



# Application for a License to Cross Public Lands

Enbridge Energy, Limited Partnership • Line 3 Replacement Project

November 2020



## TABLE OF CONTENTS

<b>1.0</b>	<b>APPLICANT INFORMATION .....</b>	<b>1</b>
<b>2.0</b>	<b>PROJECT BACKGROUND .....</b>	<b>2</b>
2.1	ENVIRONMENTAL REVIEW .....	2
<b>3.0</b>	<b>PROJECT COMPONENTS AND ASSOCIATED CONSTRUCTION ACTIVITIES.....</b>	<b>4</b>
3.1	GENERAL CONSTRUCTION PLANS.....	4
3.2	PIPELINE.....	5
3.2.1	Temporary and Operational Rights-of-Way .....	5
3.2.2	Additional Temporary Workspace.....	6
3.3	RIGHT-OF-WAY ACCESS.....	6
3.4	ASSOCIATED FACILITIES.....	6
3.4.1	Valves .....	7
3.4.2	Corrosion Protection.....	7
3.4.3	Construction Yards.....	8
3.5	WINTER CONSTRUCTION .....	8
<b>4.0</b>	<b>OPERATIONS ACTIVITIES .....</b>	<b>9</b>
<b>5.0</b>	<b>DEACTIVATION .....</b>	<b>10</b>
5.1	PERMANENT DEACTIVATION OF EXISTING LINE 3 .....	10
5.2	PERMANENT DEACTIVATION OF L3R.....	10
<b>6.0</b>	<b>PROJECT ACTIVITIES ON PUBLIC LANDS .....</b>	<b>10</b>
6.1	UPLAND CROSSING METHODS AND BEST MANAGEMENT PRACTICES....	11
6.2	WATERBODY CROSSING METHODS .....	12
6.2.1	Trench: Open Cut (Non-Isolated) Method.....	14
6.2.2	Trench: Push-Pull Method .....	14
6.2.3	Trench: Dry (Isolated) Methods .....	14
6.2.4	Modified Dry Crossing Method .....	15
6.2.5	Trenchless: Horizontal Directional Drill Method .....	15
6.2.6	Temporary Bridges.....	16
6.2.7	Waterbody Crossing Best Management Practices.....	20
6.3	WETLAND CROSSING METHODS.....	20
6.3.1	Trench: Modified Upland Construction Method.....	21
6.3.2	Trench: Push-Pull Method and Buoyancy Control .....	21
6.3.3	Wetland/Basin Best Management Practices .....	21
6.4	CONSTRUCTION DEWATERING DISCHARGES .....	22
6.5	PIPELINE DEPTH OF COVER .....	24
6.6	RECREATIONAL ACCESS AND HUNTING .....	25
6.7	BLASTING .....	26
6.8	PUBLIC LAND LEASE ACTIVITIES.....	26
6.8.1	Infiltration of Buoyancy Control and Hydrostatic Testing Water .....	26
6.8.2	Water Appropriation at Water Access Sites .....	27
6.9	REVEGETATION.....	27
6.10	POST-CONSTRUCTION MONITORING .....	27
6.11	SPECIAL FEATURES ON PUBLIC LANDS .....	28
6.11.1	Federally Funded Lands.....	28
6.11.2	Trails .....	28
6.11.3	Mineral Resources .....	31
6.11.4	Forestry Resources .....	31
6.11.5	Aquatic Management Areas .....	34
6.11.6	Sensitive Species and Plant Communities.....	34

6.11.7	Peatlands .....	37
6.11.8	Vernal Pools/Seasonal Ponds .....	40
6.11.9	Old Growth Forest .....	40
6.11.10	Archaeological and Historic Resources .....	41
6.11.11	Beaver Dams .....	41
<b>7.0</b>	<b>ENVIRONMENTAL INSPECTION AND MONITORING .....</b>	<b>42</b>
<b>8.0</b>	<b>COMPLIANCE WITH ENVIRONMENTAL STANDARDS .....</b>	<b>42</b>
8.1	STANDARDS FOR ROUTE DESIGN .....	44
8.1.1	Topography .....	44
8.1.2	Vegetation .....	47
8.1.3	Soil .....	49
8.1.4	Crossing Public Waters .....	49
8.1.5	Special Use Areas .....	50
8.2	STANDARDS FOR STRUCTURE DESIGN .....	50
8.2.1	Location of Utility .....	50
8.2.2	Appearance .....	50
8.2.3	Right-of-Way .....	50
8.3	STANDARDS FOR CONSTRUCTION METHODS .....	51
8.4	SAFETY CONSIDERATIONS .....	52
8.5	RIGHT-OF-WAY MAINTENANCE .....	52

### **TABLES**

Table 6.2-1	Waterbody Crossings on Public Land .....	13
Table 6.2-2	Bridges for Waterbody Crossings on Public Land .....	18
Table 6.11-1	MDNR Timber Permits along the Line 3 Replacement Route .....	31
Table 6.11-2	Forestry Crossings along the Line 3 Replacement Route .....	32
Table 6.11-3	Peatland Survey Areas on Public Lands for the Line 3 Replacement Project .....	37
Table 8.1-1	Utilities Co-located with the Line 3 Replacement Project on Public Lands .....	44

### **FIGURES**

Figure 2.0-1	General Project Location Map .....	3
--------------	------------------------------------	---

### **ATTACHMENTS**

Attachment A	List of Public Lands Crossed
Attachment B	Maps of Public Lands Crossed
Attachment C	Environmental Protection Plan
Attachment D	Winter Construction Plan
Attachment E	Post-Construction Vegetation Management Plan for Public Lands and Waters
Attachment F	Post-Construction Wetland and Waterbody Monitoring Plan
Attachment G	Non-Public Wetland Crossings on Public Lands Table
Attachment H	Blasting Plan
Attachment I	Site-Specific Crossing and Restoration Plans
	• Paul Bunyan State Trail
	• Willard Munger State Trail
	• Little Otter Creek Aquatic Management Area

Attachment J	Mineral Resource Plan
Attachment K	NHIS Review and Avoidance Plan ( <i>Non-public Information</i> )
Attachment L	Wetland/Peatland Construction Plans

## **ACRONYMS AND ABBREVIATIONS**

Application	revised Application for a License to Cross Public Waters
ATWS	additional temporary workspace
BMPs	best management practices
CFR	Code of Federal Regulations
construction yards	pipeline, staging areas, and storage yards
CWA	Clean Water Act
Designated Route	MPUC Designated Route
DOC	depth of cover
DOC-EERA	Minnesota Department of Commerce, Energy Environmental Review and Analysis
EI	Environmental Inspector
EIS	Environmental Impact Statement
Enbridge	Enbridge Energy, Limited Partnership
EPP	Environmental Protection Plan
EQB	Minnesota Environmental Quality Board
FdL	Fond du Lac Band of Lake Superior Chippewa
FEIS	Final Environmental Impact Statement
HDD	horizontal directional drill
IEM	Independent Environmental Monitor
INS	invasive and noxious species
IVP	Intelligent Valve Placement
L3R or Project	Line 3 Replacement Project
LCOG	Lowland Conifer Old Growth
May 2020 Order	May 1, 2020 MPUC Order Finding Environmental Impact Statement Adequate, Granting Certificate of Need as Modified, and Granting Routing Permit as Modified
MDNR	Minnesota Department of Natural Resources
Minnesota Rules	Minnesota Administrative Rules
Mitigation Plan	L3R Compensatory Wetland Mitigation Plan
MP	milepost
MPCA	Minnesota Pollution Control Agency
MPUC	Minnesota Public Utilities Commission
MPUC Applications	Enbridge applications for a certificate of need and route permit
MPUC CN Order	September 5, 2018 MPUC-issued written order granting the certificate of need as modified and required filings
MPUC FEIS Order	May 1, 2018 MPUC-issued written order finding the revised FEIS adequate
MPUC RP Order	October 26, 2018 MPUC-issued written route permit order
NHIS	Natural Heritage Information System
NPCs	Native Plant Communities
NPDES	National Pollutant Discharge Elimination System
OHV	Off-Highway Vehicle
OHWL	ordinary high water level
OHWM	ordinary high water mark
PCMP	Post-Construction Wetland and Waterbody Monitoring Plan
PHMSA	Pipeline and Hazardous Materials Safety Administration
Procedures	Summary of Construction Methods and Procedures
PSPs	potential seasonal ponds

RSA	Route Segment Alternative
SDS	State Disposal System
SOBS	Sites of Biodiversity Significance
SSRPs	Site-Specific Restoration Plans
SWPPP	Stormwater Pollution Prevention Plan
TWS	temporary workspace
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
VMP	Post-Construction Vegetation Management Plan for Public Lands and Waters

## 1.0 APPLICANT INFORMATION

Enbridge Energy, Limited Partnership (“Enbridge”) submits this revised Application for a License to Cross Public Lands (“Application”) to the Minnesota Department of Natural Resources (“MDNR”) for the passage of utilities<sup>1</sup> under public lands<sup>2</sup> related to the construction and operation of the Line 3 Replacement Project (“L3R” or “Project”). This revised Application incorporates Project updates since the December 2019 submittal that are a result of Enbridge’s ongoing coordination with federal, Tribal, and state regulatory agencies (including the MDNR) as well as landowners and other stakeholders, as well as comments received from the MDNR on application materials. Information on the Project applicant follows in this section.

Line 3 Replacement Project  
Enbridge Energy, Limited Partnership  
11 East Superior Street, Suite 125  
Duluth, Minnesota 55802

Contact: Bobby Hahn  
218-522-4751 (office)  
[Bobby.Hahn@enbridge.com](mailto:Bobby.Hahn@enbridge.com)

Barry Simonson  
218-522-4825 (office)  
[Barry.Simonson@enbridge.com](mailto:Barry.Simonson@enbridge.com)

Attachment A of this Application contains tables that describe each 40-acre parcel of public land crossed by a component of the Project. Each public land has been assigned a unique Project ID number by Enbridge based on its location from west-to-east across the state. All MDNR parcels are located south and east of Clearbrook, Minnesota.

Attachment B contains a map set showing the boundaries of each 40-acre parcel crossed by the Project. Other features such as public waters, state forests, state trails, MDNR’s requested forestry road crossing locations, Native Plant Communities (“NPCs”) ranked S1 to S3 and Sites of Biodiversity Significance (“SOBS”) ranked High or Outstanding, and data gathered during field survey (i.e., wetlands, waterbodies, and invasive and noxious weeds [“INS”]) are also depicted where relevant. Based on feedback from MDNR, Enbridge utilized its cadastral survey data to determine the boundaries of public lands (as opposed to public land boundaries available through Minnesota Geospatial Commons), and the corresponding extent of the construction workspace<sup>3</sup> that is located on a public land. Enbridge’s cadastral survey boundaries and Minnesota Geospatial Commons boundaries are displayed on maps in Attachment B.

---

<sup>1</sup> Utilities means lines, cables, and conduits for telephone, telegraph, or electric power, and pipelines for gases, liquids, or solids in suspension, and any other such item covered by the licensing requirements of Minnesota Statutes, section 84.415 (Minnesota Rules 6135.0200, Subp. 3).

<sup>2</sup> For purposes of this Application, the term “public land” includes all tracts or lots of real property belonging to the state and under the control and supervision of the Commissioner of Natural Resources.

<sup>3</sup> The terms “construction right-of-way,” “temporary construction right-of-way,” “construction workspace,” and “temporary construction workspace” define the primary mainline workspace area required for installation of L3R. For clarity, Enbridge will generically use “construction workspace” instead of “temporary construction right-of-way, temporary construction workspace,” or “construction right-of-way” as the terminology for 1) the operational right-of-way and 2) temporary construction area (which includes the following defined terms: Temporary Workspace and Additional Temporary Workspace. All construction equipment and vehicles will be confined to this approved construction workspace.

## 2.0 PROJECT BACKGROUND

The Project is a pipeline integrity- and maintenance-driven program designed to address identified mechanical integrity deficiencies on the existing Line 3 pipeline and to return the pipeline to the operating capabilities for which it was designed. L3R consists of approximately 355 miles of new 36-inch-diameter pipeline traversing the states of North Dakota, Minnesota, and Wisconsin, and terminating at the existing Enbridge Superior terminal facility near Superior, Wisconsin. This Application includes activities on public lands resulting from replacement of the existing 34-inch-diameter Line 3 pipeline with 36-inch<sup>4</sup>-diameter pipeline and associated facilities in Minnesota. Enbridge's route generally follows the existing Line 3 pipeline along the Enbridge Mainline System right-of-way from the North Dakota/Minnesota border in Kittson County to the Clearbrook Terminal in Clearwater County. Next, L3R turns south from Clearbrook to generally follow an existing third-party crude oil pipeline right-of-way to Hubbard County. The route then turns east to generally follow other existing electric transmission lines until it rejoins the Enbridge Mainline System right-of-way in St. Louis County, through the Fond du Lac Band of Lake Superior Chippewa ("FdL") Reservation to the Minnesota/Wisconsin border in Carlton County (see Figure 2.0-1).

## 2.1 ENVIRONMENTAL REVIEW

In accordance with Minnesota Administrative Rules ("Minnesota Rules") Chapter 4410, the Minnesota Department of Commerce, Energy Environmental Review and Analysis ("DOC-EERA") staff prepared an Environmental Impact Statement ("EIS") in cooperation with the MDNR and Minnesota Pollution Control Agency ("MPCA") to facilitate the Minnesota Public Utilities Commission's ("MPUC") consideration of Enbridge's Certificate of Need and Route Permit Applications ("MPCA Applications") for the Project. DOC-EERA issued the draft EIS on May 15, 2017 and the final EIS ("FEIS") on August 17, 2017. On December 7, 2017, the MPUC deemed the FEIS inadequate solely on the basis of four specific and narrow issues, and a revised FEIS was published on February 12, 2018. On May 1, 2018, the MPUC issued a written order finding the revised FEIS adequate ("MPUC FEIS Order").

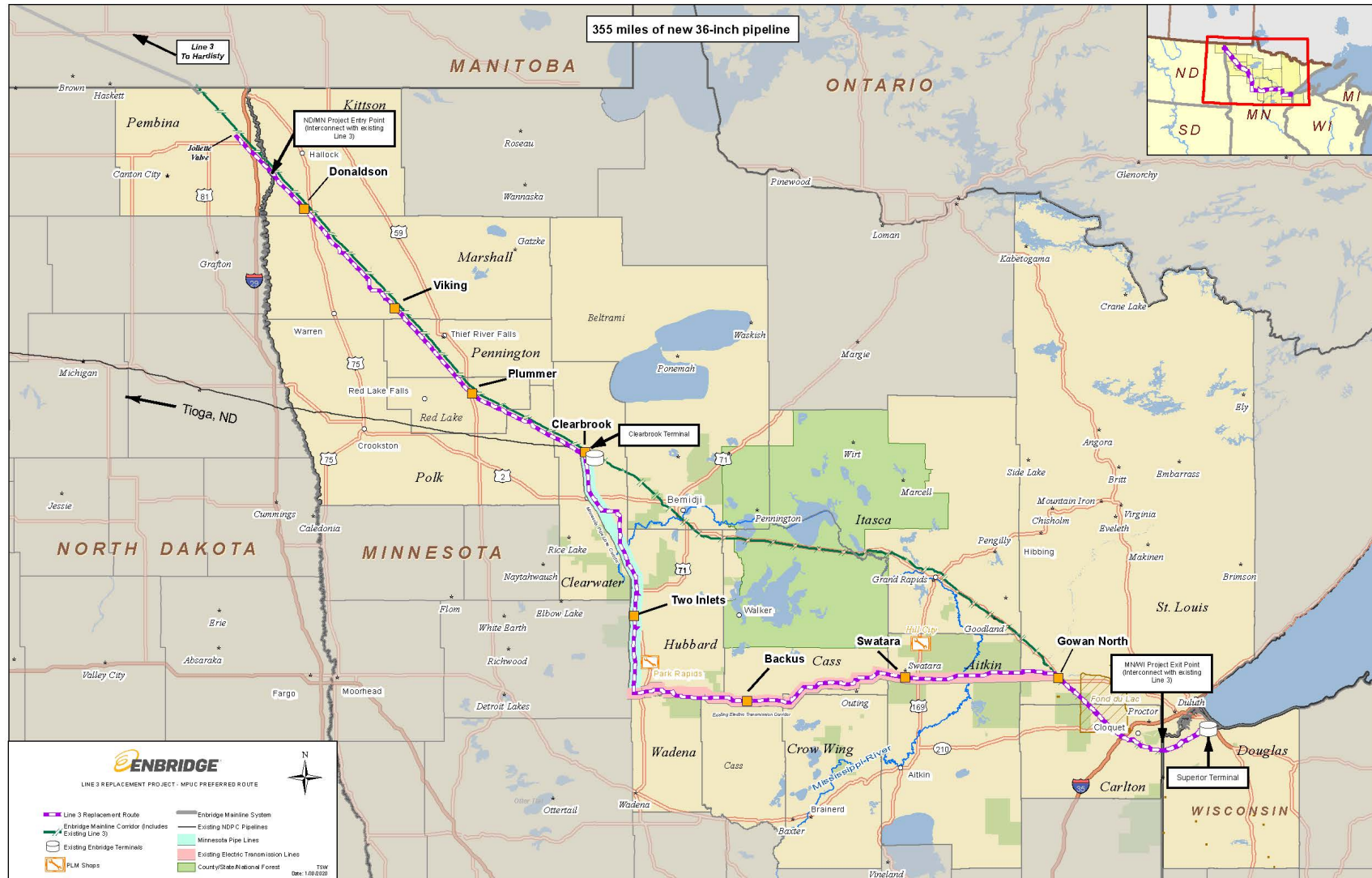
The MPUC issued a written order on September 5, 2018, granting the Certificate of Need as modified and requiring filings ("MPUC CN Order"). On October 26, 2018, the MPUC issued a written Route Permit order ("MPUC RP Order") identifying the Project's Designated Route. The Designated Route is a 750-foot wide corridor, which allows for minor adjustments to the pipeline alignment and operational right-of-way within the Project.

On June 3, 2019, the Minnesota Court of Appeals reversed the MPUC FEIS Order upon determining the failure to address the potential impacts of an oil spill into the Lake Superior Watershed constituted an inadequacy in the FEIS. On October 8, 2019, MPUC issued a written order finding the FEIS inadequate because it did not sufficiently address the potential impact of an oil spill into the Lake Superior Watershed. The order requested DOC-EERA to revise the FEIS to include an analysis of the potential impact of an oil spill into the Lake Superior Watershed and to submit the revised FEIS to the MPUC within 60 days.

---

<sup>4</sup> 36-inch-diameter steel pipeline is a more standard pipeline than 34-inch in the industry and among the Enbridge Mainline System. The decision to replace with 36-inch-diameter pipeline makes pipe, pipefitting, valves, and maintenance equipment more readily available. A 36-inch pipeline is more energy efficient than a 34-inch pipeline.

Figure 2.0-1 General Project Location Map



On December 9, 2019, the DOC-EERA issued the second revised FEIS. Notice of availability of the second revised FEIS and the procedures for written comments were also published in the December 9, 2019 Minnesota Environmental Quality Board (“EQB”) Monitor. The MPUC accepted written and oral comments on the second revised FEIS through January 31, 2020. The MPUC met to discuss the adequacy of the second revised FEIS on February 3, 2020, found it adequate, and reaffirmed its previous MPUC CN Order and MPUC RP Order with a minor change related to the public safety escrow condition within the Route Permit. The MPUC’s written orders were issued on May 1, 2020.

### **3.0 PROJECT COMPONENTS AND ASSOCIATED CONSTRUCTION ACTIVITIES**

Enbridge plans to commence construction of the new pipeline and associated facilities as soon as all construction related regulatory approvals have been obtained.

#### **3.1 GENERAL CONSTRUCTION PLANS**

Enbridge has developed an Environmental Protection Plan (“EPP”) (Attachment C) that contains elements of industry and company-wide best management practices (“BMPs”) that will be implemented during construction, such as erosion and sediment control measures, construction spill prevention, containment, and control measures; measures to prevent and contain inadvertent drilling fluid releases; INS management; and restoration/revegetation measures. Enbridge will implement standardized construction and restoration measures across the Project to avoid and minimize potentially adverse effects to public lands resulting from construction workspace preparation, construction activities, and maintenance of the pipeline. The EPP contains additional requirements for construction activities on lands administered by the MDNR which are underlined for efficient identification by pipeline construction staff.

Appendix A of the EPP contains Enbridge’s Summary of Construction Methods and Procedures document (“Procedures”), which provides a more complete description of the construction techniques that are outlined in Enbridge’s EPP. It describes the various construction methods Enbridge will utilize to construct across public lands and the decision-making process that occurs during design and in the field when identifying the appropriate crossing technique.

Appendix B of the EPP contains Enbridge’s INS Management Plan which describes the BMPs that will be utilized to manage aquatic and terrestrial INS, and tree pests/diseases. Enbridge’s INS Management Plan describes the strategies that will be used to minimize the spread of target terrestrial INS species identified within the Project construction workspace, access roads and improved haul routes that occur on public lands.

Enbridge is proposing winter construction at select locations on public lands (see Section 3.5). Enbridge will follow the procedures and construction techniques outlined in its Winter Construction Plan (see Attachment D) that differ or are additive to those described in the EPP.

Enbridge has developed a Post-Construction Vegetation Management Plan for Public Lands and Waters (“VMP”) (Attachment E) that describes the post-construction monitoring for uplands on public lands, and operation-related vegetation management procedures on public land and at public waters. Appendix A of the VMP includes the Planting Plan, which describes the seed mixes to be used on public lands and waters and a map set identifying which seed mixes will be applied at public land. It also identifies woody vegetation restoration efforts on lands managed by MDNR

Fisheries and Parks and Trails Divisions. Enbridge will also conduct post-construction monitoring at wetland and waterbody features in accordance with the Post-Construction Wetland and Waterbody Monitoring Plan (“PCMP”; Attachment F). The VMP and PCMP are further discussed in Section 6.10.

## 3.2 PIPELINE

Pipeline construction will typically follow the sequential process presented in Section 2.6 of the Procedures (Appendix A of Attachment C). The pipeline will typically be installed in uplands using the techniques described in Sections 1.8 through 1.21 of the EPP (Attachment C); in wetlands using the procedures described in Section 3.0 of the EPP and Section 3.0 of the Procedures; and across waterbodies using the methods described in Section 2.0 of the EPP and in Section 4.0 of the Procedures.

The Project will require the acquisition of new temporary workspace (“TWS”)<sup>5</sup> and operational right-of-way<sup>6</sup> in Minnesota. The Project will also require additional temporary workspace (“ATWS”).<sup>7</sup> No additional construction workspace, ATWS, or operational right-of-way will be allowed on public lands without MDNR review and approval. Changes to the Project following issuance of the License to Cross Public Lands will require a License amendment.

### 3.2.1 Temporary and Operational Rights-of-Way

Section 2.3 and Table 2.3-1 of the Procedures (see Appendix A of Attachment C) present the typical construction workspace and operational right-of-way dimensions that will be used for pipeline construction and operation in Minnesota. Construction in upland<sup>8</sup> areas will generally require a 120-foot-wide construction workspace. Enbridge will generally use a 95-foot-wide construction workspace in field-delineated wetland areas. Vegetation clearing at waterbody crossings is depicted in Figures 4.1-1 and 4.5-1 of the Procedures in Appendix A of Attachment C. The boundaries of the construction workspace will be flagged prior to clearing as outlined in Section 1.1 of the EPP (see Attachment C). The construction workspace will allow for temporary storage of topsoil and trench spoil, as well as accommodate safe operation of construction equipment and a travel lane. Temporary equipment bridges may be installed within the travel lane at waterbody crossings (see additional discussion in Section 6.2.5 of this Application).

A standard 50-foot-wide operational right-of-way in both uplands and wetlands is assumed for calculating impacts, which will be wholly contained within the 120-foot-wide and 95-foot-wide construction rights-of-way. Figure 5 of the EPP (see Attachment C) presents the temporary construction workspace and operational right-of-way configurations in both upland, wetland, and when co-located<sup>9</sup> with existing Enbridge or third-party pipelines or utilities, and in greenfield<sup>10</sup> locations. Overall, L3R will be co-located with other Enbridge pipelines; third-party pipelines or utilities; or roads, railroads, or highways for approximately 91 percent of the route. On public

---

<sup>5</sup> TWS is land located adjacent to and contiguous with the proposed right-of-way.

<sup>6</sup> The operational right-of-way is the legally acquired land rights used to install, maintain, operate, and access L3R.

<sup>7</sup> ATWS is temporary construction workspace needed when encountering environmental features that require special construction methods.

<sup>8</sup> Uplands are defined as an elevated region of land lying above the level where water flows or collects in basins.

<sup>9</sup> Co-located is any portion of the route that is within 250 feet from the centerline of a known utility.

<sup>10</sup> The term “greenfield” refers to land that has not previously been used for another pipeline, utility, road, or railroad right-of-way. For the purposes of this document, the term greenfield is applied to land that is more than 250 feet away from an existing parallel pipeline, utility, road, or railroad right-of-way.

lands, the Project is co-located for approximately 89 percent of the route (see Section 8.1.1). Where co-located with Enbridge's existing pipelines, Enbridge will use approximately 40 feet of existing operational right-of-way as temporary workspace that will revert back to operational right-of-way after construction (see Figure 5 of the EPP). The offset distance between L3R and the existing third-party pipeline or utility will vary, as presented on Figure 5 of the EPP.

A more detailed description of Enbridge's plans for construction across wetlands and waterbodies on public lands can be found in Sections 3.0 and 4.0, respectively, of the Procedures (Appendix A of Attachment C).

### **3.2.2 Additional Temporary Workspace**

ATWS will be required outside of the construction workspace to facilitate specific aspects of construction. ATWS are planned in areas needed to stage equipment and materials, hold spoil material, and where construction methods will require additional workspace. In general, Enbridge attempts to locate ATWS outside of wetlands wherever practicable. However, ATWS may be sited in select wetlands where the wetland is adjacent to a waterbody, road, railroad, foreign utility crossing, and/or pipeline cross-over, and/or where required based on site-specific conditions with prior approval from the applicable regulatory agencies. ATWS will be located at least 50 feet away from the Ordinary High Water Level ("OHWL") if topographic or other physical conditions such as stream channel meanders allow, except where the adjacent upland consists of cultivated or rotated cropland, or other disturbed lands. There are some exceptions to this practice where ATWS was added at the request of MDNR to accommodate requested construction practices. Additional information regarding ATWS is presented in Section 2.5 of the Procedures (see Appendix A of Attachment C).

## **3.3 RIGHT-OF-WAY ACCESS**

Enbridge will utilize haul routes,<sup>11</sup> access roads,<sup>12</sup> or shoo-flies<sup>13</sup> to obtain access to the construction workspace. Right-of-way access is presented in more detail in Section 1.4 of the EPP and Section 2.1 of the Procedures (see Attachment C).

Roads on public lands, including permanent roads to valves, will be permitted through the MDNR's Lease process. Enbridge has submitted Lease applications to authorize the use of short-term and long-term access roads under MDNR jurisdiction. Access roads that cross MDNR parcels included in this Application are shown on the maps in Attachment B.

## **3.4 ASSOCIATED FACILITIES**

Enbridge will construct a number of associated facilities to support pipeline operations. The following associated facilities will have no impacts to public lands:

- Clearbrook Terminal expansion;

---

<sup>11</sup> Existing public roads will typically be used as haul routes, which are used to deliver equipment and materials to the workspace during construction.

<sup>12</sup> An access road is a road used to access the pipeline construction workspace, operational right-of-way, or associated facility. Access roads can be public roads or private drives and can be existing, modified, or newly constructed.

<sup>13</sup> A shoo-fly is a short detour off the main access road or construction workspace used to avoid impacts to sensitive features, such as existing trails or wetland features.

- Pump stations (see Section 2.8.1 of the Procedures [Appendix A of Attachment C]); and
- Pipeline maintenance shops (see Section 2.8.4 of the Procedures).

Some mainline valves, corrosion protection facilities, and construction yards will be located on public lands. Information on these facilities is included in the following sections.

### 3.4.1 Valves

Enbridge will place mainline valves along the pipeline.<sup>14</sup> A valve is a remotely controlled shutoff mechanism that will be used to isolate a segment of pipeline for maintenance purposes or in the rare case of a release. Enbridge will also construct and maintain a permanent access road to each valve site. Valve construction is presented in more detail in Section 2.8.2 of the Procedures (see Appendix A of Attachment C).

Enbridge completed an Intelligent Valve Placement (“IVP”) analysis as part of the Project design to determine optimal valve locations. Based on the IVP analysis and current design, 32 mainline valves will be installed in Minnesota. Valves will be installed near major rivers, other environmentally sensitive areas, population centers, and pump stations. Enbridge also considered the topography and elevation profiles near these features when determining valve placement. Two mainline valve sites are located on land administered by the MDNR (ID Nos. 127 and 139; see Attachments A and B). The total acreage of permanent impact associated with the mainline valve on each parcel is presented in Attachment A. Impacts from the permanent roads to these valve sites are included in the application for a Lease for Long-Term Non-Forest Roads. Enbridge has also applied for a Work in Public Waters Application for the permanent bridge that will cross the Willow River on private land that is needed to access a valve.

### 3.4.2 Corrosion Protection

Enbridge mitigates corrosion by implementing a number of different measures, such as cathodic protection,<sup>15</sup> alternating current/direct current mitigation,<sup>16</sup> and corrosion-inhibiting coatings. Cathodic protection and the impressed current mitigation system are presented in more detail in Section 2.8.3 of the Procedures (see Appendix A of Attachment C).

Cathodic protection is a commonly used form of corrosion control on buried pipelines. Cathodic protection inhibits external corrosion through the use of sacrificial anodes, which corrode instead of the pipe, and/or by impressing a small electrical current through the pipe. Alternating current/

---

<sup>14</sup> Pipeline safety, including valve placement requirements, is regulated by the U.S. Department of Transportation’s Pipeline and Hazardous Materials Safety Administration (“PHMSA”) under Title 49 Code of Federal Regulations (“CFR”) Parts 100-199. Specifically, 49 CFR Part 195 prescribes safety standards and reporting requirements for hazardous liquid transportation pipeline facilities and 49 CFR Part 195.260 presents the minimum standards for valve installations. Enbridge consulted with PHMSA on the preliminary design of the Project and will comply with these and all other required federal safety regulations.

<sup>15</sup> Cathodic protection is a method for safeguarding the pipeline against corrosion. In a cathodic protection system, the metal to be protected (the pipeline) is connected to a metal that corrodes more easily (*anode array* or *anode groundbed*). The metal that corrodes more easily corrodes instead of the pipeline. Cathodic protection can be achieved by using reactive anode metals that are electrically connected to the pipeline (also known as a *galvanic anode* systems) or by using inert anode metals and impressing an electric current on the system (also known as an *impressed current* system). Enbridge’s proposed cathodic protection system includes anode arrays installed in conventional beds near the ground surface as well as in deeper wells.

<sup>16</sup> Alternating current and direct current mitigation is a means of protecting the pipeline and its cathodic protection system from electromagnetic-induced voltage and stray current from nearby electric powerlines.

direct current mitigation systems are employed to account for potential stray current sources, such as adjacent cathodically protected structures or utilities, high-voltage direct current and alternating current transmission lines, geomagnetic/telluric activity, or welding shops.

Enbridge's coating specifications, which reference National Association of Corrosion Engineers International (a professional organization for the corrosion control industry), federal regulations, and other industry standards, have been implemented to reduce long term external corrosion defects. Enbridge also has a coating integrity program that manages the long-term status of the pipe coating and investigates areas of potential concern.

The entire pipeline will be protected with a cathodic protection system. One cathodic bed facility is located on land administered by the MDNR (ID No. 32) (see Attachments A and B). The total acreage of permanent impact associated with the cathodic bed facility on this parcel is presented in Attachment A.

### **3.4.3 Construction Yards**

To support construction of the pipeline, staging areas, and storage yards (collectively referred to as "construction yards") will be strategically located outside of the construction workspace along the route. Construction yards are presented in more detail in Section 2.2 of the Procedures (see Appendix A of Attachment C). One construction yard is partially located on public land (ID No. 127) (see Attachments A and B). The total acreage of temporary impact associated with the construction yard is presented in Attachment A as ATWS.

## **3.5 WINTER CONSTRUCTION**

The MDNR has identified four areas on state land where winter construction is preferred. Of these, Enbridge committed to completing the following three areas in winter to the extent feasible and has prioritized these areas within its winter work program (see Attachment A):

- Mileposts ("MPs") 995.7 to 997.2 (portion on public lands is between MPs 995.7 to 996.5, or Land ID Nos. 32-35);
- MPs 1055.4 to 1061.8 (portion on public lands is between MPs 1056.8 to MP 1061.8, or Land ID Nos. 86-110); and
- MPs 1078.1 to 1085.6 (portion on public lands is between MPs 1078.3 to 1084.5, or Land ID Nos. 143-169).

The feasibility of winter/frozen construction will be dependent on the construction start date. If Enbridge begins construction at a date which does not allow construction of the three areas identified above, Enbridge will provide MDNR with an updated winter/frozen construction proposal that maximizes the extent of winter/frozen construction that can be completed given the revised construction schedule.

Regardless of construction start date, not all construction activities can be completed during winter within these areas. When a full winter season is available, clearing, construction mat installation, and pipe installation will be completed to the extent possible, weather permitting. However, the areas constructed in winter will also need to be revisited following spring thaw to complete activities such as final grading, seedbank preparation and permanent seeding. Final

grading may be required, as winter construction areas may have a crown remaining along the trench line and minor elevation differences after frozen soil thaws. This means that construction mats and some temporary bridges will be left in until final restoration is complete to avoid additional disturbance associated with installing and removing the mats in winter, and then re-installing and removing following spring thaw. Enbridge will conduct winter construction as outlined in its Winter Construction Plan (Attachment D).

Enbridge has also developed Peatland/Wetland Construction Plans (see Section 6.11.7) for the four areas on state land where winter construction is preferred by the MDNR and will monitor these areas following construction as described in the PCMP (see Section 6.10). For those areas that are not constructed during winter conditions, an additional Independent Environmental Monitor (“IEM”) will be dedicated to the spread and an additional MDNR staff monitor will be required as described further in Section 7.0. Finally, the Utility License will include a requirement that Enbridge post financial assurance that MDNR could access if Enbridge is unable to meet site restoration requirements.

## **4.0 OPERATIONS ACTIVITIES**

Enbridge will maintain the Project’s operational right-of-way for the life of the Project and will comply with the terms and conditions of the License to Cross Public Lands. In scenarios where there may be overlap of easements between Enbridge and a foreign utility, Enbridge will be responsible for maintaining the entirety of its easement, including any overlap.

As discussed in Section 3.2.1, Enbridge will generally maintain a 50-foot operational right-of-way centered over the pipeline following restoration. At trenched waterbodies on public lands, Enbridge will maintain a 10-foot-wide corridor centered on the pipeline free of woody shrubs, and a 30-foot-wide corridor free of trees within the riparian area of the waterbody crossing to maintain the integrity of the pipeline. At horizontal directional drill (“HDD”) crossings on public land, Enbridge will maintain a 30-foot-wide corridor centered on the pipeline free of all woody vegetation to maintain the integrity of the pipeline and to facilitate aerial inspection. This clearing is depicted in Figures 4.1-1 and 4.5-1 of the of the Procedures (see Appendix A of Attachment C).

Section 2.0 of Enbridge’s VMP addresses operational management of vegetation on public lands, including the public and non-public water features contained within public land boundaries (see Attachment E). Enbridge will maintain the operational right-of-way by removing woody shrubs and trimming branches overhanging the right-of-way approximately every 5 years to preserve pipeline integrity and to facilitate inspection of the pipeline. Title 49 CFR 195.412 (a) states that “each operator shall, at intervals not exceeding 3 weeks, but at least 26 times each calendar year, inspect the surface conditions on or adjacent to each pipeline right-of-way. Methods of inspection include walking, driving, flying or other appropriate means of traversing the right-of-way.” Enbridge’s preferred method to perform these required inspections is flying. To perform these inspections aerially, the right-of-way needs to be adequately cleared to be able to identify abnormal surface conditions. Other maintenance activities (e.g., maintenance digs) may occur as necessary over the life of the pipeline. Routine vegetation maintenance along the operational right-of-way may include mowing, grubbing, and treatment/mitigation of undesirable species once identified, including herbicide treatment as approved by the appropriate agencies.

At the request of MDNR, Enbridge will install permanent “Public Land” markers on the entry/exit to each public parcel, as well as at road crossings, to indicate that public land is being entered. These signs will be maintained during the operation of the pipeline.

Within 1 year prior to the initiation of maintenance or repair activities on public lands, Enbridge Operations staff managing the maintenance or repair efforts will check the NHIS Rare Features Data for new records of state-listed endangered and threatened species. If any are identified, Enbridge will contact the MDNR Endangered Species Review Coordinator before proceeding with activities.

## **5.0 DEACTIVATION**

### **5.1 PERMANENT DEACTIVATION OF EXISTING LINE 3**

PHMSA regulations consider a pipeline that is permanently removed from service as “abandoned.”<sup>17</sup> PHMSA regulations prescribe certain steps for formal abandonment of pipelines.<sup>18</sup>

Enbridge has an existing Utility Crossing License from the MDNR for the operation of the existing Line 3. Enbridge will consult with the MDNR and apply for the appropriate permit(s) to conduct activities prior to commencing permanent deactivation of existing Line 3, as needed.

### **5.2 PERMANENT DEACTIVATION OF L3R**

At such a time that the permanent deactivation of the proposed L3R is necessary, Enbridge will work with the appropriate agencies to determine expectations for deactivation across agency-administered lands. Enbridge will consult with the appropriate agencies and apply for the appropriate permit(s) to conduct these activities prior to commencing permanent deactivation of L3R.

## **6.0 PROJECT ACTIVITIES ON PUBLIC LANDS**

This Application addresses the Project’s impacts on 175 public lands across 35.6 miles. The Project will cross an additional 3 privately owned parcels that contain a state trail easement (see Section 6.10.2). Attachment A of this Application contains a table that lists each public land crossed by or within the Project construction workspace. Each public land has been assigned a unique Project ID number based on its location from west-to-east across the state. Attachment A also presents the width and length of the public land crossing under the jurisdiction of the MDNR. The crossing length is based on Enbridge’s cadastral survey data, as outlined in Section 1.0. Attachment A also presents Enbridge’s proposed crossing method for each public land. In all cases, Enbridge will install the pipeline “under” public lands, or below-ground, as opposed to “over,” or aboveground. Low-impact crossing types (i.e., the HDD method) are presented in Attachment A when applicable. Aboveground facilities (i.e., mainline valves and cathodic protection facilities) will be installed aboveground (see Sections 3.4.1 and 3.4.2). Attachment B contains maps of each public land crossed.

As described in Section 1.2 of the EPP (Attachment C), Enbridge will prepare detailed alignment sheets of the L3R construction workspace prior to construction. The alignment sheets will depict the plan and profile of the construction workspace, tract (property) boundaries, and environmental features such as wetlands, waterbodies, and buffer zones for sensitive features. Notations will be included in the alignment sheets to direct construction personnel to the environmental plans/or

---

<sup>17</sup> Operations & Maintenance Enforcement Guidance, 49 CFR Part 195, Subpart F.

<sup>18</sup> 49 CFR 192.3, 195.2.

permit conditions that stipulate the activities, restrictions, and/or BMPs to be employed at each environmental feature.

For the purposes of MDNR's License to Cross Public Lands for the Project, Enbridge is requesting a TWS across public lands in accordance with the proposed dimensions presented in Attachments A and B. Enbridge is also requesting an operational right-of-way of 50 feet centered on the pipeline on all public lands crossed by the centerline. ATWS dimensions and locations on public lands are presented in the land crossing table in Attachment A and the maps in Attachment B. Their total area is provided in the figures in Attachment B, where applicable.

At the request of the MDNR, Enbridge has identified the areas where there is a "Third-Party Right-of-Way Buffer Area" between the requested Enbridge Utility License easement and existing third-party Utility License easements. The dimensions and total acreage of these areas, by parcel, are presented in Attachment A and are shown on the maps in Attachment B. MDNR will apply a licensing fee to address the loss of future revenue in these areas. Enbridge will be restricted from working on these lands, except to prevent and control the spread of INS. The MDNR will continue to manage the public lands and shall retain ownership of the timber within the buffer, including managing timber from blow-down events.

Enbridge conducted its most recent land appraisals for construction workspace on public lands in December 2019. Enbridge has submitted the December 2019 Land Appraisal Report to MDNR under separate cover. In September 2020 Enbridge's land appraiser determined that the land values contained in the 2019 report had not measurably changed.

## **6.1 UPLAND CROSSING METHODS AND BEST MANAGEMENT PRACTICES**

Public lands will typically be crossed using the conventional upland (trenched) construction techniques described in the following sections of the EPP (Attachment C):

- Section 1.8 (Upland Clearing);
- Section 1.9 (Temporary Erosion and Sediment Controls);
- Section 1.10 (Topsoil Segregation and Storage);
- Section 1.11 (Upland Trenching);
- Section 1.15 (Upland Backfilling);
- Section 1.16 (Cleanup and Rough/Final Grading);
- Section 1.17 (Permanent Erosion and Sediment Control); and
- Section 1.18 (Soil Compaction Treatment).

Revegetation in upland areas on public lands is addressed in Section 7.0 of the EPP as well as Appendix A of the VMP, which contains the Planting Plan.

The EPP (Attachment C) and Winter Construction Plan (Attachment D) describe the BMPs that Enbridge will implement to avoid and minimize construction impacts on uplands crossed by the Project. In addition, Enbridge will:

- Comply with the conditions of the MPCA National Pollutant Discharge Elimination System ("NPDES")/State Disposal System ("SDS") Construction Stormwater General Permit and the Stormwater Pollution Prevention Plan ("SWPPP"), including the use of erosion and sediment control BMPs as outlined in Sections 1.9, 1.17, 2.2, and 3.4.1 of the EPP.

- Prevent spills and manage fuels and hazardous liquids as outlined in Section 10.0 of the EPP. Equipment that is parked overnight on public lands in areas with aquifers ranked as high vulnerability to contamination<sup>19</sup> will be supplied with kiddie pools to place underneath vehicles and equipment to capture potential leaks as outlined in Section 10.6.4 of the EPP.
- Enbridge's wet weather shutdown procedures to avoid rutting<sup>20</sup> are outlined in Section 1.3 of the EPP.
- Coordinate with the U.S. Department of Agriculture, Animal and Plant Health Inspection Service, Wildlife Services Program to assist with removal of large mammals such as a deer, moose, or bear that become entrapped in the trench. The IEM will also notify the MDNR through its 24-hour hotline (Section 1.11 of the EPP).
- Conduct post-construction monitoring at uplands on public lands in accordance with Section 1.0 of the VMP, and in accordance with the PCMP for surface waters on public lands. Post-construction monitoring is further discussed in Section 6.9.

## 6.2 WATERBODY CROSSING METHODS

Enbridge's Procedures (see Section 4.0 of Appendix A of Attachment C) outline the various construction methods that Enbridge may utilize to construct through waterbodies on the Project. Table 4.0-1 of the Procedures describes the waterbody crossing methods and site-specific characteristics that are most suitable for these different construction methods. The discussion of each method includes a description of the construction procedures; conditions required to employ the method (applicability of the method, and equipment needs); the extent of vegetation clearing necessary to accomplish the crossing; and environmental and/or constructability advantages and disadvantages associated with the method.

Section 2.0 of the EPP (Attachment C) describes the BMPs that Enbridge will implement to avoid or reduce impacts associated with pipeline installation at waterbodies. Unforeseen conditions which impact waterbody crossing methods are presented in Section 4.6 of the Procedures. In the case of an unforeseen condition that makes the primary crossing method not practicable, Enbridge will proceed with an alternate crossing method after obtaining agency approval as outlined in Section 6.0 of Enbridge's Environmental Control Monitor Plan.

The Project will cross 7 public water watercourses<sup>21</sup> and 13 non-public waterbodies that are not public waters on public lands. These waterbody crossings are also presented in Attachment A. Table 6.2-1 presents information on each of these crossings, including the primary crossing method and alternate method, when applicable. Locations where Enbridge has committed to winter construction are also presented in Table 6.2-1. Descriptions of each waterbody crossing method are included in Sections 6.2.1 through 6.2.5. Bridge types are presented in Section 6.2.6. BMPs for waterbody crossings are presented in Section 6.2.7.

---

<sup>19</sup> Based on the Minnesota Water Table Aquifer Vulnerability geospatial data set (Minnesota Department of Agriculture, 2015). Available online at: <https://gisdata.mn.gov/dataset/water-aquifer-vulnerability>.

<sup>20</sup> Defined as the creation of linear depressions made by tire tracks of machinery 6 inches or greater in depth that results in the mixing of topsoil and subsoil in accordance with the MDNR State Land Rutting Guidelines and Erosion and Sediment Control Decision Tree.

<sup>21</sup> Minnesota Statutes, section 103G.005, subd. 13 (definition of "natural watercourse") and 103G.005, subd. 3 (definition of "altered natural watercourse").

**Table 6.2-1**  
**Waterbody Crossings on Public Land**

Land ID No.	Waterbody MP	Feature ID	Feature Name	Public Water (ID No.)	Primary Crossing Method	Alternate Crossing Method	Winter Construction Commitment
4	924.2	CLC5048aWB	Walker Brook	Yes (No. 21)	Modified Dry Crossing	N/A	No
10	974.2	HUC5122_200aWB	Straight River	Yes (No. 33)	HDD	N/A	No
18	991.2	WA002aWB	Shell River	Yes (No. 39)	HDD	N/A	No
21	993.3	WA006aWB	Crow Wing River	Yes (No. 40)	HDD	N/A	No
35	996.5	WA017aWB	Unnamed Stream	No	Modified Dry Crossing	N/A	Yes
64	1046	CAC5160aWB	Unnamed Stream	No	Dry Crossing	Open Cut	No
67	1046.6	CAC5161aWB	Unnamed Stream	No	Modified Dry Crossing	Open Cut	No
72	1047.4	CA162aWB	Unnamed Stream	No	Dry Crossing	Open Cut	No
73	1047.4	CA162aWB	Unnamed Stream	No	Dry Crossing	Open Cut	No
75	1048.0	CA163aWB	Moose River	Yes (No. 49)	Modified Dry Crossing	Open Cut	No
75	1048.0	CA163cWB	Tributary to Moose River	No	Modified Dry Crossing	Open Cut	No
82	1049.7	CA166aWB	Unnamed Stream	No	Dry Crossing	Open Cut	No
84	1049.9	AI001aWB	Unnamed Stream	No	Dry Crossing	Open Cut	No
129	1067.0	s-51n24w31-a	Unnamed Stream	No	Dry Crossing	Open Cut	No
131	1067.2	s-51n24w29-a	Unnamed Stream	No	Dry Crossing	Open Cut	No
137 <sup>a</sup>	1068.5	s-51n24w28-d	Unnamed Ditch	No	N/A	N/A	No
147 <sup>b</sup>	1078.8	s-51n22w19-c_DESKTOP	Unnamed Steam	No	Modified Dry Crossing	Push Pull	Yes
158	1081.5	s-51n22w22-a	Unnamed Stream	No	Dry Crossing	Open Cut	Yes
169	1084.4	s-51n22w24-a	Unnamed Stream	No	Modified Dry Crossing	N/A	Yes
179	1115.6	s-48n17w6-a	Unnamed Stream	Yes (Nos. 63a and 63b)	Dry Crossing	Modified Dry Crossing	No
<sup>a</sup> Waterbody delineated within the workspace but not crossed by the pipeline.							
<sup>b</sup> This feature was delineated as wetland in the field, but Enbridge created desktop waterbody data to ensure a crossing method is proposed should perceptible flow develop at the time of construction.							

### **6.2.1 Trench: Open Cut (Non-Isolated) Method**

There are no waterbody crossings on public lands where Enbridge is proposing to use the open cut (non-isolated) method as the primary method, but it is presented as the alternate method at 12 waterbodies.

The open cut method (non-isolated) is described in Section 4.1 of the Procedures (see Appendix A of Attachment C), and Section 2.5.1 and Figure 22 of the EPP (Attachment C). Open cut crossings are typically completed within 24 to 48 hours depending on the size of the watercourse, as described in Section 2.1 of the EPP. Open cut crossing methods typically involve trenching through the waterbody while it is dry or frozen to the bottom (no perceptible flow) and direct excavation of the trench through the banks and bed of the watercourse can proceed similar to upland construction techniques. Construction while the waterbody is dry or frozen prevents the potential for sediment release during in-channel work.

As described in Sections 2.5.1.2 and 3.7.2 of the EPP (Attachment C), Enbridge will install in-stream BMPs (e.g., silt curtains) downstream of all open cut crossing locations where there is water prior to initiation of the crossing, and at all push-pull crossing locations within the waterbody where site-specific conditions allow access for BMP installation. The type of in-stream BMP utilized will depend on waterbody conditions (flow velocity, water depth, and the width of the waterbody) and will be selected in the field depending upon the site-specific conditions at the time of crossing. There may be some situations where surrounding saturated wetlands may limit the ability to install in-stream BMPs and the effort may actually extend the duration of activity and create additional disturbance.

### **6.2.2 Trench: Push-Pull Method**

Enbridge is not proposing to use the push-pull method as a primary method at any waterbody crossings on public land, but it is an alternate at one crossing if winter conditions are not present at the time of construction. The push-pull method is described in Section 3.4 of the Procedures (see Appendix A of Attachment C), and Section 3.7.1 and Figures 35 and 36 of the EPP (Attachment C). The push-pull technique is used to cross large (longer than 200 feet) saturated wetland features or wetland/waterbody complexes with greater than 12 inches of inundation and relatively competent peat soils as described in Section 3.4 of the Procedures. A dry crossing of the waterbody feature within these complexes is generally not feasible, given that the crossing cannot be isolated from the surface water or high water table of the adjacent wetlands. This method can only be used in non-frozen conditions where there is sufficient inundation to push-pull or float the pipe. If these conditions do not exist at the time of the crossing, then an alternate waterbody crossing method will be used.

To prevent the flotation of the pipe in saturated environments, Enbridge will utilize buoyancy control methods described in Section 3.7.3 of the EPP (Attachment C). Enbridge will achieve buoyancy control of the pipeline by utilizing concrete-coated pipe or bag weights. Enbridge calculates the amount of buoyancy control required based on an empty pipe.

### **6.2.3 Trench: Dry (Isolated) Methods**

Dry crossing (isolated) methods are described Sections 4.3 of the Procedures (see Appendix A of Attachment C), and in Sections 2.5.2 and 2.5.3 and Figures 23 and 24 of the EPP (Attachment C). Dry crossing methods are used at waterbodies with a well-defined channel and stable stream

banks that are consistently sloped and can be dammed to dewater the construction area and isolate the crossing from the flow of water. Dry (isolated) crossings use either the dam and pump or flume technique. Both methods involve damming the stream both upstream and downstream of the crossing location and digging a trench in the dry work area to install the pipe. Water is routed around the work area either by pumping water around the work area through hoses, or by water flowing through a flume pipe. The trench and construction work area will be dewatered and discharged into a well-vegetated area on an adjacent stream bank as described in Section 5.1 of the EPP. Dry crossings are typically completed within 24 to 48 hours depending on the size of the watercourse as described in Section 2.1 of the EPP.

#### **6.2.4 Modified Dry Crossing Method**

In situations where the stream banks are stable, but conditions are too saturated to effectively dewater from the construction workspace, Enbridge will conduct a modified dry crossing method using a dam and pump. The only difference from the standard dam and pump method and this modified technique is that Enbridge will not dewater the trench and will utilize buoyancy control methods (see Section 3.7.3 of the EPP [Attachment C]) as appropriate to sink the pipe to the bottom of the trench. Enbridge will install in-stream BMPs downstream of these crossing locations prior to initiating the crossing to mitigate the potential for downstream sedimentation. The type of in-stream BMP utilized will depend on waterbody conditions (flow velocity, water depth, and the width of the waterbody) and will be selected by in the field depending upon the site-specific conditions at the time of crossing.

The dry and modified dry crossing techniques can also be implemented in frozen conditions if there is perceptible flow. Winter construction procedures for dry crossing techniques are described in Section 2.5.2 of the Winter Construction Plan (Attachment D).

Enbridge will consider switching to the alternate open cut crossing technique (see Section 6.2.1) at a waterbody previously identified as a dry or modified dry crossing if:

- the waterbody is dry or frozen at the time of crossing as described in Section 2.5.1 of the Winter Construction Plan (Attachment D); or
- when there are water management concerns based on field conditions at the time of the crossing, such as downstream obstructions that cause ponding, or a high water table.

In either case, Enbridge will seek agency approval for any changes to crossing methods prior to initiating an alternate crossing method.

#### **6.2.5 Trenchless: Horizontal Directional Drill Method**

The HDD method is described in Section 3.6 of the Procedures (see Appendix A of Attachment C), and in Sections 2.5.4 and 11.0 of the EPP (Attachment C). HDD is a trenchless crossing method that involves no direct excavation to the banks or beds of the wetland or watercourse being crossed. This method can be implemented during frozen or non-frozen conditions. There is no difference in technique in frozen vs. non-frozen conditions; however, execution may take longer during frozen conditions related to equipment maintenance in extreme temperatures, snow removal, etc.

Before Enbridge determines that an HDD crossing technique is prudent and feasible at a given location, geotechnical surveys are conducted at the proposed site to determine the subsurface conditions. Section 3.6.1 of the Procedures (see Appendix A of Attachment C) describes the factors that must be evaluated to determine the technical feasibility of an HDD. This information, along with the HDD design and layout and any other available data, is used to determine if the HDD can be successfully installed. Enbridge has determined that the subsurface conditions at all the proposed HDD locations are amenable to successful installation of a drill.

Enbridge uses the geotechnical data gathered to determine the feasibility of an HDD, and to model the capacity of the soil to withstand the pressures of the drill and avoid widening or creating a fracture (hydraulic fracturing) through which drilling mud fluid will migrate. This information is utilized to identify where additional engineering controls should be implemented to minimize inadvertent releases.

### **6.2.6 Temporary Bridges**

Temporary equipment bridges will be used to cross some of the delineated waterbody features presented in Table 6.2-1. Sections 1.4.1 and 2.4 of Enbridge's EPP and Section 2.1 of the Procedures (Appendix A of the EPP) describe the types of temporary bridges that will be utilized on the Project on public lands, which will include:

- Clear span bridges: Temporary clear span bridges will typically be used to cross waterbodies that are less than 13 feet from top of bank to top of bank with stable banks. No direct excavation of the waterbody bed or in-stream supports are required.
- Non-clear span bridges: Typically used to cross waterbodies with top of bank to top of bank 13 feet wide or greater as required by Enbridge's engineering specifications, or where additional stabilization is required to ensure the bridge installation allows for the safe passage of construction equipment and vehicles. Installation of infrastructure or supports within the ordinary high water mark ("OHWM") are required.

Figures 3 and 4 of the EPP provide typical figures of a clear span bridge, and a non-clear span bridge with in-stream supports (construction mat or culvert/flume in-stream support type). Table 2-1 of the Summary of Construction Methods and Procedures describe the advantages and disadvantages of the various temporary bridge types.

BMPs that will apply to all bridge types include:

- Erosion and sediment control BMPs will be implemented prior to or at the same time as ground disturbing activities associated with bridge installation.
- Equipment bridges and culverts will be designed to meet the requirements of the applicable agencies and local authorities. Equipment bridges and culverts will also be maintained in accordance with the applicable permits.
- Debris or vegetation that becomes lodged on the bridge support will be removed and disposed of in an upland area.

- Bridges will be maintained to prevent soil from entering the waterbody (refer to Figures 3 and 4). Soil that accumulates on the bridge decking will be removed daily, or as deemed necessary by the Environmental Inspector (“EI”).
- Bridges will be installed parallel to the pipeline centerline so that equipment does not need to turn while working or crossing the bridge.
- For bridges that are installed on designated canoe routes, the bridge height will be designed to allow for adequate clearance to allow recreational users to pass safely under the bridge.
- In-stream supports will not be installed in or removed from waterbodies during agency-timing restrictions unless approved by the agency.
- Bridges will not restrict flow or pool water while the bridge is in place and will be constructed with clean materials.

Bridges will be removed during final cleanup or after restoration as described in Section 2.6.3 of the EPP. During frozen conditions, Enbridge may develop ice bridges to cross narrow waterbodies where conditions allow as described in Section 1.4 of the Winter Construction Plan. Only vehicles used by Enbridge or its contractors will be permitted to use these bridges.

Table 6.2-2 provides site-specific bridge plans for each waterbody located on public lands. This analysis was conducted by civil engineers trained in stream geomorphology that were also involved in collecting Rosgen geomorphic survey data for the Project. Temporary bridge crossings are intended to support construction access and activities while minimizing the potential for localized adverse stream channel impacts both during and post-construction. Adverse stream impacts can include erosive flow velocities and/or vectors, altered sediment transport resulting in channel degradation or aggradation, and/or impeding fish movement. Since 2013 Enbridge has coordinated with MDNR and performed Rosgen based stream geomorphic surveys at various proposed L3R public water watercourse crossings. For the surveyed sites geomorphic data parameters included stream type, valley type, bankfull elevation, bankfull width, channel slope, channel stability rating, and special conditions; each of these were reviewed and used to develop crossing recommendations. Similarly, using aerial imagery and other survey data collected by Enbridge along the L3R corridor (channel width, profile, slope, etc.), Enbridge can extrapolate key stream parameters, specifically stream type and valley type, for the analysis and development of crossing recommendations for non-public water course crossings and those public waters where a Rosgen based survey was not performed.

In addition to the geomorphic survey stream parameters listed above, the bridge review and analysis considered the role that vegetation plays in maintaining channel stability. Vegetation management interpretations, originally developed by Rosgen as part of grazing management, identify the relationship between specific stream types and the influence of vegetation on channel stability and the potential for natural recovery once the cause of the instability or disturbance is corrected. The guidance qualitatively interprets sensitivity to disturbance, recovery potential, stream bank erosion potential, and vegetation as a controlling influence for each stream type using a range of descriptions from very low to extreme, very poor to excellent, or negligible to very high.

**Table 6.2-2  
Bridges for Waterbody Crossings on Public Land**

Land ID No.	MP	Feature Name	Public Water (ID No.)	Stream Type	Sensitivity to Disturbance	Recovery Potential	Stream Bank Erosion Potential	Vegetation Controlling Influence	Bridge Comments	Primary Flow Location	Bridge (Support)
4	924.2	Walker Brook	Yes (No. 21)	N/A	Very high	Good	Moderate	Very high	Migration potential low; place mats on top of vegetation to avoid bank disturbance	Center of channel	In-stream Support (Flume)
35	996.5	Unnamed Stream	No	B	Very high	Good	Very high	Very high	Migration potential low; place mats on top of vegetation to avoid bank disturbance (stump removal may be required)	Center of channel	Span (N/A)
64	1046.0	Unnamed Stream	No	E	Very high	Good	Very high	Very high	Migration potential low; place mats on top of vegetation to avoid bank disturbance (stump removal may be required)	Center of channel	Span (N/A)
67	1046.6	Unnamed Stream	No	E	Very high	Good	High	Very high	Migration potential low; place mats on top of vegetation to avoid bank disturbance (stump removal may be required)	Center of Channel	In-stream Support (Mat or Flume)
72/73	1047.4	Unnamed Stream	No	B	Moderate	Excellent	Moderate	Moderate	Migration potential low; place mats on top of vegetation to avoid bank disturbance (stump removal may be required)	Center of channel	Span (N/A)
75	1048.0	Moose River	Yes (No. 49)	N/A	Very High	Good	High	Very High	Migration potential low; place mats on top of vegetation to avoid bank disturbance (stump removal may be required)	Center of channel	In-stream Support (Mat or Flume)
75	1048.0	Tributary to Moose River	No	B	Moderate	Excellent	Moderate	Moderate	Migration potential low; place mats on top of vegetation to avoid bank disturbance (stump removal may be required)	Center of channel	Span (N/A)
82	1049.7	Unnamed Stream	No	B	Moderate	Excellent	Moderate	Moderate	Migration potential low; place mats on top of vegetation to avoid bank disturbance (stump removal may be required)	Center of channel	Span (N/A)
84	1049.9	Unnamed Stream	No	E	Very high	Good	Very high	Very high	Migration potential low; place mats on top of vegetation to avoid bank disturbance (stump removal may be required)	Center of channel	In-stream Support (Flume)

ENBRIDGE ENERGY, LIMITED PARTNERSHIP  
APPLICATION FOR A LICENSE TO CROSS PUBLIC LANDS  
NOVEMBER 2020 (REV 3)

Land ID No.	MP	Feature Name	Public Water (ID No.)	Stream Type	Sensitivity to Disturbance	Recovery Potential	Stream Bank Erosion Potential	Vegetation Controlling Influence	Bridge Comments	Primary Flow Location	Bridge (Support)
129	1067.0	Unnamed Stream	No	B	Moderate	Excellent	Moderate	Moderate	Migration potential low; place mats on top of vegetation to avoid bank disturbance (stump removal may be required)	Center of channel	Span (N/A)
131	1067.2	Unnamed Stream	No	B	Moderate	Excellent	Moderate	Moderate	Migration potential low; place mats on top of vegetation to avoid bank disturbance (stump removal may be required)	Center of channel	In-stream Support (Flume)
137 <sup>a</sup>	1068.6	Unnamed Ditch	No	B	Moderate	Excellent	Moderate	Moderate	Migration potential low; place mats on top of vegetation to avoid bank disturbance (stump removal may be required)	Center of channel	In-stream Support (Flume)
147	1078.8	Unnamed Stream	No	N/A	N/A	N/A	N/A	N/A	Saturated wetland, no bed and banks identified during field surveys	N/A	EPP Typical 49
158	1081.5	Unnamed Stream	No	B	Moderate	Excellent	Moderate	Moderate	Migration potential low; place mats on top of vegetation to avoid bank disturbance	Center of channel	In-stream Support (Flume)
169	1084.4	Unnamed Stream	No	N/A	Very high	Good	Moderate	Very High	Migration potential low; place mats on top of vegetation to avoid bank disturbance	Center of channel	In-stream Support (Mat or Flume)
179	1115.6	Unnamed Stream	Yes (Nos. 63a and 63b)	E5	Very High	Good	High	Very high	Bank migration potential is to the south. Primary flow is located along the outside bend of the channel.; place mats on top of vegetation to avoid bank disturbance (stump removal may be required)	Downstream side of Channel	In-stream Support (Flume)
<sup>a</sup> Waterbody delineated within the workspace but not crossed by the pipeline. No bridges proposed at the Straight River (MP 974.2, Land ID No. 10); Shell River (MP 991.2, Land ID No. 18); and Crow Wing River (MP 993.3, Land ID No. 21).											

These recommendations are provided as guidance to allow for flexibility based on site-specific conditions at the time of installation, equipment, and the type of construction activities performed. Additional information about how the above geomorphic parameters were considered when making bridge crossing recommendations, as well as additional stream characteristics, can be found in Enbridge's July 2020 Bridge Memo to MDNR.

Equipment bridges will be removed during final cleanup or, if access is needed, after final cleanup and permanent seeding. Alternatively, bridges may be removed prior to spring melt, the area will be stabilized, and then the bridges may be reinstalled outside of applicable timing restrictions. Bridge decking will be removed to ensure sediment and debris are collected by geotextile fabric secured below decking during bridge construction. Subsequently, geotextile fabric will be removed to prevent debris from entering the watercourse.

Once the bridge is removed, Enbridge will conduct additional grading to restore the banks to as near as practicable to pre-construction conditions as needed. Because bridge headers will typically be placed on top of the vegetation, grading will be limited. Additional seeding and/or installation of erosion and sediment control BMPs will also be implemented as required. Enbridge will follow the restoration procedures described in Section 7.0 of the EPP, Site-Specific Restoration Plans ("SSRPs") for the applicable waterbodies, and the Planting Plan within the VMP. Bridge restoration will also be monitored as described in Enbridge's PCMP.

### **6.2.7 Waterbody Crossing Best Management Practices**

The EPP (Attachment C) and Winter Construction Plan (Attachment D) describe the BMPs to avoid and minimize impacts on waterbodies crossed by the Project. In addition, Enbridge will:

- Comply with the conditions of the MPCA NPDES/SDS Construction Stormwater General Permit and the SWPPP, including the use of erosion and sediment control BMPs as outlined in Section 2.2 of the EPP.
- Conduct post-construction monitoring at waterbody features in accordance with the PCMP. The PCMP is further discussed in Section 6.10 and is included as Attachment F.

In order to meet Enbridge's requirements to inspect the pipeline during operations as discussed in Section 4.0, and also to provide access to the waterbody during installation of an HDD for monitoring and response in the case of an inadvertent release of drilling mud (see Section 6.2.4), Enbridge will clear 30 feet of vegetation within the 50-foot operational right-of-way along the drill path (see Figure 4.5-1 of the Procedures, Appendix A of Attachment C). This will not generally require removal of vegetation on the stream banks. Vegetation will be cleared, but roots will be maintained, which will aid in stabilizing the soils and reducing erosion potential. No grading or stump removal will occur over the HDD path except at limited locations where free-span engineered bridges will be installed, or as needed to assist with staging to respond to an inadvertent release of drilling mud.

## **6.3 WETLAND CROSSING METHODS**

Wetland delineations have been completed on all public lands contained in this Application. The Project's construction workspace, but not the pipeline, will cross one public water basin (delineated as a wetland) on public lands using the modified upland (wetland) method: an

Unnamed Basin<sup>22</sup> (Public Water ID No. 36 on Public Land ID No. 11), identified in Attachments A and B. Enbridge will also cross non-public water wetlands on public lands, which are shown on the maps in Attachment B and are listed in Attachment G of this Application. Peatlands located on public lands are addressed in Section 6.11.7 of the Application and are noted in Attachment G. Vernal pools/potential seasonal ponds (“PSPs”) located on public lands are addressed in Section 6.11.8 of the Application and are also noted in Attachment A.

Section 3.0 of Enbridge’s Procedures (Appendix A of Attachment C) outline the various construction methods that Enbridge may utilize to construct through wetlands on the Project. Table 3.2-1 of the Procedures describes the crossing methods and site-specific characteristics that are most suitable for these different construction methods. The discussion of each method includes a description of the construction procedures; conditions required to employ the method (applicability of the method, and equipment needs, such as construction mats for wetland feature crossings); the extent of vegetation clearing necessary to accomplish the crossing; and environmental and/or constructability advantages and disadvantages associated with the method.

### **6.3.1 Trench: Modified Upland Construction Method**

The modified upland construction method (also known as the open cut or standard wetland construction method) is described in Section 3.3 of the Procedures (see Appendix A of Attachment C), and Section 3.0 and Figures 30 to 34 of the EPP (Attachment C). This construction technique can be implemented in non-frozen and frozen conditions working off of construction mats or ice roads. Winter construction procedures in wetlands are further described in Section 3.0 of the Winter Construction Plan in Attachment D. This method is used in wetlands with unsaturated mineral soils if constructed during non-frozen conditions, or in saturated soils with less than 12 inches of inundation with moderate to high bearing strength soils in frozen conditions. Relative to the other wetland construction techniques, this is the quickest installation method.

### **6.3.2 Trench: Push-Pull Method and Buoyancy Control**

The push-pull method is utilized to cross saturated wetlands in non-frozen conditions as described in Section 6.2.1. Attachment G presents the wetlands on public lands that will be crossed using the push-pull method, including when the push-pull method is the alternate method for wetlands proposed to be crossed during frozen conditions. To prevent the flotation of the pipe in saturated environments, Enbridge will utilize buoyancy control methods described in Section 3.7.3 of the EPP (Attachment C). Enbridge will achieve buoyancy control of the pipeline by utilizing concrete-coated pipe or bag weights. Enbridge calculates the amount of buoyancy control required based on an empty pipe.

### **6.3.3 Wetland/Basin Best Management Practices**

The EPP (Attachment C) and Winter Construction Plan (Attachment D) describe the BMPs that will be implemented during the installation of the pipeline through wetland features (including public water basins on public lands), regardless of pipeline installation method (except where noted). In addition, Enbridge will employ the following additional BMPs:

---

<sup>22</sup> Minnesota Statutes, section 103G.005, subd. 16 (definition of “water basin”).

- Implementation of temporary erosion and sediment control BMPs in accordance with MPCA NPDES/SDS Construction Stormwater General Permit requirements and described in Section 3.4.1 of the EPP.
- Conduct post-construction monitoring at wetland features in accordance with the PCMP. The PCMP is further discussed in Section 6.9 and is included in Attachment F.

To access the construction workspace across wetlands, Enbridge will install construction mats along the travel lane, and at portions of access roads or improved haul routes that cross wetlands. Section 3.1 of the Procedures (see Appendix A of Attachment C) describes the different construction mat types that may be utilized, and their suitability based on construction activity and site conditions. Mat travel lanes are typically a single layer (Figures 30 and 31 of the EPP); however, there may be cases in saturated areas where more than one layer of mats must be placed to provide a stable working surface (Figures 32 and 33). Enbridge may use multiple mat configurations in inundated areas depending upon the depth of inundation and presence of channelized flow to maintain surface flow. These different mat configurations are illustrated in Figure 49 of the EPP. Enbridge will remove the mats during final cleanup activities. If there are multiple layers of mats, Enbridge will probe the soil after mats have been removed to verify that no additional mats remain. During frozen conditions, Enbridge may develop ice roads to access wetlands where conditions allow as described in Section 1.4 of the Winter Construction Plan (Attachment D). There are also situations where conditions will not allow the installation of a construction mat travel lane, in which case Enbridge may utilize different equipment (e.g., swamp hoe).

As mentioned above, Section 3.4.1 of the EPP (Attachment C) describes when and where erosion and sediment control measures will be installed relative to wetland features. Enbridge is currently developing a SWPPP associated with the MPCA NPDES/SDS Construction Stormwater General Permit for the Project. The SWPPP identifies the types of materials that may be installed according to:

- type of construction activity proposed;
- topographic conditions;
- hydrology and seasonality; and
- proximity to sensitive resources.

The erosion and sediment control BMPs may be installed based on these factors; however, the specific BMP will be selected in the field based on the site-specific conditions at the time of construction. Additionally, in some saturated wetland conditions, the ability to install erosion and sediment control BMPs may be limited and the effort to install such BMPs may both extend the duration of activity and create additional disturbance.

## **6.4 CONSTRUCTION DEWATERING DISCHARGES**

Enbridge is proposing to discharge water from construction dewatering activities associated with the Project. Dewatering is necessary to facilitate the installation of the pipe at road bores and waterbody crossings, and at associated facilities that require deeper excavations such as mainline valves and cathodic protection systems. In addition, dewatering of the excavated trench is required to ensure visibility of the trench bottom to ensure that there is nothing in the trench that could compromise the integrity of the pipe (e.g., rocky conditions). Enbridge will generally discharge water appropriated from the excavations to a suitable area adjacent to the dewatering

location. As described in Section 1.11.1 of the EPP, the length of time a trench is left open will be minimized to ensure that installation of the pipe and restoration of the construction workspace occurs in a timely fashion and to minimize water-management issues. During construction, the actual volume and location from which water is to be appropriated from the trench/excavation will be determined by site-specific conditions (e.g., precipitation events).

Construction dewatering discharges are subject to the MPCA Construction Stormwater General Permit.<sup>23</sup> Enbridge is currently preparing a SWPPP, as required by the General Permit conditions, in coordination with the MPCA. The final SWPPP will be submitted to the MPCA 30 days prior to the start of construction per regulations. Enbridge will comply with the relevant conditions of the General Permit and the SWPPP for discharge of trench waters on lands administered by the MDNR.

Section 5.1 of the EPP describes the site-specific characteristics that will be assessed when planning the discharge event and location of dewatering structure(s), including soil type, topography, discharge rate, filtering mechanism, and erosion and sediment control BMPs. All dewatering discharges will be directed through a filtering device such as a geotextile filter bag in an well-vegetated upland area (refer to Figure 43 of the EPP), or, when uplands are not accessible either because of site conditions and/or distance, to a straw or hay bale dewatering structure (refer to Figure 44 of the EPP).

Enbridge will generally locate dewatering structures within the construction workspace whenever practicable; however, site-specific conditions such as saturation or workspace size or usage limitations may require that Enbridge consider using lands adjacent to the construction workspace. Enbridge will follow the process presented in Section 5.1 of the EPP to suitably locate dewatering structures both within the construction workspace and on lands adjacent to the construction workspace that will be approved through the License.

Enbridge will consult with the IEM and provide a 48-hour (2-business day) advance notice to the MDNR Northwest Region or Northeast Region Lands and Minerals Regional Supervisor, as applicable, before initiating construction dewatering on lands adjacent to the construction workspace. The notice will include the following plan components:

- A map showing the location of the dewatering structure placement relative to the licensed premises and the extent of the area to be used;
- Relevant environmental survey coverage and survey results;
- The anticipated start time and duration of the temporary use, including site preparation and dewatering activities; and
- The type of dewatering structure to be used.

Enbridge will not proceed with any activities associated with dewatering until the Environmental Inspector receives approval to commence from the IEM and applicable MDNR Lands and Minerals Regional Supervisor.

---

<sup>23</sup> Authorization to Discharge Stormwater Associated with Construction Activity under the National Pollutant Discharge Elimination System/State Disposal System Program. MNR100001.  
<https://www.pca.state.mn.us/sites/default/files/wq-strm2-80a.pdf>.

Enbridge will not discharge trench waters on property adjacent to the licensed premises at State Land Crossing No. 46 (Paul Bunyan State Trail) and State Land Crossing Nos. 181 and 182 (Willard Munger State Trail).

Generally, discharge activities require minimal to no ground disturbance as dewatering structures can be placed on top of the ground surface. Enbridge will install temporary erosion and sediment control BMPs prior to initiating the discharge activities as described in the discharge plan. Temporary erosion and sediment control BMPs are described in Section 1.9 of the EPP. Enbridge will monitor, maintain, replace, and supplement BMPs as required in the Project construction documents and as required by all applicable permits and plans, including the MPCA General Permit.<sup>24</sup>

Enbridge will not be allowed to clear merchantable timber as part of these activities. Construction vehicles that may be used during the set-up and removal of dewatering structures include pickup trucks, rubber track carriers (or, "morookas"), utility vehicles (or "UTVs"), skid steerers, and excavators for equipment/materials transport, as needed.

Once trench dewatering activities are complete in a given area, Enbridge will clean up the discharge area by removing bags and structures. Enbridge will restore any areas disturbed by the discharge event as near as practicable to pre-construction conditions. Restoration may include preparing a seedbed for permanent seeding where the dewatering structure was located, and in areas where vehicles may have caused incidental ground disturbance using seed mixes appropriate for that area as outlined in the Planting Plan (Appendix A of the VMP). Final restoration and monitoring activities will occur until final stabilization is achieved at each construction dewatering site, as required by the General Permit and outlined in the SWPPP.

## **6.5 PIPELINE DEPTH OF COVER**

In accordance with federal requirements (49 CFR 195.248), the depth of cover ("DOC") between the top of the pipe and the ground level, road bed, or river bottom can range between 18 to 48 inches, depending on the location of the pipe and the presence of rock. Minnesota Statute § 216G.07, Subd. 1 also provides guidance for pipeline depth of cover. Additional information regarding DOC is presented in Section 2.7 of the Procedures (see Appendix A of Attachment C). In wetlands and waterbodies, depth of cover is measured from the top of the pipe and ground level as defined in 49 CFR 195.248 and illustrated in Figure 18 of the EPP, not the surface water level. In wetlands with standing water, this would be from the "underwater natural bottom (as determined by recognized and generally accepted practices)" as required in 49 CFR 195.248. While Enbridge will seek waivers for Minnesota state DOC requirements in some circumstances, it will meet all federal DOC requirements and also target a nominal 48 inches of cover across the Project.

MDNR has advised that to minimize potential future scour and erosion issues at public waters, Enbridge should use its Rosgen geomorphological survey data gathered between 2015 and 2019 to plan for additional DOC at some public water crossings. MDNR has recommended that Enbridge install the pipeline to ensure that 4 feet DOC is maintained using the depth of the deepest upstream or downstream pool within the surveyed reach. MDNR also requested that where additional DOC is proposed, Enbridge extend the DOC outside of the OHWL and across

---

<sup>24</sup> Refer to Section 11.1 Inspections and Maintenance of the MPCA General Permit.

the waterbody floodplain, or to the location of the “meander belt width.”<sup>25</sup> Enbridge has included the proposed DOC at public water crossings that are located on public lands in Attachment A. Additional information on DOC can be found in the License to Cross Public Waters application.

Of the public water watercourse crossings on public lands presented in Table 6.2-1, three crossings are HDD, where DOC is not a concern. Enbridge has committed to an increased DOC which exceeds its construction standards and federal regulations at 49 CFR 195.248 at the remaining four public water watercourse crossings on public lands. At all non-public water crossings on public lands, Enbridge will install the pipeline to a standard 4-foot DOC. The pipeline/excavated trench will not intersect the public water basin crossing discussed in Section 6.3.

As outlined in the Depth of Cover Memo sent to the MDNR in June 2020, Enbridge performed a geotechnical hazard assessment of the entire pipeline route during engineering design and planning. All known waterbody crossings were reviewed as part of this assessment. The Depth of Cover Memo presents additional information on federal depth of cover requirements and the measures Enbridge takes to ensure that depth of cover is adequate.

49 CFR 195.204 also requires that the pipe be inspected prior to backfill to ensure that the installation of the pipe or pipeline systems is in accordance with the requirements of 49 CFR 195.248. Enbridge must maintain a complete record for the life of the pipe facility that documents the amount, location, and cover of each size of pipe installed (49 CFR 195.266). In order to comply with these regulations, once the pipeline is installed and prior to backfill, Enbridge civil survey crews will confirm the depth of cover for each pipeline section and record this data as part of the as-built survey data. This information will be maintained by Enbridge in its Pipeline Integrity Program database.

Furthermore, as part of Enbridge’s Pipeline Integrity Program, annual depth of cover surveys, annual flood monitoring, and annual geohazard inspection are performed on the pipeline. If these surveys or inspections identify additional potential geotechnical or hydrotechnical hazards, Enbridge will engage with a qualified Geohazard Consultant to determine if additional remediations are needed. Should the depth of cover for a pipe segment be reduced to 36 inches of cover, the pipe section would be flagged for an on-the-ground maintenance inspection and repairs would be made, as appropriate.

## **6.6 RECREATIONAL ACCESS AND HUNTING**

Enbridge will maintain public access to public lands crossed by the Project to the extent it is safe and practicable to do so during construction. Access to the immediate construction areas, however, will be limited or restricted at times such as during excavation and pipeline installation activities. Enbridge will work with the MDNR to post signs prior to crossing of Off-Highway Vehicle (“OHV”) and snowmobile trails (see Section 6.11.2). Enbridge will coordinate with the snowmobile trail organizations and the MDNR to develop appropriate notification measures during construction. Enbridge will install visible snow fencing should construction occur during the winter, as well as long-term signage, and will work with the MDNR and trail managing organizations to distribute other forms of public outreach to minimize impacts to recreational uses of the trail, as needed.

---

<sup>25</sup> The Meander Belt Width is the area that confines the outer bends of a waterbody channel and represents the outer constraints of potential lateral movement of a stream channel.

Enbridge may request that the MDNR restrict public access to certain tracts during construction activities to ensure the safety of Enbridge workers and the public. If public access to public lands must be restricted during construction for public safety, Enbridge will submit a request to the MDNR for review and approval.

During Minnesota hunting seasons (e.g., Special Youth Firearm Deer Season, Firearm Deer Season, Muzzleloader), Enbridge will make appropriate communications with the MDNR to alert hunters to construction activity. There will be specific safety requirements in place to control and mitigate hazards associated with hunting activity. These controls and mitigations include but are not limited to:

- ceasing activities on MDNR lands during the November gun-deer season opening weekend (Friday-Monday);
- wearing high-visibility blaze orange safety vests and hard hat covers;
- training and increased awareness around hunting hazards to all workers; and
- daily toolbox meetings focused on hunting safety and MDNR hunting rules and regulations.

Enbridge will work with the MDNR to maintain safe access across the Project area for hunters and MDNR personnel should Enbridge's construction schedule align with the hunting season.

## **6.7 BLASTING**

Blasting is not currently proposed on public lands. Enbridge has developed a Blasting Plan (Attachment H) outlining the procedures for blasting, and Enbridge will consult with MDNR staff should blasting be needed on any public lands.

## **6.8 PUBLIC LAND LEASE ACTIVITIES**

### **6.8.1 Infiltration of Buoyancy Control and Hydrostatic Testing Water**

Enbridge is proposing to discharge and infiltrate water associated with buoyancy water introduced during the HDD and push-pull installation processes and HDD segment hydrostatic testing. Three upland discharge areas are located on public lands:

- Shell River at MP 991.1 (Land ID Nos. 17 and 18);
- Crow Wing River at MP 993.4 (Land ID No. 21); and
- Mississippi River at MP 1069.4 (Land ID No. 139).

Workspace for the upland discharge areas are shown on the maps in Attachment B; however, the dimensions are not accounted for in the acreage totals in Attachment A. Enbridge has prepared a separate Lease application to address these activities at the MDNR's request.

## **6.8.2 Water Appropriation at Water Access Sites**

Enbridge is proposing to appropriate water from surface water sources to support construction act associated with the Project. Three of these appropriation locations are located at public water access sites located off of the construction workspace:

- Pine Lake near MP 904.7;
- Island Lake near MP 961.7; and
- Lake George near MP 1037.0.

Because these locations are not contiguous with the construction workspace, they are not represented in Attachments A or B. Enbridge has prepared a separate Lease application to address these activities at the MDNR's request.

## **6.9 REVEGETATION**

Permanent and temporary revegetation of disturbed areas within the construction workspace on public lands will proceed in accordance with Section 7.0 of the EPP. Seed mixes that will be used for restoration on public lands are specified in the Planting Plan, which is contained within Appendix A of the VMP. Enbridge's stabilization methods and associated timing, and erosion and sediment control BMPs are described in Sections 1.9, 1.17, 2.6, and 3.9 of Enbridge's EPP (Attachment C). Sections 2.6 describes additional stabilization and restoration efforts for waterbody crossings, as identified during construction and/or required by restoration plans.

MDNR will calculate the acreage of forested lands cleared for construction of the Project, outside of the operational right-of-way and calculate a licensing fee to account for this loss of forested vegetation. MDNR will not require any plantings of woody vegetation on Division of Forestry-administered lands. The Planting Plan will address woody revegetation plantings for the Willard Munger and Paul Bunyan Trails (see Section 6.11.2) and the Little Otter Creek Aquatic Management Area (see Section 6.11.5).

The MDNR has requested that Enbridge prepare SSRPs for some public water crossings subject to the License to Cross Public Waters; the following public waters with SSRPs are located on public lands (also see Attachment A).

- Land ID No. 4: Walker Brook, Water ID No 21
- Land ID No. 75: Moose River, Water ID No. 49
- Land ID No 179: Unnamed Stream, Water ID No. 63a/63b

More information is available in the License to Cross Public Waters application.

## **6.10 POST-CONSTRUCTION MONITORING**

The PCMP focuses on monitoring of aquatic resources affected by the Project after construction and restoration are complete. The plan also includes performance standards related to INS within wetland and riparian features. This plan has been developed with input from the U.S. Army Corps of Engineers ("USACE"), MPCA, and MDNR. All wetland and waterbody crossings (public and non-public) on public lands will be monitored in accordance with the PCMP. The PCMP: (i) requires pre-construction data collected to establish aquatic resources baseline conditions; (ii) establishes the data, analyses, and procedures required to monitor topography, hydrology and

vegetation following completion of Project construction; (iii) establishes objective and verifiable ecological performance standards to evaluate the success of restoration of aquatic resources to pre-construction conditions; (iv) requires the submission of annual monitoring reports to the USACE, MPCA, and MDNR and an annual meeting with the agencies to review the results; and (v) includes an adaptive management approach which specifies types of corrective actions that may be employed in the event that monitoring identifies a problem in achieving the final goal of restoring the temporarily impacted wetlands to pre-construction conditions. Enbridge is currently working with these agencies to finalize the vegetation monitoring methodology and specific monitoring locations to be used at peatlands, and wetlands that overlap with High or Outstanding SOBS, S1-S3 ranked NPCs and/or that contain state-listed plant species crossed by the Project.

Enbridge will also conduct post-construction monitoring in upland areas on public lands as outlined in Section 1.0 of the VMP (Attachment E). Post-construction monitoring will begin during the first growing season after construction restoration work is complete and be conducted in years 1, 3, and 5. Corrective actions identified during monitoring will generally be completed in the even years (years 2 and 4) and as needed after the monitoring conducted in years 1 and 3. Enbridge proposes to conduct on-the-ground monitoring efforts and restoration activities (e.g., corrective actions) supported by review of color infrared imagery. Monitoring will not be considered complete until the performance standards have been met and reviewed by the MDNR. In the case that the performance standards have not been met by year 5 of monitoring, Enbridge, in consultation with the MDNR, will either extend monitoring at those sites, or provide additional mitigation. A formal report of the monitoring results will be submitted to the MDNR by December 31 of each monitoring year.

In addition to the INS performance standards contained within the PCMP and VMP, Enbridge will be required to monitor for INS within its operational right-of-way over the life of the pipeline as a condition of its Utility License. Section 2.0 of the VMP addresses vegetation management over the operating term of the pipeline, including addressing INS throughout the license term in Section 2.2.

## **6.11 SPECIAL FEATURES ON PUBLIC LANDS**

### **6.11.1 Federally Funded Lands**

A complete list of MDNR lands crossed by the Project is presented in Attachment A. Enbridge has not identified any federally encumbered lands crossed by the Project's TWS, ATWS, or operational right-of-way.

### **6.11.2 Trails**

Installation of the pipeline should not preclude the MDNR from establishing or maintaining trails over or along the pipeline right-of-way in the future; however, Enbridge will need to approve any work involving ground disturbance within its operational right-of-way to ensure the safe operation of the pipeline.

MDNR has expressed concern that development of a pipeline right-of-way will open a corridor by which the public could access sensitive lands with off-road vehicles or other recreational equipment. Enbridge will incorporate barriers to restrict access to sensitive areas on public lands within the operational right-of-way, as practicable, and where advised by the MDNR. Restricting

access to the operational right-of-way could impede maintenance and emergency response activities.

The Project will not cross any known cross-country ski trails, or hunter walking trails; therefore, no impacts on these users are anticipated.

#### **6.11.2.1 Hiking and Horse Trails**

The Project will cross the Paul Bunyan and Willard Munger State Trails (ID Nos. 46, 181, and 182, respectively). Site-Specific Crossing and Restoration Plans for these trails are included in Attachment I of this Application. The MDNR's Utility Crossing License will be limited to the width of the MDNR's easement at the crossing point. The Project will also cross the Huntersville Horse Trail (ID No. 19).

Enbridge will notify MDNR land managers prior to conducting work across the state hiking and horse trails. An Enbridge representative will maintain a regular correspondence with MDNR staff during construction so that MDNR may inform the public of Enbridge's activities at state trails. Public use of the state trails may be interrupted for a short time to allow installation of the pipeline; Enbridge will not close the trail or interrupt recreational use of the trails without prior notification to MDNR.

Enbridge proposes to use the conventional bore method to cross the two hiking trails (see Section 3.5 of the Procedures [Appendix A of Attachment C]), which will result in no disturbance of the trail. Enbridge will clear vegetation within the construction workspace across the trails to allow vehicles and construction traffic to cross the trail and complete the bore crossings; clearing will be minimized at the Paul Bunyan Trail crossing as shown in Attachment I. Should MDNR determine that temporary trail re-routes will need to occur, Enbridge will work with the MDNR to coordinate and will be responsible for any associated timber damages. Enbridge will post signs as needed to notify the public of pipeline construction. Enbridge will also install safety fencing around the work area near the trail crossings during periods of inactive construction.

After the pipeline is installed across a trail, Enbridge will temporarily restore the disturbed area to allow passage of both trail users and pipeline construction equipment. Once the pipeline construction equipment has passed, Enbridge will restore the trail surface and adjacent areas to pre-construction conditions. Following construction, Enbridge will maintain a permanent 50-foot-wide easement along the construction workspace and for long-term maintenance of the pipeline. Enbridge will also replant temporary construction workspace with similar woody species as identified during a pre-construction timber survey as presented in the Planting Plan (Appendix A to the VMP). These replanting areas are shown on Attachment I.

#### **6.11.2.2 Grant-in-Aid OHV and Snowmobile Trails**

Enbridge reviewed Grant-in-Aid trail information, including OHV trails,<sup>26</sup> snowmobile trails,<sup>27</sup> and cross-country ski trails<sup>28</sup> located on lands managed or administered by the MDNR. The Project will temporarily impact the following nine snowmobile trails located on public lands:

---

<sup>26</sup> [https://www.dnr.state.mn.us/ohv/interactive\\_map/index.html](https://www.dnr.state.mn.us/ohv/interactive_map/index.html).

<sup>27</sup> <https://gisdata.mn.gov/dataset/trans-snowmobile-trails-mn>.

<sup>28</sup> <https://www.dnr.state.mn.us/skiing/skipass/map.html>.

- Clearwater Trail Blazer Trails – Trail will be crossed on parcel ID No. 2;
- Wadena Trails – Trail will be crossed on parcel ID No. 11;
- Nevis Wilder Trails – Trail will be crossed on parcel ID No. 27;
- Cass County Trails – Trail will be crossed on parcel ID No. 46;
- Emily-Outing Snowbird Trails – Trail will be crossed on parcel ID No. 75;
- Palisade Trail – Trail will be crossed on parcel ID No. 105;
- Haypoint Trail – Trail will be crossed on parcel ID No. 145;
- Cloquet Trail – Trail will be crossed on parcel ID No. 180; and
- Willard Munger Hinckley-Carlton State Trail – Trail will be crossed on parcel ID Nos. 181 and 182.

The Project will also temporarily intersect the Moose River OHV Trail on parcel ID Nos. 58, 64, 68, and 75, and will be in the vicinity of, but not crossing, this trail in several other areas. Enbridge will notify MDNR land managers prior to conducting work across these trails.

Public use of trails may be interrupted for a short time to allow installation of the pipeline or when utilized for construction workspace access. Enbridge will post signs as needed to notify users of pipeline construction and install safety fencing around the work area near trail crossings during periods of inactive construction. Signs will be high and visible, and safety fencing will be installed. If the open-cut method is used, Enbridge will conduct excavation and pipeline installation activities across the trail within a 48-hour period to limit impacts. After the pipeline is installed across a trail, Enbridge will temporarily restore the disturbed area to allow passage of both trail users and pipeline construction equipment. Once the pipeline construction equipment has passed, Enbridge will restore the trail surface and adjacent areas to pre-construction conditions. Trails used for construction workspace access will be temporarily closed to the public only during active construction in that area and then restored to pre-construction conditions once construction is complete.

Should construction occur during frozen conditions, Enbridge will place additional signage in advance of snowmobile trail crossings to ensure adequate notification for trail users and will ensure a minimum 6-inch snow cover over the trail path following construction. Enbridge will also work with trail sponsors regarding any necessary signage and re-routes. Should trails need to be re-routed on public land, the License may have conditions for timber damages resulting from creation of new trails.

The Project's operational right-of-way will be subject to periodic vegetation clearing during pipeline operations (see Section 4.0), which will create an open corridor for potential unauthorized use by OHVs. Measures Enbridge will utilize during the Project's operational phase to prevent unauthorized use of its right-of-way may include but are not limited to posting "no trespassing" signs and establishing natural barriers (such as boulders) where trails intersect the right-of-way, as directed by the MDNR.

### 6.11.3 Mineral Resources

Enbridge's Mineral Resources Plan (Attachment J) was developed in coordination with MDNR. The Mineral Resource Plan addresses public lands managed by the MDNR where future mineral resource management activities could occur and establishes measures that avoid interference with mineral resources management activities. The Mineral Resource Plan outlines Enbridge's operational right-of-way, plus additional sloping to define mineral resource impact avoidance areas. The costs for these mineral resource encumbrances will be calculated as a condition in the License to Cross Public Lands.

### 6.11.4 Forestry Resources

The Project will cross approximately 35.3 miles of the following public land within state forests: Mississippi Headwaters, Huntersville, Foot Hills, Land O'Lakes, Hill River, Savanna, and Fond du Lac.

All merchantable timber will be managed in accordance with Enbridge contract specifications. Enbridge will compensate the MDNR for merchantable timber loss based on MDNR's timber valuation reviews. The construction and operation of the pipeline will prevent future use of the operational right-of-way to produce merchantable timber; however, the MDNR will be compensated for the value of the land within the operational right-of-way.

MDNR has advised Enbridge that there are current timber sales crossed by and in the vicinity of the Project. Enbridge is aware of the timber permits listed in Table 6.11-1. Enbridge will work with the MDNR and permitted parties to coordinate timber harvest activities on public lands in advance of clearing so that construction of the Project will not interfere with permitted timber harvest activities.

**Table 6.11-1**  
**MDNR Timber Permits along the Line 3 Replacement Route**

Permit Number	Permit Holder	Permit Date	Permit Expiration <sup>a</sup>	Location	Land ID No.
X015021	Sawyer Timber Co., LLP	5/26/2016	5/31/2020	T138N, R31W, S15, Cass County	Permittee will need to cross L3R right-of-way to access off right-of-way timber stands. Timber stands are located south of L3R right-of-way
X015978	Haverinen Brothers Logging	5/24/2018	5/31/2021	T139N, R26W, S11, SESE, Cass County T139N, R26W, S12, SWSW, Cass County	Permittee will need to cross L3R right-of-way to access off right-of-way timber stands. Timber stands are located south of L3R right-of-way
B013978	Michael Rieger	6/14/2018	5/31/2021	T139N, R25W, S1, Cass County	81 (NWSE), 82 (NESE), 83 (SESE)
X015700	Haverinen Brothers Logging	9/12/2017	5/31/2021	T138N, R33W, S2, Wadena County T138N, R33W, S11, Wadena County	33 (SESW) 36 (NENW)
B014046	Dick Walsh Forest Products Inc	9/11/2018	5/31/2022	T138N, R33W, S2, Wadena County	35 (SESE)

Permit Number	Permit Holder	Permit Date	Permit Expiration <sup>a</sup>	Location	Land ID No.
B103770	Croatt Enterprises Inc.	12/4/2017	5/31/2020	T51N, R24W, S31, Aitkin County T51N, R25W, S35, Aitkin County T51N, R25W, S36, Aitkin County	126 (Government lot 2) 119 (NESE) 120 (NWSW), 121 (NESW), 122 (NWSE), 123 (NESE)
<sup>a</sup> MDNR has advised Enbridge that some timber permits were extended in 2020 due to poor harvest conditions; these permits may still be active at the time of construction.					

Enbridge has worked with the MDNR to coordinate permanent access across the pipeline after construction for crossing by MDNR vehicles and logging equipment so long as any such crossings do not pose a risk to the safe operation of the pipeline, and permission is granted by affected landowners for state logging trails across non-public lands. Enbridge will install thicker walled pipe under such crossings. Pipeline crossings will be designed to accommodate vehicles up to 10 tons per axle weight. MDNR use of these crossings shall not produce rutting within the Enbridge right-of-way; if rutting occurs, MDNR will need to cease operations until conditions improve or appropriate measures are approved by Enbridge and implemented to protect the pipeline. Enbridge will not build roads at these crossings and MDNR will be responsible for providing necessary mats to prevent rutting during road use. Enbridge will reserve the right to withdraw access if a crossing may have the potential to cause an unsafe condition or damage to the pipeline.

Table 6.11-2 lists the forestry crossings agreed to by MDNR and Enbridge in April 2019; they are also presented in Attachment A and shown on maps in Attachment B, when located on public lands.

**Table 6.11-2**  
**Forestry Crossings along the Line 3 Replacement Route**

Forestry Crossing ID No.	MP	County	Township, Range, Section
1	921.3	Clearwater	T147, R37, S16
2	921.9	Clearwater	T147, R37, S21
3a <sup>a</sup>	924.0	Clearwater	T147, R37, S34
3b <sup>a</sup>	924.0	Clearwater	T147, R37, S34
4	941.7	Clearwater	T145, R36, S36
5	941.8	Clearwater	T145, R36, S36
6	941.9	Clearwater	T145, R36, S36
7	991.0	Wadena	T138, R34, S1
8 <sup>a</sup>	991.5	Wadena	T138, R33, S6
9	993.0	Wadena	T138, R33, S5
10	994.0	Wadena	T138, R33, S4
11	994.6	Wadena	T138, R33, S3
12	994.8	Wadena	T138, R33, S3
13	995.9	Wadena	T138, R33, S2
14	996.5	Wadena	T138, R33, S2
15	1005.9	Cass	T138, R31, S9
16	1006.2	Cass	T138, R31, S9
17	1006.8	Cass	T138, R31, S9
18	1007.2	Cass	T138, R31, S10
19	1007.3	Cass	T138, R31, S10
20	1007.8	Cass	T138, R31, S10
21 <sup>a</sup>	1021.1	Crow Wing	T138, R29, S14
22 <sup>a</sup>	1021.4	Crow Wing	T138, R29, S12

ENBRIDGE ENERGY, LIMITED PARTNERSHIP  
APPLICATION FOR A LICENSE TO CROSS PUBLIC LANDS  
NOVEMBER 2020 (REV 3)

Forestry Crossing ID No.	MP	County	Township, Range, Section
23 <sup>a</sup>	1021.9	Crow Wing	T138, R29, S12
24 <sup>a</sup>	1032.3	Cass	T139, R27, S20
25	1042.1	Cass	T139, R26, S11
26	1042.6	Cass	T139, R26, S12
27	1042.7	Cass	T139, R26, S12
28	1042.8	Cass	T139, R26, S12
29	1042.9	Cass	T139, R26, S12
30	1043.1	Cass	T139, R26, S12
31	1043.5	Cass	T139, R25, S7
32	1043.9	Cass	T139, R25, S7
33	1044.4	Cass	T139, R25, S8
34	1044.5	Cass	T139, R25, S8
35	1045.1	Cass	T139, R25, S8
36	1045.4	Cass	T139, R25, S8
37	1045.9	Cass	T139, R25, S9
38	1046.1	Cass	T139, R25, S9
39	1046.7	Cass	T139, R25, S4
40	1046.9	Cass	T139, R25, S3
41	1047.5	Cass	T139, R25, S3
42	1047.8	Cass	T139, R25, S3
43	1047.9	Cass	T139, R25, S2
44	1048.1	Cass	T139, R25, S2
45 <sup>a</sup>	1048.9	Cass	T139, R25, S1
46	1049.4	Cass	T139, R25, S1
47	1049.6	Cass	T139, R25, S1
48	1058.1	Aitkin	T51, R26, S35
50	1058.6	Aitkin	T51, R26, S35
52	1059.4	Aitkin	T49, R26, S35
53	1060.2	Aitkin	T51, R25, S31
54	1063.7	Aitkin	T51, R25, S34
55	1064.7	Aitkin	T51, R25, S35
56	1066.2	Aitkin	T51, R24, S31
57 <sup>a</sup>	1073.8	Aitkin	T51, R23, S29
58	1074.2	Aitkin	T51, R23, S28
59 <sup>a</sup>	1076.1	Aitkin	T51, R23, S27
62	1078.5	Aitkin	T51, R22, S19
63	1079.1	Aitkin	T51, R22, S19
64	1079.8	Aitkin	T51, R22, S20
65	1080.3	Aitkin	T51, R22, S20
66	1081.4	Aitkin	T51, R22, S21
67	1083.5	Aitkin	T51, R22, S24
68 <sup>a</sup>	1085.6	St. Louis	T51, R21, S20
69 <sup>a</sup>	1089.9	St. Louis	T51, R21, S24
70 <sup>a</sup>	1096.9	St. Louis	T50, R20, S1
71 <sup>a</sup>	1099.2	St. Louis	T50, R19, S7
72 <sup>a</sup>	1099.3	St. Louis	T50, R19, S7
73 <sup>a</sup>	1100.4	St. Louis	T50, R19, S17
74 <sup>a</sup>	1104.1	St. Louis	T50, R19, S35
75 <sup>a</sup>	1106.5	Carlton	T49, R18, S5
<sup>a</sup> Crossing not located on public land within the License to Cross Public Lands application.			

### **6.11.5 Aquatic Management Areas**

The proposed route will cross two parcels of land administered by the MDNR's Fisheries Division as part of the Little Otter Creek Aquatic Management Area (parcel ID Nos. 179 and 180).

MDNR provided Enbridge with detailed planting and restoration guidance for the construction workspace on these parcels in September 2020. These requirements have been incorporated within a revised Little Otter Creek Aquatic Management Area Site-Specific Crossing and Restoration Plan, which is included in Attachment I and will be implemented as part of the Planting Plan (Appendix A to the VMP).

The crossing at Parcel No. 179 includes two licensed crossings of one Unnamed Stream, a public water, which is included in the License to Cross Public Waters application as ID Nos. 63a/63b. Enbridge will cross the waterbodies and wetlands on these parcels as outlined in Sections 6.2 and 6.3, respectively. Enbridge committed to additional depth of cover at the Unnamed Stream crossing as presented in Attachment A. In addition, Enbridge extended the depth of cover to the wetland boundaries surrounding the stream following communication from MDNR in August 2020. The accommodation of this additional depth of cover required addition of a new ATWS on public land on the west side of the stream crossing to store trench spoil. Additional information regarding the waterbody crossing is presented in the License to Cross Public Waters application.

### **6.11.6 Sensitive Species and Plant Communities**

Enbridge initiated consultation in early 2013 with the Midwest Region Ecological Services Field Office of the U.S. Fish and Wildlife Service ("USFWS") for the Minnesota portion of the Project. The initial consultation letter included a list of federally endangered, threatened, and candidate species that may occur in the Project area in Minnesota. Three federally listed species may be affected by the Project: gray wolf, Canada lynx, and northern long-eared bat. The Project's action agencies under Section 7 of the Endangered Species Act, the USACE and Bureau of Indian Affairs, submitted a Biological Assessment to the USFWS on March 25, 2019 that assessed potential impacts and described the conservation measures that Enbridge will implement to avoid and minimize impacts on these federally listed species. The USFWS responded with a letter of concurrence on August 6, 2019. In the letter, the USFWS concurred that the Project will not adversely affect the gray wolf and Canada lynx and may affect, but incidental take is not prohibited for northern long-eared bat. With this letter of concurrence, the USFWS concluded informal consultation for the Project under Section 7 of the federal Endangered Species Act.

Enbridge also initiated consultation with the MDNR Endangered Species Review Coordinator in early 2013 to understand the potential presence of state-threatened and state-endangered species near the Project. Enbridge has conducted periodic reviews of Minnesota Natural Heritage Information System ("NHIS") data provided by the MDNR. Enbridge's NHIS Review and Avoidance Plan (see Attachment K) contains a review of NHIS data and other MDNR data sources for rare or sensitive ecological resources along the Project; an assessment of the potential for impacts on those resources; and a description of measures for avoiding or minimizing impacts. Enbridge will implement the following BMPs which are additive to standard construction measures on public lands to address NHIS-related commitments. Where relevant, the locations where these additional BMPs will apply are presented in Attachment A (see "Comments" column) and on maps in Attachment B.

**Mammals (Section 4.4.2.2 of Attachment K)**

- Enbridge will not remove trees during the months of June and July on lands administered by MDNR, unless a bat protection plan has been approved by MDNR (see footnote in Attachment A).

**NPCs ranked S1-S3 and SOBS ranked High or Outstanding (Section 5.2.2.2 of Attachment K)**

- Attachment A presents the 40s which cross NPCs ranked S1-S3 and SOBS ranked Outstanding or High as presented in the NHIS Review and Avoidance Plan. These locations are also shown on maps in Attachment B.
- MDNR recommended that Enbridge limit the width of the construction workspace to 95 feet and limit the placement of ATWS within High or Outstanding SOBS and NPCs ranked as S1-S3. Enbridge has coordinated with MDNR to modify workspace to avoid impacts on these resources through MDNR comments on Enbridge's applications for permits, licenses, and leases needed to construct the Project. Through those processes, Enbridge has reduced upland construction workspace and ATWS within High or Outstanding SOBS and NPCs ranked as S1-S3 as outlined in Section 5.2.2 of Attachment K. Table E-1 of Attachment K presents the public lands crossed by workspace within NPC and SOBS. Where the construction workspace was already less than or equal to 95 feet wide in these areas, that is noted, including areas where Enbridge had already reduced the workspace to 95 feet. The table also presents justifications for the areas where the Project construction workspace and/or ATWS exceeds 95 feet wide within these communities. In all cases, the workspace as presented in this Application is needed as proposed for constructability purposes.
- Winter construction is a minimization measure in High or Outstanding SOBS and NPCs ranked as S1-S3 and is noted in Attachment A where currently proposed, depending upon the start of construction.
- Enbridge will use redundant erosion controls per the requirements of the MPCA Construction Stormwater General Permit and the Section 401 Water Quality Certification conditions, which are summarized in Sections 1.9, 2.2, and 3.4 of the EPP, and include the following:
  - Enbridge will properly install and maintain redundant sediment control measures immediately prior to or at the same time as ground disturbance activities (grading, topsoiling) at surface waters (i.e., wetlands and waterbodies) located within 50 feet of the Project and where stormwater flows to the surface water (refer to the EPS in the SWPPP. Redundant controls will not be installed adjacent to road ditches, judicial ditches, county ditches, stormwater conveyance channels, storm drain inlets, and sediment basins.
  - Enbridge will also install perimeter controls along the downgradient perimeter of the construction workspace and improved temporary access roads in non-cultivated wetlands where slopes are greater than 3 percent to prevent sedimentation into adjacent wetlands outside of the construction workspace.

- On public lands and wherever practicable at waterbody crossings, Enbridge will use wildlife-friendly erosion and sediment control BMPs that contain biodegradable netting (Category 3N or 4N natural fiber) and will avoid the use of plastic mesh. Enbridge will limit the areas where burning may occur and in compliance with any burn permits issued by MDNR Forestry.
- Enbridge will seek to minimize the amount of soil disturbance to the topsoil after it is replaced over the subsoil within these communities on public lands (see Attachments A and B). Enbridge has committed to using a rolling harrow, Harley rake, or drag harrow (or equivalent) after topsoil replacement to break up large clods and to prepare the soil surface on public lands. Enbridge will not utilize field cultivators or chisel plows on public lands. Enbridge will select seed mixes for public lands as described in the Planting Plan (Appendix A of the VMP). Seed will be applied uniformly on public land at specified rates across the prepared construction workspace by drilling, broadcasting, hydroseeding, or air seeding, as outlined in Section 7.4 of the EPP.
- Enbridge will avoid the use of hydroseeding on public lands; however, Enbridge may use hydroseeding on steep slopes to ensure seed is maintained in place until revegetation is successfully achieved.
- As stated in Section 1.16.1 of the EPP, Enbridge will begin cleanup and rough grading (including installation of temporary erosion and sediment control BMPs) as soon as practicable, but not later than the end of the following workday after backfilling the trench in locations within these communities on public lands in uplands (see Attachments A and B). Enbridge will attempt to complete this rough cleanup within 1 week. As described in Section 3.9.1 of the EPP, cleanup, rough, and final grading (including installation of temporary and erosion and sediment control BMP measures) will proceed as soon as the trench has been backfilled in wetlands (see Table E-1 in Attachment E). Enbridge will initiate seedbed preparation and permanent seeding as described in Section 7.3.
- All exposed areas, including spoil piles will be temporarily stabilized and temporary erosion and sediment control BMPs will be maintained until permanent cover<sup>29</sup> is established consistent with the MPCA General Permit (see Section 1.9.1 of the EPP), which requires the following:
  - Stabilization<sup>30</sup> of all exposed areas, including stockpiles, must be initiated immediately<sup>31</sup> to limit soil erosion when construction activity has permanently or

<sup>29</sup> Permanent cover means surface types that will prevent soil failure under erosive conditions. Examples include: gravel, concrete, perennial cover, or other landscaped material that will permanently arrest soil erosion. Permittees must establish a uniform perennial vegetative cover (i.e., evenly distributed, without large bare areas) with a density of 70 percent of the native background vegetative cover on all areas not covered by permanent structures, or equivalent permanent stabilization measures. Permanent cover does not include temporary BMPs such as wood fiber blanket, mulch, and rolled erosion control products (Minnesota Rules 7090).

<sup>30</sup> Stabilization means that the exposed ground surface has been covered by appropriate materials such as mulch, staked sod, riprap, erosion control blanket, mats, or other material that prevents erosion from occurring. Grass seeding, agricultural crop seeding, or other seeding alone is not stabilization. Mulch materials must achieve approximately 90 percent ground coverage (Minnesota Rules 7090).

<sup>31</sup> Initiated immediately means taking an action to commence soil stabilization as soon as practicable, but no later than the end of the work day, following the day when the land-disturbing activities temporarily or permanently cease (Minnesota Rules 7090).

temporarily ceased on any portion of the site and will not resume for a period exceeding 14 calendar days.

- In areas within 1 mile of, and draining to, a special or impaired water, stabilization measures will be initiated within 24 hours and completed within 7 calendar days whenever construction activity has permanently or temporarily ceased on any portion of the site.
- On portions of the Project where work will be occurring during applicable “work in water restrictions” for Public Waters, all exposed soil areas within 200 feet of the water’s edge, and that drain to that water, will be stabilized within 24 hours. Stabilization of all exposed soils within 200 feet of the public water’s edge, and that drain to that water, will be initiated immediately and completed within 7 calendar days whenever construction activity has permanently or temporarily ceased on any portion of the site outside of the restriction period.
- Enbridge will work with MDNR to provide compensation for woody revegetation planting within temporary workspace and ATWS on MDNR Forestry lands. The location and details regarding these methods will be determined by MDNR land managers.
- As stated in Section 1.8.1 of the EPP, on public lands, mulch and mechanically cut woody debris must be uniformly broadcast to less than 2-inch thickness and in a manner that maintains visible ground. An Environmental Inspector will proceed with the clearing crews to monitor these activities on public lands. Should an accumulation of mulch or mechanically cut woody debris occur on public lands, Enbridge will remove the material and haul off-site to an approved location. However, woody debris or mulch that scatters during normal use of clearing equipment is acceptable, provided it does not accumulate as described above. Enbridge will manage INS using an integrated approach described in the INS Management Plan included as Appendix B of the EPP. The INS Management Plan contains specific measures that will be implemented to manage invasive species on public lands, including those in High or Outstanding SOBS and NPCs ranked as S1-S3.

Through ongoing consultation with MDNR since 2015, Enbridge has worked to avoid and minimize impacts on state-protected threatened and endangered plant species by adopting reroutes, reducing or shifting construction workspace, removing access roads, and selecting construction techniques that avoid ground disturbance. These locations are presented in more detail in Table 4.1-1 of Attachment K and Enbridge’s Endangered Species Permit Application for the following sites on public land:

- [Locational Information Removed]

### **6.11.7 Peatlands**

Enbridge conducted a field survey to determine the depth and characteristics of select peatlands crossed by the Project to ensure the placement of the pipe within the peat layer will not create hydrological issues. Survey occurred at 38 peatlands on public and non-public lands between August and October 2019. The survey report was provided to MDNR on October 16, 2019. Of the 38 peatland survey locations contained within the survey protocol, 25 peatlands surveyed are either partially or wholly located on public land; these peatlands are presented in Table 6.11-3.

Table 6.11-3

**Peatland Survey Areas on Public Lands for the Line 3 Replacement Project**

ID No.	Survey Site ID	MP Range	Pipeline Installation <sup>a</sup>	Sphagnum Peatland	Wetland/Peatland Construction Plan
32	P01-V_1	995.7-995.8	Within mineral soil layer	No	Yes
33-35	P01-V	995.9-996.4	Within non-porous peat layer	No	Yes
35	P02-V	996.5-996.6	Within porous peat layer for 852 of 1,173 feet; attempt to segregate porous and non-porous soils	No	Yes
86-87, 93-94	P06-V	1056.7-1057.1	Within non-porous peat layer	Yes	Yes
88	P07-V	1057.3-1057.3	Within mineral soil layer	No	Yes
89	P08-V	1057.5-1057.6	Within mineral soil layer	Yes	Yes
91, 96	P09-V	1058.1-1058.1	Within mineral soil layer	No	Yes
91, 96	P10-V	1058.2-1058.2	Within mineral soil layer	Yes	Yes
92, 97-99	P11-V	1058.3-1058.7	Within mineral soil layer	Yes	Yes
99-100	P12-V	1058.9-1059.0	Within mineral soil layer	Yes	Yes
101-104	P13-V	1059.3-1060.1	Within non-porous peat layer	Yes	Yes
105-108	P14-V	1060.3-1061.1	Within porous peat layer for 2,302 of 4,224 feet; attempt to segregate porous and non-porous soils	Yes	Yes
108-109	P15-V	1061.1-1061.4	Within mineral soil layer	Yes	Yes
111-115	P16-V	1062.5-1063.7	Within non-porous peat layer	Yes	Yes
117-118	P17-V	1064.3-1064.3	Within mineral soil layer	No	Yes
119	P18-V	1064.6-1064.7	Within porous peat layer for 173 of 528 feet; attempt to segregate porous and non-porous soils	Yes	Yes
120-121	P19-V	1064.9-1065.1	Within mineral soil layer	Yes	Yes
121	P20-V	1065.1-1065.2	Within mineral soil layer	Yes	Yes
123	P21-V	1065.6-1065.6	Within mineral soil layer	No	Yes
132-133	P22-V	1067.4-1067.6	Within mineral soil layer	No	Yes
133-135	P23-V	1067.8-1068.0	Within mineral soil layer	Yes	Yes
142	P30-V	1076.2-1076.3	Within porous peat layer for 317 of 528 feet; attempt to segregate porous and non-porous soils	Yes	No
147-148	P36-I	1078.8-1079.1	Within mineral soil layer	No	Yes
149-150	P37-I	1079.4-1079.6	Within mineral soil layer	Yes	Yes
157-169	P40-I	1081.3-1084.5	Within porous peat layer for 9,155 of 16,896 feet; attempt to segregate porous and non-porous soils	Yes	Yes

<sup>a</sup> The method of installation in each peatland is presented in Attachment G.

Enbridge will generally install the pipeline across peatlands using wetland crossing methods as discussed in Section 6.3 of this Application. As discussed in Section 3.0 and presented in Figures 32 and 33 of the EPP, grading and topsoil removal in wetlands will be limited to the trench line, which is approximately 20 feet wide on average. As discussed in Section 3.6.1 of the EPP, when constructing in wetland areas without standing water, up to 1 foot of topsoil (organic layer) will be stripped from the trench line and stockpiled separate from trench spoil to preserve the native seed stock. Where topsoil segregation occurred, it will be spread uniformly over the trench area from which it was removed following rough grading (see Section 3.9 of the EPP). As described in Section 7.7.3 of the EPP (Attachment C), Enbridge will follow this same procedure in Sphagnum-dominated peatland communities (see Table 6.10-3) but may also apply straw mulch which has been shown to improve Sphagnum moss establishment and survival.

As outlined in Section 3.5, Enbridge is proposing to complete construction at some areas in winter conditions, depending on the construction start date. The MDNR has required Enbridge to prepare Wetland/Peatland Construction Plans for some public lands to include site-specific construction plans and proposed restoration efforts as part of the Utility License. Wetland/Peatland Construction Plans are presented in Attachment L.

The results of Enbridge's peatland field surveys indicate that at 31 of the 38 peatlands surveyed, the pipe would be installed below the peat layer in the mineral soil or within the non-porous peat layer;<sup>32</sup> therefore, avoiding the potential adverse hydrology impacts of concern to the MDNR. At seven of the peatland locations contained within the survey protocol, the pipeline will be installed in the porous peat layer for a segment of the peatland crossing. Five of these peatland communities are located on public land. Table 6.10-3 also presents the length of the pipeline segment that will be installed within the porous peat layer relative to the full length of the peatland crossing. In these five locations on public lands, it is not feasible and prudent to install the pipeline to a deeper level within mineral soil or non-porous layers because of constructability constraints (e.g., the inability or the significant cost to maintain stable trench walls due to saturated soil conditions, the additional workspace and that would be needed to store excavated soil). Avoiding the peatlands using a trenchless method such as HDD is also not feasible or prudent in these areas due to the difficulty associated with maintaining a pilot hole and the higher risk of inadvertent release of drilling mud when drilling in unconsolidated soils. However, Enbridge is proposing additional mitigation measures to minimize long-term hydrology impacts on these 5 peatlands following construction as depicted in the Wetland/Peatland Construction Plans in Attachment L. Enbridge will attempt to segregate porous and non-porous soils at these peatlands; the ability to segregate porous and non-porous soils during installation will depend on soil conditions during the time of construction. In heavily saturated conditions, multiple layer segregation will be difficult, if not impossible. Heavily saturated areas with a high-water table and fluid soil types will be the most difficult to segregate and may not be possible. In areas of low- to moderate-saturation and more solid soils, segregation may be possible. Enbridge will work with the EI, MDNR IEM (see Section 7.0), and soils scientists in each of these locations to determine how much segregation is feasible. At a minimum, Enbridge will follow the below steps at the five peatlands on public lands, including the two on non-public lands not presented in Table 6.11-3 where the pipe will be installed within the porous layer:

- The top 12 inches (or, to the bottom of the organic layer) will be excavated and stacked on the non-working side of the construction workspace;
- The subsoil and layers below will then be excavated and stacked on the working side of the construction workspace; and
- Materials would be backfilled into the ditch; in the reverse order they were removed.

Additional segregation beyond this is not likely due to the soils inability to be stacked or piled. This will also be the case at push-pull crossings where saturation levels will limit soil segregation.

---

<sup>32</sup> The degree of humification recorded as Von Post classes roughly correlate to the type of organic material and hydraulic conductivity as follows: H1-H3 are fibric materials with K cm/sec<sup>2</sup> of 10<sup>-1</sup> to 10<sup>-2</sup>; H4-H6 are hemic materials with K cm/sec<sup>2</sup> of 10<sup>-3</sup> to 10<sup>-4</sup>; and H7-H10 are sapric materials with K cm/sec<sup>2</sup> of greater than 10<sup>-5</sup>. Von Post ratings of H4 and less are considered "permeable peat."

### **6.11.8 Vernal Pools/Seasonal Ponds**

Enbridge developed a protocol and completed a desktop analysis to identify PSPs located within the Project survey corridor in Minnesota. That analysis determined that the Project will impact a total of 22.5 acres of forested PSPs, of which 4.3 acres are located on public lands. Attachment A contains the total acreage of forested PSPs impacted by construction activities and located on public lands, by parcel.

In February 2020, Enbridge prepared the L3R Compensatory Wetland Mitigation Plan (latest version) ("Mitigation Plan") consistent with the Interagency Compensatory Wetland Mitigation Guidance. As noted in the Mitigation Plan, all wetlands will be restored to pre-construction conditions to be determined by objective, verifiable performance standards and post-construction monitoring (see, generally, the PCMP). Enbridge will provide compensatory wetland mitigation for temporal loss of wetlands during construction and for permanent conversion of some wetlands from a forested or scrub-shrub vegetation community to an herbaceous community. Permanently converted areas are within the 50-foot permanent easement where the pipeline corridor will be maintained by periodic vegetation management activities. Forested and scrub-shrub vegetation communities outside of the permanent easement will be allowed to regenerate. Forested vernal pools/seasonal ponds are special wetlands (Table 3.0-1 of the Mitigation Plan) that require a higher compensatory wetland mitigation ratio than normal wetlands.

### **6.11.9 Old Growth Forest**

Enbridge's September 2020 NHIS Review and Avoidance Plan (Attachment K; Section 5.4.2) addressed the Project impacts on three Designated Old Growth Forest and Lowland Conifer Old Growth ("LCOG") Forest as communicated by MDNR. All three locations are wholly located on public land.

- The Project crosses LCOG at MPs 1065.2 and 1065.6 (ID Nos 121 and 123) and at MPs 1084.1 and 1084.2 (ID Nos. 168 and 169). The construction workspace does not exceed 95 feet within delineated wetlands at any of the locations where the Project crosses LCOG. Enbridge is proposing to construct between MPs 1084.1 and 1084.2 during winter conditions as an additional minimization measure (see Section 3.5).
- MPs 1078.2 to 1078.5 (ID Nos. 145 and 146): The Project crosses 4.0 acres of Designated Old Growth Forest. The Project construction workspace is 120 feet wide and ATWS are present on the south side of the construction workspace. Additional justification regarding Enbridge's route selection is provided in Section 5.4.2 of Attachment K. Enbridge is proposing to construct between MPs 1078.2 and 1078.5 during winter conditions as an additional minimization measure (see Section 3.5).
- MPs 1079.5 to 1081.3 (ID Nos. 150 to 157): The Project crosses 25.1 acres of Designated Old Growth Forest. The Project construction workspace is 120 feet wide in upland locations and 95 feet wide in wetlands. Additional justification regarding Enbridge's route selection is provided in Section 5.4.2 of Attachment K. Enbridge is proposing to construct between MPs 1079.5 and 1081.3 during winter conditions as an additional minimization measure (see Section 3.5).

As a BMP to avoid impacts on Old Growth forests, Enbridge will stake construction exclusion areas where old-growth is located adjacent to the boundaries of construction workspace and

access roads. Locations of the exclusion areas are indicated in Attachment A and are shown on maps in Attachment B. Enbridge requires that all personnel and equipment must remain within the marked construction workspace.

#### **6.11.10 Archaeological and Historic Resources**

Enbridge conducted archaeological and historic resources surveys along the L3R route from 2013 through 2020. In addition, Tribal Cultural Resources Surveys have been conducted along the entire L3R route. The results of archaeological and architectural history surveys conducted by Enbridge and Tribal Cultural Resources Surveys, and applicable mitigation and avoidance procedures have been provided to the MDNR for review under the Field Archeology Act (Minnesota Statutes 138.31-138.42). Enbridge has submitted the Final Avoidance, Mitigation, and Implementation Plan for Construction to the MDNR Archaeologist for this Project. This Plan also includes an Unanticipated Discoveries Plan, which describes the procedures related to an unanticipated discovery of an archaeological or historic resource or human remains.

#### **6.11.11 Beaver Dams**

Enbridge reviewed locations where beaver dams are known to exist on public lands within the construction workspace based on field survey notes and comments provided by the MDNR. Field visits were conducted to gather additional data on the beaver dams. There are no beaver dams within the construction workspace on state lands. There is one beaver lodge and pond within the construction workspace on state lands at MP 1006.5, or ID No. 40 (see Attachments A and B). Enbridge will work with MDNR Wildlife to obtain a permit for beaver lodge removal.

Should Enbridge discover a new beaver dam on public lands during construction that must be removed, or identify the need to trap a beaver, activities will not commence until all required permits and authorizations, including landowner approval, are obtained. The following BMPs will be implemented during removal of all beaver dams:

- Enbridge will obtain landowner permission and will contact downstream landowners prior to removal activities;
- Enbridge will monitor weather conditions prior to removal;
- Removal will be limited to the debris that comprises the dam structure;
- Waterbody bed and bank material will not be removed or disturbed during debris removal;
- Materials will be removed incrementally by hand using hand tools to minimize the adverse effects of sudden water release on downstream waters/landowners;
- Poned water will be released slowly to minimize potential downstream sedimentation. After each drop in dam height, Enbridge will allow the water level and sediment plume to stabilize;
- Downstream conditions will be monitored by construction staff to ensure incremental release of water;

- No mechanized removal will occur outside of the construction workspace when activities could impact public waters;
- In areas where multiple dams are located, Enbridge will remove the dam farthest downstream first;
- Work will be halted, and the situation reassessed should removal result in unexpected conditions (e.g. ponding); and
- Due to Enbridge's plan to remove only material necessary and to do it gradually to maintain water quality, Enbridge does not anticipate the need for any additional contingency measures to manage water flow.

## **7.0 ENVIRONMENTAL INSPECTION AND MONITORING**

Enbridge will comply with applicable federal, state, and local rules and regulations, and take all appropriate precautions to protect against environmental degradation. Enbridge will provide appropriate construction oversight to confirm and document compliance with the measures of the EPP and requirements of applicable federal, state, Tribal, and local permits. Enbridge's Environmental Inspectors will assist in interpreting and implementing the requirements of the EPP, including additional requirements on public lands, and verify compliance with these procedures for Enbridge. Enbridge has also committed to applicable agencies to fund a comprehensive third-party monitoring program to be deployed during Project construction. The details of this inspection and monitoring program are described in Enbridge's Environmental Monitor Control Plan.

Additional environmental monitoring of construction activities will be required for any of the public lands with a Wetland/Peatland Construction Plan where pipeline construction is not conducted in winter/frozen conditions. Each construction spread where non-winter/frozen construction occurs within the identified areas will have one additional dedicated IEM beyond the minimum that are planned for each applicable spread. Additional MDNR monitoring staff will also be required to address unforeseen circumstances and authorize adjustments to construction approaches in compliance with license conditions.

## **8.0 COMPLIANCE WITH ENVIRONMENTAL STANDARDS**

Enbridge applied for its MPUC Applications from the MPUC to construct and operate the Project on April 24, 2015. The DOC-EERA staff prepared an EIS in cooperation with the MDNR and MPCA to facilitate the MPUC's review of the MPUC Applications in accordance with Minnesota Rules Chapter 4410. The EIS considered numerous certificate of need alternatives, route permit alternatives, and route segment alternatives for the Project.

At the conclusion of contested case proceedings, the MPUC issued the MPUC CN Order on September 5, 2018. On October 26, 2018, the MPUC issued the MPUC RP Order finding identifying the Project's Preferred Route inclusive of Route Segment Alternative ("RSA")-05 and RSA-22 through the FdL Reservation as the MPUC Designated Route (hereafter referred to as the "Designated Route" or "Project"). The Project is a 750-foot wide corridor, which allows for minor adjustments to the pipeline alignment and operational right-of-way within the Project.

As discussed in Section 2.1, on December 9, 2019, the Minnesota Department of Commerce issued the second revised FEIS. Notice of availability of the second revised FEIS and the procedures for written comments were also published in the December 9, 2019 EQB Monitor. The MPUC accepted comments regarding the Second Revised FEIS and its certificate of need and route permit decisions through January 31, 2020.

On February 3, 2020, the MPUC found that the Second Revised FEIS was adequate and reaffirmed its previous certificate of need and route permit orders with a minor change related to the public safety escrow condition within the route permit. On May 1, 2020, the MPUC issued its Order Finding Environmental Impact Statement Adequate, Granting Certificate of Need as Modified, and Granting Routing Permit as Modified ("May 2020 Order"). In the May 2020 Order, the Commission found that the Second Revised FEIS is adequate under the applicable rules, approved a certificate of need for the Project by reissuing several prior orders with modifications, and reissued the routing permit for the Project by reissuing several prior orders with modifications.<sup>33</sup>

On May 21, 2020, several parties filed petitions for reconsideration of the May 2020 Order. On July 20, 2020, the MPUC issued its Order Denying Reconsideration.

The Designated Route approved by the MPUC in its May 2020 Order crosses the public lands contained within this Application. Enbridge must comply with the routing provisions of the May 2020 Order. In adopting its May 2020 Order, (which reissued the September 5, 2018 MPUC CN Order) the MPUC found that the Project satisfies the following applicable criteria (Minn. Rules, part 7853.0130) for granting a certificate of need for a large petroleum pipeline: (1) the probable result of denial would adversely affect the future adequacy, reliability, or efficiency of energy supply to the applicant, to the applicant's customers, or to the people of Minnesota and neighboring states, considering five enumerated sub-factors; (2) a more reasonable and prudent alternative to the proposed facility has not been demonstrated by a preponderance of the evidence on the record by parties or persons other than the applicant, considering four enumerated sub-factors, including the effects upon the natural and socioeconomic environments; (3) the consequences to society of granting the certificate of need are more favorable than the consequences of denying the certificate, considering four enumerated sub-factors, also including the effects upon the natural and socioeconomic environments; and (4) it has not been demonstrated on the record that the design, construction, or operation of the proposed facility will fail to comply with those relevant policies, rules, and regulations of other state and federal agencies and local governments.

Minnesota Rules, 6135.1100-6135.1500 provide a "basic framework,"<sup>34</sup> environmental standards and criteria for utility crossings of public lands. These standards deal with route design, structure design, construction methods, safety considerations, and right-of-way maintenance. Minnesota Rules, 6135.1000, subp. 2 requires that the Application indicate whether the applicant is satisfying the standard, where applicable, or if not, why not. Except when MDNR determines that it is not feasible and prudent, or not in the best interests of the environment, the applicant shall comply with these environmental standards in designing, constructing, and maintaining utility crossings.

---

<sup>33</sup> The Commission's Order Accepting Tribal Economic Opportunity and Labor Education Plan as Modified was reissued through an Erratum Notice dated May 13, 2020.

<sup>34</sup> Minn. R. 6135.1000, subp. 1.

The Project along the Designated Route complies with environmental standards applicable to the public land crossings except where it is not feasible and prudent or in the best interests of the environment. As described in the following sections, where strict compliance with a particular standard is not feasible and prudent or in the best interest of the environment, Project design, plans, and BMPs minimize potential adverse environmental effects. Additionally, environmental effects to public land crossings are subject to mitigation by ongoing public regulatory authority.<sup>35</sup>

## 8.1 STANDARDS FOR ROUTE DESIGN

### 8.1.1 Topography

Minnesota Rules 6135.1100 Standard for Route Design, subp. 1 states that, with regard to topography:

- A. avoid steep slopes;
- B. avoid scenic intrusions into stream valleys and open exposures to water;
- C. avoid scenic intrusions by avoiding ridge crests and high points; and
- D. avoid creating tunnel vistas by, for example, building deflections into the route or using acceptable screening techniques.

Strict compliance with the topography route design standards is not feasible and prudent because the Designated Route for this large linear infrastructure Project crosses many steep slope areas and some greenfield areas in northern Minnesota. Approximately 91 percent of the Project is co-located with an existing pipeline, utility, or transportation corridor. The remaining portion of the Project is located in greenfield areas. Table 8.1-1 identifies the existing utility or transportation corridor within which L3R will be co-located at each public land crossing. Of the 178 public land crossings, 19 are not co-located with an existing corridor: public land crossing ID Nos. 17 – 35 between MPs 991.0 to 991.6 and MPs 993.0 to 996.6. The Project route was originally co-located with an existing transmission line corridor in this area; however, Enbridge chose to move the route off of the corridor because it crosses the Crow Wing Chain Wildlife Management Area, which is encumbered with federal funding.

**Table 8.1-1**  
**Utilities Co-located <sup>a</sup> with the Line 3 Replacement Project on Public Lands**

MDNR ID No.	From MP	To MP	Length (miles)	Co-located Corridor Type	Utility Description/Company (if known)
1 – 2	921.3	921.3	0.1	Utility Line	MinnCan Pipeline
3	921.9	921.9	0.1	Utility Line	MinnCan Pipeline
4	924.2	924.3	0.2	Utility Line	MinnCan Pipeline
5 – 8	941.5	942.1	0.6	Utility Line	MinnCan Pipeline
9	954.9	955.2	0.3	Utility Line	MinnCan Pipeline
10	974.0	974.3	0.2	Utility Line	MinnCan Pipeline
11	981.7	981.9	0.2	Utility Line	Overhead Electric Utility
				Transportation Corridor	Fiber Optic Cable

<sup>35</sup> This includes, but is not limited to, the Clean Water Act (“CWA”) Section 404 and Section 10 Rivers and Harbors Act permit; the MPCA CWA Section 401 water quality certification; MPCA NPDES/SDS industrial wastewater permit; MPCA NPDES/SDS construction stormwater general permit; and other related MDNR licenses and permits.

MDNR ID No.	From MP	To MP	Length (miles)	Co-located Corridor Type	Utility Description/Company (if known)
12 – 16	983.9	984.7	0.8	Utility Line	Overhead Electric Utility
				Transportation Corridor	Fiber Optic Cable
37 – 43	1005.8	1007.4	1.6	Utility Line	Overhead Electric Utility
				Transportation Corridor	
44 – 45	1007.5	1007.9	0.4	Utility Line	Overhead Electric Utility
46	1011.8	1011.8	0.0	Utility Line	Overhead Electric Utility
				Transportation Corridor	
47 – 63	1042.0	1045.7	3.7	Utility Line	Overhead Electric Utility
64 – 80	1045.9	1048.9	2.9	Utility Line	Overhead Electric Utility
				Transportation Corridor	
81 – 84	1049.4	1050.0	0.6	Utility Line	Overhead Electric Utility
85	1052.9	1053.0	0.1	Utility Line	Overhead Electric Utility
86 – 110	1056.7	1061.8	5.1	Utility Line	Overhead Electric Utility
				Transportation Corridor	
111 – 127	1062.5	1066.4	3.9	Utility Line	Overhead Electric Utility
128 – 137	1066.6	1068.6	2.0	Utility Line	Overhead Electric Utility
				Transportation Corridor	Underground Telephone Utility
138 – 140	1069.1	1069.7	0.6	Utility Line	Overhead Electric Utility
				Transportation Corridor	
141	1074.2	1074.4	0.3	Utility Line	Overhead Electric Utility
142	1076.2	1076.3	0.0	Utility Line	Overhead Electric Utility
143 – 169	1078.3	1084.5	6.2	Utility Line	Overhead Electric Utility
170 – 172	1100.5	1100.9	0.4	Utility Line	Enbridge Pipeline
173 – 178	1105.1	1106.2	1.1	Utility Line	Enbridge Pipeline
179 – 180	1115.5	1118.0	0.3	Utility Line	Enbridge Pipeline
181 – 182	1118.0	1118.0	0.0	Utility Line	Enbridge Pipeline
				Transportation Corridor	Fiber Optic Cable
<sup>a</sup> "Co-located" means any portion of the route within 250-feet from the centerline of a known utility or transportation corridor.					

Enbridge has coordinated with adjacent utility owners throughout Project development. Typical workspace configurations for construction of the Project when co-located with an existing Enbridge pipeline are provided in Figure 5 of the EPP (Attachment C). Enbridge has depicted co-located utilities on the maps in Attachment B where digital data is available. By co-locating the pipeline with other utilities, Enbridge minimizes scenic intrusions to stream valleys, open exposures to water, and ridge crests and high points.

Enbridge is proposing the installation of the pipeline under public lands, and vegetation will be restored within the cleared construction workspace following construction, which will also further minimize scenic intrusions. However, pipeline inspection requirements discussed in Section 4.0 will require that the operational right-of-way be maintained clear of woody vegetation. Enbridge has minimized this clearing to 30 feet over HDD paths. Following restoration, Enbridge will maintain a 10-foot-wide corridor centered on the pipeline free of woody shrubs, and a 30-foot-wide corridor free of trees within the riparian area of trenched waterbody crossings to maintain the integrity of the pipeline (see Section 4.1 and Figure 4.1-1 of the Procedures [see Appendix A of Attachment C]).

Additional measures to minimize scenic intrusions and impacts on steep slopes at public land crossings, include but are not limited to, the following:

- Temporary erosion and sediment control BMPs will be installed prior to or at the same time as ground disturbing activities (e.g., grading, topsoiling) at the base of sloped approaches to streams, wetlands, water conveyances (e.g., ditches, swales) and improved access roads on public lands. Temporary erosion and sediment control BMPs will also be installed at the downgradient edge of the construction workspace and temporary access roads as needed, and/or in other areas determined by the EI to slow water leaving the site and prevent siltation of waterbodies and wetlands downslope or outside of the construction workspace (e.g., swales and side slopes). Temporary erosion and sediment control BMPs will be placed across the entire construction workspace and temporary access roads at the base of slopes greater than 5 percent and at site-specific locations identified in the SWPPP until the area is revegetated and there is no potential scouring of, or sediment transport to surface waters. Temporary erosion and sediment control BMPs will be maintained until permanent cover is established (Section 1.9 of the EPP).
- Temporary slope breakers will be installed on public lands to minimize concentrated or sheet flow runoff in disturbed areas at maximum allowable spacing ranging from 250 feet (3-5% slope), 200 feet (5-15% slopes), to 150 feet (15-25% slopes), to <100 feet (25% slopes) unless otherwise specified in permit conditions (Section 1.9.4 of the EPP).
- The location of trench breakers will be selected based on field conditions at the time of construction and will consider the degree and length of slope, presence of downslope sensitive resource areas such as wetland and waterbodies, and proximity to other features such as roads and/or railroads. Enbridge will install trench breakers according to the following conditions:
  - Trench breakers will be installed on slopes greater than 5 percent adjacent to streams, wetlands, or other waterbodies.
  - Where the pipeline exits a wetland towards areas of lower relief, trench breakers will be installed (within the upland) where there is a potential for underground drainage along the pipe in order to prevent wetland or waterbody drainage.
  - At all waterbody crossings, as necessary, to prevent diversion of water into upland portions of the pipeline trench and to keep accumulated trench water out of the waterbody.
  - Adjacent to Minnesota public watercourses<sup>36</sup> with poorly defined bed and banks located within wetland complexes.
  - Enbridge will not use foam trench breakers or pillows outside of the external boundaries of the FdL Reservation in Minnesota. Further, Enbridge will not use foam trench breakers or pillows on public lands and public waters within the external boundaries of the FdL Reservation in Minnesota.
- The general location of trench breakers will be identified on construction alignment sheets with a note to “Field Verify,” the precise location through coordination between Enbridge’s

---

<sup>36</sup> Public waters as defined in Minnesota Statutes 103G.005, Subd. 15 and depicted in Public Waters Inventory maps authorized by Minnesota Statutes 103G.201.

EIs, Enbridge's Craft Inspectors, and the Contractor's Foreman. Additional trench breakers may also be added depending on site-specific conditions (See Trench Breaker Memo provided in May 2020, and Section 1.13 of the EPP).

- During final grading, slopes on public lands in areas other than cropland will be stabilized with erosion and sediment control BMPs. Except for actively cultivated areas, permanent berms (diversion dikes or slope breakers) will be installed in slope areas on public lands at maximum allowable spacing ranging from 250 feet (5%), 200 feet (>5-15% slopes), to 150 feet (15-25% slopes), to <100 feet (25% slopes) unless otherwise specified in permit conditions (Section 1.17 of the EPP).
- Restoration of the stream bank and bed contours will be initiated immediately after the installation of the crossing using the open cut trench method and prior to restoring flow using the standard or modified dam and pump or flume method, unless site and permit conditions delay permanent installation. Enbridge will restore the stream banks as near as practicable to pre-construction conditions unless that slope is determined to be unstable. If the slope is considered unstable, Enbridge will reshape the banks to prevent slumping. For public waters, Enbridge will return the bank to pre-construction contours, unless otherwise directed by the site-specific restoration plan. If Enbridge cannot restore to pre-construction contours at a public water, Enbridge will consult with the MDNR before proceeding further. Once the banks have been reshaped, Enbridge will commence soil stabilization activities as described in Section 1.9.1 of the EPP. Temporary slope breakers will be installed on all sloped approaches to streams in accordance with the spacing requirements identified in Section 1.9.4 of the EPP and the outlet of the slope breaker will be directed away from the stream into a well-vegetated area. (Section 2.6 of the EPP). Enbridge has developed prepared SSRPs for public water crossings on public lands (see Section 6.9).
- Enbridge will utilize the seed mixes identified in the Planting Plan (Appendix A to the VMP) to restore and stabilize steep eroding slopes where appropriate based on site-specific conditions on public lands and at public waters.

### 8.1.2 Vegetation

Minnesota Rules 6135.1100 Standard for Route Design, subp. 2 states that, with regard to vegetation:

- A. Avoid wetlands; and
- B. Run along fringe of forests rather than through them, but if it is necessary to route through forests, then utilize open areas in order to minimize destruction of commercial forest resources.

Strict compliance with the vegetation route design standards is not feasible and prudent because the Designated Route for this large linear infrastructure Project crosses numerous wetlands interspersed along the route and many forested areas. Total avoidance of all wetlands is not possible. When the full construction workspace crosses these areas, the width will be reduced to 95 feet.

Section 6.3 describes Project wetland BMPs that minimize wetland impacts on public lands. Additional measures to minimize wetland impacts, include but are not limited to, the following:

- Prior to the commencement of clearing activities, survey crews will flag wetland boundaries and the boundaries of the construction workspace and improved access roads so they can be easily identified by Project personnel and managed as described in applicable plans and permit requirements (Section 1.1 of the EPP).
- Vegetation and trees within wetlands will be cut off at ground level, leaving existing root systems intact (Section 3.2 of the EPP).
- ATWS will be located outside of wetlands wherever feasible and prudent. However, ATWS may be sited in select wetlands where the wetland is adjacent to a public water or waterbody, road, railroads, foreign utility crossings, pipeline cross-overs, and/or where required based on site-specific conditions with prior approval from the applicable regulatory agencies. Staging areas, additional spoil storage areas, and other ATWS will be located in upland areas at least 50 feet away from wetland boundaries, where safe work practices or site conditions permit, except where the adjacent upland consists of cultivated or rotated cropland or other disturbed land or where ATWS are required to address MDNR waterbody crossing requirements. If site conditions do not permit a 50-foot setback, then these areas will be located as far away from the wetland as is practicable. Vegetation will not be cleared between these areas and the wetland in any event. No construction activities including vegetation clearing or earthwork will occur between the ATWS and the wetland (Section 3.3 of the EPP).

In some cases, the Project's Designated Route runs through forests, rather than along forest fringes. Further, approximately 91 percent of the route is co-located with an existing pipeline, utility, or transportation corridor, thereby minimizing forest fragmentation (see Section 8.1.1).

Clearing of forested wetlands for ATWS will be avoided as much as possible. Following construction in wetlands and forests, the construction workspace will be restored to pre-construction contours, and the workspace will be revegetated as described in Section 7.0 of the EPP. Trees will be allowed to regenerate outside of the operational right-of-way. Enbridge will compensate MDNR for reestablishment of woody vegetation outside of the operational right-of-way on Division of Forestry lands and will replant woody vegetation on Division of Fisheries and Division of Parks and Trails lands in accordance with the Planting Plan (Appendix A to the VMP).

All merchantable timber will be managed in accordance with Project contract specifications and applicable permits and licenses (Section 1.8.2 of the EPP). As described in Section 1.8.1 of the EPP, chipping is not allowed on public lands. On public lands, mulch and mechanically cut woody debris must be uniformly broadcast to less than 2-inch thickness and in a manner that maintains visible ground. An EI will proceed with the clearing crews to monitor these activities on public lands. Should an accumulation of mulch or mechanically cut woody debris occur on public lands, Enbridge will remove the material and haul off-site to an approved location. However, woody debris or mulch that scatters during normal use of clearing equipment is acceptable, provided it does not accumulate as described above. Chips, mulch, or mechanically cut woody debris will not be stockpiled in a wetland (Section 3.2 of the EPP).

### **8.1.3 Soil**

Minnesota Rules 6135.1100 Standard for Route Design, subp. 3 states that, with regard to soil characteristics:

- A. Avoid soils whose high susceptibility to erosion would create sedimentation and pollution problems during and after construction;
- B. Avoid areas of plastic soils which would be subject to extensive slippage; and
- C. Avoid areas with high water tables, especially if construction requires excavation.

Strict compliance with the soils route design standards is not feasible and prudent because the Designated Route crosses some areas of soils with high susceptibility to erosion, high plastic soils, or areas with high water tables (see Section 6.0). However, the EPP (Attachment C) describes BMPs and other measures to minimize soil impacts at public land crossings. These measures include but are not limited to, the following:

- Topsoil will be segregated in accordance with the method described in Section 1.10.1 of the EPP. Topsoil will not be typically segregated in standing water wetlands, unless specifically requested by the landowner or managing land agency in accordance with applicable permit conditions (Section 1.10.1 of the EPP).
- During construction, certain activities may be suspended in wet weather conditions to prevent soil rutting and compaction (Section 1.3 of the EPP).
- Temporary and permanent erosion and sediment control BMPs will be implemented to prevent sedimentation and minimize soil erosion (Sections 1.9 and 1.17 of the EPP).
- Spill prevention, containment and control measures will be implemented to avoid soil contamination (Section 10.0 of the EPP).

### **8.1.4 Crossing Public Waters**

Minnesota Rules 6135.1100 Standard for Route Design, subp. 4 states that, with regard to crossing public waters:

- A. Avoid streams, but if that is not feasible and prudent, cross at the narrowest places wherever feasible and prudent, or at existing crossings of roads, bridges, or utilities; and
- B. Avoid lakes, but where there is no feasible and prudent alternative route, minimize the extent of encroachment by crossing under the water.

Crossings on or under the beds of streams designated by the commissioner as trout waters shall be avoided unless there is no feasible alternative. When unavoidable, maximum efforts shall be taken to minimize damage to trout habitat.

The License to Cross Public Waters application presents a justification for the routing and crossing method selected at each public water feature, including those that are located on public lands.

### **8.1.5 Special Use Areas**

The Project does not cross any special use areas designated under Minnesota Statutes, section 84.033, as scientific natural areas; or those areas designated pursuant to Minnesota Statutes, section 103F.325, as units of the Minnesota Wild and Scenic River System; nor any areas subject to special regulation for recreational, scenic, natural, scientific, or environmental purposes. Therefore, Enbridge complies with the environmental standard for special use areas (Minnesota Rules 6135.1100, subp. 5).

## **8.2 STANDARDS FOR STRUCTURE DESIGN**

### **8.2.1 Location of Utility**

Minnesota Rules 6135.1200 Standard for Structure Design, subp. 1 states that, with regard to locating the utility overhead or under the ground or water:

- A. Primary consideration shall be given to underground and underwater placement in order to minimize visual impact. If the proposal is for overhead placement, the application shall explain the economic, technological, or land characteristic factors, which make underground placement infeasible. Economic considerations alone shall not be the major determinant.
- B. If overhead placement is necessary, the crossing shall be hidden from view as much as practicable.

Enbridge will install the pipeline underground across public lands in compliance with this environmental standard. However, as described in Sections 3.4.1 and 3.4.2, two aboveground valve sites and one aboveground cathodic protection structure are proposed for placement on public lands. Complete underground placement of these features is technologically impractical, as portions of these structures require aboveground components for operation and routine servicing.

### **8.2.2 Appearance**

Minnesota Rules 6135.1200 Standard for Structure Design, subp. 2 states that, with regard to appearance of the structures, they shall be made as compatible as practicable with the natural area with regard to: height and width, materials used, and color.

As described in Section 8.2.1, Enbridge will install the pipeline underground across public lands, in compliance with this environmental standard. The valve sites and aboveground cathodic protection features are fenced and locked at all times. They will be located alongside existing cleared corridors with high-voltage transmission line infrastructure or roadways nearby, so their presence will not alter the existing condition of the areas significantly.

### **8.2.3 Right-of-Way**

Minnesota Rules 6135.1200 Standard for Structure Design, subp. 3 states that the right-of-way width shall be kept to a minimum.

The Project complies with the right-of-way width minimization standard. Section 3.2.1 describes the temporary and operational rights-of-way widths for the Project. At wetlands, Enbridge will reduce the right-of-way width 25 feet to 95 feet wide. At waterbody crossings, Enbridge will neck down the right-of-way 25 feet starting 20 feet from the OHWM.

### 8.3 STANDARDS FOR CONSTRUCTION METHODS

Minnesota Rules 6135.1300 Standard for Construction Methods, states that:

- When crossing roads or rivers, leave a screen of vegetation between the structures and the road or river.
- When crossing under public waters, take steps to prevent excessive erosion of lake or stream banks and construct temporary sediment traps to reduce sedimentation.
- Construction across wetlands in the winter in order to minimize damage to vegetation and in order to prevent erosion and sedimentation.
- Construct at times when local fish and wildlife are not spawning or nesting.

Wherever and to the extent feasible and prudent, the Project complies with this crossing construction method standard. Vegetative clearing to minimize impacts at stream crossings is described in Figures 4.1-1 and 4.5-1 of the Procedures in Appendix A of Attachment C. Temporary and permanent erosion and sediment control BMPs will be employed on public land crossings and in wetlands as described in Sections 1.9, 1.17, 2.2, and 3.4.1 of the EPP. Enbridge is proposing winter construction in select locations and will utilize winter construction techniques as described in its Winter Construction Plan (see Section 3.5 and Attachment D).

The Project complies with the construction time window restrictions applicable to public water crossings on public lands (Section 2.1 of the EPP) as follows:

Enbridge will adhere to the following work-exclusion dates for Public Water Inventory cool- and warm-water fisheries that require in-channel work,<sup>37</sup> or will seek a waiver from the MDNR:

- Region 1 (Northwest) Non-Trout Streams: March 15 – June 30;
- Region 1 Lakes: March 15 – June 30; and
- Region 2 (Northeast) Non-Trout Stream and Lakes: March 15 – June 30.

In addition, Enbridge will adhere to the following work-exclusion dates in designated Minnesota trout streams and their designated tributaries that require in-channel work to allow for spawning and migration, or will seek a waiver from the MDNR:

- Region 1 (Northwest): September 1 – June 30;
- Region 2 (Northeast): September 15 – June 30; and
- Region 2 within the Lake Superior watershed: September 15 – June 30.

---

<sup>37</sup> In-channel work that results in the alteration of the course, current, or cross-section of the public water; this restriction does not apply to water appropriation activities (see Section 6.0).

## 8.4 SAFETY CONSIDERATIONS

Minnesota Rules 6135.1400 Safety Considerations, states that:

- Applicants for crossings of electrical transmission lines and pipelines shall adhere to federal and state safety regulation, both with regard to prevention (such as safety valves and circuit breakers) and with regard to emergency procedures in the event of failure (fire suppression, oil spill cleanup).
- In order to ensure adequate safety for commercial or recreational navigational uses of waterways, overhead crossings shall be constructed at adequate heights to provide maximum safety compatible with existing or potential navigational uses.

Enbridge will comply with all federal and state pipeline safety regulations. Title 49 CFR establishes reporting, design and construction requirements, pressure testing, operation and maintenance requirements, integrity management and corrosion requirements and specifies required qualifications of pipeline personnel. For a new hazardous liquid pipeline, high consequence areas must be identified prior to construction and hazardous liquid pipeline operators must develop and submit to the PHMSA a written Integrity Management Plan within 1 year of the start of construction (49 CFR 195.452). See Section 3.4 for a description of safety considerations, including mainline valve placement. Additionally, MPCA reviews the Project's oil and hazardous substance discharge prevention and response plan in accordance with Minnesota Statutes, section 115E.04. The pipeline will be installed underground and will not obstruct navigational uses.

## 8.5 RIGHT-OF-WAY MAINTENANCE

Minnesota Rules 6135.1500 Right-of-Way Maintenance, states that:

- Natural vegetation of value to fish or wildlife, which does not pose a hazard to or restrict reasonable use of the utility, shall be allowed to grow in the right-of-way.
- Where vegetation has been removed, new vegetation consisting of native grasses, herbs, shrubs, and trees recommended by the commissioner shall be planted and maintained on the right-of-way.
- Chemical control of vegetation shall be in accordance with rules, regulations, and other requirements of all state and federal agencies with authority over the use.

Maintenance during operations will proceed as described in Section 4.0 and Section 2.0 of the VMP (Attachment E). Section 7.0 of the EPP (Attachment C) and Appendix A of the VMP (Attachment E) describe revegetation of the construction workspace on public lands following construction. Enbridge will use MDNR recommended native seed mixes to revegetate the construction workspace on public lands. MDNR will not require any plantings of woody vegetation on Division of Forestry-administered lands. Enbridge will compensate MDNR for reestablishment of woody vegetation outside of the operational right-of-way on Division of Forestry lands and will replant woody vegetation on Division of Fisheries and Division of Parks and Trails lands in accordance with the Planting Plan (Appendix A to the VMP). Chemical control of INS will only be used if approved by the landowner or land-managing agency as described in the INS Management Plan (Appendix B of Attachment C).