

Thunder Butte Pipeline, LLC

# **Certificate of Corridor Compatibility and Route Permit 3<sup>rd</sup> Amended Consolidated Application**

**Thunder Butte Pipeline Project Case No. PU-24-086**

October 2024

Volume 1 of 2

## CERTIFICATE OF CORRIDOR COMPATIBILITY AND ROUTE PERMIT 3<sup>RD</sup> AMENDED CONSOLIDATED APPLICATION

Thunder Butte Pipeline Project Case No. PU-24-086

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Appendix H	Geohazard Investigation Report
Appendix I	Landowner Waiver
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## Acronyms and Abbreviations

°F	degrees Fahrenheit
AJD	Approved Jurisdictional Determination
ANSI	American National Standards Institute
APE	Area of Potential Effect
API	American Petroleum Institute
Arcadis	Arcadis U.S., Inc.
ARO	abrasive-resistant overlay
BABE	Biological Assessment and Biological Evaluation
BGEPA	Bald and Golden Eagle Protection Act
bgs	below ground surface
BIA	U.S. Bureau of Indian Affairs
BLE	base level engineering
BMP	best management practice
bpd	barrels per day
CFR	Code of Federal Regulations
Commission	North Dakota Public Service Commission
Consolidated Application	Consolidated Certificate of Corridor Compatibility and Route Permit Application
Existing Pipeline Project Corridor	50-foot wide Project Corridor/ Field Survey Area
Proposed Pipeline Project Corridor	200-foot wide Project Corridor/Field Survey Area
CPR	Canadian Pacific Railway
CUP	Conditional Use Permit
DBH	diameter at breast height
DWR	Department of Water Resources
E	endangered
EI	Environmental Inspector
EMP	Environmental Mitigation Plan
Enbridge Storage Facility	Enbridge Stanley Pump Station and Terminal
EPND	Enbridge Pipelines North Dakota
ESRI	Environmental System Research Institute, Inc.
FBIR	Fort Berthold Indian Reservation
FEMA	Federal Emergency Management Agency

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Gap	Gap Midstream, LLC
HDD	horizontal directional drilling
HICS	Hardened Intersite Cable System
ICBM	intercontinental ballistic missile
IMP	Integrity Management Plan
IPaC	Information for Planning and Consultation
km	kilometer
LACT	lease acquisition custody transfer
LWCF	Land and Water Conservation Fund
MBTA	Migratory Bird Treaty Act
Metcalf	Metcalf Archaeological Consultants, Inc.
MHA Nation	Mandan, Hidatsa, and Arikara Nation
N/A	Not Applicable
ND DEQ	North Dakota Department of Environmental Quality
ND DOT	North Dakota Department of Transportation
NDAC	North Dakota Administrative Code
NDCC	North Dakota Century Code
NDDA	North Dakota Department of Agriculture
NDDTL	North Dakota Department of Trust Lands
NDGFD	North Dakota Game and Fish Department
NDGS	North Dakota Geological Survey
NDPR	North Dakota Parks and Recreation Department
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NLEB	Northern long-eared bat
NPDES	National Pollutant Discharge Elimination System
NRCS	U.S. Department of Agriculture, Natural Resources Conservation Service
NRHP	National Register of Historic Places
OD	outer diameter
OSHA	Occupational Safety and Health Administration
PEM	palustrine emergent
PHMSA	Pipeline Hazardous Materials Safety Administration
PLC	programmable logic controller
PLOTS	Private Lands Open to Sportsmen

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Project	Thunder Butte Pipeline Project
Project Corridor/Field Survey Area	200-foot wide area for the proposed pipeline (100 feet on either side of the centerline) and 50-foot wide area for the existing pipeline (10 feet on either side of the centerline)
psi	pound per square inch
psig	pound per square inch gauge
RFI	Request for Information
ROW	right-of-way
SCADA	supervisory control and data acquisition
SHSND	State Historical Society of North Dakota
SMNSR	Synthetic Minor New Source Review
SPCC Plan	Spill Prevention, Control, and Countermeasures Plan
SPWS	Senior Professional Wetland Specialist
Study Area	1-mile-wide area (0.5 mile on either side of the pipeline centerlines).
SWPPP	Stormwater Pollution Prevention Plan
T	threatened
TAT	Three Affiliated Tribes
TAT FWD	TAT Fish and Wildlife Division
TBPL	Thunder Butte Pipeline, LLC
TBPS	Thunder Butte Petroleum Services, Inc.
TBPS Facility	TBPS Crude Storage and Loading Facility
THPO	Tribal Historic Preservation Office
USACE	U.S. Army Corp of Engineers
USAF	U.S. Air Force
USC	United States Code
USDA	U.S. Department of Agriculture
USDOT	U.S. Department of Transportation
USEPA	United States Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
VOC	volatile organic compound
WOUS	waters of the United States
WPAs	Waterfowl Production Areas

## Checklist for Combined Corridor Compatibility and Route Permit Application

Authority	Description	Section(s)
<b>Chapter 49-22 CENTURY CODE – Title 49</b>		
49-22-04		
1.	Ten-Year Plan	8, Appendix B
49-22-08	Application for a Certificate for a Corridor	
1.a.	Description of size and type of facility	1, 9
1.b.	Summary of any studies of environmental impacts	14, Appendix E, Appendix F, Appendix G, Appendix H
1.c.	Need for the facility	3
1.d.	Site for energy conversion facility	N/A
1.e.	Preferred transmission (pipeline) corridor	2.2, 13.1.5, 16.3, 18
1.f.	Analysis of merits and detriments of facility location	2.2, 13
1.g.	Mitigating measures	20, Appendix C
1.h.	Corridor evaluation pursuant to 49-22-09 and 49-22-05.1	16.1, 16.2, 18
49-22-08.1	Application for Route Permit	
1.a.	Description of size and type of facility	1, 9
1.b.	Description of the location	2, Appendix A
1.c.	Route evaluation relative to 49-22-09 and 49-22-05.1	16.1, 16.2, 18
1.d.	Mitigating measures	20, Appendix C
1.e.	Right-of-way preparation, construction, and reclamation	11, Appendix C
1.f.	Statement identifying how: 1) landowners informed of right-of-acquisition; and 2) how landowners will be compensated	10
1.g.	Other relevant information	19
49-22-09	Factors to be considered in evaluating corridor and route applications	18
1	Research and investigation into effects of the project on public health, welfare, natural resources, and the environment	18.1
2	Effects of transmission technology and design to minimize adverse effects	18.2
3	Potential beneficial uses of waste energy from energy conversion facility	18.3
4	Unavoidable adverse direct and indirect environmental effects	18.4
5	Corridor or route alternatives developed during the hearing which minimize adverse effects	18.5
6	Irreversible and irretrievable commitments of natural resources if designated	18.6
7	Direct and indirect economic impacts of the facility	18.7

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8	Existing plans for other developments at or in the vicinity	18.8
9	Effect of project on scenic areas, historic sites and structures, paleontological and archaeological sites	18.9, Appendix D, Appendix F
10	Effect of route on unique biological areas	18.10, Appendix E, Appendix G
11	Problems raised by federal, state, or local entities	18.11, Appendix D
<b>ADMINISTRATIVE CODE – ARTICLE 69-06</b>		
<b>69-06-05-01</b>	<b>Application for a Transmission Facility Permit</b>	
2.a.(1)	Type of facility proposed	1
2.a.(2)	Purpose of facility	3
2.a.(3)	Technology to be deployed	5
2.a.(4)	Type of product to be transmitted	4.1
2.a.(5)	Source of product being transmitted	4.2
2.a.(6)	Final destination of product being transmitted	4.3
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2.a.(7)(b)	The approximate length of facility	9.1.2
2.a.(7)(c)	The estimated span length for electric facilities	N/A
2.a.(7)(d)	The anticipated type of structure for electric facilities	N/A
2.a.(7)(e)	The voltage for electric facilities	N/A
2.a.(7)(f)	The requirement for and general location of any associated facilities	9.2.1
2.a.(7)(g)	The estimated distance between pipeline surface structures	9.2.3
2.a.(7)(h)	The pipe size	9.1.3
2.a.(7)(i)	The maximum design for pipeline operating pressure and temperature	9.1.4
2.a.(7)(j)	The maximum design pipeline flow rate	9.2.4
2.a.(7)(k)	The number and general location of compressor or pumping stations	9.2.5
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2.b.(2)	Obtaining route permit	7.2
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2.b.(4)	Starting construction	7.4
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2.b.(6)	Testing operations	7.6
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2.c.	A copy of each evaluative study or assessment of environmental impact of the proposed facility submitted to the agencies listed in section 69-06-01-05 and each response received	15, Appendix E, Appendix F
2.d.	Need for facility	3

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2.j.	Map of criteria that lead to route location	Appendix A
2.k.	Discuss relative value of each criterion and how the location was selected; how operation will affect criteria	2, 14, 16, 18
2.l.	Mitigating measures	20, Appendix C
2.m.	Qualifications of each person involved in location study	21
2.n.	Map identifying criteria that led to the route location and new facilities	Appendix A
2.o.	8½ × 11 black and white map suitable for newspaper publication	Appendix K
2.p.	Discussion of present and future natural resource development in the area	19.3
2.q.	Maps and GIS data meeting Commission requirements	Appendix A, Appendix K, GIS CD
69-06-06-01	Application for Waiver of Procedures and Time Schedule	
69-06-08-02	Transmission Facility Corridor and Route Criteria	
1	Exclusion areas	16.1, Appendix A, Appendix D, GIS CD
1.a.	Designated or registered national: parks, sites, landmarks, monuments, wilderness	16.1.1
1.b.	Designated or registered state: parks, sites, monuments, archeological sites, natural preserves	16.1.2
1.c.	County parks and recreational areas, municipal parks, parks owned or administered by other governmental subdivisions	16.1.3
1.d.	Areas of critical habitat	16.1.4, Appendix G
1.e.	Areas where unique or rare species would be irreversibly damaged	16.1.5, Appendix G
1.f.	Area within 1,200 feet of an intercontinental ballistic missile (ICBM) facility	16.1.6, Appendix A, Appendix D
1.g.	Areas within 30 feet of direct line of ICBM launch facilities	16.1.7, Appendix A, Appendix D
2	Avoidance Areas	16.2, Appendix A, Appendix D, Appendix E, Appendix G, Appendix H, GIS CD

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Authority	Description	Section(s)
2.a	Designated or registered national: historic districts; wildlife areas; wild, scenic, or recreational rivers; wildlife refuges; grasslands	16.2.1, Appendix A, Appendix G
2.b.	Designated or registered state: wild, scenic, recreational rivers, game refuges, game management areas, forest management lands, grasslands	16.2.2, Appendix A, Appendix G, GIS CD
2.c	Historical resources which are not specifically designated as exclusion or avoidance areas	16.2.3, Appendix D, Appendix F
2.d.	Areas which are geologically unstable	16.2.4, Appendix A, Appendix H, GIS CD
2.e.	Within 500 feet of a residence, school, or place of business	16.2.5, Appendix A, Appendix G, Appendix I
2.f.	Reservoirs and municipal water supplies	16.2.6, Appendix A
2.g.	Water sources for organized rural water districts	16.2.7
2.h.	Irrigated land (does not apply to underground transmission facility)	N/A
2.i.	Area of recreational significance but not designated exclusion areas	16.2.8, Appendix A
3	Selection criteria.	16.3, Appendix A, GIS CD
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4.b.	Training and utilization of instate labor	16.4.2
4.c.	Economies of construction and operation	16.4.3
4.d.	Use of citizen coordinating committees	16.4.4
4.e.	Commitment of portion of transmitted product for use in state	16.4.5

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Authority	Description	Section(s)
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## Introduction

Thunder Butte Pipeline, LLC (TBPL) proposes the Thunder Butte Pipeline Project (the Project) to transport crude oil from the existing Thunder Butte Petroleum Services, Inc. (TBPS) Crude Storage and Loading Facility (Existing TBPS Facility) within the Fort Berthold Indian Reservation (FBIR), approximately 2.6 miles northwest of Makoti, North Dakota, to the existing Enbridge Stanley Pump Station and Terminal (Enbridge Storage Facility) in Stanley, North Dakota (**Figure 1** in **Appendix A**). The Project is a joint venture between Gap Midstream, LLC (Gap) and the Mandan, Hidatsa, and Arikara Nation (MHA Nation)/Three Affiliated Tribes (TAT) doing business as TBPL. The MHA Nation/TAT owns the TBPS Facility, and the Enbridge Pipelines North Dakota (EPND) owns the Enbridge Storage Facility.

The Project will consist of the following three primary components:

- Construction of a new 3.84-mile-long underground pipeline;
- Conversion of an existing 30.8-mile-long underground collector (gathering) pipeline to a transmission pipeline; and
- Construction of an aboveground midline pump station with one new access road on a 2-acre site with one permanent access road immediately adjacent to the existing pipeline.

The new pipeline will commence at the TBPS Facility and terminate at the interconnection with the existing gathering pipeline in Section 2, Township 152 North (T152N), Range 88 West (R88W). The existing pipeline was previously owned by EPND (Line 82-111). From the interconnection point with the existing pipeline approximately 2.1 miles southeast of Plaza, North Dakota, the existing pipeline will transport crude oil to the Enbridge Storage Facility. All but the southern 3.84 miles of the Project is an existing pipeline.

The Project requires approval from North Dakota Public Services Commission (the Commission); therefore, TBPL is submitting a Consolidated Certificate of Corridor Compatibility and Route Permit Application (Consolidated Application) to the Commission requesting a Certificate of Corridor Compatibility and Route Permit for construction and operation of the Project. This Consolidated Application and the attached **Appendix A** through **Appendix K**, support TBPL's request for a Certificate of Corridor Compatibility and Route Permit for both the proposed pipeline and conversion of the existing gathering pipeline to a transmission pipeline. This Consolidated Application complies with Chapter 49-22 of the North Dakota Century Code (NDCC) and Chapters 69-06-05 and 69-06-08 of the North Dakota Administrative Code (NDAC).

TBPL filed a Consolidated Application for the Project dated January 5, 2024. The Project has been assigned Case Number PU-24-086.

TBPL filed an Amended Consolidated Application on February 19, 2024, identifying a new location for the proposed midline pump station in Section 34, Township 154 North (T154N), Range 89 West (R89W). Subsequently, TBPL identified a different location as the preferred site for the midline pump station. TBPL filed a 2<sup>nd</sup> Amended Application on June 24, 2024, identifying the preferred new location for the midline substation in Section 1, T153N, R88W. The Commission issued an Information Request dated March 6, 2024, which contained 16 questions and/or requests for information (RFIs). TBPL filed Responses to the Commission's RFIs on June 5, 2024, to address the Commission's questions and/or requests for information.

TBPL requests that the information in the previously submitted documents be discarded and superseded by this 3<sup>rd</sup> Amended Consolidated Application. The previously submitted documents are listed below.

- TBPL's original Consolidated Application dated January 5, 2024,

- 1<sup>st</sup> Amended Consolidated Application dated February 19, 2024,
- 2<sup>nd</sup> Amended Consolidated Application dated June 24, 2024, and
- TBPL's Responses to the Commission's RFIs dated June 5, 2024.

## 1 Facility Type

The Project facilities are comprised of three primary components:

- **Proposed Pipeline:** Construction of a new 3.84-mile-long underground crude oil pipeline,
- **Existing Pipeline:** Conversion of an existing 30.8-mile-long underground crude oil collector (gathering) pipeline to a crude oil transmission pipeline, and
- **Proposed Midline Pump Station:** Construction of an aboveground midline pump station on a 2-acre site with one associated permanent access road immediately adjacent to the existing pipeline.

The Project design will allow unilateral flow of crude oil from the TBPS Facility to the Enbridge Storage Facility (**Figure 1 in Appendix A**). The Project will provide a maximum flowrate of 24,000 barrels per day (bpd).

### 1.1 Proposed New Pipeline

The Project includes constructing a new 3.84-mile-long, 6.625-inch outer diameter (OD) carbon steel crude oil pipeline in Ward and Mountrail Counties, North Dakota and converting the recently acquired existing 30.8-mile-long, 6.625-inch OD collector (gathering) pipeline into a transmission pipeline for the transport of crude oil. The new pipeline will have a minimum depth of cover of 72 inches across the entire route. From new pipeline's interconnection point, the existing pipeline will transport crude oil to the Enbridge Storage Facility in Stanley, North Dakota.

### 1.2 Conversion of Existing Pipeline

The existing pipeline comprises 6.625-inch OD pipe with a 0.156-inch wall thickness and a maximum allowable operation pressure of 1,400 pounds per square inch (psi) at a maximum operating temperature of 100 degrees Fahrenheit (°F). The steel pipe meets American National Standards Institute (ANSI) 600 specifications. The pipeline flanges, fittings, and valves meet the American Petroleum Institute (API) 5L specification, with PSL-2 and X-52 ratings, and a 0.250-inch wall thickness where the pipeline encounters railway or roadway crossings; natural drainages; ponds, sloughs, or other wetlands; and on each side of aboveground valve stations. Pipe welds were inspected by a qualified weld inspector according to industry standard practice using non-destructive methods.

Based on the available historic records, the existing pipeline was installed at depths varying between 48 inches and 72 inches below ground surface (bgs). The final alignment drawings for the existing pipeline are provided in **Appendix A**. TBPL conducted two field surveys for the existing pipeline to verify the depth of cover of the existing pipeline. Based on the field surveys, the existing pipeline meets the of 48- or 72-inch minimum depth of cover requirement as described in the depth of cover memorandum provided in **Appendix H**. The depth of cover memorandum in **Appendix H** includes TBPL's signed statement certifying that the proposed and existing pipelines will be buried to a minimum depth from the ground surface to the top of the pipe of 48 inches in range land, 48 inches for cultivated land, 48 inches at the bottom of the ditch for road crossings, and 72 inches across undeveloped section lines.

As part of the as-built drawings and survey that will be completed for the existing pipeline right-of-way (ROW) during construction of the new pipeline, the depth of cover for the existing pipeline will be reevaluated. If the depth of the existing pipeline is found to be less than 48 inches or 72 inches at section lines, proper repairs will be done to ensure 48-inch minimum depth of cover is obtained over the existing pipe.

The existing pipeline was last operated in 2007/2008 when the Enbridge Storage Facility crude oil tanks in Lot 10 were idled. No spills or incidents have been reported. TBPL is currently conducting weekly aerial surveys of the pipeline to verify that no damage has occurred.

The pipeline was put under nitrogen blanket in 2013 at which time EPND ran a smart pig through the line to assess the integrity of the line. The pipeline was flushed with nitrogen using foam pigs and a smart pig to remove crude oil from the line and to put a nitrogen blanket in the pipeline in 2013. After the pigs were removed, the nitrogen blanket was left on the pipeline at 15 psig. No issues were identified at that time.

There are no recordings of pressure readings on the existing pipeline; however, EPND provided statements documenting that they conducted pressure checks regularly to verify that there were no leaks. When we purchased the pipeline, we cracked open a couple of vent valves on each end of the pipeline to verify there was still pressure on the pipeline. There was still pressure on the line showing that the nitrogen blanket was holding. TBPL ran a smart pig through the line with nitrogen in December 2023. There was still nitrogen pressure on the pipeline at that time as well. The smart pig data revealed there were no concerns for the operating pressure and temperature that the pipeline will be running at. A nitrogen blanket was left on the pipeline after the pig run and our operations guys check the pressure gauges regularly to verify no leaks are occurring.

Once construction of the proposed pipeline is completed and prior to operations, TBPL will conduct a hydrostatic test of the pipelines to verify the new and existing pipelines are safe to operate at the desired pressures prior to flowing oil down the line.

## 1.3 Proposed Aboveground Facilities

Associated aboveground facilities will include construction of a new 2-acre midline pump station adjacent to the existing pipeline (**Figure 1 in Appendix A**) and one associated permanent access road. As described in the 2<sup>nd</sup> Amended Consolidated Application filed June 13, 2024, TBPL is proposing to relocate the midline pump station to a different location. The proposed new location for the midline pump station is approximately 8 miles northwest of Plaza, North Dakota, in Section 1, T153N, R88W as shown on the figures in **Appendix A**.

## 1.4 Existing Storage Facilities

The existing storage facilities include the TBPS Facility and the Enbridge Storage Facility. These facilities are owned by third-party entities and are not part of the Project; however, TBPL has leased the 0.65-acre Lot 10 site within the Enbridge Storage Facility and purchased the existing facilities on Lot 10 including eight 400-barrel storage tanks. The proposed modifications to these existing storage facilities are described in Section 9.2.2.

# 2 Location

## 2.1 Location of Proposed Facilities

The proposed pipeline will be located within the following portions of Ward and Mountrail Counties, North Dakota: Sections 2, 11, 14 of T152N, R88W (**Figure 1 in Appendix A**). Approximately 3 miles of the proposed pipeline will be within the FBIR, approximately 2.28 miles of which will be constructed abutting the existing Canadian

Pacific Railway (CPR) ROW. During construction, several temporary access roads and temporary workspaces/laydown areas may be required.

The proposed midline pump station will be located on 2 acres of land approximately 8 miles northwest of Plaza, North Dakota, in Section 1, T153N, R88W (**Figure 1** in **Appendix A**). One permanent access road will be required, approximately 20 feet wide and 30 feet long.

## 2.2 Location of Existing Pipeline

The existing pipeline is located within the following portions of Mountrail County, North Dakota (**Figure 1** in **Appendix A**): Sections 2 and 3, T152N R88W, and Sections 36, 35, 26, 27, 22, 21, 16, 17, 8, and 7, T153N R88W, and Sections 12, 1, and 2, T153N R89W, and Sections 35, 34, 27, 28, 21, 20, 17, 8, 7, and 6, T154N R89W, and Sections 1 and 2, T154N R90W, and Sections 35, 26, 27, 22, 21, 20, 17, 18, 7, and 6, T155N R90W, and Sections 1 and 2, T155N R91W, and Sections 35, 26, and 27, T156N R91W.

## 2.3 Locations of Existing Storage Facilities

The TBPS Facility occupies 190 acres. The land is in the northeast corner of the FBIR in Ward County, North Dakota, south of North Dakota Highway 23, in Sections 19 and 20 of T152N, R87W. The address is 37685 247th Avenue SW, Plaza, North Dakota 58771.

The Enbridge Storage Facility occupies approximately 40 acres and is in the Section 27, T156N, R91W, Mountrail County, North Dakota. The siting of the existing facility was previously approved by the Commission on August 23, 2006, in Docket No. PU-06-317. TBPL has leased the 0.65-acre Lot 10 site within the Enbridge Storage Facility and purchased the existing facilities on Lot 10 including eight 400-barrell storage tanks.

## 2.4 Project Corridor and Field Survey Area

The Project Corridor/Field Survey Area for the proposed pipeline is the 200-foot-wide area (100 feet on either side of the pipeline centerline). The Project Corridor/Field Survey Area for the existing pipeline is a 50-foot-wide area (10 feet on either side of the 30-foot permanent ROW). There will not be any rerouting of the existing pipeline because it is already installed in the ground. The ROW easements for the existing pipeline limit disturbances to within the 30-foot-wide permanent ROW. For future maintenance activities on the existing pipeline, a 50-foot-wide area will be more than sufficient as a buffer. The Study Area used for the desktop analysis for both the proposed and existing pipelines was a 1-mile-wide area (0.5 mile on either side of the pipeline centerlines).

## 2.5 Preferred Location of Project Corridor and Route

The preferred locations of the Project Corridors and Routes are depicted on the maps in **Appendix A**. A black and white map for newspaper publication is provided in **Appendix K**.

The preferred location of the Project Corridor for the proposed pipeline is a 200-foot-wide area (100 feet on either side of the pipeline centerline). The preferred location of the Project Corridor for the existing pipeline is a 50-foot-wide area (10 feet on either side of the 30-foot permanent ROW). No disturbances will be required for conversion of the existing pipeline; therefore, the 50-foot-wide area Project Corridor includes the maximum area required to conduct future maintenance or repairs, if needed.

The Preferred Routes are the centerlines of the proposed pipeline and the existing pipeline within the 30-foot-wide permanent easement. Approximately 2.28 miles (59.4 percent) of the Preferred Route for the proposed pipeline will be constructed abutting the existing CPR ROW. The remaining portion of the Route is on private agricultural

land and is generally collocated with railroads and roads. The Preferred Route for the existing pipeline is privately-owned land predominantly used for crop production.

Additional discussion of the Route Alternatives and siting criteria considered when selecting the Preferred Corridor and the Route is provided in Section 13.1.5.

### **3 Purpose of and Need for the Facility**

The purpose of the Project is to provide infrastructure for transportation of crude oil from the TBPS Facility to the Enbridge Storage Facility in Stanley, North Dakota, where it will be safely and efficiently distributed to multiple third-party interconnecting pipelines in Stanley, North Dakota. The proposed Project will result in the conversion of an existing crude oil gathering pipeline to a crude oil transmission pipeline.

The Project will allow crude oil producers in North Dakota's Bakken production region, especially those on the FBIR, to access to major U.S. crude oil markets. The Project will also directly benefit Bakken crude oil producers by allowing for the efficient aggregation of volumes of crude oil from within Ward and Mountrail Counties and adjacent counties for shipment to major U.S. markets, thereby offering producers the potential for better netbacks.

The Project will provide direct benefits to local communities through temporary construction employment, jobs to operate and maintain the pipeline and associated facilities, landowner easement compensation, and additional tax revenues via property and sales taxes from the sale of goods and services during Project construction and operation. Additional indirect benefits will result from Project-related purchases of local goods and services, such as the purchase of local gravel for access roads, purchase of fuel, and restaurant and hotel expenditures by Project construction and operations personnel.

### **4 Product**

#### **4.1 Type of Product to be Transmitted**

The Project will transmit light sweet Bakken crude oil.

#### **4.2 Source of Product**

The anticipated sources of the Bakken crude oil to be transported by the Project are formations in the Williston Basin region of North Dakota.

#### **4.3 Final Destination of Product**

The final destination of the crude oil transported by the Project will be refining markets throughout the U.S.

### **5 Technology to be Deployed**

The Project will be designed, constructed, maintained, inspected, and operated to meet or exceed the U.S. Department of Transportation (USDOT), Pipeline Hazardous Materials Safety Administration (PHMSA) regulations and in accordance with industry standards and company policies. Technologies used to satisfy these requirements and standards include:

- An external protective coating will be used including abrasive-resistant overlay (ARO) coating on pipe installed via horizontal directional drilling (HDD) and cathodic protection to prevent external pipeline abrasion and/or corrosion.
- Cathodic protection will be required for the pipeline, and TBPL will engineer and install as appropriate to meet all federal and state requirements.
- Pipelines will be subject to regular internal inspection using in-line inspection tools to detect internal anomalies including corrosion or denting.
- Maintenance staff will perform regular aerial and foot patrols of the permanent ROW. Weekly aerial surveys are currently conducted for the existing pipeline and will continue during operations. In addition, operations personnel will conduct foot patrols on a frequent basis.
- A supervisory control and data acquisition (SCADA) monitoring and alarm system will be installed that continuously monitors the flow and pressure of the system and triggers alarms for anything outside normal operating conditions.

Construction and installation of the pipeline will employ different techniques (such as HDD) to avoid or minimize impacts to sensitive areas and identified road crossings. These techniques are discussed further in Section 11.

## **6 Estimated Total Cost for Construction**

The estimated total cost for construction is \$19.6 million.

## **7 Schedule**

### **7.1 Obtaining Certificate of Corridor Compatibility**

TBPL requests a Certificate of Corridor Compatibility and Route Permit from the Commission in November 2024.

### **7.2 Obtaining Route Permit**

TBPL requests a Certificate of Corridor Compatibility and Route Permit from the Commission in November 2024.

### **7.3 Completing Right-of-Way Acquisition**

TBPL expects to complete ROW acquisition by the end of December 2024.

### **7.4 Starting Construction**

Construction for the Project is scheduled to begin immediately following permit approvals.

### **7.5 Completing Construction**

TBPL expects to complete construction of the Project in early 2025.

### **7.6 Testing Operations**

TBPL expects to conduct hydrostatic testing of the pipeline and associated site facilities in early 2025.

## 7.7 Commencing Operations

The Project is anticipated to be operational early 2025.

## 8 Ten-Year Plan

TBPL filed its Ten-Year Plan for 2024 through 2034 with the Commission in January 2024. The proposed Project is consistent with TBPL's Ten-Year Plan (**Appendix B**).

## 9 Facility Size and Design

The following provides a description of the Project design including the pipeline infrastructure and associated aboveground facilities. The steel pipeline would meet USDOT regulations.

### 9.1 Pipeline

#### 9.1.1 Width of Rights-of-Way

Construction of the proposed pipeline will require an 80-foot-wide ROW comprising a 30-foot-wide permanent easement and an adjacent 50-foot-wide temporary construction workspace. The Pipeline Construction Sequence Schematic is provided in the Environmental Mitigation Plan (EMP) provided in **Appendix C**.

The existing pipeline was built in the 1960s within a 30-foot-wide permanent easement. No temporary construction ROW, ground disturbances, or additional permanent ROW will be required for conversion of the existing gathering pipeline to a transmission pipeline.

#### 9.1.2 Length of Pipelines

The proposed pipeline will be approximately 3.84 miles long. The existing pipeline is approximately 30.8 miles long.

#### 9.1.3 Pipe Size

The proposed pipeline will be comprised of a 6.625-inch OD carbon steel mainline pipeline with a nominal wall thickness of 0.188 inch. The pipe material will be API-5L CS X52. At the proposed railroad crossing, approximately 60 feet of 6.625-inch OD, 0.188-inch wall thickness, API 5L CS X52 carrier pipe will be installed using common jack and bore installation methods to avoid having to install casing pipe.

The existing pipeline comprises 6.625-inch OD pipe with a nominal wall thickness of 0.188 inch. The pipeline meets the API 5L specification, with PSL-2 and X-42 carrier pipe ratings, and a 0.250-inch wall thickness where the pipeline encounters railway or roadway crossings; natural drainages; ponds, sloughs, or other wetlands; and on each side of the existing two aboveground block valve stations.

Pipe welds on the existing pipeline were inspected by a qualified weld inspector according to industry standard practice using non-destructive methods. Based on the available historic records, the existing pipeline was installed at depths varying between 48 inches and 72 inches bgs.

#### 9.1.4 Maximum Design Operating Pressure and Temperature

The maximum operating pressure for the proposed pipeline is 1,440 psi gauge (psig) throughout the Project. The new pipeline will be designed to operate at a maximum of 120°F.

The maximum allowable operation pressure for the existing pipeline is 1,400 psig at a maximum operating temperature of 100°F.

## 9.2 Proposed and Existing Aboveground Facilities

### 9.2.1 Proposed Midline Pump Station

As part of the Project, a new midline pump station will be constructed adjacent to the existing pipeline. The midline pump station will be located on 2 acres of land approximately 8 miles northwest of Plaza, North Dakota as shown on **Figure 1** in **Appendix A**. Site plans for the midline pump station are provided in **Appendix A**.

The proposed midline pump station will include a pig receiver, pump and metering skid, and a pig launcher. Pig traps will be locally operated, and valves will not be motor operated because the largest valve is planned to be 10 inches in diameter.

Cellular communication will be used for communication between the ends of the proposed pipeline and the midline pump station to measure flow and confirm that there is no loss of fluids from point to point.

Electric utility power is readily available at the midline pump station; therefore, no additional aboveground electrical utilities are proposed. Access to the electric power lines and the pipeline ROWs will be from existing roads and the CPR ROW.

### 9.2.2 Modifications to Existing Storage Facilities

Modifications within the site boundaries of the TBPS Facility and within Lot 10 at the Enbridge Storage Facility will include the installation of additional aboveground facilities.

The TBPS Facility includes two existing crude oil storage tanks with 140,000-barrel capacity each, four truck-to-tank offloading stations, three tank-to-truck loading stations, and a control building. The crude oil storage tanks are equipped with internal floating roofs for control of volatile organic compound (VOC) emissions.

Proposed modifications to the TBPS Facility include installation of one pig launcher and a transfer pump/meter skid (oil transfer skid) with a pump unit and lease acquisition custody transfer (LACT) combined onto one skid. The pump/meter skid will include a valve, a strainer, a custody transfer flow meter, and associated instrumentation, two mainline pumps, a divert valve, and equipment and panels for programmable logic controller (PLC)/open multi-network integration control equipment and SCADA communications. Valves will be a combination of plug, gate, and ball valves and properly rated for service.

TBPL has leased the 0.65-acre Lot 10 at the Enbridge Storage Facility. TBPL purchased the existing facilities within Lot 10 including eight 400-barrel-capacity tanks, a pig receiver, sump tank, control valve manifold, inlet meter station with leak-detection equipment, strainer station, transfer pump station, control building, and an asset custody transfer station. The site also contains the PLC equipment and SCADA communications under a covered roof.

The existing pipeline within Lot 10 at the Enbridge Storage Facility will be modified to route to the connection point with the existing pipeline, where a new pig receiver will be installed before the connection with the existing pipeline. The maximum throughput of the Lot 10 site will be 6,000 bpd during truck unloading operations before the pipeline is flowing. When the pipeline is in operation, 24,000 bpd will flow through the LACT skids, but no crude will be stored in the on-site storage tanks.

### **9.2.3 Estimated Distance between Surface Structures**

The estimated distance between surface structures at each end of the Project is 18.82 miles from the TBPS Facility to the midline pump station and 15.82 miles from the midline pump to the Enbridge Storage Facility. Pipeline markers will also be placed at designated locations along the Route (e.g., public road crossings). There are two existing aboveground block valve sets on the existing pipeline. One of the existing block valves is upstream of the East Fork of Shell Creek and the other existing block valve is downstream of the creek to minimize adverse impacts to the environment. Both of the existing block valves are manually operated and not capable of remote operations.

### **9.2.4 Maximum Design Flow Rate for Pipeline Facilities**

The maximum design flowrate for the Project is 24,000 bpd.

### **9.2.5 Number and Location for Pumping Stations**

One new midline pump station will be constructed for the Project as described in Section 9.2.1. A new transfer pump/meter skid with a pump unit and LACT combined onto one skid will be installed within the existing TBPS Facility.

## **10 Easement Acquisition**

### **10.1 Informing Landowners of Easement Acquisition**

Upon identifying the preliminary Route for the proposed pipeline and the proposed location for the midline pump station, TBPL used publicly available information to identify affected landowners. TBPL then contacted landowners via telephone and/or in person. TBPL's land agents presented maps of the proposed pipeline route for landowner review, and TBPL considered landowner input when developing the route. TBPL will obtain all necessary survey permissions and will complete negotiations for acquisition of option agreements to obtain ROW easements.

### **10.2 Compensation for Easement**

Landowners will be compensated for Project-required interests at or above their fair market values. Compensatory offers for easements and fee acquisitions were based on analysis of comparable property values. All offers were presented to landowners in writing with appropriate legal descriptions and depictions identifying the parameters and locations of the permanent pipeline ROW easement and temporary construction easements. TBPL's land agents are trained and tasked to negotiate respectfully and in good faith with all landowners and governing entities. TBPL stresses to its land agents its preference for all negotiations, when possible, to be conducted with each landowner in person and as often as necessary to reach a mutually beneficial agreement.

TBPL will compensate landowners for permanent easement rights and temporary workspace use. TBPL uses a formula for calculating compensation relating to incidental damages incurred during pipeline construction (such as crop losses). TBPL considers the actual compensation provided to landowners as confidential information.

Anticipated damages, such as crop loss, will be calculated and included in the original compensation amount. If additional damage claims are made, TBPL will address the claims as they arise.

## 11 Right-of-Way Preparation, Construction, and Reclamation Procedures

The ROW preparation, construction, and reclamation procedures for the proposed pipeline and 2-acre site for the midline pump station are described in the following subsections. Conversion of the existing pipeline will not require any ROW preparation, construction, or reclamation.

### 11.1 Description of Right-of-Way Preparation and Construction of New Pipeline

The proposed Project will be designed, constructed, tested, operated, and maintained in accordance with applicable requirements under the USDOT regulations in Title 49 Code of Federal Regulations (CFR) Part 195, U.S. Department of Labor regulations, Occupational Safety and Health Administration (OSHA) requirements, and other applicable federal and state regulations.

Before mobilization, a pre-construction safety and environmental orientation will be held on site. The orientation will review safety compliance; incident reporting; protocols for determining, correcting, and documenting safety non-compliance; and expectations for compliance enforcement. Construction personnel will be briefed and trained on relevant construction and environmental requirements including laws, rules, and regulations applicable to the work. The construction contractor will provide at least one qualified and experienced safety representative as well as personnel trained in emergency management.

Construction will only take place during daylight hours. Spill prevention measures will be in place to maintain construction personnel safety and to protect the environment. To maintain public and construction personnel safety, access to the ROW will be controlled to allow only authorized vehicles to the extent practicable.

The standard pipeline construction process includes clearing and grading, trenching, pipe stringing, bending, welding, lowering the pipeline, padding, and backfilling, hydrostatic testing, and ROW cleanup and restoration. The following subsections discuss these activities in more detail. The Pipeline Construction Sequence Schematic is provided in **Appendix C**.

#### 11.1.1 Clearing and Grading

Once the limits of the approved work area (the ROW and temporary workspaces within the 80-foot-wide construction ROW), pipeline centerline, access roads, aboveground facilities, and sensitive areas (such as wetland boundaries and cultural sites) have been staked and flagged, the construction area will be cleared and graded. The ROW will be graded to provide a relatively level surface that is wide enough to allow for the passage of heavy construction equipment.

During construction, TBPL will avoid removal of trees and shrubs, if practicable. Trees and shrubs have been inventoried to record the location, number, and species as described in **Appendix G** and in accordance with the Commission's Tree and Shrub Mitigation Specifications as described in the EMP provided in **Appendix C**. Trees and shrubs with diameter at breast height (DBH) of 1 inch or greater will be replaced consistent with the Commission's Tree and Shrub Mitigation Specifications.

To prevent soil mixing, topsoil will be removed and segregated from the underlying subsoil. Topsoil will be removed from both the trench and spoil side for the entire length of the pipeline and stored on the temporary construction ROW on the spoil side of the trench for replacement in the affected area after construction. Construction will be suspended, or adequate protection measures taken, during abnormally wet conditions to

prevent excessive rutting or mixing of topsoil with subsurface soils. The Pipeline Construction Sequence Schematic and the Topsoil Salvage Trench and Spoil Side Schematic are provided in the EMP (**Appendix C**).

Measures will be taken during clearing and grading to maintain continuous access to pastures and livestock facilities. Best management practices (BMPs), such as silt fences, will be installed along the construction ROW adjacent to wetlands. Temporary erosion controls will be installed before initial disturbance of soils where necessary to minimize erosion. Erosion control BMPs will be maintained during construction as described in the EMP (**Appendix C**).

Areas where vegetation will be removed during construction will be restored in accordance with the landowner agreements. Specific restoration measures are described in the EMP (**Appendix C**). For areas to be revegetated, seeding must comply with requirements specified by the landowners or the U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS). All timber riprap, timber mats, prefabricated equipment mats, and other construction debris will be removed. Trees and shrubs with DBH of 1 inch or greater will be replaced consistent with the Commission's Tree and Shrub Mitigation Specifications, if needed.

### 11.1.2 Trenching

Trenches will be excavated using a trencher or backhoe to a depth sufficient to provide the minimum cover required by federal, state, and local governments, as well as landowner requirements. If areas of solid rock are encountered, special excavation equipment and/or techniques will be used.

The amount of open trench permitted at any time during the Project will depend on the stability of the trench and weather conditions. Where livestock is confined or in cultivated fields, temporary "plugs" will be installed at regular intervals along the ROW to provide safe access for livestock and farm equipment across the open trench.

### 11.1.3 Pipe Stringing, Bending, and Welding

Pipe will either be stored at the staging area located at the midline pump station, within the TBPS Facility, or transported directly to the pipeline ROW. Following trenching, pipe will be strung along the ROW. A stringing crew using special trailers will move the pipe along the ROW. Pipe lengths will typically be 40 to 60 feet.

A pipe-bending machine will be used for making slight bends in the pipe to accommodate variations in the pipeline route or to conform to the topography. Using a series of clamps and hydraulic pressure, the bending machine makes a smooth, controlled bend in the pipe. Bending will be in accordance with federal standards to ensure integrity of the bend. Pipes used for sharp bends are bent at the mill. The pipe will be pre-coated with a fusion-bonded epoxy external coating to provide corrosion protection. An ARO coating will also be used on pipe installed via HDD.

The welding process joins the sections of pipe into one continuous length. All welders will be required to pass an approved qualification test; the test will use Project-specific weld procedures developed in accordance with federally adopted welding standards. All field welds will be non-destructively tested to ensure structural integrity and compliance with USDOT regulations. Once welds are approved, the joints will be externally coated, and the entire pipeline will be visually and electronically inspected for coating defects, scratches, or other damage. Any damage or defects will be repaired before lowering the pipe into the trench.

### 11.1.4 Pipeline Installation and Trench Backfilling

Several side-boom tractors will simultaneously lift the welded sections of pipe and lower them into the trench. Non-metallic slings will be used to protect the pipe and coating as it is raised and lowered into position. Sandbags or foam blocks will be placed at the bottom of the trench before laying the pipe in rocky areas to protect the pipe and coating from damage.

As necessary, trench breakers or water stops will be installed adjacent to wetlands and in steep topography to eliminate water migration along the trench. When required, the trench will be dewatered before lowering in the pipe. Dewatering effluent will pass through sediment filters, such as hay bale structures and/or filter base, to ensure compliance with applicable water quality requirements.

Once the pipe is installed, the trench will be backfilled. Soil will be returned to the trench in the reverse order of excavation. The pipeline will be buried with a minimum cover of 72 inches of soil. Subsoil will be returned to the trench first, followed by the topsoil. The trench line will be compacted with a wheeled roller or other suitable construction equipment. A crown will be left over the trench line to allow for natural subsidence. If the excavated material contains rocks that could damage the pipe and/or coating, a rock shield will be used to protect the pipe. Topsoil will not be used for padding.

## 11.2 Special Construction Techniques

### 11.2.1 Horizontal Directional Drilling Method Construction

Horizontal directional drilling (HDD) is a trenchless technique for installing pipelines or other linear utilities to avoid or minimize surface disturbances to sensitive areas and to install pipe where conventional installation techniques are unfavorable. TBPL will use the HDD method at crossing locations where conventional installation techniques are not possible or to avoid existing features such as paved roadways, some wetlands, and the East Fork of Shell Creek. These locations are described in Sections 11.2.2 and 11.2.3.

The first phase of HDD consists of drilling a directionally controlled pilot hole along a pre-determined path extending from grade at one end to grade at the opposite end. The entry and exit holes for the HDD are designed to be set back from the area of avoidance to allow the geometry of the drill to reach a desired target depth.

The second phase consists of enlarging the pilot hole to a size that will accommodate pulling the pipeline through the enlarged hole; approximately 1.5 to 2.0 times the outer diameter of the pipe. The enlargement of the pilot hole (or reaming) will be accomplished by pulling reaming heads of specific diameters through the hole, in stages, if necessary, to create a wider hole. Each stage involves circulating drilling fluid from equipment on the surface through the drill pipe to a downhole bit or reamer and back to the surface through the annular space between the pipe and the wall of the hole. The circulating fluid primarily consists of bentonite, which is a non-toxic, naturally occurring sedimentary clay composed of weathered and aged volcanic ash. While the hole is being drilled, the pipe is being welded to accommodate the length of the HDD. Once welding is complete, the entire segment of pipe is pressure-tested before installation.

Once the drilled hole is prepared and stable, the welded section of pipeline is pulled through the hole. Generally, the pipe is laid out and welded on the exit side of the drill. The welded section can be assembled in segments instead of as a continuous length; however, pipe pulling operations will cease while the segments are being welded together.

### 11.2.2 Highway and County Road Crossings

The road and railroad crossings will be constructed according to applicable crossing permits and agreements. TBPL will use the HDD method to install the proposed pipeline at the crossings of Highway 23, two county roads, and paved driveways. The CPR railroad ROW will be crossed using industry standard jack and bore techniques. Typical HDD and bore schematics for the road and railroad crossings are provided in **Appendix C**.

### 11.2.3 Wetland and Waterbody Crossings

Arcadis U.S., Inc. (Arcadis) conducted desktop reviews and wetland and waterbody delineation field survey for the Field Survey Areas of the proposed and existing pipelines and the Midline Pump Station area. Copies of the

wetland and waterbody delineation reports are provided in **Appendix E**. The reports include detailed descriptions of the survey methods and soil type evaluations and identify the locations of waters of the United States (WOUS) per the United States Army Corps of Engineers (USACE) Approved Jurisdictional Determination (AJD) dated April 22, 2024 (**Appendix D**). Where the proposed pipeline crosses the WOUS, TBPL plans to use HDD construction techniques. The Typical HDD schematic for the WOUS crossings is provided in **Appendix C**.

No stream crossings or wetland disturbances will be required for conversion of the existing pipeline. No wetlands or waterbodies were identified within or near the Midline Pump Station area.

## 11.3 Restoration Procedures

During construction of the proposed pipeline, topsoil will be removed and stockpiled along one edge of the temporary construction ROW. The centerline of the new pipeline will then be staked and excavated, and that soil will be stockpiled on the opposite side of the ROW relative to the topsoil stockpile. After pipe has been strung, welded, coated, and inspected, it will be lowered into the ditch and the stockpile from excavation will be used for backfilling after sorting and removing the rocks.

Once construction is complete, the pipeline ROW and temporary workspaces will be restored to original contours and revegetated to the extent practicable, except that trees and shrubs will be regularly removed from the ROW to facilitate pipeline inspection and maintenance. After the ditch has been backfilled, the topsoil will be replaced, and approximate original contours restored. Wetland edges will be stabilized, and permanent erosion control measures will be installed.

Disturbed areas will be restored as described in the EMP (**Appendix C**) and in accordance with landowner agreements. For areas to be revegetated, seeding will comply with requirements specified by the landowners or the USDA NRCS. All timber riprap, timber mats, prefabricated equipment mats, and other construction debris will be removed. Trees and shrubs with DBH of 1 inch or greater will be replaced consistent with the Commission's Tree and Shrub Mitigation Specification, if needed.

## 12 Operation and Maintenance

Once construction of the proposed pipeline is completed and prior to operations, TBPL will conduct a hydrostatic test of the entire pipeline to verify the new and existing pipelines are safe to operate at the desired pressures prior to flowing oil down the line.

A SCADA monitoring and alarm system will be installed that continuously monitors the flow and pressure of the system and triggers alarms for anything outside normal operating conditions. Pipeline pressure, temperature, and flowrate data will be transmitted via cellular networks to a central SCADA system located at the TBPS Facility. The SCADA system will provide continuous monitoring of measurement data 24 hours a day, 7 days a week. Where changes in the data occur that indicate a potential issue with the pipeline or facilities, alarms will be triggered, notifying the operator of the potential issue. TBPL will develop a pipeline Integrity Management Plan (IMP) for the Project that complies with applicable federal regulations and outlines preventive maintenance, inspection, line patrol, leak detection systems, SCADA, and other pipeline integrity procedures to be implemented to ensure the safe operation of the Project.

During operations, TBPL will conduct weekly aerial surveys of the pipelines to verify that no damage has occurred. In addition, operations personnel will conduct routine foot traffic checks to verify that no leaks are occurring.

TBPL will collaborate with the local emergency response manager in conjunction with Ward and Mountrail Counties to develop an appropriate Emergency Response Plan. TBPL will contract with an experienced

emergency response service provider for the Project. Consistent with federal regulations, TBPL is preparing a Spill Prevention, Control, and Countermeasure Plan (SPCC Plan) for the Project, which will outline specific protocols to be implemented in the event of an accidental spill or release. TBPL will work with local emergency responders to ensure implementation of a safe and effective response strategy should an adverse event occur.

TBPL will use the permanent 30-foot-wide ROWs to conduct inspections and perform maintenance. Maintenance will include making any necessary pipeline and facility repairs and removing any vegetation on the ROW that impacts the safe and reliable inspection and operation of the pipeline. Inspections and maintenance will be performed in compliance with applicable USDOT regulations.

## 13 Alternatives Considered

### 13.1 Project Alternatives

#### 13.1.1 No Action

Under No Action, the proposed Project will not be constructed. Without the Project, a pipeline connection between the TBPS Facility and the existing pipeline, and then to other third-party pipelines, will not be established. The ultimate purpose to provide producers with access to major U.S. markets will not be fulfilled. For these reasons, No Action is not an alternative to the Project.

#### 13.1.2 Other Pipelines

No existing or planned pipeline projects provide a pipeline connection extending between the TBPS Facility near Plaza, North Dakota and the Enbridge Storage Facility in Stanley, North Dakota or between the TBPS Facility and the interconnection point with the existing pipeline near Plaza, North Dakota. As such, no other pipelines meet the purpose of and need for this Project.

#### 13.1.3 Rail

No rail facilities currently exist or are planned that will provide a means to transport crude oil between the TBPS Facility and the Enbridge Storage Facility or between the TBPS Facility and the interconnection point with the existing pipeline near Plaza, North Dakota. Given the lack of existing rail infrastructure between the proposed endpoints, construction of permanent, aboveground rail lateral service lines and ancillary facilities would be required. Such facilities would require permanent conversion of agricultural land to an industrial purpose. Thus, rail facilities would have greater permanent environmental, and landowner impacts than the Project. This alternative would also require participation of a third-party rail operator. This alternative was determined not feasible because of the associated environmental impacts and financial, logistic, and time constraints necessary to acquire land and construct the requisite rail infrastructure. For this reason, the rail transportation alternative was eliminated from consideration.

#### 13.1.4 Trucking

The TBPS Facility's Synthetic Minor New Source Review (SMNSR) air permit (SMNSR-TAT-000781-2021.002) was issued in July 2022. The 2022 permit requires the use of the Project pipelines for crude loadout and does not allow crude to be trucked from the site; therefore, construction of the modifications to the existing TBPS Facility for a pipeline connection are required for operation of the existing TBPS Facility.

Under the current air permit for the TBPS Facility, transport of crude oil by truck is not a viable option because emissions would not comply with the permit limits. The trucking alternative was reviewed and eliminated because it does not meet the purpose of and need for the Project.

### 13.1.5 Route Alternatives

TBPL dedicated a significant amount of work in review of route alternatives to identify the Preferred Route for the proposed pipeline. TBPL obtained and analyzed public and proprietary information to identify sensitive areas and features within the Project Corridor, such as exclusion and avoidance areas, populated areas, wetlands, waterbodies, natural resources, areas of cultural significance, and public lands. TBPL also considered ROWs (e.g., existing pipelines, railroads, and roads) to maximize collocation with other utilities.

Once an initial route was selected, TBPL sought input from potentially affected landowners, resource agencies, local governments, and owners of existing infrastructure regarding the proposed route, and the route was further refined based on input received. In addition, TBPL completed civil and environmental field surveys and additional constructability reviews to identify the Preferred Route.

The Preferred Route for the proposed pipeline was selected to minimize the effects of construction on environmentally sensitive areas and to collocate with existing roads, railroads, and pipelines in the area as much as possible from the TBPS Facility to the interconnection point of the existing pipeline near Plaza, North Dakota by using existing ROWs to the maximum extent feasible. Approximately 2.28 miles (59.4 percent) of the Preferred Route for the proposed pipeline is collocated with existing utility corridors. The Preferred Route meets the needs of the Project, complies with the Commission's siting criteria, minimizes impacts to landowners and the environment, and maximizes collocation with existing utility corridors.

The existing pipeline was constructed in the 1960s; therefore, there are no route alternatives for the existing pipeline. The Preferred Route is limited to the centerline of the existing pipeline as depicted on the maps in **Appendix A**. The Preferred Route primarily traverses agricultural land including cultivated cropland and pasture.

## 14 Environmental Studies

Several environmental studies were conducted during the evaluation of the Project Corridors and Routes for the proposed and existing pipelines and the 2-acre site for the proposed midline pump station. Studies conducted included desktop analysis using available literature and geospatial resources and field surveys conducted by qualified environmental scientists. The Study Area used for the desktop analysis for both the proposed and existing pipelines is 1 mile wide (0.5 mile on either side of the pipeline centerline).

The Field Survey Area consists of three sub-areas:

- Pipeline Corridor for a new 3.84-mile-long underground pipeline with a 200-foot-wide corridor (Proposed Pipeline Project Corridor);
- Pipeline Corridor for an existing 30.8-mile-long underground pipeline with a 50-foot-wide corridor (Existing Pipeline Project Corridor); and
- A 2-acre site for a proposed aboveground midline pump station which is adjacent to the existing pipeline (Midline Pump Station area).

### 14.1 Wetland and Waterbody Inventory

Arcadis conducted desktop reviews and wetland and waterbody delineation field surveys for the Field Survey Areas of the proposed and existing pipelines and Midline Pump Station area. Copies of the wetland and

waterbody delineation reports are provided in **Appendix E**. The reports include detailed descriptions of the survey methods used to identify wetlands and soil type evaluations.

- **Proposed Pipeline Project Corridor:** Arcadis conducted a wetland and waterbody delineation survey of the Project Corridor for the proposed pipeline on August 7 and 8, 2018. Arcadis surveyed a 200-foot-wide Field Survey Area (100 feet to each side of the pipeline centerline) to identify potential wetland areas in the vicinity of the 80-foot-wide construction ROW for the proposed pipeline. Arcadis identified 10 palustrine emergent (PEM) wetlands totaling approximately 8.48 acres (Wetlands W1 to W10) and one waterbody (East Fork Shell of Creek) totaling approximately 246 linear feet within the Field Survey Area for the proposed pipeline.

The USACE issued an AJD on November 28, 2018 identifying the WOUS within the Project Corridor for the proposed pipeline. Based on the AJD, East Fork Shell of Creek and two wetlands (W1 and W9) are WOUS. The other wetlands (W2, W3, W4, W5, W6, W7, W8, and W10) are considered isolated wetlands and were determined to not be WOUS. TBPL submitted a request for an updated AJD on September 29, 2023 to reflect the updated definition of WOUS and subsequent changes in the jurisdictional status of applicable wetlands and streams. In the AJD dated April 22, 2024, the USACE identified one perennial stream (the East Fork Shell of Creek) and four wetlands (W1, W6, W7, and W9) as WOUS.

- **Existing Pipeline Project Corridor:** Arcadis conducted a wetland and waterbody delineation field survey on August 5 through 8, 2024. Arcadis surveyed a 50-foot-wide Field Survey Area (25 feet to each side of the pipeline centerline) to identify potential wetland areas and waterbodies in the Project Corridor for the existing pipeline. Arcadis identified total of 34 PEM wetlands totaling approximately 5.1 acres, 11 potentially farmed wetlands totaling approximately 1.23 acres, and three perennial streams totaling approximately 171 linear feet within the Field Survey Area for the existing pipeline. Arcadis submitted a second AJD request to the USACE on September 9, 2024 to determine the jurisdictional status of wetland and streams identified during the wetland and waterbody delineation survey for the existing pipeline. The AJD will be provided as an addendum to this application upon USACE issuance and receipt.
- **Midline Pump Station Area:** Arcadis conducted a wetland and waterbody delineation survey for the Midline Pump Station concurrent with the survey completed for the existing pipeline. No wetlands or waterbodies were identified within or near the site.

## 14.2 Cultural Resource Inventory

Metcalf Archaeological Consultants, Inc. (Metcalf) completed a Class I file search for the Project Corridors for the proposed and the existing pipeline. The purpose of the review was to determine if any portion of the Project Corridors had been previously surveyed and to identify any previously recorded cultural resources. The results of the Class I File Search are included in **Appendix F-1**.

Class III surveys were conducted for the proposed pipeline, existing pipeline, and the 2-acre site for the midline pump station as described in the following paragraphs. Redacted versions of the Class III survey reports for cultural resources are provided in **Appendix F**. The NON-PUBLIC cultural resource report, maps, and geographic information system (GIS) layers were provided to the Commission as a separate submittal with the Application to Protect Information on March 25, 2024 and October 18, 2024.

- **Proposed Pipeline Project Corridor:** In total, 136 previously recorded sites were identified, 80 within the Area of Potential Effect (APE) for the proposed Project and an additional 56 within the other portions of the Project Corridor. The APE was defined as a 3.84-mile-long, 300-foot-wide corridor (150 feet to each side of the pipeline centerline) and temporary construction workspaces and laydown areas.

On October 2, 2023, Metcalf conducted a Class III Cultural Resource Inventory for the proposed pipeline APE. A total of 147 acres were surveyed. During the survey, no cultural resources were identified; therefore, Metcalf recommended a finding of *No Historic Properties Affected* (36 CFR 800.4[d][1]) for this undertaking. The results of the Class III Cultural Resource Inventory are included in **Appendix F**.

- **Existing Pipeline Project Corridor:** Metcalf completed a Class III Cultural Resource Inventory for the existing pipeline APE on August 5 through 8, 2024. The APE was defined as a 30.8-mile-long, 50-foot-wide corridor (24 feet to each side of the centerline) for the existing pipeline. During the survey of the existing pipeline, no cultural resources were identified; therefore, Metcalf recommended a finding of *No Historic Properties Affected* (36 CFR 800.4[d][1]) for this undertaking. The results of the Class III Cultural Resource Inventory for the existing pipeline are included in **Appendix F**.
- **Midline Pump Station Area:** Metcalf completed a Class III Cultural Resource Inventory for the 2-acre site for the proposed midline pump station APE on August 5 through 8, 2024. The APE was defined as the 2-acre site with an additional 100-foot buffer. During the survey, no cultural resources were identified; therefore, Metcalf recommended a finding of *No Historic Properties Affected* (36 CFR 800.4[d][1]) for this undertaking. The results of the Class III Cultural Resource Inventory for the midline pump station are included in **Appendix F**.

## 14.3 Habitat Assessment

Arcadis conducted an environmental desktop assessment to identify federally listed plant and animal species and suitable habitat, vegetation and potential land cover types, state-regulated noxious weeds, and tree and shrub areas with the potential to occur within the Study Area. Arcadis also performed a natural resources field survey of the Field Survey Areas for the Proposed and Existing Pipeline Project Corridors and the Midline Pump Station area on August 5 through 8, 2024. The purpose of the survey was to assess the presence or absence and/or document the extent of federally listed species and habitat (Sections 14.3.1, 14.3.2, and 14.3.3), identify the primary land cover types (Section 14.3.4), document state-regulated noxious weed infestation areas (Section 14.3.5), and inventory tree and shrub areas (Section 14.3.6). A copy of the Biological Habitat Assessment Report is provided in **Appendix G**.

The Study Area is characterized by a rural landscape with gently sloping hills, open fields, and actively farmed/cultivated cropland. Streams and other waters, including prairie pothole wetlands and linear wetland drainages, are common features observed throughout the Study Area. The existing Canadian Pacific Railway (CPR) ROW, developed/industrial areas, multiple roads, and residential parcels also intersect the Study Area.

### 14.3.1 Federally Protected Species

Before initiating field surveys, Arcadis queried the United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation Tool (IPaC) and the report identified five federally listed threatened, endangered, or candidate species with potential to occur within the Study Area: Northern long-eared bat (NLEB), piping plover, rufa red knot, whooping crane, Dakota skipper, and monarch butterfly (USFWS 2024a; **Appendix D**). Based on the IPaC report, no designated critical habitat was identified within the Field Survey Area (USFWS 2024a).

Suitable habitat preferences for the listed species are described in **Table 3** (USFWS 2024b through 2024g). Arcadis' ecologists referenced USFWS fact sheets (USFWS 2024b through 2024g) for each listed species to identify suitable habitat, reviewed publicly available aerial imagery (Environmental Systems Research Institute, Inc. [ESRI] 2024), and reviewed the findings from other Arcadis aquatic resource surveys (Arcadis 2018, 2024) to assess if these habitat characteristics are likely to occur within the Study Area. Land cover types were determined, and the locations of trees and shrubs were identified by reviewing publicly available aerial imagery (ESRI 2024) along with the findings from two aquatic resource surveys conducted by Arcadis (Arcadis 2018,

2024). Based on the results of the desktop review and field surveys, identified land cover types included crops, pasture, native prairie, and other (such as wetlands, streams, and developed areas). In addition, potential habitat areas for federally listed species, land cover type areas, and tree and shrub areas were identified to be field verified.

The USFWS North Dakota Ecological Services Field Office in Bismarck has primary oversight of federally protected plant and animal species. North Dakota does not have a separate state endangered or threatened species list; only species listed by the Endangered Species Act of 1973 are considered threatened or endangered in the State of North Dakota (North Dakota Game and Fish Department [NDGFD] 2021).

Based on the presence of suitable habitat within or near the Proposed and Existing Pipeline Project Corridors and the Midline Pump Station area, the likelihood of species occurrence is described herein. Species effect determinations are provided in the following subsections; however, these determinations are considered preliminary until concurrence from the USFWS is obtained.

Habitat information gathered during the field survey is also summarized in **Table 1** and described in greater detail in **Appendix G**. One species observation of a monarch butterfly (federally listed candidate species) was recorded during the field survey in the Existing Pipeline Project Corridor. No other federally listed threatened, endangered, or candidate species were observed during the field surveys.

As result of agricultural activities and other historical disturbances, the Proposed Pipeline Project Corridor has limited suitable habitat for federally listed species. Suitable habitat is present for rufa red knot and whooping crane near the East Fork of Shell Creek and associated wetlands and other aquatic features. Native prairie habitat fringing the East Fork of Shell Creek is suitable habitat for the Dakota skipper and monarch butterfly to utilize. During construction of the proposed pipeline, TBPL plans to use the HDD method at the WOUS crossing locations to avoid disturbances to associated wildlife.

USFWS developed the avoidance and minimization measures described in the Programmatic Biological Assessment and Biological Evaluation (BABE) for the FBIR Oil and Gas Development (Cardno Limited 2014) and subsequent Revised Addendum to Programmatic BABE for the Fort Berthold Indian Reservation Oil and Gas Development (Trihydro Corporation 2015). TBPL is committed to the integration of and adherence with relevant avoidance and minimization measures identified by the USFWS for the federally listed species potentially present within or near the Project Corridors or crossed by the Routes; however, these commitments primarily pertain to drilling and production.

**Table 1 Federally Listed Species Habitat Information and Summary Survey Results<sup>1</sup>**

Common Name (Scientific Name)	Federal Listing Status	Habitat Information <sup>1</sup>	Survey Results Summary <sup>2,3</sup>
<b>Mammals</b>			
Northern Long Eared Bat ( <i>Myotis septentrionalis</i> )	Endangered (E)	Typically overwinters in caves or mines and utilizes forest habitats in the rest of the year.	<b>Proposed Pipeline Project Corridor:</b> Land cover consists of developed, prairie, pasture, and agricultural cropland. There are no significant forested areas or abandoned mines or other structures that constitute suitable habitat for the NLEB. Suitable habitat for the NLEB is not present.
		Forested roosting habitat includes snags or mature trees with cavities or crevices and/or loose or exfoliating bark.	<b>Existing Pipeline Project Corridor:</b> Land cover consists of developed, prairie, pasture, and agricultural cropland. There are no significant forested areas or abandoned mines or other structures that constitute suitable habitat for the NLEB. Suitable habitat for the NLEB is not present. Two underground abandoned mine areas are located within the Study Area and constitute suitable overwintering habitat for the NLEB.
		Uncommonly may utilize abandoned structures, barns, or sheds.	<b>Midline Pump Station Area:</b> Land cover consists of developed, prairie, pasture, and agricultural cropland. There are no significant forested areas or abandoned mines or other structures that constitute suitable habitat for the NLEB. Suitable habitat for the NLEB is not present.
<b>Birds</b>			
Piping Plover ( <i>Charadrius melodus</i> )	Threatened (T)	In the Northern Great Plains, nests on the unvegetated shorelines of alkaline lakes, reservoirs, or river sandbars.	<b>Proposed Pipeline Project Corridor:</b> There are no lakes, reservoirs, or rivers with unvegetated shorelines or sandbars within the Proposed Pipeline Project Corridor. Suitable habitat for the piping plover is not present.
			<b>Existing Pipeline Project Corridor:</b> There are no lakes, reservoirs, or rivers with unvegetated shorelines or sandbars within the Existing Pipeline Project Corridor. Suitable habitat for the piping plover is not present.
			<b>Midline Pump Station Area:</b> There are no wetland or stream features within the Midline Pump Station area. Suitable habitat for the piping plover is not present.
Rufa Red Knot ( <i>Calidris canutus rufa</i> )	T	Utilize inland saline lakes as stopover habitat in the Northern Great Planes. May potentially utilize natural and man-made freshwater habitats along inland migration routes including impoundments, wetlands, and riverine sandbars.	<b>Proposed Pipeline Project Corridor:</b> Approximately 9 acres of wetlands were identified within the Proposed Pipeline Project Corridor, which may constitute suitable stopover habitat for migratory bird species. Suitable stopover habitat for the rufa red knot is present.
			<b>Existing Pipeline Project Corridor:</b> Approximately 6 acres of wetlands were identified within the Existing Pipeline Project Corridor, which may constitute suitable stopover habitat for migratory bird species. Suitable stopover habitat for the rufa red knot is present.
			<b>Midline Pump Station Area:</b> There are no wetland or stream features within the Midline Pump Station area. Suitable stopover habitat for the rufa red knot is not present.
Whooping Crane ( <i>Grus americana</i> )	E	Breeds, migrates, winters, and forages in varied habitats that may include lakes, open ponds, upland swales, wet meadows and rivers, pasture areas, and cropland.	<b>Proposed Pipeline Project Corridor:</b> Approximately 9 acres of wetlands that may exhibit open ponded centers in wet portions of the year and 0.02 acre of perennial streams were identified within the Proposed Pipeline Project Corridor. Land cover types, including pastures, native prairie, and crops, are present within the Proposed Pipeline Project Corridor. Suitable habitat for the whooping crane is present.
			<b>Existing Pipeline Project Corridor:</b> Approximately 6 acres of wetlands that may exhibit open ponded centers in wet portions of the year and 0.2 acre of perennial streams were identified within the Existing Pipeline Project Corridor. Land cover types, including pastures, native prairie, and crops, are present within the Existing Pipeline Project Corridor. Suitable habitat for the whooping crane is present.
			<b>Midline Pump Station Area:</b> The Midline Pump Station area consists of cropland area planted with soybean, which may constitute suitable habitat for the whooping crane.
<b>Insects</b>			
Dakota Skipper ( <i>Hesperia dacotae</i> )	T	Moist bluestem ( <i>Andropogon</i> species) prairies including flowering wood lily ( <i>Lilium philadelphicum</i> ), harebell ( <i>Campanula rotundifolia</i> ), and smooth camas ( <i>Camassia</i> species).  Upland prairie on ridges and hillsides dominated by bluestem, needlegrasses ( <i>Nassella</i> species), and purple coneflower	<b>Proposed Pipeline Project Corridor:</b> Approximately 1 acre of native prairie areas with the potential to contain preferred flowering species, such as purple coneflower, are present within the Proposed Pipeline Project Corridor. An additional approximate 0.08-acre area dominated by purple coneflower was also identified within the Field Survey Area. Suitable habitat for the Dakota skipper is present.
			<b>Existing Pipeline Project Corridor:</b> Approximately 13 acres of native prairie areas with the potential to contain preferred flowering species, such as purple coneflower, are present. Approximately 1.4 acres of areas dominated by purple coneflower, purple prairie clover, and/or blazing star ( <i>Iiatris spicata</i> ) were identified within the Existing Pipeline Project Corridor, 0.86 acre of which is overlapped by native prairie areas and 0.59 acre of which are independent of native prairie areas. Suitable habitat for the Dakota skipper is present.
			<b>Midline Pump Station Area:</b> The Midline Pump Station area consists of monoculture cropland area, which does not constitute suitable habitat for the Dakota skipper. Suitable habitat is not present.
Monarch Butterfly ( <i>Danaus plexippus</i> )	Candidate	Fields, roadside areas, and wet or dry open areas with milkweed ( <i>Asclepias syriaca</i> ) and flowering plants	<b>Proposed Pipeline Project Corridor:</b> Approximately 1 acre of native prairie areas with the potential to contain usable flowering species were identified within the Proposed Pipeline Project Corridor. Suitable habitat for the monarch butterfly is present. No areas dominated by milkweed were identified.
			<b>Existing Pipeline Project Corridor:</b> Approximately 13 acres of native prairie areas with the potential to contain usable flowering species were identified within the Existing Pipeline Project Corridor. Suitable habitat for the monarch butterfly is present. One monarch butterfly was observed within the Existing Pipeline Project Corridor. No areas dominated by milkweed were identified.
			<b>Midline Pump Station Area:</b> The Midline Pump Station area consists of cropland area, which does not constitute suitable habitat for the monarch butterfly. Suitable habitat for the monarch butterfly is not present.

Notes:

- Habitat information was derived from USFWS fact sheets (USFWS 2024b through 2024g).
- Data from previous field surveys were used to supplement the findings of this report as needed (Arcadis 2018, 2024).
- Wetlands and streams from the 2024 delineation (Arcadis 2024) have not been confirmed by a USACE AJD and may be subject to change.

### **14.3.1.1 Northern Long-Eared Bat (*Myotis septentrionalis*)**

According to the IPaC Official Species List (USFWS 2024a), potential effects to the NLEB only need to be considered if the Project includes wind turbine operations. The Project does not include wind turbine operations.

NLEBs overwinter in abandoned mines and utilize forested areas throughout the rest of the year. Land cover within the Study Area consists of crops, native prairie, pasture, wetlands, streams, and developed areas (USFWS 2024b). Two underground abandoned mine areas are located within the Study Area and constitute suitable overwintering habitat for the NLEB.

#### **Proposed Pipeline Project Corridor: No Effect**

There are no forested areas, trees, or shrubs identified with cavities, exfoliating bark, furrowed bark, or other crevices that would constitute suitable roosting habitat for the NLEB. No abandoned or dilapidated sheds or similar buildings were observed within the Proposed Pipeline Project Corridor (**Appendix G**). There is no suitable habitat for the NLEB within the Proposed Pipeline Project Corridor. Due to lack of suitable habitat, the Project is expected to have no effect on the NLEB in the Proposed Pipeline Project Corridor.

#### **Existing Pipeline Project Corridor: No Effect**

There are no forested areas, and identified individual trees and shrubs did not contain cavities, exfoliating bark, furrowed bark, or other crevices that would make them suitable roosting habitat for the NLEB. No abandoned or dilapidated sheds or similar buildings were observed within the Existing Pipeline Project Corridor. There is no suitable habitat for the NLEB within the Existing Pipeline Project Corridor. Due to lack of suitable habitat, the Project is expected to have no effect on the NLEB in the Existing Pipeline Project Corridor.

It should be noted that two underground abandoned mine areas (the Spiegel and Mormon Coal Mines) are located within the 0.5-mile buffer area. These abandoned mines constitute suitable overwintering habitat for the NLEB. Given the mines' locations outside of the Field Survey Area, these features are not expected to be impacted by Project activities. However, their proximity to the Project indicates that the NLEB may be present in the direct vicinity of the Existing Pipeline Project Corridor.

#### **Midline Pump Station Area: No Effect**

The Midline Pump Station area consisted of agricultural cropland without any tree or shrub species that would constitute suitable roosting habitat for the NLEB. No abandoned or dilapidated sheds or similar buildings were observed within the Midline Pump Station area. There is no suitable habitat for the NLEB within the Midline Pump Station area. Due to lack of suitable habitat, the Project is expected to have no effect on the NLEB in the Midline Pump Station area.

### **14.3.1.2 Piping Plover (*Charadrius melodus*)**

The piping plover is a small shorebird that nests in large wetlands. Critical habitat for this species has been designated by USFWS. Based on the IPaC report (USFWS 2024a), there is no designated critical habitat for this species within the Study Area.

Mountrail and Ward Counties are located within the Central Flyway zone for migratory birds in North America (NDGFD 2024). Piping plovers migrate through North Dakota from mid-April to August, with peak breeding season between late May and mid-July (NDGFD 2019a). They utilize unvegetated, sandy areas associated with larger waterbodies (lakes and rivers) in the Northern Great Plains area (USFWS 2024c).

**Proposed Pipeline Project Corridor: No Effect**

There are no lakes or reservoirs with unvegetated shorelines identified within the Proposed Pipeline Project Corridor (**Appendix E**). Additionally, none of the delineated streams contain unvegetated sandbar areas or streambanks. Suitable habitat for the piping plover was not identified within the Proposed Pipeline Project Corridor. Due to lack of suitable habitat, the Project is expected to have no effect on the piping plover in the Proposed Pipeline Project Corridor.

Permanent impacts to piping plover habitat, such as wetlands and/or streams, identified as jurisdictional WOUS will be avoided via HDD. Temporary impacts to wetlands and streams via log matting may occur for ease of construction equipment movement throughout the Project Area. Wetlands that were not confirmed by the USACE as jurisdictional WOUS may be permanently impacted. Additionally, this species is highly mobile, and suitable habitat features (such as prairie pothole wetlands) are readily available in areas outside of the limits of the Project. Therefore, despite the potential for direct habitat loss, this habitat loss is not expected to significantly impact the piping plover within the Proposed Pipeline Project Corridor.

**Existing Pipeline Project Corridor: No Effect**

There are no lakes or reservoirs with unvegetated shorelines identified within the Existing Pipeline Project Corridor (**Appendix E**). Additionally, none of the delineated streams contain unvegetated sandbar areas or streambanks. Suitable habitat for the piping plover was not identified within the Existing Pipeline Project Corridor. Due to lack of suitable habitat, the Project is expected to have no effect on the piping plover in the Existing Pipeline Project Corridor.

**Midline Pump Station Area: No Effect**

There are no lakes, reservoirs, wetland, or stream features within the Midline Pump Station area (**Appendix E**). The Midline Pump Station Area consists entirely of cropland area, which does not constitute suitable habitat for the piping plover. Due to lack of suitable habitat, the Project is expected to have no effect on the piping plover in the Midline Pump Station area.

**14.3.1.3 Rufa Red Knot (*Calidris canutus rufa*)**

Rufa red knot are small birds that nest in a scrape on the ground lined with leaves, lichens, and moss, usually near water. This species may pass through North Dakota as part of their annual migration. Critical habitat for this species has been proposed by USFWS, and no proposed critical habitat for this species has been identified within the Study Area (USFWS 2024a).

Mountrail and Ward Counties are located within the Central Flyway zone for migratory birds in North America (NDGFD 2024). Rufa red knots migrate through North Dakota in mid-May and mid-September to October (NDGFD 2019b), utilizing saline and freshwater aquatic habitats as stopover habitat (USFWS 2024d).

**Proposed Pipeline Project Corridor: May Affect – Not Likely to Adversely Affect**

There are 10 PEM or farmed wetlands totaling approximately 9 acres and one perennial stream totaling approximately 0.02 acre within the Proposed Pipeline Project Corridor (Arcadis 2018). Based on available aerial imagery, many of the PEM wetlands appear to exhibit standing surface water, creating shallow ponded areas (**Appendices E and G**). The Project is located in an area characterized by prairie pothole formations, which are commonly utilized by migratory species as stopover habitat. Suitable habitat for the rufa red knot is present within the Proposed Pipeline Project Corridor. No species occurrences were observed during the field survey; however, the survey was conducted outside of the migratory window for these species in North Dakota.

Permanent impacts to rufa red knot habitat, such as wetlands and/or streams that have been identified as jurisdictional WOUS, will be avoided via HDD. Temporary impacts to wetlands and streams via log matting may

occur for ease of construction equipment movement throughout the Project Area. Wetlands that were not confirmed by the USACE as jurisdictional WOUS may be permanently impacted. Permanent impacts to wetlands may contribute to a direct loss of rufa red knot habitat. However, this species is highly mobile, and suitable habitat features (such as prairie pothole wetlands) are readily available in areas outside of the limits of the Proposed Pipeline Project Corridor. Therefore, despite the potential for direct habitat loss during construction of the proposed pipeline, this habitat loss is not expected to significantly impact the rufa red knot.

Construction noise and activity may divert any migratory species from the immediate Project vicinity, but this is not expected to contribute to any direct or indirect cause of fatalities to migratory bird species. Additionally, the Project's construction timeline is such that any ground disturbance will occur outside of the migratory window for the rufa red knot to be present in the vicinity of the Project. The proposed measures to minimize the potential effects to migratory bird species during construction are provided in Section 14.3.7. The Project will comply with the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) and would result in minimal disturbances to avian species. Therefore, it is reasonable to assume that the Project may affect but is not likely to adversely affect the rufa red knot or its habitat in the Proposed Pipeline Project Corridor. Species effect determinations are considered preliminary until concurrence from the USFWS is obtained.

**Existing Pipeline Project Corridor: No Effect**

There are 34 PEM wetlands and 11 potentially farmed wetlands totaling approximately 6 acres and three perennial streams totaling approximately 0.2 acre identified within the Existing Pipeline Project Corridor (Arcadis 2024). Based on available aerial imagery, many of the PEM wetlands appear to exhibit standing surface water, creating shallow ponded areas. The Project is located in an area characterized by prairie pothole formations, which are commonly utilized by migratory species as stopover habitat. Suitable habitat for the rufa red knot is present within the Existing Pipeline Project Corridor.

Ground disturbance is not proposed in the Existing Pipeline Project Corridor; therefore, no suitable habitat areas for the rufa red knot will be adversely affected by Project activities. Conversion of the existing pipeline is expected to have no effect on the rufa red knot.

**Midline Pump Station Area: No Effect**

There are no lakes, reservoirs, wetland, or stream features within the Midline Pump Station area. The Midline Pump Station area consists entirely of cropland area; therefore, suitable habitat for the rufa red knot is not present.

**14.3.1.4 Whooping Crane (*Grus americana*)**

North Dakota provides important stopover habitat for whooping cranes as they migrate during the spring (April through May) and the fall (September through October). Critical habitat for this species has been designated by USFWS, and no designated critical habitat for this species has been identified within the Project Area (USFWS 2024a).

**Proposed Pipeline Project Corridor: May Affect – Not Likely to Adversely Affect**

There are 10 PEM or farmed wetlands totaling approximately 9 acres and one perennial stream totaling approximately 0.02 acre within the Proposed Pipeline Project Corridor (Arcadis 2018). Based on available aerial imagery, many of the PEM wetlands appear to exhibit standing surface water, creating shallow ponded areas. The Project is located in an area characterized by prairie pothole formations, which are commonly utilized by migratory species as stopover habitat. Approximately 81 percent of the Proposed Pipeline Project Corridor consists of pastures, crops, or native prairie areas. Suitable habitat for the whooping crane is present within the Proposed Pipeline Project Corridor. No species occurrences were observed during the field survey; however, the survey was conducted outside of the migratory window for the whooping crane in North Dakota.

Permanent impacts to whooping crane habitat (such as wetlands and/or streams) that have been identified as jurisdictional WOUS will be avoided via HDD. Temporary impacts to wetlands and streams via log matting may occur for ease of construction equipment movement throughout the Project Area. Wetlands not confirmed by the USACE as jurisdictional WOUS may be permanently impacted. Permanent impacts to wetlands may contribute to a direct loss of whooping crane habitat. However, this species is highly mobile, and suitable habitat features (such as prairie pothole wetlands and other streams, wetlands, and upland areas) are readily available in areas outside of the limits of the Proposed Pipeline Project Corridor. Therefore, despite the potential for direct habitat loss, construction of the proposed pipeline is not expected to significantly impact the whooping crane.

Construction noise and activity during construction may divert any migratory species from the immediate Project vicinity, but this is not expected to contribute to any direct or indirect cause of fatalities to migratory bird species. Additionally, the Project's construction timeline is such that any ground disturbance will occur outside of the migratory window for the whooping crane to be present in the vicinity of the Project.

The proposed mitigation measures to minimize the potential effect on migratory bird species are provided in Section 14.3.7. The proposed Project would comply with the MBTA and the BGEPA and would therefore result in minimal disturbances to avian species. With implementation of these guidelines, the proposed Project is not likely to adversely affect whooping crane habitat or result in fatalities. If these construction guidelines are followed, it is reasonable to assume that the Project may affect, but is not likely to adversely affect, the whooping crane or its habitat within the Proposed Pipeline Project Corridor. Species effect determinations are considered preliminary until concurrence from the USFWS is obtained.

#### **Existing Pipeline Project Corridor: No Effect**

There are 34 PEM wetlands and 11 potentially farmed wetlands totaling approximately 6 acres and three perennial streams totaling approximately 0.2 acre identified within the Existing Pipeline Project Corridor (Arcadis 2024). Based on available aerial imagery, many of the PEM wetlands appear to exhibit standing surface water, creating shallow ponded areas. The Project is located in an area characterized by prairie pothole formations, which are commonly utilized by migratory species as stopover habitat. Approximately 95 percent of the Existing Pipeline Project Corridor consists of pastures, crops, or native prairie areas. Suitable habitat for the whooping crane is present within the Existing Pipeline Project Corridor.

Ground disturbance is not proposed in the Existing Pipeline Project Corridor. No suitable habitat areas for the whooping crane will be adversely affected by Project activities. The Project is expected to have no effect on the whooping crane in the Existing Pipeline Project Corridor.

#### **Midline Pump Station Area: May Affect – Not Likely to Adversely Affect**

The Midline Pump Station area consists entirely of cropland area, which may constitute suitable habitat for the whooping crane. The Project therefore may affect the whooping crane in the Midline Pump Station area. No species occurrences were observed during the field survey; however, the survey was conducted outside of the migratory window for the whooping crane in North Dakota.

The whooping crane is highly mobile, and suitable habitat features, such as prairie pothole wetlands and other streams, wetlands, and upland areas, are readily available in areas outside of the limits of the Midline Pump Station area. Therefore, despite the potential for direct habitat loss, the Project is not expected to significantly impact the whooping crane or its habitat in the Midline Pump Station area.

Construction noise and activity during construction may divert any migratory species from the immediate Project vicinity, but this is not expected to contribute to any direct or indirect cause of fatalities to migratory bird species. Additionally, the Project's construction timeline is such that any ground disturbance will occur outside of the migratory window for the whooping crane to be present in the vicinity of the Project.

The proposed mitigation measures to minimize the potential effect on migratory bird species are provided in Section 14.3.7. With implementation of these guidelines, the proposed Project is not likely to adversely affect whooping cranes habitat or result in fatalities. If these construction guidelines are followed, it is reasonable to assume that the Project may affect, but is not likely to adversely effect, the whooping crane or its habitat in the Midline Pump Station area. Species effect determinations are considered preliminary until concurrence from the USFWS is obtained.

#### **14.3.1.5 Dakota Skipper (*Hesperia dacotae*)**

Mountrail County is known to have occurrence of the Dakota skipper. Suitable habitat for Dakota skipper butterflies includes high-quality mixed and tall prairie ranging from wet-mesic tallgrass prairie to dry-mesic mixed-grass prairie dominated by little bluestem, big bluestem, prairie sandreed, or other preferred habitat species. Critical habitat for this species has been designated by USFWS, and no designated critical habitat for this species has been identified within the Study Area (USFWS 2024a).

##### **Proposed Pipeline Project Corridor: May Affect – Not Likely to Adversely Affect**

Approximately 1 acre (0.01 percent) of the Proposed Pipeline Project Corridor consists of native prairie areas with flowering species, and an additional approximately 0.08-acre area dominated by purple coneflower was identified within the Proposed Pipeline Project Corridor. Suitable habitat for the Dakota skipper is present within the Proposed Pipeline Project Corridor.

Unless native prairie areas can be fully avoided, the Project may affect Dakota skipper habitat. The area affected would be small, other suitable habitat is available in the vicinity, and this species is mobile; therefore, the Project is not likely to adversely affect this species.

Construction is proposed to occur over winter months when suitable flowering habitat areas are dormant and not utilized by the Dakota skipper. Revegetation will be conducted in compliance with landowner agreements. Any impacts to summer habitat areas are expected to fully recover between construction and the emergence of flowering plants. Additionally, there are alternative native prairie areas in the vicinity of the Project that will not be disturbed and will maintain suitable habitat for the species throughout construction. Therefore, any temporary habitat loss that may result from the Project is expected to be negligible.

The proposed mitigation measures to minimize the potential effects on the Dakota butterfly are provided in Section 14.3.7. With implementation of these guidelines, the proposed Project is not likely to adversely affect Dakota skipper habitat or result in fatalities. If these construction guidelines are followed, it is reasonable to assume that the Project may affect, but is not likely to adversely affect, the Dakota skipper or its habitat in the Proposed Pipeline Project Corridor. Species effect determinations are considered preliminary until concurrence from the USFWS is obtained.

##### **Existing Pipeline Project Corridor: No Effect**

Approximately 13 acres of native prairie areas with the potential to contain preferred flowering species, such as purple coneflower, are present. Approximately 1.4 acres of areas dominated by purple coneflower, purple prairie clover, and/or blazing star (*liatris spicata*) were identified within the Existing Pipeline Project Corridor, 0.86 acre of which is overlapped by native prairie areas and 0.59 acre of which are independent of native prairie areas. Suitable habitat for the Dakota skipper is present within the Existing Pipeline Project Corridor.

Ground disturbance is not proposed within the Existing Pipeline Project Corridor; therefore, conversion of the existing pipeline is expected to have no effect on the Dakota skipper.

##### **Midline Pump Station Area: No Effect**

The Midline Pump Station area consists of cropland area which does not constitute suitable habitat for the Dakota skipper. Suitable habitat is not present. The Project is expected to have no effect on the Dakota skipper in the Midline Pump Station area.

#### **14.3.1.6 Monarch Butterfly (*Danaus plexippus*)**

The monarch butterfly is a candidate insect species with the potential to occur within or near the Project; however, no critical habitat has been designated for this species (USFWS 2024a). It should be noted that the monarch butterfly is listed as a candidate species, and as such, does not have designated critical habitat protections under Section 7 of the Endangered Species Act. Therefore, formal coordination with the USFWS for this species is not required.

The monarch butterfly's migratory pathway crosses North Dakota. During the breeding season, monarchs lay their eggs on their obligate milkweed host plant (primarily *Asclepias spp.*), and larvae feed on milkweed.

##### **Proposed Pipeline Project Corridor: May Affect – Not Likely to Adversely Affect**

While no areas of milkweed dominance were identified within the Field Survey Area, approximately 1 acre within the Proposed Pipeline Project Corridor consists of natural prairie areas, and other flowering species were present in these native prairie areas. Suitable habitat for the monarch butterfly is present within the Proposed Pipeline Project Corridor.

Unless native prairie areas can be fully avoided, the Project may affect the monarch butterfly. The area affected would be small, other suitable habitat is available in the vicinity, and this species is mobile; therefore, the Project is not likely to adversely affect this species.

Construction is proposed to occur over winter months when suitable flowering habitat areas are dormant and not utilized by the monarch butterfly. Revegetation will be conducted in compliance with landowner agreements. Any impacts to summer habitat areas are expected to fully recover between construction and the emergence of flowering plants. Additionally, there are alternative native prairie areas in the vicinity of the Project, which will not be disturbed and will maintain suitable habitat for the species throughout construction. Therefore, any temporary habitat loss that may result from the Project is expected to be negligible.

The proposed mitigation measures to minimize the potential effect on the monarch butterfly are provided in Section 14.3.7. With implementation of these guidelines, the proposed Project is not likely to adversely affect monarch butterfly habitat or result in fatalities. If these construction guidelines are followed, it is reasonable to assume that the Project may affect, but is not likely to adversely affect, the monarch butterfly or its habitat in the Proposed Pipeline Project Corridor. Species effect determinations are considered preliminary until concurrence from the USFWS is obtained.

##### **Existing Pipeline Project Corridor: No Effect**

While no areas of milkweed dominance were identified within the Existing Pipeline Project Corridor, approximately 13 acres within the Existing Pipeline Project Corridor consist of natural prairie areas, and other flowering species were present in these native prairie areas. Additionally, there was one species occurrence of an observed monarch butterfly within the Existing Pipeline Project Corridor. Suitable habitat for the monarch butterfly is present.

Ground disturbance is not proposed within the Existing Pipeline Project Corridor. No suitable habitat areas for the monarch butterfly will be adversely affected by Project activities. Conversion of the existing pipeline is expected to have no effect on the monarch butterfly.

##### **Midline Pump Station Area: No Effect**

The Midline Pump Station area consists of monoculture cropland area which does not constitute suitable habitat for the monarch butterfly. Suitable habitat is not present. The Project is expected to have no effect on the monarch butterfly in the Midline Pump Station area.

Following a review of federally listed species, their respective habitat requirements, and the field surveys, Arcadis has made the following preliminary species affect determinations for the NLEB, whooping crane, Dakota skipper, piping plover, red knot, and monarch butterfly as shown in **Table 2**. These affect determinations are preliminary and have not been confirmed by the USFWS.

Recommendations for avoiding and minimizing adverse impacts to federally listed species and migratory birds during construction are provided in **Table 3** in Section 14.3.7.

CERTIFICATE OF CORRIDOR COMPATIBILITY AND ROUTE PERMIT 3RD AMENDED CONSOLIDATED APPLICATION  
Thunder Butte Pipeline Project Case No. PU-24-086

**Table 2 Summary Conclusions and Species Affect Determinations**

Species	Suitable Habitat Present? (Yes / No)	Identified Habitat	Preliminary Affect Determination
Northern long-eared bat	No	N/A	Proposed Pipeline Project Corridor: <b>No Effect</b>
	No	N/A	Existing Pipeline Project Corridor: <b>No Effect</b>
	No	N/A	Midline Pump Station Area: <b>No Effect</b>
Piping plover	No	N/A	Proposed Pipeline Project Corridor: <b>No Effect</b>
	No	N/A	Existing Pipeline Project Corridor: <b>No Effect</b>
	No	N/A	Midline Pump Station Area: <b>No Effect</b>
Rufa red knot	Yes	9 acres of PEM/farmed wetlands	Proposed Pipeline Project Corridor: <b>May Affect – Not Likely to Adversely Affect</b>
	Yes	6 acres of PEM/farmed wetlands	Existing Pipeline Project Corridor: <b>No Effect</b>
	No	N/A	Midline Pump Station Area: <b>No Effect</b>
Whooping crane	Yes	<ul style="list-style-type: none"> <li>• 9 acres of PEM/farmed wetlands</li> <li>• 0.02 acre of perennial stream</li> <li>• 1 acre of native prairie area</li> <li>• 67 acres of cropland</li> </ul>	Proposed Pipeline Project Corridor: <b>May Affect – Not Likely to Adversely Affect</b>
	Yes	<ul style="list-style-type: none"> <li>• 6 acres of PEM/farmed wetlands</li> <li>• 0.2 acre perennial stream</li> <li>• 13 acres of native prairie area</li> <li>• 148 acres of cropland</li> <li>• 13 acres of pasture area</li> </ul>	Existing Pipeline Project Corridor: <b>No Effect</b>
	Yes	2 acres of cropland	Midline Pump Station Area: <b>May Affect – Not Likely to Adversely Affect</b>
Dakota skipper	Yes	<ul style="list-style-type: none"> <li>• 1 acre of native prairie area</li> <li>• 0.08 acre of area dominated by purple coneflower</li> </ul>	Proposed Pipeline Project Corridor: <b>May Affect – Not Likely to Adversely Affect</b>
	Yes	<ul style="list-style-type: none"> <li>• 13 acres of native prairie area</li> <li>• 1.4 acres of area dominated by purple coneflower, purple prairie clover, and/or blazing star, 0.86-acre of which is overlapped by native prairie areas and 0.59-acre of which are independent of native prairie areas.</li> </ul>	Existing Pipeline Project Corridor: <b>No Effect</b>
	No	N/A	Midline Pump Station Area: <b>No Effect</b>
Monarch butterfly	Yes	• 1 acre of native prairie area	Proposed Pipeline Project Corridor: <b>May Affect – Not Likely to Adversely Affect</b>
	Yes	• 13 acres of native prairie area	Existing Pipeline Project Corridor: <b>No Effect</b>
	No	N/A	Midline Pump Station Area: <b>No Effect</b>

### 14.3.2 Migratory Bird Treaty Act

The Project is located within potential migratory corridors for piping plover, red knot, and whooping crane; therefore, there is a potential for incidental interactions during the migration season. Arcadis conducted a field survey of the Proposed and Existing Pipeline Project Corridors and the Midline Pump Station area on August 5 through 8, 2024 to identify migratory birds. No migratory bird species were observed within the Proposed and Existing Pipeline Project Corridors or the Midline Pump Station area during the field survey; however, suitable habitat for the whooping crane and red knot was identified within the Study Area (**Appendix G**). In North Dakota, species protected under the MBTA are present throughout the year; however, most of these protected species are seasonally present in North Dakota and typically nest from February 1 through July 15 annually. During the nesting period, birds are more vulnerable to human activities.

Construction of the proposed pipeline and midline pump station is scheduled to commence in the fourth quarter of 2024 or the first quarter of 2025 and will take approximately 2 to 3 months to reach completion. Except for construction of the midline pump station within previously disturbed areas, conversion of the existing pipeline will not require ground-disturbing activities.

No direct disturbances to nesting or breeding birds are anticipated; however, if nesting or breeding birds are observed within 1 mile of an active work area, construction within 1 mile of the sighting will be modified or curtailed until the bird(s) have left the area, USFWS will be consulted on how to proceed, and the NDGFD and the TAT Fish and Wildlife Division (FWD) will be notified. With implementation of these guidelines, the proposed Project is not likely to adversely affect migratory species or result in fatalities including piping plover, red knot, or whooping crane.

### 14.3.3 Bald and Golden Eagle Protection Act Consultation

The BGEPA prohibits anyone without a permit from taking a bald or golden eagle including their parts, nests, or eggs. The BGEPA defines “take” as to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb and includes impacts resulting from human-induced alterations near previously used nesting sites. Arcadis conducted a field survey of the Proposed and Existing Pipeline Project Corridors and the Midline Pump Station area on August 5 through 8, 2024 to identify raptor nests and observe raptors (**Appendix G**). The field survey also included observations of raptor species and raptor nests within 0.5 mile line-of-sight of the Field Survey Areas.

During the field survey, the location of bald eagle nest NA12SC01 was confirmed. No additional raptor nests were recorded. During Arcadis’ field survey, no raptor species or raptor nests were observed within the 0.5-mile line-of-sight of the Field Survey Areas for the Proposed or Existing Pipeline Project Corridors or Midline Pump Station area. The features identified during the field survey are summarized below:

**Study Area:** Based on review of the NDGFD eagle nest database, one eagle nest was identified in the Study Area west of the Existing Pipeline Project Corridor, approximately 375 feet from the existing pipeline centerline as shown on the maps in **Appendix A**. This eagle nest is adjacent to existing County Road 49th Street NW.

**Proposed Pipeline Project Corridor:** Based on review of the NDGFD’s database, no eagle nests were identified in the Proposed Pipeline Project Corridor or within the 1-mile wide Field Survey Area for the proposed pipeline. No raptor species or raptor nests were observed within the 0.5-mile line-of-sight of the Field Survey Area. No woody vegetation areas or trees were identified within the Proposed Pipeline Project Corridor, and no previously used nesting sites have been identified. If construction will occur between February 1 and July 15, aerial raptor surveys will be performed extending 0.5 mile from the construction ROW before construction begins. During construction, a 0.5-mile buffer will be implemented around active eagle nest sites (known occupied within the past 5 years).

**Existing Pipeline Project Corridor:** Based on review of the NDGFD's database, one eagle nest was identified approximately 375 feet from the existing pipeline Route. This eagle nest is adjacent to existing County Road 49<sup>th</sup> Street NW. Conversion of the existing pipeline will not require disturbances within 0.5 mile of this eagle nest. No raptor species or raptor nests were observed within the 0.5-mile line-of-sight of the Field Survey Area.

**Midline Pump Station Area:** Based on review of the NDGFD eagle nest database, one bald eagle nest is approximately 2 miles northwest of the Midline Pump Station area as shown on the maps in **Appendix A**. During Arcadis' field survey, no raptor species or raptor nests were observed within the 0.5-mile line-of-sight of the Field Survey Area.

### 14.3.4 Land Cover, Cropland, and Grassland

Arcadis conducted a field survey of Proposed and Existing Pipeline Project Corridors and the Midline Pump Station area on August 5 through 8, 2024 to identify land cover and vegetation within the survey areas (**Appendix G**). Four primary land cover classifications were identified: cropland, pasture, native prairie, and other. Developed areas (e.g., railroad/road ROW, industrial/existing petroleum storage facilities) and areas representing delineated aquatic features were designated as "other."

A summary of the land cover types is provided below:

- **Cropland:** fallow, harvested, or planted agricultural areas consisting of peas (*Lathyrus oleraceus*), wheat (*Triticum* species), canola (*Brassica napus*), soybean (*Glycine max*), flaxseed (*Linum usitatissimum*), wheat barley (*Hordeum vulgare*), lentils (*Lens culinaris*), and hay (likely *Phleum pratense* or *Medicago sativa*).
- **Pasture:** agricultural areas characterized by grasses and other low-lying herbaceous vegetation suitable for grazing animals such as cattle or sheep.
- **Native Prairie:** naturalized areas characterized by the predominance of native species such as rough goldenrod (*Solidago rigida*), prairie coneflower (*Ratibida columnifera*), prairie sagewort (*Artemisia frigida*), hairy false goldenaster (*Heterotheca villosa*), broom snakeweed (*Gutierrezia sarothrae*), lavender cotton (*Santolina chamaecyparissus*), purple coneflower (*Echinacea purpurea*), and purple prairie clover (*Dalea purpurea*), and a lack of farming or other development activities. Approximately 1.48 acres were dominated by purple coneflower, purple prairie clover, and/or blazing star. These prairie species indicate suitable habitat for the Dakota skipper and monarch butterfly. Some noxious weeds or non-native species may be present in native prairie areas. Concentrations of Canada thistle, a noxious weed, were identified in 11 areas as described in Section 14.3.5.
- **Other (Developed):** areas in which the natural or native ecosystem is removed and/or replaced by paved, gravel- or dirt-covered roads, parking areas, railroad, planted roadside areas within ROWs or other maintained areas, industrial facilities containing petroleum extraction or storage equipment. Developed sub-categories include road/ROW, industrial/petroleum areas, mowed field, and railroad/ROW.
- **Other (Aquatic Resources):** consist of previously delineated streams or wetlands.

Based on the desktop review and field survey results, the land cover types identified during the field surveys are summarized below:

**Proposed Pipeline Project Corridor:** The primary land cover type within the Proposed Pipeline Project Corridor is cropland. Approximately 67 acres are classified as cropland, 1 acre is classified as native prairie, 17 acres are classified as developed areas (other), and 9 acres are occupied by aquatic resource areas. There is no pastureland within the Proposed Pipeline Project Corridor.

**Existing Pipeline Project Corridor:** The primary land cover type within the Existing Pipeline Project Corridor is approximately 148 acres classified as cropland, 13 acres classified as pasture, 13 acres classified as native prairie areas, 4 acres classified as developed areas (other), and 6 acres occupied by aquatic resource areas.

**Midline Pump Station Area:** The land cover type within the Midline Pump Station area is entirely of cropland. There were no pasture, aquatic resources, developed, or native prairie areas identified within the area.

### 14.3.5 Noxious Weeds

The North Dakota Department of Agriculture (NDDA) coordinates efforts of county weed boards and state and federal land managers to implement weed management programs as established in North Dakota Law (NDCC Section 4.1-47-02). Each county in North Dakota has a County Weed Control Board, which develops and maintains county-level lists of noxious weeds and implements noxious weed control. Information from the NDDA noxious weed list was used to compile a list of 15 noxious weeds (NDDA 2023). North Dakota has 13 state-listed noxious weeds. Two additional species are listed as invasive in either Ward or Mountrail County.

Arcadis conducted a field survey of the Field Survey Areas for the Proposed and Existing Pipeline Project Corridors and the Midline Pump Station area on August 5 through 8, 2024 to identify areas of significant weed infestations (**Appendix G**). During the field survey, concentrations of Canada thistle, a noxious weed, were identified in 11 areas. A total of approximately 3.78 acres of weed infestation areas were observed as described in the following subsections.

**Proposed Pipeline Project Corridor:** Five noxious weed infestation areas of Canada thistle (*Cirsium arvense*) were identified within the Proposed Pipeline Project Corridor totaling 0.76 acre. Areas in which vegetation will be removed during construction will be restored in accordance with the landowner agreements. For areas to be revegetated, seeding will comply with requirements specified by the landowner agreements or the NRCS. A Weed Management Plan (**Appendix J**) has been developed for the Project. BMPs will be implemented to prevent the spread of noxious weeds and to minimize the risk of importing or transporting any weed species. Equipment and tools will be cleaned of any plant debris before ingress and egress from the Proposed Pipeline Project Corridor.

**Existing Pipeline Project Corridor:** The existing pipeline's 30-foot-wide permanent ROW was previously disturbed during installation of the pipeline in the 1960s. Most of this permanent easement is now vegetated, except areas that have since been disturbed from subsequent crop production or development. Six noxious weed infestation areas (Canada thistle) were identified within the Existing Pipeline Project Corridor totaling 3.02 acres. Conversion of the existing pipeline will not require ground disturbances within the Existing Pipeline Project Corridor. Weed control measures described in the Weed Management Plan (**Appendix J**) will be implemented to control weed infestations within the permanent ROW and in accordance with the landowner agreements.

**Midline Pump Station Area:** No noxious weed infestation areas were identified within the Midline Pump Station area, which consisted entirely of monoculture cropland area.

### 14.3.6 Tree/Sapling/Shrub Inventory

Arcadis conducted a field survey of the Proposed and Existing Pipeline Project Corridors and the Midline Pump Station area on August 5 through 8, 2024 to inventory trees, saplings, and shrubs (**Appendix G**). Trees and shrubs were inventoried to record the location, number, and species in accordance with the Commission's Tree and Shrub Mitigation Specifications described in the EMP provided in **Appendix C**. Trees and shrubs inventoried included those considered as invasive species or noxious weeds.

**Proposed Pipeline Project Corridor:** Arcadis inventoried trees, saplings, and shrubs within a 200-foot-wide Field Survey Area (100 feet to each side of the centerline) for the proposed pipeline. No trees or shrubs were

identified within the Proposed Pipeline Project Corridor; therefore, construction of the proposed pipeline is expected to have no effect on trees and shrubs.

**Existing Pipeline Project Corridor:** Arcadis inventoried trees, saplings, and shrubs within a 50-foot-wide Field Survey Area (25 feet to each side of the centerline) of the existing pipeline. The existing pipeline was built in the 1960s, and the 30-foot permanent ROW has largely been maintained in an herbaceous state. Two individual trees and eight shrub areas, totaling 0.74 acre, were identified and inventoried within the Existing Pipeline Project Corridor. Shrubs consisted of fireberry hawthorn (*Crataegus chrysocarpa*), western snowberry (*Symphoricarpos occidentalis*), and chokecherry (*Prunus virginiana*). The trees were identified as Russian olives (*Elaeagnus umbellata*). No tree or shrub removal will be required for conversion of the existing pipeline; therefore, there will be no effect on trees and shrubs.

**Midline Pump Station Area:** No trees, saplings, or shrubs were identified within or near the Midline Pump Station area. This area consisted entirely of cropland.

### 14.3.7 Avoidance and Minimization Measures

TBPL will implement measures to minimize potential adverse effects to potentially affected federally listed threatened, endangered, and candidate species and migratory birds during construction and operation of the Project. The measures identified in **Table 3** will be implemented to minimize adverse impacts to federally listed species, migratory birds, and raptors.

**Table 3 Avoidance and Minimization Measures for Potentially Affected Species**

Common Name	Conservation Measure(s)
Northern long-eared bat	Not Applicable – Suitable habitat not found within the Project Area. In addition, per the IPaC Official Species List (USFWS 2024a; Appendix D), potential impacts to the NLEB only need to be considered if the project includes wind turbine operations.
Piping plover	During construction of the proposed pipeline, disturbances to wetland habitat would be minimized by the use of the HDD method for the crossings of WOUS.
	TBPL would provide an identification guide for on-site personnel and training on protocols to follow to minimize impacts if this bird is seen within the active construction area.
	If piping plovers are sighted within active work areas, all construction would be modified or curtailed until the bird(s) have left the area, USFWS would be contacted on how to proceed, and the NDGFD and the TAT FWD would be notified.
Rufa red knot	During construction of the proposed pipeline, disturbances to wetland habitat would be minimized by the use of the HDD method for the crossings of WOUS.
	TBPL would provide an identification guide for on-site personnel and training on protocols to follow to minimize impacts if this bird is seen within the active construction area.
	If piping plovers are sighted within a 1-mile (2 km) radius of active work areas, all construction would be modified or curtailed until the bird(s) have left the area, USFWS would be contacted on how to proceed, and the NDGFD and the TAT FWD would be notified.
Whooping crane	During construction of the proposed pipeline, disturbances to wetland habitat would be minimized by the use of the HDD method for the crossings of WOUS.
	TBPL would provide an identification guide for on-site personnel and training on protocols to follow to minimize impacts if this bird is seen within the active construction area.

**Table 3 Avoidance and Minimization Measures for Potentially Affected Species**

Common Name	Conservation Measure(s)
	If whooping cranes are sighted within a 1-mile (2 km) radius of active work areas, construction activities would be modified or curtailed until the bird(s) have left the area, USFWS would be contacted on how to proceed, and the NDGFD and the TAT FWD would be notified.
Dakota skipper	If Dakota skippers are sighted within active work areas, construction would be modified or curtailed until the butterfly(ies) have left the area, USFWS would be contacted on how to proceed, and the NDGFD and the TAT FWD would be notified.
	TBPL would provide an identification guide for on-site personnel and training on protocols to follow to minimize impacts if this butterfly is seen within the active construction area.
Monarch butterfly	TBPL would provide an identification guide for on-site personnel and training on protocols to follow to minimize impacts if this butterfly is seen within the active construction area.
Raptors/Eagles	If construction occurs between February 1 and July 15, an aerial raptor surveys must be performed extending 0.5 mile from the construction ROW before construction begins.
	During construction, TBPL would implement a 0.5-mile buffer around active eagle nest sites (known occupied within the past 5 years).
	If eagles are observed within 1.0 mile of an active work area, construction within 1.0 mile of the sighting would be modified or curtailed until the bird(s) have left the area, USFWS would be consulted on how to proceed, and the NDGFD and the TAT FWD would be notified.

### 14.3.8 Geohazard Investigation

Arcadis conducted a desktop analysis of geohazards within the 1-mile-wide area Study Area (0.5 mile on either side of the pipeline centerlines) as shown on the Avoidance Areas map sheets in **Appendix A**. In addition, Arcadis conducted a field survey of the Proposed and Existing Pipeline Project Corridors and the Midline Pump Station area on August 5 through 8, 2024 to identify geological hazards and potentially unstable areas (e.g., abandoned coal mines, gravel pits, landslide areas). The Field Survey Areas for the geohazard investigation were a 200-foot-wide Proposed Pipeline Project Corridor (100 feet on either side of the pipeline centerline), a 50-foot-wide Existing Pipeline Project Corridor (25 feet on either side of the pipeline centerline), and the Midline Pump Station area. The results of the field surveys and a copy of the Geohazard Investigation Report are provided in **Appendix H**.

In an email to the Commission, the North Dakota Geological Survey (NDGS) raised a concern regarding a location at which the existing pipeline may have shallow depth of cover at the crossing of an unnamed creek between mile posts 21 and 22. The state geologist recommended additional engineering review via a field survey to evaluate this location.

In response to the state geologist’s recommendation, TBPL conducted field surveys to confirm the depth of cover in the location identified between mile posts 21 and 22. In addition, Arcadis reviewed the NDGS geologic and landslide mapping and aerial imagery for the Study Area and conducted a field survey to evaluate the depth of the existing pipeline and to identify any geohazards including potential landslide areas and abandoned coal mines in the Study Area. Based on the desktop review of NDGS GIS data and aerial imagery, and the field survey, there are no “geologically unstable” areas that presently exhibit signs of instability within the 200-foot-wide Proposed Pipeline Project Corridor, within the 50-foot-wide Existing Pipeline Project Corridor, or within the Midline Pump Station area.

**Study Area:** Four features within the Study Area were identified as areas of potential concern due to their unknown extents as shown on the Avoidance Areas map sheets in **Appendix A**; however, these features appear to be outside of the Proposed and Existing Pipeline Project Corridors. These features are two active landslide areas (S1 and S2) and two underground mines (M1 and M2).

**Proposed Pipeline Project Corridor:** No geologically unstable areas were identified within the Proposed Pipeline Project Corridor or crossed by the Route. Based on the desktop review of NDGS GIS data and aerial imagery, and the field surveys, there are no “geologically unstable” areas that presently exhibit signs of instability within the 200-foot-wide Proposed Pipeline Project Corridor. In a letter dated October 6, 2023, the NDGS stated that based on a review of the Proposed Pipeline Project Corridor and Route against available geologic and landslide area mapping and contemporary aerial imagery, NDGS did not identify any geologic concerns with the Project at this time.”

**Existing Pipeline Project Corridor:** TBPL conducted field surveys to confirm the depth of cover in the location identified between mile posts 21 and 22. In addition, Arcadis reviewed the NDGS geologic and landslide mapping and aerial imagery for the Study Area and conducted a field survey to evaluate the depth of the existing pipeline at several waterbody crossings and to identify any geohazards including potential landslide areas and abandoned coal mines in the Study Area. Based on the desktop review of NDGS GIS data and aerial imagery, and the field survey, there are no “geologically unstable” areas that presently exhibit signs of instability within the 50-foot-wide Existing Pipeline Project Corridor.

**Midline Pump Station Area :** No geologically unstable areas were identified within the Midline Pump Station area. Based on the desktop review of NDGS GIS data and aerial imagery, and the field survey, there are no “geologically unstable” areas that presently exhibit signs of instability within the Midline Pump Station area.

## 15 Consultations

On behalf of TBPL, Arcadis sent letters to multiple agencies and officials, including those identified in NDAC § 69-06-01-05, providing information about the Project and requesting input. A summary of the agency notifications is provided in **Table 4**. The responses received to date are summarized in the following subsections. Copies of all correspondence and consultations are provided in **Appendix D**.

### 15.1 United States Department of Defense, Minot Air Force Base

On behalf of TBPL, Arcadis submitted a Project consultation letter to the Department of Defense, Minot Air Force Base on September 29, 2023 providing opportunity to comment (**Appendix D**). GIS/ kmz files were provided on October 16, 2023. Copies of the Exclusion Areas maps and updated GIS files were provided via emails on October 27, 2023, December 6, 2023, and September 9, 2024. In an email response dated September 10, 2024, Mr. Samuel Warren, Community Planner, stated that there are no ICBM facilities within the Proposed Pipeline Project Corridor; however, two Hardened Intersite Cable Systems (HICS) may be crossed by the Proposed Pipeline Route. Specific locations of the cables are not publicly available.

In an email response dated September 23, 2024, Mr. Cy Munos, Cable Affairs Officer, stated that there will be HICS crossing within the Proposed Pipeline Route because the proposed pipeline stops at 62<sup>nd</sup> Avenue NW. There is not a buried splice near the proposed cable crossing; therefore, he did not foresee any issues with this cable crossing. Depending on how far the pipeline will be from the existing railroad tracks, the U.S. Air Force (USAF) cable is buried fairly deep at the railroad track crossing per railroad protocols.

Mr. Warren also identified one ICBM facility within the Existing Pipeline Project Corridor and several places where HICS cross the Existing Pipeline Route. As the existing pipeline will not be disturbed, no issues are anticipated.

The USAF provided the following additional cable crossing criteria:

- The angles of the cable crossings should be as close to 90 degree as possible.
- There should be a minimum of 1 foot of separation, 3- to 4-foot separation if directional bored.
- No cable crossing should be within 50 feet of USAF buried splices.
- Ditch cutting for access roads on USAF easements is not allowed without USAF approval.

## 15.2 U.S. Army Corps of Engineers

On behalf of TBPL, Arcadis submitted a Project consultation letter and a request for an AJD to the USACE on September 29, 2023 (**Appendix D**) with a copy of the Wetland and Water Body Delineation Report for the proposed pipeline (Arcadis 2018; **Appendix E**). In the AJD letter dated April 22, 2024 (**Appendix D**), the USACE identified the East Fork of Shell Creek (OW-1) and four wetlands (W1, W6, W7, and W9) as WOUS as shown on the Route Selection Criteria Considered maps in **Appendix D**. Where the Project crosses the East Fork of Shell Creek and wetlands determined to be WOUS by the USACE, TBPL plans to use HDD construction techniques to avoid impacts. Construction of the proposed pipeline will not result in disturbances to WOUS; therefore, a USACE permit is not required.

On behalf of TBPL, Arcadis submitted a Project consultation letter and a second request for an AJD to the USACE on September 9, 2024 (**Appendix D**) with a copy of the Wetland and Water Body Delineation Report for the Existing Pipeline Project Corridor and the Midline Pump Station area (**Appendix E**). Conversion of the existing pipeline and construction of the midline pump station will not result in disturbances to WOUS; therefore, a USACE permit is not anticipated to be required.

## 15.3 United States Fish and Wildlife Service

On behalf of TBPL, Arcadis submitted a Project consultation letter to the USFWS on September 29, 2023 providing opportunity to comment (**Appendix D**). A copy of the IPaC query for the list of federally listed species with the potential to occur within the Field Survey Area for the proposed pipeline was enclosed with the consultation letter. In the absence of a federal nexus, the USFWS typically does not provide a response to the Commission consultation/notifications unless the agency has a concern.

## 15.4 United States Department of Agriculture

On behalf of TBPL, Arcadis submitted a Project consultation letter to the USDA NRCS on September 29, 2023 providing opportunity to comment (**Appendix D**). In a letter dated October 10, 2023, the USDA NRCS provided guidelines for the installation of permanent structures where wetlands occur and recommended that impacts to wetlands be avoided. TBPL will comply with these guidelines including using the HDD method for construction; therefore, wetland impacts are anticipated to be minimal.

## 15.5 State Historical Society of North Dakota and Tribal Historic Preservation Office

In 2023, Metcalf completed a Class I file search of the Proposed and Existing Pipeline Project Corridors. On October 2, 2023, Metcalf conducted a Class III Cultural Resource Inventory for the proposed pipeline APE (Metcalf 2023). Metcalf completed a Class III Cultural Resource Inventory for the existing pipeline APE and Midline Pump Station area on August 5 through 8, 2024 (Metcalf 2024). During the surveys, no cultural resources

were identified within the APEs; therefore, Metcalf recommended a finding of *No Historic Properties Affected* (36 CFR 800.4[d][1]) for this undertaking. The results of these investigations are discussed further in the Cultural Resources Report (**Appendix F**).

On behalf of TBPL, Arcadis submitted a Project consultation letter and a copy of the 2023 Metcalf report to the State Historical Society of North Dakota (SHSND) on November 29, 2023 providing opportunity to comment. A copy of the 2024 Metcalf report was provided to the SHSND on September 26, 2024. In a letter dated January 1, 2024, the SHSND stated that no significant sites would be affected by the Project.

On behalf of TBPL, Arcadis submitted a Project consultation letter and a copy of the 2023 Metcalf report to the MHA Nation/TAT Tribal Historic Preservation Office (THPO) on November 27, 2023 and a second letter was emailed to THPO on July 22, 2024 providing opportunity to comment. THPO concurrence was obtained for the portion of the Proposed Pipeline Project Corridor on FBIR as part of the Final Environmental Impact Statement (FEIS) for the Mandan, Hidatsa, and Arikara Nation's Proposed Clean Fuels Refinery Project (U.S. Bureau of Indian Affairs [BIA ] and U.S. Environmental Protection Agency [USEPA] 2009). No additional response has been received from THPO to date.

## 15.6 North Dakota Geological Survey

On behalf of TBPL, Arcadis submitted a Project consultation letter to the NDGS on September 29, 2023 providing opportunity to comment. In a letter dated October 6, 2023, the NDGS responded stating the following:

- “The NDGS appreciates the notification and opportunity to provide comment on your proposed Project work. The September 29, 2023, comment solicitation letter was reviewed by our office on October 6, 2023. After a review of the proposed new pipeline route corridor against available geologic and landslide area mapping and contemporary aerial imagery we would not note any geologic concerns with the Project at this time.”

In an email to the Commission, NDGS raised a concern regarding a location at which the existing pipeline may have shallow depth of cover at the crossing of an unnamed creek between mile posts 21 and 22. The state geologist recommended additional engineering review via a field survey to evaluate this location.

In response to the state geologist's recommendation, TBPL conducted field surveys to confirm the depth of cover in the location identified between mile posts 21 and 22. In addition, Arcadis reviewed the NDGS geologic and landslide mapping and aerial imagery for the Study Area and conducted a field survey to evaluate the depth of the existing pipeline and to identify any geohazards including potential landslide areas and abandoned coal mines in the Study Area. The results of the field surveys and a copy of the Geohazard Investigation Report are provided in **Appendix H**.

## 15.7 North Dakota Parks and Recreation Department

The scope of authority and expertise of the North Dakota Parks and Recreation Department (NDPR) covers properties that NDPR owns, leases, or manages; properties protected under Section 6(f) of the Land and Water Conservation Fund (LWCF); rare plants; and ecological communities established through the Natural Heritage Program. On behalf of TBPL, Arcadis submitted a Project consultation letter to the NDPR on September 29, 2023. In a response letter dated October 18, 2023, NDPR stated the following:

- “The Project does not appear to affect properties NDPR owns, leases, or manages.
- “The Project does not appear to affect any properties protected under Section 6(f) of the LWCF.

- “Based review of the North Dakota Natural Heritage biological conservation database, no known plant or animal species of concern or significant ecological communities are documented within or immediately adjacent to the Project site.”

## 15.8 North Dakota Department of Environmental Quality

On behalf of TBPL, Arcadis submitted a Project consultation letter to the North Dakota Department of Environmental Quality (ND DEQ) on September 29, 2023. In a letter dated October 18, 2023, the ND DEQ responded stating the following:

- “All necessary measures must be taken to minimize fugitive dust emissions created during construction activities. Any complaints that may arise are to be dealt with in an efficient and effective manner.
- “Care is to be taken during construction activity near any water of the state to minimize adverse effects on a water body. This includes minimal disturbance of stream beds and banks to prevent excess siltation, and the replacement and revegetation of any disturbed area as soon as possible after work has been completed. Caution must also be taken to prevent spills of oil and grease that may reach the receiving water from equipment maintenance and/or the handling of fuels on the site. Guidelines for minimizing degradation to waterways during construction are attached.
- “Oil and gas related construction activities located within tribal boundaries within North Dakota may be required to obtain a permit to discharge stormwater runoff from the U.S. Environmental Protection Agency (USEPA). Further information may be obtained from the USEPA website or by calling the USEPA - Region 8 at 303-312-6312. Oil and gas related construction activities outside of tribal boundaries, that disturb one or more acres, and could discharge sediment laden stormwater to waters of the state are required to have a permit to discharge stormwater runoff until the site is stabilized by the re-establishment of vegetation or other permanent cover. Further information on the stormwater permit may be obtained from the department's website or by calling the Division of Water Quality at 701-328-5210. Also, cities may impose additional requirements and/or specific best management practices for construction affecting their storm drainage system. Check with the local officials to be sure any local stormwater management considerations are addressed.
- “The construction Project overlies the Hiddenwood Lake surficial aquifer. Care should be taken to avoid spills of any materials that may have an adverse effect on groundwater quality. All spills must be immediately reported to this department and appropriate remedial actions performed.
- “The proposed Project appears to have the potential to be a source of emissions to the air capable of causing or contributing to air pollution and may be required to have an Air Pollution Control Permit to Construct/Operate as required by Chapter 33.1-15-14 of the North Dakota Air Pollution Control Rules. The applicant should contact the department's Air Pollution Control Program at 701-328-5188 prior to commencing construction.
- “All solid waste materials must be managed and transported in accordance with the state's solid and hazardous waste rules. Appropriate efforts to reduce, reuse and/or recycle waste materials are strongly encouraged. As appropriate, segregation of inert waste from non-inert waste can generally reduce the cost of waste management. Further information on waste management and recycling is available from the department's Division of Waste Management at 701-328-5166.
- “Projects that involve construction of pipelines should select locations that minimize the potential for impacts to human health and the environment during and after construction by avoiding, when possible, source water protection areas and sensitive surface and groundwater environments. Additionally, when possible, pipeline

Routes should select areas with natural barriers to both surface and ground waters. Human health and the environment should be further protected by developing a spill response plan that emphasizes rapid deployment of prepositioned assets necessary to contain spills and subsequent cleanup. Proper surveillance and monitoring for early detection of leaks should be required.

- “These comments are based on the information provided about the Project in the above-referenced submittal. The U.S. Army Corps of Engineers may require a water quality certification from this department for the Project if the Project is subject to their Section 404 permitting process. Any additional information which may be required by the U.S. Army Corps of Engineers under the process will be considered by this department in our determination regarding the issuance of such a certification.
- “The department owns no land in or adjacent to the proposed improvements, nor does it have any projects scheduled in the area. In addition, we believe the proposed activities are consistent with the State Implementation Plan for the Control of Air Pollution for the State of North Dakota.”
- The ND DEQ letter included Construction and Environmental Disturbance Requirements as an attachment (**Appendix D**). These requirements apply to construction disturbances in and near waters of the State of North Dakota.

The Project will comply with the ND DEQ Construction and Environmental Disturbance Requirements, and the EMP provided in **Appendix C** meets or exceeds these requirements. TBPL will develop and implement Project-specific measures to protect human health and the environment including a Stormwater Pollution Prevention Plan (SWPPP), SPCC Plan, and Dust Control Plan, as described in Section 20. During operations, the IMP will be implemented as described in Section 12.

## 15.9 North Dakota Department of Water Resources

On behalf of TBPL, Arcadis submitted a Project consultation letter to the North Dakota Department of Water Resources (DWR) on September 29, 2023, providing opportunity to comment. In a letter dated October 23, 2023, DWR responded stating the following:

- “There are no Federal Emergency Management Administration (FEMA) National Flood Insurance Program (NFIP) floodplains identified or mapped where the proposed Project is to take place. No permit relative to the NFIP are likely required based on the current effective Flood Insurance Rate Map and State minimum standards. However, flood risk has been identified through the North Dakota Risk Assessment Map service and Base Level Engineering (BLE) ([ndram.dwr.nd.gov](http://ndram.dwr.nd.gov)). In the absence of FEMA NFIP data, BLE is often considered best available data and is recommended to be considered in the design process. The State of North Dakota has no formal NFIP permitting authority as all NFIP permitting decisions are considered by impacted NFIP participating communities, the community with zoning authority for the area in question. Please work directly with the local floodplain administrators of the zoning authorities impacted.
- “The DWR’s Engineering and Permitting Section reviewed the Project location and determined that it may require a surface drain permit if the Project impacts sloughs, ponds, lakes (i.e., wetlands) outside of the ROW. Also, the Project location may potentially impact two permitted surface drains. The surface drain permits are Taylor Slough Drain (DR-661) and Wild Willow Drain (DR-4495). The DWR requests to be notified if either DR-661 or DR-4495 will be modified.
- “Initial review indicates the Project does not require a conditional or temporary permit for water appropriation. However, if surface water or groundwater will be diverted for construction of the Project, a water permit will be required per North Dakota Century Code 61-04-02. Please consult with the DWR’s Water Appropriation Division if you have any questions at (701) 328-2754 or [appropinfo@nd.gov](mailto:appropinfo@nd.gov).

- “The DWR maintains a network of observation wells across the state for monitoring the water levels and quality in glacial and bedrock aquifers. These wells are often installed in road and highway rights-of-way to limit inconvenience to the adjacent landowners. DWR observation wells have a yellow protective casing extending between 1 and 3 feet above ground surface, and their locations are marked with a stake. If an observation well is encountered during Project activities and must be removed, please contact the Water Appropriation Division. The DWR hopes to keep all observation wells, but otherwise will ensure the well is properly abandoned.”

Two surface drains, Taylor Slough Drain (Permit DR-661) and Wild Willow Drain (Permit DR-4495), were identified within the Study Area; however, these surface drains are not in the 200-foot-wide Proposed Pipeline Project Corridor and will not be crossed by the Route. The Project will not affect sloughs, ponds, lakes (i.e., wetlands) outside of the Proposed Pipeline Project Corridor; therefore, no surface drain permits are anticipated to be required. In addition, the Project will have no direct impacts to surface drain permits Taylor Slough Drain and Wild Willow Drain. In the unlikely event that either DR-661 or DR-4495 will be modified, the DWR will be notified. No effects to these drains are expected during construction or operation of the Project.

## 15.10 North Dakota Department of Transportation

On behalf of TBPL, Arcadis submitted a Project consultation letter to the North Dakota Department of Transportation (ND DOT) on September 29, 2023 providing opportunity to comment. In a letter dated October 5, 2023, the ND DOT responded stating the following:

- “The Project should have no adverse effects on the ND DOT highways.
- “However, if because of this Project any work needs to be done on highway right of way, appropriate permits and risk management documents will need to be obtained from the ND DOT District Engineer, Korby Seward, Minot at 701-857-6907.”

A permit will be obtained from the District Engineer for the crossing of State Highway 23. TBPL will comply with all applicable permit requirements.

## 15.11 North Dakota Game and Fish Department

On behalf of TBPL, Arcadis submitted a Project consultation letter to the NDGFD on September 29, 2023 providing opportunity to comment and requesting an assessment of on wildlife concerns. In a letter dated October 26, 2023, NDGFD responded stating the following:

- “The National Wetland Inventory indicates a variety of wetlands within the proposed Project Corridor. Steps should be taken to protect any wetlands that cannot be avoided, no alterations should be made to existing drainage patterns, and above-ground appurtenances should not be placed in wetland areas. Unavoidable destruction or degradation of wetland acres should be mitigated in kind.
- “Aerial surveys should be conducted for raptor nests before construction begins. We recommend that a 0.5-mile construction buffer be implemented around active eagle nest sites (known occupied within the past 5 years). Ms. Sandra Johnson, Conservation Biologist may be contacted at 701-328-6327 for additional information on golden eagle nest sites in the state.”

On behalf of TBPL, Arcadis coordinated with Ms. Johnson to determine whether eagle nests or other raptor nests occur within 1 mile of the Project.

In an email dated November 29, 2023, Ms. Johnson also stated that there are no known prairie dog colonies or bighorn sheep occurrences in the Proposed Pipeline Project Corridor. NDGFD concluded that the Project will not

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have significant adverse effects on wildlife or wildlife habitat provided these recommendations are implemented where appropriate during Project construction, and disturbed areas are reclaimed to pre-Project conditions.

**Table 4 Agency Consultations**

Agency	Communication Media	Date Sent	Studies Provided to Agency	Date of Response	Application Section Number <sup>1</sup>
Energy Infrastructure and Impact Office	Letter	9/29/2023	N/A	N/A	N/A
Grand Forks Air Force Base	Letter	9/29/2023	N/A	N/A	N/A
Job Service of North Dakota	Letter	9/29/2023	N/A	N/A	N/A
Military Aviation and Installation Assurance Siting Clearinghouse	Letter	9/29/2023	N/A	N/A	N/A
Minot Air Force Base	Letter Email	9/29/2023 9/9/2024	Exclusion Areas maps, GIS files/kmz	9/11/2024 9/23/2024	15.1
Mountrail County Commission	Letter	9/29/2023	N/A	N/A	N/A
North Dakota Aeronautics Commission	Letter	9/29/2023	N/A	N/A	N/A
North Dakota Career and Technical Education	Letter	9/29/2023	N/A	N/A	N/A
North Dakota Department of Agriculture	Letter	9/29/2023	N/A	N/A	N/A
North Dakota Department of Commerce	Letter	9/29/2023	N/A	N/A	N/A
North Dakota Department of Environmental Quality	Letter	9/29/2023	NA	10/18/2023	15.8
North Dakota Department of Health	Letter	9/29/2023	N/A	N/A	N/A
North Dakota Department of Human Services	Letter	9/29/2023	N/A	N/A	N/A
North Dakota Department of Labor and Human Services	Letter	9/29/2023	N/A	N/A	N/A
North Dakota Department of Transportation	Letter	9/29/2023	N/A	10/5/2023	15.10
North Dakota Department of Trust Lands	Letter	9/29/2023	N/A	N/A	N/A
North Dakota Department of Vocational Education	Letter	9/29/2023	N/A	N/A	N/A
North Dakota Department of Water Resources	Letter	9/29/2023	N/A	10/23/2023	15.9
North Dakota Forest Service	Letter	9/29/2023	N/A	N/A	N/A
North Dakota Game and Fish Department	Letter	9/29/2023	N/A	10/26/2023	15.11
North Dakota Geological Survey	Letter	9/29/2023	N/A	10/6/2023	15.6
North Dakota Indian Affairs Commission	Letter	9/29/2023	N/A	N/A	N/A
North Dakota Industrial Commission	Letter	9/29/2023	N/A	N/A	N/A
North Dakota Office of Attorney General	Letter	9/29/2023	N/A	N/A	N/A
North Dakota Parks and Recreation Department	Letter	9/29/2023	N/A	10/18/2023	15.7
North Dakota Pipeline Authority	Letter	9/29/2023	N/A	N/A	N/A
North Dakota Soil Conservation Committee	Letter	9/29/2023	N/A	N/A	N/A
North Dakota State Water Commission and Western Area Water Supply	Letter	9/29/2023	N/A	N/A	N/A
North Dakota Transmission Authority	Letter	9/29/2023	N/A	N/A	N/A
Office of Governor	Letter	9/29/2023	N/A	N/A	N/A
State Historical Society of North Dakota	Letter	<ul style="list-style-type: none"> <li>• 11/29/2023</li> <li>• 9/29/2023</li> </ul>	<ul style="list-style-type: none"> <li>• Class I and Class III Cultural Resource Inventory Report for Proposed Pipeline</li> <li>• Class III Cultural Resource Inventory Report for Existing Pipeline and Midline Pump Station</li> </ul>	1/2/2024  N/A	15.5
MHA Nation/Three Affiliated Tribes Tribal Historic Preservation Office	Letter	11/27/2023	Class I and Class III Cultural Resource Inventory Report for Proposed Pipeline	N/A	15.5
Twentieth Air Force Ninety-first Missile Wing	Letter	9/29/2023	N/A	N/A	N/A
U.S. Department of Interior, Bureau of Land Management	Letter	9/29/2023	N/A	N/A	N/A
United States Department of Agriculture, North Dakota Natural Resources Conservation Service	Letter	9/29/2023	N/A	10/10/2023	15.4
United States Army Corps of Engineers	Letter	<ul style="list-style-type: none"> <li>• 9/29/2023</li> <li>• 9/10/2024</li> </ul>	<ul style="list-style-type: none"> <li>• Wetland Delineation Report for Proposed Pipeline and Request for Jurisdictional Determination</li> <li>• Wetland and Water Body Delineation Report for the Existing Pipeline and Midline Pump Station Site</li> </ul>	4/22/2024  10/16/2024	15.2
United States Department of Defense	Letter	9/29/2023	N/A	N/A	N/A
United States Department of Transportation, Federal Aviation Administration	Letter	9/29/2023	N/A	N/A	N/A
United States Fish and Wildlife Service	Letter Letter	<ul style="list-style-type: none"> <li>• 9/29/2023</li> <li>• 10/24/2024</li> </ul>	<ul style="list-style-type: none"> <li>• 2023 IPaC Report</li> <li>• 2024 IPaC Report</li> </ul>	N/A N/A	15.3
Ward County Commission	Letter	9/29/2023	N/A	N/A	N/A

Note:  
 1 Section number within the application that discusses agency response.

## 16 Siting Criteria

### 16.1 Exclusion Areas

Per NDAC § 69-06-08-02(1), certain geographical areas will be excluded from consideration for a transmission pipeline route. For example, Exclusion Areas may be located within the Corridor, but at no given point may such an area or areas encompass more than 50 percent of the Corridor unless there is no reasonable alternative.

The Exclusion Areas within the Study Area, Proposed and Existing Pipeline Project Corridors, and Midline Pump Station area, or crossed by the Routes for the proposed and existing pipelines were evaluated, and the results are described in the following subsections, summarized in **Table 5**, and shown on the Exclusion Areas maps in **Appendix A**.

#### 16.1.1 Designated or Registered: National Parks, Memorial Parks, Historic Sites and Landmarks, Natural Landmarks, Monuments, and Wilderness Areas

No designated or registered national parks, memorial parks, historic landmarks, natural landmarks, monuments, or wilderness areas were identified within the Study Area, Proposed Pipeline or Existing Pipeline Project Corridors, Midline Pump Station area or crossed by the Routes for the proposed or existing pipelines.

#### 16.1.2 Designated or Registered: State Parks, Sites, Monuments, Archaeological Sites, and Natural Preserves

No designated or registered state parks, sites, monuments, archeological sites, natural preserves are within the Study Area, Proposed Pipeline or Existing Pipeline Project Corridors, Midline Pump Station area, or crossed by the Routes for the proposed pipeline or the existing pipelines. Metcalf conducted a Class I file search and Class III field surveys for the Proposed and Existing Pipeline Project Corridors and the Midline Pump Station area. Redacted versions of the Metcalf reports are provided in **Appendix F**. During the Class III cultural surveys, no cultural resources were identified within the APEs for the Proposed or Existing Pipeline Project Corridors or the Midline Pump Station area; therefore, Metcalf recommended a finding of *No Historic Properties Affected* (36 CFR 800.4[d][1]) for this undertaking.

In a letter dated January 1, 2024, the SHSND stated that no significant sites would be affected by the Project (**Appendix D**). An Unanticipated Discovery Plan (**Appendix F**) has been developed and will be implemented, if needed.

#### 16.1.3 County Parks and Recreational Areas, Municipal Parks, and Parks Owned or Administered by Other Governmental Subdivisions

No county parks and recreational areas, municipal parks, or parks owned or administered by other governmental subdivisions are within the Study Area, Proposed Pipeline or Existing Pipeline Project Corridors, Midline Pump Station area, or crossed by the Routes for the proposed or the existing pipelines.

### 16.1.4 Areas Critical to the Life Stages of Threatened or Endangered Animal or Plant Species

Arcadis conducted an environmental desktop assessment of the Study Area and performed a natural resources field surveys of the Proposed and Existing Pipeline Project Corridors and the Midline Pump Station area on August 5 through 8, 2024. No areas critical to the life stages of threatened or endangered animal or plant species were identified within the Proposed or Existing Pipeline Project Corridors, Midline Pump Station area, or crossed by the Routes for the proposed or the existing pipelines. A copy of the Biological Habitat Assessment Report is provided in **Appendix G** and the findings are summarized below.

**Study Area:** Based on the USFWS IPaC report (USFWS 2024a), no designated critical habitat for federally listed species occurs within the Study Area. Prairie pothole wetlands within the Study Area may be important stopover habitat for migratory birds (rufa red knot and whooping crane). Native prairie areas with flowering species are suitable habitat for insect species (Dakota skipper and monarch butterfly). Two abandoned coal mines may provide suitable habitat for NLEB.

**Proposed Pipeline Project Corridor:** Wetlands and native prairie habitat suitable for federally listed species. Prairie pothole wetlands may be important stopover habitat for migratory birds (rufa red knot and whooping crane). Small areas of native prairie with flowering species (less than 2 acres total) are suitable habitat for insect species (Dakota skipper and monarch butterfly). Potential habitat areas for the Dakota skipper and monarch butterfly may be temporarily impacted, but these areas have not been designated critical habitat areas for the species. Alternative suitable habitat for federally listed migratory bird species and butterflies is present in the immediate vicinity of the Project and will not be disturbed. The federally listed species potentially present in the Proposed Pipeline Project Corridor are highly mobile and are expected to avoid construction areas and relocate to alternative suitable habitat. Effects to wetlands and streams within the Proposed Pipeline Project Corridor during construction will be minimized by the use of HDD at the WOUS crossings. Temporary wetland impacts are not expected to disrupt the migratory patterns of these species, and no fatalities of federally listed species are expected.

**Existing Pipeline Project Corridor:** Wetlands suitable for federally listed species were identified within the Existing Pipeline Project Corridor; however, no ground disturbances are required in these areas.

**Midline Pump Station Area:** No suitable habitat for federally listed species was identified in the Midline Pump Station area.

### 16.1.5 Areas Where Animal or Plant Species that are Unique or Rare to This State Would be Irreversibly Damaged

In a letter dated October 18, 2023 (Section 15.7), NDPR stated that no known plant or animal species of concern or significant ecological communities are documented within or immediately adjacent to the Project site. No areas where animal or plant species that are unique or rare to North Dakota were identified within the Study Area, Proposed or Existing Pipeline Project Corridors, Midline Pump Station area, or crossed by the Routes for the proposed or existing pipelines; therefore, no unique or rare animal or plant species are anticipated to be irreversibly damaged from construction or operation of the Project.

### 16.1.6 Areas within 1,200 Feet of the Geographic Center of an Intercontinental Ballistic Missile Launch or Launch Control Facility

Based on publicly available information, there are no Minot Air Force Base assets located in Ward and Mountrail Counties. Correspondence with USAF regarding ICBM facilities is summarized in Section 15.1, and copies are provided in **Appendix D**.

**Study Area:** Several ICBM missile launch or launch control facilities were identified within the Study Area as shown on the maps in **Appendix A**.

**Proposed Pipeline Project Corridor:** Based on correspondence with USAF (**Appendix D**), the Proposed Pipeline Project Corridor is not within 1,200 feet of the geographic center of an ICBM launch or launch control facility, and no ICBM facilities are crossed by the Proposed Pipeline Route. Based on correspondence with USAF (**Appendix D**), no launch facilities or missile alert facilities will be affected by construction of the proposed pipeline.

**Existing Pipeline Project Corridor:** Based on correspondence with the USAF (**Appendix D**), the Existing Pipeline Project Corridor is within 1,200 feet of the geographic center of one ICBM launch or launch control facility (**Appendix A**). This Exclusion Area does not constitute more than 50 percent of the Project Corridor. Conversion of the existing pipeline will not require any ground disturbances within 1,200 feet of these features; therefore, no launch control or missile alert facilities that will be affected by the Project. The existing pipeline was built in the 1960s; therefore, there is no reasonable alternative to avoid such features. Based on correspondence with USAF (**Appendix D**), no launch facilities or missile alert facilities will be affected by the Project.

**Midline Pump Station Area:** The Midline Pump Station area is not located within 1,200 feet of the geographic center of an ICBM launch or launch control facility. Based on correspondence with USAF (**Appendix D**), no launch facilities or missile alert facilities will be affected by the Project.

### 16.1.7 Areas within 30 Feet on Either Side of a Direct Line between Intercontinental Ballistic Missile Launch or Launch Control Facility

Based on publicly available information, there are no Minot Air Force Base assets located in Ward and Mountrail Counties. Correspondence with USAF regarding ICBM facilities is summarized in Section 15.1, and copies are provided in **Appendix D**.

**Study Area:** Several direct lines or HICSS between ICBM missile launch or launch control facilities were identified within the Study Area as shown on the maps in **Appendix A**.

**Proposed Pipeline Project Corridor:** Based on correspondence with the USAF (**Appendix D**), the Proposed Pipeline Project Corridor and the Proposed Pipeline Route are located within 30 feet on either side of one HICS direct line between ICBM launch or launch control facilities (**Appendix A**). Notification of USAF is required 48 hours before construction: Cable Affairs Office 701-723-6053, 701-720-8247 cell. USAF personnel are required to be on site when excavating or directional boring in the HICS easement (16.5 feet).

Before construction, TBPL will implement one-call notification to identify the locations of the HICSS to be crossed by the proposed pipeline. Once construction approaches the HICS, TBPL will notify USAF 48 hours ahead of time so that USAF personal can be on site.

TBPL will comply with USAF protocols as described in Section 15.1; therefore, no issues are anticipated based on correspondence with USAF (**Appendix D**). No launch facilities or missile alert facilities will be adversely affected by the Project.

**Existing Pipeline Project Corridor:** Based on correspondence with the USAF (**Appendix D**), the Existing Pipeline Project Corridor and the Existing Pipeline Route are located within 30 feet on either side of a direct line between several ICBM launch or launch control facilities (**Appendix A**). There is only one site within the Existing Pipeline Project Corridor. Conversion of the existing pipeline will not require any ground disturbances within 30 feet on either side of a direct line between ICBM launch or launch control facilities; therefore, no launch facilities or missile alert facilities will be affected by the Project. The existing pipeline was built in the 1960s; therefore, there is no reasonable alternative to avoid such features. These Exclusion Areas do not constitute more than 50 percent of the Existing Pipeline Project Corridor. As the existing pipeline will not be disturbed, no issues are anticipated based on correspondence with USAF (Section 15.1 and **Appendix D**). No launch facilities or missile alert facilities will be affected by the Project.

**Midline Pump Station Area:** The Midline Pump Station area is not located within 30 feet on either side of a direct line between ICBM launch or launch control facility. Based on correspondence with USAF (Section 15.1 and **Appendix D**), no launch facilities or missile alert facilities will be affected by the Project.

**Table 5 Exclusion Areas Summary**

Feature	Within one-mile-wide Study Area (Y/N)	PROPOSED PIPELINE		EXISTING PIPELINE		MIDLINE PUMP STATION	Description	Section Addressed
		Within Project Corridor (Y/N)	Route Crosses (Y/N)	Within Project Corridor (Y/N)	Route Crosses (Y/N)	Within 2-Acre Site (Y/N)		
Designated or registered national parks, memorial parks, historic sites and landmarks, natural landmarks, monuments, and wilderness areas.	N	N	N	N	N	N	<ul style="list-style-type: none"> <li>Study Area: N/A</li> <li>Proposed Pipeline Project Corridor: N/A</li> <li>Existing Pipeline Project Corridor: N/A</li> <li>Midline Pump Station Area: N/A</li> </ul>	16.1.1
Designated or registered state parks, historic sites, monuments, historical markers, archaeological sites, and natural preserves.	N	N	N	N	N	N	<ul style="list-style-type: none"> <li>Study Area: N/A</li> <li>Proposed Pipeline Project Corridor: N/A</li> <li>Existing Pipeline Project Corridor: N/A</li> <li>Midline Pump Station Area: N/A</li> </ul>	16.1.2, Appendix D, Appendix F, GIS CD
County parks and recreational areas, municipal parks, and parks owned or administered by other governmental subdivisions.	N	N	N	N	N	N	<ul style="list-style-type: none"> <li>Study Area: N/A</li> <li>Proposed Pipeline Project Corridor: N/A</li> <li>Existing Pipeline Project Corridor: N/A</li> <li>Midline Pump Station Area: N/A</li> </ul>	16.1.3
Areas critical to the life stages of threatened or endangered animal or plant species.	Y	Y	Y	N	N	N	<ul style="list-style-type: none"> <li>Study Area: One bald eagle nest approximately 2 miles northwest of the Midline Pump Station area. Wetlands and native prairie habitat suitable for federally listed species.</li> <li>Proposed Pipeline Project Corridor: Several small areas of wetlands and native prairie habitat suitable for federally listed species.</li> <li>Existing Pipeline Project Corridor: One bald eagle nest was identified approximately 375 feet west of the existing pipeline centerline; however, no effects are expected because no ground disturbances are required.</li> <li>Midline Pump Station Area: N/A</li> </ul>	16.1.4, Appendix E, Appendix G, GIS CD
Areas where animal or plant species that are unique or rare to this state would be irreversibly damaged.	N	N	N	N	N	N	<ul style="list-style-type: none"> <li>Study Area: N/A</li> <li>Proposed Pipeline Project Corridor: N/A</li> <li>Existing Pipeline Project Corridor: N/A</li> <li>Midline Pump Station Area: N/A</li> </ul>	16.1.5, Appendix G
Areas within 1,200 feet of the geographic center of an ICBM launch or launch control facility.	Y	N	N	Y	Y	N	<ul style="list-style-type: none"> <li>Study Area: Several ICBM facilities within the Study Area</li> <li>Proposed Pipeline Project Corridor: N/A</li> <li>Existing Pipeline Project Corridor: One within the Existing Pipeline Project Corridor and crossed by the Route; however, no effects are expected because no ground disturbances are required.</li> <li>Midline Pump Station Area: N/A</li> </ul>	16.1.6, Appendix D, GIS CD
Areas within 30 feet on either side of a direct line between ICBM launch or launch control facility.	Y	Y	Y	Y	Y	N	<ul style="list-style-type: none"> <li>Study Area: Several ICBM facilities within the Study Area.</li> <li>Proposed Pipeline Project Corridor: Two HICS may be within the Proposed Pipeline Project Corridor and crossed by the Route.</li> <li>Existing Pipeline Project Corridor: Several within the Existing Pipeline Project Corridor and crossed by the Route; however, no effects are expected because no ground disturbances are required.</li> <li>Midline Pump Station Area: N/A</li> </ul>	16.1.7, Appendix D, GIS CD

Abbreviations  
 N/A = Not Applicable

## 16.2 Avoidance Areas

Per NDAC § 69-06-08-02(2), certain geographical areas may not be considered in the routing of a transmission pipeline unless the applicant shows that, under the circumstances, there is no reasonable alternative. In determining whether an Avoidance Area should be designated for a facility, the Commission may consider, among other things, the proposed management of adverse impacts, the orderly siting of facilities, system reliability and integrity, the efficient use of resources, and alternative Routes. In addition, a buffer zone will be implemented around these areas to protect their integrity, unless a distance is specified in the criteria. Avoidance Areas may be located within a Corridor, but at no given point may such an area or areas encompass more than 50 percent of the Corridor unless there is no reasonable alternative.

The Avoidance Areas within the Study Area, Proposed Pipeline or Existing Pipeline Project Corridors, Midline Pump Station area, or crossed by the Routes for the proposed pipeline or the existing pipelines were evaluated, and the results are summarized in **Table 6** and shown on the Avoidance Areas maps in **Appendix A**. Avoidance Areas are described in the following subsections.

### 16.2.1 Designated or Registered National Historic Districts; Wildlife Areas; Wild, Scenic, or Recreational Rivers; Wildlife Refuges; and Grasslands

No designated or registered national historic districts; wildlife areas; wild, scenic, or recreational rivers; wildlife refuges; grasslands; scenic outlooks/viewing areas are located within the Study Area, Proposed and Existing Pipeline Project Corridors, or crossed by the Routes for the proposed pipeline or the existing pipeline. When TBPL executed easement agreements with the landowners, none of the landowners of the properties identified USFWS-managed wetland or grassland easements within the Project Corridors for the proposed pipeline or the existing pipeline.

**Study Area:** Based on desktop analysis, several USFWS-managed Waterfowl Production Areas (WPAs) are located within the Study Area.

**Proposed Pipeline Project Corridor:** Based on desktop analysis, there are no USFWS-managed WPAs within the Proposed Pipeline Project Corridor for the proposed pipeline.

**Existing Pipeline Project Corridor:** Based on desktop analysis, several USFWS-managed WPAs are located within the Project Corridor and crossed by the Route for the existing pipeline; however, the land within the existing ROW is private land. The existing pipeline was built in the 1960s; therefore, there is no reasonable alternative to avoid such features. These Avoidance Areas do not constitute more than 50 percent of the Existing Pipeline Project Corridor. Conversion of the existing pipeline will not require ground disturbances within the WPAs.

**Midline Pump Station Area:** Based on desktop analysis, there are no USFWS-managed WPAs within the Midline Pump Station area.

### 16.2.2 Designated or Registered State Wild, Scenic, Recreational Rivers; Game Refuges; Game Management Areas; Management Areas; Forest; Forest Management Lands; and Grasslands

No state designated wild, scenic, or recreational rivers; state game refuges or game management areas; state forests or forest management lands; or state grasslands are located within the Study Area, Proposed or Existing Pipeline Project Corridors, Midline Pump Station area, or crossed by the Routes for the proposed pipeline or the

existing pipelines. The NDGFD manages Private Lands Open to Sportsmen (PLOTS) and the North Dakota Department of Trust Lands (NDDTL) manages School Trust Lands. In a letter dated October 18, 2023 (Section 15.8), the ND DEQ stated that department owns no land in or adjacent to the proposed improvements, nor does it have any Projects scheduled in the area.

**Study Area:** Several NDGFD-managed PLOTS lands and NDDTL School Trust Lands were identified within the Study Area. No ND DEQ lands were identified within the Study Area.

**Proposed Pipeline Project Corridor:** Based on desktop analysis and the letter from the ND DEQ (Section 15.8), there are no NDGFD-managed PLOTS lands, NDDTL School Trust Lands, or ND DEQ lands in the Proposed Pipeline Project Corridor.

**Existing Pipeline Project Corridor:** Based on desktop analysis and the letter from the ND DEQ (Section 15.8), there are no NDGFD-managed PLOTS lands, NDDTL School Trust Lands, or ND DEQ lands in the Existing Pipeline Project Corridor.

**Midline Pump Station Area:** Based on desktop analysis and the letter from the ND DEQ (Section 15.8), there are no NDGFD-managed PLOTS lands, NDDTL School Trust Lands, or ND DEQ lands within the Midline Pump Station area.

### 16.2.3 Historical Resources Not Specifically Designated as Exclusion or Avoidance Areas

Metcalf conducted a Class I file search for the Proposed and Existing Pipeline Corridors, and Class III surveys for the Proposed and Existing Pipeline Project Corridors and the Midline Pump Station area. Redacted versions of the Metcalf Class III Cultural Resources Reports are provided in **Appendix F**. During the Class III cultural surveys, no cultural resources were identified within the APEs for the proposed or existing pipelines or the Midline Pump Station area; therefore, Metcalf recommended a finding of *No Historic Properties Affected* (36 CFR 800.4[d][1]) for this undertaking.

In a letter dated January 1, 2024, the SHSND stated that no significant sites would be affected by the Project (**Appendix D**). An Unanticipated Discovery Plan (**Appendix F**) has been developed and will be implemented, if needed.

### 16.2.4 Areas which are Geologically Unstable

Arcadis conducted a desktop review of the Study Area and a field survey of the Proposed Pipeline Project Corridor, the Existing Pipeline Project Corridor, and the Midline Pump Station area on August 5 through 7, 2024 to identify geologically unstable areas (e.g., abandoned coal mines, gravel pits, landslide areas). The results of the desktop review and field surveys are summarized in **Appendix H**.

**Study Area:** Within the 1-mile-wide Study Area, four features were identified as areas of potential concern due to their unknown extents as shown on the Avoidance Areas map sheets in **Appendix A**. These features were identified as two active landslide areas (S1 and S2) and two underground mines (M1 and M2) as described in **Appendix H**.

**Proposed Pipeline Project Corridor:** No geologically unstable areas were identified within the Proposed Pipeline Project Corridor or crossed by the Route.

**Existing Pipeline Project Corridor:** No geologically unstable areas were identified within the Existing Pipeline Project Corridor or crossed by the Route.

**Midline Pump Station Area:** No geologically unstable areas were identified within the Midline Pump Station area.

### 16.2.5 Within 500 Feet of a Residence, School, or Place of Business

Arcadis conducted a desktop review of the Study Area and field surveys of the Proposed and Existing Pipeline Project Corridors and the Midline Pump Station area on August 5 through 8, 2024 to identify residences, schools, or places of business within 500 feet of the pipeline centerlines for the proposed and existing pipeline (**Appendix G**).

**Study Area:** Several occupied residences and places of business were identified within the Study Area; however, only one residence was within 500 feet of the existing pipeline centerline. No schools were identified within the Study Area.

**Proposed Pipeline Project Corridor:** No residences, schools, or places of business within were identified within 500 feet of the centerline.

**Existing Pipeline Project Corridor:** One occupied residence was identified approximately 441 feet from the centerline. Conversion of the existing pipeline will not require disturbances or construction within 500 feet of the occupied residence. TBPL obtained a waiver from the landowner, and a copy of the waiver is provided in **Appendix I**. No additional occupied structures, schools, or places of business were identified within 500 feet of the centerline.

**Midline Pump Station Area:** No residences, schools, places of business, or municipal wells were identified within 500 feet of the Midline Pump Station area.

### 16.2.6 Reservoirs and Municipal Water Supplies

A desktop review of available data sources was conducted to identify locations of reservoirs, municipal water supply wells, and private domestic (drinking water) wells within or near the Study Area, the Proposed and Existing Pipeline Project Corridors, Midline Pump Station area, or crossed by the Routes of the proposed or existing pipelines.

**Study Area:** Stanley Reservoir, two aquifers, two source water protection areas (both are non-community/inactive), and several private domestic (drinking water) wells were identified within the Study Area. No municipal water supplies or municipal wells were identified within the Study Area.

**Proposed Pipeline Project Corridor:** Based on available data sources, no reservoirs, municipal water supplies, municipal wells, or domestic wells were identified within or near the Proposed Pipeline Project Corridor or crossed by the Route. The Hiddenwood-Lake Aquifer is within the Proposed Pipeline Project Corridor and crossed by the Route; however, this aquifer is not a municipal water supply. Based on the FEIS for the Mandan, Hidatsa, and Arikara Nation's Proposed Clean Fuels Refinery Project (BIA and USEPA 2009), groundwater in the portion of the aquifer within the Field Survey Area is of very poor quality and is not suitable for drinking water. Generally, water in this aquifer is a sodium sulfate bicarbonate type with high quantities of sulfate, iron, and dissolved solids.

**Existing Pipeline Project Corridor:** Based on available data sources, no reservoirs, municipal water supplies, municipal wells, or domestic wells were identified within or near the Existing Pipeline Project Corridor or crossed by the Route. The Shell Creek-White Lake Aquifer is located within the Existing Pipeline Project Corridor and crossed by the Route; however, no disturbances are required within the aquifer area.

**Midline Pump Station Area:** Based on available data sources, no reservoirs, municipal water supplies, municipal wells, domestic wells, or aquifers were identified within or near the Midline Pump Station area.

### 16.2.7 Water Sources for Organized Rural Water Districts

No wellhead protection areas or other water sources for organized rural water districts have been identified within the Study Area, Proposed or Existing Pipeline Project Corridors, Midline Pump Station area, or crossed by the Routes for the proposed pipeline or the existing pipeline.

### 16.2.8 Area of Recreational Significance Which Are Not Designated as Exclusion Areas

Arcadis conducted a desktop review of the Study Area and performed a natural resources field surveys of the Proposed and Existing Pipeline Project Corridors and the Midline Pump Station area on August 5 through 8, 2024 (**Appendix G**). The findings of these assessments are summarized below.

**Study Area:** One NDPR-designated snowmobile trail is located within the Study Area.

**Proposed Pipeline Project Corridor:** No areas of recreational significance were identified within the Proposed Pipeline Project Corridor or crossed by the Route; therefore, construction will have no effect on this trail. In a letter dated October 18, 2023, NDPR stated that the Project does not appear to affect properties NDPR owns, leases, or manages.

**Existing Pipeline Project Corridor:** One NDPR-designated snowmobile trail is within the Existing Pipeline Project Corridor and crossed by the Existing Pipeline Route. Conversion of the existing pipeline will not require disturbances or construction within or near the snowmobile trail; therefore, the Project will have no effect on this trail.

**Midline Pump Station Area:** No areas of recreational significance were identified within the Midline Pump Station area; therefore, construction will have no effect on this trail.

**Table 6 Avoidance Areas Summary**

Feature	Within one-mile-wide Study Area (Y/N)	PROPOSED PIPELINE		EXISTING PIPELINE		MIDLINE PUMP STATION	Description	Section Addressed
		Within Project Corridor (Y/N)	Route Crosses (Y/N)	Within Project Corridor (Y/N)	Route Crosses (Y/N)	Within 2-Acre Site (Y/N)		
Designated or registered national historic districts; wildlife areas; wild, scenic, or recreational rivers; wildlife refuges; and grasslands.	Y	N	N	Y	Y	N	<ul style="list-style-type: none"> <li>Study Area: Several USFWS-managed WPAs</li> <li>Proposed Pipeline Project Corridor: N/A</li> <li>Existing Pipeline Project Corridor: Several USFWS-managed WPAs on private land within the Existing Pipeline Project Corridor and crossed by the Route; however, no disturbances are required within the WPAs.</li> <li>Midline Pump Station Area: N/A</li> </ul>	16.2.1, Appendix A, GIS CD
Designated or registered state wild, scenic, or recreational rivers; game refuges; game management areas; management areas; forest; forest management lands; and grasslands.	N	N	N	N	N	N	<ul style="list-style-type: none"> <li>Study Area: Several NDDTL School Trust Lands and one NDGL PLOTS Land.</li> <li>Proposed Pipeline Project Corridor: N/A</li> <li>Existing Pipeline Project Corridor: N/A</li> <li>Midline Pump Station Area: N/A</li> </ul>	16.2.2, Appendix A, GID CD
Historical resources that are not specifically designated as exclusion or avoidance areas.	N	N	N	N	N	N	<ul style="list-style-type: none"> <li>Study Area: N/A</li> <li>Proposed Pipeline Project Corridor: N/A</li> <li>Existing Pipeline Project Corridor: N/A</li> <li>Midline Pump Station Area: N/A</li> </ul>	16.2.3
Areas that are geologically unstable.	Y	N	N	N	N	N	<ul style="list-style-type: none"> <li>Study Area: Several potential landslide areas, abandoned coal mines, gravel pits.</li> <li>Proposed Pipeline Project Corridor: N/A</li> <li>Existing Pipeline Project Corridor: N/A</li> <li>Midline Pump Station Area: N/A</li> </ul>	16.2.4, Appendix D, Appendix H, GIS CD
Within 500 feet of a residence, school, or place of business.	Y	N	N	Y	N	N	<ul style="list-style-type: none"> <li>Study Area: Several occupied residences and businesses but no schools and only one residence within 500 feet of existing pipeline centerline.</li> <li>Proposed Pipeline Project Corridor: N/A</li> <li>Existing Pipeline Project Corridor: One occupied residence is approximately 441 feet from the centerline. Landowner waiver was obtained (<b>Appendix I</b>). No businesses or schools.</li> <li>Midline Pump Station Area: N/A</li> </ul>	16.2.5, Appendix A, Appendix G, Appendix I, GIS CD
Reservoirs and municipal water supplies.	N	N	N	N	N	N	<ul style="list-style-type: none"> <li>Study Area: Stanley Reservoir, several private domestic wells, one water source protection area (non-domestic), and several aquifers.</li> <li>Proposed Pipeline Project Corridor: Hiddenwood Lake Aquifer; however, groundwater in this portion of the aquifer is not suitable for drinking water and not a municipal water supply.</li> <li>Existing Pipeline Project Corridor: Shell Creek-White Lake Aquifer; however, no disturbances are required within the aquifer area.</li> <li>Midline Pump Station Area: N/A</li> </ul>	16.2.6, Appendix A, GIS CD
Water sources for organized rural water districts.	N	N	N	N	N	N	<ul style="list-style-type: none"> <li>Study Area: N/A</li> <li>Proposed Pipeline Project Corridor: N/A</li> <li>Existing Pipeline Project Corridor: N/A</li> <li>Midline Pump Station Area: N/A</li> </ul>	16.2.7
Area of recreational significance which are not designated as exclusion areas.	Y	N	N	Y	Y	N	<ul style="list-style-type: none"> <li>Study Area: One NDPR-designated snowmobile trail.</li> <li>Proposed Pipeline Project Corridor: N/A</li> <li>Existing Pipeline Project Corridor: One NDPR-designated snowmobile trail within the Existing Pipeline Project Corridor and crossed by the Route.</li> <li>Midline Pump Station Area: N/A</li> </ul>	16.2.8, Appendix A, GIS CD

Abbreviations  
 N/A = Not Applicable

## 16.3 Selection Criteria Considered

During Project design, TBPL selected a Preferred Project Corridor and Route for the proposed pipeline that complies with the Commission's selection criteria to avoid significant adverse effects or to manage and maintain these effects at an acceptable minimum for the resources described in the following subsections.

The Selection Criteria Considered for the Preferred Corridor and Route for both the proposed pipeline and the existing pipeline were evaluated, and the results are shown on the Selection Criteria Considered maps in **Appendix A**.

### 16.3.1 Agricultural Production

Impacts on agricultural production will be limited to the construction of the proposed new facilities. No impacts are expected for conversion of the existing pipeline.

A desktop review of available data sources was conducted for the Study Area, and field surveys were performed to identify cropland and pasture within the Proposed and Existing Pipeline Project Corridors the Midline Pump Station area (**Appendix G**). The primary land use within the Proposed and Existing Pipeline Project Corridors and Midline Pump Station area is agricultural land, with cultivated crops and some pastureland used for livestock grazing as described in Section 14.3.4. The primary crops cultivated in the area include peas (*Lathyrus oleraceus*), canola (*Brassica napus*), wheat species (*Triticum spp.*), wheat barley (*Hordeum vulgare*), lentils (*Lens culinaris*), soybean (*Glycine max*), flaxseed (*Linum usitatissimum*), and hay species (likely *Phleum pratense* or *Medicago sativa*).

The primary impact on agricultural production will be the loss of standing crops within the temporary construction ROW for the proposed pipeline and within the Midline Pump Station area for the growing season during construction. The pipeline will be buried deeper than typical tillage depths to allow continued agricultural use of the land in the ROW after construction. On agricultural land, rocks greater than 4 inches in diameter that are exposed on the surface due to construction will be removed from the ROW before and after topsoil replacement. Construction may also result in soil compaction, mixing of topsoil and subsoil including introduction of rocks into the topsoil from the subsoil, erosion, and the introduction of weeds. These impacts can lower soil productivity and reduce crop yields following construction.

Following construction, TBPL will restore the ROW to its pre-construction contours and stabilize the ground. After restoration of the construction ROW is completed, planting and harvesting will be allowed to continue over the permanent ROW for the proposed pipeline. Fields are anticipated to return to normal yields; however, there is a potential for diminished crop yields for 1 to 2 years following construction. Financial compensation will be provided to the landowners for temporary and permanent effects to agricultural production; therefore, impacts to agricultural production within the Proposed Pipeline Project Corridor are anticipated to be minor and short-term. Operation of the Project is not anticipated to result in long-term impacts on agriculture production.

Approximately 2.8 acres of prime farmland and approximately 46 acres of farmland of statewide importance may be temporarily affected during construction of the proposed pipeline (**Table 7**). The proposed midline pump station will displace approximately 2 acres of farmland of statewide importance for the life of the Project. No additional farmland will be disturbed or displaced by conversion of the existing pipeline.

**Table 7 Farmland in Project Corridors**

Type of Farmland	Acres in the 200-foot Project Corridor	Acres in 30-foot Permanent ROW	Temporary Impact in 80-foot Construction ROW (Acres)	Acres Impact in Permanent ROW (Acres)
<b>Proposed Pipeline Project Corridor</b>				
Prime Farmland	2.8	0.4	1.2	0.0
Farmland of Statewide Importance	46	6.8	18	0.0
Not Prime Farmland	47	6.9	19	0.0
Prime Farmland if Drained	0.0	0.0	0.0	0.0
<b>Subtotal</b>	<b>95</b>	<b>14</b>	<b>38</b>	<b>0.0</b>
Type of Farmland	Acres in 50-foot Project Corridor	Acres in 30-foot Permanent ROW	Acres Temporary Impact	Acres Permanent Impact
<b>Existing Pipeline Project Corridor</b>				
Prime Farmland	3.2	1.9	0.0	0.0
Farmland of Statewide Importance	79 <sup>1</sup>	487 <sup>1</sup>	2.0 <sup>1</sup>	2.0 <sup>1</sup>
Not Prime Farmland	106	63	0.0	0.0
Prime Farmland if Drained	0.8	0.5	0.0	0.0
<b>Subtotal</b>	<b>188</b>	<b>113</b>	<b>0.0</b>	<b>0.0</b>
<b>Total</b>	<b>283</b>	<b>128</b>	<b>2.0</b>	<b>2.0</b>

Source: USDA 2023

\* Totals may differ due to rounding.

<sup>1</sup> Includes 2-acre Midline Pump Station area.

### 16.3.2 Family Farms and Ranches

A desktop review of available data sources was conducted for the Study Area, and field surveys were performed to identify land cover, cropland, and pasture within the Proposed and Existing Pipeline Project Corridors the Midline Pump Station area (**Appendix G**). Easements will be negotiated with all affected landowners, and sufficient compensation will be provided. The Project will not result in changes of land ownership. The primary impact on family farms and ranches would be the loss of standing crops and pasture within the work area for the growing seasons during which Project-related activities occur, temporary prohibition of livestock grazing in the construction ROW, and restrictions on livestock movement across the construction ROW during construction. The effects of construction on family farms or ranches are anticipated to be minor and short-term.

Post-construction restoration will return the ROW to pre-construction contours, and farming and ranching operations will be allowed to continue over the permanent ROW. Long-term or permanent impacts on family farms and ranches are not anticipated. Impacts on family farms and ranches will be limited to the construction of the new pipeline; no impacts are expected for conversion of the existing pipeline or during the operation of the Project.

### 16.3.3 Land Economically Suitable for Irrigation

During TBPL’s negotiations of the landowner easement agreements, none of the landowners of the properties within the Project Corridors stated that they believe their land could be economically suitable for irrigation or that they plan to install an irrigation system. There are no known irrigated lands within the Project Corridors or crossed by the Route; therefore, the Project is unlikely to result in temporary or permanent impacts to areas suitable for irrigation.

## 16.3.4 Surface Drainage Patterns and Groundwater Flow Patterns

### 16.3.4.1 Surface Water Drainage Patterns

Arcadis conducted a wetland and waterbody delineation survey of the 200-foot-wide Field Survey Area for the proposed pipeline on August 7 and 8, 2018 (**Appendix E**). Arcadis surveyed an area (100 feet to each side of the centerline) to identify potential wetland areas in the vicinity of the 80-foot-wide construction ROW for the proposed pipeline. In addition, Arcadis conducted a wetland and waterbody delineation field survey of the 50-foot-wide Field Survey Area for the existing pipeline and the 2-acre site for the proposed Midline Pump Station on August 5 through 8, 2024 (**Appendix E**). Based on the desktop review and field surveys, surface water drainage patterns are summarized below.

**Study Area:** Stanley Reservoir, the Little Knife River, Shell Creek, the East Fork of Shell Creek, and several unnamed drainages are within the Study Area. Two surface drains, Taylor Slough Drain (Permit DR-661) and Wild Willow Drain (Permit DR-4495), were identified within the Study Area.

**Proposed Pipeline Project Corridor:** The Proposed Pipeline Project Corridor and Route cross the East Fork of Shell Creek and several wetlands. The creek flows to the southwest before connecting with Lake Sakakawea. This waterbody is within a pasture and is subject to grazing pressure from cattle. During construction, effects on surface drainage patterns will include temporary localized disturbances to the topography. Where the proposed pipeline crosses the WOUS, the HDD method will be used to minimize potential impacts to flow or future maintenance efforts by landowners or the drainage authority. The HDD method will be used to avoid disturbing the bed or banks of the East Fork of Shell Creek; therefore, no changes to surface drainage patterns are anticipated.

Intermittent drainages will be crossed using open-cut construction. These drainages are expected to be dry during construction of the proposed pipeline; therefore, no changes to surface drainage patterns are anticipated. If these drainages are flowing, then the open cut method of construction will not be used, and the HDD method will be used instead to avoid disturbing the flowing drainage. After construction, disturbed areas will be restored to approximate pre-construction contours, allowing drainage patterns to remain unchanged.

TBPL will implement the following mitigation measures to minimize the potential for impacts to the intermittent drainages:

- Develop and implement a SWPPP to minimize erosion and potential effects associated with stormwater runoff and sediment transport to surface waters during construction. The SWPPP will include BMPs that will be implemented until final reclamation has been achieved to minimize changes to the existing surface drainage patterns and avoid alteration of existing groundwater flow patterns.
- Implement temporary erosion control BMPs (e.g., slope breakers, sediment barriers, and mulch) to minimize the potential for soil loss due to wind or water erosion during construction.
- Restore the work area to approximate pre-construction contours.

**Existing Pipeline Project Corridor:** The Existing Pipeline Project Corridor and Route cross the Little Knife River, Shell Creek, and several unnamed drainages. Conversion of the existing pipeline will not require any disturbances of surface waters or associated wetlands and riparian habitats; therefore, no effects are expected.

**Midline Pump Station Area:** No surface waters or drainages were identified within the Midline Pump Station area; therefore, no effects are expected.

### 16.3.4.2 Groundwater Drainage Patterns

Arcadis conducted a desktop review and field surveys of the Proposed and Existing Pipeline Project Corridors and the Midline Pump Station area on August 5 through 8, 2024 to identify surface water features and drainage patterns (**Appendix E**). Based on Arcadis' desktop review, aquifers underlying the Project Corridors for the proposed and existing pipelines are composed of both bedrock and overlying unconsolidated deposits. Shallow water table conditions (less than 6 feet) are expected to be encountered in multiple locations (NRCS 2023). The water table is expected to be isolated from underlying bedrock and unconsolidated aquifers in most locations. The Hiddenwood Lake unconsolidated aquifer is present beneath the Route of the proposed pipeline. Although the aquifer is expected to be at least 65 feet below the ground surface and confined from the surface in most areas; the crossing location is within a possible recharge zone (Pettyjohn and Hutchinson 1971). Review of drillers logs from the vicinity of the Shell Creek-White Lake aquifer crossing indicate that water-bearing sand and gravel deposits are found at varied depths, and most wells exhibit confined conditions (DWR 2023). The Fort Union Formation underlays the Project Area at depths of 105 to more than 125 feet bgs (Bureau of Indian Affairs [BIA] and USEPA 2009).

Construction that may encounter shallow (water table) aquifers, such as trenching, drilling, dewatering, and backfilling, could cause minor fluctuations in groundwater levels and/or increased turbidity within the surficial aquifers. The proposed pipeline will be installed at depths that will not interfere with groundwater flow patterns. Typically, the pipeline trench will be less than 6 feet deep, except where the HDD method is proposed for installation of the pipe, where installation depths will be deeper.

Dewatering, if necessary, is not expected to have a significant effect on regional groundwater flow patterns. Shallow (water table) aquifers will quickly reestablish equilibrium if disturbed, and turbidity levels will rapidly subside. Based on the relatively shallow depth of construction, and because the depth of the shallowest groundwater level within the Hiddenwood Lake and Shell Creek-White Lake Aquifers is anticipated to be below the deepest point of the proposed pipeline trench, installation of the proposed pipeline will not have a significant effect on regional groundwater flow patterns or quality. Any potential effects on groundwater flow patterns will be limited to surficial aquifers, and impacts will be highly localized and limited to the construction phase of the Project. No permanent impacts to groundwater flow patterns are expected.

Two surface drains, Taylor Slough Drain (Permit DR-661) and Wild Willow Drain (Permit DR-4495), were identified within the 1-mile Field Survey Area for the proposed pipeline; however, these surface drains are not within the 200-foot-wide Proposed Pipeline Project Corridor and will not be crossed by the Route. The Project will not affect sloughs, ponds, lakes (i.e., wetlands) outside of the Proposed Pipeline Project Corridor; therefore, no surface drain permits are anticipated to be required. In addition, the Project will have no direct impacts to surface drain permits Taylor Slough Drain (DR-661) and Wild Willow Drain (DR-4495). In the unlikely event that either DR-661 or DR-4495 will be modified, the DWR will be notified.

The DWR maintains a network of observation wells across the state for monitoring the water levels and quality in glacial and bedrock aquifers. No observation wells were identified within the Project Corridors; therefore, no direct impacts to water wells are anticipated. If an observation well is encountered during Project activities and must be removed, the DWR Water Appropriation Division will be notified. If the functionality of a well is impacted, a replacement well(s) will be installed.

Impacts on deeper aquifers (e.g., Fort Union-Hell Creek Aquifer) are not anticipated given their depths and separation from surficial materials. Moreover, deeper aquifers are commonly confined and hydraulically insulated from overlying formations.

Surface drainage and groundwater flow patterns will not be significantly altered by construction of proposed pipeline and associated aboveground facilities. Implementation of Project-specific SWPPP, SPCC Plan, and IMP would

minimize potential risk of impacts to groundwater during construction and operation. The effects of construction will be minor and short-term; therefore, no mitigation measures to protect groundwater are anticipated to be required.

### 16.3.5 Sound-Sensitive Land Uses

Arcadis conducted a desktop review and natural resources field survey of the Proposed and Existing Pipeline Project Corridors and the Midline Pump Station area on August 5 through 8, 2024 to identify sound-sensitive land uses. Land use in the vicinity of the Project is primarily agricultural. The Project is in a rural, sparsely populated agricultural area with very few noise-sensitive receptors within or near the Project Corridors. Existing noise sources near the Project include the existing CPR railroad and car/truck traffic traveling on State Highway 23 (typically between 60 and 95 decibels when cars, trucks, and/or trains are traveling on roads/railroads at higher speeds).

**Study Area:** Sound-sensitive land uses in the Study Area include occupied residences, places of business, schools, hospitals, churches, or cemeteries.

**Proposed Pipeline Project Corridor:** No occupied residences, schools, places of business, hospitals, churches, cemeteries, or other noise-sensitive land uses were identified within 500 feet of the Route for the proposed pipeline.

**Existing Pipeline Project Corridor:** One residence was identified within 500 feet of the Route. No additional occupied structures, cemeteries, schools, or places of business were identified within 500 feet of the Route for the existing pipeline. Conversion of the existing pipeline will not require disturbances or construction within 500 feet of the occupied residence. Before construction, TBPL obtained a waiver from the landowner, and a copy of the waiver is provided in **Appendix I**.

**Midline Pump Station:** No occupied residences, schools, places of business, hospitals, churches, cemeteries, or other noise-sensitive land uses were identified within 500 feet of the Midline Pump Station area.

Sound-sensitive receptors close to the construction areas will be exposed to temporary increases in noise levels during operation of heavy equipment for construction. Noise generated during construction will be limited to equipment and heavy machinery during normal working hours. The effects of construction noise will be less noticeable for the portion of the proposed pipeline near State Highway 23, where the existing noise levels are elevated from railroad and highway vehicular traffic.

The effects of noise will be diminished with distance from the equipment operations. Nighttime noise levels will normally be unaffected by construction, as most construction is typically restricted to daylight hours on weekdays. Noise generated during pipeline operations and maintenance is expected to be negligible.

### 16.3.6 Visual Effect on Adjacent Areas

A desktop review of available data sources was conducted to identify visual resources within the Study Area. No designated scenic outlooks or viewing areas were identified within the Project Corridors or crossed by the Routes for the proposed or the existing pipelines or Midline Pump Station area. The proposed pipeline and aboveground facilities will be in a rural area that is sparsely populated and dominated by cropland. Views of the landscape will be limited to residents of homesteads, occasional views from area roadways, and oil and gas personnel; therefore, based on number of viewers and duration of their views, viewer sensitivity is considered low.

Visual impacts during construction will include views of personnel and equipment during the construction period (approximately 3 months). Heavy equipment, open trenches, and spoil piles will change the colors and textures of the landscape. The removal of vegetation will create contrast within the existing landscape with the introduction of distinct lines in the landscape. The new pipeline will be buried, and the associated Midline Pump Station will have a relatively low profile. Following construction, disturbed soils will be re-contoured and re-vegetated to match

original conditions in accordance with landowner agreements. Following successful revegetation, visual impacts will be minimal.

One residence was identified within 500 feet of the existing pipeline Route. TBPL obtained a waiver from the landowner, and a copy of the waiver is provided in **Appendix I**. No additional occupied structures, cemeteries, schools, or places of business were identified within 500 feet of the Route for the existing pipeline or the proposed pipeline. Conversion of the existing pipeline will not require disturbances or construction within 500 feet of the occupied residence.

Construction of the proposed Midline Pump Station and one associated permanent access road will result in the long-term conversion of agricultural land to industrial use. The aboveground facilities will be in rural agricultural areas, where very few people will see the facilities, and the visual impact will not significantly alter the aesthetic landscape.

## 16.3.7 Extractive and Storage Resources

### 16.3.7.1 Oil and Gas Production

The Project Corridors and Routes for the proposed and existing pipelines are located within the Williston Basin, a major oil and gas producing basin in western North Dakota. A desktop review of available data sources was conducted to identify oil and gas production facilities within the Proposed and Existing Pipeline Project Corridors and the Midline Pump Station area.

**Study Area:** Several oil or gas wells were identified within the Study Area.

**Proposed Pipeline Project Corridor:** No oil or gas wells were identified within the Proposed Pipeline Project Corridor or crossed by the Route.

**Existing Pipeline Project Corridor:** No oil or gas wells were identified within the Existing Pipeline Project Corridor or crossed by the Route.

**Midline Pump Station:** No oil or gas wells were identified within or proximate to the Midline Pump Station area.

TBPL performed a centerline survey of the Route to identify extractive and storage resources owned by third-party entities. TBPL contacted, or will contact, each entity to obtain its respective crossing and encroachment guidelines and requirements and will continue to work closely with each entity during the construction and operation and maintenance phases to safely construct and operate the Project around existing facilities and minimize the potential for impacts.

Because oil and gas are generally produced from depths of 1,000 feet or more, construction of the proposed pipeline is not expected to affect the ability of existing wells to produce petroleum and/or natural gas. Typically, the pipeline trench will be less than 6 feet deep, except where the HDD method is proposed for installation of the pipe, where installation will be slightly deeper. Potential construction-related damage that could occur will be limited to the near-surface components of the wells and gathering systems. To minimize the potential for impacting near-surface components, TBPS will implement the following mitigation measures:

- Avoid direct impact to any wells located near the construction ROW.
- Identify any associated underground gathering lines along the Route of the proposed pipeline and take appropriate precautions to protect the integrity of such facilities.

### 16.3.7.2 Sand and Gravel Mining Operations

Arcadis conducted a desktop review and field surveys of the Proposed and Existing Pipeline Project Corridors and the Midline Pump Station area on August 5 through 8, 2024 to identify sand and gravel mining operations (**Appendix H**). The results of the desktop review and field surveys are summarized below.

**Study Area:** Two abandoned coal mines and several gravel mines were identified within the 1-mile-wide Study Area.

**Proposed Pipeline Project Corridor:** No sand/gravel mining operations were identified within the Proposed Pipeline Project Corridor or crossed by the Route.

**Existing Pipeline Project Corridor:** No sand/gravel mining operations were identified within the Existing Pipeline Project Corridor or crossed by the Route.

**Midline Pump Station Area:** No sand/gravel mining operations (gravel pits) were identified within the Midline Pump Station area.

### 16.3.8 Wetlands, Woodlands, and Wooded Areas

Arcadis conducted a desktop review and field surveys of the Proposed and Existing Pipeline Project Corridors and the Midline Pump Station area on August 5 through 8, 2024 to identify wetlands, surface water features, woodlands, and wooded areas (**Appendix C, Appendix E, and Appendix G**). The results of the desktop review and field surveys are summarized below.

**Study Area:** Wetlands and water bodies were identified within the Study Area. Wooded areas are primarily limited to the banks of the water bodies. No woodlands were present.

**Proposed Pipeline Project Corridor:** During construction of the proposed pipeline and midline pump station, clearing of vegetation will result in temporary impacts to wetlands and wooded areas. Wetlands within the Proposed Pipeline Project Corridor are identified in **Appendix E**. To minimize potential impacts to riparian vegetation during construction of the proposed pipeline, TBPL will use the HDD method at the crossings of the East Fork of Shell Creek and the wetlands determined by the USACE as WOUS. The typical HDD schematic for the WOUS crossings is provided in **Appendix C**. Areas in which vegetation will be removed during construction will be restored in accordance with the landowner agreements. A SWPPP will be developed to minimize erosion and discharge of sediments or pollutants to wetlands and surface waters. Construction is anticipated to result in minor and short-term effects on wetlands.

No trees or shrubs were identified within the Proposed Pipeline Project Corridor (**Appendix G**). Construction of the proposed pipeline is expected to have no effect on wooded areas.

**Existing Pipeline Project Corridor:** Wetlands within the Existing Pipeline Project Corridor are identified in **Appendix E**. No wetland disturbances will be required for conversion of the existing pipeline. The existing pipeline was built in the 1960s, and the 30-foot permanent ROW has largely been maintained in an herbaceous state. A few trees and shrubs were identified within the Existing Pipeline Project Corridor; however, no tree or shrub removal will be required for conversion of the existing pipeline; therefore, construction is expected to have no effect on wetlands or wooded areas.

**Midline Pump Station Area:** No wetlands, woodlands, or wooded areas were identified within the Midline Pump Station area. Construction is expected to have no effect on wetlands or wooded areas.

### 16.3.9 Radio and Television Reception and Other Communication or Electronic Facilities

No radio, television, or other communication or electronic facilities were identified within or near the Project Corridors or crossed by the Route for the proposed pipeline or existing pipeline. No effects on radio, television, or other communication or electronic facilities are expected as a result of the Project.

### 16.3.10 Human Health and Safety

The PHMSA administers the national regulatory program to ensure the safe transportation of crude oil and other hazardous materials by pipeline. The PHMSA develops safety regulations and other approaches to risk management that ensure safety in the design, construction, testing, operation, maintenance, and emergency response of pipeline facilities.

Many of the regulations are written as performance standards that set the level of safety to be attained and allow the pipeline operator to use various technologies to achieve safety. Best practices and engineering controls will be implemented to prevent adverse effects to the environment and human health and safety.

TBPL will collaborate with the local emergency response manager in conjunction with Ward and Mountrail Counties to develop an appropriate Emergency Response Plan. TBPL will work with local emergency responders to ensure implementation of a safe and effective response strategy should an adverse event occur.

### 16.3.11 Animal Health and Safety

Due to the proximity to Highway 23, existing agricultural activities, and previous ground disturbances, animals within and near Project Corridors and the Route for the proposed pipeline and existing pipeline are limited to livestock and common wildlife species such as squirrels, badgers, deer, pheasant, grouse, partridge, and songbirds. No species of concern are expected to be impacted by the Project.

As a result of the noise and human activity during construction, livestock and mobile species, such as larger mammals and birds, will likely avoid the construction areas and relocate to adjacent habitat and are not expected to be negatively impacted by Project activities. Less mobile or burrowing species may be inadvertently killed during construction. Some individuals may be permanently displaced and perish due to increased competition or other effects of being forced into suboptimal habitat, although suitable habitat within the Project Corridors will be available following construction.

BMPs will be implemented during construction to allow for the unhindered movement of local livestock and wildlife. Overall impacts on livestock and wildlife are expected to be temporary and minor.

### 16.3.12 Plant Life

Existing vegetation, including cultivated crops, weeds, trees, and shrubs (**Appendix G**) will be temporarily cleared within the work area before the start of construction. The disturbed areas will be restored to approximate pre-construction contours, and vegetation will be restored in accordance with landowner agreements. For those areas to be revegetated, a native seed mix will be developed in conjunction with the local landowners and NRCS for areas to be seeded.

A Weed Management Plan has been developed for the Project (**Appendix J**). BMPs will be implemented to prevent the spread of noxious weeds and to minimize the risk of importing or transporting any weed species. Equipment and tools will be cleaned of any plant debris before ingress and egress from the Project Area.

## 16.4 Policy Criteria

### 16.4.1 Location and Design

The location and design of the Project takes advantage of existing facilities and utility corridors to the extent practicable. TBPL identified a Preferred Project Corridor and Route for the proposed pipeline that meet the needs of the Project and comply with the Commission's siting policy criteria while minimizing potential impacts to landowners, existing infrastructure, and the environment. The Preferred Project Corridor and Route for the existing pipeline is the centerline of the gathering pipeline to be converted to a transmission pipeline.

No designated Exclusion Areas or Avoidance Areas are within the Project Corridor or crossed by the Route for the proposed pipeline. Mitigation measures will be implemented to avoid or minimize potential adverse impacts on Exclusion Areas and Avoidance Areas within the Project Corridor for the existing pipeline.

### 16.4.2 Training and Use of In-State Labor

Both local and out-of-state labor will be used during the construction and operation of the Project. Local construction crews will be used to the maximum extent feasible. All TBPL's assets are in North Dakota, and the Project will be operated by qualified personnel who will reside in state. TBPL will provide environmental training for all Project personnel (both contractor and TBPL) before construction.

### 16.4.3 Economies of Construction and Operation

Development of the Project will result in the investment of approximately \$19.6 million. This cost includes the proposed new pipeline, conversion of the existing pipeline, and construction of the proposed midline pump station.

Construction of the Project will result in beneficial impacts on the state and local economy. During construction, 10 to 50 temporary workers will be required depending on the stage of construction. The workforce needs will result in additional local expenditures for food and lodging. The state and the City of Stanley will benefit from an increase in sales, use, and lodging tax revenue. Based on the estimated retail purchases by temporary workers and current tax rates, the state and local governments will realize additional tax revenue.

During construction, local businesses will benefit from increased demands for goods and services generated by the temporary workforce's need for food and lodging. This economic stimulus could result in a temporary need for local establishments to add staff or increase hours worked by existing staff to accommodate the increases in demand.

In addition to purchases by workers, TBPL will purchase some materials necessary for construction of the Project locally, primarily consumables, fuel, equipment rental, space leasing, and miscellaneous construction-related materials (e.g., office supplies). State and local governments will realize sales tax revenue from these purchases.

Sales or use taxes on pipe and other materials and installed equipment will result in state and local tax revenues. Such purchases are subject to sales tax if the items are manufactured in state or use taxes when purchased outside the state and imported into the state. Typically, project owners and contractors are entitled to a credit for taxes paid in another jurisdiction (e.g., the point of purchase or manufacture) but generally have an option to specify the point of delivery as the location for purposes of taxation.

During operation of the Project, four permanent workers will be required. The permanent workforce will result a minor increase in additional local expenditures for food and lodging. Indirect benefits to the local and state economy will also be realized in the form of tax revenues generated from the labor force. The operation and maintenance costs of the Project are expected to be minimal, and local labor will be used to the maximum extent feasible.

The Project will provide a safe and efficient means to transport Bakken crude oil to an existing hub with connections to pipelines and a rail facility that can transport to markets throughout the United States, resulting in economic benefits to North Dakota producers and those with ties to Bakken crude oil production.

Additionally, the Project will provide a wider market for local oil producers, reduce operating and transportation costs, provide a safe and efficient means of product transportation, and increase revenues to local mineral owners.

#### **16.4.4 Use of Citizen Coordinating Committees**

TBPL did not engage citizen coordinating committees on this Project. Based on the Project's relatively small size and remote location, a citizen coordinating committee was not anticipated to be necessary.

#### **16.4.5 Commitment of a Portion of Transmitted Product for Use in State**

The Project will provide North Dakota producers with wider access to markets for locally produced crude oil. The Project will also facilitate the delivery of crude oil to in-state and out-of-state markets by transporting crude oil to the Enbridge Storage Facility in Stanley, North Dakota, where it will be distributed to multiple third-party interconnecting pipelines. The Project will provide producers with access to major U.S. markets.

The Project will provide an additional outlet for crude oil from the TBPL Facility, thereby removing an existing capacity constraint and enabling additional crude oil barrels to enter the system. As a result, crude oil that would otherwise be transported by truck to a market hub can enter the TPBS Facility and be transported by pipeline. As such, the Project will provide a safer, more reliable, and more efficient means of transporting crude oil.

The Project will also directly benefit Bakken crude oil producers by allowing for the efficient aggregation of volumes of crude oil from within Ward and Mountrail Counties and adjacent counties for shipment to major U.S. markets, thereby offering producers the potential for better netbacks.

#### **16.4.6 Labor Relations**

TBPL maintains good relations with the local labor force, and the labor market in the Project Area is supportive of the oil and gas industry. The Project will have no anticipated effect on labor relations within North Dakota.

#### **16.4.7 Coordination of Facilities**

The Project has been designed to coordinate with existing facilities to the maximum extent practicable. The Project will be owned and operated by TBPL. The Project pipelines will be used in conjunction with TBPS and Enbridge to optimize market access to North Dakota producers.

#### **16.4.8 Monitoring Impacts**

TBPL believes that construction-related impacts will be adequately mitigated during the Project by implementing BMPs, good construction techniques, environmental inspection, and standard engineering practices to monitor the ROW for potential impacts. Before construction, a SWPPP will be developed and implemented to minimize erosion and sediment transport. After construction, areas of disturbance will be restored to pre-construction conditions in accordance with landowner agreements and erosion and sediment controls will be inspected and maintained until final stabilization of the construction work areas.

During construction, communication will be maintained with landowners to minimize potential impacts to the maximum extent feasible. During construction and after restoration of disturbed areas, a Weed Management Plan (**Appendix J**) will be implemented for the ROW to prevent the spread of noxious weeds and to minimize the risk of importing or transporting any weed species. A thorough inspection and environmental monitoring will be

performed to ensure the success of restoration efforts; therefore, long-term monitoring of impacts directly related to the Project is not anticipated to be necessary. Contract specifications will incorporate environmental protection and mitigation measures, and contractors will be expected to implement these measures in the field.

During operation, the pipelines will be regularly inspected to search for signs of accidental release and to ensure that mechanical integrity is maintained.

### 16.4.9 Using Existing and Proposed Rights-of-Way and Corridors

The proposed pipeline Route abuts the existing CPR ROW to the maximum extent feasible. The Route traverses cultivated cropland, and there are no existing or proposed ROWs or utility corridors near the Route. The proposed Route will cross several existing ROWs and utility corridors (aboveground electrical lines and aboveground and underground telephone lines) and other pipeline ROWs. The road and railroad ROWs will be crossed using HDD methods. The new pipeline will cross an aboveground pipe within the TBPS facility, overhead power lines when exiting the TBPS facility, overhead powerlines near 66<sup>th</sup> Street NW and the railroad crossing, existing underground pipelines near 41<sup>st</sup> NW, and overhead powerlines at 41<sup>st</sup> NW.

The existing pipeline is within an existing 30-foot-wide easement and primarily traverses cultivated cropland. Conversion of the existing pipeline will not require any new permanent ROW.

Inside the Enbridge Storage Facility, the existing pipeline within Lot 10 will be modified to route to the connection point with the existing pipeline, where a new pig receiver will be installed before the connection with the existing pipeline. There are several underground pipelines, powerlines, and overhead powerlines that will be crossed within Lot 10.

### 16.4.10 Other Existing or Proposed Transmission Facilities

The Project will connect with the existing TBPS Facility and the Enbridge Storage Facility. Existing and planned transmission facilities are described in the Ten-Year Plan (**Appendix B**). TBPL does not currently have any plans to construct other proposed transmission facilities within the next 5 years.

## 17 Identification of Potential Permits and Approvals

The Project Corridor is in a rural area in central North Dakota within portions of Ward and Mountrail Counties. In Ward County, the Project Corridor is within Orlien Township. Zoning is the responsibility of Ward County. In Mountrail County, the Project Corridor is within Idaho, Purcell, Burke, Austin, Oakland, Shell, Spring Coulie, and Plaza Townships. There are no major cities within or near the Project Corridor; however, the small, incorporated cities of Plaza and Stanley occur within near the Project Corridor and Route.

The Project will be constructed in compliance with applicable federal, state, and local laws, regulations, or plans. **Table 8** provides a list of potential tribal, federal, state, and local permits and approvals that may be needed for the Project.

CERTIFICATE OF CORRIDOR COMPATIBILITY AND ROUTE PERMIT 3RD AMENDED CONSOLIDATED APPLICATION  
Thunder Butte Pipeline Project Case No. PU-24-086

**Table 8 Potential Permits and Approvals**

Agency	Permit/Approval	Status
<b>Tribal</b>		
MHA Nation/Three Affiliated Tribes Tribal Historic Preservation Office	Cultural and historic resources consultation and review	Concurrence was obtained for the portion of the Proposed Pipeline Project Corridor on FBIR as part of the FEIS (BIA and USEPA 2009).
<b>Federal</b>		
U.S. Army Corps of Engineers	Section 404 permit for dredge/fill in jurisdictional wetlands and waterbodies	No permit anticipated to be required because TBPL will use HDD method for WOUS crossings to avoid impacts. If needed, authorization under Nationwide Permit 33 will be obtained before construction begins for temporary impacts during WOUS crossings.
U.S. Fish and Wildlife Service	Consultation and review of the proposed Project regarding potential impacts to federally listed species	Project does not require formal or informal consultation, but a letter requesting input regarding the Project was sent to USFWS.
<b>State</b>		
North Dakota Public Service Commission	Certificate of Corridor Compatibility	Application herein.
	Route Permit	Application herein.
North Dakota Department of Health, Water Quality Division	National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction Activity	SWPPP to be prepared and permit obtained before construction begins.
	NPDES General Permit for Temporary Dewatering/Hydrostatic Testing	Permit to be obtained before discharges.
North Dakota Department of Environmental Quality, Air Pollution Control Program	Permit to Construct	Permit to be obtained before construction begins at Lot 10.
	Permit to Operate	Permit to be obtained before operations begin at Lot 10.
North Dakota Division of Water Quality, Water Appropriation Division	Water Appropriation	Initial review indicates the Project does not require a conditional or temporary permit for water appropriation. However, if surface water or groundwater will be diverted for construction of the Project, a water permit will be required.
North Dakota Division of Water Quality, Engineering and Permitting Section	Surface Drain Permits	No surface drain permits are anticipated to be required.
State Historical Society of North Dakota	Cultural and historic resources consultation and review	In a letter dated January 1, 2024, the SHSND stated that no significant sites would be affected by the Project.
North Dakota Department of Transportation	Utility Crossing Permit	To be obtained before crossing State Highway 23.
	Oversize and Overweight Permit	To be obtained by construction contractor as necessary.
<b>Local</b>		
Mountrail County	Conditional Use Permit (CUP)	Permit will be obtained for the Midline Pump Station before construction.
	Building Permit	Permit to be obtained for the Midline Pump Station before construction.
	Utility Road Crossing Permits	Permit to be obtained before crossing county/township roadways.
	Approach Permits	Permit to be obtained before installing approach, if needed.
Ward County	CUP	Not Required.
	Building Permit	Not Required.
	Utility Road Crossing Permits	Permit to be obtained before construction begins.
	Approach Permits	Permit to be obtained before installing approach, if needed.
<b>Other Approvals</b>		
Canadian Pacific Railway	Crossing Agreement	Agreement to be obtained before crossing railroad ROW.

## **18 Evaluation of NDCC Section 49-22-09 Factors**

In selecting the Preferred Corridor and Route for the Project, TBPL evaluated the factors set forth in NDCC Section 49-22-09. A discussion of each factor is provided below.

### **18.1 Effects on Public Health, Welfare, Natural Resources, and the Environment**

Sections 14 through 19 describe the available research and investigations used to evaluate the potential effects associated with the Route, construction, and operation of the proposed Project on public health and welfare, natural resources, and the environment. As discussed in those sections, the Project is not anticipated to have any significant or long-term negative impacts on public health and welfare, natural resources, or the environment.

### **18.2 Transmission Technologies and Systems Designed to Minimize Adverse Environmental Effects**

The Project design is consistent with existing pipeline technologies. Mitigation measures have been or will be used to avoid or minimize any potential impacts to sensitive resources including the use of the HDD method for the road, railroad, and WOVS crossings. In addition, throughout construction, BMPs will be implemented to reduce any potential impacts to resources from ROW clearing, grading, trenching, and pipe and facility installation. Once construction is completed, the Project will be monitored remotely 24 hours a day, 7 days a week using a SCADA system.

### **18.3 Potential for Beneficial Uses of Waste Energy from a Proposed Energy Conversion Facility**

The Project does not include any energy conversion facilities; therefore, the potential for beneficial uses of waste energy from a proposed energy conversion facility does not apply.

### **18.4 Unavoidable Adverse Direct and Indirect Environmental Effects**

Except for the 2-acre Midline Pump Station area and one associated new permanent access road, unavoidable adverse direct and indirect environmental effects of the Project will be temporary and minimized wherever practicable using mitigation measures and BMPs. Temporary construction-related unavoidable adverse direct and indirect environmental effects will include clearing of vegetation and loss of standing crops within the construction work area and increased traffic, dust, and noise levels. Wildlife may temporarily avoid the ROW during construction. Construction will be conducted on an accelerated timeline within approximately 3 months; therefore, impacts to wildlife are anticipated to be minimal, and no long-term impacts are anticipated. Noise levels will increase during construction; however, the Project is not anticipated to generate noise while operating. Sections 14 through 19 provide additional information regarding the Project's potential direct and indirect environmental effects and planned mitigation measures.

## **18.5 Corridor or Route Alternatives Developed During the Hearing that Minimize Adverse Effects**

Section 13 describes the Corridor and Route alternatives analyzed for the Project. TBPL has identified a Preferred Project Corridor and Route for the proposed pipeline that meet the needs of the Project and comply with the Commission's siting criteria while minimizing potential impacts to landowners, existing infrastructure, and the environment. The preferred Project Corridor and Route for the existing pipeline is the centerline of the gathering pipeline to be converted to a transmission pipeline.

If other corridor or route alternatives are developed during the Commission's hearing process, TBPL will analyze those alternatives as necessary.

## **18.6 Irreversible and Irretrievable Commitments of Natural Resources if Designated**

Minimal irreversible or irretrievable commitments of natural resources will result from construction of the new pipeline portion of the Project because land use along the operational ROW will be returned to agricultural use following construction. In some locations, the Project will result in creating a new open corridor in an agricultural area where the permanent ROW will need to be maintained in an herbaceous state free of trees.

The midline pump station and associated permanent access road will displace approximately 2 acres of agricultural land. As a result, the land will be taken out of crop production and converted into industrial land use for operation of the midline pump station. The conversion of approximately 2 acres of agricultural land to an industrial use represents a relatively small permanent impact relative to the total acreage of agricultural land in Mountrail County. The Project will result in minor irreversible or irretrievable commitments of natural resources.

Conversion of the existing gathering pipeline to a transmission pipeline will not result in additional commitments of natural resources because the pipeline was previously installed, and no changes are proposed for the existing operational ROW. Conversion of the existing pipeline will result in no irreversible or irretrievable commitments of natural resources.

## **18.7 Direct and Indirect Economic Impacts of the Facility**

The Project's direct and indirect economic impacts, described in Section 16.4.3, include the following:

- Short-term employment opportunities arising from construction;
- Long-term employment opportunities arising from operation; and
- Increased revenue from Project-related local expenditures (such as for gravel, fuel, lodging, and food).

Additionally, the Project will provide a safe and efficient means to transport Bakken crude oil to an existing hub with connections to pipelines and a rail facility that can transport to markets throughout the United States, resulting in benefits to North Dakota producers and those with ties to Bakken crude oil production.

## **18.8 Existing Plans for Other Developments (State, Local, and Private) in the Vicinity of the Project**

TBPL consulted with multiple federal, state, and local governments, landowners, and existing infrastructure owners regarding the Project. TBPL has not identified state or local government or private development plans in

the vicinity of the Project. TBPL will obtain all necessary permits and approvals for the Project from federal, state, and local governments and agencies and will comply with applicable local land use requirements. No potential conflicts with existing or planned developments are anticipated to occur upon implementation of the Project.

## **18.9 Effects of the Proposed Route on Existing Scenic Areas, Historic Sites and Structures, and Cultural Resources**

The Project avoids all known scenic areas, historic sites and structures, and cultural resources; therefore, the Project is not anticipated to impact these resources. For further discussion in Sections 14, 15, 16, 17, and 18. During the Class III Cultural Resource Inventory for the Field Survey Areas for the proposed and existing pipelines and Midline Pump Station area, no cultural resources were identified within the APE; therefore, Metcalf recommends a finding of *No Historic Properties Affected* (36 CFR 800.4[d][1]) for this undertaking.

On behalf of TBPL, Arcadis submitted a Project consultation letter and a copy of the 2023 Metcalf report to the State Historical Society of North Dakota (SHSND) on November 29, 2023 providing opportunity to comment. A copy of the 2024 Metcalf report was provided to the SHSND on September 26, 2024. In a letter dated January 1, 2024, the SHSND stated that no significant sites would be affected by the Project.

On behalf of TBPL, Arcadis submitted a Project consultation letter and a copy of the 2023 Metcalf report to the MHA Nation/TAT Tribal Historic Preservation Office (THPO) on November 27, 2023 and a second letter was emailed to THPO on July 22, 2024 providing opportunity to comment. THPO concurrence was obtained for the portion of the Proposed Pipeline Project Corridor on FBIR as part of the FEIS (BIA and USEPA 2009). No additional response has been received from THPO to date.

## **18.10 Effects of the Proposed Route on Areas Which are Unique Because of Biological Wealth or Rare and Endangered Species Habitats**

No areas that are unique because of biological wealth or because they are habitats for rare and endangered species are located within or near the Project Corridors or crossed by the Route; therefore, the Project is not anticipated to impact these resources. For further discussion in Sections 14, 15, 16, 17, and 19.

## **18.11 Problems Raised by Federal Agencies, other State Agencies, and Local Entities**

TBPL consulted with several federal, state, and local agencies to identify environmental resources that may be present within or near the proposed Project Corridor or crossed by the Route, and to evaluate the potential environmental impacts of the proposed Project. In addition, field surveys were conducted for several resources to further identify environmental resources and evaluate potential impacts.

Section 15 summarizes agency consultations that have occurred to date. TBPL's agency consultations and surveys focused on evaluating biological, cultural, wetland resources. TBPL is actively consulting with federal, state, and local agencies and governments and plans to address any problems or concerns raised.

## 19 Other Factors Considered

### 19.1 Design Construction Limitations

The Project was designed to facilitate transportation of crude oil between the TBPS Facility and the Enbridge Storage Facility. Specific factors considered in the selection of the Corridor and Route, including design and construction limitations, are identified in Sections 2 and 13 and are discussed throughout. Additionally, crossings of existing infrastructure (e.g., road ROWs and CPR railroad ROW) were factored into the Project design.

### 19.2 Economic Considerations

In selecting the Corridor and Route, one of many factors TBPL considered was facilitating construction of the Project in the most economical and efficient manner. The Corridor and Route selection required balancing of multiple factors as discussed specifically in Sections 2 and 13.

Other economic considerations associated with the Project include the positive direct and indirect economic benefits that the Project will provide within and beyond North Dakota. As discussed in Section 18.7, the Project will provide multiple economic benefits including short-term and long-term employment opportunities, increased tax revenue, and increased revenue from Project-related local expenditures. Additionally, the Project will provide a safe and efficient means to transport Bakken crude oil to an existing hub with connections to pipelines and rail facilities that can transport to markets throughout the United States, resulting in benefits to North Dakota producers and those with ties to Bakken crude oil production.

### 19.3 Present and Future Natural Resource Development

Existing oil and gas, coal, and sand and gravel operations have been identified in the area, and TBPL has confirmed that they do not conflict with the Route. Future petroleum production development and transport near the Corridor and Route can be expected from multiple entities; however, TBPL has no current plans to expand the crude oil transport pipeline system in the vicinity of the Project.

## 20 Applicant's Mitigation Measures and Policies and Commitments to Limit Environmental Impact

The Project has been designed and routed to minimize potential environmental impacts. The Project will be constructed and operated in accordance with all applicable environmental laws, regulations, and industry standards. TBPL will conduct its activities with the objectives of providing a healthful and safe workplace for its employees and preventing accidents and environmental incidents.

Mitigation measures to minimize adverse impacts of the proposed Project are identified throughout this Combined Application. Measures will be taken during clearing and grading to maintain continuous access to pastures and livestock facilities. Areas in which vegetation will be removed during construction will be restored in accordance with the landowner agreements. For areas to be revegetated, seeding will comply with requirements specified by the landowners or the NRCS. Trees and shrubs with DBH of 1 inch or greater will be replaced consistent with the Commission's Tree and Shrub Mitigation Specifications, if needed.

TBPL has developed or is in the process of developing several Project control plans that would be used during construction to minimize and mitigate impacts to environmental resources. These plans include the following, which would be incorporated into contract documents and implementation will be enforced by TBPL:

- **Stormwater Pollution Prevention Plan**

A SWPPP will be developed and implemented for stormwater management and erosion/sediment control measures. BMPs, such as silt fences, will be installed along the ROW adjacent to wetlands. Temporary erosion controls will be installed before initial disturbance of soils where necessary to minimize erosion. Erosion control BMPs will be maintained during construction as described in the SWPPP and EMP (**Appendix C**).

- **Spill Prevention, Control, and Countermeasures Plan**

A SPCC Plan will be developed and implemented for spill prevention measures and BMPs with details on spill response and notification procedures in the event of an inadvertent spill.

- **Environmental Mitigation Plan**

An EMP was developed (**Appendix C**) that outlines general construction-related mitigation measures in accordance with applicable industry-wide standards and regulatory requirements to minimize potential environmental impacts during Project development. During construction of the proposed pipeline, the HDD and bore methods will be used to avoid impacts at crossings of WOUS, roads, and railroad ROW.

- **Integrity Management Plan**

During operations, an IMP will be developed and implemented to comply with applicable federal regulations and outlines preventive maintenance, inspection, line patrol, leak detection systems, SCADA, and other pipeline integrity procedures to be implemented to ensure the safe operation of the Project.

- **Unanticipated Discoveries Plan**

An Unanticipated Discoveries Plan (**Appendix F**) has been developed to identify the protocols to be implemented in the event of a discovery of cultural resources or human remains.

- **Weed Management Plan**

A Weed Management Plan (**Appendix J**) has been developed identifying the BMPs to be implemented to prevent the spread of invasive and noxious weeds and to minimize the risk of importing or transporting any weed species. BMPs will be implemented to prevent the spread of noxious weeds and to minimize the risk of importing or transporting any weed species. Equipment and tools should be cleaned of any plant debris before ingress and egress from the Project Area.

- **Dust Control Plan**

A Dust Control Plan will be developed and implemented for measures to minimize and control fugitive dust during construction and soil disturbance.

To further comply with permits, plans, obligations, and commitments, TBPL would employ one or more Environmental Inspectors (EIs) during construction of the Project. The EI(s) would be responsible for monitoring construction and would provide reports to TBPL.

## 21 Qualifications of Preparers

### ARCADIS U.S., INC.

**Kathryn Cloutier, M.S.**

Ms. Cloutier has more than 35 years of experience in environmental permitting, regulatory compliance, and impact analysis including National Environmental Policy Act (NEPA) environmental assessments and environmental impact statements. She received a Biology Bachelor's Degree in 1975 and received a Master of Science degree in Environmental Science/Natural Resources in 2000. For more than 12 years, she has been working with the MHA Nation and TBPS to obtain environmental permits for the TBPS Facility and for a new greenfield petroleum refinery. Her specific experience includes project management for the MHA Nation and TBPS environmental permitting and regulatory compliance; consultation and coordination with regulatory agencies; knowledge of environmental laws; and writing clear, concise, legally defensible environmental documents. She has identified all required permits and approvals and has prepared comprehensive application packages for a variety of petroleum and natural gas pipelines and transmission line projects including Clean Water Act Section 404 (wetland) permits, Section 402 (process water and storm water discharge) permits, Section 401 Water Quality Certifications, floodplain use permits, hydrostatic test water and trench dewatering permits, and road permits. Additional experience includes preparation of SPCC plans and SWPPPs, fugitive dust control plans, county conditional/special use permits, county drainage/sediment control plans, noxious weed/invasive species control plans, revegetation and rehabilitation plans, and other plans.

**Doug Anderson**

Mr. Anderson has more than 14 years of experience in the environmental industry, specializing in land use planning, permitting, natural resources management, and regulatory strategy. His project experience has primarily focused on the planning and permitting of facilities and infrastructure in the oil and gas, mining, transportation, and power sectors. Environmental permitting experience includes NEPA analysis for projects, Section 404/401 USACE and state water quality permitting, Federal Energy Regulatory Commission, and multiple consultations with USFWS and state wildlife agencies regarding sensitive ecological resources.

**Stephen W. Chu, SPWS**

The wetland and waterbody delineations were performed and authored by Mr. Chu, Senior Professional Wetland Scientist, Senior Environmental Scientist. Mr. Chu was a Field Coordinator and one of two Lead Wetland Delineators for this Project. Mr. Stephen W. Chu, SPWS (#1770) is a Certified Senior Ecologist and has earned a Master of Science degree in Natural Resources and Environmental Sciences from the University of Illinois at Urbana-Champaign. Mr. Chu has more than 16 years of experience managing and completing complex ecology-related projects. His area of expertise consists of wetland delineations, wetland mitigation design, wetland restoration, wetland and native area monitoring, habitat surveys, tree surveys, and threatened and endangered species surveys.

**Stuart Jennings, M.A. SPWS**

The wetland and waterbody delineations were performed and authored by Mr. Jennings, Senior Professional Wetland Scientist, Senior Ecologist. Mr. Jennings was a Field Coordinator and one of two Lead Wetland Delineators for this Project. Mr. Jennings is a Senior Professional Wetland Specialist (SPWS; #1925) is a Senior Ecologist who has a Master of Arts in Biology and undergraduate in Botany, from Marshall University, Huntington WV. Mr. Jennings has more than 25 years of experience managing and completing ecology-related projects.

**Katherine Mageland, WPIT**

Ms. Mageland was a Field Coordinator and Lead for the biological field surveys and coauthored the Biological Habitat Assessment Report and Aquatic Resources Delineation Report. Ms. Mageland is a Wetland Professional in Training with 7 years of environmental consulting experience.

**Olivia Cacciatore, PWS**

Ms. Cacciatore coauthored the Biological Habitat Assessment Report. Ms. Cacciatore holds a Master of Science degree in Forest Resources and Conservation from the University of Florida. She is a Professional Wetland Scientist and has 6 years of experience in environmental consulting, wetland ecology and hydro-ecology research, and environmental surveys. She is certified by the Society of Wetland Scientists as a Professional Wetland Scientist (#3788).

**Ron Johnson, P.E., PWS**

The wetland and waterbody delineations were performed Mr. Johnson. He is an Environmental Professional with 22 years of experience as a Regulatory Consultant. He is certified by the Society of Wetland Scientists as a Professional Wetland Scientist (#1683).

**Timothy Newton, P.G.**

Mr. Newton has more than 30 years of experience in engineering and scientific projects involving the physical and hydrologic properties of soil and rock including 9 years spent in the field performing geotechnical and geophysical studies for highway structures. He has extensive experience with dam safety evaluations and flood control designs, including performance of subsurface investigations, hazard classifications, and visual inspections.

**Timothy Webb-Horvath, P.E.**

Mr. Webb-Horvath has a Bachelor of Science in Environmental Resource Engineering successfully obtained from SUNY College of Environmental Science and Forestry, located in New York. He has been with Arcadis since April 2021 in the position of Environmental Engineer. His role consists of advising on water crossings, hydrological evaluations and surface water analytics. Mr. Webb-Horvath has extensive experience in water and hydrological applications, as well as with pipeline and water crossings was critical to the successful execution of the Project.

**Timothy Noel, B.S.**

Mr. Noel holds a Bachelor of Science in Environmental Science from the University of Phoenix, with a focus in plant and animal biology. He has 4 years of experience providing technical expertise in support of linear and non-linear projects in the mid-Atlantic region of the United States. He has a broad spectrum of environmental compliance and permitting for rail, commercial/industrial, and natural gas transmission clients.

**Jason Adams, P.G.**

Mr. Adams (WY-PG #3826) is the Arcadis soils, geology, and paleontology technical lead for environmental impact analyses in western North America and has provided project management for multiple oil and gas development, transportation, and distribution projects. He has a wide range of experience in the field of geological and hydrological sciences and a variety of disciplines including soil science; hydrology; exploration geology; sedimentology; stratigraphy; paleontology; and geochemistry.

**Nancy Cochran**

Ms. Cochran is a Lead GIS Analyst with 14 years of experience, primarily supporting complex environmental permitting, siting, and routing projects. She was one of two Lead GIS Analysts for this Project for the field surveys impact calculations, report writing, and figure creation.

**Mollie Sheini, M.S.**

Ms. Sheini has a Master of Science degree in Wetland Ecology from the University of Alabama at Tuscaloosa and worked for the USFWS Easement Program up in Pingree, North Dakota for 13 months. She is a wetlands ecologist with 6 years of experience working as a data analyst and environmental technician. She was one of two Lead GIS Analysts for this Project for impact calculations, report writing, and figure creation.

**METCALF ARCHAEOLOGICAL CONSULTANTS, INC.**

Metcalf Archaeological Consultants, Inc. (Metcalf) has 40 years of professional experience providing quality cultural resource management services for private sector and government clients.

**Andrew Reinhard, Ph.D.**

Dr. Reinhard serves as project director on cultural resource management projects. Project duties include the procurement and execution of technical projects, serving as the primary point of contact between clients and agencies while providing excellent and responsive customer service. Responsibilities extend to ensuring compliance with applicable regulations, permits, and statutes while monitoring schedules, budgets, and field operations. Dr. Reinhard is responsible for supervising and contributing to technical aspects of archaeological projects both in the field and in the office. Over the past 30 years, he has conducted archaeological investigations in North Dakota, Kansas, Illinois, and New Mexico, as well as in Greece and Italy.

**Liz France, M.S.**

Ms. France has been working in the field of archaeology since 1998. She received her bachelor's degree in 2003 and continued to work as an archaeologist in both New York State and in Mesoamerica. She received her Master of Science degree in 2008 and began working in North Dakota the same year. Ms. France has worked in North Dakota, South Dakota, Montana, and Kansas in her role as a Project Director, leading field crews and writing technical reports. She is also a Project Manager for Metcalf and routinely works with clients and agencies. Further, she is the Regional Project Coordinator for the Northern Region at Metcalf, maintains staff levels through hiring, and puts together the schedules for the staff.

**Bill Bluemle**

Mr. Bluemle has been a professional archaeologist for more than 30 years. Since joining Metcalf in 1999, Mr. Bluemle has supported and supervised numerous projects in North Dakota, South Dakota, Montana, and Wyoming. He has authored many technical reports for federal, state, Tribal, and local government agencies. His duties at Metcalf include conducting field surveys, testing, monitoring, supervising crew, interacting with clients and government agencies, and technical report writing.

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