Coordination of Facilities

The Project has been designed to take advantage of its existing facilities to the maximum extent practicable and site new facilities to minimize human and environmental impacts to the greatest extent possible.

B.4.d.(8) Monitoring of Impacts

EPND believes that construction-related impacts will be adequately mitigated throughout the Project route by the use of best management practices, good construction techniques, and environmental inspection. Therefore, long-term monitoring of impacts directly related to the Project is not anticipated. Following the installation of the pipeline, a thorough inspection will be performed to ensure restoration efforts have been successful.

B.4.d.(8)(i) Environmental Training

EPND will communicate the environmental requirements to Project personnel, and implement the following procedures to ensure that environmental compliance is maintained at the construction site:

- require environmental training for all Project personnel (both contractor and EPND) prior to construction;
- require Project personnel visiting the work site to receive environmental training;
- require everyone who attends training to sign an acknowledgement form and receive, as a proof-of-training, a copy of the training booklet and a hardhat sticker; and
- require all personnel to display a hardhat sticker when on a job site or dismiss personnel from the job site until the person obtains a hardhat sticker through completion of training.

B.4.d.8(ii) Environmental Monitoring

Environmental monitoring and inspection will be conducted during and immediately following construction. Contract specifications will incorporate environmental protection and mitigation measures, and contractors will be expected to implement these measures in the field.

B.4.d.(9) Utilization of Existing and Proposed Rights-of-Way and Corridors

Co-located and Parallel to EPND's existing North Dakota Pipeline System

EPND will co-locate the new 24-inch pipeline, between Beaver Lodge Station and Grand Forks, North Dakota, parallel to EPND's Line 81, Line 82 and Line 87 for approximately 62 total miles. Where co-located, the centerline of the new pipeline will be located within EPND's existing pipeline right-of-way and have a 40-foot offset or buffer zone from EPND's existing pipeline, as shown on Exhibits B.1 and B.2. This buffer or offset zone provides for the safe construction, inspection, maintenance and operation of the new pipeline. No new permanent right-of-way will be required where the new pipeline is co-located within EPND's existing pipeline right-of-way. Shown on Table 1 below is a breakdown of the construction workspace requirements for these locations. Also enclosed as Exhibits B.1 and B.2 are the typical configuration drawings, which provide a pictorial overview of the construction footprint described on Table 16.

Table 16 Co-located and Parallel to EPND's Existing North Dakota Pipeline System		
	Construction Workspace	
Land Type	**Typical Construction Footprint**	**Extra Temporary Work Space at Crossings**
Upland	120 ft.	Up to 20,000 sq. ft.
Wetland	95 ft.	Up to 20,000 sq. ft.

Parallel to third-party pipelines and small utility corridors:

Between Beaver Lodge Station and Grand Forks, North Dakota, there will be sections of the new pipeline that will follow third-party pipelines and small utility corridors for approximately 77 total miles. EPND plans to acquire a 50-foot wide new permanent right-of-way, which will provide a 25-foot buffer or offset zone on either side of the newly installed pipe. This buffer or offset zone allows the safe construction, inspection, maintenance and operation of the new pipeline, and protects it from future encroachments. Shown on Table 17 below is a breakdown of the construction workspace and permanent right-of-way requirements for these locations parallel to foreign pipelines and utility corridors. Also enclosed as Exhibits B.3 and B.4 are the typical configuration drawings, which provide a pictorial overview of the land requirements described on Table 17.

Table 17 Parallel to Foreign Pipelines and Utility Corridors				
	Construction Workspace			Permanent Right-of-Way
Land Type	**Typical Construction Footprint**	**Typical Temporary Work Space**	**Extra Temporary Work Space at Crossings**	**New ROW**
Upland	120 ft.	70 ft.	Up to 20,000 sq. ft.	50 ft.
Wetland	95 ft.	45 ft.	Up to 20,000 sq. ft.	50 ft.

Greenfield Pipeline Areas

The new pipeline route, between Beaver Lodge Station and Grand Forks, North Dakota, includes sections where the new pipeline traverses greenfield areas for approximately 160 total miles. Along these greenfield sections, EPND plans to acquire a 50-foot wide new permanent right-of-way, which provides a 25-foot buffer or offset zone on either side of the newly installed pipe. This buffer or offset zone allows the safe construction, inspection, maintenance and operation of the new pipeline, and protects it from future encroachments. Shown on Table 18 below is a breakdown of the construction workspace and permanent right-of-way requirements for the greenfield pipeline sections along the pipeline route. Also enclosed as Exhibits B.5 and B.6 are the typical configuration drawings, which provide a pictorial overview of the land requirements described on Table 18.

Table 18
Greenfield Pipeline Sections along New Pipeline Route

	Construction Workspace				Permanent Right-of-Way
Land Type	Typical Construction Footprint	Typical Temporary Work Space		Extra Temporary Work Space at Crossings	New ROW
		Non-working Side	Working Side		
Upland	120 ft.	15 ft.	55 ft.	Up to 20,000 sq. ft.	50 ft.
Wetland	95 ft.	15 ft.	30 ft.	Up to 20,000 sq. ft.	50 ft.

B.4.d.(10) Other Existing and Proposed Transmission Facilities

The new pipeline and related station facilities will be operated as an integral part of EPND's existing North Dakota Pipeline System. As such, this Project will benefit from the use of EPND's existing Beaver Lodge, Stanley and Berthold Station sites for the installation of certain new station facilities that are required for this Project. Other benefits will be the operational flexibility shared through the connectivity between EPND's existing North Dakota Pipeline System and this Project, which enables EPND to utilize the capacity of the new pipeline during routine maintenance activities on its Line 81 or vice versa.

B.5 THE CRITERIA TO BE EVALUATED SHALL INCLUDE AT A MINIMUM ALL OF THE FOLLOWING, WHICH ARE WITHIN THE DESIGNATED CORRIDOR:

Complete descriptions, potential impacts, and mitigation measures relevant to the following six criteria are provided in section B.4 in conjunction with the descriptions of potential impacts.

- Exclusion Areas;
- Avoidance Areas;
- Selection Criteria;
- Policy Criteria;
- Design and Construction Limitations; and
- Economic Considerations.

B.6 MITIGATION MEASURES

B.6.a Measures to Preserve the Human Environment

EPND has developed an Environmental Protection Plan ("EPP") as its mitigation measures to minimize impacts from this Project (*see* Exhibit J). This plan provides a detailed description of the guidelines and mitigation measures that will be implemented during construction, and includes the following components:

- General Mitigation Measures
- Temporary Erosion and Sediment Control Measures
- Stream and River Crossings
- Wetland Crossings
- Highway, Road, and Rail Crossings
- Construction Dewatering
- Water Appropriation
- Revegetation and Monitoring
- Winter Construction
- Waste Management
- Spill Prevention, Containment, and Control Measures
- Drilling Fluid Response, Containment, and Notification Procedures

To further ensure compliance with permits, plans, obligations, and commitments, EPND will have full-time environmental inspector to monitor construction and compliance.

EPND will require its construction contractor to clean up any personal litter, bottles, and paper deposited by right-of-way preparation and construction crews on a daily basis. Waste and scrap that is the product of pipeline construction will be removed and disposed of in accordance with applicable regulations before construction is completed.

To the extent practicable, EPND will minimize noise and dust resulting from construction near residential areas.

The pipeline route crosses 297 roads, including ~~27~~ 20 private or commercial roads, ~~274~~ 271 county and city roads, no state roads, and 6 federal roads. The pipeline also crosses 16 railroads. Paved roads and railroad crossings will be bored; therefore, use of these facilities will not be disrupted as a result of the Project. Gravel roads will be open cut and bored. Open cutting a road will temporarily close it to traffic; however, the road network throughout the 2-mile wide study area is sufficient that suitable alternative routes are readily available.

U.S highway and railroad crossings for the route are summarized in Table 19 and Table 20, respectively. All road and rail crossings will be bored unless the applicable permitting agency specifically permits EPND to open cut the road.

TABLE 19
U.S. Highways Crossed by the Sandpiper Pipeline Project

County	Roadway Name	Milepost
Williams	—	—
Mountrail	—	—
Ward	U.S. Highway 2	~~57.3~~ 57.4
	U.S. Highway 52	~~67.4~~ 67.5
	U.S. Highway 83	~~79.7~~ 79.8
McHenry	—	—
Pierce	—	—
Towner	U.S. Highway 281	~~178.9~~ 179.4
Ramsey	—	—
Nelson	U.S. Highway 2	227.9
Grand Forks	Interstate 29	~~294.2~~ 295.1

TABLE 20 Railways Crossed by the Sandpiper Pipeline Project		
County	Railway Name	Milepost
Williams	—	—
Mountrail	—	—
Ward	Burlington Northern Railway	~~54.5~~ 55.0
	Burlington Northern Railway	~~57.0~~ 57.1
	Soo Line Railroad	~~67.5~~ 67.6
	Burlington Northern Railway: abandoned	81.9
McHenry	Burlington Northern Railway: abandoned	91.3
	Burlington Northern Railway: abandoned	~~118.1~~ 118.3
Pierce	Burlington Northern Railway	~~138.6~~ 138.7
	Burlington Northern Railway	~~157.9~~ 158.3
Towner	Great Burlington Railroad	~~178.9~~ 179.4
Ramsey	Burlington Northern Railway	~~195.3~~ 195.8
	Soo Line Railroad	~~216.7~~ 217.3
Nelson	Burlington Northern Railway	~~226.6~~ 227.2
Grand Forks	Burlington Northern Railway	~~260.3~~ 261.2
	Burlington Northern Railway	~~263.0~~ 263.9
	Burlington Northern Railway	~~268.8~~ 269.6
	Burlington Northern Railway	~~292.7~~ 293.6

EPND will obtain applicable permits prior to conducting road crossings. Temporary signs will be posted at each crossing as appropriate to alert motorists of construction activity. Paved roads and railroads will be bored which will minimize interference with traffic flow caused by construction activities. (For more information on protecting the human environment, see Section B.4.c.(8) of this Application)

B.6.b Measures to Protect Terrain and Geological Resources

EPND will, to the extent practicable, restore the area affected by pipeline construction to the natural conditions that existed immediately before construction of the pipeline. Restoration will be compatible with the safe operation, maintenance, and inspection of the pipeline.

To the extent practicable, EPND will restore the construction area to pre-construction contours. Measures such as slope breakers, erosion control blankets and revegetation will be employed to maintain the stability of slopes along the right-of-way.

Fuel and all other hazardous materials will be stored in accordance with the requirements of EPND's EPP (see Exhibit J). The EPP also describes response, containment, and cleanup measures.

B.6.c Measures to Protect Soils

Pipeline construction activities such as clearing, grading, trench excavation, and backfilling, as well as the movement of construction equipment along the right-of-way may result in impacts on soil resources. Clearing removes protective cover and exposes soil to the effects of wind and precipitation, which may increase the potential for soil erosion and movement of sediments into sensitive environmental areas. Grading and equipment traffic may compact soil, reducing porosity and percolation rates, which could result in increased runoff potential. Trench excavation and backfilling could lead to a mixing of topsoil and subsoil and may introduce rocks to the soil surface from deeper soil horizons.

EPND will minimize or avoid these impacts on soils by implementing the mitigation measures described in the project's EPP (see Exhibit J). The EPP will be included in contract documents and enforced as such throughout the Project.

Temporary erosion and sedimentation control measures may include installation of silt fence, straw bales, slope breakers, trench breakers, erosion control fabric, and mulch.

To minimize potential impacts on soil productivity, topsoil will be segregated during trench excavation in agricultural land, unsaturated wetlands, and if applicable, other areas where soil productivity is an important consideration. Unless otherwise requested by the landowner, topsoil in cropland will be removed to a maximum depth of 12 inches from the trench and spoil storage area and stored separately from the trench spoil. After the trench is backfilled, topsoil will be returned to its approximate original location in the soil horizon.

Compaction of agricultural soils will be minimized by restricting construction activities during periods of prolonged rainfall. Where unacceptable levels of compaction occur in agricultural lands, a chisel plow or other deep tillage equipment will be utilized to loosen the soil.

EPND will retain environmental inspectors to monitor the contractor's compliance with applicable requirements to protect soil resources during construction of the Project.

EPND is developing a Contaminated ~~Soils~~ Sites Management Plan that will be utilized to address issues from prior contamination if encountered during construction and set forth proper containment and handling protocols. EPND will provide the Contaminated ~~Soils~~ Sites Management Plan to the ND-PSC as a supplemental filing prior to construction.

B.6.d Measures to Protect Vegetation and Wildlife

EPND will clear the right-of-way to the extent necessary to assure suitable access for construction, safe operation, and maintenance of the pipeline. Clearing of herbaceous vegetation during construction is anticipated to result in a short-term impact. Active revegetation measures and rapid colonization by annual and perennial herbaceous species in the disturbed areas will restore most vegetative cover within the first growing season.

In areas that require permanent revegetation, EPND will specify appropriate seed mixes, application rates, and seeding dates, taking into account recommendations of appropriate state and federal agencies and landowner requests. In non-agricultural areas, vegetation cleared from additional temporary workspace will be allowed to revegetate after construction depending on arrangements with the landowner. Consequently, significant changes in cover types are not anticipated. Revegetation will allow wildlife species to return to the 2-mile wide study area after construction is completed.

Temporary revegetation measures may also be required to quickly establish ground cover to minimize the potential for soil erosion and noxious weeds to establish. A temporary seed mix will be applied in these situations. The Project's EPP (see Exhibit J) contains more details regarding temporary revegetation.

After completion of waterbody crossings, EPND will revegetate disturbed stream banks in accordance with the EPP and requirements of applicable state or federal permits. When constructing in wetland areas without standing water, up to 1 foot of topsoil (organic layer) will be stripped from the trench line and stockpiled separately from trench spoil to preserve the native seed stock. In standing water wetlands, soil segregation is not typically practical; however, the contractor will attempt to segregate as much of the top layer as possible based on site/saturation conditions.

At stream approaches, the contractor will leave a 20-foot buffer (typically from the Ordinary High Water Mark) of undisturbed herbaceous vegetation on all stream banks during initial clearing, except where grading is needed for bridge installation, or where restricted by applicable regulations and/or permit conditions (such as impaired waterways).

EPND will take appropriate precautions to protect livestock and crops affected by construction. Operation of the pipeline is not anticipated to significantly affect terrestrial wildlife, fisheries resources, or other aquatic species. Shelter belts and trees will be protected and restored by EPND to the extent practicable in a manner compatible with the safe operation, maintenance, and inspection of the pipeline.

B.6.e Measures to Protect Land Use

EPND will obtain and comply with applicable county permits and zoning and land use regulations. Permits may include, but are not limited to, grade and fill permits, ditch crossing permits, road and utility permits and conditional use permits. EPND will retain one or more environmental inspectors to monitor compliance with environmental conditions of county permits.

EPND will repair surface drains and drainage tiles disturbed during right-of-way preparation, construction, and maintenance activities. EPND will repair private roads and farm lanes damaged when moving equipment or when obtaining access to the right-of-way. EPND will repair or replace fences and gates removed or damaged as a result of right-of-way preparation, construction, or maintenance activities.

The Project will be installed at a minimum depth of 48 inches from the surface contour to minimize the potential for environmental damage resulting from deep tillage activities unless modified to accommodate special construction issues at the site. Across undeveloped section lines, EPND will install 72 inches of cover.

Shelter belts and trees will be protected by EPND to the extent practicable in a manner compatible with the safe operation, maintenance, and inspection of the pipeline.

B.6.f Measures to Protect Water Resources

EPND will obtain applicable permits for crossing wetlands and waterbodies and for water appropriations related to hydrostatic testing and trench dewatering. Environmental inspectors will monitor compliance with applicable waterbody and wetland protection requirements during construction of the facilities.

EPND's EPP (see Exhibit J) describes additional mitigation measures, and contains illustrations of how sediment control devices are typically installed at waterbody crossings. Additionally, EPND will maintain a vegetative buffer until the actual crossing of the waterbody takes place. Temporary sediment control measures, such as silt fence installed at each crossing, will minimize the introduction of sediment into waterbodies during construction and minimize the movement of spoil and sediment from surface runoff during and after construction. Permanent erosion control measures, such as vegetation and installation of slope breakers, will effectively stabilize riparian zones. EPND will stabilize stream banks disturbed during construction using methods as directed by applicable state and/or federal permits.

For open-cut crossings, "hard plugs" of soil prevent the flow of water from the waterbody into the adjacent trench and the migration of sediment from the adjacent trench into the waterbody. After the pipe is installed, the trench will be backfilled in such a manner to restore the natural contours of the waterbody to the extent practicable. EPND is presently working with its Engineering Department and applicable permitting agencies to determine the best crossing methodology for each of the waterbodies. Construction methods to be utilized for waterbody crossings are detailed in the Project's EPP (Exhibit J).

Wetland crossings will be conducted in accordance with applicable regulatory requirements. If construction mats or timbers are placed in wetlands to support equipment, they will be removed after construction is completed. In order to maintain surface water hydrology within wetlands, preconstruction contours will be restored and no crown will be left over the trench. If there is a potential for a wetland to be drained by trenching, trench plugs will be installed as needed at the edge of a wetland. In unsaturated wetlands, topsoil will be replaced to facilitate the natural revegetation process.

EPND's EPP (see Exhibit J) specifies several measures to protect wetlands and waterbodies from becoming polluted with fuels or other hazardous materials during construction. This plan prohibits the storage of fuel or other hazardous materials within 100 feet of a wetland or waterbody. The EPP also specifies that equipment must be refueled at least 100 feet from waterbodies unless, due to site-specific conditions, there is no practical alternative. In that case, the contractor must implement site-specific protective measures and containment procedures described in the EPP. Contractors will be required to provide trained personnel, appropriate equipment and materials to contain and clean up releases of fuel, lubricating oil, or hydraulic fluid that result from equipment failure when working in or near wetlands or surface waterbodies.

Water appropriations for hydrostatic testing will be conducted in accordance with applicable permits. EPND will conduct trench dewatering and hydrostatic test discharges in a manner consistent with the NDPDES General Permit NDG-070000. EPND's EPP (see Exhibit J) describes best management practices that will be implemented to minimize off-site erosion from surface water runoff, and protect water and soil resources within the 2-mile wide study area.

Much of the concerns associated with the quality of the water being discharged are addressed by the fact that no additives to the water are permitted unless written approval is received from EPND and applicable permits authorize such additives. Environmental Inspectors will monitor permit compliance. Where appropriate, water will be discharged into

an energy dissipation and/or filtering device to remove sediment and to reduce the erosive energy of the discharge.

B.6.g Measures to Protect Cultural Resources

EPND is conducting Class III inventory surveys throughout the 2-mile wide study area and considering impacts to cultural resources throughout the course of the Project. Avoidance is the preferred method of treatment for historic properties. In the event that a historic property cannot be avoided, EPND will consult with the NDSHPO to mitigate adverse effects and implement appropriate treatment plans

As discussed in Section B.2.i, EPND will not submit information about the specific location of cultural sites or historic properties with this application. In addition, a Unanticipated Discovery Plan ("UPD") was developed (Exhibit K) for use during all Project construction activities that describes actions that will be taken in the event a previously unrecorded cultural resource site is discovered during construction activities.

EPND has prepared its UDP, which describes the actions taken in the event a previously unrecorded paleontological or cultural resource site is discovered during construction activities, specifically calling for work to stop until the correct authority or agency can be contacted, and the find can be properly evaluated.

B.7 QUALIFICATIONS OF PERSONS CONTRIBUTING TO THE STUDY

See Section D.6 of the Application for Certificate of Corridor Compatibility.

B.8 MAPS

See Section D.7 of the Application for Certificate of Corridor Compatibility

B.9 OTHER MATTERS

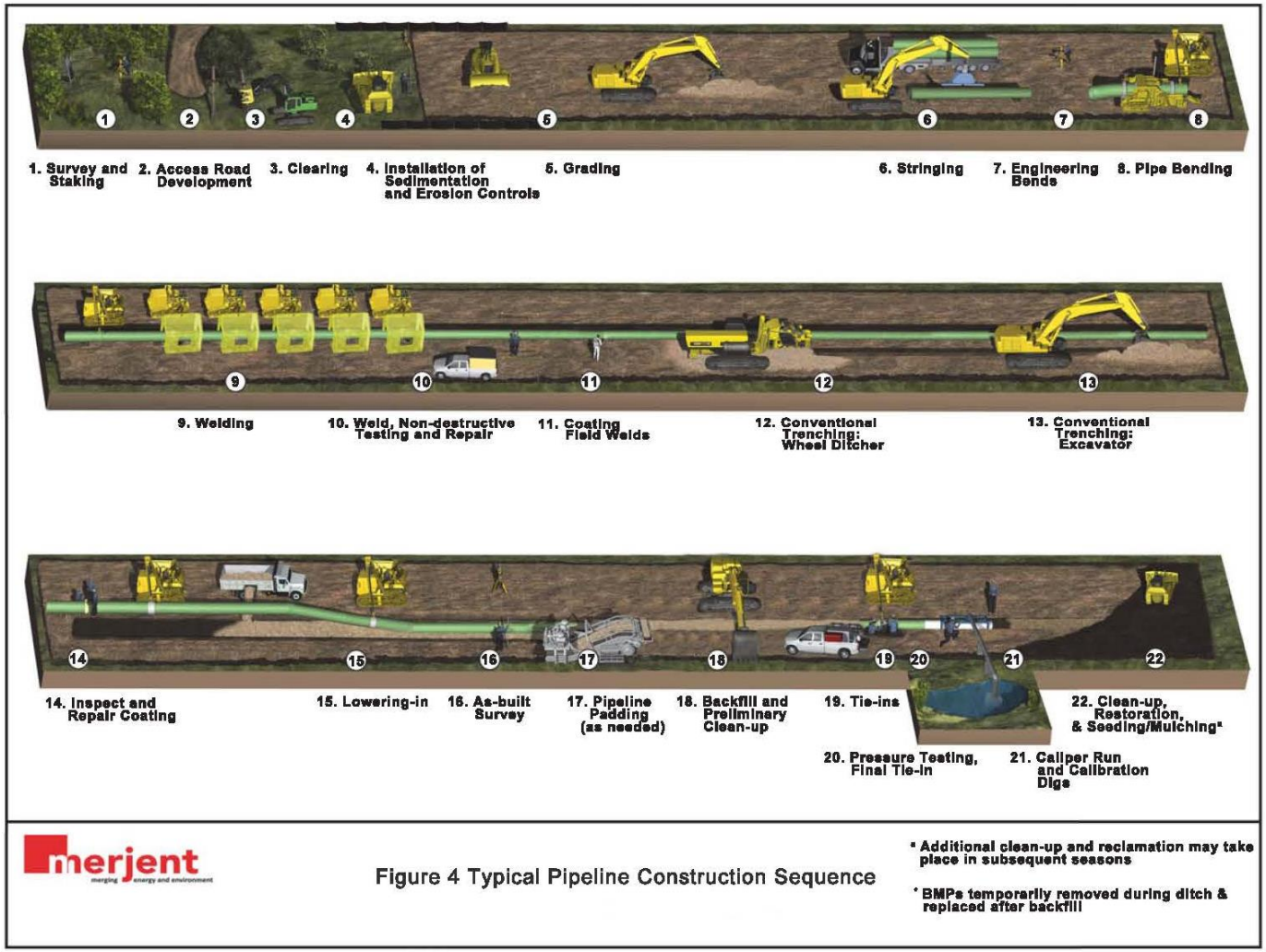
The information provided below is in accordance with North Dakota Century Code, Sections 49-22-08.1 (1)e, (1)f, and (1)g.

B.9.a Present and Future Resource Development

EPND's discussion of present and future resource development in the area is focused on our existing knowledge. Current coal, oil and gas, and sand and gravel operations have been identified, and EPND confirmed they are not conflicting with the route location. No future resource development operations have been identified. (For more details relating to impacts to natural resources, see Sections B.4.c(4)(i), B.4.c(4)(ii), and B.4.c(4)(iii).

B.9.b Right-of-Way Preparation, Construction and Reclamation Procedures

Standard pipeline construction proceeds in the manner of an outdoor assembly line composed of specific activities that make up the linear construction sequence. These operations collectively include survey and staking of the right-of-way, clearing and grading, topsoil stripping, pipe stringing and bending, welding and coating, trenching, lowering-in and backfilling, hydrostatic testing, cleanup, and restoration and revegetation. Figure 4 shows the typical steps of cross-country pipeline construction.


1. Survey and Staking
2. Access Road Development
3. Clearing
4. Installation of Sedimentation and Erosion Controls
5. Grading
6. Stringing
7. Engineering Bends
8. Pipe Bending
9. Welding
10. Weld, Non-destructive Testing and Repair
11. Coating Field Welds
12. Conventional Trenching: Wheel Ditcher
13. Conventional Trenching: Excavator
14. Inspect and Repair Coating
15. Lowering-in
16. As-built Survey
17. Pipeline Padding (as needed)
18. Backfill and Preliminary Clean-up
19. Tie-ins
20. Pressure Testing, Final Tie-In
21. Caliper Run and Calibration Digs
22. Clean-up, Restoration, & Seeding/Mulching*
merjent
Figure 4 Typical Pipeline Construction Sequence
* Additional clean-up and reclamation may take place in subsequent seasons
* BMPs temporarily removed during ditch & replaced after backfill

B.9.b.(1) Survey and Staking

First, the right-of-way is surveyed, staked, and prepared for clearing. The right-of-way is then cleared and graded to the extent necessary to provide construction access and safe movement of equipment and personnel during construction. Silt fence and other erosion control measures are installed, and sensitive areas are marked for avoidance. Appropriate safety measures are implemented before excavation begins, including notification through the North Dakota One-Call system, to ensure foreign utilities and adjacent pipelines are properly marked. Pipe, valves, and fittings are transported to the right-of-way by truck and placed along the right-of-way.

B.9.b.(2) Clearing and Grading

EPND will clear the 120-foot-wide construction right-of-way and additional temporary workspaces. The clearing crew will typically mow, chip, mulch and/or haul off all non-merchantable timber. Burning of non-merchantable wood may be allowed if the contractor has obtained the necessary permits and approvals. All merchantable timber will be property of the EPND unless other arrangements are made with the landowner.

Following clearing, grading of the ground surface may be done to provide a relatively smooth working surface and a safe working area. Typically, a vegetative buffer will be left relatively undisturbed at waterbody crossings, except where grading is needed for bridge installation, until just prior to pipeline installation across the waterbody.

Following grading, temporary bridges will be installed at waterbodies, except for drainage ditches, intermittent waterbodies, and other non-fisheries water, along the pipeline route to provide temporary access for equipment traveling along the construction right-of-way. In addition, temporary erosion control measures will be installed in accordance with EPND's EPP (see Exhibit J).

B.9.b.(3) Topsoil Stripping

Topsoil will be stripped and segregated in agricultural areas, cropland, hayfields, pasture, residential areas, and other areas as requested by the landowner along the pipeline route in accordance with EPND's EPP (see Exhibit J). In unsaturated wetlands, a maximum of 12-inches of surficial soils will also be stripped from the trench areas. Topsoil will be stripped to a maximum depth of 12-inches in cultivated lands.

B.9.b.(4) Stringing and Bending

After individual pipe sections are strung out along the right-of-way they are bent to conform to the contours of the trench and terrain. This operation typically involves specially designed stringing trucks to deliver pipe from pipe yards to the right-of-way. Small portable cranes and/or side-boom tractors are used to unload the stringing trucks and place pipe along the right-of-way. A mechanical pipe-bending machine will bend individual joints of pipe to the desired angle to accommodate natural ground contours or pipeline alignment. In certain areas, prefabricated fittings will be used where field bending is not practicable.

B.9.b.(5) Welding and Coating

The pipe segments are lined up, clamped, welded, and field coated, and the welds are inspected. EPND will inspect the welds, both visually and radiographically. The pipe is typically delivered with a factory coating of fusion-bonded epoxy or similar material to prevent corrosion. EPND will apply coating at welded joints and will electronically inspect the pipe coating before the pipe is lowered into the trench. Trenching may occur before or after the pipe has been welded.

B.9.b.(6) Trenching

Backhoes and/or ditching machines will be used to excavate trenches in accordance with the USDOT's regulations in 49 CFR Part 195.

Where trench dewatering is needed, water will be discharged directly to well vegetated upland areas. Where vegetation is sparse or absent, or in environmentally sensitive areas (e.g., adjacent to waterbodies or wetlands), straw bale dewatering structures or suitable filtering alternatives will be used to minimize siltation in adjacent waterbodies.

B.9.b.(7) Lowering In, Padding, and Backfilling

The prepared pipe is lowered into the trench and, where applicable, tied-in to existing facilities. During backfilling, subsoil is replaced first and then the topsoil is replaced. Precautions, such as padding the trench with soil to prevent damage to the pipeline, are taken during backfilling to protect the pipe from rock damage. Directly above the pipeline, an excess of soil or "crown" will be placed to allow for future settling. Construction debris, including wooden supports, welding rods, containers, brush, trees, or refuse of any kind, will not be permitted in the backfill.

B.9.b.(8) Hydrostatic Testing

The pipeline is hydrostatically tested to ensure its integrity prior to the line being filled with crude oil and placed into service. The testing process will involve filling a segment of the pipeline with water and maintaining a prescribed pressure for a specified amount of time.

The length of individual test segments will be determined by topography and water availability. Water withdrawals used to fill and test the pipelines will be consistent with state regulations and EPND's EPP (see Exhibit J). EPND will obtain hydrostatic test water from major waterbodies crossed by the pipeline and/or municipal sources along the pipeline route. The test water will be discharged through energy dissipation devices to the ground surface or to a nearby waterbody. These discharges will be done in accordance with EPND's EPP (see Exhibit J) and permits issued by the state agencies.

B.9.b.(9) Cleanup and Restoration

The right-of-way is restored, as nearly as practicable, to preconstruction conditions. Restoration includes implementing temporary and permanent stabilization measures such as slope breakers, mulching, and seeding. Fences that are removed to install the pipeline will be reconstructed across the right-of-way. Disturbed areas will be revegetated in accordance with EPND's EPP (Exhibit J), other permit requirements, and site-specific landowner requests.

B.9.c Landowner Issues

B.9.c.(1) Procedures for Landowner Relations

EPND engaged experienced land agents to support land acquisition efforts for the described Project. EPND mailed Project introduction letters to all landowners on the centerline of the approximate ~~299~~300-mile segment and adjacent properties (See Exhibit O). The letters provided a brief Project description, notification that a land agent would be contacting them to request survey permission, Project contact information (toll free phone number, mailing address, email and website) and were accompanied by a brochure outlining the survey process. The landowners have also been personally contacted and made aware of the Project. EPND's land agents received more than 95 percent survey permission to perform civil and environmental survey work activities. In addition to the proposed Project information that has been provided and discussed with landowners during the personal visits, EPND is committed to giving landowners complete information about the Project and keeping them informed throughout construction. EPND has purchased new land at the Beaver Lodge Station and Stanley Station and secured an option agreement to

purchase the land needed for the new proposed facilities at Lakota. EPND's land agents will conduct in person meetings with each landowner to explain the easement purchase process and provide written information. EPND's land agents will provide affected landowners with information regarding the temporary and permanent easement area, including the associated compensation package.

B.9.c.(2) Public Outreach and Landowner Communications

EPND developed a public consultation plan specific to the Sandpiper Project and its route. This plan underscores the importance and value of communication with landowners and communities during planning, permitting and construction of the Sandpiper Pipeline Project. Enbridge has identified and reached out to: affected landowners, elected and public officials at all levels of government (federal to township), emergency responders, business and environmental groups, community groups, other interested parties and the public. We provide opportunities for people to both learn about the Project and provide input during each Project phase. Enbridge's outreach activities include, but are not limited to, Project introductory letters to elected officials and potential landowners along the planned Project route (See Exhibit O), listening sessions and open houses in communities along the Project right-of-way, and one-on-one meetings and group presentations.

In order to ensure a strong public consultation plan, EPND reviewed the issues and concerns in communities along the Project route and received information through said meetings, open houses, and listening sessions. The information was then relayed to the Project team for their consideration and to improve the route selection process. EPND developed several avenues for stakeholders to obtain information on the Project and to contact Project personnel. This includes a Project fact sheet which was developed and included in the introductory mailing to public officials and landowners. The fact sheet has been updated throughout the Project cycle. Web content was posted to Enbridge's project pages specific to the Sandpiper Pipeline Project. This site has been updated consistently as the Project continues with the latest in routing information, fact sheets, and copies of the displays presented to the public during the open houses. A Project toll-free phone number, e-mail address and USPS address have also been established, allowing stakeholders to have ready access as they seek information about the Project. EPND strives to be accessible to the stakeholders affected by the Sandpiper Pipeline Project and, therefore, has been available at several community events, trade shows, and has presented to several civic organizations with information on the Sandpiper Pipeline Project, pipeline safety, construction, and community involvement.

Enbridge hosted listening Sessions in Stanley, Minot, and Grand Forks in May, 2013. Two listening sessions were held in each city. While the first session of each evening was comprised of randomly-chosen members of the general public, EPND recruited landowners for the second session. The goal of each listening session was to facilitate a conversation on energy and community related issues, gain an unbiased level of knowledge about Enbridge in the communities, and provide information about the Project early.

EPND hosted eight open houses August 19-22, 2013 along the proposed route, four of which were focused on North Dakota citizens, at Minot, Stanley, Devils Lake, and East Grand Forks, Minnesota. Open House locations were selected using suggestions from elected officials and county commissioners offered during meetings held earlier in the year. Similar to the Project introductory letters, EPND mailed all elected and government officials, landowners on the centerline and adjacent landowners an invitation to the North Dakota-based open houses. To further publicize the open houses, the company also purchased ads in and sent a news release to local and regional newspapers and posted open house event details on the Sandpiper website. The open houses were conducted in a trade show-style, "come-and-go" format to allow for one-on-one dialogue, relationship building and information exchange tailored to address stakeholders' individual information needs and concerns. Collectively, the open houses attracted more than 500 attendees in North Dakota, Minnesota, and Wisconsin, including landowners, elected officials, media, general public and community leaders. For those unable to attend, EPND posted all information presented, including fact sheets and open house displays, on the Project website.

B.9.d Operations and Safety

B.9.d.(1) Pipeline Operation and Control

The EPND pipeline control center is located in Estevan, Saskatchewan, Canada.

The control center is manned by pipeline operators 24 hours a day. A computerized pipeline control system allows these operators to remotely monitor and control the pipeline and related facilities. The control center also serves as an emergency center to receive calls from employees, the public or public officials reporting unusual conditions or pipeline failures.

The computerized pipeline control system has been designed to control the pipeline within pre-established minimum and maximum operating pressures. Both the computer system and operating practices include procedures for abnormal operating conditions, including

emergency shutdown and isolation of the pipeline and notification procedures in the event of suspected emergencies.

EPND has developed a Control Room Management Plan based on the United States Code of Federal Regulations. EPND has also revised and enhanced its procedures pertaining to decision making, handling pipeline startups and shutdowns, release detection system alarms, communication protocols, and suspected column separations. EPND has enhanced its organizational structures to better support pipeline operators and to manage span of control and workloads.

B.9.d.(2) Communications Capabilities

A Frame Relay Wide Area Network ("WAN") provides the primary communications exchange for pipeline monitoring and control. A dial-up back-up system or satellite system is used during primary communication failures. Communications to monitor and control remote valves utilize frame relay land line connection, spread spectrum radios, or cellular based radios to connect to the WAN. EPND supplements communications with the use of cellular phones, as needed, to facilitate personnel communications during operation, maintenance, or emergency activities.

Land lines are used to exchange the necessary computerized data for pipeline monitoring and control. EPND uses cellular phones to facilitate personnel communications during operation, maintenance, or emergency activities.

B.9.d.(3) Protection of the Pipe from Damage

EPND has an aggressive program in educating excavators and the public about the presence of the pipeline and preventing damage to the pipeline from excavating equipment. As in all other states where EPND and affiliates have existing facilities, EPND has joined and supports the North Dakota One-Call system.

The pipeline is protected from corrosion in a number of ways. The pipe is covered with a modern, fusion-bonded protective coating. All buried or submerged metallic structures (pipeline systems) are under a cathodic protection system, as required by Pipeline Safety Regulations. The cathodic protection system induces a very mild electrical current to prevent corrosion of the steel pipe and related structures.

Additionally, all of EPND's operations, including its standards for quality of the oil it can accept for shipment are regulated through EPND's tariff by the FERC under the Interstate Commerce Act of 1887. The tariff requires a shipper to deliver crude oil to EPND with

certain quality standards and includes safety and quality standards designed to protect the integrity of the pipeline and the safety of the public and environment. EPND verifies that the oil entering its system meets those standards, and a shipper is required to provide EPND with a certificate that sets out the specifications of the oil it submits to EPND. One of the many quality standards set in the tariff, is that crude oil on the EPND system can contain no more than 0.5 percent, by volume, of sediment or water. Other quality control aspects of the tariff relate to temperature, viscosity, density, and various physical characteristics of the oil. Additionally, EPND always has the ability to reject a shipment or remove a shipper's oil if it does not meet EPND's standards or if it poses a risk to EPND's facilities.

B.9.d.(4) Inspections

EPND conducts routine inspections of the pipelines and facilities to determine that the system is operating properly and in compliance with 49 CFR Part 145.

The cathodic protection system is monitored by taking pipe/structure-to-soil and line current readings (where possible) each calendar year (not to exceed a 15-month interval). Additionally, each rectifier and anode groundbed used to impose cathodic protection on the pipeline is inspected to ensure proper operation. Repairs and adjustments to the cathodic protection system are either made during the annual survey or during later maintenance activities. At least six times per year, each critical cathodic protection interference bond to foreign structures is inspected and corrective measures are implemented, as needed.

EPND also periodically evaluates the effectiveness of its cathodic protection system by conducting supplemental close interval surveys (e.g., close interval pipe to soil, etc.) of the system. Although not required by regulation, this method allows EPND to assess overall effectiveness of the pipeline protection system.

The North Dakota Pipeline System, including aerial observation of stations and surrounding areas, is patrolled by air at least 26 times per year to inspect surface conditions of land on or adjacent to the pipeline right-of-way. Line walking inspection of the right-of-way is sometimes used to supplement aerial inspections in congested areas. This inspection also assists in identifying unknown construction or other unsafe activity on the pipeline right-of-way.

Isolating valves are checked at least twice per year to ensure proper operation. In the event of a release, it is important for valves to close properly to isolate the section of pipeline and minimize product release. Other components of the pipeline, such as tanks and pump stations, are also routinely inspected.

EPND periodically inspects the transmission segments of its pipeline system, in accordance with the integrity management standards of 49 C.F.R. Part 195. These inspections are conducted by a combination of hydrostatic testing, direct assessment and internal integrity inspections with the use of electronic inspection tools commonly called "smart pigs." These devices travel through the inside of the pipeline and use on-board sensors and computers to look for and examine any unusual conditions (dents, gouges, corrosion, or cracks) in the pipe. Results of the inspection are then analyzed, and if a feature is found, the pipeline is inspected to verify preliminary findings and repair as required.

EPND implemented an Integrity Management Program (IMP) as required by federal pipeline regulations that requires, among many things, pipelines located in certain higher consequence areas to be internally inspected at prescribed intervals.

All overpressure safety devices capable of limiting, regulating, controlling and/or relieving operating pressures are inspected and tested to ensure the device is in good mechanical condition and functioning properly.

Inspectors from the Pipeline Hazardous Materials Safety Administration ("PHMSA") (and their agents from MNOPS for the Minnesota portion of the system) periodically inspect the EPND's compliance with applicable government regulations. Inspections of the EPND's written procedures, records, and facilities are also periodically conducted by EPND and these agencies.

B.9.d.(5) Maintenance

EPND has a comprehensive preventative maintenance program that meets and, in many cases exceeds, minimum federal safety standards set forth in 49 CFR Part 195. When facilities are added or replaced, there are comprehensive standards for their design and installation in both EPND procedure manuals and contract specifications. Repair pipe is pre-tested and other components used to repair the pipeline meet national standards and regulatory requirements. Other procedures, such as welding procedures, movement of the pipe, coating repair, corrosion control, and tank maintenance, are all guided by written procedures, which have been reviewed by the PHMSA inspectors. Accordingly, as EPND adds new facilities to its system, it ensures that they are incorporated into the ongoing preventative maintenance program.

B.9.d.(6) Training of Personnel

EPND has established a comprehensive orientation, technical, safety, emergency, and on-the-job training program that is in compliance with the Operator Qualification rules issued

under 49 CFR Part 195. As personnel progress in pipeline operation and maintenance positions, they receive hundreds of hours of formal and on-the-job training. Demonstrations of competence are shown through a variety of measures that include review of job performance, periodic pipeline control system simulators, emergency exercises, welding certification tests, and other functions required to maintain safe pipeline operation and maintenance.

B.9.d.(7) Public Awareness Program

EPND conducts a comprehensive Public Awareness Program to provide important pipeline safety information to those who live and work near our pipelines. Annually, we mail public awareness information to affected members of the public (those who work and live in the vicinity of the pipeline), schools, excavators, farmers, local public officials and emergency responders. Key messages include how to recognize and respond to a pipeline emergency and how to prevent third-party damage to pipelines. Enbridge participates in pipeline safety awareness meetings facilitated by the North Dakota Pipeline Association (NDPA) in each of our areas of operation. These meetings provide critical safety information to emergency response and public officials. Enbridge also participates in county-wide One-Call educational presentations for excavators in conjunction with the North Dakota One-Call Board. All excavators working within our counties of operation are invited to attend. Schools within 1,200 feet of our pipeline are provided with additional pipeline safety information via mail and online and are visited a minimum of once every three years. EPND has also been active at the local, county, and state level in emergency response planning and joint training/exercises to prepare all responders for potential emergency response.

EPND offers a free online Emergency Responder Education Program. The content is based on “Pipeline Emergencies,” an industry-leading pipeline emergency response training program developed by the National Association of State Fire Marshals. The program also includes information specific to EPND pipelines and the products transported on our systems. Through the course, emergency responders will learn the basics of gas and liquids pipeline operations, the potential hazards associated with the products transported by EPND, pipeline emergency response tactics, and how to apply the information to real-life situations.

EPND has trained Emergency Response Ambassadors in each geographical area to provide additional face-to-face training and information to PSAPS (Public Safety Answering Points) and emergency responders with the primary focus being those within a 5 minute response time of the pipeline.

The pipeline route is marked at all public roads and railway crossings (at a minimum) to increase the public's awareness of the underground pipeline. Additional markings are posted at valves, other pipeline facilities, and stations along the pipeline route.

B.9.d.(8) Emergency Preparedness

EPND's operating and maintenance practices are aimed at preventing emergencies. However, it is imperative that EPND is prepared to respond to an emergency. Enbridge has emergency response plans in place to work promptly and effectively with local emergency responders utilizing the Incident Command System (ICS) and Unified Command. EPND employees also conduct extensive training with oil release response techniques and equipment. EPND employees train with local emergency responders at all equipment deployment exercises.

EPND is prepared to respond to an emergency with extensive site-specific emergency response readiness utilizing control point and high quiescence mapping and tactical response plans for areas of concern. There are response trailers located at key points along the pipeline which include personal protective equipment and air quality monitors, containment and absorbent booms and skimmers, vacuum trucks and heavy equipment. Along with trained EPND response employees, there are maintenance crews and a vast network of contract equipment and emergency resource personnel trained in emergency response, including contracted Oil Spill Response Organizations ("OSROS"), staged all along our system.

In addition to preventative activities described above, EPND's Integrated Contingency Plan has been prepared in compliance with PHMSA rules under 49 CFR Part 194. The Integrated Contingency Plan has been submitted and approved by PHMSA and includes pre-planning, equipment staging, notifications, training requirements and emergency response procedures. Oil recovery techniques and equipment direction is found in the Enbridge Oil Spill Tactics Guide.

B.9.d.(9) Release Response

The introduction of contaminants into groundwater due to accidental release of construction related chemicals, fuels, or hydraulic fluid during construction could have an adverse effect on groundwater quality, most notably near shallow water wells. Release-related impacts from pipeline construction are primarily associated with fuel storage, equipment refueling, and equipment maintenance. EPND's EPP (see Exhibit J) outlines measures that will be implemented to prevent accidental releases of fuels and other hazardous substances. The EPP also describes response, containment, and cleanup procedures. By implementing the

protective measures set forth in the EPP, long-term contamination due to construction activities is not anticipated.

As part of the pipeline operation, which is regulated by the USDOT-OPS, EPND will implement an ongoing inspection program to monitor the integrity of the pipeline system. Monitoring activities include regular inspection of the cathodic protection system, which addresses the possible corrosion potential for a steel pipe installed below grade. In addition, EPND will use computerized inspection tools that travel through the inside of the pipeline to check pipe integrity. EPND also performs regular aerial flyovers to inspect the pipeline right-of-way. As required by federal law, EPND will maintain an Emergency Response Plan to address pre-planning, equipment staging, notifications, and release containment procedures to be implemented in the event of a pipeline release.

B.9.d.(9)(i) Protection from Fuel Releases

EPND has developed procedures to minimize the potential for accidental releases of petroleum or other substances during construction, and has included them in the EPP (see Exhibit J). Water resources will be protected from fuel releases by prohibiting the storage of fuel within 100 feet of a wetland or surface waterbody. Refueling and overnight parking of equipment will not be allowed within this zone unless, due to site-specific conditions, there is no practical alternative. Contractors will be required to provide adequately trained personnel, and proper equipment and materials to contain and clean up releases of fuel, lubricating oil or hydraulic fluid that result from equipment failure.

B.9.d.(10) Status of Required Permits

As discussed herein, EPND is working with various federal, state, and local agencies to secure the appropriate permits required for the Project in North Dakota. Table 21 shows EPND's current status in obtaining permits.

TABLE 21
Status of Environmental Permits and Authorizations

Permit/Authorization	Status of Permit/Authorization
FEDERAL	
1. COE-Omaha District – Request for Jurisdictional Determination and Application for Nationwide Permit (NWP) 12 Section 404 Permit	Anticipated submittal: ~~February 2014~~ January 2014 Anticipated issuance: October 2014
2. NDSHPO – NHPA Section 106 Compliance	Anticipated submittal: January 2014 (submittal of 2013 field reports) September 2014 (submittal of 2014 field reports) Anticipated issuance: October 2014
3. USFWS – Endangered Species Act Section 7 Compliance[1]	Anticipated submittal: February 2014 Anticipated issuance: ~~October 2014~~ January 2015
4. USFWS – Wetland and Grassland Easements[2]	Consultation ongoing
STATE	
1. ND-PSC – Certificate for Corridor Compatibility	Anticipated submittal: October 2013 Anticipated issuance: March 2014
2. ND-PSC – Route Permit	Anticipated submittal: October 2013 Anticipated issuance: March 2014
3. NDDH – Air Quality Permits to Construct (Berthold, Stanley, and Beaver Lodge~~, and Lakota Stations~~)	Anticipated submittal: ~~April 2014~~ January & February 2014 Anticipated issuance: ~~July 2014~~ April 2014
4. NDDH – Air Quality Permits to Operate (Berthold, Stanley, and Beaver Lodge~~, and Lakota~~ Stations)	Anticipated submittal: ~~November 2013~~ n/a[3] Anticipated issuance: April 2014
5. NDDH – Construction Stormwater and Temporary Dewatering General Permit (NDR10-0000) SWPPP – facilities	Anticipated submittal: April 2014 Anticipated issuance: May 2014
6. NDDH – Construction Stormwater and Temporary Dewatering General Permit (NDR10-0000) and SWPPP – mainline	Anticipated submittal: October 2014 Anticipated issuance: November 2014
7. NDDH – Permit(s) to discharge hydrostatic test water (General Permit NDG-070000)	Anticipated submittal: October 2014 Anticipated issuance: November 2014
8. NDSWC –Temporary Water Permit/Water Withdrawal Permit(s)	Anticipated submittal: October 2014 Anticipated issuance: November 2014
79. NDSWC – Sovereign Lands Permit	Anticipated submittal: June 2014 Anticipated issuance: October 2014
10. NDSLD – License to Cross School Trust Lands	Anticipated submittal: March 2014 Anticipated issuance: ~~June~~ July 2014
11. NDGF – Wetland, Stream, and Wildlife Review	Initial consultation has been completed. EPND will continue to coordinate with NDGF, as needed.

TABLE 21

Status of Environmental Permits and Authorizations

Permit/Authorization	Status of Permit/Authorization
12. NDPR – National Heritage Inventory Review	Initial consultation has been completed. EPND will continue to coordinate with NDPR, as needed.
13. County Floodplain Administrators	Anticipated submittal: March 2014 Anticipated issuance: May 2014
Local	
13. County Floodplain Administrators	Anticipated submittal: March 2014 Anticipated issuance: May 2014

[1] Formal consultation with USFWS is anticipated to be concurrent with the processing of COE NWP 12 application.

[2] EPND will continue to coordinate with USFWS regarding these easements to identify potential avoidance/mitigation measures, or special construction techniques across these areas.

[3] A formal application is not submitted for a permit to operate. After startup, the NDDH conducts a site visit to verify all conditions of the permit to construct have been satisfied. The NDDH issues a permit to operate after the permit to construct conditions have been verified.