North Dakota Public Service Commission
Consolidated Application

Certificate of Corridor Compatibility and Route Permit

DAPL Connector Pipeline Project

Prepared for:
Epping Transmission Company, LLC

Prepared by:
E3 Environmental, LLC

August, 2016

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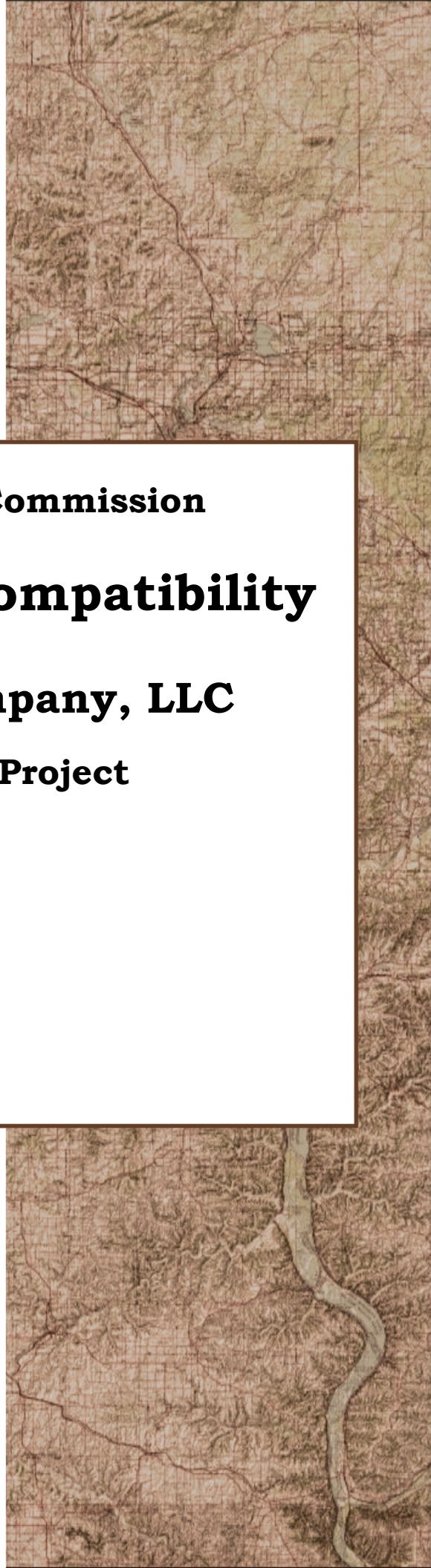

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TABLE OF CONTENTS

APPENDICES

INTRODUCTION

Epping Transmission Company, LLC. (Epping Transmission) is proposing the new DAPL Epping Facility Connector Pipeline Project (Project), which would be located in Williams County, North Dakota. The Project will connect the Epping Station and the existing Divide Mainline Pipeline to the DAPL Epping Facility. The project would originate at the existing Epping Station, located in Williams County, ND approximately 0.4 miles south of Epping, ND and extend northeast to terminate at the DAPL Epping Facility, which is located approximately 1.8 miles northeast of Epping, ND. The Project scope includes a new 12.75-inch diameter crude oil pipeline totaling approximately 3.2 miles in length and two pipeline connections to the existing Divide Mainline and the new DAPL valve site. The connections will include a new 8-inch pipeline which will deliver crude oil from the Divide Mainline to the valve site and a second 8-inch pipeline which will deliver crude from the valve site back to the Divide Mainline. Each connection line is approximately 0.1-miles in length. Project maps can be found in Appendix B. Epping Transmission submits to the North Dakota Public Service Commission (PSC or Commission) a single consolidated application for a Certificate of Corridor Compatibility and Route Permit for the Project. The existing Divide Mainline was previously sited by the ND PSC, case number PU-14-223.

The application provides the requisite information as stipulated by:

- North Dakota Century Code, Energy Conversion and Transmission Facility Siting Act, Section 49-22-08; and,
- North Dakota Administrative Code, Chapter 69-06-05, Transmission Facility Permit.

SECTION 1: DESCRIPTION

1.1 TYPE AND SIZE OF FACILITY

1.1.1 TYPE

The Project will result in a new crude oil transmission pipeline and two pipeline connections with the existing Divide Mainline. The steel pipelines will meet U.S. Department of Transportation (DOT) regulations, specifically the design criteria outlined in 49 C.F.R. part 195 subpart C. The Project will be constructed per 49 C.F.R. part 195 subpart D, and operated and maintained per 49 C.F.R. part 195 subpart F.

1.1.2 SIZE

The Project pipeline specifications are the following:

Transmission Pipeline:

- 12.75-inch diameter steel pipe
- 0.375-inch line pipe wall thickness, 0.500-inch bore pipe wall thickness
- Normal Operating Pressure: 200 pounds per square inch gauge (psig)
- Maximum Operating Pressure: 1440 psig
- Normal Throughput: approximately 30,000 barrels per day (bpd)
- Maximum Throughput: approximately 70,000 bpd
- Maximum Operating Temperature: 100 degrees Fahrenheit

Connection Pipelines:

- 8-inch diameter steel pipe
- 0.322-inch line pipe wall thickness
- Normal Operating Pressure: 200 pounds per square inch gauge (psig)
- Maximum Operating Pressure: 1440 psig
- Normal Throughput: approximately 20,000 barrels per day (bpd)
- Maximum Throughput: approximately 50,000 bpd
- Maximum Operating Temperature: 100 degrees Fahrenheit

1.1.3 LENGTH

The Project is approximately 3.2 miles in length. Each connection line is approximately 0.1-mile length.

1.2 PURPOSE OF FACILITY

The purpose of the Project is to transport crude oil from Epping Station and the Divide Mainline to the DAPL Epping Facility. From the DAPL Epping Facility, the product will be transported via interconnecting pipelines for distribution to refineries across the United States. The purpose of the connection lines is to allow operational flexibility to the existing infrastructure as these lines will allow crude to be added to or taken away from the DAPL Connection Pipeline.

1.3 LOCATION

The Project will be located in Williams County, North Dakota and result in a transmission pipeline originating at the existing Epping Station, and will extend to the northeast to terminate at the DAPL Epping Station, which is located approximately 1.8 miles northeast of Epping, ND. Additionally, two pipeline connections will be constructed connecting the existing Divide Mainline and the DAPL connection pipeline. Refer to the Project maps provided in Appendix B.

1.4 ABOVEGROUND FACILITIES

All tie-in facilities will be located within the existing facility fence lines. One block valve would be constructed, located just north of Epping, ND where the Project crosses Highway 8 or 60th Street Northwest. The location is depicted on the maps in Appendix B and valve site schematics can be found in Appendix A.

1.5 PROJECT SCHEDULE

1.5.1 CERTIFICATE OF CORRIDOR COMPATIBILITY

Epping Transmission seeks a Certificate of Corridor Compatibility on or before November 2016.

1.5.2 ROUTE PERMIT

Epping Transmission seeks a Route Permit on or before November 2016.

1.5.3 RIGHT-OF-WAY ACQUISITION

Epping Transmission is in the process of acquiring right-of-way; approximately 71% (5 of 7 tracts) of the right-of-way has been acquired. Epping Transmission is actively working with the remaining landowners to finalize their agreements.

1.5.4 CONSTRUCTION SCHEDULE

Epping Transmission has scheduled construction activities to commence during the fourth quarter of 2016. The construction activities will take approximately two (2) months to complete. Commissioning and restoration activities will commence immediately after construction is complete.

1.5.5 ADDITIONAL PROJECT PERMITS OR AUTHORIZATIONS

The Project will be constructed in compliance with applicable federal, state and local laws, regulations or plans. Epping Transmission will obtain necessary permits or approvals for the construction and operation of the Project.

SECTION 2: STUDIES

2.1 CORRIDOR

Epping Transmission selected the proposed corridor based upon several criteria designed to conform to the PSC's siting requirements and to avoid and minimize socioeconomic and environmental impacts, while maximizing the benefits to local resource developers in the Williston Basin. The location of existing assets was also considered during the selection process. Epping Transmission's process of selecting a corridor to site the Project was influenced by the opportunity to parallel with other utility corridors.

The proposed corridor is a one-mile wide area centered upon a proposed alignment which was selected utilizing web-based mapping tools (*i.e.*, one-half mile on either side of the proposed alignment) (Corridor). The Corridor is illustrated on the maps in Appendix B.

A comprehensive desktop analysis of the Corridor included consultations with the federal and state agencies identified below. These consultations were conducted for the purpose of environmental resource assessment as stipulated by the PSC's siting requirements for a Transmission Facility Corridor. Consultation letters were distributed on July 19, 2016. The results of the environmental analysis are summarized in Section 2.2 of this document. Records of the agency consultations are provided in Appendix C.

- U.S. Fish and Wildlife Service (USFWS)
- North Dakota Game and Fish Department (NDGFD)
- North Dakota Parks and Recreation – Natural Heritage Program (NDPRD)
- North Dakota Department of Trust Lands (NDDTL)
- North Dakota State Water Commission (NDSWC)
- North Dakota State Historic Preservation Office (NDSHPO)
- Western Area Water Supply Authority (WAWSA)
- Williams County Water Resource Board (WCWRB)
- Williams County Weed Control Board (WCWCB)

2.2 ENVIRONMENTAL DESKTOP ANALYSIS

2.2.1 WILDLIFE INVENTORY

Approximately 160 wildlife species are residents or seasonal visitors to the greater Missouri River ecosystem, and hundreds of native fish species live in the mainstream and its tributaries. Some of these animal species include fur-bearing mammals (*e.g.*, beaver, muskrat, moose, eastern cottontail, elk, moose and mule deer), birds and waterfowl species (*e.g.*, mallard, Canada goose, sharp-tailed grouse and golden and bald eagles). Species classified as threatened or endangered by the Endangered Species Act (ESA) may occur within the Project County.

Epping Transmission engaged federal and state agencies in consultations to identify potential occurrences of sensitive species or their critical habitats. Refer to Appendix C for a complete record of agency consultations.

2.2.2 WETLAND AND WATERBODIES ANALYSIS

To evaluate the location and extent of mapped wetlands and waterbodies within the Corridor, a desktop analysis of aerial photography, National Hydrography Data set (NHD) and National Wetland Inventory (NWI) maps was completed. The desktop analysis identified three (3) waterbodies, five (5) waterways and approximately 61 wetland features within the Corridor. Epping Transmission commissioned field studies to augment the desktop analysis. The field study results are discussed in the associated Route Permit Application.

2.2.3 TREE/SHRUB ANALYSIS

A desktop analysis of aerial photography was used to evaluate the location and extent of woody vegetation within the Corridor. The density of the woody cover in this region is generally sparse, and typically associated with significant topographic relief such as defined banks, incised drainage channels or agricultural windrows. The desktop analysis was augmented with field surveys. The field survey results are contained in Appendix D and discussed in detail in the Route Permit Application.

2.3 AGENCY CONSULTATIONS

2.3.1 U.S. FISH AND WILDLIFE SERVICE

The USFWS administers several programs designed to identify and protect special status plant and animal species, critical habitats and lands managed by the agency. E3 Environmental, LLC (E3), on behalf of Epping Transmission, sent a Project consultation letter with maps of the Corridor on July 19, 2016. A response from the USFWS is pending. Refer to Appendix C for a record of this consultation.

2.3.1.1 FEDERALLY PROTECTED SPECIES REVIEW

The USFWS identifies and maintains a list of species and critical habitats that have been afforded protection by the ESA. The ESA provides a program for the conservation of threatened and endangered plants and animals and their critical habitats.

E3 reviewed USFWS published data and identified the following listed species and/or designated critical habitat with the potential to occur within the Corridor.

- Whooping crane (*Grus americana*) – Endangered
- Least tern (*Sternula antillarum*) – Endangered
- Pallid sturgeon (*Scaphirhynchus albus*) – Endangered
- Gray wolf (*Canis lupus*) – Endangered
- Red Knot (*Calidris canutus rufa*) – Threatened
- Piping plover (*Charadrius melodus*) – Threatened

- Northern long-eared bat (*Myotis septentrionalis*) – Threatened

E3 reviewed available information describing the life history, critical habitats, and conservation measures associated with each species to assess the potential effects of the Project on these resources. The results of the assessment are provided below.

Whooping crane: The Aransas Wood Buffalo Population of Whooping Cranes engages in semi-annual migration through North Dakota. This flock breeds in the Wood Buffalo National Park in Alberta and Northwest Territories, Canada, and winters in the Aransas National Wildlife Refuge in Texas. North Dakota provides migratory habitat for the species, providing roosting and feeding opportunities during migration. During migration, the species is most closely associated with larger wetland complexes for roosting habitat, typically using adjacent uplands to forage. The Project is located within the migratory corridor for the whooping crane and potential foraging habitat exists within the Corridor.

Least tern: Lake Sakakawea and the Missouri River, located approximately 11 miles south of the Project, provide suitable breeding and nesting habitat for least terns. The Corridor does not contain the sandbars and riverbanks necessary for nesting, so impacts to the interior least tern are not anticipated.

Pallid sturgeon: The preferred habitat of the pallid sturgeon includes the benthic environment associated with swift waters of large turbid, free-flowing rivers with braided channels, dynamic flow patterns, periodic flooding of terrestrial habitats, and requires extensive micro habitat diversity. The species inhabits the Missouri and Mississippi Rivers from Montana to Louisiana. In North Dakota, reaches of the Missouri River system have been cited as providing suitable habitat for the pallid sturgeon. However, much of the habitat has been compromised from channelization, installation of impoundments, and altered flow regimes. Potential suitable habitat is not present in the Corridor, so impacts to the pallid sturgeon are not anticipated.

Gray wolf: The gray wolf uses a variety of habitats that support a large prey base including montane and low-elevation forests, grasslands and desert scrub. The Corridor generally lacks forested habitat and is a great distance from the known Minnesota and Manitoba populations. This species is not tolerant of human disturbance and will tend to avoid interaction with humans. The activities associated with construction and later operations will likely serve as a deterrent to this species. Therefore, impacts to the gray wolf are not anticipated.

Rufa red knot: North Dakota is a possible migration stopover in spring and autumn for the rufa red knot, particularly within Lake Sakakawea and its major tributaries. The rufa red knot migrates between breeding grounds in Canada and wintering grounds in South America. A significant factor threatening the rufa red knot is the loss or modification of its habitat due to beach erosion and shoreline protection efforts. Migratory behavior and habitat requirements of this species are poorly understood,

particularly for those populations occupying the midcontinent flyways. Inland stopovers include the Mississippi Valley, Great Lakes and Great Plains. Suitable habitat is not present within the Corridor; therefore, impacts to the rufa red knot are not anticipated.

Piping plover: The piping plover is a small shorebird that nests on open, sparsely vegetated sand or gravel beaches adjacent to alkali wetlands and on beaches, sand bars and dredged material islands of major river systems. The shorelines of the Missouri River and Lake Sakakawea provide suitable habitat for breeding and nesting, however, the shoreline of the Missouri River is located approximately11 miles south of the Project. Desktop review of the Corridor did not identify potentially suitable habitat within the Corridor.

Northern long-eared bat: The northern long-eared bat roosts underneath bark, in cavities, or in crevices of both live and dead trees. Populations have also been found in cool environments such as caves and mines and prefer to spend winter hibernating in locations with high humidity and no air currents. Breeding occurs in late summer or early fall in maternity colonies where females give birth around the same time, which may occur anywhere from late May to late July. Most records of northern long-eared bats are from winter hibernacula surveys, and no known hibernacula have been identified in North Dakota.

Dakota skipper: The Dakota skipper is a butterfly native to North Dakota that has recently been listed as threatened under the ESA by the USFWS. This species is dependent on intact (e.g.; undisturbed) native prairie and is intolerant of habitat disturbance. The USFWS manages the species and its critical habitat. A review of USFWS published data confirmed that the agency has no confirmed occurrence of this species, and does not manage any designated critical skipper habitat in Williams County, North Dakota.

2.3.1.2 MIGRATORY BIRD TREATY ACT

The USFWS is responsible for the protection of migratory birds. Management of this responsibility has largely focused on protection of the birds while on their breeding grounds during the breeding season. In North Dakota, species protected under the MBTA are present throughout the year. However, it is generally acknowledged that the majority of protected species seasonally present in North Dakota nest from February 1st through July 15th. The proposed Project construction is scheduled to commence in October of 2016 and take approximately two (2) months to reach completion. Due to the Project schedule and phenology of resident birds, MBTA mitigation is not likely to be required, as construction will occur outside of the typical nesting season. Should mitigation be required, Epping Transmission will continue to consult with agencies as necessary and will develop MBTA mitigation plans as appropriate.

2.3.1.3 BALD AND GOLDEN EAGLE PROTECTION ACT

The Bald and Golden Eagle Act (BGEA) prohibits anyone without a permit from taking a bald or golden eagle including their parts, nests or eggs. The BGEA defines "take" as to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb. The BGEA also addresses impacts resulting from human-induced alterations occurring around previously used nesting sites. Suitable eagle habitat may occur within the Corridor.

2.3.1.4 U.S. FISH AND WILDLIFE MANAGED LANDS

The USFWS administers National Wildlife Refuges and Waterfowl Production Areas (WPAs) as well as wetland and grassland easements throughout North Dakota. A desktop review of information available in the public domain, including U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle maps, USGS PAD-US dataset, and the USFWS Information, Planning, and Conservation System (IPaC) has been completed for the Corridor. The desktop analysis indicates no USFWS managed lands are located within the Corridor.

2.3.2 NORTH DAKOTA GAME AND FISH DEPARTMENT

The NDGFD has oversight of the State's game species. On July 19, 2016, E3, on behalf of Epping Transmission, initiated consultations with the NDGFD requesting information regarding the presence or absence of State Conservation Priority Species within the Corridor. NDGFD response is pending. Refer to Appendix C for a record of this communication.

2.3.3 NORTH DAKOTA PARKS AND RECREATION DEPARTMENT

The NDPRD Natural Resource Division's scope of authority and expertise covers recreation and biological resources (in particular, rare species and ecological communities). The NDPRD also maintains a database comprised of the location and recorded occurrences of plant and animal species of special concern. The NDPRD authority includes management of state park lands and Land and Water Conservation funded recreation projects.

On July 19, 2016, E3, on behalf of Epping Transmission, initiated consultations with the NDPRD seeking confirmation regarding the presence or absence of managed lands, ecological resources, rare species or their critical habitats within the Corridor. A written response is pending. See Appendix C for a record of the correspondence.

2.3.4 NORTH DAKOTA DEPARTMENT OF TRUST LANDS, MINERALS AND SURFACE MANAGEMENT

The NDDTL is in charge of managing surface acres and mineral interests held in trust for various schools and institutions.

On July 19, 2016, E3, on behalf of Epping Transmission, initiated consultations with the NDDTL Surface Management Division requesting comments regarding the presence

or absence of School Trust Lands within the Corridor. The NDDTL Surface Management Division responded on July 20, 2016 confirming the absence of state School Trust Lands within the Corridor. Refer to Appendix C for a record of this consultation.

Also on July 19, 2016, E3, on behalf of Epping Transmission, initiated consultations with the NDDTL Minerals Management Division requesting comments regarding the presence or absence of State Mineral Trust lands within the Corridor. The NDDTL Minerals Management Division responded on July 20, 2016 confirming the presence of Mineral Trust land tracts within the Corridor as depicted in the consultation map. Refer to Appendix C for a record of the correspondence.

2.3.5 NORTH DAKOTA STATE WATER COMMISSION

The NDSWC administers water appropriation and sovereign lands permit programs, and may have relevant information regarding rural water supply systems.

On July 19, 2016, E3, on behalf of Epping Transmission, initiated consultations with the NDSWC requesting comments regarding the presence of sovereign lands and/or rural water supply systems within the Corridor. A written response was received is pending. Refer to Appendix C for a copy of this correspondence.

2.3.6 NORTH DAKOTA STATE HISTORICAL PRESERVATION OFFICE

The NDSHPO is responsible for managing the historic and archaeological resources of the state; as such, the NDSHPO maintains records of all previously recorded cultural resources within the state.

A Class I inventory was conducted in June 2016, which identified ten (10) completed cultural resources surveys (MS#3251, MS#9856, MS#11987, MS#14750, MS#15020, MS#15860, MS#15938, MS#16512, MS#16513, and MS#16625) within the Corridor. Ten previously-recorded cultural resources are located within the Project Corridor, including eight *sites* (32WI81, 32WI82, 32I481, 32WI791, 32WI1169, 32WI1493, 32WI1165, and 32WI11678) and two *isolates* 32WIX433, and 32WIX569.

To augment the Class I inventory, a Class III field investigation was conducted, with the details of this effort included in the associated Route Permit Application. Refer to Appendix E for the Cultural Resources Report. This report was submitted to the SHPO on July 22, 2016 and concurrence was received on July 26, 2016.

2.3.7 WESTERN AREA WATER SUPPLY AUTHORITY

The Corridor occurs entirely within the WAWSA's five county jurisdiction. These counties include Burke, Divide, McKenzie, Mountrail and Williams. WAWSA utilizes a combination of Missouri River water treated at the Williston Regional Water Treatment and ground water treated by the R&T Water Supply Commerce Authority's Water Treatment Plant in Ray to supply and meet the needs of municipal, rural and industrial water users in five northwestern North Dakota counties including Williams County. On July 19, 2016, E3, on behalf of Epping Transmission, initiated consultations with the

WAWSA requesting comments regarding the presence of reservoirs or municipal water supplies within the Corridor. A response is pending. Refer to Appendix C for a copy of this correspondence.

2.3.8 WILLIAMS COUNTY WATER RESOURCE BOARD

The WCWRB is responsible for managing any drains, ditches and/or other drainage systems regulated by the county; as such, the WCWRB has knowledge of the county-regulated drains, ditches and/or other drainage systems.

On July 19, 2016, E3, on behalf of Epping Transmission, initiated consultations with the WCWRB requesting comments regarding the presence of county-regulated drains, ditches and/or other drainage systems within the Corridor; a response is pending. Refer to Appendix C for a copy of this correspondence.

2.3.9 WILLIAMS COUNTY WEED CONTROL BOARD

The WCWCB maintain records for the location and species of noxious weeds within the county. On July 19, 2016, E3, on behalf of Epping Transmission, initiated consultations with the WCWCB requesting comments regarding the presence of noxious weeds within the Corridor; a response is pending. Refer to Appendix C for a copy of this correspondence.

SECTION 3: NEED FOR FACILITY

3.1 ANALYSIS OF NEED BASED ON PRESENT AND PROJECTED DEMAND INCLUDING SYSTEM STUDIES

The Project will transport product from formations in the Williston Basin. The development of hydrocarbon production in the Williston Basin has increased significantly in recent years due to advancements in deep horizontal directional drilling techniques and subsequent oil extraction in the Bakken and Three Forks Shale formations. Studies conducted by the North Dakota Department of Mineral Resources and the USGS in 2010 estimated mean undiscovered volumes of 3.65 billion barrels of recoverable crude oil reserves may be available in North Dakota's deep shale formations. Information from the Department of Mineral Resources indicates that oil production has increased dramatically over the past five years. In January of 2011, North Dakota produced 342,923 barrels of oil per day. That figure has increased to 30, 797,518 barrels per day in June of 2016.

A major constraint in the efficient transportation of hydrocarbons from North Dakota to distribution centers and eventual end users in the United States is the lack of pipeline capacity. This lack of pipeline capacity has resulted in an increase in truck and rail traffic to accommodate the growth in hydrocarbon production. To relieve the transportation constraints, several projects have been planned to address the growing volumes of crude oil, natural gas and natural gas liquids. As pipeline projects come online, rail and other surface transportation alternatives are minimized, as pipeline is the safe, cost effective and efficient transportation alternative.

Construction of the Project will provide safe, reliable transport of an average 30,000 bpd of crude oil between the Epping Station, Divide Mainline and the DAPL Epping Station. From the DAPL Epping Station crude will be transported via interconnecting pipelines for distribution to refineries in mid-continent and gulf coast area refineries.

SECTION 4: CORRIDOR LOCATION AND CRITERIA EVALUATION

Epping Transmission has conducted a thorough inventory of the Corridor and evaluated the resources within it to assess the compatibility of the Project with the PSC's siting criteria. The following sections identify and discuss the presence or absence of siting criteria within the Corridor. Where siting criteria are identified, the location of each is shown on the maps in Appendix B.

4.1 CORRIDOR LOCATION

Epping Transmission identified a preferred Corridor, which is a one-mile wide area centered upon the preferred pipeline alignment. The selection of the proposed Project alignment was a multi-disciplinary effort, which included socioeconomic, environmental, logistics, engineering, and financial considerations.

Epping Transmission initiated landowner negotiations, agency consultations and desktop analysis of the Corridor. These efforts were augmented by field studies, including natural and cultural resource field surveys. The results of the field studies are discussed in detail in the associated Route Permit Application.

4.2 FACTORS TO BE CONSIDERED IN EVALUATING APPLICATIONS AND DESIGNATION OF CORRIDORS AND ROUTES (NDCC 49-22-09)

4.2.1 FEASIBLE ALTERNATIVES TO THE PROPOSED CORRIDOR OR ROUTE

Construction of the Project will provide firm, reliable service for an average 30,000 bpd from Epping Station and the Divide Mainline to the DAPL Epping Station. From the DAPL Epping Station, the product will be transported to refineries across the United States. Epping Transmission identified and evaluated several project alternatives; however, none of these alternatives effectively satisfied the Project objective. These alternatives included:

- No Action Alternative; and
- Trucking Alternative.

4.2.1.1 NO ACTION ALTERNATIVE

This alternative would leave the region constrained by limited transport capacity for safe and reliable transmission of crude oil products by pipeline. Currently, this production is shipped solely through the COLT rail facility, which leaves customers with rail as their only transportation option. For this reason, Epping Transmission rejected a no action alternative.

4.2.1.2 TRUCKING ALTERNATIVE

This alternative was reviewed and eliminated due to the volume of crude oil to be transported. The normal daily throughput of the Project will be approximately 30,000 barrels or 1,260,000 gallons of crude oil. The average load for a truck carrying crude oil is approximately 178 barrels (approximately 7,500 gallons) per truck. Thus, it would

require 168 trucks per day, an average of seven (7) trucks every hour for twenty-four (24) hours a day to transport the volume of product the pipeline would transport to the DAPL Epping Station. This level of truck activity is not logistically feasible, as it would cause significant amounts of heavy vehicle traffic for area residents, as well as additional wear and tear on the infrastructure. Disruption in the trucking capacity due to seasonal load restrictions on roads, inclement weather or road repairs would cause a delay in delivering this valuable resource to market. Additionally, the DAPL Epping Station currently does not provide for truck unloading. This alternative is not desirable; therefore, Epping Transmission rejected a *Trucking Alternative*.

4.2.2 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF NATURAL RESOURCES SHOULD THE PROPOSED CORRIDOR BE DESIGNATED

Epping Transmission is not aware of any irreversible or irretrievable commitments of natural resources that will result from the requested approvals.

4.2.3 EXISTING PLANS OF THE STATE, LOCAL GOVERNMENT AND/OR PRIVATE ENTITIES FOR OTHER DEVELOPMENTS AT OR IN THE VICINITY OF THE PROPOSED ROUTE

Epping Transmission is aware of a housing development, which is under construction, located to the west of the Project. Epping Transmission has obtained landowner waivers from those landowners with occupied structures within 500-feet of the Project alignment.

Epping Transmission is also aware of the County's plans to widen County Road 42. Through coordination with Williston County, Epping Transmission has modified the design of the pipeline crossings to accommodate this planned roadway expansion.

Additionally, the Dakota Access Pipeline is currently under construction, so there is the potential for other pipelines, utilities or other projects to be developed in the vicinity of this Project. Epping Transmission will coordinate with these developers as appropriate.

4.2.4 PROBLEMS RAISED BY FEDERAL AGENCIES, OTHER STATE AGENCIES AND LOCAL ENTITIES

Epping Transmission has consulted with federal and state agencies to identify possible environmental resources within the Corridor and any related agency concerns. A complete record of these consultations is provided in Appendix C.

4.3 EXCLUSION AREAS (NDAC 69-06-08-02(1))

Exclusion areas are geographical areas that must be excluded from consideration when siting an energy transmission facility. A proposed corridor may contain exclusion areas; however, exclusion areas may not encompass more than 50% of the corridor width at any point, unless there is no reasonable alternative. The following table and subsequent sections identify and discuss exclusion areas identified within the Corridor.

Exclusion Area	Within Corridor	50% or More of Corridor	Section Reference
Federal Resources			**4.3.1**
National Parks or Memorial Parks	No	No	
Historic Sites or Landmarks	No	No	
Natural Landmarks or Monuments	No	No	
Wilderness Areas	No	No	
State			**4.3.2**
Historic Sites, Monuments or Historical Markers	No	No	
Archaeological Sites	Yes	No	
Parks	No	No	
Nature Preserves	No	No	
County			**4.3.3**
Parks	No	No	
Recreation Areas	No	No	
Municipal Parks	No	No	
Other			**4.3.4**
Areas Critical to the Life Stages of Threatened and Endangered Animals or Plant Species	No	No	4.3.4.1
Areas where Animal or Plant Species that are Unique or Rare to this State would be Irreversibly Damaged	No	No	4.3.4.2
Areas within 1,200 feet of a geographic center of an intercontinental ballistic missile (ICBM) launch or launch control facility.	No	No	4.3.4.3
Areas within 30 feet on either side of a direct line between (ICBM) launch or launch control facilities to avoid microwave interference.	No	No	4.3.4.4

4.3.1 FEDERAL RESOURCES

Epping Transmission has initiated consultations with federal and state agencies and conducted a comprehensive review of published information. Epping Transmission concluded no national or memorial parks, natural landmarks or monuments, or wilderness areas will be crossed or affected by the Project.

4.3.2 STATE RESOURCES

Epping Transmission has initiated consultations with federal and state agencies and conducted a comprehensive review of published information. Epping Transmission confirmed the presence of state parks, monuments, historical markers, archaeological sites or nature preserves within the proposed Corridor. Refer to Section 2.3.6 for additional information. Appendix E contains the Cultural Resources Report.

4.3.3 COUNTY RESOURCES

Epping Transmission has confirmed through a combination of agency consultations and review of publicly available information the absence of county parks or recreation areas, municipal parks, or parks owned by other subdivisions of government bodies within the proposed Corridor. Refer to Section 2 of this document for a comprehensive discussion of Epping Transmission consultations, and Appendix C for documentation of agency consultations.

4.3.4 OTHER EXCLUSION AREAS

4.3.4.1 AREAS CRITICAL TO THE LIFE STAGES OF THREATENED AND ENDANGERED ANIMALS OR PLANT SPECIES

Epping Transmission conducted a comprehensive desktop review of the Corridor; these efforts were augmented with agency consultations and additional field surveys to confirm the presence or absence of critical habitat. Refer to Appendix C for documentation of the agency consultations, and Section 2 of the associated Route Permit Application for details of the field studies.

4.3.4.2 AREAS WHERE ANIMAL OR PLANT SPECIES THAT ARE UNIQUE OR RARE TO THIS STATE WOULD BE IRREVERSIBLY DAMAGED

Epping Transmission has engaged in federal and state agency consultations, reviewed published information and conducted a desktop analysis of the Corridor to determine if areas of critical animal or plant habitat may occur. Based on these studies, Epping Transmission has confirmed the absence of protected species and/or their critical habitats. Refer to Appendix C for supporting documentation of agency consultations.

4.3.4.3 AREAS WITHIN 1,200 FEET OF THE GEOGRAPHIC CENTER OF AN ICBM LAUNCH OR LAUNCH CONTROL FACILITY

Upon review of tabular location data and aerial imagery, which was compiled by the University of Wyoming, there are no areas within 1,200 feet of the geographic center of an Intercontinental Ballistic Missile (ICBM) launch or launch control facility located within the Corridor.

4.3.4.4 AREAS WITHIN THIRTY (30) FEET ON EITHER SIDE OF A DIRECT LINE BETWEEN ICBM LAUNCH OR LAUNCH CONTROL FACILITIES TO AVOID MICROWAVE INTERFERENCE

A review of data compiled by the University of Wyoming that contained tabular location data and aerial imagery was completed. This review confirmed the absence of areas within thirty (30) feet on either side of a direct line between ICBM launch or launch control facilities within the Corridor.

4.4 AVOIDANCE AREAS (NDAC 69-06-08-02(2))

Avoidance areas are geographic areas that may not be considered in the routing of a transmission facility, unless it is shown there is no reasonable alternative under the

circumstances. A proposed corridor may contain avoidance areas; however, avoidance areas may not encompass more than 50% of the corridor width at any point, unless there is no reasonable alternative. The following table and text identify and discuss avoidance areas within the proposed Corridor.

Avoidance Area	Within Corridor	50% or More of Corridor	Section Reference
Federal			**4.4.1**
Historic Districts	No	No	
Wildlife Areas	No	No	
Wild, Scenic or Recreational Rivers	No	No	
Wildlife Refuges	No	No	
Grasslands			
State			**4.4.2**
Wild, Scenic or Recreational Rivers	No	No	
Game Refuges or Game Management Areas	No	No	
Forests or Forest Management Areas	No	No	
Grasslands	No	No	
Other			**4.4.3**
Historical Resources not specifically designated as Exclusion or Avoidance Areas	No	No	4.4.3.1
Areas of Known Geologic Instability	No	No	4.4.3.2
Areas within 500 Feet of a Residence, School, or Place of Business	Yes	No	4.4.3.3
Reservoirs and Municipal Water Supplies	Yes	No	4.4.3.4
Water Sources for Organized Rural Water Districts	No	No	4.4.3.5
Irrigated Land (not applicable to underground facilities)	NA	NA	4.4.3.6
Areas of Recreational Significance which are not designated as Exclusion Areas	No	No	4.4.3.7

4.4.1 FEDERAL RESOURCES

Epping Transmission conducted agency consultations and a comprehensive review of publicly available information. This review indicated the absence of designated or registered historic districts, refuges, grasslands, and wild, scenic or recreational rivers within the Corridor. Refer to Appendix C for documentation of agency consultations.

4.4.2 STATE RESOURCES

Epping Transmission conducted a review of publicly available information and initiated project specific agency consultations. Through these efforts, Epping Transmission has concluded there are no designated or registered management areas, forests, forest

management lands, grasslands or wild, scenic or recreational rivers within the Corridor. Refer to Appendix C for documentation of agency consultations.

4.4.3 OTHER AVOIDANCE AREAS

4.4.3.1 HISTORICAL RESOURCES NOT SPECIFICALLY DESIGNATED AS EXCLUSION OR AVOIDANCE AREAS

Epping Transmission conducted a review of publicly available information, initiated project specific agency consultations and augmented the agency review with field studies. Through these efforts, Epping Transmission has confirmed the absence of historical resources that are not specifically designated as exclusion or avoidance areas within the Corridor. Refer to Appendix C for documentation of agency consultations and Appendix E for the Cultural Resources Report.

4.4.3.2 AREAS OF KNOWN GEOLOGIC INSTABILITY

Geologic instability generally refers to surface geology and areas where landslides have occurred. The North Dakota Geological Survey (NDGS) landslide mapping data was consulted for information regarding areas of landslides within the Corridor. Review of landslide deposit data from the North Dakota Geological Survey indicated the absence of landslide deposits within the Corridor.

North Dakota has not experienced an earthquake of sufficient magnitude to damage steel welded pipe or structural steel structures in recorded history. Sinkholes are known to occur in the region, but these are related to subsurface mining activities as opposed to limestone dissolution. According to a review of PSC abandoned mine data, no abandoned surface mines are located in the Corridor.

4.4.3.3 AREAS WITHIN 500 FEET OF A RESIDENCE, SCHOOL OR PLACE OF BUSINESS

Aerial photography was utilized to identify structures located within the Corridor. Approximately 109 potentially occupied structure was identified within the Corridor.

4.4.3.4 RESERVOIRS AND MUNICIPAL WATER SUPPLIES

Two (2) wells were identified within the Corridor: one has been identified as a domestic well for the City of Epping and the other is a NDSWC test hole.

4.4.3.5 WATER SOURCES FOR ORGANIZED RURAL WATER DISTRICTS

The Williams County Water Resource Board (WCWRB) has water resources located throughout Williams County, and as such, the Corridor is wholly within the WCWRB. The WCWRB oversees waterlines that occur within the Corridor. A consultation letter was provided to the WCWRB, refer to Section 2 and Appendix C for a record of this communication.

4.4.3.6 IRRIGATED LAND

This criterion does not apply to underground transmission facilities; as such, it is not applicable to this Project.

4.4.3.7 AREAS OF RECREATIONAL SIGNIFICANCE WHICH ARE NOT DESIGNATED AS EXCLUSION AREAS

Epping Transmission confirmed the Corridor does not contain any areas of recreational significance.

4.5 SELECTION CRITERIA (NDAC 69-06-08-02(3))

The selection criteria require assessment of the environmental impacts and alterations to land use that may result from the siting of the Project. Through this process, Epping Transmission believes the Project will successfully avoid or minimize these effects to the maximum extent practicable.

4.5.1 AGRICULTURAL IMPACT

Agricultural Production: The Corridor contains approximately 2,467 acres of private land. According to land cover data maintained by the USGS, approximately 978 of these acres are categorized as agricultural vegetation. An additional 1240 acres are classified as shrub land or grasslands. Refer to Appendix B for maps depicting land cover within the Corridor.

Family Farms and Ranches: The Project will have no permanent impacts to lifestyle or farm/ranch operations once construction has been completed. The Corridor contains approximately 2,467 acres of private land. According to land cover data maintained by the USGS, approximately 978 of these acres are categorized as agricultural vegetation. An additional 1,240 acres are classified as shrub land or grasslands. Refer to Appendix B for maps depicting land cover within the Corridor.

Lands Suitable for Irrigation: This section is not applicable to buried pipelines (NDAC 69-06-08-02(2)(h)).

Surface Drainage: Standard construction techniques will be employed and significant modifications to surface drainage patterns are not anticipated. Care will be taken throughout the construction process to minimize environmental impacts, including modification of drainage patterns. During restoration, those areas that were disturbed during construction will be restored, the local topography will be restored to its original contours, vegetation will be reestablished and impacts shall be minimal and temporary. Best management practices will be implemented to prevent erosion and off site travel of sediments.

Ground Water: Well data, recorded by the State Water Commission, has been reviewed for the Project area. Well data indicates groundwater in upland areas is located more than twenty (20) feet below the surface. Typical subsurface excavations associated with the Project will not extend to more than ten (10) feet below the ground surface. At that

depth, the Project will not intersect the groundwater table, nor will the Project alter recharge rates or the infiltration, permeability, or percolation of water into the groundwater reservoir. Additionally, construction will not affect the lateral movement or groundwater quality.

4.5.2 THE IMPACTS UPON OTHER RESOURCES

Noise-Sensitive Land Uses: The Project is located in a rural setting, effectively isolating it from the majority of sensitive receptors. Construction of the Project will temporarily affect the local noise environment. The ambient sound level of a region is defined by the total noise generated within the specific environment and is usually comprised of sounds emanating from natural and artificial sources.

Construction of the Project will be conducted during typical working hours and is expected to cause temporary increases in ambient sound within and adjacent to the Corridor. The use of heavy equipment or trucks will be the primary noise source during construction and excavation. The level of impact may vary by equipment type, duration of construction activity, and the distance between the noise source and the receptor. Once constructed and in-service, normal pipeline operations are not audible.

Visual Effect on Adjacent Areas: Tie-in facilities will be placed within the boundaries of existing operating terminals. One block valve site will be constructed just north of the City of Epping. The location of this feature is adjacent to a high way and is not expected to have adverse impacts to the view shed.

Extractive and Storage Resources: This Project will not affect any extractive or storage resources.

Wetlands, Woodlands and Wooded Areas: A comprehensive desktop review of published data, including aerial photography and NWI data, was conducted to assess the presence or absence of wetlands, woodlands and wooded areas. The review of the proposed Corridor confirmed the presence of these resources. Epping Transmission commissioned field surveys to identify and record the locations of these resources along the proposed route. Refer to Section 2 of the Route Permit for a comprehensive discussion of the field studies results.

Radio and Television Reception, and other Communication or Electronic Control Facilities: Epping Transmission does not anticipate the Project will affect radio, television, or other electronic control facilities.

Human Health and Safety: Epping Transmission' Environmental, Health and Safety Policy meets federal and state laws, rules and regulations, and is enforced equally with respect to both Epping Transmission and its contractors. The implementation of this policy promotes a safe and healthy workplace during construction and operation of all Epping Transmission' assets. In addition, the operation of the pipeline will be monitored in accordance with DOT regulations.

Animal Health and Safety: The wildlife currently inhabiting the Corridor is common and is generally mobile. The local wildlife inhabitants will not be displaced by the Project and no measurable impact to the viability of these populations will occur. Epping Transmission does not anticipate species of special concern to experience direct impacts due to construction or operation of the Project.

Plant Life: There will be no impacts to plant life associated with the construction or operation of the pipeline. No species of special concern will be impacted by the Project.

4.6 POLICY CRITERIA

4.6.1 POLICIES AND COMMITMENTS TO LIMIT ENVIRONMENTAL IMPACT

Epping Transmission is committed to conducting its business in compliance with all applicable environmental laws and regulations. These laws, regulations and standards are designed to safeguard the environment, human health, wildlife and natural resources. Epping Transmission will conduct its activities with the objectives of providing a healthful and safe workplace for its employees, and preventing accidents and environmental incidents. All persons and firms providing service to Epping Transmission are required to conduct their work in compliance with environmental conditions, permit authorizations and applicable regulations.

4.6.2 LOCATION AND DESIGN

The Project will be located in Williams County, North Dakota, originating at Epping Station, and will extend to the northeast to terminate at the DAPL Epping Station. Two pipeline connections will also be constructed connection the existing Divide Mainline to the DAPL connection pipeline. Project maps are provided in Appendix B.

The Project will be approximately 3.2 miles in length constructed of steel, and will be a 12.75-inch diameter pipe. The pipe installed will have a line pipe wall thickness of 0.375-inches and bore pipe wall thickness of 0.500-inches denoted as the American Petroleum Institute (API) Code 5L specification X-42-X52 pipeline pipe. The connection lines will be approximately 0.1-miles in length each; 8-inches in diameter with a wall thickness or 0.322-inches.The maximum operating pressure of the connection pipelines will be 1440 psig.

The proposed pipeline will meet U.S. DOT regulations, specifically the design criteria outlined in 49 C.F.R. part 195 subpart C, and will be constructed per 49 C.F.R. part 195 subpart D, and operated and maintained per 49 C.F.R. part 195 subpart F.

4.6.3 TRAINING AND UTILIZATION OF AVAILABLE LABOR IN THIS STATE FOR THE GENERAL AND SPECIALIZED SKILLS REQUIRED

Pipeline construction is a specialized niche construction market and the labor force needed to build the Project will be primarily comprised of a specialized workforce. The primary contractor will supply specialized skilled labor. The workforce is anticipated to reach a peak of approximately 40 personnel.

4.6.4 ECONOMIES OF CONSTRUCTION AND OPERATION

Epping Transmission will invest approximately $6.5 million in North Dakota to develop this Project, generating additional tax revenues annually. Once constructed and in-service, the continued costs of maintenance and operation of the proposed pipeline are minimal.

4.6.5 USE OF CITIZEN COORDINATING COMMITTEES

Epping Transmission has established and maintains a good relationship with the local community officials and the local population. These relationships provide multiple grass roots communication channels to inform local residents regarding the developments associated with the Project.

4.6.6 COMMITMENT OF A PORTION OF THE TRANSMITTED PRODUCT FOR USE IN THIS STATE

The Project will interconnect with existing facilities. The products handled, transferred and shipped at these facilities are currently delivered to markets both in and out of state.

4.6.7 LABOR RELATIONS

Epping Transmission maintains positive labor relations with its staff and contract work force and does not anticipate encountering any adverse labor relations on this Project. The labor market in the region is generally supportive of the oil and gas industry.

4.6.8 THE COORDINATION OF FACILITIES

An affiliate of Epping Transmission owns and operates the Epping Station; and has agreements in place to provide product to the DAPL Epping Station as such coordination of facilities should be seamless.

4.6.9 MONITORING OF IMPACTS

Epping Transmission has established and maintains positive landowner and community relationships throughout the region through its open communication and commitment to corporate citizenship standards that are based on integrity. Epping Transmission will monitor landowner concerns through its right-of-way group. In a similar manner, Epping Transmission will monitor community concerns and will respond to all reasonable concerns brought to its attention by local community leaders. Epping Transmission will select a contractor for construction of the Project and will coordinate the oversight responsibilities for construction activities with this contractor throughout the Project. Environmental responsibilities will be coordinated in the same manner.

4.6.10 UTILIZATION OF EXISTING AND PROPOSED RIGHTS-OF-WAY AND CORRIDORS

Epping Transmission chose the preferred route in an effort to maximize the use of existing utility corridors. Approximately 74% (2.6 miles) of the Project is co-located with

existing utility corridors. Refer to Appendix B for maps depicting portions of the Project that is collocated with other utilities.

4.6.11 OTHER EXISTING OR PROPOSED TRANSMISSION FACILITIES

Appendix G contains Epping Transmission's 10-Year Plan, which was filed with the Commission on July 29, 2016 (Case No. PU-16-561). This plan contains details regarding existing and planned Epping Transmission assets.

SECTION 5: MITIGATIVE MEASURES

5.1 LOCATION

The selection of the Corridor was a multi-disciplinary effort, which included socioeconomic, environmental, logistics, engineering, and financial considerations. The Corridor described in this application meets the siting criteria, and provides Epping Transmission with the opportunity to utilize existing assets, and minimize landowner and environmental impacts.

Landowner considerations also factored into the Corridor selection. The proposed Corridor limits the number of potentially affected landowners while providing potential routing opportunities that will further minimize individual impacts to current land practices. All affected landowners will be compensated for Project impacts through negotiated easement agreements and settlements for seasonal crop losses.

The proposed Corridor selection was also influenced by environmental studies that suggested the area lacked sensitive features such as critical wildlife habitat, major wetlands or waterbodies, or other unique environmental features. The proposed Corridor will allow routing options that will further minimize waterbody crossings and potentially avoid all the wetland crossings entirely. In addition to these routing considerations, compliance with environmental permits procured for the Project will effectively mitigate the impacts of construction along with the final approved route. Standard pipeline construction techniques will involve temporary impacts, but long-term or permanent impacts will be avoided through implementation of modern construction techniques, adherence to permit requirements, and avoidance of sensitive features identified during routing studies.

Epping Transmission and its affiliates own and operate other assets in the region. Planning and development of these assets are conducted in a manner that maximizes the benefits to the region's resources. The proposed Corridor and route will allow Epping Transmission to draw upon existing pipeline and facility assets in the region.

5.2 CONSTRUCTION

The proposed construction of the Project will be conducted in an orderly sequence designed to complete the Project in the minimum amount of time required to safely prepare the site, install the pipeline and restore the areas disturbed by construction.

Construction is estimated to require a minimum of two (2) months to complete. Construction techniques will be employed that minimize the area of ground disturbance, off-site deposition of sediments, and long-term impacts to agricultural productivity. Construction activities shall conform to all applicable permit stipulations; these requirements are mandated by the agency and implemented by the project sponsor for minimizing impacts to the environment.

Restoration will immediately follow pipeline construction. Final grading will restore the original contours of the land. Disturbed areas will be prepared for re-seeding and restoration will be coordinated to meet landowner specifications.

5.3 OPERATION

Once put into service, the Project will deliver crude oil from the Epping Station and Divide Mainline to the DAPL Epping Station. Normal pipeline operations are imperceptible to the public, as they are buried and therefore not visible, and require only minimal aboveground activity. Standard operating procedures will conform to applicable DOT requirements, which include regular pipeline monitoring and periodic inspection. Additionally, routine maintenance of the ROW will likely be required to remain in compliance.

SECTION 6: LIST OF PREPARERS

William McCarthy, C.W.B.
Senior Environmental Compliance Analyst
E3 Environmental, LLC, 871 West Jefferson Avenue, St. Paul, MN 55102

M.S. Wildlife Biology, University of Minnesota – Twin Cities; and B.S. Wildlife Biology, Michigan State University. Mr. McCarthy is an environmental compliance analyst with 20 years of environmental consulting experience working with various energy assets and regulatory agencies. As a compliance analyst, he has managed the environmental requirements for facility siting, pipeline routing, federal licensing and various federal, state and local permits. Mr. McCarthy is a certified wildlife biologist, and in this role conducts and coordinates field studies, agency consultations, mitigation and avoidance plans.

Katie Schmidt, EIT
Environmental Engineer and Senior Consultant
E3 Environmental, LLC, 871 West Jefferson Avenue, St. Paul, MN 55102

B.S. Civil Engineering with an emphasis in Environmental Engineering-Iowa State University. Ms. Schmidt is a Senior Environmental Consultant with ten years of experience working with various energy assets and regulatory agencies. As a consultant, she has managed multiple pipeline projects supporting clients through the construction permitting and siting processes, which included coordination with various federal, state and local agencies.

Jon Knudsen
Wildlife Biologist
E3 Environmental, LLC, 871 Jefferson Avenue, St. Paul, MN 55102

M.S. Biology, Idaho State University – Pocatello, ID; and B.S. Zoology, University of Wisconsin – Madison, WI. Mr. Knudsen has 10 years of environmental consulting and biological monitoring experience, which includes horizontal project management of oil, gas, wind, and mining projects in Colorado, Wyoming, Montana, and North Dakota. His expertise includes surveying sensitive species, writing technical reports, and consulting with regulatory agencies to ensure clients are in compliance with associated rules and regulations. In addition, Mr. Knudsen specializes in training energy development companies on wildlife-related issues, including the Endangered Species Act and Migratory Bird Treaty Act.

Garrett Knudsen, RPA
Senior Cultural Resource Specialist
E3 Environmental, LLC, 871 Jefferson Avenue, St. Paul, MN 55102

Ph. D. (candidate), Faculty of Archaeology and Anthropology, University of Cambridge, M.A. Anthropology, Idaho State University – Pocatello, ID; and B.S. Anthropology and Zoology, University of Wisconsin – Madison, WI. Mr. Knudsen is a Secretary of Interior qualified archaeologist with over 15 years of experience in cultural resource management, heritage preservation and environmental compliance for private and public clients in the transportation, energy and mining industries. Mr. Knudsen's regions of expertise include greater western North America; Midwest, Great Plains, Southwest, California, Texas, Great Basin, Plateau, Northwest Coast, and Alaska. He is also a specialist in archaeological landscapes, remote sensing, human skeletal remains and predictive models.

E3 ENVIRONMENTAL™
Enhancing Execution with Experience™

North Dakota Public Service Commission

Route Permit

Epping Transmission Company, LLC

DAPL Connector Pipeline Project

Prepared by:
E3 Environmental, LLC

August 2016

TABLE OF CONTENTS

APPENDICES

INTRODUCTION

Epping Transmission Company, LLC. (Epping Transmission) is proposing the new DAPL Epping Facility Connector Pipeline Project (Project), which would be located in Williams County, North Dakota. The Project will connect the Epping Station and the existing Divide Mainline Pipeline to the DAPL Epping Facility. The project would originate at the existing Epping Station, located in Williams County, ND approximately 0.4 miles south of Epping, ND and extend northeast to terminate at the DAPL Epping Facility, which is located approximately 1.8 miles northeast of Epping, ND. The Project scope includes a new 12.75-inch diameter crude oil pipeline totaling approximately 3.2 miles in length and two pipeline connections to the existing Divide Mainline and the new DAPL valve site. The connections will include a new 8-inch pipeline which will deliver crude oil from the Divide Mainline to the valve site and a second 8-inch pipeline which will deliver crude from the valve site back to the Divide Mainline. Each connection line is approximately 0.1-miles in length. Project maps can be found in Appendix B. Epping Transmission submits to the North Dakota Public Service Commission (PSC or Commission) a single consolidated application for a Certificate of Corridor Compatibility and Route Permit for the Project. The existing Divide Mainline was previously sited by the ND PSC, case number PU-14-223.

The application provides the requisite information as stipulated by:

- North Dakota Century Code, Energy Conversion and Transmission Facility Siting Act, Section 49-22-08.1; and,
- North Dakota Administrative Code, Chapter 69-06-05, Transmission Facility Permit.

SECTION 1: DESCRIPTION

1.1 TYPE OF TRANSMISSION FACILITY

The Project will result in a new crude oil transmission pipeline and two pipeline connections with the existing Divide Mainline. The steel pipelines will meet U.S. Department of Transportation (DOT) regulations, specifically the design criteria outlined in 49 C.F.R. part 195 subpart C. The Project will be constructed per 49 C.F.R. part 195 subpart D, and operated and maintained per 49 C.F.R. part 195 subpart F.

1.2 PURPOSE OF TRANSMISSION FACILITY

The purpose of the Project is to transport crude oil from Epping Station and the Divide Mainline to the DAPL Epping Facility. From the DAPL Epping Facility, the product will be transported via interconnecting pipelines for distribution to refineries across the United States. The purpose of the connection lines is to allow operational flexibility to the existing infrastructure as these lines will allow crude to be added to or taken away from the DAPL Connection Pipeline.

1.3 LENGTH, SIZE AND DESIGN OF PIPELINE FACILITY

1.3.1 LENGTH OF FACILITY

The Project is approximately 3.2 miles in length. Each connection line is approximately 0.1-mile length.

1.3.2 PIPE SIZE

The Project pipeline specifications are detailed below:

Transmission Pipeline:

- 12.75-inch diameter steel pipe
- 0.375-inch line pipe wall thickness, 0.500-inch bore pipe wall thickness

Connection Pipelines:

- 8-inch diameter steel pipe
- 0.322-inch line pipe wall thickness

1.3.3 OPERATING PRESSURE AND THROUGHPUT

The Project has been designed with the following design parameters listed below:

Transmission Pipeline:

- Normal Operating Pressure: 200 pounds per square inch gauge (psig)
- Maximum Operating Pressure: 1440 psig
- Normal Throughput: 30,000 barrels per day (bpd)
- Maximum Throughput: 70,000 bpd
- Maximum Operating Temperature: 100 degrees Fahrenheit

Connection Pipelines:

- Normal Operating Pressure: 200 pounds per square inch gauge (psig)
- Maximum Operating Pressure: 1440 psig
- Normal Throughput: 20,000 barrels per day (bpd)
- Maximum Throughput: 50,000 bpd
- Maximum Operating Temperature: 100 degrees Fahrenheit

1.4 ABOVEGROUND FACILITIES

All tie-in facilities will be located within the existing facility fence lines. One block valve would be constructed, located just north of Epping North Dakota where the Project crosses Highway 8 or 60th Street Northwest. The location is depicted on the maps in Appendix B and valve site schematics can be found in Appendix A.

1.5 WIDTH OF RIGHT-OF-WAY

The Project will be constructed utilizing a typical 110-foot construction right-of-way (ROW). Epping Transmission will maintain a typical 25-foot permanent ROW along the entire length of the pipeline.

1.6 LOCATION

The Project will be located in Williams County, North Dakota and result in a transmission pipeline originating at the existing Epping Station, and will extend to the northeast to terminate at the DAPL Epping Station, which is located approximately 1.8 miles northeast of Epping, ND. Additionally, two pipeline connections will be constructed connecting the existing Divide Mainline and the DAPL connection pipeline. Refer to the Project maps provided in Appendix B.

1.7 PROJECT SCHEDULE

1.7.1 ROUTE PERMIT

Epping Transmission seeks a Route Permit on or before November 2016.

1.7.2 CERTIFICATE OF CORRIDOR COMPATIBILITY

Epping Transmission seeks a Certificate of Corridor Compatibility on or before November 2016.

1.7.3 RIGHT-OF-WAY ACQUISITION

Epping Transmission is in the process of acquiring right-of-way; approximately 71% (5 of 7 tracts) of the right-of-way has been acquired. Epping Transmission is actively working with the remaining landowners to finalize their agreements.

1.7.4 CONSTRUCTION SCHEDULE

Epping Transmission has scheduled construction activities to commence during the fourth quarter of 2016. The construction activities will take approximately two (2) months to complete. Commissioning and restoration activities will commence immediately after construction is complete.

1.7.5 ADDITIONAL PROJECT PERMITS OR AUTHORIZATIONS

The Project will be constructed in compliance with applicable federal, state and local laws, regulations or plans. Epping Transmission will obtain necessary permits or approvals for the construction and operation of the Project.

SECTION 2: ROUTE ANALYSIS AND ENVIRONMENTAL STUDIES

2.1 PIPELINE ROUTE

Epping Transmission has conducted a thorough analysis of the Project Corridor as reported in the Application for a Certificate of Corridor Compatibility. This analysis was a broad based study of the proposed Corridor (a one-mile corridor centered upon a proposed route). The purpose of this analysis is to confirm the Corridor is suitable and will cause minimal environmental impacts, thus conforming to the PSC siting criteria.

In conjunction with these efforts, Epping Transmission studied routing alternatives and developed the Project alignment (Route). Epping Transmission chose this Route to meet landowner requests and to minimize impacts to environmental features. The Route meets the Project's objectives while conforming to the PSC's transmission route siting requirements. In support of Epping Transmission' route selection, desktop studies were refined and augmented with field studies of the Route.

Trained natural and cultural resource specialists conducted field studies in June of 2016. The purpose of the field studies was two-fold: (1) to definitively identify any potential resource issues (*e.g.*, wetlands, waterbodies, protected species, critical habitats or cultural resources) within the survey corridor, and (2) to provide the baseline field data necessary to prescribe alternative routing or mitigation as necessary to minimize environmental impacts. The Survey Corridor for fieldwork was typically 250-feet in width and was centered upon the Route. The results of these field surveys are summarized in the following sections, the Natural Resources Report located in Appendix D and the Cultural Resource Report in Appendix E.

2.2 ROUTE ALTERNATIVES

Construction of the Project will provide firm, reliable service for an average 30,000 bpd from Epping Station and the Divide Mainline to the DAPL Epping Station. From the DAPL Epping Station, the product will be transported to refineries across the United States. Epping Transmission identified and evaluated several project alternatives; however, none of these alternatives effectively satisfied the Project objective. These alternatives included:

- No Action Alternative; and
- Trucking Alternative.

No Action Alternative:

This alternative would leave the region constrained by limited transport capacity for safe and reliable transmission of crude oil products by pipeline. Currently, this production is shipped solely through the COLT rail facility which leaves customers with rail as their only transportation option. For this reason, Epping Transmission rejected a no action alternative.

Trucking Alternative:

This alternative was reviewed and eliminated due to the volume of crude oil to be transported. The normal daily throughput of the Project will be approximately 30,000 barrels or 1,260,000 gallons of crude oil. The average load for a truck carrying crude oil is approximately 178 barrels (approximately 7,500 gallons) per truck. Thus, it would require 168 trucks per day, an average of seven (7) trucks every hour for twenty-four (24) hours a day to transport the volume of product the pipeline would transport to the DAPL Epping Station. This level of truck activity is not logistically feasible as it would cause significant amounts of heavy vehicle traffic for area residents, as well as additional wear and tear on the infrastructure. Disruption in the trucking capacity due to seasonal load restrictions on roads, inclement weather or road repairs would cause a delay in delivering this valuable resource to market. Additionally, the DAPL Epping Station currently does not provide for truck unloading. This alternative is not desirable; therefore, Epping Transmission rejected a *Trucking Alternative*.

2.3 ENVIRONMENTAL SURVEY

Field surveys were conducted in June of 2016. The Survey Corridor was typically 250-feet in width and centered upon the proposed Route. The Survey Corridor is depicted on the maps in Appendix B.

2.3.1 NOXIOUS WEEDS

"Noxious weed" is a general term used to describe fast-spreading, non-native plant species in a given area. Noxious weeds have adverse ecological and economic impacts due to their ability to outcompete native plant species for habitat and resources. Field survey identified 18 patches of noxious weeds within the Survey Corridor Refer to Appendix D for the Natural Resource Report and Section 5 for proposed mitigation procedures that will be implemented during construction activities.

2.3.2 TREE/SAPLING/SHRUB SURVEY

During the field surveys, crews performed a detailed tree/shrub (i.e., woody vegetation) inventory. This inventory recorded the pre-construction condition of these resources, this inventory will form the baseline for restoration and mitigation reconciliation. Within the Survey Corridor, eight patches of woody vegetation were mapped: five upland shrub communities, one riparian deciduous community, one riparian shrub community and one shelterbelt. Refer to the Natural Resource Report in Appendix D for more detailed information and Section 5 for planned mitigation measures.

2.3.3 WETLAND AND WATERBODIES SURVEY

The Survey Corridor was inventoried for wetland and waterbody features (*i.e.*, creek, pond, streams, rivers). Field crews identified features, characterized these features as a wetland or waterbody and recorded feature boundaries relative to the proposed

Route to facilitate avoidance mitigation where practicable. Appendix D contains the Natural Resources Report, which outlines the results of these field studies.

2.3.3.1 WETLAND SURVEY

Three wetlands were identified within the Survey Corridor. All three of these features are Palustrine Emergent (PEM) features with little to no open water. Due to the ephemeral status and disconnected hydrology, it is unlikely that these features would be USACE jurisdictional. Refer to Appendix D for the Natural Resources Report, and Section 5 of this document for mitigation measures.

2.3.3.2 WATERBODIES SURVEY

Field surveys did not identify any waterbodies within the Survey Corridor. Refer to Appendix B for the mapped location of this feature, Appendix D for the Natural Resources Report and Section 5 for mitigation measures.

2.3.4 WILDLIFE INVENTORY

Approximately 160 wildlife species are resident or seasonal visitors to the Corridor. These include common mammals (*e.g.*, white-tailed deer, mule deer, raccoon and pronghorn antelope); various songbirds (*e.g.*, western meadowlark, LeConte's sparrow, horned lark); raptors (*e.g.*, bald eagle, golden eagle, red-tailed hawk, rough-legged hawk) and numerous other fauna. The Survey Corridor was inventoried for sensitive species and their critical habitat. No threatened or endangered species or their critical habitats were observed by field biologists. Appendix D contains the Natural Resources Report, which outlines the results of these field studies.

2.3.4.1 FEDERALLY PROTECTED SPECIES SURVEY

Under authority of the Endangered Species Act (ESA), the U.S. Fish and Wildlife Service (USFWS) and the Fisheries Service division of the National Oceanic and Atmospheric Administration (NOAA) have identified and maintained a list of species and critical habitats that have been afforded protection under the ESA. The ESA also provides a program for the conservation of threatened and endangered plants and animals and the habitats in which they live.

On July 19, 2016, E3 Environmental, LLC (E3), on behalf of Epping Transmission, requested a USFWS review of the Project, requesting information relating to the presence or absence of threatened and endangered species within the Corridor. A response from the USFWS has not been received; there is not a federal nexus as such the USFWS may decline the opportunity to provide a response.. Refer to Appendix C for agency correspondence.

Epping Transmission commissioned field studies to confirm the presence or absence of these species and/or their critical habitats along the proposed Route. The results of this assessment are provided below. Refer to Appendix D for the Natural Resources Report, which outlines the results of these field studies, and Section 5 for proposed mitigation measures.

Whooping crane: The Aransas Wood Buffalo Population of Whooping Cranes engages in semi-annual migration through North Dakota. This flock breeds in the Wood Buffalo National Park in Alberta and Northwest Territories, Canada, and winters in the Aransas National Wildlife Refuge in Texas. North Dakota provides suitable migratory roost and forage habitat for the species. During migration, the species is most closely associated with larger wetland complexes for roosting habitat, typically using adjacent uplands to forage. The Project is located within the migratory corridor for the whooping crane and suitable foraging habitat (*i.e.*, cultivated cropland and wetlands) was observed within the Survey Corridor. The proposed Project may affect but is not likely to adversely affect the whooping crane as construction kickoff is scheduled for late fall/winter of 2016.

Least tern: Suitable shoreline habitat for breeding and nesting terns does not occur in the Survey Corridor. Least terns may transition through the Project area during migration; however, impacts to the terns are not anticipated.

Pallid sturgeon: The preferred habitat of the pallid sturgeon does not occur in the Survey Corridor. Therefore, impacts to the species are not anticipated.

Gray wolf: Potentially suitable habitat for the gray wolf does occur in the Survey Corridor, however, potential habitat is not expansive and the activities associated with construction and later operations will likely serve as a deterrent to this species. The proposed Project is not likely to affect the gray wolf.

Rufa Red knot: Suitable habitat is not present within the Survey Corridor. Adverse impacts to the red knot are not anticipated.

Piping plover: The Survey Corridor does not contain suitable habitat for breeding and nesting. Adverse impacts to the piping plover are not anticipated.

Northern long-eared bat (NLEB): Field efforts identified one tree within the Survey Corridor that could potentially provide suitable habitat for this species. The Project is located outside of the White-Nose Syndrome Zone, as such; tree-removal activities are not restricted. Impacts to the NLEB are not anticipated.

Bald and Golden Eagle: Field surveys conducted in June of 2016 confirmed suitable habitat is present within the Survey Corridor or within line-of-site of the Survey Corridor. No bald or golden eagle nests were observed during field surveys. Refer to Section 5 for mitigation measures should a bald or golden eagle be observed during construction.

Migratory Birds: Adverse impacts to migratory birds are not anticipated due to the proposed timing of the project. Provided vegetation clearing is initiated after July 15th and prior February 1st, the project will not impact birds that are protected under the Migratory Bird Treaty Act. Should the project be delayed, additional screening of the approved workspace for evidence of breeding bird activity prior to clearing would be recommended to facilitate conformance with the Migratory Bird Treaty Act. Section 5

contains mitigation measures to be implemented should migratory birds be encountered during construction.

2.3.4.2 U.S. FISH AND WILDLIFE SERVICE MANAGED LANDS

On July 19, 2016, E3, on behalf of Epping Transmission, requested a USFWS review of the Project and information relating to the presence or absence of USFWS managed land within the Survey Corridor. The USFWS response is pending. Refer to Appendix C for a record of this correspondence.

2.3.5 NORTH DAKOTA STATE HISTORIC PRESERVATION OFFICE

The North Dakota State Historic Preservation Office (NDSHPO) is responsible for managing the historic and archaeological resources of the state; and maintains records of all previously recorded cultural resources within the state.

A Class I cultural resources inventory (literature review) was conducted of records from the State Historical Society of North Dakota to identify previously completed cultural resource investigations and recorded cultural resources within the Corridor.

The Class I cultural resources inventory identified ten (10) previously recorded cultural resource within the Corridor.

The ensuing Class III cultural resource inventory of the Survey Corridor was completed in June 2016. No new unrecorded cultural resources were identified; crews relocated two previously recorded prehistoric sites (32WI1169 and 32WI1678) and one previously recorded historic site (32WI82). Site 32WI82 remains recommended as *Not Eligible* for inclusion in to the NHRP and no further work is recommended. Sites 32WI1169 and 32WI1678 have been left *Unevaluated* for the NHRP and avoidance is recommended.

The Cultural Resources Report was submitted to the NDSHPO on July 22, 2016 requesting concurrence with the recommendation of *No Significant Sites Affected* for the Project provided avoidance measures implemented. Concurrence was received on July 26, 2016. Refer to Appendix C for documentation of agency consultations and Appendix E for the Cultural Resources Report.

SECTION 3: ANALYSIS OF NEED BASED ON PRESENT AND PROJECTED DEMAND, INCLUDING SYSTEM STUDIES

The Project will transport product from formations in the Williston Basin. The development of hydrocarbon production in the Williston Basin has increased significantly in recent years due to advancements in deep horizontal directional drilling techniques and subsequent oil extraction in the Bakken and Three Forks Shale formations. Studies conducted by the North Dakota Department of Mineral Resources and the USGS in 2010 estimated mean undiscovered volumes of 3.65 billion barrels of recoverable crude oil reserves may be available in North Dakota's deep shale formations. Information from the Department of Mineral Resources indicates that oil production has increased dramatically over the past five years. In January of 2011, North Dakota produced 342,923 barrels of oil per day. That figure has increased to 30, 797,518 barrels per day in June of 2016.

A major constraint in the efficient transportation of hydrocarbons from North Dakota to distribution centers and eventual end users in the United States is the lack of pipeline capacity. This lack of pipeline capacity has resulted in an increase in truck and rail traffic to accommodate the growth in hydrocarbon production. To relieve the transportation constraints, several projects have been planned to address the growing volumes of crude oil, natural gas and natural gas liquids. As pipeline projects come online, rail and other surface transportation alternatives are minimized as pipeline is the safe, cost effective and efficient transportation alternative.

Construction of the Project will provide safe, reliable transport of an average 30,000 bpd of crude oil between the Epping Station, Divide Mainline and the DAPL Epping Station. From the DAPL Epping Station crude will be transported via interconnecting pipelines for distribution to refineries in mid-continent and gulf coast area refineries.

SECTION 4: SITING CRITERIA ANALYSIS

4.1 FACTORS TO BE CONSIDERED IN EVALUATING APPLICATIONS AND DESIGNATIONS OF SITES, CORRIDORS AND ROUTES (NDCC 49-22-09)

4.1.1 AVAILABLE RESEARCH AND INVESTIGATION RELATING TO THE EFFECTS OF THE LOCATION, CONSTRUCTION AND OPERATION OF THE PROPOSED FACILITY ON PUBLIC HEALTH AND WELFARE, NATURAL RESOURCES AND THE ENVIRONMENT

Route planning between Epping Station the Divide Mainline and the DAPL Epping Station identified and evaluated several options for routing this Project. These studies were designed to define a preferred route that achieves project objectives, is technologically and economically feasible to construct, and minimizes impacts to landowners and the environment. The key logistical considerations included the location of Epping Station, the Divide Mainline, and DAPL Epping Station, identification of existing utility corridors for collocation, and acquisition of pipeline ROW from area landowners.

Field studies were conducted to identify environmental, biological and cultural resources along the Route; the results of this effort are discussed in Section 2 of this document. The full Natural Resources Report is provided in Appendix D. Refer to Appendix E for the Cultural Resources Report.

4.1.2 THE EFFECTS OF NEW ENERGY CONVERSION AND TRANSMISSION TECHNOLOGIES AND SYSTEMS DESIGNED TO MINIMIZE ADVERSE ENVIRONMENTAL EFFECTS

The Project does not include energy conversion or transmission technologies/systems specifically designed to minimize adverse environmental impacts.

The Project will be constructed in compliance with environmental permits; the conditions of these permits are designed to minimize adverse environmental impacts. Refer to Section 5 of this document for a full description of the mitigation measures.

4.1.3 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 will be temporary and minimized through compliance with environmental permits. The potential impacts to resources including vegetation, wildlife, agricultural operations, transportation and noise levels are discussed in the following sections. Refer to Section 5 for a full description of the mitigative measures planned to minimize impacts resulting from the Project's location, construction and operation.

4.1.4 ALTERNATIVES TO THE PROPOSED CORRIDOR OR ROUTE WHICH ARE DEVELOPED DURING THE HEARING PROCESS AND WHICH MINIMIZE ADVERSE EFFECTS

Epping Transmission will fully participate in the hearing process and will address any alternatives developed during the hearing process, as applicable.

4.1.5 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF NATURAL RESOURCES SHOULD THE PROPOSED CORRIDOR AND ROUTE BE DESIGNATED

Epping Transmission is not aware of any irreversible or irretrievable commitments of natural resources that will result from the requested approvals.

4.1.6 DIRECT AND INDIRECT ECONOMIC IMPACTS OF THE PROPOSED FACILITY

Epping Transmission will invest approximately $6.5 million in North Dakota to develop this Project, generating additional tax revenues annually. Once constructed and in-service, the continued costs of maintenance and operation of the Project are minimal.

4.1.7 EXISTING PLANS OF THE STATE, LOCAL GOVERNMENT AND PRIVATE ENTITIES FOR OTHER DEVELOPMENTS AT OR IN THE VICINITY OF THE PROPOSED ROUTE

Epping Transmission is aware of a housing development, which is under construction, located to the west of the Project. Epping Transmission has obtained landowner waivers from those landowners with occupied structures within 500-feet of the Project alignment.

Epping Transmission is also aware of the County's plans to widen County Road 42. Through coordination with Williston County, Epping Transmission has modified the design of the pipeline crossings to accommodate this planned roadway expansion.

Additionally, the Dakota Access Pipeline is currently under construction, so there is the potential for other pipelines, utilities or other projects to be developed in the vicinity of this Project. Epping Transmission will coordinate with these developers as appropriate.

4.1.8 THE EFFECT OF THE PROPOSED ROUTE ON EXISTING SCENIC AREAS, HISTORIC SITES AND STRUCTURES AND PALEONTOLOGICAL OR ARCHAEOLOGICAL SITES:

Epping Transmission commissioned Class I and Class III cultural resource inventories. Cultural resources were identified within the Survey Corridor. Project activities will avoid cultural resource sites, which were previously recorded with the SHPO. All related agency consultations can be found in Appendix C, and supporting documentation of field studies can be found in Appendix E.

Project-specific consultation with various federal, state and local agencies did not identify any scenic areas along the Route. Refer to Appendix C for a record of these consultations.

4.1.9 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

The proposed Route is not anticipated to result in permanent impacts to the environment. See Section 2 for a comprehensive discussion of Epping Transmission's effort to identify sensitive environmental resources along the proposed Route and Section 5 for a comprehensive discussion of proposed mitigation. Epping Transmission has worked with agencies to develop a route that avoids or minimizes environmental impacts. Provided the mitigation plans are fully implemented and environmental permit conditions are executed, the Project will not result in any impacts to protected species or their habitats. See Appendix C for complete federal and state agency consultations. Detailed survey results can be found in Appendix D.

4.1.10 PROBLEMS RAISED BY FEDERAL AGENCIES, OTHER STATE AGENCIES AND LOCAL ENTITIES

Epping Transmission provided Project specific consultations to various federal, state and local agencies. Through this consultation process, these agencies had the opportunity to identify possible sensitive environmental resources along the Route and any related agency concerns. A complete record of these communications can be found in Appendix C.

4.2 EXCLUSION AREAS (NDAC 69-06-08-02(1))

Exclusion areas are geographical areas that must be excluded in the consideration of a route for a transmission facility. When evaluating the extent of an exclusion area an appropriate buffer was considered to protect the integrity of the area, this buffer is dependent upon the resource. A survey corridor may contain exclusion areas; however, exclusion areas may not encompass more than 50% of the survey corridor width at any point, unless there is no reasonable alternative. The following table and text identify and discuss exclusion areas within the Survey Corridor.

Exclusion Area	Within Project Survey Corridor	Crossed by Route	50% or More of Survey Corridor	Section Providing Discussion of Resource
Federal				
National Parks or Memorial Parks	No	No	No	4.2.1
Historic Sites or Landmarks	No	No	No	2.3.5, 4.2.1
Natural Landmarks or Monuments	No	No	No	4.2.1
Wilderness Areas	No	No	No	4.2.1

Exclusion Area	Within Project Survey Corridor	Crossed by Route	50% or More of Survey Corridor	Section Providing Discussion of Resource
State				
Historic Sites, Monuments, or Historical Markers;	No	No	No	4.2.2
Archaeological Sites	Yes	No	No	2.3.5, 4.2.2
Parks	No	No	No	4.2.2
Nature Preserves	No	No	No	4.2.2
County				
Parks	No	No	No	4.2.3
Recreation Areas	No	No	No	4.2.3
Municipal Parks	No	No	No	4.2.3
Other				
Areas Critical to the Life Stages of Threatened or Endangered Animal or Plant Species	No	No	No	Section 2.3, 4.2.4, Section 5
Areas where Animal or Plant Species that are Unique or Rare to this State would be Irreversibly Damaged	No	No	No	4.2.5
Areas within 1,200 feet of a geographic center of an intercontinental ballistic missile (ICBM) launch or launch control facility.	No	No	No	4.2.6
Areas within 30 feet on either side of a direct line between (ICBM) launch or launch control facilities to avoid microwave interference.	No	No	No	4.2.7

4.2.1 FEDERAL RESOURCES

Epping Transmission has initiated consultations with federal and state agencies and conducted a comprehensive review of published information. Epping Transmission confirmed no national parks, memorial parks, historic sites or landmarks, natural landmarks, historic sites, monuments, or wilderness areas within the Survey Corridor.

4.2.2 STATE RESOURCES

Epping Transmission has initiated consultations with federal and state agencies and conducted a comprehensive review of published information. Three previously recorded cultural resources were identified within the Survey Corridor. Project

activities will avoid impacts to these sensitive resources as outlined recommended by the Cultural Resource Report, which can be found in Appendix E. Further discussion is contained in Section 2 and mitigation measures are discussed in Section 5.

4.2.3 COUNTY RESOURCES

Epping Transmission has confirmed through a combination of agency coordination, review of publicly available information, and field studies that no county parks, recreation areas, municipal parks or parks owned by other subdivisions of government bodies are located within the Survey Corridor. Refer to Appendix C for documentation of agency correspondence.

4.2.4 OTHER EXCLUSION AREAS

4.2.4.1 AREAS CRITICAL TO THE LIFE STAGES OF THREATENED AND ENDANGERED ANIMAL OR PLANT SPECIES

Epping Transmission commissioned natural resource surveys of the proposed Route. The scope of the surveys included documentation for the presence or absence of federally listed and state listed species of concern, or evidence of suitable habitats for these species. Emphasis was placed on those species identified through project consultations for the corridor analysis that agencies indicated had the potential to occur within the Survey Corridor and, therefore, the Route. The results of these field efforts are detailed in Section 2.3 and planned mitigative measures are discussed in Section 5 of this document. Refer to Appendix D for the complete Natural Resources Report.

4.2.4.2 AREAS WHERE ANIMAL OR PLANT SPECIES THAT ARE UNIQUE OR RARE TO THIS STATE WOULD BE IRREVERSIBLY DAMAGED

Based upon agency consultations and subsequent field surveys, the Project will not result in irreversible impacts that would be detrimental to sensitive plant and animal species or their habitats. The implementation of the proposed mitigation plans and full compliance with environmental permits will fully mitigate the potential for irreversible damage.

4.2.4.3 AREAS WITHIN 1,200 FEET OF THE GEOGRAPHIC CENTER OF AN ICBM LAUNCH OR LAUNCH CONTROL FACILITY

Upon review of tabular location data and aerial imagery compiled by the University of Wyoming, there are no areas within 1,200 feet of the geographic center of an Intercontinental Ballistic Missile (ICBM) launch or launch control facility located within the Survey Corridor or crossed by the Route.

4.2.4.4 AREAS WITHIN THIRTY (30) FEET ON EITHER SIDE OF A DIRECT LINE BETWEEN ICBM LAUNCH OR LAUNCH CONTROL FACILITIES TO AVOID MICROWAVE INTERFERENCE

A review was completed of data compiled by the University of Wyoming that contained tabular location data and aerial imagery. This review confirmed the absence of areas

within thirty (30) feet on either side of a direct line between ICBM launch, or launch control facilities within the Survey Corridor, or crossed by the Route.

4.3 AVOIDANCE AREAS (NDAC 69-06-08-02(2))

Avoidance areas are geographic areas that may not be considered in the routing of a transmission facility, unless it is shown there is no reasonable alternative under the circumstances. A survey corridor may contain avoidance areas; however, avoidance areas may not encompass more than 50% of the survey corridor width at any point, unless there is no reasonable alternative. The following table and text identify and discuss avoidance areas within the Survey Corridor.

Avoidance Area	Within Survey Corridor	Crossed by Route	50% or more within Survey Corridor	Section Providing Discussion
Federal				**4.3.1**
Historic Districts	No	No	No	
Wildlife Areas	No	No	No	
Wild, Scenic or Recreational Rivers	No	No	No	
Wildlife Refuges	No	No	No	
Grasslands	No	No	No	
State				**4.3.2**
Wild, Scenic or Recreational Rivers	No	No	No	
Game Refuges or Game Management Areas	No	No	No	
Forests or Forest Management Lands	No	No	No	
Grasslands	No	No	No	
Other				**4.3.3**
Historical Resources not specifically designated as Exclusion or Avoidance Areas	No	No	No	4.3.3.1
Areas of Known Geologic Instability	No	No	No	4.3.3.2
Areas within 500 Feet of a Residence, School, or Place of Business	No	No	No	4.3.3.3
Reservoirs and Municipal Water Supplies	No	No	No	4.3.3.4
Water Sources for Organized Rural Water Districts	No	No	No	4.3.3.5
Irrigated Land (not applicable to underground facilities)	NA	NA	NA	4.3.3.6
Areas of Recreational Significance which are not Designated as Exclusion Areas	No	No	No	4.3.3.7

4.3.1 FEDERAL RESOURCES

Epping Transmission conducted agency consultations, a comprehensive review of publicly available information, and field studies of the Survey Corridor. This review indicated the absence of designated or registered historic districts, refuges, grasslands, and wild, scenic or recreational rivers in the Survey Corridor.

4.3.2 STATE RESOURCES

Epping Transmission conducted a review of publicly available resources and concluded no designated or registered state wild, scenic or recreational rivers, game refuges, game management areas, management areas, forests, forest management lands, or grasslands are crossed by the Survey Corridor.

4.3.3 OTHER AVOIDANCE AREAS

4.3.3.1 HISTORICAL RESOURCES NOT SPECIFICALLY DESIGNATED AS EXCLUSION OR AVOIDANCE AREAS

Epping Transmission conducted a review of publicly available information, initiated project specific agency consultations and augmented the agency review with field studies. Through these efforts, Epping Transmission has confirmed the absence of historical resources that are not specifically designated as exclusion or avoidance areas within the Survey Corridor. Refer to Appendix C for documentation of agency consultations and Appendix E for the Cultural Resources Report.

4.3.3.2 AREAS OF KNOWN GEOLOGIC INSTABILITY

Geologic instability generally refers to surface geology and areas where landslides have occurred. The North Dakota Geological Survey (NDGS) landslide mapping data was consulted for information regarding areas of landslides. Review of the landslide deposit data from the North Dakota Geological Survey indicated the absence of deposits within the Survey Corridor. No landslide deposits were identified within the Survey Corridor.

North Dakota has not experienced an earthquake of sufficient magnitude to damage steel welded pipe or structural steel structures in recorded history. Sinkholes are known to occur in the region, but these are related to subsurface mining activities as opposed to limestone dissolution. According to a review of PSC abandoned mine data, no mining activities are located within the Survey Corridor.

4.3.3.3 AREAS WITHIN 500 FEET OF A RESIDENCE, SCHOOL OR PLACE OF BUSINESS

Aerial photography was utilized to identify structures located within 500 feet of the proposed pipeline alignment. Epping Transmission confirmed the presence of eight (8) potentially occupied structures within 500 feet of the Route. Landowner waivers have been obtained from all affected landowners, refer to Appendix F for landowner waiver documentation.

4.3.3.4 RESERVOIRS AND MUNICIPAL WATER SUPPLIES

No reservoirs or municipal water supplies were identified within the Survey Corridor.

4.3.3.5 WATER SOURCES FOR ORGANIZED RURAL WATER DISTRICTS

The Williams County Water Resource Board (WCWRB) and the Western Area Water Supply Authority (WAWSA) oversee water resources located throughout Williams County. Consultation letters were sent to both the WCWRB and the WAWSA on July 19, 2016, a response is pending.

4.3.3.6 IRRIGATED LAND

This criterion does not apply to underground transmission facilities; as such, it is not applicable to this project.

4.3.3.7 AREAS OF RECREATIONAL SIGNIFICANCE WHICH ARE NOT DESIGNATED AS EXCLUSION AREAS

Epping Transmission has confirmed the Route does not traverse areas of recreational significance.

4.4 SELECTION CRITERIA (NDAC 69-06-08-02(3))

The selection criteria require assessment of the environmental impacts and alterations to land use that may result from the siting of the Project. Through this process, Epping Transmission believes the Project will successfully avoid or minimize these effects to the maximum extent practicable.

4.4.1 AGRICULTURAL IMPACTS

The Project will temporarily affect approximately 82 acres of private land in North Dakota; of which approximately 29 acres are located on privately owned lands used for agriculture and utilized by family farms and ranches.

Agricultural Production: Once construction is complete, the land will be restored to its pre-construction contours and land use. Epping Transmission will provide settlements to landowners for crop loss resulting from Project construction.

Family Farms and Ranches: Upon the completion of construction, the land will be restored to its pre-construction contours and land use. Epping Transmission has negotiated easements with all affected landowners. The Project will have no permanent impacts to lifestyle or farm/ranch operations once construction is completed.

The location of pipeline markers is defined under 49 C.F.R. 195. Epping Transmission works with local landowners and county officials to ensure pipeline markers are located where required but also in an acceptable location for these parties. These markers are to be placed in full view so they are not accidentally damaged or cause damage to landowner or county equipment.

Lands Suitable for Irrigation: This section is not applicable to buried pipelines (NDAC 69-06-08-02(2) (h)).

Surface Drainage: Standard construction techniques will be employed and significant modifications to surface drainage patterns are not anticipated. Care will be taken throughout the construction process to minimize environmental impacts, including modification of drainage patterns. During restoration, those areas that were disturbed during construction will be restored, the local topography shall be restored to its original contours, vegetation shall be reestablished and impacts shall be minimal and temporary. Best management practices (BMPs) will be implemented to provide proper erosion and sediment control. Permanent impacts to surface drainage are not anticipated but will be minimized to the maximum extent possible.

Ground Water: Well data, recorded by the State Water Commission, has been reviewed for the Survey Corridor. Well data indicates groundwater in upland areas is located more than twenty (20) feet below the surface. Typical subsurface excavations associated with the Project will not extend to more than ten (10) feet below the ground surface. At that depth, the Project will not intersect the groundwater table, nor will the Project alter recharge rates or the infiltration, permeability, or percolation of water into the groundwater reservoir. Additionally, construction will not affect the lateral movement and/or groundwater quality.

4.4.2 THE IMPACTS UPON OTHER RESOURCES

Noise-Sensitive Land Uses: The Project is located in a rural setting, effectively isolating it from the majority of sensitive receptors. Construction of the Project will temporarily affect the local noise environment. The ambient sound level of a region is defined by the total noise generated within the specific environment and is usually comprised of sounds emanating from natural and artificial sources. Construction of the Project will be conducted during typical working hours and is expected to cause temporary increases in ambient sound within and adjacent to the Project. The use of heavy equipment or trucks will be the primary noise source during construction and excavation. The level of impact may vary by equipment type, duration of construction activity, and the distance between the noise source and the receptor. Once constructed and in-service, normal pipeline operations are not audible.

Visual Effect on Adjacent Areas: Tie-in facilities will be placed within the boundaries of existing operating terminals. One block valve site will be constructed just north of the City of Epping. The location of this feature is adjacent to a high way and is not expected to have adverse impacts to the view shed.

Extractive and Storage Resources: This Project will not affect any extractive or storage resources.

Wetlands, Woodlands and Wooded Areas: Epping Transmission commissioned field surveys to identify and record the locations of these resources along the proposed Route. Refer to Section 2 for a comprehensive discussion of the field studies results, Appendix C for copies of related agency correspondence, and Section 5 for proposed mitigation.

Radio and Television Reception, and other Communication or Electronic Control Facilities: Epping Transmission does not anticipate the Project will affect radio, television, or other electronic control facilities.

Human Health and Safety: Epping Transmission's Environmental, Health and Safety Policy meets federal and state laws, rules and regulations, and is enforced equally with respect to both Epping Transmission and its contractors. The implementation of this policy promotes a safe and healthy workplace during construction and operation of all Epping Transmission's assets. In addition, the operation of the pipeline will be monitored in accordance with DOT regulations.

Animal Health and Safety: The wildlife currently inhabiting the Survey Corridor is common and is generally mobile. The local wildlife inhabitants will not be permanently displaced by the Project and no measurable impact to the viability of these populations will occur. Epping Transmission does not anticipate species of special concern to experience direct impacts due to construction or operation of the Project.

Plant Life: There will be no permanent impacts to plant life associated with the construction or operation of the pipeline.

4.5 POLICY CRITERIA (NDAC 69-06-08-02.4)

4.5.1 POLICIES AND COMMITMENTS TO LIMIT ENVIRONMENTAL IMPACT

Epping Transmission is committed to conducting its business in compliance with all applicable environmental laws and regulations. These laws, regulations and standards are designed to safeguard the environment, human health, wildlife and natural resources. Epping Transmission will conduct its activities with the objectives of providing a healthful and safe workplace for its employees and preventing accidents and environmental incidents. All persons and firms providing service to Epping Transmission are required to conduct their work in compliance with environmental conditions, permit authorizations and applicable regulations.

4.5.2 LOCATION AND DESIGN

The Project will be located in Williams County, North Dakota, originating at Epping Station, and will extend to the northeast to terminate at the DAPL Epping Station. Two pipeline connections will also be constructed connection the existing Divide Mainline to the DAPL connection pipeline. Project maps are provided in Appendix B.

The Project will be approximately 3.2 miles in length constructed of steel, and will be a 12.75-inch diameter pipe. The pipe installed will have a line pipe wall thickness of 0.375-inches and bore pipe wall thickness of 0.500-inches denoted as the American Petroleum Institute (API) Code 5L specification X-42-X52 pipeline pipe. The connection lines will be approximately 0.1-miles in length each, 8-inches in diameter with a wall thickness or 0.322-inches.The maximum operating pressure of the connection pipelines will be 1440 psig.

The proposed pipeline will meet U.S. DOT regulations, specifically the design criteria outlined in 49 C.F.R. part 195 subpart C, and will be constructed per 49 C.F.R. part 195 subpart D, and operated and maintained per 49 C.F.R. part 195 subpart F.

4.5.3 TRAINING AND UTILIZATION OF AVAILABLE LABOR IN THIS STATE FOR THE GENERAL AND SPECIALIZED SKILLS REQUIRED

Pipeline construction is a specialized niche construction market. The primary contractor will supply specialized skilled labor. Epping Transmission will draw upon the local labor force to supply labor as appropriate. The workforce is anticipated to reach a peak of approximately 40 personnel.

4.5.4 ECONOMIES OF CONSTRUCTION AND OPERATION

Epping Transmission will invest approximately $6.5 million in North Dakota to construct the Project. This includes the design and construction of the pipeline as well as the real estate services and easement acquisitions. The greatest economic impacts will be realized during construction, which is planned to commence in the fourth quarter of 2016. Once constructed and in-service, the continued costs of maintenance and operation of the proposed pipeline are minimal.

4.5.5 USE OF CITIZEN COORDINATING COMMITTEES

Epping Transmission has established and maintained a good relationship with the local residents through its long-term regional presence operating various assets in the area. Through these relationships, Epping Transmission has maintained several grass roots communication channels to inform local residents regarding the developments associated with the Project. Epping Transmission will continue to maintain contact with local government officials. Through this contact, Project related information will be exchanged and should concerns arise, Epping Transmission will work with officials to resolve those issues.

4.5.6 COMMITMENT OF A PORTION OF THE TRANSMITTED PRODUCT FOR USE IN THIS STATE

The Project will interconnect with existing facilities. The products handled, transferred, and shipped at these facilities are currently delivered to markets located inside and outside of the state.

4.5.7 LABOR RELATIONS

Epping Transmission maintains positive labor relations with its staff and contract work force and does not anticipate encountering any adverse labor relations on this Project. The labor market in the region is generally supportive of the oil and gas industry.

4.5.8 THE COORDINATION OF FACILITIES

An affiliate of Epping Transmission owns and operates the Epping Station; and has agreements in place to provide product to the DAPL Epping Station as such coordination of facilities should be seamless.

4.5.9 MONITORING OF IMPACTS

Epping Transmission Corporation has established and maintains positive landowner and community relationships throughout the region through its open communication and commitment to corporate citizenship standards that are based on integrity. Epping Transmission will monitor landowner concerns through its Right-of-Way/Land group. In a similar manner, Epping Transmission Corporation will monitor community concerns and will respond to all reasonable concerns brought to its attention by local community leaders. Epping Transmission will select a contractor for construction of the Project and will coordinate the oversight responsibilities for construction activities with this contractor throughout the Project. Environmental responsibilities will be coordinated in the same manner.

4.5.10 UTILIZATION OF EXISTING AND PROPOSED ROW AND CORRIDORS

Epping Transmission chose the preferred Project alignment in an effort to maximize the use of existing utility corridors. Approximately 74% (2.6 miles) of the Project is co-located with existing utility corridors. Refer to Appendix B for maps depicting portions of the Project that are collocated with other utilities.

4.5.11 OTHER EXISTING OR PROPOSED TRANSMISSION FACILITIES

Appendix G contains Epping Transmission's 10-Year Plan, which was filed with the Commission on July 29, 2016 (Case No. PU-16-561). This plan contains details regarding existing and planned Epping Transmission assets.

SECTION 5: MITIGATIVE MEASURES

5.1 LOCATION

The Project scope includes a new 12.75-inch diameter crude oil pipeline totaling approximately 3.2 miles in length and two connections to the existing Divide Mainline and the new DAPL valve site. The connections will include a new 8-inch pipeline which will deliver crude oil from the Divide Mainline to the valve site and a second 8-inch pipeline which will deliver crude from the valve site back to the Divide Mainline. Each connection line is approximately 0.1-miles in length. Refer to the project maps provided in Appendix B.

Trees and shrubs: Epping Transmission will comply with the Commission's tree and shrub mitigation specifications. Field surveys included a pre-construction tree and shrub inventory. The clearing or removal of trees or shrubs will be done selectively, in a manner that minimizes the disturbance to woody vegetation and in compliance with the Commission's specifications. The replacement of trees and shrubs will be based upon actual impacts due to construction, shall meet the 2:1 replacement ratio specified, and will be fully documented.

Wetlands and Waterbodies: Epping Transmission will minimize impacts to wetland and waterbodies by minimizing workspace through these features and by utilizing low-impact crossing methods such as horizontal directional drilling if appropriate. Furthermore, Epping Transmission will conduct all jurisdictional crossings in compliance with the U.S. Army Corps of Engineers (USACE) Nationwide Permit #12. Features will be returned to their pre-construction condition and contours.

Whooping crane: The whooping crane is federally listed as an endangered species. It is present in North Dakota on a semi-annual basis during the spring and fall migration between breeding grounds in Wood Buffalo National Park in Alberta and Northwest Territories, Canada, and winter grounds in the Aransas National Wildlife Refuge in the Gulf of Mexico. Field surveys identified potential migratory foraging and roosting habitat in the Survey Corridor.

In North Dakota, the cranes will typically pass through the state during the spring migration occurring March through early June. Construction activities for the Project are scheduled to begin in the fourth quarter of 2016 (October), which should largely mitigate impacts to this species. Additionally, to mitigate potential impacts to migratory cranes, Epping Transmission will suspend heavy equipment operations if whooping cranes are observed within 0.5 miles (line of sight) from active construction activities. Suspended activities will resume in the absence of whooping cranes. See Appendix C for Epping Transmission's consultation with the USFWS.

Bald and Golden Eagle: Construction activities will occur outside of the breeding season. No evidence of eagle nesting activities nor suitable habitat was recorded during field studies. In the event nesting activities are observed prior to construction, Epping Transmission would initiate notification to appropriate agencies.

Migratory Bird Treaty Act: If Project activities occur within the active breeding season, Epping Transmission shall conduct a sweep of the construction right-of-way, prior to clearing activities to identify potential active nesting birds. If an active nest is observed, Epping Transmission shall establish and maintain an exclusion buffer around the nest until the site is no longer active.

Cultural Resources: Epping Transmission submitted the Cultural Resources Report to the NDSHPO on July 22, 2016 requesting concurrence with the recommendation of *No Significant Sites Affected* for the Project. Concurrence was received on July 26, 2016. In the event of an unanticipated discovery, the Project's Unanticipated Discovery Plan will be implemented. The project will avoid impacts to the two unevaluated cultural sites as recommended by the Cultural Resource Report.

Noxious Weeds: Noxious weeds were identified within the Survey Corridor during field surveys. Equipment leaving infested areas will be inspected visually prior to leaving the area. The vehicles and equipment shall be cleaned (*e.g.*, power washed) to remove remaining soils and vegetation prior to entering uninfected tracts.

5.2 CONSTRUCTION

The construction of the proposed pipeline will be conducted in an orderly sequence designed to complete the Project in the minimum amount of time required to safely prepare the site, install the pipeline and restore the areas disturbed by construction.

Construction is estimated to require approximately two (2) months. Construction techniques will be employed to minimize the area of ground disturbance, off site deposition of sediments, and long-term impacts to agricultural productivity. Construction activities shall conform to all applicable permit stipulations; these requirements are mandated by the agency and implemented by the Project sponsor for minimizing impacts to the environment.

Restoration will immediately follow pipeline construction. Final grading will restore the original contours of the land. Disturbed areas will be prepared for re-seeding and restoration will be coordinated to meet landowner specifications.

5.3 OPERATION

Once put into service, the Project will deliver crude oil from the Epping Station and Divide Mainline to the DAPL Epping Station. Normal pipeline operations are imperceptible to the public, as they are buried and therefore not visible, and require only minimal aboveground activity. Standard operating procedures will conform to applicable DOT requirements, which include regular pipeline monitoring and periodic inspection. Additionally, routine maintenance of the ROW will likely be required to remain in compliance.

SECTION 6: DESCRIPTION OF RIGHT-OF-WAY PREPARATION, CONSTRUCTION AND RECLAMATION PROCEDURES

6.1 TYPICAL PIPELINE CONSTRUCTION PROCEDURES

Construction will be an assembly-line process and will include the following general tasks: surveying and staking, clearing and grading, trenching, pipe stringing, pipe bending, welding, coating, hydrostatic testing, lowering in, tie-ins, backfilling, rough grading, and final restoration (*e.g.*, topsoil replacement, final grading, seeding and mulching, where required). The pipeline may be placed into service before final restoration has been completed in all areas.

At any location in the Project area, construction activities will require approximately two (2) months to complete from start to finish, except when weather-related delays affect the schedule. However, construction activity at any location will not be continual but will occur in distinct phases with several days or weeks between each phase.

Surveying and Staking: Prior to construction activities, Epping Transmission will stake the centerline, establish the boundaries of the approved work areas (*e.g.*, the construction ROW boundaries and temporary extra workspace areas) and flag the location of approved access roads and foreign utility lines. Wetland/waterway boundaries and other environmentally sensitive areas also will be marked or fenced for protection at this time as appropriate.

Clearing and Grading: Prior to clearing, landowner fences will be braced and cut, and temporary gates and fences will be installed to control livestock where necessary. A clearing crew will clear the work area of vegetation and obstacles that may be encountered (*e.g.,* remaining trees, stumps, logs, brush, and rocks) in the work area.

The ROW will be graded, where necessary, to provide a reasonably level work surface and to segregate topsoil. Topsoil will be carefully removed and stored along the edge(s) of the ROW in a manner that allows for a haul road and trench line. The topsoil depth in the area is variable, but generally, the topsoil is between 2-inches and 9-inches deep with the deepest topsoil in valleys and the thinnest topsoil on the hillsides and hilltops. The topsoil depth and the layer removed will be determined in the field; upon completion of pipeline construction, the trench will be backfilled and topsoil will be returned to the upper soil horizon. All disturbed areas shall be graded to restore the original contours.

Where steep slopes or side slopes are encountered, the construction contractor may re-grade the slope, or in areas of side slopes, two-tone the area to create level working surface. At these locations, excess spoil will be pushed to the side of the construction ROW, distributed over the working area and travel lane, or stored in alternative temporary workspace (ATWS). This material will be returned to the original location and preconstruction contours will be reestablished during restoration.

Concurrent with grading, erosion and sediment control devices will be installed as appropriate based upon site conditions. Waterbodies may be bored using horizontal directional drilling (HDD) methods to place pipe under the waterbody without disturbing it. The pipeline will be placed such that adequate cover from the bottom of the waterbody will be in place. This will be individual to the waterbody but will be no closer than five (5) feet to the bottom of the waterbody. Construction mats will also be installed across saturated areas to prevent rutting as equipment travel the ROW. Erosion and sediment control devices, which may include silt fences, straw wattles, straw bales and road access pads, will be installed where necessary to prevent soil and sediment from leaving the construction work area.

Following installation of the pipe and backfilling of subsoil in the trench, the ROW will be returned to the original grade and the topsoil will be redistributed over the work area.

Trenching: The trench will be excavated by using backhoes to a depth that provides sufficient cover over the pipeline after backfilling. The bottom width of the trench will be sufficient to accommodate the 12.75-inch diameter pipeline. Typically, the trench will be excavated to an approximate depth of six (6) feet to allow for a minimum of five (5) feet of cover after construction. In cultivated areas, the depth of cover will be below the maximum tillage depth. Additional cover requirements may be applicable at public road crossings.

Trench spoil will be stored adjacent to but will not be mixed with topsoil on the non-working side of the ROW. In some cases, however, where sufficient space will be lacking on the non-working side, trench spoil may be side cast on the travel lane and spread over the working side of the ROW.

Pipe Stringing, Bending, and Welding: Sections of externally coated pipe up to 60-feet long *(i.e.,* joints) will be transported over public roads to the ROW by truck and placed or "strung" along the ROW parallel to the trench in a continuous line. After the pipe sections are strung along the trench and before they are welded together, individual sections of the pipe may be bent, where necessary, so the finished pipeline sections conform to the natural contours of the land. Typically, a track-mounted, hydraulic pipe-bending machine would be used. Where multiple or complex bends greater than what can be properly bent in the field are required, a factory made "fitting" will be used.

After the pipe sections are bent, the joints will be welded together into sections and placed on temporary supports. Welding will comply with requirements listed in Title 49 C.F.R. Part 195 and API Standard 1104 *Welding of Pipelines and Related Facilities*. Each weld will be tested by using radiographic non-destructive examination to ensure no defective welds are present and Epping Transmission engineering standards are met. Welds that do not meet standards and specifications will be removed and/or repaired.

A third-party contractor certified in non-destructive inspection will be used and inspections will be performed as outlined in Title 49 C.F.R. Part 195. After the welds are approved, a protective epoxy coating will be applied to the welded joints. The pipeline will subsequently be electronically and visually inspected for defects in the epoxy coating. Damage to or defects in the coating will be repaired prior to lowering-in the pipeline. Cathodic protection systems will also be directly bonded to the pipe at that time.

Lowering-in and Backfilling: The trench will be inspected for the presence of rocks and other debris that could damage the pipe or protective coating. If rocks or other obstructions are observed, these will be removed or the pipeline trench bottom will be padded with subsoil or sand prior to the pipeline being lowered into the trench.

If the trench bottom were obscured by water, the trench will be dewatered. Where dewatering may be required, Epping Transmission will pump water from the trench into well-vegetated upland areas or into sediment filtration/energy dissipation devices.

In areas of steep slopes, breakers consisting of sand bags or foam will be installed to prevent 'piping' from occurring along the pipe in the trench after the area was backfilled.

The trench will be backfilled using the native material removed and compacted; however, the trench may be crowned slightly to accommodate settling.

Hydrostatic Testing: Epping Transmission will hydrostatically test the pipeline. Hydrostatic testing will conform to DOT standards and will establish the maximum operating pressure for the pipeline when it is operational. Testing involves installation of test headers, which control the pressure applied. The test headers will be later removed upon the completion of a successful pressure test. The test procedures are a function of pressure and time. Once the desired test pressure has been achieved, the test section must hold the pressure for an eight (8) hour period, without a significant change in pressure. Once testing is completed, the test water will be evacuated. The line is then dried and prepared for commissioning. Epping Transmission will either procure discharge permit(s) from the North Dakota Department of Health, with the ensuing discharge conforming to the conditions stipulated in the permit, or capture the water and transport it offsite for disposal.

Final Tie-in and Commissioning: Following successful pressure testing, test manifolds will be removed and the final pipeline tie-ins will be made. After final tie-ins are complete, the tie-in welds are inspected and the line is sufficiently dried, the pipeline will be commissioned. Commissioning involves activities to verify equipment is properly installed and working, the controls and communications systems are functional, and the pipeline is ready for service. The pipeline will be cleaned and dried using mechanical devices; the line will be purged of air and then loaded with product.

Cleanup and Restoration: Final cleanup will begin after backfilling as soon as weather and site conditions permit. During cleanup, construction debris remaining on the ROW will be collected and disposed of properly. Work areas will be graded and restored to preconstruction contours as closely as practical.

During restoration, segregated topsoil will be spread over the surface after final grading and permanent erosion controls will be installed. After permanent erosion control devices are installed, disturbed, non-cultivated areas will be seeded and slopes mulched where required. Seed mixes will be approved in advanced by the landowner, and seeding will occur within the recommended seeding dates for the Project area.

For cultivated areas, no seed or mulch will be applied after the topsoil was replaced unless specifically requested by the landowner.

Markers showing the location of the pipeline will be installed at fence and road crossings in order to identify the owner of the pipeline and convey emergency information in accordance with applicable governmental regulations, including DOT safety requirements. Special markers providing information and guidance to aerial patrol pilots will also be installed.

6.2 WETLAND AND WATERBODY CONSTRUCTION PROCEDURES

Waterbody Construction and Restoration: One identified stream will be crossed by the Project. If necessary, Epping Transmission will cross this feature using methods that will minimize the length of time necessary to install the pipeline and restore the stream bank, as well as to prevent sediment from entering the waterbody during construction to reduce the impacts to the waterbody. Epping Transmission will implement the following mitigative measures:

- Temporary extra workspaces will be located at least 50-feet from the edges of the waterbody, unless a ten (10) foot setback was identified for waterbodies located in actively cultivated agricultural fields.
- Temporary extra workspaces will be limited to the minimum size needed to construct the waterbody crossing.
- Riparian vegetation will be preserved by limiting clearing of vegetation between temporary extra workspace areas and waterbody edges.
- Temporary sediment and erosion control devices will be installed across the width of the ROW after clearing but before ground disturbance. These devices will remain in place throughout construction until stream banks and adjacent upland areas are stabilized.
- Trench spoil placement will be restricted to at least ten (10) feet from the water's edge on the ROW, or in temporary extra workspace areas.
- Waterbody buffers will be maintained (*e.g.*, temporary extra workspace area setbacks, refueling restrictions) in the field with signs until construction related ground-disturbing activities are complete.
- The use of equipment operating in the waterbody will be limited to that needed to construct the crossing.

- Storage and refueling activities will be restricted near surface waters and spill response procedures will be promptly implemented if a spill or leak occurs during construction.
- Bank stabilization and re-establishment of streambed and bank contours will be completed as soon as practicable after construction.

6.3 AGRICULTURAL LAND CONSTRUCTION AND RESTORATION PROCEDURES

Portions of the Project occur in agricultural areas. These areas consist of active croplands predominately used to grow durum, hard red spring wheat, red winter wheat, barley, sunflowers and canola. Agricultural lands are also used as range or pasture land for livestock production. Epping Transmission will utilize the following general construction methods in agricultural areas, consistent with the requirements of landowners:

- Prior to construction, landowners will be contacted and irrigation facilities, wells, waterlines and other livestock watering systems will be located.
- Water flow will be maintained in supply systems unless shutoff was coordinated with the affected parties.
- Existing fences will be cut and braced along the ROW, and temporary gates and fences, if necessary, will be installed to control livestock and limit public access.
- On all active agricultural lands, which include fallow or rotated cropland, hayfields, improved pastures and rangeland, Epping Transmission will remove the topsoil and segregate the soil from subsoil.
- Epping Transmission will decompact the travel lane on the ROW if requested by the landowner.
- On all actively cultivated lands free of shallow bedrock, the trench will be excavated to sufficient depth to allow a minimum of four (4) feet of soil cover between the top of the pipe and the final land surface after backfilling.
- Restoration and revegetation practices (*i.e.*, seeding) will comply with the requirements outlined in the landowner line list.
- Epping Transmission will not plant an annual cover crop on actively cultivated land unless requested by the landowner.
- Weed-free mulch will be used on steep slopes to control erosion unless the landowner requests mulch not be applied. Mulch will be crimped into the soil.
- Earthen diversion berms will be constructed to reduce runoff on steep slopes only when the landowner approves.
- No erosion control fabric will be used in rangeland without having landowner approval.
- Fences and gates will be replaced in accordance with landowner agreements.
- Private roads will be restored to equal pre-construction conditions.

- Epping Transmission will respond promptly to landowner concerns following construction to mitigate areas of subsidence and erosion problems should they occur.
- Epping Transmission will require the contractor to thoroughly clean the equipment and materials (*e.g.*, timber mats, bridges, etc.) at the contractor yard prior to mobilization to the ROW to prevent spread of nuisance weeds.

SECTION 7: EASEMENT, ACQUISITION, LANDOWNER NOTIFICATION AND EASEMENT COMPENSATION PLAN

7.1 LANDOWNER INFORMATION REGARDING EASEMENT ACQUISITION, AND NECESSARY EASEMENT CONDITIONS AND RESTRICTIONS

Once a preliminary route has been established, a title review is conducted of courthouse records for the purpose of identifying the current landowner. Epping Transmission initiates contacts with affected landowners via telephone to be followed with personal visits and e-mail correspondence. Contact by surface mail may be used as a last resort if no other means of landowner contact is successful.

The refinement of the Route includes adjustments made per landowner request. Epping Transmission negotiates with landowners in good faith, and necessary easement conditions and restrictions are presented and discussed.

7.2 COMPENSATION POLICY

Epping Transmission's practice for determining landowner compensation for easements is based on research of comparable fair market pricing and prior experience negotiating easements locally.

SECTION 8: LIST OF PREPARERS

William McCarthy, C.W.B.
Senior Environmental Compliance Analyst
E3 Environmental, LLC, 871 Jefferson Avenue, St. Paul, MN 55102

M.S. Wildlife Biology, University of Minnesota – Twin Cities; and B.S. Wildlife Biology, Michigan State University. Mr. McCarthy is an environmental compliance analyst with 20 years of environmental consulting experience working with various energy assets and regulatory agencies. As a compliance analyst, he has managed the environmental requirements for facility siting, pipeline routing, federal licensing and various federal, state and local permits. Mr. McCarthy is a certified wildlife biologist, and in this role conducts and coordinates field studies, agency consolations, mitigation and avoidance plans.

Katie Schmidt, EIT
Environmental Engineer and Senior Consultant
E3 Environmental, LLC, 871 West Jefferson Avenue, St. Paul, MN 55102

B.S. Civil Engineering with an emphasis in Environmental Engineering-Iowa State University. Ms. Schmidt is a Senior Environmental Consultant with ten years of experience working with various energy assets and regulatory agencies. As a consultant, she has managed multiple pipeline projects supporting clients through the construction permitting and siting processes, which included coordination with various federal, state and local agencies.

Jon Knudsen
Wildlife Biologist
E3 Environmental, LLC, 871 Jefferson Avenue, St. Paul, MN 55102

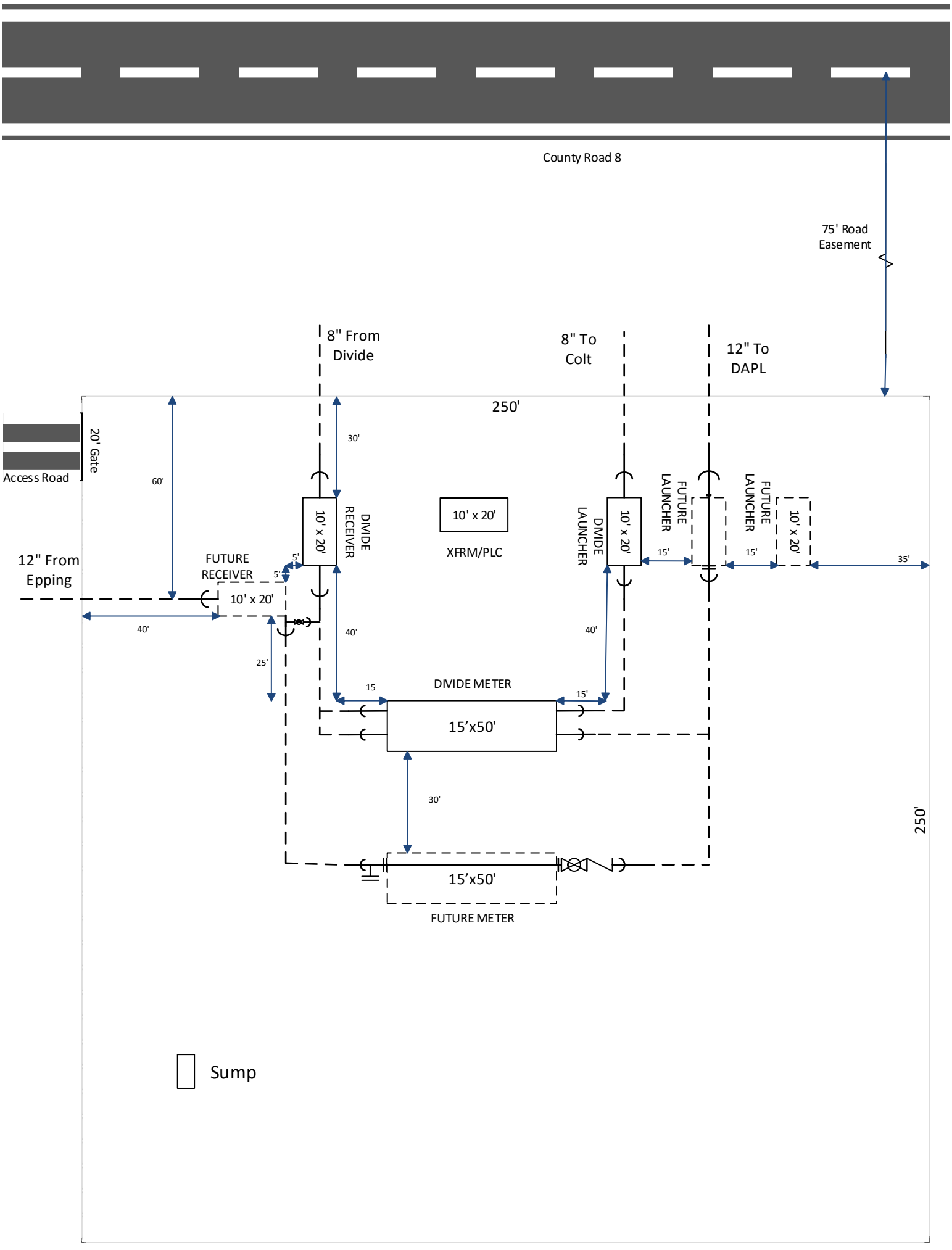
M.S. Biology, Idaho State University – Pocatello, ID; and B.S. Zoology, University of Wisconsin – Madison, WI. Mr. Knudsen has 10 years of environmental consulting and biological monitoring experience, which includes horizontal project management of oil, gas, wind, and mining projects in Colorado, Wyoming, Montana, and North Dakota. His expertise includes surveying sensitive species, writing technical reports, and consulting with regulatory agencies to ensure clients are in compliance with associated rules and regulations. In addition, Mr. Knudsen specializes in training energy development companies on wildlife-related issues, including the Endangered Species Act and Migratory Bird Treaty Act.

Garrett Knudsen, RPA
Senior Cultural Resource Specialist
E3 Environmental, LLC, 871 Jefferson Avenue, St. Paul, MN 55102

Ph. D. (candidate), Faculty of Archaeology and Anthropology, University of Cambridge, M.A. Anthropology, Idaho State University – Pocatello, ID; and B.S. Anthropology and Zoology, University of Wisconsin – Madison, WI. Mr. Knudsen is a Secretary of Interior qualified archaeologist with over 15 years of experience in cultural resource management, heritage preservation and environmental compliance for private and public clients in the transportation, energy and mining industries. Mr. Knudsen's regions of expertise include greater western North America; Midwest, Great Epping Transmission, Southwest, California, Texas, Great Basin, Plateau, Northwest Coast, and Alaska. He is also a specialist in archaeological landscapes, remote sensing, human skeletal remains and predictive models.

Appendix A

Engineering Documents


County Road 8
75' Road Easement
8" From Divide
8" To Colt
12" To DAPL
250'
20' Gate
Access Road
60'
30'
10' x 20'
DIVIDE RECEIVER
10' x 20'
XFRM/PLC
10' x 20'
DIVIDE LAUNCHER
FUTURE LAUNCHER
FUTURE LAUNCHER
10' x 20'
12" From Epping
FUTURE RECEIVER
5'
5'
10' x 20'
15'
15'
35'
40'
40'
40'
25'
15
DIVIDE METER
15'
15'x50'
30'
250'
15'x50'
FUTURE METER
Sump

Appendix B

Project Maps

T156N R99W S35
T156N R99W S36
T156N R98W S31
T156N R98W S32
T156N R98W S33
T155N R99W S1
T155N R99W S2
T155N R99W S11
T155N R99W S12
T155N R98W S4
T155N R98W S5
T155N R98W S6
T155N R98W S7
T155N R98W S8
DAPL Epping Station
Epping Station
1
2
3
125th Ave NW
124th Ave NW
123rd Ave NW
122nd Ave NW
121st Ave NW
60th St NW
Co Rd 8
Co Rd 8c
Front St
School Ave
Uggen Ave
Main Ave
Lawrence Ave
1st St
2nd St
3rd St
Co Hwy 42
123rd Dr NW
125th St NW
59th Ln NW
Co Rd 17
59th St NW
BURLINGTON
NORTHERN
PIPELINE
Gravel Pit
BM 2197
BM 2228
BM 2286
BM 2312
Stony Creek
Stony Creek
Stony Creek
Mountrail County
Williams County
Milepost
Valves
Proposed Alignment
Corridor (1 mile)
NHD Flowline
NHD Waterbody
N
0
0.25
0.5
1
Miles
1:16,000
Map not to scale, for environmental review purposes only.
E3 Environmental
Enhancing Execution with Experience
Epping Transmission Company, LLC
DAPL Connector Pipeline Project
Overview Map
Williams County, North Dakota
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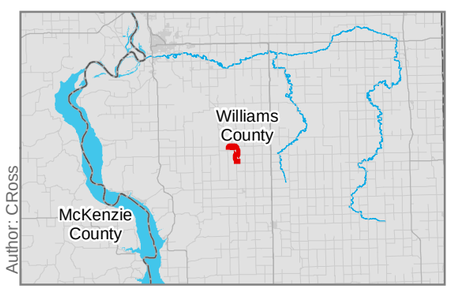
Date: 8/8/2016
Author: CRoss

Document Path: P:\Summit\DAPL\MXDs\PSC_Maps\MMC_DAPL_NaturalResource_aerial.mxd

Date: 8/17/2016

Author: CRoss



- Milepost
- Centerline
- Valve
- Corridor (1 mile)
- Environmental Survey Corridor
- ND Well Data
- Potentially Occupied Structure
- Occupied Structure within 500ft
- Surveyed Wetlands
- Surveyed Woody Vegetation
- Surveyed Noxious Weeds

*Refer to Natural Resource Report for detailed maps and tables.

N

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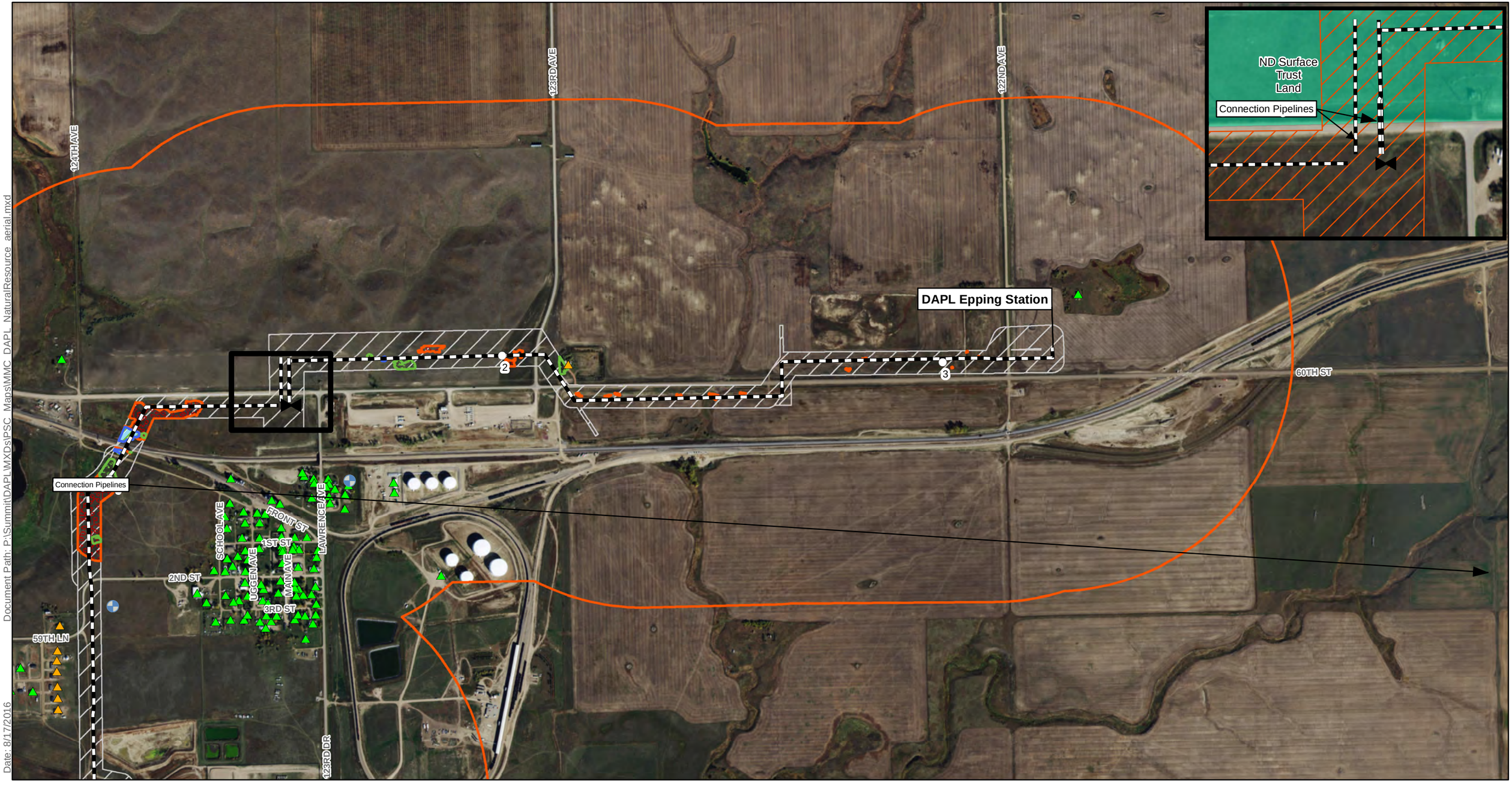
0 500 1,000 2,000 Feet

1:12,000

Map not to scale, for environmental review purposes only.

Epping Transmission Company, LLC

DAPL Connector Pipeline Project
Siting Criteria
Natural Resource - Aerial Map
Page 1 of 2
Williams County, North Dakota



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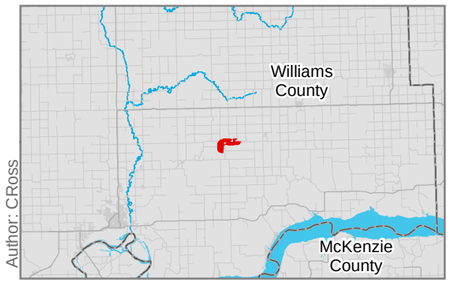

- Milepost
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- Occupied Structure within 500ft
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1:12,000

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DAPL Connector Pipeline Project
Siting Criteria
Natural Resource - Aerial Map
Page 2 of 2
Williams County, North Dakota

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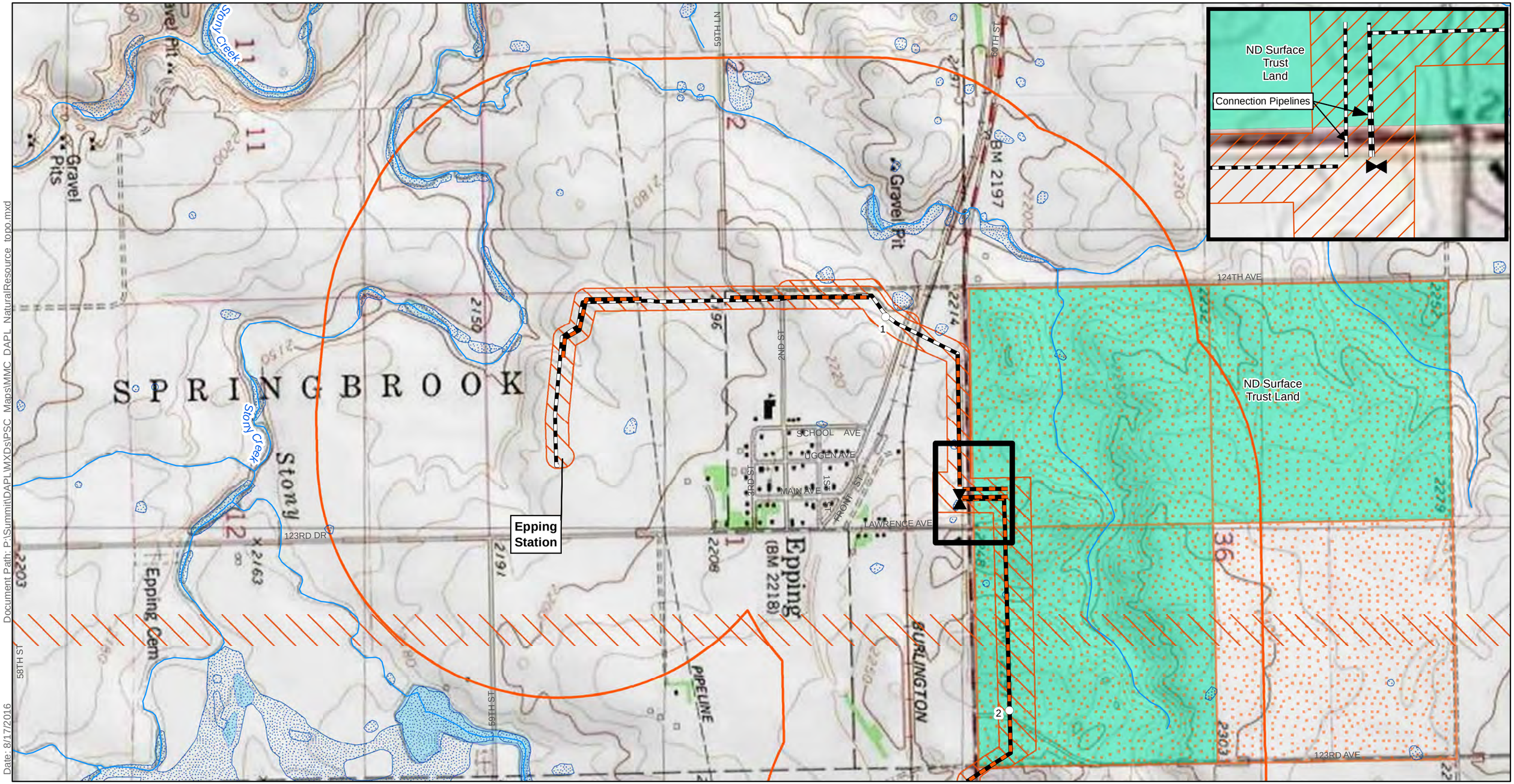
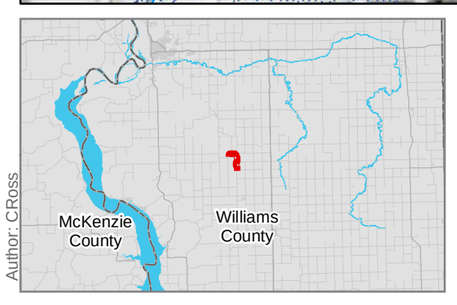
Author: CRoss





- Centerline
- Co-location
- Milepost
- Valve
- Corridor (1 mile)
- Environmental Survey Corridor
- NHD Waterway
- NHD Waterbody
- NWI Wetland

Criteria Data

- State Land
- Abandoned Mine
- PLOTS Land
- ICBM Facility
- ICBM Direct Line to Control Facility
- ND Mineral Trust Lands
- NDGS Landslide Deposits

N

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0 500 1,000 2,000 Feet

1:12,000

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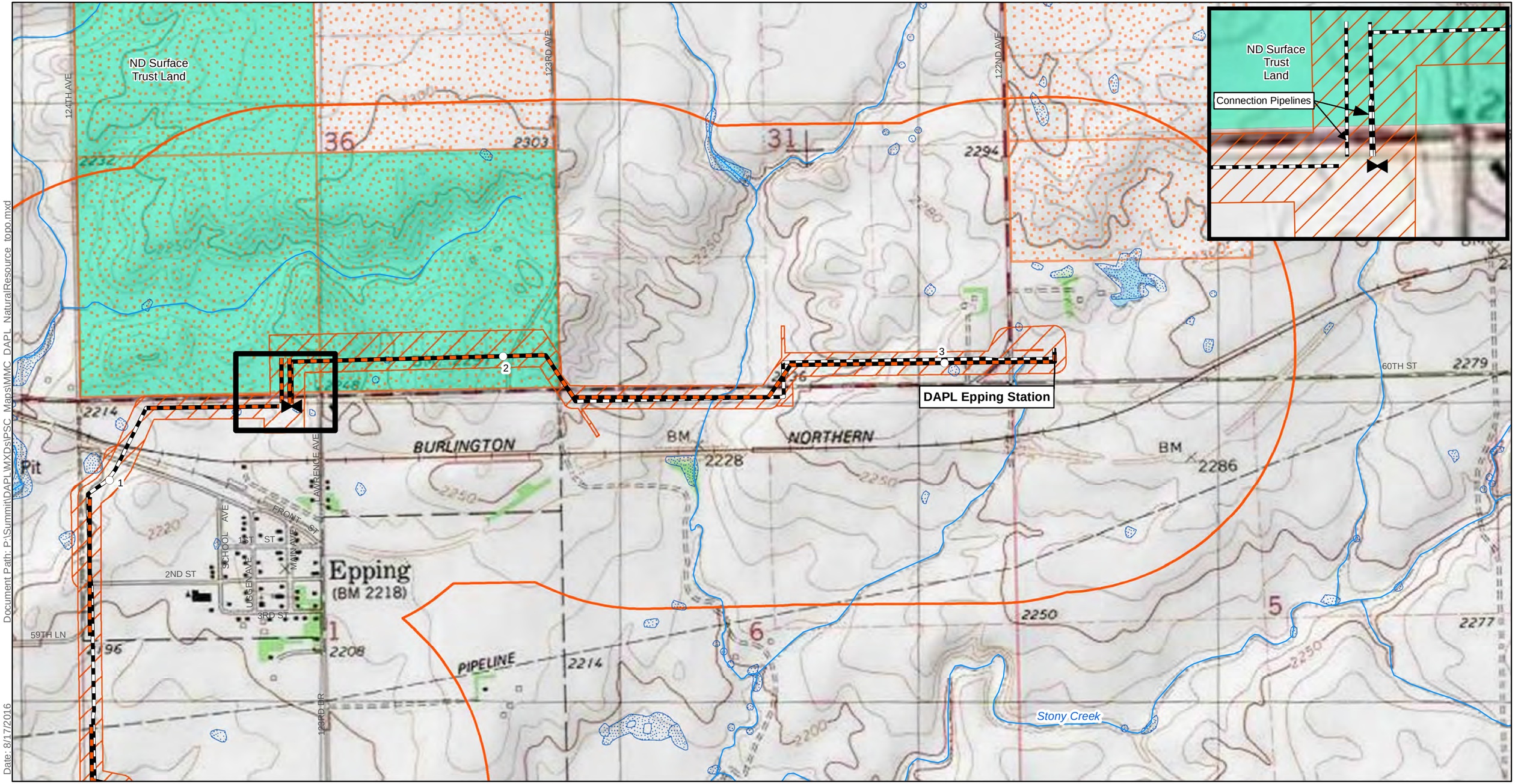
Epping Transmission Company, LLC

DAPL Connector Pipeline Project
Siting Criteria
Natural Resource - Topo Map
Page 1 of 2
Williams County, North Dakota



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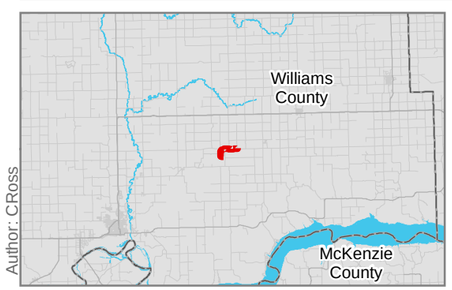

- Centerline
- Co-location
- Milepost
- Valve
- Corridor (1 mile)
- Environmental Survey Corridor
- NHD Waterway
- NHD Waterbody
- NWI Wetland

Criteria Data

- State Land
- Abandoned Mine
- PLOTS Land
- ICBM Facility
- ICBM Direct Line to Control Facility
- ND Mineral Trust Lands
- NDGS Landslide Deposits

N

E3 Environmental
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0 500 1,000 2,000 Feet

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Epping Transmission Company, LLC

DAPL Connector Pipeline Project
Siting Criteria
Natural Resource - Topo Map
Page 2 of 2
Williams County, North Dakota

Document Path: P:\Summit\DAPL\MXDs\PSC_Maps\MMC_DAPL_LandCover.mxd

Date: 8/17/2016

Author: CRoss

59TH LN
60TH ST
61ST ST
124TH AVE
2ND ST
SCHOOL AVE
UGGEN AVE
3RD ST
1ST ST
MAIN AVE
FRONT ST
LAWRENCE AVE
Epping Station
123RD DR
59TH ST
58TH ST
123RD AVE
1
2

Milepost
Centerline
Valve
Corridor (1 mile)
Environmental Survey Corridor

GAP Land Cover

- Agricultural Vegetation
- Developed & Other Human Use
- Forest & Woodland
- Recently Disturbed or Modified
- Semi-Desert
- Shrubland & Grassland

*Refer to Natural Resource Report for detailed maps and tables.

E3 Environmental
Enhancing Execution with Experience

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0 500 1,000 2,000 Feet

1:12,000

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Epping Transmission Company, LLC

DAPL Connector Pipeline Project

Siting Criteria

Land Cover Map

Williams County, North Dakota

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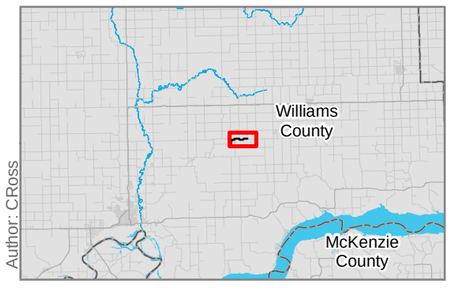
Date: 8/17/2016

Author: CRoss



- Milepost
- Centerline
- Valve
- Corridor (1 mile)
- Environmental Survey Corridor

GAP Land Cover

- Agricultural Vegetation
- Developed & Other Human Use
- Forest & Woodland
- Recently Disturbed or Modified
- Semi-Desert
- Shrubland & Grassland

*Refer to Natural Resource Report for detailed maps and tables.

N

0 500 1,000 2,000 Feet

1:12,000

Map not to scale, for environmental review purposes only.

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Enhancing Execution with Experience

Epping Transmission Company, LLC

DAPL Connector Pipeline Project

Siting Criteria

Land Cover Map

Williams County, North Dakota

Appendix C

Agency Consultations

Consultation Maps

Maps utilized for all Agency Consultations

T156N R99W S36
T156N R98W S31
T156N R99W S35
T156N R98W S32
T156N R98W S33
T156 R099
T155 R099
T156 R098
T155 R098
T155N R99W S2
T155N R99W S1
T155N R98W S6
T155N R98W S5
T155N R98W S4
T155 R099
T155 R098
Stony Creek
Stony Creek
T155N R99W S11
T155N R99W S12
T155N R98W S7
T155N R98W S8
T155N R98W S9

Document Path: P:\Summit\DAPL\MXDs\ConsultationMaps\MMC_DAPL_AgencyNotification_aerial.mxd

Date: 7/19/2016

Author: CRoss

- Proposed Route
- Corridor
- Valve Location
- ND Mineral Trust Land
- NHD Waterway
- NWI Wetland
- NHD Waterbody

Land Ownership

- State of North Dakota

N

0 0.25 0.5 1 Miles

1:16,000

Map not to scale, for environmental review purposes only.

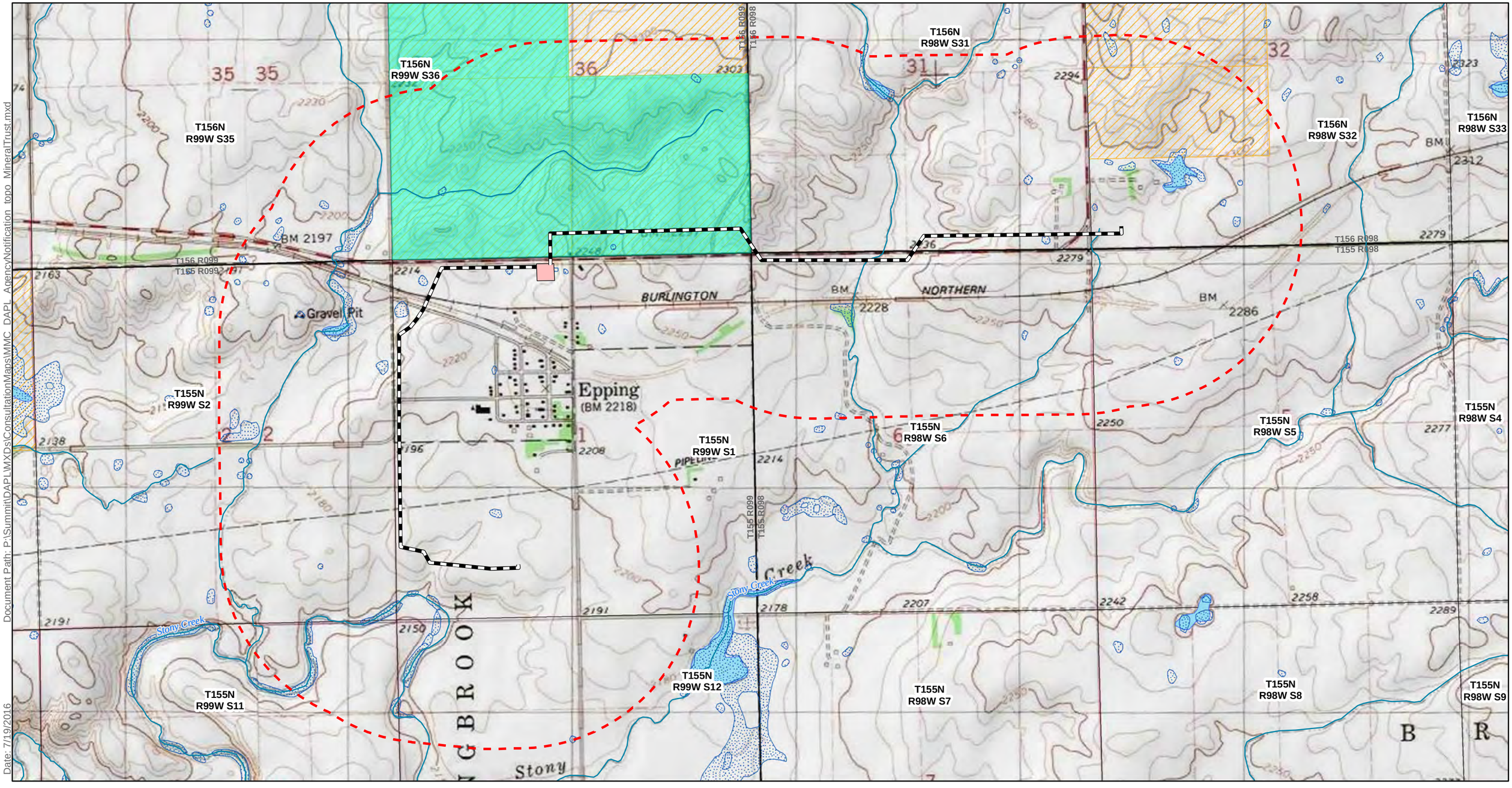
E3 Environmental
Enhancing Execution with Experience

Epping Transmission Company, LLC

DAPL Connector Pipeline Project

Consultation Map - Aerial

Williams County, ND



- Proposed Route
- Valve Location
- Corridor
- ND Mineral Trust Land
- NHD Waterway
- NWI Wetland
- NHD Waterbody

Land Ownership

- State of North Dakota

N

0 0.25 0.5 1 Miles

1:16,000

Map not to scale, for environmental review purposes only.

E3 Environmental
Enhancing Execution with Experience

Epping Transmission Company, LLC

DAPL Connector Pipeline Project

Consultation Map - Topo

Williams County, ND

U.S. Fish and Wildlife Service

Consultation

July 19, 2016

Mr. Scott Larson, Field Supervisor
U.S. Fish and Wildlife Service
North Dakota Field Office
3425 Miriam Avenue
Bismarck, ND 58501-7926

Epping Transmission Company, LLC – DAPL Connector Pipeline Project
Project Notification and Request for Review

Epping Transmission Company (ETC) is planning the DAPL Connector Pipeline Project (Project). The Project will result in the construction of an approximately 3.6 mile, 12-inch diameter, crude oil pipeline. The pipeline will be entirely located within Williams County North Dakota and is under the jurisdiction of the North Dakota Public Service Commission. The Project centerline will traverse Township 155N Range 98W Section 6, Township 155N Range 99W Sections 1 & 36 and Township 156N Range 98W Sections 31 & 32. The Project alignment and 1-mile wide Study Area are depicted on the attached maps.

E3 Environmental, LLC (E3), on behalf of ETC, submits this information and respectfully requests the United States Fish and Wildlife Service (USFWS) to review a 1-mile wide study area, which is centered upon the Project alignment. Project location maps are enclosed.

On July 7, 2016, E3 reviewed the USFWS Information for Planning and Conservation (IPaC) system for the purpose of identifying threatened and endangered species, designated critical habitat, proposed critical habitat, Migratory Bird Treaty Act (MBTA) compliance, and other natural resource issues of concern that may occur within Williams County. The results include:

Federally Listed Species
Interior least tern (*Sternula antillarum*) – Endangered
Whooping crane (*Grus americana*) – Endangered
Pallid sturgeon (*Scaphirhynchus albus*) – Endangered
Piping plover (*Charadrius melodus*) – Threatened
Red Knot (*Calidris canutus rufa*) – Threatened
Northern Long-eared Bat (*Myotis septenrionnalis*) – Threatened
Gray wolf (*Canis lupus*) – Endangered

E3 has reviewed the available data describing the life history, critical habitat, and conservation measures associated with each species to evaluate the potential effects of the Project on these resources. The results of this analysis are as follows:

Interior least tern: The interior populations of the least tern have historically been associated with large river systems, such as the Missouri River, for breeding and

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St. Paul, MN 55102

migratory habitats. Breeding birds are known to congregate in colonies, utilizing sandbar habitat common to larger rivers. The least tern is typically found in North Dakota during the late spring and summer breeding season. The Project is approximately 11 miles from the Missouri River. Desktop analysis concluded that no suitable habitat is present within the Study Area; therefore, impacts to the least tern are not anticipated.

Whooping crane: The whooping crane is a large bodied waterbird that breeds in Canada and winters in the Gulf of Mexico. This species has been closely studied and monitored in recent years due to its small population. North Dakota provides migratory habitat for the species, providing roosting and feeding opportunities during migration. This species prefers larger wetland complexes for roosting habitat, typically using adjacent uplands for foraging opportunities. Roosting habitat is not present within the Study Area.

Precautionary measures would be implemented if whooping cranes are sighted in or near the Project area. ETC would suspend all heavy equipment operation should a whooping crane be spotted within 0.5 miles of the Project Area. Heavy equipment activities would resume upon the departure of the individual(s). The USFWS would be notified of crane sightings.

Pallid sturgeon: The pallid sturgeon's preferred habitat includes the benthic environment associated with swift waters of large turbid, free-flowing rivers with braided channels, dynamic flow patterns, periodic flooding of terrestrial habitats, and requiring extensive micro habitat diversity. The species inhabits the Missouri and Mississippi Rivers from Montana to Louisiana. The Project is approximately 11 miles from the Missouri River. Desktop analysis concluded that no suitable habitat is present within the Study Area; therefore, impacts to the pallid sturgeon are not anticipated.

Piping plover: The piping plover is a small shore bird, typically associated with shorelines along small alkaline lakes, large reservoir beaches, and river islands and adjacent sand pits. Breeding birds select wide beaches with highly clumped vegetation covering less than 25% of the area. Current breeding range on the Northern Great Plains extends south along major prairie rivers including the Missouri River, and in alkali wetlands including those in North Dakota. The Missouri River, the nearest designated critical habitat for the piping plover, is located approximately 11 miles southeast of the proposed Project. Breeding season in North Dakota occurs mid-April through August. Desktop analysis has concluded that no suitable habitat is present within the Study Area; therefore, impacts to the piping plover or its designated critical habitat are not anticipated.

Rufa red knot: The Rufa red knot migrates between breeding grounds in the Arctic and wintering grounds in the Southern Hemisphere. A significant factor threatening the Rufa red knot is destruction and modification of its habitat due to beach erosion and shoreline protection projects. Migratory behavior and habitat requirements of this species are poorly understood particularly for those populations occupying the midcontinent flyways. Inland stopovers include the Mississippi Valley, Great Lakes, and Great Plains. Desktop analysis has concluded that no suitable habitat is present within the Study Area; therefore impacts to the Rufa red knot are not anticipated.

Northern long-eared bat: The northern long-eared bat (NLEB) roosts underneath bark, in cavities, or in crevices of both live and dead trees. Populations have also been found

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in cool environments such as caves and mines, and prefer to spend winter hibernating in locations with high humidity and no air currents. Breeding occurs in late summer or early fall in maternity colonies where females give birth around the same time, which may occur anywhere from late May to late July. The Final 4(d) rule exempts incidental take of the NLEB from all activities occurring in areas that have not been affected by white-nose syndrome. The Study Area occurs outside of the USFWS white-nose syndrome buffer zone; as such, there are no restrictions for Project activities.

Gray wolf: The gray wolf is a large carnivore that through conservation measures has experienced measurable population recovery, particularly in the Great Lakes states of the upper Midwest. As populations rebound, individuals may break from packs to explore opportunities to establish packs in unoccupied territory. Roaming individuals can cover great distances without establishing viable breeding populations in previously unoccupied habitat(s). This species is not tolerant of human disturbance and will tend to avoid interaction with humans. The activities associated with construction would likely serve as a deterrent to this species. Therefore, this Project will have no impact on the gray wolf.

USFWS Managed Lands:

Conservation programs such as Waterfowl Production Areas and wetland and grassland easements represent an important tool used by USFWS to identify and manage high quality wildlife habitat. A review of public records did not identify any of these USFWS managed lands in the Project study area.

Migratory Bird Consultation:

USFWS administers various wildlife related mandates of national concern including the MBTA. ETC understands that unlike the Endangered Species Act, the MBTA has no provisions for the allowance of a take and therefore compliance may best be achieved by avoiding or minimizing the potential to interact with migratory species during the active breeding season. ETC also understands that in North Dakota, the breeding season is typically defined as occurring annually from February 1 through July 15.

We appreciate your assistance with this request and look forward to your timely review and comments on this Project. E3 has been retained by ETC to provide environmental consulting support for this Project. Should you have any questions or require additional information, please contact me at 651-282-0652 or kschmidt@go2e3.com.

Sincerely,

Katie Schmidt

Katie Schmidt, Senior Consultant
E3 Environmental, LLC
871 Jefferson Ave
St. Paul, MN 55102

RECORD OF TELEPHONE CONVERSATION

Contact: Jessica Johnson, USFWS-Bismarck	
Phone No: 701-250-4415	
Date: April 29, 2016	**Time:** 10:15 am CST
Prepared By: Katie Schmidt, Sr. Consultant, E3 Environmental, LLC	
Subject: Project Consultation Letter	

Schmidt received a call from Johnson regarding the project consultation/ notification letter submitted to the USFWS for review and comment. . Johnson asked if the project had a federal nexus, Schmidt confirmed that it did not, however that the project does fall under the purview of the North Dakota Public Service Commission's siting rules.

Johnson stated that in the absence of a federal nexus, the USFWS typically does not provide response to ND PSC project consultation/notifications unless the agency has a concern. As such, no response will be provided for the Project.

North Dakota State Historic Preservation Office

Consultation

STATE HISTORICAL SOCIETY OF NORTH DAKOTA

July 26, 2016

Mr. Joe Pnewski
Archaeologist
E3 Environmental, LLC
871 Jefferson Avenue
St. Paul, MN 55102

NDSHPO REF.: 16-1335 "Epping Transmission Company, LLC Class I and Class III Inventory of the DAPL Connector Pipeline Project, Williams County, North Dakota"

Dear Mr. Pnewski,

We reviewed NDSHPO REF.: 16-1335 "Epping Transmission Company, LLC Class I and Class III Inventory of the DAPL Connector Pipeline Project, Williams County, North Dakota," and find it acceptable.

We concur with a "No Significant Sites Affected" determination, provided the project remains as described and mapped in this report dated July 2016, and provided sites 32WI1169 and 32WI1678 are avoided.

Thank you for the opportunity to review the project. If you have questions please contact Susan Quinnell at squinnell@nd.gov or (701) 328-3576.

Sincerely,

Claudia J. Berg
Director, State Historical Society of North Dakota

Consultation

Katie Schmidt

From: Bement, Allisen C. <abement@nd.gov>
Sent: Wednesday, July 20, 2016 1:08 PM
To: Katie Schmidt
Subject: RE: Epping Transmission Company, LLC: DAPL Connector Pipeline Project Consultation

Katie,

We agree that the data provided fairly represents the approximate location of the pipeline route as indicated by E3 Environmental and the proximity of mineral interests managed by this office to that pipeline, for use in a filing with the PSC in the state of North Dakota. Please be advised that the State of ND owns a 50% mineral interest in 156-99-36: NE4 which falls within the project corridor.

Respectfully,

Allisen Bement, RL
Land Professional
ND Department of Trust Lands
701.328.1952
abement@nd.gov

From: Katie Schmidt [mailto:KSchmidt@go2e3.com]
Sent: Wednesday, July 20, 2016 12:07 PM
To: Bement, Allisen C. <abement@nd.gov>
Subject: RE: Epping Transmission Company, LLC: DAPL Connector Pipeline Project Consultation

Attached you will find the shapefile data, please let me know if it does not open properly.

Thanks-Katie

Katie Schmidt, EIT
Senior Consultant/Operations Manager
E3 Environmental, LLC
kschmidt@go2e3.com
O: 651.282.0652
M: 651.216.6881

From: Bement, Allisen C. [mailto:abement@nd.gov]
Sent: Wednesday, July 20, 2016 12:03 PM
To: Katie Schmidt <KSchmidt@go2e3.com>
Subject: RE: Epping Transmission Company, LLC: DAPL Connector Pipeline Project Consultation

Thank you Katie. Could you also send me the shapefile for the project?

Allisen Bement, RL
Land Professional
ND Department of Trust Lands
701.328.1952
abement@nd.gov

From: Katie Schmidt [mailto:KSchmidt@go2e3.com]
Sent: Wednesday, July 20, 2016 11:07 AM
To: Bement, Allisen C. <abement@nd.gov>
Subject: RE: Epping Transmission Company, LLC: DAPL Connector Pipeline Project Consultation

Project Maps attached, they were dropped from my previous email.

Katie

Katie Schmidt, EIT
Senior Consultant/Operations Manager
E3 Environmental, LLC
kschmidt@go2e3.com
O: 651.282.0652
M: 651.216.6881

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From: Katie Schmidt
Sent: Wednesday, July 20, 2016 11:03 AM

To: 'abement@nd.gov' <abement@nd.gov>
Subject: Epping Transmission Company, LLC: DAPL Connector Pipeline Project Consultation

Ms. Bement,

E3 Environmental (E3) has been retained by Epping Transmission Company to provide environmental consulting support for the DAPL Connector Pipeline Project. Attached you will find a project consultation letter, project location maps and shapefile data to assist in your project review.

Should you have question or require additional information please feel free to contact me via the information below.

Regards,

Kaite

Katie Schmidt, EIT14
Senior Consultant/Operations Manager
E3 Environmental, LLC
kschmidt@go2e3.com
O: 651.282.0652
M: 651.216.6881
871 Jefferson Avenue
St. Paul, MN 55102
www.go2e3.com

Consultation

From:	Haupt, Michael L.
To:	Katie Schmidt
Subject:	RE: Epping Transmission Company, LLC: DAPL Connector Pipeline Project Consultation
Date:	Wednesday, July 20, 2016 3:08:26 PM
Attachments:	image001.png

Thanks Katie!

Michael L. Haupt
Land Management Professional, CPRM
North Dakota Department of Trust lands
1707 Nth 9th Street
Bismarck ND 58506-5523
701-328-1916
mhaupt@nd.gov

Note: You can track the real time status of your right-of-way application 24/7 at http://www.land.nd.gov/surface/right-of-way.aspx using either the ROW number or by entering at least the first three letters of the company name. By checking this site you can find the name, telephone number and email address of the person working on the application as well as its current status in real time.

From: Katie Schmidt [mailto:KSchmidt@go2e3.com]
Sent: Wednesday, July 20, 2016 3:03 PM
To: Haupt, Michael L. <mhaupt@nd.gov>
Subject: RE: Epping Transmission Company, LLC: DAPL Connector Pipeline Project Consultation

Michael,

I have provided your comments back to my client and they have confirmed that the Bison Midstream project and this are one in the same. Bison Midstream is the parent company to Epping Transmission Company, LLC, see the attached email.

Please let me know if you need any additional information.

Thanks-Katie

Katie Schmidt, EIT
Senior Consultant/Operations Manager
E3 Environmental, LLC
kschmidt@go2e3.com
O: 651.282.0652
M: 651.216.6881

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From: Haupt, Michael L. [mailto:mhaupt@nd.gov]
Sent: Wednesday, July 20, 2016 11:42 AM
To: Katie Schmidt <KSchmidt@go2e3.com>
Subject: RE: Epping Transmission Company, LLC: DAPL Connector Pipeline Project Consultation

Katie,

Good morning! The ND School Trust owns surface in the S2 and NW4 of section 36-156-99 Williams County and contains existing pipeline corridors as shown on the attached aerial photo. We have a request from Bison Midstream (ROW#7822) for a similar pipeline project and route, not sure if the proposed Epping Transmission Company project is the same or not? Future pipeline routes on this tract would be 20 feet from and parallel to the nearest existing pipeline. Cultural sites, as depicted on the attached map, must be identified by the company, depicted on the survey plat and designated to be directionally bored. If Epping Transmission Company is different from Bison Midstream please submit an on line application on our web site at https://land.nd.gov/surface/Right-of-Way.aspx. Let me know if you have questions. Thanks.

Michael L. Haupt
Land Management Professional, CPRM
North Dakota Department of Trust lands
1707 Nth 9th Street
Bismarck ND 58506-5523
701-328-1916
mhaupt@nd.gov

Note: You can track the real time status of your right-of-way application 24/7 at http://www.land.nd.gov/surface/right-of-way.aspx using either the ROW number or by entering at least the first three letters of the company name. By checking this site you can find the name, telephone number and email address of the person working on the application as well as its current status in real time.

From: Katie Schmidt [mailto:KSchmidt@go2e3.com]
Sent: Wednesday, July 20, 2016 11:06 AM
To: Haupt, Michael L. <mhaupt@nd.gov>
Subject: Epping Transmission Company, LLC: DAPL Connector Pipeline Project Consultation

Mr. Haupt

E3 Environmental (E3) has been retained by Epping Transmission Company to provide environmental consulting support for the DAPL Connector Pipeline Project. Attached you will find a project consultation letter, and project location maps.
Should you have question or require additional information please feel free to contact me via the

information below.

Regards,

Katie

Katie Schmidt, EIT
Senior Consultant/Operations Manager
E3 Environmental, LLC
kschmidt@go2e3.com
O: 651.282.0652
M: 651.216.6881
871 Jefferson Avenue
St. Paul, MN 55102
www.go2e3.com

North Dakota Game and Fish Department

Consultation

July 19, 2016

Mr. Greg Link, Chief
Conservation and Communication Division
North Dakota Game and Fish Department
100 N. Bismarck Expressway
Bismarck, ND 58501-5095

Epping Transmission Company, LLC – DAPL Connector Pipeline Project
State Conservation Priority Species Consultation

Epping Transmission Company (ETC) is planning the DAPL Connector Pipeline Project (Project). The Project will result in the construction of an approximately 3.6 mile, 12-inch diameter, crude oil pipeline. The pipeline will be entirely located within Williams County North Dakota and is under the jurisdiction of the North Dakota Public Service Commission. The Project centerline will traverse Township 155N Range 98W Section 6, Township 155N Range 99W Sections 1 & 36 and Township 156N Range 98W Sections 31 & 32. The Project alignment and 1-mile wide Study Area are depicted on the attached maps.

E3 Environmental, LLC (E3), on behalf of ETC, submits this information and respectfully requests the North Dakota Game and Fish Department (Department) to review a 1-mile wide study area, which is centered upon the Project alignment.

As indicated above, the purpose of this correspondence is to provide the Department notice of the Project such that the environmental topics that fall under the purview of the Department that are also relevant to the PSC's siting requirements for Energy Conversion facilities are administrated properly. It is our understanding that the Department curates information on the presence or absence of State Conservation Priority Species.

We appreciate your assistance with this request and look forward to your timely review and comments regarding this Project. E3 has been retained by ETC to provide environmental consulting support for this Project. Should you have any questions or require additional information, please contact me at 651-282-0652 or kschmidt@go2e3.com.

Sincerely,

Katie Schmidt

Katie Schmidt, Senior Consultant
E3 Environmental, LLC
871 Jefferson Ave
St. Paul, MN 55102

North Dakota Parks and Recreation Department

Consultation

July 19, 2016

Ms. Kathy Duttenhefner, Coordinator
Natural Resources Division
North Dakota Department of Parks and Recreation
1600 East Century Avenue, Suite 3
Bismarck, ND 58503-0649

Epping Transmission Company, LLC – DAPL Connector Pipeline Project
Natural Heritage Inventory Review
State Park Lands; and Land and Water Conservation Fund Review

Epping Transmission Company, LLC is planning the DAPL Connector Pipeline Project (Project). The Project will result in the construction of an approximately 3.6 mile, 12-inch diameter, crude oil pipeline. The pipeline will be entirely located within Williams County North Dakota and is under the jurisdiction of the North Dakota Public Service Commission. The Project centerline will traverse Township 155N Range 98W Section 6, Township 155N Range 99W Sections 1 & 36 and Township 156N Range 98W Sections 31 & 32. The Project alignment and 1-mile wide Study Area are depicted on the attached maps.

E3 Environmental, LLC (E3), on behalf of ETC, submits this information and respectfully requests the North Dakota Parks and Recreation Department (Department) to review a 1-mile wide study area, which is centered upon the Project alignment.

As indicated above, the purpose of this request is to provide the Department notice of the Project, and to ensure the environmental topics that fall under the purview of the Department, which are also relevant to the PSC's siting requirements for Energy Conversion facilities, are administrated properly. It is our understanding that the Department administers the following state programs:

- State Park Lands
- Land and Water Conservation Fund
- Natural Heritage Inventory

We appreciate your assistance with this request and look forward to your timely review and comments on this Project. E3 has been retained by ETC to provide environmental consulting support for this Project. Should you have any questions or require additional information, please contact me at 651-282-0652 or kschmidt@go2e3.com.

Sincerely,

Katie Schmidt

Katie Schmidt, Senior Consultant
E3 Environmental, LLC
871 Jefferson Ave
St. Paul, MN 55102

North Dakota State Water Commission

Consultation

July 19, 2016

Mr. Todd Sando, State Engineer
North Dakota State Water Commission
900 East Boulevard Avenue, Dept. 770
Bismarck, ND 58505-0850

Epping Transmission Company, LLC – DAPL Connector Pipeline Project
Project Notification and Request for Review

Epping Transmission Company, LLC is planning the DAPL Connector Pipeline Project (Project). The Project will result in the construction of an approximately 3.6 mile, 12-inch diameter, crude oil pipeline. The pipeline will be entirely located within Williams County North Dakota and is under the jurisdiction of the North Dakota Public Service Commission. The Project centerline will traverse Township 155N Range 98W Section 6, Township 155N Range 99W Sections 1 & 36 and Township 156N Range 98W Sections 31 & 32. The Project alignment and 1-mile wide Study Area are depicted on the attached maps.

E3 Environmental, LLC (E3), on behalf of ETC, submits this information and respectfully requests the North Dakota State Water Commission (NDSWC) to review a 1-mile wide study area, which is centered upon the Project alignment. Project location maps are enclosed.

As indicated above, the purpose of this correspondence is to provide notification of the Project and to provide the NDSWC the opportunity to comment on the Project. It is our understanding that the NDSWC administers water appropriation and sovereign lands permit programs, and may also have relevant information regarding rural water supply systems and projects. Copies of correspondence received in response to this letter will be included in the Corridor Certification and Route Permit application to be filed with the PSC.

We appreciate your assistance with this request and look forward to your timely review and comments regarding this Project. E3 has been retained by ETC to provide environmental consulting support for this Project. Should you have any questions or require additional information, please contact me at 651-282-0652 or kschmidt@go2e3.com.

Sincerely,

Katie Schmidt

Katie Schmidt, Senior Consultant
E3 Environmental, LLC
871 Jefferson Ave
St. Paul, MN 55102

Western Area Water Supply Authority

Consultation

Katie Schmidt

To: Jacob.Monson@wawsp.com
Subject: Epping Transmission Company-DAPL Connector Pipeline Project Consultation Letter
Attachments: MMC_DAPL_AgencyNotification_Maps.pdf; DAPL_ShapefileData.zip

Mr. Monson

I am providing you notification for the Epping Transmission Company, LLC (ETC) DAPL Connector Pipeline Project (Project). The Project will result in the construction of a 3.6 mile, 12-inch diameter, crude oil pipeline. The Project will be entirely located within Williams County North Dakota and is under the jurisdiction of the North Dakota Public Service Commission. The Project centerline will traverse Township 155N Range 98W Section 6, Township 155N Range 99W Sections 1 & 36 and Township 156N Range 98W Sections 31 & 32. The Project alignment and 1-mile wide Study Area are depicted on the attached maps. Also attached you will find the supporting shapefile data (coordinate system WGS 84).

The purpose of this correspondence is to afford the Western Area Water Supply Authority (WAWSA) the opportunity to review the Project and associated Corridor and provide comment as appropriate. In closing, E3 Environmental, LLC has been retained by ETC to provide environmental consulting support for the Project. Should you have any questions or require additional information, please contact me by phone or email. Per previous communication, E3 understands that no response from your agency indicates that the WAWSA has no concerns with the project.

Regards,

Katie

Katie Schmidt, EIT
Senior Consultant/Operations Manager
E3 Environmental, LLC
kschmidt@go2e3.com
O: 651.282.0652
M: 651.216.6881
871 Jefferson Avenue
St. Paul, MN 55102
www.go2e3.com

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Williams County Weed Control Board

Consultation

July 19, 2016

Mr. Jim Basaraba, Weed Control Officer
Williams County Weed Control Board
P.O. Box 1109
Williston, ND 58802-1109

Epping Transmission Company, LLC– DAPL Connector Pipeline Project
Project Notification and Request for Review

Epping Transmission Company (ETC) is planning the DAPL Connector Pipeline Project (Project). The Project will result in the construction of an approximately 3.6 mile, 12-inch diameter, crude oil pipeline. The pipeline will be entirely located within Williams County North Dakota and is under the jurisdiction of the North Dakota Public Service Commission. The Project centerline will traverse Township 155N Range 98W Section 6, Township 155N Range 99W Sections 1 & 36 and Township 156N Range 98W Sections 31 & 32. The Project alignment and 1-mile wide Study Area are depicted on the attached maps.

E3 Environmental, LLC (E3), on behalf of ETC, submits this information and respectfully requests the Williams County Weed Control Board to review a 1-mile wide study area, which is centered upon the Project alignment. Project location maps are enclosed.

Based on a review of the North Dakota Century Code 4.1-47-02 and North Dakota Department of Agriculture (NDDA) guidance documents, the following noxious weeds are currently listed:

- Absinth wormwood (*Artemisia absinthium*)
- Canadian thistle (*Cirsium arvense*)
- Diffuse knapweed (*Centaurea diffusa*)
- Leafy spurge (*Euphorbia esula*)
- Musk thistle *(Carduus nutans)*
- Purple loosestrife *(Lythrum salicaria)*
- Russian knapweed (*Acroptilon repens*)
- Spotted knapweed (*Centaurea masculosa*)
- Yellow toadflax (*Linaria vulgaris*)
- Dalmation toadflax (*Linaria dalmatica*)
- Saltcedar (*Tamarix chinensis*)

To facilitate our environmental review, we are requesting the following information for areas crossed that are within the 1-mile wide study area associated with the Project:

- Confirmation that the list of noxious weeds above is correct and current;
- Known locations of noxious and/or invasive weed species along the proposed route; and

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St. Paul, MN 55102

- Guidance and/or recommendations for weed control, pesticide use, and non-chemical treatment options.

We ask that your office provide the location, size, and extent of noxious/invasive weeds as a GIS shapefile (if possible), geographic coordinates (e.g., latitude/longitude), Public Land Survey System Section(s), or marked on a map. The information that your office provides will assist us in project planning and execution. Copies of correspondence received in response to this letter will be included in application to be filed with the PSC.

We appreciate your assistance with this request and look forward to your timely review and comments on this Project. E3 has been retained by ETC to provide environmental consulting support for this Project. Should you have any questions or require additional information, please contact me at 651-282-0652 or kschmidt@go2e3.com.

Sincerely,

Katie Schmidt

Katie Schmidt, Senior Consultant
E3 Environmental, LLC
871 Jefferson Ave
St. Paul, MN 55102

Williams County Water Resource Board

Consultation

July 19, 2016

Mr. Roger Gunlikson, Vice Chairman
Williams County Water Resource Board
205 E Broadway, PO Box 2047
Williston, ND 58802-2047

Epping Transmission Company, LLC – DAPL Connector Pipeline Project
Project Notification and Request for Review

Epping Transmission Company, LLC (ETC) is planning the DAPL Connector Pipeline Project (Project). The Project will result in the construction of an approximately 3.6 mile, 12-inch diameter, crude oil pipeline. The pipeline will be entirely located within Williams County North Dakota and is under the jurisdiction of the North Dakota Public Service Commission. The Project centerline will traverse Township 155N Range 98W Section 6, Township 155N Range 99W Sections 1 & 36 and Township 156N Range 98W Sections 31 & 32. The Project alignment and 1-mile wide Study Area are depicted on the attached maps.

E3 Environmental, LLC (E3), on behalf of ETC, submits this information and respectfully requests the Williams County Water Resource Board to review and identify water sources within a 1-mile wide study area, which is centered upon the Project alignment. Project location maps are enclosed.

As indicated above, the purpose of this correspondence is to provide notification of the Project and to solicit comments that will assist in the regulatory process. To facilitate our review, we are requesting the following information be provided:

- Locations of any county-regulated drains, ditches, and/or other drainage features;
- Any special requirements, restrictions, or specifications regarding constructing pipelines across or under county regulated drainage features;
- Any local ordinances related to drainage; and
- Any permits issued through your office, which may be applicable to the Project and a summary of the permit process and anticipated timeframes.

We appreciate your assistance with this request and look forward to your timely review and comments on this Project. E3 has been retained by ETC to provide environmental consulting support for this Project. Should you have any questions or require additional information, please contact me at 651-282-0652 or kschmidt@go2e3.com.

Sincerely,

Katie Schmidt, Senior Consultant
E3 Environmental, LLC
871 Jefferson Ave
St. Paul, MN 55102

Appendix D

Natural Resources Report

Photos courtesy of: Jon Knudsen

Natural Resource Survey Report
DAPL Connector Pipeline Project
Williams County, North Dakota

Prepared for:

Epping Transmission Company, LLC

Prepared by:

E3 Environmental, LLC

July 2016

E3 Environmental
Enhancing Execution with Experience

TABLE OF CONTENTS

LIST OF TABLES

LIST OF APPENDICES

SECTION 1: INTRODUCTION

1.1 BACKGROUND

E3 Environmental, LLC (E3), at the request of Epping Transmission Company, LLC (Epping Transmission), performed natural resource of the DAPL Connector Pipeline Project (Project). The Project is approximately 3.2 miles in length and would transport crude oil from Epping Transmission's Epping Station to the DAPL Epping Station just outside of Epping, North Dakota.

E3 biologists conducted surveys to identify, delineate, and inventory natural resources that could potentially be impacted by pipeline construction. The Project does need to satisfy the North Dakota Public Service Commission's (PSC) siting authority requirements. As such, surveys included:

- Raptor nest documentation and status determination,
- Wetland and waterbody delineation and jurisdictional characterization,
- Woody vegetation delineation and inventory,
- Noxious weed inventory and delineation, and
- Federally protected species surveillance and habitat assessment.

This report details the methodologies used by E3 biologists to complete the above surveys and presents the results and E3's recommendations.

1.2 REGULATORY JUSTIFICATION

Several federal and state laws protect native wildlife and natural resources from being destroyed or degraded by anthropogenic disturbance. The following Acts and regulations protect certain species and natural resources within Williams County (Project Area), and compliance with these Acts and regulations serves as justification for conducting the completed surveys.

1.2.1 CLEAN WATER ACT

The Clean Water Act of 1972 (CWA) (33 U.S.C. §1251 et seq.) prohibits the discharge of fill materials or pollutants into Waters of the United States or associated wetlands (jurisdictional waterbodies) without a permit from the USACE. Wetland and waterbody boundary determinations and associated jurisdictional characterizations were therefore conducted for the Project. The U.S. Army Corps of Engineers (USACE) administers the Nationwide Permit Program (NWP) which is a series of general permits that regulates ground-disturbing activities within jurisdictional features.

1.2.2 MIGRATORY BIRD TREATY ACT

The Migratory Bird Treaty Act of 1918 (MBTA) (16 U.S.C. §§ 703–712) protects the majority of native birds species from being killed, sold, transported, harassed, or harmed. This also applies to bird parts, nests, feathers, and eggs. Most species found within the Project Area are protected under the MBTA, including raptors, which will frequently reuse nest sites.

1.2.3 BALD AND GOLDEN EAGLE PROTECTION ACT

The Bald and Golden Eagle Protection Act of 1940 (BGEPA) (16 U.S.C. §§ 668-668c) offers comprehensive protection for bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*) in the United States. The BGEPA prohibits the take of eagles, including parts, nests, or eggs; and any disturbance of protected species, including any activity that could cause injury to the species, nest abandonment, or a decrease in productivity.

1.2.4 ENDANGERED SPECIES ACT

The Endangered Species Act of 1973 (ESA) (16 U.S.C. § 1531 et seq.) contains a suite of protective measures pertaining to critically imperiled species at risk of extinction. These include species classified as threatened and endangered (T & E), defined as a species which has the potential of becoming endangered and a species which is in danger of extinction, respectively. Species are listed as threatened or endangered due to natural and anthropogenic factors threatening their existence, including disease, predation, habitat degradation, or inadequate regulation. The ESA also identifies habitats critical to listed species and provides mitigation strategies relating to activities within these habitats. Projects that impact listed species may be required to acquire permits to allow for take or to conduct more intensive field studies.

1.2.5 NORTH DAKOTA PUBLIC SERVICE COMMISSION MITIGATION REQUIREMENTS

The PSC's siting criteria requires that a proposed project's impacts to the PSC-specific exclusion and avoidance areas and selection criteria be considered when siting a transmission facility. These features include but are not limited to wetlands/waterways, noxious weeds, woody vegetation, and threatened and endangered species.

SECTION 2: SURVEY CORRIDOR

The Project, which is approximately 3.2 miles in length, is located on private land and state lands in Williams County, North Dakota. The Project originates at the Epping Station located within the SESW of Section 01 T155N:R99W and terminates at the DAPL Epping Station located within the SWSW of Section 32 T156N:R98W. E3 conducted natural resource surveys utilizing a typical 250-foot corridor which was centered upon the proposed Project alignment (Survey Corridor). The Survey Corridor encompassed approximately 100.8 acres. Refer to Appendix A for maps depicting the Project alignment

and Survey Corridor. Natural resource surveys were conducted by E3 on June 6, 2016. A follow-up survey to complete a re-route located in Section 6 T155N:T98W was conducted on July 7, 2016.

2.1 GENERAL LANDSCAPE CHARACTERIZATION

The Survey Corridor is located entirely within the Northwestern Glaciated Plains (42) Level III ecoregion, functioning as a transitional between moister, agricultural plains to the east and drier, broken plains to the west and southwest (Omernik, 1987; United States Environmental Protection Agency, 2013). The Northwestern Glaciated Plains ecoregion is characterized by morainal landscapes with abundant wetlands and significant surface irregularity (Omernik & Griffith, 2008). Mixed-grass prairie consisting of a short to mid-grass species dominate the landscape, where undisturbed. Intensive dryland farming and cattle ranching are the primary land-uses (Bryce, et al., 1998). This ecoregion marks the westernmost extent of continental glaciation.

2.2 VEGETATION COMMUNITIES

Vegetation communities are described by their location within United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Major Land Resource Areas (MLRA), which are broad geographic areas characterized by a particular pattern of soil, climate, vegetation, and land use. The Survey Corridor crosses one MLRA: Central Dark Brown Glaciated Plains (MLRA 53B)(USDA, NRCS, 2006).

The Central Dark Brown Glaciated Plains support prairie vegetation dominated by western wheatgrass (*Pascopyrum smithii*), needleandthread (*Hesperostipa comata*), big bluestem (*Andropogon gerardi*), and little bluestem (*Schizachyrium scoparium*) (USDA, NRCS, 2006). Shrub and forb species including prairie rose (*Rosa arkansana*), western snowberry (*Symphoricarpos occidentalis*), stiff goldenrod (*Solidigo rigida*), and leadplant (*Amorpha canescens*) are interspersed throughout the uplands and mixed-prairie. Woodlands are mostly absent from this region.

Seven ground-cover types, modeled by the Gap Analysis Program (GAP) as ecological systems, occur within the Survey Corridor. The most dominant ecological systems include: Northwestern Great Plains Mixedgrass Prairie, Cultivated Cropland, Developed – Open Space, and Western Great Plains Depressional Wetland Systems (described below). All ecological systems/cover-types within the Survey Corridor are included in Table 1 based on United States Geological Survey (USGS) GAP land cover data (US Geological Survey, 2011).

- Northwestern Great Plains Mixedgrass Prairie: This vegetation cover type constitutes the majority of the Survey Corridor, particularly within central and western parcels. Dominant grasses for this ecological system include western

wheatgrass, green needlegrass, and fescue (*Festuca spp.*), although blue grama (*Bouteloua gracilis*) and needle-and-thread (*Hesperostipa comate*) may also dominate. Shrub species including western snowberry, fringed sagewort (*Artemisia frigida*), and silver sagebrush (*Artemisia cana*) are also associated with this ecological system. Cool-season exotics such as Kentucky bluegrass (*Poa pratensis*), smooth bromegrass (*Bromus inermis*), and Japanese brome (*Bromus japonicas*) can increase in dominance due to intensive grazing. This system is one of the most disturbed grassland systems in North Dakota (Comer, et al., 2003).

- Cultivated Cropland: This vegetation cover dominates the eastern portion of the Survey Corridor, where canola (*Brassica sp.*) field occur. These areas would have been composed of Northwestern Great Plains Mixedgrass Prairie before being developed for agricultural purposes. Corn, wheat, and alfalfa crops are also being cultivated within and adjacent to the Survey Corridor.

- Developed – Open Space: This cover type consists of previously-developed parcels of land, including pipeline scars, well pads, and industrial plant footprints. Most of this cover-type occurs along the pipeline scars through the center and along the western edge of the Survey Corridor.

- Western Great Plains Depressional Wetland Systems: This ecological system is identified by low-lying depressions and emergent wetland vegetation, typically adjacent to permanent or semi-permanent streams. Sedge (*Carex spp.*), bulrush (*Typha spp.*), and rush (*Juncus spp.*) are the dominant mesic vegetation types found in proximity to wetland margins (Comer, et al., 2003). This ecological system is uncommon within the Survey Corridor, and associates with the few wetlands and intermittent streams in the western portion of the Project (refer to photo in Appendix B).

Table 1. GAP vegetation types and acreages within the Survey Corridor.

Vegetation Type	Acres	% of Survey Corridor
Northwestern Great Plains Mixedgrass Prairie	52.0	51.3%
Cultivated Cropland	25.7	25.3%
Developed, Open Space	15.3	15.1%
Western Great Plains Depressional Wetland Systems	4.2	4.1%
Developed, Low Intensity	3.3	3.3%
Northwestern Great Plains Shrubland	0.7	0.7%
Western Great Plains Wooded Draw and Ravine	0.2	0.2%
Total	**101.5**	**100.0%**

2.3 CLIMATE

The Project Area climate is semi-arid to subumid and continental, with warm summers and very cold winters (Sucik, 2002). In January, the average temperature is 13 degrees Fahrenheit, with an average daily minimum temperature of -2 degree Fahrenheit. In July, the average temperature is 71 degrees Fahrenheit, with an average daily maximum temperature of 84 degrees Fahrenheit. Mean annual precipitation for the Project Area is 14 inches. Most of the precipitation falls during the warm period with about 73 percent falling April through September (Sucik, 2002). The average seasonal snowfall is approximately 30 inches.

National Weather Service data for the Williston, North Dakota monitoring station (located approximately 14 miles southwest of Survey Corridor) recorded precipitation totals for the period from January 2016 to June 2016 to be 6.91 inches as described in Table 2 below (National Oceanic and Atmospheric Adminsistration (NOAA), 2016). The normal precipitation average for this time period is 7.13 inches. For this time period, rainfall was 0.22 inches below normal.

Table 2. Monthly recorded precipitation at National Weather Service Station in Williston, North Dakota.

Month	Recorded Precipitation	Normal Precipitation	Difference (inches)
January	0.38	0.59	-0.21
February	0.75	0.39	0.36
March	0.18	0.71	-0.53
April	1.95	1.00	0.95
May	1.81	1.92	-0.11
June	1.84	2.52	-0.68
Total	**6.91**	**7.13**	**-0.22**

Source: NOAA preliminary climate Data Reports

2.4 SOILS

Soil types intersected by the Survey Corridor were analyzed through the NRCS Web Soil Survey in July of 2016 (NRCS, 2016a). Described below are the components of dominant soil orders within the Survey Corridor, including Bowbells, Williams, Zahill, and Zahl soils. A list of all soil classifications and the acreage encompassed by the Survey Corridor are located in Table 3.

2.4.1 BOWBELLS

The Bowbells soil series is composed of deep and very deep, well to moderately well drained, moderately permeable soils. These soils are formed from glacial till on glacial till plains or moraines with slopes of 0 to 9 percent. Belfield soils are present in areas

with a mean annual temperature of 42 degrees Fahrenheit, receiving 14 inches mean annual precipitation. Small grain agriculture, hay, and pasture are the primary land uses associated with soils in the Bowbells series, while potential native vegetation populations include western wheatgrass, big bluestem, and green needlegrass (NRCS, 2016b).

2.4.2 WILLIAMS

The Williams soil series is composed of very deep, well drained soils that are in calcareous glacial till. These soils are located on glacial till plains and moraines with slopes of 0 to 35 percent. Williams soils are present in areas with a mean annual temperature of 40 degrees Fahrenheit, receiving 14 inches mean annual precipitation. Small-grain agriculture and pasture are the primary land uses associated with soils in the Williams series, while potential native vegetation populations include western wheatgrass, needle-and-thread, blue grama, green needlegrass, and prairie junegrass (*Koeleria cristata*) (NRCS, 2016b).

2.4.3 ZAHILL

The Zahill soil series is composed of very deep, well drained soils that are formed in till. These soils are located in till plains, hills, moraines, and escarpments with slopes of 0 to 65 percent. Zahill soils are present in areas with a mean annual temperature of 42 degrees Fahrenheit, receiving 13 inches mean annual precipitation. Range and dryland crop agriculture and the primary land uses associated with soils in the Zahill series, while potential native vegetation populations include western wheatgrass, needle-and-thread, little bluestem, bluebunch wheatgrass, prairie junegrass, sedges, and blue grama (NRCS, 2016b).

2.4.4 ZAHL

The Zahl soil series is composed of very deep, well drained, moderately slow or slowly permeable soils. These soils are formed in calcareous glacial till, and are located on glacial till plains, moraines, and valley side slopes with slopes of 1 to 60 percent. Zahl soils are present in areas with a mean annual air temperature of about 40 degrees Fahrenheit, receiving 14 inches mean annual precipitation. Rangeland, pasture, and small grain agriculture are primary the land uses associated with soils in the Zahl series, while potential native vegetation populations include western wheatgrass, little bluestem, and needle-and-thread (NRCS, 2016b).

Table 3. Soil components and acreages within Survey Corridor.

Map Unit Symbol	Soil Types	Slopes (percent)	Acres within Survey Corridor	Percent within Map Unit
C210B	Williams-Bowbells loams	3-6	66.1	65.1%
C132C	Williams-Zahl-Zahill complex	6-9	16.9	16.7%
C135D	Zahl-Williams loams	9-15	12.8	12.7%
C210A	Williams-Bowbells loams	0-3	2.8	2.7%
C491A	Straw-Fluvaquents channeled	0-2	1.8	1.7%
C75A	Vallers loam, saline	0-1	1.1	1.1%
Survey Corridor Total			**34.7**	**100.0%**

Source: **(NRCS, 2016a)**

SECTION 3: SURVEY METHODOLOGY

E3 completed natural resource surveys within the Survey Corridor on June 6 and July 7, 2016. Natural resource surveys were performed on foot by a team of E3 biologists following guidelines published by the PSC, USACE, Bureau of Land Management (BLM), and United States Forest Service (USFS). Data was collected using Trimble® Juno T41/5, Trimble® GeoExplorer 6000 XT, or Trimble® GeoExplorer 6000 XH handheld GPS units facilitated with Terrasync® GIS software. Binoculars and spotting scopes assisted biologists with the observation and identification of wildlife within the Survey Corridor. All natural resource surveys were conducted concurrently, allowing the entire Survey Corridor to be completed during the two site visits.

3.1 RAPTOR NESTS

Pedestrian raptor nest surveys were conducted by E3 biologists within the Survey Corridor and within line-of-site of the Survey Corridor. Suitable nesting substrates, such broad-leaf tree stands and windrows, were searched for raptor nests within the Survey Corridor. Located nests, if found, were observed from a distance suitable to avoid disturbing the birds. Binoculars or spotting scopes were used to identify adult birds exhibiting nesting or brooding behavior (e.g. incubating or behaving agonistically). If nests were determined inactive, and within the Survey Corridor, the areas under, around, and in the nests were searched for signs of recent activity (fresh mute, regurgitated pellets, eggs, eggshell fragments, prey remains, etc.). Accurate GPS locations of raptor nests were recorded at each nest site and the nest status, condition, substrate, and species of raptor using the nests were documented (if possible). Annual activity status and productivity determinations were recorded for all nests. Note that many species of raptors (e.g. red-tailed hawks) reuse nesting sites annually.

3.2 WETLANDS

E3 biologists identified and defined the boundaries of all wetlands observed during field surveys using methodology in accordance with the USACE *Wetlands Delineation Manual* (Environmental Laboratory, 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (Version 2.0)* (Environmental Laboratory, 2010). For an area to be delineated as a regulated wetland, the hydrophytic vegetative, wetland hydrology, and hydric soils must all be present and consistent with federal classification criteria. Wetlands inventoried within the Survey Corridor were classified using the Cowardin System, developed by the USFWS (Cowardin et al. 1979).

3.2.1 WETLAND VEGETATION

More than 50 percent of the vegetative cover must consist of obligate or facultative wetland species as determined by the dominance test using the 50/20 rule; the prevalence index; or by evidence of morphological adaptation (USACE 1987). Hydrophytic vegetation was determined to be present if any of these three indicators were satisfied. If none of the indicators are satisfied, then hydrophytic vegetation is absent unless (1) indicators of hydric soil and wetland hydrology are present and (2) the site meets the requirements for a problematic wetland situation.

3.2.2 WETLAND HYDROLOGY

To be considered a wetland, there must be evidence of periodic or permanent ground inundation. The presence of wetland hydrology was evaluated by recording the extent of observed surface flows, the depth of inundation, the depth to saturated soils, and the depth to free water in soil test pits. Other evidence such as water-stained leaves or general drainage patterns can indicate a site has the proper hydrology to be a wetland.

3.2.3 WETLAND SOILS

The National Technical Committee for Hydric Soils (NTCHS) defines a hydric soil as a soil that is formed under conditions of saturation, flooding, or ponding that occurs long enough during the growing season to develop anaerobic conditions (or conditions of limited oxygen) at or near the soil surface and that favor the establishment of hydrophytic vegetation. The USDA-NRCS *Field Indicators of Hydric Soils in the United States*—Guide for Identifying and Delineating Hydric Soils, Version. 7.0 was used to determine the presence of hydric soils (2010). The soil conditions within the Survey Corridor were sampled by taking cores along wetland/upland boundary to examine the water table depth and to identify hydric indicators.

3.3 WATERBODIES

E3 biologists identified and defined the boundaries of all waterbodies observed during field surveys by mapping the ordinary high water mark (OHWM) of each feature. Common indicators of an OHWM include open water or evidence of a natural line visible on the bank, shelving or terracing, changes in soil characteristics, vegetation changes,

the presence of litter and debris, and watermarks on structures that are inundated during normal high water conditions. The OHWM typically represents the potential limits of the USACE's jurisdiction. However, the USACE has full discretion in determining the jurisdictional status of referenced wetlands and waterbodies in this report. A non-jurisdictional characterization was made for this waterbody, following the criteria outlined in the *U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook* (2007).using methodology.

3.4 WOODY VEGETATION

E3 biologists mapped, characterized, and inventoried woody vegetation present within the Survey Corridor. The boundaries of each distinct woody vegetation habitat were mapped and are depicted on the Project maps in Appendix A. Woody vegetation within each patch was then inventoried. Direct tallies (100%) were employed in forested upland lands, shrublands, and riparian zones for all trees greater than one-inch diameter at breast height (DBH) when possible; sub-sampling was employed in woodlands too dense to directly count. Large shrub patches were inventoried by measuring percent cover, unless habitat patches were small enough to count each individual. Regardless of DBH, all trees and shrubs were mapped, characterized, and inventoried within shelterbelts and windbreaks. E3 biologists taxonomically identified and tallied all species within each habitat. Refer to Appendix B for a table detailing the woody vegetation identified within the Survey Corridor.

3.5 NOXIOUS WEEDS

Noxious weeds are defined by the Federal Noxious Weed Act of 1974 as "a plant which is of foreign origin, is new to, or is not widely prevalent in the United States, and can directly or indirectly injure crops or other useful plants, livestock or the fish and wildlife resources of the United States, or public health" (Title 7 United States Code 2801-2814, 2011). The State of North Dakota defines noxious weeds as "weeds that are difficult to control, easily spread, and injurious to public health, crops, livestock, land, or other property" (North Dakota Century Code 4.1-47-01, 2015). North Dakota has County Weed Boards in all 53 counties, each of which has the opportunity to add noxious weeds to the state list for regulation only within their jurisdiction.

The North Dakota Department of Agriculture identifies 11 plant species as noxious weeds (2016). Williams County does not recognize any additional problematic noxious weeds within its boundaries (North Dakota Department of Agriculture, 2016) (Table 4).

Table 4. State and County designated noxious weeds with the potential to occur within the Survey Corridor.

Common Name	Scientific Name	Noxious Designation	
		North Dakota	Williams County
Absinth wormwood	*Artemisia absinthium*	X	X
Canada thistle	*Cirsium arvense*	X	X
Dalmatian toadflax	*Linaria dalmatica*	X	X
Diffuse knapweed	*Centaurea diffusa*	X	X
Leafy spurge	*Euphorbia esula*	X	X
Musk thistle	*Carduus nutans*	X	X
Purple loosestrife	*Lythrum salicaria*	X	X
Russian knapweed	*Acroptilon repens*	X	X
Saltcedar	*Tamarix ramosissima*	X	X
Spotted knapweed	*Centaurea stoebe*	X	X
Yellow toadflax	*Linaria vulgaris*	X	X

Source: North Dakota Department of Agriculture, 2016

E3 conducted surveys for noxious weeds within the Survey Corridor. Noxious weed infestations were identified and delineated in the field by mapping their boundaries using Trimble GPS units. Percent cover for all noxious weeds within each patch was estimated for each species.

3.6 THREATENED AND ENDANGERED SPECIES

The USFWS Information, Planning, and Conservation System (IPaC) was accessed on June 1, 2016 to obtain information regarding the presence of T & E species within the Survey Corridor (Table 5). This information does not represent a comprehensive survey, but rather acknowledges the potential presence of listed species within the Survey Corridor. The USFWS identifies seven threatened, endangered, or candidate species that have the potential to occur within the Survey Corridor or could potentially be impacted by development within the Survey Corridor (USFWS, 2016b). However, no critical habitat for these species is currently identified within the Survey Corridor. These listed species were surveyed for opportunistically during the field visit in 2016.

Table 5. Federally listed species with the potential to occur within the Project Area.

Common Name	Scientific Name	Federal Status
Interior least tern	*Sterna antillarum athalassos*	Endangered
Piping plover	*Charadrius melodus*	Threatened
Rufa red knot	*Calidris canutus rufa*	Threatened
Whooping crane	*Grus americana*	Endangered
Pallid sturgeon	*Scaphirhynchus albus*	Endangered
Gray wolf	*Canis lupus*	Endangered
Northern long-eared bat	*Myotis septentrionalis*	Threatened

Source: (USFWS, 2016b).

3.6.1 INTERIOR LEAST TERN

Federal Status: Endangered

The interior least tern is the smallest member of the gull and is federally listed as endangered due to river channelization and impoundment, water pollution, and lower water levels. The interior least tern is found throughout major interior rivers of the United States, including the Mississippi and Missouri rivers, where terns nest in bare, sandy areas along open water bodies. Nests are shallow holes and constructed between late April and August. Least terns prefer habitat near open or flowing water, where they hover in search of food, and dive for small fish in the water (USFWS, 2016c). The interior least tern is identifiable by its small size, measuring at approximately nine inches in length. Breeding adults have gray upper bodies and white lower bodies, with a black cap, black nape, and black eye stripe. Vocalization is short and high pitched (USFWS, 2016c).

3.6.2 PIPING PLOVER

Federal Status: Threatened

The piping plover is a small shorebird that is federally listed as threatened due to human disturbance and habitat destruction. The piping plover is identifiable by its small size and stocky stature, with a sandy brown colored upper body, and white lower body. During the breeding season, adults have a black forehead, a black breast band, and an orange bill (USFWS, 2016c). This species nest on open, sparsely vegetated sand or gravel beaches adjacent to alkali wetlands; and on beaches, sand bars, and dredged material islands of major river systems (USFWS, 2016c).

3.6.3 RUFA RED KNOT

Federal Status: Threatened

The rufa subspecies of the red knot is a medium sized shorebird that is federally listed as threatened due to horseshoe crab overharvesting, coastal development, and climate change. The rufa red knot is identifiable by its proportionally large wingspan of 20 inches to its body length of 9 inches. This bird is a larger member of the sandpiper family, with a short, straight bill that tapers to the tip. During breeding, rufa red knots bear a reddish breeding plumage, which is gray the rest of the year (USFWS, 2016c). Migratory habits and habitat requirements of this species are poorly understood, especially for populations utilizing midcontinent and intercontinental flyways. Migration routes are typically between South America and Canada, with inland stopovers in the Great Plains, Great Lakes, and various areas within the Mississippi Valley (USFWS, 2016c).

3.6.4 WHOOPING CRANE

Federal Status: Endangered

The whooping crane is a large bird species that is federally listed as endangered due to habitat destruction and historic over-hunting. The whooping crane is identified by its height, standing erect at five feet, and by its snow white plumage, with black primaries. This large-bodied bird is known by its vocal tone, which is a loud, single note that is vocalized when alarmed. The whooping crane may live up to 30 years (USFWS, 2016c). This species prefers a variety of wetland habitats in both salt and fresh water. Nesting occurs in wetland potholes in Canada, predominantly consisting of bulrush, but also including populations of cattail, sedge, musk-grass, and other common aquatic plants. Nest sites are typically found in shallow diatom ponds. Migration paths include stops in a variety of landscapes, although wetlands are preferred throughout the route (USFWS, 2016c).

3.6.5 PALLID STURGEON

Federal Status: Endangered

The pallid sturgeon is an aquatic fish that is federally endangered, primarily due to the habitat destruction resulting from river channelization and damming. The pallid sturgeon is identified by its flat, shovel-shaped snout, with a long, slender, and fully plated caudal peduncle. Consistent with other sturgeon species, the mouth of the pallid sturgeon is ventrally positioned, protrusible, and toothless. This species has a cartilaginous skeletal structure (USFWS, 2016c). The pallid sturgeon is a large river obligate, primarily in Missouri and Mississippi River Systems, in areas with diverse habitat options. Pallid sturgeons prefer benthic environments with predominantly sandy and fine substrates, with successful populations of micro-invertebrates and deep water for spawning activity (USFWS, 2016c).

3.6.6 GRAY WOLF

Federal Status: Endangered

The gray wolf is a large canine species that is federally listed as endangered due to habitat destruction, human interference, and overhunting. The gray wolf is identifiable by its canine body shape, long bushy tail with a black tip, and a mix of gray and brown coat colors. The average size of a gray wolf is 3-5 feet in length, weighing approximately 60-145 pounds (USFWS, 2016c). This species prefers a wide range of habitat, including forests, plains, prairies, agricultural areas, swamps, and barren lands, but has been extirpated from most of its historic range. Dens are located near water and dug into well-drained soil on a south-facing slope, under boulders, among tree roots, or in cut banks, hollow logs, or other natural structures. This species is a roaming animal, therefore are wide-ranging and rare to encounter (USFWS, 2016c).

3.6.7 NORTHERN LONG-EARED BAT

The northern long-eared bat (NLEB) is a federally threatened species not only due to habitat destruction, but also due to onset white-nose syndrome (WNS), which affects many bat species in the United States. NLEBs are medium sized bats with a body length of 3-4 inches and a wingspan of 9-10 inches. Their fur color ranges medium to dark brown on the back and light brown on the underside. This bat is distinguished by its long ears (USFWS, 2016c). During the summer months, this small mammal roosts individually or in colonies underneath bark, or in any indentations on both live and dead trees. The NLEBs tend to select tree stand roosts based on a range of factors, including the ability of the tree to retain loose bark and provide crevices or cavities for cover. Signs of roost presence include fallen loose bark and fecal matter in concentrated areas near tree bases in older stands. Breeding begins in late summer or early fall (USFWS, 2016c). Currently, the NLEB is managed as threatened under the Final 4(d) rule.

SECTION 4: RESULTS

4.1 RAPTOR NESTS

No raptor nests were recorded by E3 biologists during pedestrian surveys in June or July of 2016. Suitable roosting habitat, overwintering habitat, or previously-recorded nests for bald and golden eagles were not present within the Project Area.

4.2 WETLANDS

Desktop review of the Survey Corridor indicates both lentic and lotic wetlands are present within the Project Area. The National Wetlands Inventory (NWI) contains five palustrine emergent wetlands within the Survey Corridor (USFWS, 2016a). The National Hydrography Dataset (NHD) does not contain wetlands within the Survey Corridor. During field surveys, E3 identified and delineated three wetlands within the Survey

Corridor, totaling approximately 0.6 acres (Table 6). These wetlands are all Palustrine Emergent (PEM) features with little to no open water (refer to photo in Appendix B). None of these wetlands were classified as jurisdictional during surveys due to their ephemeral status and disconnected hydrology; however, the USACE has final authority on jurisdictional status. Refer to the Project maps in Appendix A for the location of these features.

Table 6. Wetlands, Waterbodies, and their Associated Acreages and Jurisdictional Determinations within the Survey Corridor.

Water Feature ID	Feature Type	Classification[1]	Jurisdictional Determination[2]	PCN Required	Crossing Length (ft)	Surveyed Acres
WET-01	Wetland	PEM	No	No	--	0.1
WET-02	Wetland	PEM	No	No	156	0.5
WET-03	Wetland	PEM	No	No	48	0.1

[1]Cowardin et al, 1979
[2]USACE has final authority over jurisdictional status

4.3 WATERBODIES

Desktop review of the Survey Corridor identified two intermittent tributaries to Stone Creek, contained within the NHD (USFWS, 2016a). Field investigation determined these features were upland swales. E3 did not identify or delineate any waterbodies within the Survey Corridor.

4.4 WOODY VEGETATION

Woody vegetation was relatively sparse throughout the Survey Corridor. A total of eight woody vegetation patches were mapped within the Survey Corridor, totaling 0.36 acres. Of the eight patches, five were upland shrub communities, one was a riparian deciduous community, one was a riparian shrub community, and one was a shelterbelt. Appendix B lists the species inventory within each patch, the estimated number of trees that could be removed with a 50-foot construction right-of-way (ROW), and the estimated mitigation (2:1) for each woody vegetation patch.

4.5 NOXIOUS WEEDS

A total of 18 noxious weed patches were mapped by E3 biologists within the Survey Corridor, totaling 9.4 acres (Table 7). Two species, leafy spurge and Canada thistle, listed by Williams County and the State of North Dakota were mapped throughout the Survey Corridor. These were typically in areas disturbed by farming, grazing, or road construction. Refer to the Project maps in Appendix A for the locations of these features.

Table 7. Noxious weed patches and acreages mapped within the Survey Corridor.

Weed ID	Patch Type	Acres
NX-01	Leafy Spurge 2%	5.542742
NX-02	Canada Thistle 30% Leafy Spurge 10%	0.027361
NX-03	Canada Thistle 30% Leafy Spurge 30%	3.020009
NX-04	Leafy Spurge 25%	0.339455
NX-05	Leafy Spurge 15%	0.273377
NX-06	Canada Thistle 40%	0.027026
NX-07	Canada Thistle 30%	0.016528
NX-08	Canada Thistle 25%	0.023016
NX-09	Leafy Spurge 30%	0.005972
NX-10	Canada Thistle 40%	0.003827
NX-11	Canada Thistle 20%	0.071763
NX-12	Canada Thistle 40%	0.016071
NX-13	Canada Thistle 20%	0.023784
NX-14	Canada Thistle 5% Leafy Spurge 2%	0.003818
NX-15	Canada Thistle 10%	0.003295
NX-16	Canada Thistle 15%	0.004411
NX-17	Canada Thistle 15%	0.006542
NX-18	Canada Thistle 10%	0.001448

4.6 THREATENED AND ENDANGERED SPECIES

No candidate, threatened, or endangered species or their critical habitats were encountered by E3 biologists during field surveys within the Survey Corridor. The following sections detail the potential effects the Project could have on listed species.

4.6.1 INTERIOR LEAST TERN

Federal Status: Endangered

The Missouri River, located approximately 12 miles to the southeast of the Project, provides suitable breeding and nesting habitat for least terns. However, the Survey Corridor does not contain the sandbars, riverbanks, and broad beaches necessary for colonial nesting. Due to the lack of nesting habitat within the Survey Corridor, impacts to the interior least tern are not anticipated.

4.6.2 PIPING PLOVER

Federal Status: Threatened

Lake Sakakawea and the Missouri River, located approximately 12 miles to the southeast of the Project, provide suitable breeding and nesting habitat for piping plovers. This area is mapped as critical habitat by the USFWS. However, the Survey Corridor does not contain the sandbars or gravel beaches necessary for nesting. Due to the lack of nesting habitat within the Survey Corridor, impacts to the piping plover are not anticipated.

4.6.3 RUFA RED KNOT

Federal Status: Threatened

North Dakota is a possible migration stopover in spring and autumn for the rufa red knot, particularly within Lake Sakakawea and its major tributaries. Due to the lack of suitable foraging habitat within the Survey Corridor, impacts to this species and its associated habitat are not anticipated.

4.6.4 WHOOPING CRANE

Federal Status: Endangered

Suitable migratory habitat for the whooping crane is potentially located within the Survey Corridor (wet fields and croplands). If whooping cranes are sighted within 0.5 miles of the Project, E3 recommends suspending all heavy equipment operation until birds vacate the area. Any potential sightings of whooping cranes would be verified and reported to the USFWS. Provided these measures are fully implemented, potential impacts to this species are not anticipated.

4.6.5 PALLID STURGEON

Federal Status: Endangered

The Project does not cross any waterbodies classified as suitable habitat for the pallid sturgeon. Therefore, the Project will have no impacts to this listed species.

4.6.6 GRAY WOLF

Federal Status: Endangered

The Survey Corridor intersects potentially suitable habitat for the gray wolf, however potential habitat is not expansive, and is near regular human activity. Because the Project would likely act as a deterrent to this species, impacts to this species are unlikely.

4.6.7 NORTHERN LONG-EARED BAT

Federal Status: Threatened

Potentially suitable habitat in the form of a single cottonwood tree (*Populous deltoides*) occurs within the Survey Corridor. However, because the Project occurs outside of the White-Nose Syndrome Zone, there are no restrictions to tree-removing activities per the Final 4(d) Rule. Therefore, no impacts to this species are anticipated.

SECTION 5: RECOMMENDATIONS

Based on the findings during field surveys, E3 recommends the following guidance to maintain compliance with regulatory agencies and minimize its impact on resident natural resources:

Raptors:

- Conduct a raptor nest survey within line-of-site of the Survey Corridor prior to construction (if construction occurs before September 1)
- Adhere to USFWS-suggested timing buffers for active raptor nests during nesting season (April 15-August 30)
- Report active nest sites to the USFWS

Woody vegetation:

- Minimize removal of woody vegetation
- Follow PSC guidelines for tree-clearing activity

Wetlands/waterbodies:

- Minimize ground disturbance activities through wetlands/waterbodies
- Minimize equipment rutting by use of construction mats
- Restore disturbed areas promptly to original contours

Noxious weeds:

- Minimize topsoil spread and traffic in areas with high concentrations of noxious weeds
- Visually inspect equipment prior to leaving infested areas – clean vegetation and soils from vehicles and equipment prior to entering uninfected tracts
- Contractors will thoroughly clean the equipment and materials (e.g., timber mates, bridges, etc.) at the contractor yard prior to mobilization to the Project and upon departure from locations of infestations to prevent spread of nuisance weeds

Threatened and Endangered Species:

- If any threatened or endangered species are encountered during construction activities, report internally for external communication to agencies, as appropriate.
- If construction activities occur between April 15-July15, conduct a breeding bird sweep of the impacted area within two weeks of construction to minimize impacts to protected bird species

SECTION 6: REFERENCES

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Appendix A

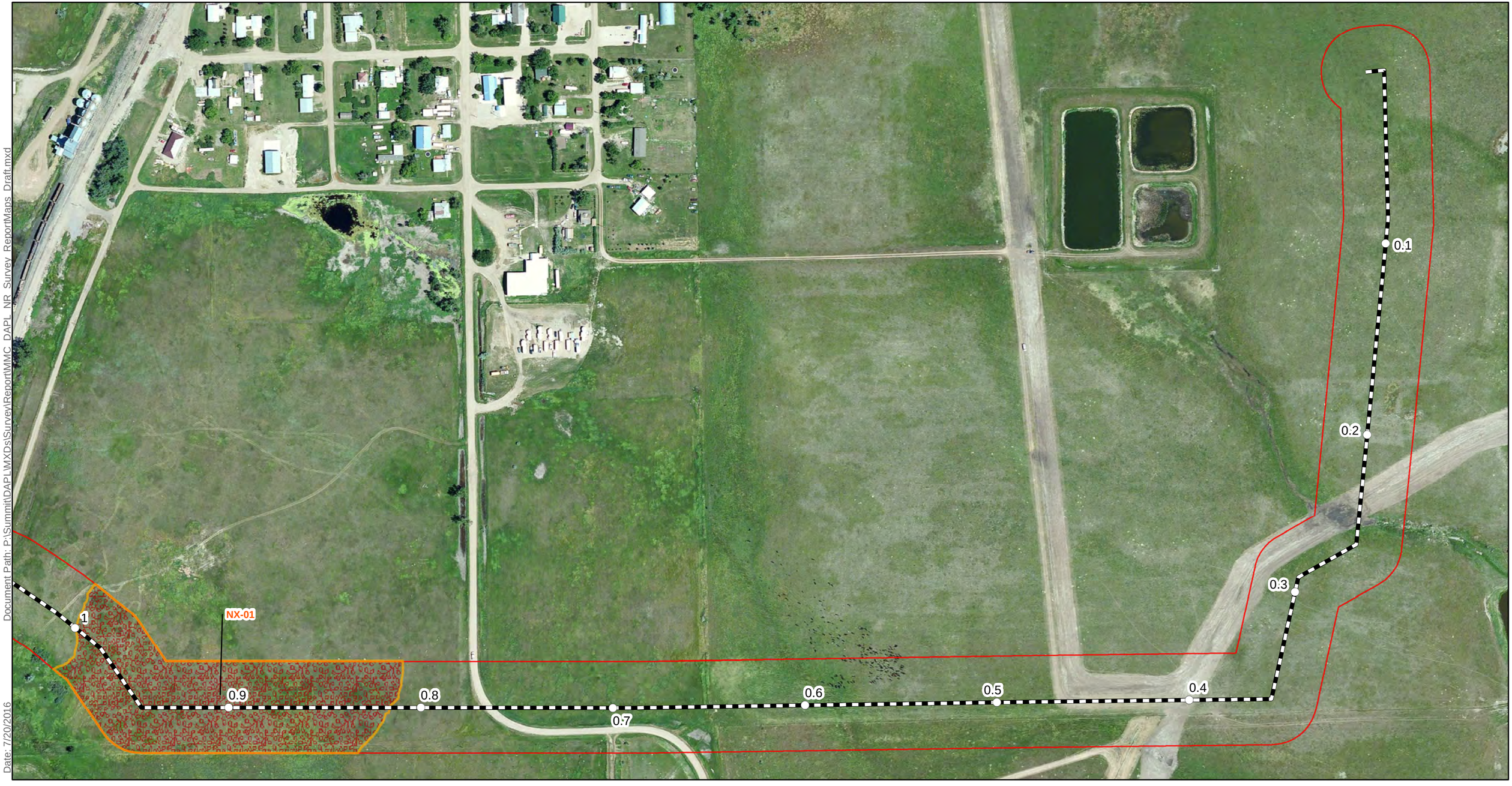
Natural Resource Maps

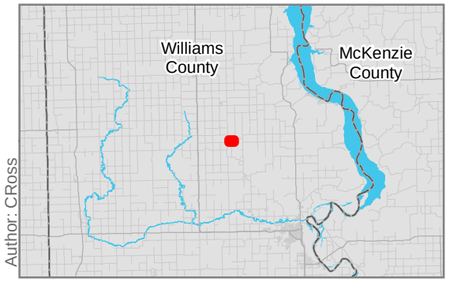
T156N R99W S35
T156N R99W S36
ND Surface Trust Land
T156N R98W S31
T156N R98W S32
DAPL Epping Station
124th Ave NW
123rd Ave NW
122nd Ave NW
Co Rd 8
60th St NW
Co Rd 8c
BM 2197
Gravel Pit
BURLINGTON
NORTHERN
BM 2228
BM 2286
Front St
School Ave
Uggen Ave
Main Ave
Lawrence Ave
1st St
2nd St
3rd St
Epping
(BM 2218)
Co Hwy 42
PIPELINE
59th Ln NW
T155N R99W S2
T155N R99W S1
T155N R98W S6
T155N R98W S5
123rd Dr NW
Stony Creek
Co Rd 17
59th St NW
T155N R99W S11
T155N R99W S12
T155N R98W S7
T155N R98W S8
Milepost
Proposed Alignment
Valve Site
Federal Land
Joint Ownership
Local Land
Native American Land
Private Conservation Land
State Land
Unknown
Township Boundary
Section Boundary
Map not to scale, for environmental review purposes only.
N
0 0.1 0.2 0.4 Miles
1:12,000
Williams County
McKenzie County
E3 Environmental
Enhancing Execution with Experience
Epping Transmission Company, LLC
DAPL Connector Pipeline Project
Overview Map
Williams County, North Dakota
Document Path: P:\Summit\DAPL\MXDs\Survey\Report\WMC_DAPL_NR_OverviewMap.mxd
Date: 8/8/2016
Author: CRoss

Document Path: P:\Summit\DAPL\MXDs\Survey\Report\WMC_DAPL_NR_Survey_ReportMaps_Draft.mxd

Date: 7/20/2016

Author: CRoss





- Milepost
- Centerline
- Woody Vegetation - Shrub
- Woody Vegetation - Tree
- Noxious Weed
- Natural Resouce Survey Corridor

E3 Environmental
Enhancing Execution with Experience

N

0 125 250 500 Feet

1:3,000

Map not to scale, for environmental review purposes only.

Epping Transmission Company, LLC

DAPL Connector Pipeline Project

Natural Resource Survey

Page 1 of 5

Williams County, North Dakota

Document Path: P:\Summit\DAPL\MXDs\Survey\Report\WMC_DAPL_NR_Survey_ReportMaps_Draft.mxd

Date: 7/20/2016

Author: CRoss

- Milepost
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N

0 125 250 500 Feet

1:3,000

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DAPL Connector Pipeline Project

Natural Resource Survey

Page 2 of 5

Williams County, North Dakota

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DAPL Connector Pipeline Project

Natural Resource Survey

Page 3 of 5

Williams County, North Dakota

- Milepost
- Centerline
- Woody Vegetation - Shrub
- Woody Vegetation - Tree
- Noxious Weed
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Natural Resource Survey

Page 4 of 5

Williams County, North Dakota

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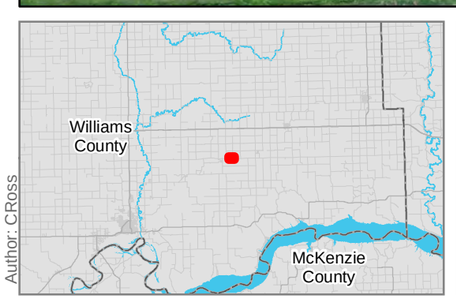
Date: 7/20/2016

Author: CRoss



- Milepost
- Centerline
- Woody Vegetation - Shrub
- Woody Vegetation - Tree
- Noxious Weed
- Natural Resouce Survey Corridor

N

0 125 250 500 Feet

1:3,000

Map not to scale, for environmental review purposes only.

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DAPL Connector Pipeline Project

Natural Resource Survey

Page 5 of 5

Williams County, North Dakota

Appendix B

Woody Vegetation

Woody Vegetation

Woody Veg ID	Patch Type	Species	Number of Plants			Area Surveyed (Acres)	Anticipated Disturbance (Acres)
			Survey Area	Const. ROW	Estimated Mitigation		
WVS-001	Upland Shrub	Snow Berry	40%	40%	**40%**	0.1464	0.0382
WVS-002	Upland Shrub	Snow Berry	25%	25%	**25%**	0.6959	0.2912
		Silver Buffaloberry	5%	5%	**5%**		
WVS-003	Upland Shrub	Snow Berry	20%	20%	**20%**	0.0063	0.0004
		Silver Buffaloberry	5%	5%	**5%**		
WVS-004	Riparian Deciduous	Plains Cottonwood	1	1	**2**	0.006	0.0052
	Upland Shrub	Snow Berry	5%	5%	**5%**		
WVS-005	Riparian Shrub	Tatarian Honeysuckle	60%	0%	**0%**	0.047	0.0000
WVS-006	Upland Shrub	Snow Berry	10%	10%	**10%**	0.041	0.0064
WVS-007	Upland Shrub	Snow Berry	10%	10%	**10%**	0.4580	0.0227
WVS-008	Wooded Fencerow/ Shelterbelt	Siberian Peashrub	50%	0%	**0%**	0.2156	0.0000

% = Percent Cover

Appendix E

Cultural Resources Report

STATE HISTORICAL SOCIETY OF NORTH DAKOTA

July 26, 2016

Mr. Joe Pnewski
Archaeologist
E3 Environmental, LLC
871 Jefferson Avenue
St. Paul, MN 55102

NDSHPO REF.: 16-1335 "Epping Transmission Company, LLC Class I and Class III Inventory of the DAPL Connector Pipeline Project, Williams County, North Dakota"

Dear Mr. Pnewski,

We reviewed NDSHPO REF.: 16-1335 "Epping Transmission Company, LLC Class I and Class III Inventory of the DAPL Connector Pipeline Project, Williams County, North Dakota," and find it acceptable.

We concur with a "No Significant Sites Affected" determination, provided the project remains as described and mapped in this report dated July 2016, and provided sites 32WI1169 and 32WI1678 are avoided.

Thank you for the opportunity to review the project. If you have questions please contact Susan Quinnell at squinnell@nd.gov or (701) 328-3576.

Sincerely,

Claudia J. Berg
Director, State Historical Society of North Dakota

Photos courtesy of: Chris Schmidt and Dan Woodward

Epping Transmission Company, LLC Class I and Class III Inventory of the DAPL Connector Pipeline Project Williams County, North Dakota.

Prepared for:

Epping Transmission Company LLC

Prepared by:

E3 Environmental, LLC

July 2016

E3 Environmental
Enhancing Execution with Experience

MANUSCRIPT DATA RECORD FORM

1. Manuscript Number: [SHPO assigns]

2. SHPO Reference #: [SHPO assigns]

3. Authors: Garrett Knudsen, Joseph K. Pnewski

4. Title: Epping Transmission Company, LLC Class I and Class III Inventory of the DAPL Connector Pipeline Project

5. Report Date: July, 2016

6. Number of Pages (Including front matter, references cited and appendices): 48

7. Type – I = Inventory (Class I and Class III CRI)

8. Acres – 120.6

9. Legal Location(s) (no quarter sections) with Historic Context Study Unit(s):

Consult township tables in The North Dakota Comprehensive Plan for Historic

Preservation: Archeological Component, (SHSND 1990) for Study Unit assignments.

Study Units: LM, CB, KN, HE, SM, GA, JA, GR, NR, SR, SO, SH, YE

COUNTY	TWP	RNG	SEC	SU
Williams	155N	98W	6	GA
	155N	99W	1	GA
	156N	98W	31, 32	GA
	156N	99W	36	GA

Epping Transmission Company LLC,

DAPL Connector Pipeline Project Class I and Class III Cultural Resource Inventory

Submitted to:

State Historical Society of North Dakota

Prepared for:

Epping Transmission Company LLC

Prepared By:

Garrett L. Knudsen and Joseph K. Pnewski

Principal Investigator:

Garrett L. Knudsen

July, 2016

E3 Environmental, LLC
871 Jefferson Ave
St. Paul, MN 55102

EXECUTIVE SUMMARY

E3 Environmental, LLC (E3) conducted a Class I and a Class III cultural resources inventory for the proposed Epping Transmission Company, LLC (ETC) DAPL Connector Pipeline Project (Project). The Project falls on private, state, and mineral trust land in Williams County, North Dakota as well as. Regulatory agencies involved are the North Dakota State Historic Preservation Office (ND SHPO) and the North Dakota Public Service Commission (NDPSC); ND SHPO guidelines are implemented in this cultural resources study.

A Class I inventory conducted June 2016 identified 10 completed cultural resources surveys (MS#3251, MS#9856, MS#11987, MS#14750, MS#15020, MS#15860, MS#15938, MS#16512, MS#16513, and MS#16625) within one-half mile of the proposed pipeline (Project Corridor). Ten previously-recorded cultural resources are located within the Project Corridor, including eight *sites* (32WI81, 32WI82, 32I481, 32WI791, 32WI1169, 32WI1493, 32WI1165, and 32WI11678) and two *isolates* 32WIX433, and 32WIX569. Of these ten, three sites (32WI82, 32WI1169, and 32WI1678) are recorded within the Survey Corridor, which is a 250-foot wide corridor centered upon the proposed project alignment, including proposed sites for block valve development. The Survey Corridor is 120.6 acres in area.

The Class III inventory, conducted in June, 2016, included pedestrian survey of the Survey Corridor and a re-investigation of previously recorded archaeological sites. The entire Survey Corridor was surveyed in 15-meter (maximum) transects as part of this study. These survey efforts identified no previously-unrecorded cultural resources. E3 also re-located and investigated two previously-recorded prehistoric sites (32WI1169 and 32WI1678) and one previously recorded historic site (32WI82) within the Survey Corridor.

Previously-recorded site 32WI82 remains recommended ***Not Eligible*** for inclusion to the NRHP and requires no further consideration. Previously recorded sites 32WI1169 and 32WI1679 are left ***Unevaluated*** for the NRHP. It is recommended that ***Unevaluated*** sites be allowed a 50-foot buffer outside of site boundaries to be avoided by construction activities. If construction does occur within 25 feet of site boundaries, on-site monitoring by a qualified archaeologist is recommended. In addition, a 50 foot buffer around the outside of individual cairn and stone features within 32WI1169 and 32WI1679 should be avoided by construction activities. If construction does occur within 25 feet of site boundaries, on-site monitoring by a qualified archaeologist is recommended.

Appendix F

Landowner Waivers

Bison Midstream, LLC
999 18th Street, Suite 3400S
Denver, CO 80202

Phone: 720.452.6221
Fax: 720.452.6232
www.summitmidstream.com

May 9, 2016

Greg A. Bjella & Patricia K. Bjella
PO Box 101
Epping, ND 58843

RE: Bison Midstream, LLC– DAPL Connection Project

Mr. and Mrs. Bjella,

Please review the attached site map noting the proposed location of an underground pipeline and associated facilities that are included in the Bison DAPL Connection Project Application that Bison Midstream, LLC intends to file with the North Dakota Public Service Commission ("Pipeline Project"). The Pipeline Project involves the installation of approximately 3.35 miles of a 12 inch crude oil pipeline. The attached site map indicates that the Pipeline Project will be located within 500 feet of your residence or business.

By signing below you are confirming that you have no objection to the Pipeline Project, or the future operation and maintenance of the Pipeline Project. Your cordial cooperation in this manner is greatly appreciated.

Respectfully,

Nathan Brady
Landman
Bison Midstream, LLC

X Greg A. Bjella
Greg A. Bjella

Date: 7-11-2016

X Patricia K. Bjella
Patricia K. Bjella

Date: July 11, 2016

Bison Midstream, LLC
999 18th Street, Suite 3400S
Denver, CO 80202

Phone: 720.452.6221
Fax: 720.452.6232
www.summitmidstream.com

May 9, 2016

Paul Allen Collupy
Samantha Lynn Collupy
5948 124B
Epping, ND 58843

RE: Bison Midstream, LLC– DAPL Connection Project

Dear Paul and Samantha,

Please review the attached site map noting the proposed location of an underground pipeline and associated facilities that are included in the Bison DAPL Connection Project Application that Bison Midstream, LLC intends to file with the North Dakota Public Service Commission ("Pipeline Project"). The Pipeline Project involves the installation of approximately 3.35 miles of a 12 inch crude oil pipeline. The attached site map indicates that the Pipeline Project will be located within 500 feet of your residence or business.

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Respectfully,

Nathan Brady
Landman
Bison Midstream, LLC

X Paul Allen Collupy
Paul Allen Collupy

Date: 5-13-16

X Samantha L Collupy
Samantha Lynn Collupy

Date: 5-13-16

Bison Midstream, LLC
999 18th Street, Suite 3400S
Denver, CO 80202

Phone: 720.452.6221
Fax: 720.452.6232
www.summitmidstream.com

May 9, 2016

COPY

Epping ND Meadows, LLC
P.O. Box 1203
Epping, ND 58843

RE: Bison Midstream, LLC– DAPL Connection Project

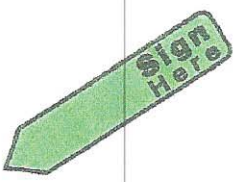
Dear Sir or Madam,

Please review the attached site map noting the proposed location of an underground pipeline and associated facilities that are included in the Bison DAPL Connection Project Application that Bison Midstream, LLC intends to file with the North Dakota Public Service Commission ("Pipeline Project"). The Pipeline Project involves the installation of approximately 3.35 miles of a 12 inch crude oil pipeline. The attached site map indicates that the Pipeline Project will be located within 500 feet of your residence or business.

By signing below you are confirming that you have no objection to the Pipeline Project, or the future operation and maintenance of the Pipeline Project. Your cordial cooperation in this manner is greatly appreciated.

Respectfully,

Nathan Brady
Landman
Bison Midstream, LLC



Epping ND Meadows, LLC

X Albert S Howell
Pres. Ash, Inc.
Managing Member

Date: May 17, 2016

Bison Midstream, LLC
999 18th Street, Suite 3400S
Denver, CO 80202

Phone: 720.452.6221
Fax: 720.452.6232
www.summitmidstream.com

May 9, 2016

Duwayne K. Hoffman
Lisa Hoffman
P.O. Box 1203
Williston, ND 58802

RE: Bison Midstream, LLC– DAPL Connection Project

Dear Duwayne and Lisa,

Please review the attached site map noting the proposed location of an underground pipeline and associated facilities that are included in the Bison DAPL Connection Project Application that Bison Midstream, LLC intends to file with the North Dakota Public Service Commission ("Pipeline Project"). The Pipeline Project involves the installation of approximately 3.35 miles of a 12 inch crude oil pipeline. The attached site map indicates that the Pipeline Project will be located within 500 feet of your residence or business.

By signing below you are confirming that you have no objection to the Pipeline Project, or the future operation and maintenance of the Pipeline Project. Your cordial cooperation in this manner is greatly appreciated.

Respectfully,

Nathan Brady
Landman
Bison Midstream, LLC

X Duwayne K. Hoffman
Duwayne K. Hoffman

Date: 5-12-16

X Lisa Hoffman
Lisa Hoffman

Date: 5-16-16

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May 9, 2016

Toby J. Mattern
Toni L. Mattern
5928 124B Ave NW
Epping, ND 58843

RE: Bison Midstream, LLC– DAPL Connection Project

Dear Toby and Toni,

Please review the attached site map noting the proposed location of an underground pipeline and associated facilities that are included in the Bison DAPL Connection Project Application that Bison Midstream, LLC intends to file with the North Dakota Public Service Commission ("Pipeline Project"). The Pipeline Project involves the installation of approximately 3.35 miles of a 12 inch crude oil pipeline. The attached site map indicates that the Pipeline Project will be located within 500 feet of your residence or business.

By signing below you are confirming that you have no objection to the Pipeline Project, or the future operation and maintenance of the Pipeline Project. Your cordial cooperation in this manner is greatly appreciated.

Respectfully,

Nathan Brady
Landman
Bison Midstream, LLC

X Toby J. Mattern
Toby J. Mattern

Date: 5-14-16

X Toni L. Mattern
Toni L. Mattern

Date: 5-14-16

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May 9, 2016

Shane E. Humenvik
Elizabeth A. Humenvik
5936 124B Ave NW
Epping, ND 58843

RE: Bison Midstream, LLC– DAPL Connection Project

Dear Shane and Elizabeth,

Please review the attached site map noting the proposed location of an underground pipeline and associated facilities that are included in the Bison DAPL Connection Project Application that Bison Midstream, LLC intends to file with the North Dakota Public Service Commission ("Pipeline Project"). The Pipeline Project involves the installation of approximately 3.35 miles of a 12 inch crude oil pipeline. The attached site map indicates that the Pipeline Project will be located within 500 feet of your residence or business.

By signing below you are confirming that you have no objection to the Pipeline Project, or the future operation and maintenance of the Pipeline Project. Your cordial cooperation in this manner is greatly appreciated.

Respectfully,

Nathan Brady
Landman
Bison Midstream, LLC

X_____
Shane E. Humenvik
Date: 7-24-16

X_____
Elizabeth A. Humenvik
Date: 7-24-16

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Denver, CO 80202

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Fax: 720.452.6232
www.summitmidstream.com

May 9, 2016

Layne Westphal
12407 59th Lane NW
Epping, ND 58843

RE: Bison Midstream, LLC– DAPL Connection Project

Dear Layne,

Please review the attached site map noting the proposed location of an underground pipeline and associated facilities that are included in the Bison DAPL Connection Project Application that Bison Midstream, LLC intends to file with the North Dakota Public Service Commission ("Pipeline Project"). The Pipeline Project involves the installation of approximately 3.35 miles of a 12 inch crude oil pipeline. The attached site map indicates that the Pipeline Project will be located within 500 feet of your residence or business.

By signing below you are confirming that you have no objection to the Pipeline Project, or the future operation and maintenance of the Pipeline Project. Your cordial cooperation in this manner is greatly appreciated.

Respectfully,

Nathan Brady
Landman
Bison Midstream, LLC

X Layne Westphal
Layne Westphal

Date: 5-13-16

Appendix G

10-Year Plan

CROWLEY | FLECK PLLP
ATTORNEYS

John W. Morrison
100 West Broadway, Suite 250
P.O. Box 2798
Bismarck, ND 58502-2798
701.223.6585
jmorrison@crowleyfleck.com

July 27, 2016

Mr. Darrell Nitschke
Executive Director
PUBLIC SERVICE COMMISSION
12th Floor, State Capitol
600 E. Boulevard Ave.
Bismarck, ND 58505-0480

Dear Mr. Nitschke:

In re: Epping Transmission Company, LLC and Polar Midstream, LLC
2016 Joint Ten-Year Plan

On behalf of Epping Transmission Company, LLC and Polar Midstream, LLC, we hereby submit the Joint Ten-Year Plan pursuant to North Dakota Century Code § 49-22-04 and North Dakota Administrative Code Chapter 69-06-02.

CROWLEY FLECK PLLP
Attorneys for Epping Transmission Company, LLC
and Polar Midstream, LLC
100 West Broadway, Suite 250
Post Office Box 2798
Bismarck, North Dakota 58502

By _____
JOHN W. MORRISON

lh
enc.

Ten-Year Plan to:
County Auditors:
Divide, Williams and Burke Counties
Megan Davis
Notice to:
State Agencies and Officers designated in
§ 69-06-01-05, N.D. Adm. Code.

Epping Transmission Company, LLC ("Epping"), and Polar Midstream, LLC ("Polar") (collectively, the "Operators") hereby submit their joint ten-year plan pursuant to North Dakota Century Code § 49-22-04.

Introduction

- Operators are affiliates of each other and subsidiaries of Summit Midstream Holdings, LLC. Affiliate Meadowlark Midstream Company, LLC ("Meadowlark") does not currently own a transmission facility in North Dakota subject to the provisions of North Dakota Century Code § 49-22-04, but owned the Divide Lateral Oil Pipeline (described below) at the time of the 2014 filing of Meadowlark's initial ten-year plan. Since then, certain assets held by Meadowlark have been transferred to its affiliates. The ownership of each transmission facility in North Dakota subject to the provisions of North Dakota Century Code § 49-22-04 is further described below.

SECTION A: Existing Facilities

Divide Lateral Oil Pipeline

1. Owner: Polar

2. Location: Originates in Divide County at the Divide Pump Station site, which is approximately 17 miles northwest of Alamo, North Dakota. From that location, the Divide Lateral Oil Pipeline extends in a south/southeasterly direction into Williams County to its terminus at the existing Colt Rail Terminal ("Colt Hub") located north of Epping, North Dakota. A map showing the location of the Divide Lateral Oil Pipeline is attached hereto as **EXHIBIT "A."**

3. Type and Capacity:
   a. Product Type: Crude oil
   b. Length of Facility: 43.5 miles
   c. Pipe Size: 8.625" diameter, 0.322" wall thickness
   d. Maximum Design Operating Pressure: 1440 psig
   e. Maximum Design Flow Rate: 45,000 barrels per day
   f. Pump Station Specifications: Field gathering injection pumps move product to Colt Hub.
   g. Minimum Cover Over Pipe: 36"
   h. In Service Date: October 2013

The Divide Lateral Oil Pipeline is not committed to be retired in the next ten years.

Little Muddy Interconnection Pipeline

1. Owner: Epping

2. Location: Originates in close proximity to the Colt Hub in Epping, North Dakota and ends at North Dakota Pipeline Company LLC's ("NDPC") Little Muddy Station located approximately 10.5 miles northwest of Epping, North Dakota, where it interconnects with NDPC's interstate pipeline. A map showing the location of the Little Muddy Interconnection Pipeline is attached hereto as **EXHIBIT "A."**

3. Type and Capacity:
   a. Product Type: Crude oil
   b. Length of Facility: 14.2 miles
   c. Pipe Size: 10.75" diameter, 0.365" wall thickness
   d. Maximum Design Operating Pressure: 1440 psig
   e. Maximum Design Flow Rate: 26,000 barrels per day
   f. Pump Station Specifications: Facility injection pumps move product to the Enbridge Tank at Little Muddy
   g. Minimum Cover Over Pipe: 36"
   h. In Service Date: October 2014 (partial service)/February 2016 (full service)

The Little Muddy Interconnection Pipeline is not committed to be retired in the next ten years.

Stampede Lateral Pipeline

4. Owner: Polar

5. Location: Originates in Divide County at the Divide Pump Station site, which is approximately 17 miles northwest of Alamo, North Dakota. From that location, the Stampede Lateral Pipeline extends in an easterly direction into Burke County to its terminus at the existing Global Rail Terminal located approximately 1.5 miles east of Columbus, North Dakota. A map showing the location of the Stampede Lateral Pipeline is attached hereto as **EXHIBIT "A."**

6. Type and Capacity:
   a. Product Type: Crude oil
   b. Length of Facility: 46.2 miles
   c. Pipe Size: 10.75" diameter, 0.365" wall thickness
   d. Maximum Design Operating Pressure: 1480 psig
   e. Maximum Design Flow Rate: 60,000 barrels per day
   f. Pump Station Specifications: Facility injection pumps move product to the Global Rail Facility in Columbus, ND.
   g. Minimum Cover Over Pipe: 36"
   h. In Service Date: December 2015 (partial service)/February 2016 (full service)

The Stampede Lateral Pipeline is not committed to be retired in the next ten years.

SECTION B: Intended Construction of Transmission Facilities During the Next Five Years

DAPL Connector Pipeline

Epping intends to construct, and will seek a route permit for, an approximately four-mile long, twelve-inch steel crude oil pipeline that extends from an origin point at Epping Station in Williams County, North Dakota, to an interconnect with Dakota Access, LLC in Williams County, North Dakota. A map showing the anticipated location of the DAPL Connector Pipeline is attached hereto as **EXHIBIT "A."**

SECTION C: Proposed Transmission Facilities During the Next Ten-Year Time Period

See Section B, above.

SECTION D: Regional Coordination

While Operators coordinate with producers in North Dakota by discussing potential connections with planned and existing wells, Operators have very limited regional coordination with other midstream companies in North Dakota due to confidentiality concerns and potential antitrust issues.

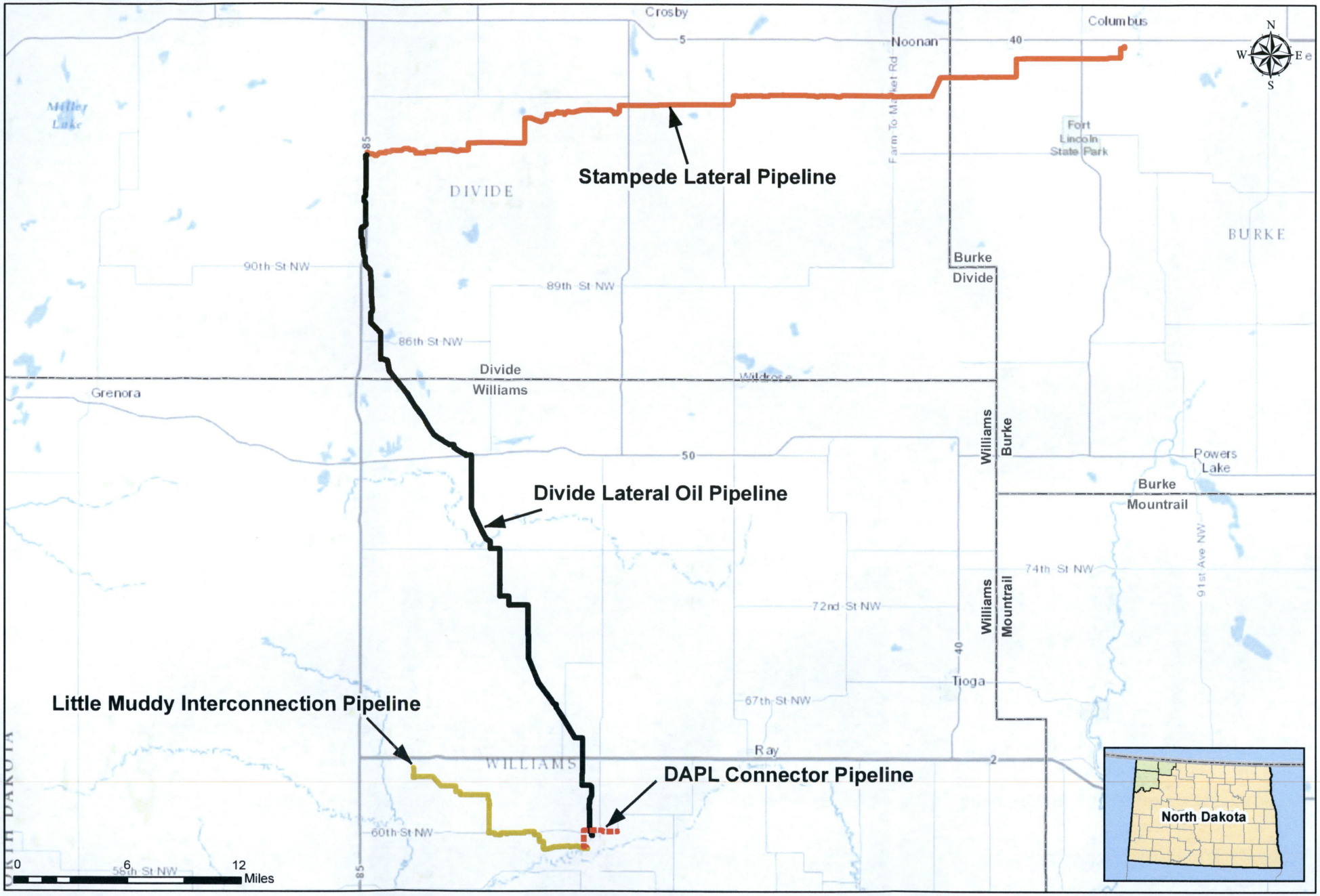
SECTION E: Environmental Information

Operators monitor regulatory developments and have developed working relationships with the U.S. Fish and Wildlife Service, the Bureau of Land Management, the North Dakota Industrial Commission, the North Dakota Public Service Commission, and the North Dakota Department of Health, in an effort to ensure regulatory compliance. Operators continue to develop detailed risk collaborations with local emergency planning groups.

Operators select pipeline corridors and routing to minimize impact as required by the statutes and rules and regulations of the Public Service Commission. When desirable, Operators may employ local environmentalists and archaeologists to assist with planning. Operators are prepared to meet any emergency and mitigate the impact of a pipeline failure.

SECTION F: Projected Demand for Service

While lower commodity prices have currently reduced drilling activity in the areas where Operators have gathering facilities (Williams, Divide, and Burke Counties), increased competition for commodity takeaway options will increase producer demand for optionality and flexibility regarding connections, with a corresponding demand for future projects like the DAPL Connector Pipeline.


Crosby
Noonan
Columbus
Stampede Lateral Pipeline
Divide Lateral Oil Pipeline
Little Muddy Interconnection Pipeline
DAPL Connector Pipeline
DIVIDE
BURKE
WILLIAMS
Grenora
Tioga
Ray
Burke
Divide
Williams
Mountrail
Powers Lake
Fort Lincoln State Park
Farm To Market Rd
90th St NW
89th St NW
86th St NW
74th St NW
72nd St NW
67th St NW
60th St NW
91st Ave NW
North Dakota
0
6
12
Miles
Legend
Divide Lateral Oil Pipeline
Little Muddy Interconnection Pipeline
Stampede Lateral Pipeline
DAPL Connector Pipeline
SUMMIT MIDSTREAM