ENBRIDGE LINE 3 REPLACEMENT PROJECT License for Utility to Cross Public Waters No. UWAT011547

FINDINGS OF FACT, CONCLUSIONS

AND ORDER

License for Utility to Cross Public Waters No. UWAT011547

Enbridge Line 3 Replacement Project

11-12-2020

MINNESOTA DEPARTMENT OF NATURAL RESOURCES

In the Matter of the Application for License for Utility to Cross Public Waters No. UWAT011547	**FINDINGS OF FACT, CONCLUSIONS OF LAW, AND ORDER OF COMMISSIONER**

After review of the application, due investigation of relevant information, and consideration of comments, and based on the information and statements contained in the license application submitted by Enbridge Energy, Limited Partnership ("Enbridge"), the applicant's description of the project and work proposed to be undertaken and supplemental information in the administrative record or otherwise available to the Minnesota Department of Natural Resources, the Commissioner of the Minnesota Department of Natural Resources ("DNR") makes the following:

FINDINGS OF FACT

I. EXECUTIVE SUMMARY

1. Pursuant to the requirements of Minnesota Statutes section 84.415 and Minnesota Rules chapter 6135, Enbridge applied for a license to cross public waters with a utility infrastructure project as part of its proposed Line 3 Replacement Pipeline Project ("Project"; the term "project" is used to refer to the public waters crossing component of the overall Project). The application seeks approval for construction and operation of a 36-inch diameter pipeline and associated facilities across 66 public waters under the jurisdiction of the DNR located in Kittson, Marshall, Pennington, Red Lake, Clearwater, Hubbard, Wadena, Cass, Aitkin, St. Louis, and Carlton Counties. These Findings of Fact only address Enbridge's application for a license to cross public waters (the "Application"). Other license and permit applications will be addressed in separate findings.

2. The Project is intended to address mechanical integrity deficiencies on the existing Line 3 pipeline. The Project proposes to install 337 miles of new 36-inch diameter pipe and associated facilities from the North Dakota-Minnesota border to the Minnesota-Wisconsin border. Enbridge's proposed pipeline route would generally follow the existing Line 3 pipeline from the North Dakota-Minnesota border in Kittson County to Enbridge's terminal facility in Clearbrook, Minnesota. From the terminal in Clearbrook, the pipeline would proceed south and generally follow the existing Minnesota Pipe Line Company's right-of-way to Hubbard, Minnesota. From Hubbard, the route would proceed east, following existing electric

transmission line and railroad rights-of-way and traversing greenfield areas until crossing the Minnesota-Wisconsin border approximately five miles east-southeast of Wrenshall, Minnesota. The route would end at the existing Enbridge terminal in Superior, Wisconsin.

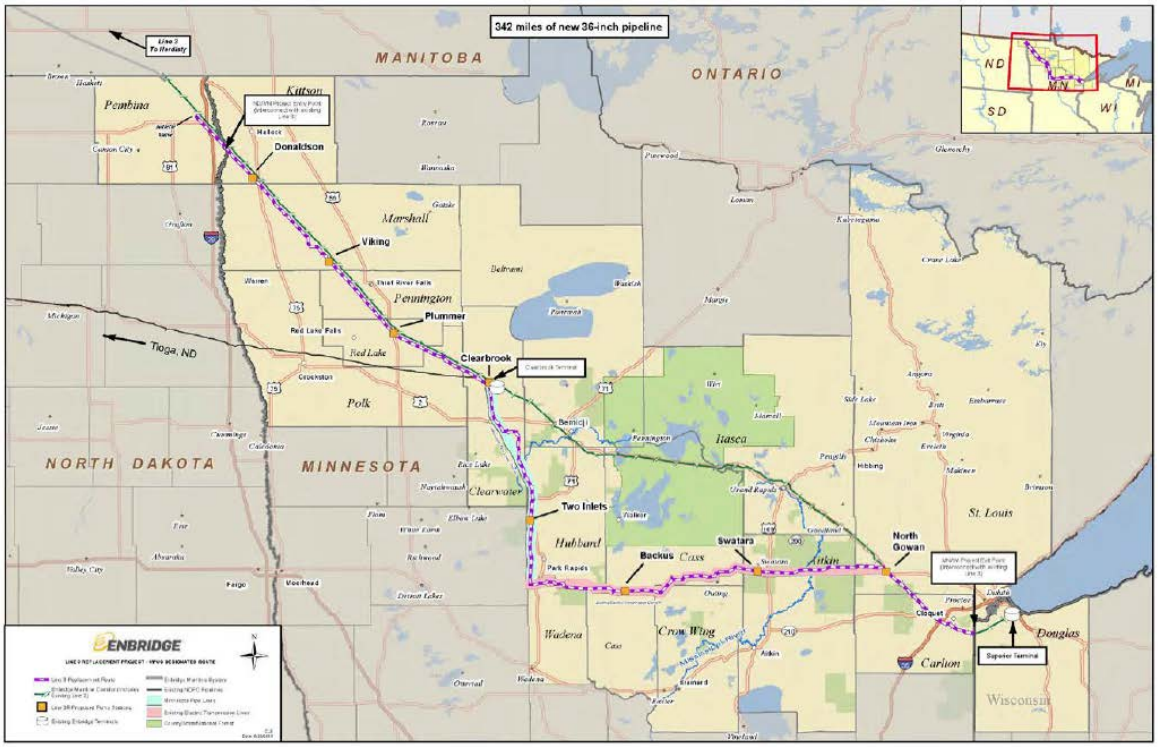
3. The Project has undergone significant review from the Public Utilities Commission ("PUC"). On April 24, 2015, Enbridge filed separate applications for a certificate of need ("CN") and routing permit ("RP") for the Project. The PUC authorized the Department of Commerce, Energy Environmental Review and Analysis Unit ("EERA") to prepare an environmental impact statement ("EIS"). PUC referred the CN, RP, and EIS adequacy determination to the Office of Administrative Hearings for contested-case proceedings. Following the contested-case proceedings, and following a revised Final EIS ("FEIS") submitted by EERA, the PUC eventually found the revised FEIS to be adequate, and granted the CN and RP contingent on certain modifications and conditions. The Minnesota Court of Appeals reversed the FEIS order for its failure to address the potential impacts to the Lake Superior watershed and remanded to the PUC for further proceedings. On remand, the PUC requested that EERA submit a second revised FEIS that included an analysis of the potential impact to the Lake Superior watershed. On May 1, 2020, after receiving public comments and hosting public meetings, PUC issued an order finding the second revised FEIS adequate and granting the CN and RP subject to certain modifications and conditions.

4. As required by Minn. R. 4410.7055, DNR has reviewed the second revised FEIS and it serves to inform DNR's current findings.

5. The license Enbridge seeks in this proceeding relates solely to the Project's crossing of state public waters. A multitude of other permits and regulatory requirements will also apply to the Project prior to construction. Required authorizations from DNR include four separate water appropriation permits, two public waters work permits, a threatened and endangered species takings permit, a utility license to cross state land, and an approved calcareous fen management plan. The Project would also cross wetland and stream areas not covered by DNR licenses or permits. These wetland and stream crossings are regulated by the Army Corp of Engineers ("USCOE") Clean Water Act section 404 permit and the Minnesota Pollution Control Agency ("MPCA") Clean Water Act section 401 Water Quality Certification.

II. ENVIRONMENTAL SETTING OF THE PROJECT

6. As shown below, the proposed Project transects thirteen Minnesota counties: Kittson, Marshall, Pennington, Red Lake, Polk, Clearwater, Hubbard, Wadena, Cass, Aikin, St. Louis, Crow Wing, and Carlton Counties.



7. The Project proposes to maintain a 50-foot wide permanent corridor along the pipeline route. During construction, the Project proposes to temporarily widen the corridor to 120-feet wide in uplands and 95-feet wide in wetlands. The pipeline route also includes additional temporary construction workspaces ("ATWS").

8. The Project proposes to cross 178 parcels of state land spanning 35.6 total miles. The state lands are located in seven counties: Clearwater, Hubbard, Wadena, Cass, Aitkin, St. Louis, and Carlton. The state lands consist of State Forests, School Trust lands, and Aquatic Management Areas. These state land crossings will be addressed in the utility license to cross state lands.

9. The Project proposes 72 water crossings, of which 66 are public waters crossings subject to DNR licensing. The crossings consist of five water basins, 61 watercourses, and six wetlands. Five of the public waters crossings are designated trout stream tributaries. The 66 public waters crossings are located in 11 counties: Kittson, Marshall, Pennington, Red Lake, Clearwater, Hubbard, Wadena, Cass, Aitkin, St. Louis, and Carlton. The six wetland crossings are of public waters wetlands located within private lands; these crossings are not addressed in the license. Five of these public waters wetland crossings located on private lands are addressed in the Work in Public Waters Permit No. 2018-3419, and the other wetland, at mile post 963.7 in Hubbard County, does not require a work in public waters permit as the activity is vegetation

removal by cutting, and no excavation or filling will be taking place. An Aquatic Plant Management permit is also not needed for this wetland crossing per Minn. R. 6280.0250, subp. 1(D).

10. The Project would also cross wetlands and streams not covered by DNR licenses or permits. These wetland and stream crossings are regulated by the USCOE Clean Water Act section 404 permit and the MPCA Clean Water Act section 401 Water Quality Certification.

III. APPLICATION AND COMMENT PROCESS

11. Enbridge proposes to cross public waters located in Kittson, Marshall, Pennington, Red Lake, Clearwater, Hubbard, Wadena, Cass, Aitkin, St. Louis, and Carlton Counties. Because the utility is proposing to cross public waters under the jurisdiction of the DNR, a DNR utility license is required. *See* Minn. Stat. § 84.415, subd. 1.

A. Enbridge Submits Application to DNR for a License to Cross Public Waters

12. Enbridge originally submitted an initial application to DNR for a license to cross public waters for the Project ("initial version of the Application") on November 3, 2015. The initial version of the Application proposed the Line 3 replacement along with the proposed Sandpiper Pipeline project. The initial version of the Application was later suspended.

13. On October 29, 2018, Enbridge submitted an updated and revised Application for a License to Cross Public Waters ("second version of the Application").

14. Enbridge submitted a $2,250.00 check covering the license application fee in conjunction with the second version of the Application.

15. The second version of the Application contained a completed DNR application for license to cross public waters, information about the applicant, Project overview and purpose, a description of the Project, statements on land requirements, description of general construction activities, description of operation activities, description of Project activities at Public Water Inventory ("PWI") feature crossings, environmental inspection and monitoring, and status of environmental and regulatory reviews and authorizations, along with supporting figures, maps, photographs and technical information.

16. On November 30, 2018, Enbridge submitted a Revision 1 to the Supplemental Information Package of the second version of the Application ("revised second version of the Application").

17. The revised second version of the Application made revisions based on November 13, 2018 comments from the DNR. Specifically, the revised second version of the Application re-numbered crossing numbers, added crossing length to appendix A, developed new site-specific plans for sites to be crossed using the horizontal directional drilling ("HDD") crossing method (HDD is a trenchless crossing method that installs pipe in a relatively shallow arc along a prescribed underground path using a surface-launched drilling rig), new HDD plans for Route Segment Alternative 22 (this route segment alternative became part of the approved route under the RP), new site-specific plans for crossings where Rosgen geomorphic stream survey data was collected in the fall of 2018, inclusion of PWI ID numbers on all drawings and in all references, and other minor updates. The revised second version of the Application also addressed DNR's comments about depth of cover of the underwater pipeline crossings.

B. The Application for a License to Cross Public Waters Was Circulated for Public Comment

18. On March 18, 2019, the DNR posted all of Enbridge's license and permit applications and supplemental materials on the DNR Line 3 Permitting website https://www.dnr.state.mn.us/line3/index.html for a 60-day comment period, which closed on May 17, 2019. The revised second version of the Application was among the application materials posted for public comment. The DNR published a GovDelivery (email newsletter) notice and press release notifying the public of the open comment period. Prior to the public comment period, the DNR issued GovDelivery notices informing recipients of the revised second version of the Application and notifying them of its availability on the permitting website.

19. DNR held informational webinars on April 29, April 30, and May 6, 2019, to provide information to the public about the Project and receive public comment. The informational webinars were recorded and are available on the DNR Line 3 Permitting website (https://www.dnr.state.mn.us/line3/index.html).

20. The DNR received nearly 10,000 public comments on all of the draft applications combined. The vast majority of these comments were form letters. Form letters were identified when two or more unrelated individuals submitted identical or substantively identical submissions, or when a submission was determined to consist nearly entirely of text provided for the purpose of mass e-mailing. Within the form-letter submission, there were numerous form-letter variants consisting of standard form-letter text that was altered through deletion or addition of sender-composed text.

21. Not all submissions contained substantive comments on the applications. For example, many commenters offered opinions as to whether the Project should or should not proceed, with minimal or no additional content relating to the draft applications.

22. Given the large number of submissions and individual comments received during the public-comment process, the DNR grouped similar comments into themes and considered those themes individually in lieu of responding to each individual comment.

i. Comments Received from the 1855 Treaty Authority, the Lower Sioux Indian Community, the White Earth Band of Ojibwe, the Red Cliff Band of Superior Chippewa, and Honor the Earth and DNR Response

23. The 1855 Treaty Authority, the Lower Sioux Indian Community, and the White Earth Band of Ojibwe all commented on the Project's potential impacts on wild rice. ***DNR Response:*** DNR worked with the USCOE to ensure there would be higher mitigation ratios under the USCOE Clean Water Act section 404 permit for wetlands hydraulically connected to wild rice waters. DNR worked with the MPCA on identifying what could qualify as sensitive waters under the MPCA Clean Water Act section 401 Water Quality Certification. Wild rice was one of the factors used to identify sensitive waters. MPCA is considering special conditions based on construction timing under the Clean Water Act section 401 Water Quality Certification, including that Enbridge be prohibited from constructing in known wild rice waters or in areas up to 25 miles upstream of wild rice waters from April 1 through July 15.

24. The Lower Sioux Indian Community commented that DNR should deny any approvals to Enbridge because oil pipelines contribute to climate change and should not be replaced. ***DNR Response:*** The PUC, not the DNR, determines whether to issue a certificate of need for a pipeline project and has jurisdiction to determine whether all pipeline projects in the State of Minnesota should be denied as a matter of policy. *See* Minn. Stat. § 216B.243.

25. The Red Cliff Band of Lake Superior Chippewa ("Red Cliff") commented, "The proposed route for Enbridge's proposed Line 3 will cross at least 5 lakes and 62 rivers or streams in the Anishinaabe and Dakota territories known as Minnesota. Any one (or all) of these bodies of nibi could [be] devastated by the proposed Line 3. Any contamination would not only harm the nibi, which we are spiritually connected to, as well as our giigoonh (fish) relatives that we are also connected and related to." ***DNR Response*:** The PUC, not the DNR, has the authority to issue the pipeline routing permit for the Project pursuant to Minnesota Statutes section 216G. The PUC has issued a RP designating the route for the Project. As described above in paragraph 3, the Project underwent an environmental review process as part of the CN and RP. The DNR is applying Minnesota Statutes section 84.415 and Minnesota Rules chapter 6135 in reviewing the Application. These authorities allow for public waters crossings by utilities, including oil pipelines, if the utility meets applicable standards. DNR has conducted a rigorous review of the Application to ensure that adverse impacts on the environment from construction of the project are minimized. The DNR has determined the project meets these standards.

26. Red Cliff commented, "The proposed route crosses four State Recognized Manoomin Waters: Hay Creek, Portage Lake, Peterson Lake, [and] Moose Lake and will impact dozens more recognized rice beds. Any contamination from construction, such as a frac[] out from the Horizontal Directional Drilling under Hay Creek, would be detrimental to the fragile ecosystem that manoomin relies on." ***DNR Response*:** The DNR is aware of the wild rice (manoomin) in the river systems and has worked with the MPCA and Enbridge on the best options for HDD sites; the company has a plan in place as part of the EPP for inadvertent releases of drilling fluid. Section 11 of the EPP details the drilling fluid response, containment and notification procedures if any inadvertent releases occur during an HDD crossing, including clean up procedures for different land types (i.e. uplands, wetlands, waterbodies). These procedures would also be incorporated into Attachment M of the MPCA Clean Water Act 401 water quality certification, if issued. Enbridge's technical engineers have evaluated each crossing for the best method to use (open cut, push pull, HDD, dry crossing, etc.), and have determined based on soil types and prior knowledge of pipeline crossings that the above-mentioned sites are at low risk for an undetected inadvertent release of HDD drilling mud (commonly referred to as a "frac out") to occur. Other locations where there have been frac outs in the past are being crossed by a different method, such as an open cut, to avoid frac out risks.

27. Red Cliff commented, "MDNR's Evaluation Criteria for water crossing is to avoid if feasible and if it is unavoidable to cross narrow locations and minimize the extent of encroachment. The sheer number of water crossings necessary for this proposed project should prohibit it from receiving a MDNR Water Crossing Permit." ***DNR Response:*** This comment appears to be referencing public water crossing standards under Minnesota Rule 6135.1100, subp. 4. Paragraphs 81-83 below analyze these public water crossing standards and how the project is meeting these standards. The quantity of crossings is not a factor for consideration in analyzing an application for a license to cross public waters.

28. Red Cliff commented, "Horizontal Directional Drilling under the Misi-zibbi (Mississippi River) jeopardizes all our human and non-human relatives that rely on the nibi downstream of the proposed Line 3 crossing. The threat of a potential frac[] out is not worth the risk and is reason enough to deny the permit." ***DNR Response:*** Data from areas proposed for HDD crossings were evaluated by MPCA Hydrogeologists to ensure that HDD is likely to succeed. One Mississippi River crossing is a very large crossing that would be difficult to construct using the open trench method of construction. The geological conditions in this area indicate that an HDD crossing has the best chance to minimize impacts to the river. The MPCA Clean Water Act section 401 Water Quality Certification proposes additional measures to minimize impacts in the event that HDD drilling mud is released into the water.

29. Red Cliff commented, "The MDNR Line 3 Webinar 3 stated that it is difficult to restore public water after construction and that 'additional details on public water restoration plans will likely [be] needed.' This indicates that the associated permit information submitted by Enbridge is insufficient to ensure that MDNR can confidently approve this permit while protecting the water and restoring the environment." ***DNR Response:*** This comment references the informational webinars that occurred in April and May 2019. *See* ¶19. For the approximately 18 months since the webinars, DNR staff have continued to provide comments, request additional information, and require changes to the Application materials from Enbridge. Enbridge has submitted two revised versions of the Application since the webinars, including significant revisions to the EPP and the PCVMP regarding restoration and revegetation. In addition, the DNR has required that SSRPs be submitted for 31 water crossings to ensure these sites are restored to pre-construction conditions. For the reasons discussed herein, DNR determines the final iteration of the Application, when subject to the license and conditions in the license, complies with utility licensing standards and requirements.

30. Red Cliff commented, "Miskwabekaang has no faith in Enbridge's ability to adequately protect the environment or their ability to execute their Environmental Protection Plan given Enbridge's history listed above." ***DNR response***: Enbridge is required to provide Independent Environmental Monitors (IEM) for determining permit compliance as a condition of the PUC RP. This condition requires the IEM to be under the control of and report to Department of Commerce, MDA, MPCA and the DNR. These monitors will track Project compliance with permit conditions. Any non-compliance will be addressed by the appropriate regulatory agency. DNR agency staff will also perform spot check inspections to confirm compliance with DNR license conditions.

31. Comments were received from the Honor the Earth, a non-profit organization that raises awareness and financial support for Indigenous environmental justice ("Honor the Earth"), during the public comment period from March 18, 2019, to May 17, 2019. Below is a summary of these comments that pertain to the proposed license and DNR's responses to these comments.

32. Honor the Earth raised comments DNR provided on the USCOE Clean Water Act section 404 permit regarding erosion. DNR had made the following comments: use BMPs at all times; limit open trench for any given location to 72 hours or less; backfill trench as soon as possible; when possible have the fill-in crew follow close behind the pipe installation; immediately respond during the time a trench is open prior to a storm event; monitor and erosion control should be in place before a rain event; and this should be kept in mind during construction season and any disruptions. Based on these DNR comments to the 404 permit, Honor the Earth asked the following questions. How will this 72 hour requirement be met? Is the DNR requiring this as part of their permits? How will this be managed at the Spring Brook crossing? ***DNR Response:*** This comment includes aspects covered by the license to cross state

land and the license to cross public waters. Under the final Environmental Protection Plan dated November 6, 2020 (rev. 11) ("EPP"), which is part of the Application and license, Enbridge is required to minimize the length of trench and amount of time the trench is left open in wetter conditions to minimize water management issues with high water tables or precipitation events. Enbridge must limit the cumulative amount of excavated open trench to a maximum of 72 hours or 14,000 linear feet per spread. Under the license to cross public waters, Enbridge will be required to complete in-stream pipeline installation activities for crossings of streams or lakebeds within specific timeframes. Minor waterbodies (all waterbodies 10 feet or less in width at the water edge at time of crossing) must be completed in 24 hours. Intermediate waterbodies (all waterbodies greater than 10 feet but less than 100 feet wide at the water edge at time of crossing) must be completed within 48 hours. Major waterbodies (all waterbodies greater than 100 feet wide at the water edge at time of crossing) must be completed in the timeframes specified in the Application materials or other regulatory permits. Enbridge is required to initialize stabilization of stream banks and buffer areas next to streams within 24 hours after pipeline placement in the stream. Crossing 48 (Spring Brook) is subject to these requirements. DNR required submittal of specific crossing plans for Spring Brook to address water management during and after construction.

33. Honor the Earth submitted a comment regarding wetland crossing techniques that quoted a DNR comment on the 404 permit. The comment stated: "Table 2-1 describes the wetland crossing techniques Enbridge intends to utilize during construction. Enbridge and the Contractor will select the method of pipeline installation and post-construction restoration in wetlands that depend on the season, saturation level, and stability of the soils at the time of construction. Enbridge will typically install the pipelines through wetlands with moderate- to high-bearing strength soils using standard upland crossing methods utilizing timber mats or equivalent to avoid rutting, minimizing disturbance to soils and vegetation, and to ensure safe and stable working surfaces for construction equipment and personnel. Enbridge may install the pipeline through saturated wetlands with low bearing strength peat soils by using push-pull techniques, if practicable, or by using standard upland crossing techniques with frost or ice roads during the winter when conditions allow. Enbridge may install the pipelines through narrow wetlands or ditches adjacent to roads or railroads and sensitive wetlands or riparian wetlands adjacent to waterbody crossings using trenchless techniques such as the auger bore or the [HDD] method." ***DNR Response:*** The wetland crossing techniques for the project have been updated and were determined during the resource review process. The wetland crossing techniques are specified in the Application. Paragraph 59 contains a further discussion of waterbody crossing methods.

34. Honor the Earth stated, "What about in the standing water wetlands? They've stated in other application material that they may not be able to achieve adequate depth of coverage. Why is the pipeline not built above ground in sensitive areas, such as the Savannah

State Forest?" ***DNR Response:*** DNR technical staff considered depth of cover in wetlands and other sensitive resource areas during the resource review process. The Application and attached plans include that the pipeline will be placed four feet below the consolidated organic material component of wetlands, not from the top of standing water, floating mat, or unconsolidated top portion of the wetland. Above ground crossings for this type and size of utility are not feasible due to safety and vandalism concerns.

ii. Comments Received from Friends of the Headwaters and the Public Generally and DNR Response

35. Friends of the Headwaters ("FOH") submitted comments to the DNR during the public comment period. FOH addressed DNR's comments to the USCOE on the Clean Water Act section 404 permit as those relate to the license to cross public waters. FOH commented that the Application does not contain detailed data on hydrology and geomorphology for each water crossing, a complete risk analysis, and a detailed explanation for the selection of a particular water crossing method at each crossing. FOH commented that the Application does not contain a long-term monitoring plan to capture permanent impacts, mitigation plans for different circumstances, or financial assurance to guarantee funds available to mitigate reasonably foreseeable risks. FOH raised DNR's recommendation to the USCOE that there be no more than 3 miles of open trench and that no trench be open for more than 72 hours. ***DNR Response:*** The commenter's overriding concern appears to be that the Application lacks a lot of important details and information that DNR commented on for the section 404 permit. For the approximately 18 months since the comment was submitted, DNR staff have continued to provide comments, request additional information, and require changes and updates to the Application materials from Enbridge. In addition, DNR has coordinated with USCOE and MPCA on the requirements under the Clean Water Act section 404 permit and the MPCA Clean Water Act section 401 Water Quality Certification. As described in sections C, D, and E below, Enbridge has submitted two revised versions of the Application since this comment. The Application includes detailed data for each crossing in attachment B and selection criteria and reasoning for the water crossing method for each crossing in attachment J. SSRPs provide tailored restoration information for 31 crossing sites. The final Post-Construction Wetland and Waterbody Monitoring Plan dated November 7, 2020 (rev. 6) ("PCMP"), an interagency agreement with the MPCA and USCOE, details monitoring requirements for aquatic resources after construction and restoration are complete, including pre-construction data to establish baseline conditions and objective and verifiable ecological performance standards. The PCMP Plan contains a five-year monitoring period where public water watercourse monitoring and corrective actions, if any, are required to be implemented. Based on DNR resource review comments, Enbridge made significant revisions to the SSRPs, EPP, and Post-Construction Vegetation Management Plan for Public Lands and Waters ("PCVMP") regarding restoration and revegetation. The comment indicates the LaSalle Valley location should be examined for an

HDD water crossing. As more fully discussed in paragraphs 56 and 59 below, DNR staff thoroughly reviewed crossing 29 (LaSalle Creek) and concur that a dry (isolated) crossing method best minimizes impacts from the crossing. Geotechnical data and previous pipeline construction indicate this crossing is not well suited for an HDD crossing. The comment raises mitigation plans for different circumstances and financial assurance to guarantee mitigation. Paragraph 50 discusses the special provision in the license for wetland/peatland winter construction and mitigation requirements. This provision includes enhanced monitoring and mitigation requirements. The license also has a special provision requiring financial assurance to ensure wetland and waterbody restoration is completed. The comment raises open trench issues. Under the EPP, Enbridge is required to minimize the length of trench and amount of time the trench is left open in wetter conditions to minimize water management issues with high water tables or precipitation events. Enbridge must limit the cumulative amount of excavated open trench to a maximum of 72 hours or 14,000 linear feet per spread.

36. Friends of the Headwaters commented that DNR must independently evaluate the route for the Permit. ***DNR Response:*** The PUC, not the DNR, has the authority to issue the pipeline routing permit for the Project pursuant to Minnesota Statutes section 216G. Alternatives involving different routes for the Project are not "feasible" alternatives under Minnesota Rule 6135.1000, .1100. DNR applies its standards for route design, Minn. R. 6135.1100, within the scope of the route selected by the PUC in the RP.

37. Comments were received from the general public pertaining to the license to cross public waters during the public comment period from March 18, 2019, to May 17, 2019. Below is a summary of key themes that emerged in the comments and DNR's responses to these comments.

38. Multiple public commenters were concerned about work exclusion dates to allow for fish spawning and migration. One commenter asked if there is a mechanism to make Enbridge follow the work exclusion dates and which crossings would be required to abide by the exclusion dates. Another commenter stated the exclusion dates mean Enbridge will need to construct between late April and early August. The commenter noted that these are the wettest and driest times of year in Minnesota. The commenter asked how Enbridge's construction will be monitored to ensure it is not unduly stressing aquatic communities. ***DNR Response***: Enbridge will be required under the terms of the license to comply with designated trout stream work exclusion dates for in-channel work and fisheries work exclusion dates for non-trout streams. Crossings 33 (Straight River), 48 (Spring Brook), and 65 (Little Otter Creek) are designated trout streams and are subject to the trout stream restrictions. Crossing 29 (LaSalle Creek) is a trout stream, but DNR has granted a limited exception from November 1-March 31 in the license to allow Enbridge to construct this crossing during winter conditions. Crossing 54 (Unnamed Stream) is a trout stream, but DNR has granted an exception to the trout stream

restriction dates in the license to allow Enbridge to construct this crossing during winter conditions. Winter construction at these crossings minimizes DNR's concerns with overall impacts to the habitat, including runoff, compaction, and impacts to vegetation, and allows for quicker restoration. Additionally, based on comments from the DNR, Enbridge will adhere to trout stream restriction dates for three crossings of non-designated waters that contain trout habitat, crossings 63a, 63b, and 67. The MPCA 401 Water Quality Certification would include additional construction timing limitations in wetlands and limitations on timing for HDD activities. Independent environmental monitors will be required under the license and used to monitor license and other permit conditions to ensure compliance.

39. A few public commenters queried why aboveground crossing methods were not being pursued in sensitive areas. The commenters raised concerns about underground crossings not achieving adequate depth of cover and risks of frac outs from HDD crossing methods. ***DNR Response***: Aboveground crossings for this type and size of utility are not feasible due to safety and vandalism concerns. Site-specific crossing and installation method plans for sensitive crossing areas were developed, reviewed, and approved by the DNR technical staff. The site-specific plans are incorporated into the terms and conditions of the license. Regarding the comment about not achieving adequate depth of cover, DNR is requiring Enbridge to install the pipeline under public waters with an increased depth of cover to maintain hydraulic connectivity and to avoid pipeline exposure due to changes in stream geomorphology.

40. A public commenter was concerned about Enbridge's proposal to use blasting at the crossing of Little Otter Creek, which is crossing 65. The commenter stated, "This is another example of where Enbridge should not be permitted to impact. Blasting is an extreme act and should not be permitted near a trout stream." ***DNR Response:*** The PUC has the authority to issue and has issued the RP establishing the Project route. The area of crossing 65 has shallow bedrock geology. Blasting is necessary in this location in order to excavate the trench for the modified dry crossing method. Under a special provision in the license, Enbridge will be required to coordinate with the DNR on placement of blasted rock back in the channel to build trout habitat and restore stream sinuosity. The Application includes a blasting plan as attachment H. Enbridge is required under the license to comply with this plan. In addition, this crossing is subject to an SSRP requiring enhanced coordination with the DNR for final restoration.

41. Several public commenters raised concerns about the LaSalle Creek crossing, crossing 29. Commenters noted this area experienced HDD frac outs and other difficulties during the construction of the MinnCann pipeline. Commenters stated, "How will these difficulties be avoided this time? This area is also culturally significant. This is another area that the DNR should consider environmentally-sensitive building techniques, such as above-ground construction." ***DNR Response:*** As discussed more fully in paragraphs 56 and 59 below, the DNR similarly had questions about this sensitive crossing and the prior HDD crossings in this area.

DNR's comments resulted in a realignment of the crossing and a change in the crossing method to a dry (isolated) crossing method. DNR required Enbridge to collect additional hydrological information in this area to assess shallow groundwater interaction with the proposed pipeline. DNR hydrologists evaluated this information and worked with Enbridge to identify construction practices that could address the unique hydrology of the wetland and stream. Above ground crossings for this type and size of utility are not feasible due to safety and vandalism concerns.

42. Multiple public commenters raised concerns about the Spring Brook crossing, crossing 48. Commenters raised comments DNR provided on the USCOE Clean Water Act section 404 permit regarding this crossing, including DNR requesting additional geological investigation due to an abundance of springs and seeps and potential for uncontrolled groundwater flow. DNR recommended requiring a site-specific construction and bank restoration plan for the crossing as well as mitigation for impacts to the valuable aquatic resource. The commenters asked, "What construction methods may decrease the risk to springs in the area? Why is industry allowed to continue abusing sacred lands in this way?" ***DNR Response:*** The PUC, not the DNR, determines whether to issue a certificate of need for a pipeline project and has jurisdiction to determine whether all pipeline projects in the State of Minnesota should be denied as a matter of policy. *See* Minn. Stat. § 216B.243. Paragraphs 55 and 59 below more fully discuss crossing 48 (Spring Brook). In response to DNR's noted comments about this area, DNR required Enbridge to conduct additional investigations to understand the source and magnitude of the springs and seeps. The additional data indicated the source and magnitude of flow in the area of the proposed crossing had a low risk for uncontrolled flow. DNR required Enbridge to investigate the possibility for an HDD crossing at this location. An HDD crossing would have the potential to decrease the risk to springs and other resources in the area. However, the additional data were inconclusive that an HDD crossing could be successful. The risk of an HDD crossing was therefore too high. Enbridge has since prepared and is subject to a site specific construction plan, which includes special water management measures that ensure flow can continue in the area without damaging the pipe or creating undue erosion, and a site-specific restoration plan ("SSRP") for this crossing. SSRPs provide tailored restoration information for 31 crossing sites to ensure the sensitive crossings can be restored to pre-construction condition.

43. A public commenter was concerned about the issue of spill response. The commenter indicated they lived on the Mississippi River downstream of the proposed pipeline crossing and a spill at that crossing would cause immediate and irreparable environmental damage to the river. The topography of the area makes access by equipment extremely difficult and the toxic nature of tar sands crude would make for a disaster. If the crossing is not denied, then the crossing should be subject to the highest level of pipeline safety. ***DNR Response***: Spill response is regulated by the Minnesota Department of Public Safety, Office of Pipeline Safety

("OPS"). The OPS has requirements pertaining to Enbridge's response requirements to a spill or discharge from the utility. Enbridge must comply with the OPS requirements.

44. Another public commenter was concerned about the Application containing insufficient information regarding bentonite clay drilling mud used during horizontal directional drilling. The HDD method necessarily involves the addition of sediment into the system. The commenter indicated DNR must specify the acceptable sediment doses resulting from the release, or failure to recover, this drilling mud. ***DNR Response***: Discharge of HDD drilling mud is regulated under the MPCA National Pollutant Discharge Elimination System / State Disposal System permit and the Clean Water Act section 401 Water Quality Certification.

45. The DNR provided resource review comments on the revised second version of the Application to Enbridge through the course of several in-person and electronic meetings, including an in-person meeting on June 4, 2019.

C. Enbridge Submits Revised Application to DNR for a License to Cross Public Waters

46. On December 20, 2019, after receiving comments on its revised second version of the Application, Enbridge submitted a revised Application for License to Cross Public Waters for the Line 3 Replacement Project ("third version of the Application").

47. The third version of the Application contained updated information from the revised second version of the Application. The third version of the Application included a completed DNR application for license to cross public waters, information about the applicant, Project background, a description of the Project components and associated construction activities, operation activities, description of Project activities at public waters crossings, environmental inspection and monitoring, and compliance with environmental standards, along with supporting figures, maps, photographs and technical information.

48. Enbridge incorporated comments from DNR on the revised second version of the Application into the information in the third version of the Application. Examples of DNR's comments that were addressed include: updated construction and restoration plans, such as the EPP and blasting plan, reflecting discussions between the DNR and Enbridge, a reduced 10-foot wide corridor centered on the pipeline free of woody shrubs, and 30-foot wide corridor free of trees within the riparian area of the waterbody crossing at trenched crossings, and a 30-foot wide corridor centered on the pipeline at HDD crossings free of all woody vegetation, updated depth of cover information reflecting discussions between the DNR and Enbridge, information describing the removal of beaver dams, and a waterbody crossing justification table.

D. The DNR Reviews and Provides Resource Review Comments on Application for a License to Cross Public Waters

49. The DNR reviewed all versions of the Application and provided resource review comments to Enbridge during all phases of the Application process. This process included numerous meetings, discussions, and correspondence between DNR staff and Enbridge. Key resource review topics and resolutions are discussed below.

50. Wetland/Peatland Winter Construction. DNR technical staff indicated that early iterations of the Application did not sufficiently address why Enbridge cannot construct across wetlands in winter. Staff noted several peatland areas will be significantly impacted by non-frozen construction scheduling. Staff requested that Enbridge first avoid the area; if the area cannot be avoided, then minimize impacts by frozen construction; and if frozen construction cannot happen, then there should be mitigation. ***Resolution***: The Project route was established by the PUC's RP, so avoiding the wetland/peatland complexes entirely is not feasible. PUC has the authority to issue the RP for the Project. As part of its USCOE Clean Water Act section 404 permit, Enbridge would be required to install groundwater monitoring wells in peatland/wetland complexes. Enbridge conducted surveys of these peatland/wetland complexes. Based on the survey results, DNR staff and other regulatory agencies identified the locations for the groundwater monitoring wells, based on survey results. Six sensitive water crossings are subject to a special provision in the license with winter construction and mitigation requirements. These are crossing numbers 41, 50, 51, 54, 55, and 56. Crossing 41 (Big Swamp Creek) is part of a large riparian wetland/peatland complex that flows into a site of high biodiversity significance on the Minnesota Biological Survey. Crossing 50 (Unnamed Stream) is part of a large riparian wetland/peatland complex that contains a site of moderate biodiversity and threatened or endangered species. Crossing 51 (Moose Lake/Moose Lake Tributary) is part of a large riparian wetland/peatland complex that flows into a lake of outstanding biodiversity and is adjacent to a DNR Wildlife Management Area. Crossing 54 (Unnamed Stream) is a trout stream that flows through a large riparian wetland/peatland complex and into a site of high biodiversity significance. Crossing 55 (Unnamed Stream) is part of a large riparian wetland/peatland complex that is a site of high biodiversity significance, connects lakes of high and outstanding biodiversity, and has the potential for wild rice. Crossing 56 (West Savanna River) is part of a large riparian wetland/peatland complex that is a site of high biodiversity significance and connects lakes of high and outstanding biodiversity, and there is wild rice located at this crossing. Under the adaptive management strategy winter construction plan, Enbridge must attempt to construct in these areas during winter to the maximum extent feasible, depending on construction start dates for the Project. In the event Enbridge cannot completely construct in the sensitive areas during winter, Enbridge must submit for DNR review and approval a revised peatland/wetland site construction plan that demonstrates how winter construction will be implemented to the maximum extent feasible, including information to support why any specific winter construction is not feasible. The plan must also provide construction details for

peatland/wetland construction that will be implemented to minimize impacts to these resources. In addition, Enbridge must minimize impacts by the following site specific construction plans for these six water crossings and implementing enhanced environmental construction monitoring to ensure that Enbridge properly utilizes best management practices. The enhanced monitoring requires an additional independent environmental monitor at each construction spread where non-winter construction will occur and additional DNR staff monitoring of these sites, with Enbridge responsible for the costs of this additional DNR staff monitoring. If this monitoring identifies unanticipated impacts to these areas, Enbridge will be required to submit a corrective action plan for DNR review and approval. Enbridge will be required to implement the corrective action plan within one year. If the DNR determines the corrective action plan did not sufficiently remediate the impacts, the DNR can conduct an assessment of the impacted area to determine if additional mitigation is needed. This assessment could result in additional mitigation by Enbridge or result in a monetary fine to Enbridge. Any money received from Enbridge as a result of this assessment will be used for administration, planning and implementation of wetland restoration activities on state land. Enbridge is also required under the special provision in the license and the PCMP Plan to provide financial assurance that DNR can access to perform the restoration work, restore other wetlands and waterbodies in the area, or purchase wetland credits if Enbridge fails to meet its site restoration requirements.

51. Site-Specific Restoration Plans. DNR technical staff raised concerns in early iterations of the Application about restoration at complex and sensitive water crossing locations. DNR staff wanted specific and tailored restoration details for these crossings. DNR requested that Enbridge prepare SSRPs for these water crossings that, due to the complexity of the crossing location or the specific waterbody characteristics, cannot be addressed with typical restoration measures. ***Resolution***: Based on DNR's comments regarding SSRPs and discussions between Enbridge and DNR on this issue, the Application has been updated to include SSRPs for 31 public water crossings. The SSRPs are based on field survey data of the subject sites, including detailed longitudinal survey of the ordinary high water level on both sides of the water body within the construction workspace; detailed longitudinal survey of the top of bank at one-foot intervals on both sides of the waterbody within the construction workspace; detailed elevation profile at one-foot intervals of the bed and banks of the public waters at the pipeline centerline; five-foot plotted grid pattern elevation reference points of bed and banks of the public waters within the 95-foot construction workspace outside the pipeline centerline; pre-construction photos from multiple vantage points; and types and locations of existing vegetation. SSRPs contain tailored restoration plans. The information includes a revegetation plan and streambank/streambed cross-section, including areas for woody vegetation planting and use of natural materials for streambank stabilization; restoration information for areas outside the ordinary high water level for some crossings; bank restoration cross-sections for centerline excavation and bridge setting and in-stream supports; streambed restoration plan view that shows the thalweg and stream features; pre-construction photos; and restoration typicals used for

implementation of restoration methods. Under a special provision in the license, SSRPs are subject to additional review and revision by DNR based upon final construction plans, site visits, or other updated information. Enbridge must obtain DNR's final approval for a particular SSRP before beginning construction of the pipeline within the identified area subject to that SSRP. The remaining 35 crossings are subject to typical restoration plans. These crossings generally have the following characteristics: the crossings will be crossed using the HDD or bore method; the crossings are maintained as ditches; the crossings exhibit typical cross section geomorphology, do not meander, and exhibit a shallow channel and negligible bank height; or the crossings were delineated as wetlands with no defined bed or bank.

52. Depth of Cover. DNR technical staff commented in early iterations of the Application about the proposed depth of cover of the pipeline. Suitable depth of cover is needed to ensure hydraulic connectivity and avoid additional risk for future pipe exposures due to changes in watercourse location from geomorphological processes. DNR staff requested Enbridge to revise the channel cross section to increase the depth of cover based on available data of the lowest point in the stream near the proposed crossing. DNR staff also recommended that Enbridge extend the increased depth of cover for crossing numbers 2, 16, 50, 54, 55, 56, 60, 63a, 63b, and 65 outside the Ordinary High Water as detailed in a memorandum dated August 14, 2020. ***Resolution***: In response to DNR's resource review feedback, Enbridge increased the pipeline depth of cover within the ordinary high water level of most water crossings to the depths indicated by DNR. Enbridge is required to construct at these increased depths. For those crossings where increased depth of cover was insufficient, the DNR is including special provisions in the license requiring the desired depth of cover. These increased depths address DNR's concerns within the ordinary high water levels. Enbridge is required under a special provision in the license to immediately notify the DNR if the pipeline comes out of compliance with the original Application specifications (for example, the pipe becomes exposed). Enbridge must submit a plan for corrective action within six months to the DNR for review and approval. Enbridge is required to implement the corrective action plan within one year.

53. Designated Trout Stream and Fisheries Timing Restrictions on Lakes and Streams. DNR staff commented in early iterations of the Application about protecting fish spawning and migration. Enbridge requested an exemption from fisheries work exclusion dates for five public waters crossings, crossings 9, 18a, 18b, 32, and 36, since these crossings represent delineated wetland communities that likely do not support fish spawning and habitat. ***Response:*** DNR imposes work exclusion dates as a best management practice for public waters work to allow for fish migration and spawning. Enbridge will be subject to the trout stream work exclusion dates for in-channel work and fisheries work exclusion dates for non-trout stream locations per a special provision in the license and the Application. Five crossings are DNR designated trout streams, crossings 29, 33, 48, 54, and 65. Enbridge is subject to trout stream work-exclusion dates at three of these crossings, crossings 33, 48, and 65. DNR granted a

limited exception to the trout stream restrictions at crossing 29, from November 1 to March 31, to allow Enbridge to construct during winter conditions at that location. DNR granted a full exception to the trout stream restrictions at crossing 54 to allow Enbridge to construct during winter conditions. Winter construction at these crossings minimizes DNR's concerns with overall impacts to the habitat, including runoff, compaction, and impacts to vegetation, and allows for quicker restoration. Regarding fisheries work exclusion dates for non-trout streams, DNR granted an exception for the five crossings requested by Enbridge referenced above. Crossings 9, 18a, and 18b are small ditched headwaters streams just downstream from the start of the public waters designation and are intermittent streams with limited fish communities. Crossings 32 and 36 are within the mapped PWI polygon but the actual lake is much smaller than the mapped public water, so the crossings are located in uplands or wetlands without open water, meaning there is not a concern with actual impact to fish habitat at these locations. Under the exception for these five crossings in the license, Enbridge will not be allowed to work during high flows when the water level is above the ordinary high water mark.

54. Construction Timing Exclusions at Crossings 63a, 63b, and 67. DNR staff commented in early iterations of the Application about potential impacts at three water crossings in close proximity to designated trout tributaries. These are crossing numbers 63a, 63b, and 67. Crossings 63a and 63b propose to cross less than 100 feet upstream of a designated trout tributary to Little Otter Creek. Brook Trout have been sampled at moderate densities in this area. This is a very cold tributary, indicating there is significant groundwater input. Although the tributary is not currently formally designated as a trout stream tributary, DNR intends to designate it in the future due to its cold stream temperatures and presence of naturally reproducing Brook Trout population. Crossing 67 proposes to cross a tributary to Clear Creek. Several recent reports indicate a robust trout population in the tributary. The tributary provides significant coldwater flow to Clear Creek, which has one of the coldest temperature regimes in the area. While the locations of these three proposed water crossings are not currently designated as trout streams or trout stream tributaries, the locations have trout present, cold water temperatures, and suitable habitat to support naturally reproducing trout populations. DNR requires Enbridge to comply with trout stream restricted work dates of September 15 to April 30 at these sites to minimize the impact of pipeline construction to the ecology of the streams. ***Resolution***: Enbridge will not be allowed to construct crossings 63a, 63b, and 67 from September 15 to April 30, per a special provision in the license.

55. Crossing 48 (Spring Brook, also referred to as the Spire Valley crossing). DNR staff commented in early iterations of the Application submittals that the proposed water crossing of this designated trout stream in a narrow forested wetland corridor required additional detailed information. This is a greenfield crossing. Enbridge is proposing to cross using a dry crossing method. The dry crossing method uses 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. DNR commented about uncontrolled flow from springs in the area of the proposed crossing, particularly from the western hillslope leading to Spring Brook. Uncontrolled flow could lead to erosion, sediment loss, and/or sloughing negatively affecting the stability of the hillside, water supply at nearby wells, and/or water quality and quantity in Spring Brook. ***Resolution:*** The crossing location is downstream of the fish hatchery and outside the DNR's Spire Valley Aquatic Management Area. DNR staff accompanied Enbridge on a site visit to the location on November 15, 2018. DNR required Enbridge to conduct additional investigations of the area to understand the source and magnitude of the springs. DNR required Enbridge to investigate the possibility for an HDD crossing. Enbridge's investigations and additional data collections resulted in a DNR determination that the data was inconclusive that an HDD crossing could be successful. The additional data indicated the source and magnitude of flow in the area of the proposed crossing had a low risk for uncontrolled flow. Enbridge has prepared and is subject to a site specific construction plan, which includes special water management measures that ensure flow can continue in the area without damaging the pipe or creating undue erosion. Enbridge is also subject to an SSRP for this crossing. This crossing is additionally subject to trout stream work-exclusion dates and exclusion dates per the Application. Enbridge will not be allowed to conduct in-stream work from September 1 to June 30.

56. Crossing 29 (LaSalle Creek). DNR staff commented in early iterations of the Application submittals that the proposed water crossing of this designated trout stream required additional detailed information. LaSalle Creek is a narrow valley coldwater trout stream that is approximately 15 feet wide from top of bank to top of bank. The stream is low-gradient, with nearly vertical banks and features a sinuous channel with sand-dominated bottom. Enbridge is proposing to cross using a dry crossing method. This is a greenfield crossing but is in the vicinity of another pipeline corridor. Enbridge originally proposed an HDD crossing. DNR staff had significant concerns about an HDD crossing due the history of a frac out during a 2007 crossing by the Koch Minnesota Pipeline. ***Resolution:*** DNR consulted with Enbridge to change the crossing method to a dry (isolated) crossing, as further discussed in paragraph 59, and move the proposed crossing alignment to a greenfield crossing necessary to cross the creek at a more favorable location. This changed crossing alignment moved to a straighter section of LaSalle Creek to minimize the amount of sinuous channel that would be impacted. DNR staff accompanied Enbridge on a site visit to the location on November 14, 2018. DNR continued to further discuss the crossing, including during an April 2, 2020 meeting. DNR needed additional information about potential artesian conditions and water management in the area. Enbridge conducted additional geotechnical investigation in April 2020, including soil samples and piezometers. Enbridge prepared and submitted a plan to DNR in August 2020 containing techniques to manage water encountered during pipeline construction and operation. Enbridge has prepared and is subject to a site specific construction plan, which includes special water

management measures that ensure Enbridge has additional pumping capacity and can manage groundwater flow using sheet piling. Enbridge is also subject to an SSRP for this crossing, which includes piezometer monitoring. This crossing is additionally subject to trout stream work-exclusion dates and exclusion dates per the Application. Enbridge will not be allowed to conduct in-channel work from September 1 to October 31 and April 1 to June 30. Enbridge will be allowed to work between November 1 to March 31, but only during winter conditions, in order to facilitate winter construction of the crossing. Winter construction at this crossing minimizes DNR's concerns with overall impacts to the habitat, including runoff, compaction, and impacts to vegetation, and allows for quicker restoration.

57. Trench Breakers. DNR staff commented on early iterations of the Application submittals regarding trench breakers. Trench breakers are installed in sloped areas after pipe has been lowered into the trench to protect against subsurface water flow along the pipe after the trench is backfilled. Staff indicated that correct placement of trench breakers is vital to prevent erosion from the pipeline disrupting shallow groundwater or acting as a preferential flow path for shallow groundwater. Staff recommended that Enbridge's plans include notations of the distance between trench breakers based on percent of slope or include charts of trench breaker spacing by percent of slope. DNR requested that Enbridge space trench breakers appropriately at all stream, river, or waterbody crossings regardless of trench slope. Staff recommended using trench breaker spacing adapted from Pennsylvania State Standards. ***Resolution:*** DNR staff confirmed that Enbridge's trench breaker placement is more conservative than the Pennsylvania State Standards proposed by the DNR. Enbridge will not put trench breakers in push pull areas as there is not a stable wall and no dewatering is occurring. Enbridge will not put trench breakers at HDD crossing locations or at wetlands on the fringes of rivers where the slope is low. DNR technical staff concur with these items. Enbridge will not be allowed to use closed cell polyurethane foam trench breakers on state water crossings.

58. Bridges. DNR staff commented on initial Application submittals about temporary bridges that Enbridge will install and use during the construction phase of the Project to move equipment. DNR was concerned that the bridge drawings need more detail. Staff indicated that detailed bridge plans should be provided and that bridge locations should be included in SSRPs. DNR requested additional details on bridges at certain crossings. The primary concerns on bridge placement related to abutments, fill, and structures that would be placed in the water, culverts, and different types of stream supports. ***Resolution***: Enbridge updated the Application materials, including the EPP, to provide additional bridge details. Enbridge will be allowed to use temporary clear span bridges and in-stream support bridges for equipment crossing of public waters. The type of bridge that will be allowed for a particular crossing is specified in the Application materials. Enbridge will not be allowed to use a bridge at crossing 41, unless crossing that watercourse in winter. Enbridge will be required to place all bridge entry supports at least five feet from the bank of the watercourse. Enbridge will be required to install all

bridges, culverts, and mats in the deepest portion of the stream. Enbridge must size these openings adequately to prevent or minimize increases in flow of water and to avoid restriction of flow that creates ponding or scouring on either side of the bridge.

59. Waterbody Crossing Methods.

a. *Primary and Alternate Crossing Methods*. Enbridge has proposed primary crossing methods for all crossings and alternative crossing methods for 37 crossings. The license authorizes only the primary crossing methods. Enbridge would need additional DNR approval to implement an alternative crossing method.

b. *Proposed Primary Crossing Methods*. Enbridge's pipeline waterbody crossing methods fall in two broad categories: open trench and trenchless. Enbridge is proposing to use two different types of open trench methods for stream crossings as the primary crossing method. The two primary trench crossing methods are dry (isolated) method and modified dry crossing. The dry (isolated) method is used at 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 the water. The dry (isolated) method uses either the dam-and-pump or flume technique. This method involves damming the stream both upstream and downstream of the crossing location and digging a trench in the dry work area to install pipe. Water is routed around the work area by pumping water through hoses or flowing water through a flume pipe. The modified dry crossing method does not dewater the trench and uses buoyancy control methods to sink the pipe to the bottom of the trench. The modified dry crossing method is used where stream banks are stable but conditions are too saturated to dewater from the construction workspace. Enbridge proposes to use two trenchless methods. One is HDD and the other is guided bore. The HDD method is used for large waterbodies that cannot be crossed by other methods or to cross sensitive resources because it involves no direct excavation. A small diameter pilot hold is drilled along a prescribed profile. Barrel reams are then used to enlarge the pilot hole to accommodate the pipeline diameter. Drilling mud is used to remove cuttings and maintain integrity of the hole. The pipe section is pulled through the hole and welded to the adjoining sections of pipe. During pilot hold drilling, reaming, and swabbing, pressure is applied to the borehole as drilling fluids are pumped in. During an HDD crossing, Enbridge will monitor the drill fluid following best management practices as described in section 11 of the EPP. These measures include continuously monitoring and maintaining a log of drilling mud volume balance, maintaining drilling fluid circulation at entry and exit endpoints, real-

time monitoring and recording of annular drilling fluid pressures, continuously monitoring the drill path by inspecting land and water surface (including adequate lighting for 24-hour continuous monitoring), and immediate shutdown if an inspector notices inadvertent return conditions or the HDD operator identifies a sustained loss in fluid pressure or loss of circulation. Enbridge's containment, response, and cleanup procedures are additionally defined in section 11 of the EPP. The bore method is used to cross narrow and stable watercourses. The bore method is not suitable for areas with high water tables or loose substrates. The bore method does not use pressurized water or drilling mud to hold the hole open (like the HDD method does), so there is not a risk for an inadvertent release of drilling mud.

c. *Enbridge Crossing Method Selections*. The primary crossing method for each crossing is identified in attachment A to the Application. In general, Enbridge is proposing to use wetland waterbody crossing methods on 60 crossings. Enbridge is proposing the dry (isolated) method for 29 crossings, the modified dry method for eight crossings, the guided bore method for two crossings, and the HDD method for 21 crossings. For the remaining six crossings under this license, Enbridge is proposing a modified upland crossing method. Enbridge proposed the dry (isolated) dam-and-pump method where streams had low flow and defined banks where fish passage was not a concern. This method works best in non-permeable substrate and is preferred for crossing meandered channels. The dry (isolated) flume method is suitable for crossing relatively narrow streams that have straight channels and are relatively free of large rocks and bedrock at the point of crossing where fish passage is a concern. This method works best where the waterbody has defined banks and channel with a solid and fine-textured substrate. Enbridge proposed the guided bore method where there is fine-textured impermeable soils and a deep water table. This method requires a slightly incised watercourse with approach slopes that are absent or slight. The HDD method is suitable for crossing sensitive, deep, wide, or high-flow waterbodies, depending on site topography and substrate. This method is limited in areas of glacial till or outwash interspersed with boulder and cobbles, fractured bedrock, or coarse sands and gravels. Geotechnical boring and hydrofracture risk analysis are performed to determine feasibility and potential for frac outs.

d. *DNR Approval of Crossing Methods.* DNR staff reviewed and discussed Enbridge's proposed crossing method for each crossing location. DNR provided feedback, recommendations, and comments to Enbridge regarding crossing methods at certain locations. Many factors influence and determine the most appropriate crossing method for a particular crossing site. In many cases an HDD

crossing is preferable because it does not disturb the bed of the stream; however, if a frac out of HDD drilling mud were to occur, this could be just as bad or worse for a stream than an open trench crossing. Geology of the stream and other construction factors must be consider in determining if an HDD crossing is likely to be successful. An open trench crossing, while more invasive, can be conducted in a relatively short time period, and the impact of construction can be minimized with proper restoration. DNR's comments resulted in Enbridge design changes, including water crossing methods. In general, DNR's comments led to additional HDD crossings and changes from wet trench crossings to dry or modified dry crossings. Specific crossings are discussed in subparagraph e below. DNR has approved the final primary crossing methods as indicated in attachment A to the Application.

e. *Specific Crossings.* DNR staff had numerous discussions with Enbridge regarding proposed crossing methods at particular crossings. A summarized discussion of a few key crossings follows.

i. Crossing 16 (Silver Creek). Enbridge is proposing a dry (isolated) crossing for this location. This crossing is surrounded by agricultural and pasture lands. During the November 14, 2018 site visit to this crossing location, DNR and Enbridge discussed HDD and open cut crossing methods. It was determined that neither HDD nor open cut would address cattle destabilization issues at the stream. HDD was not a feasible crossing method as it would have to include three crossings and would have a drill length over one mile. Also, an HDD crossing would have to cross under existing pipelines twice and would present safety and operational concerns. A dry crossing allows Enbridge to bury the pipeline with confidence that it will have sufficient depth of cover.

ii. Crossing 29 (LaSalle Creek). As more fully discussed above in paragraph 56, Enbridge is proposing a dry (isolated) crossing method for this site. DNR concurs this crossing method best minimizes potential impacts at the site. Geotechnical surveys indicate the site conditions are not favorable for an HDD crossing. A re-route of the pipeline would be required to parallel the waterbody for a substantial distance, due to the existing pipeline infrastructure to the west of the proposed route. Pullback of the pipe in an HDD crossing would necessitate additional physical alteration of forested wetlands to the east. The crossing was located to provide an optimal stream crossing angle. A dry dam-and-pump (isolated) crossing results in a lower impact crossing than an open cut (non-isolated) method.

Enbridge has planned for additional pumping capacity and to manage groundwater flow using sheet piling at the crossing.

iii. Crossing 34 (Shell River). Enbridge is proposing a dry (isolated) crossing at this site. During the November 14, 2018 site visit, DNR advised Enbridge that the Koch Minnesota Pipeline crossed at this location using HDD and requested Enbridge to complete geotechnical work to determine the feasibility of an HDD crossing. Based on review of geotechnical data, it was determined that HDD is not a good fit for this location. HDD would cause additional impacts to wetlands for ATWS required for the drill. Geotechnical data indicated probable cobbles at this location.

iv. Crossing 35 (Shell River). Enbridge is proposing a dry (isolated) crossing at this site. DNR staff originally recommended an HDD crossing at this location. There are five total crossings of the Shell River, and DNR staff were concerned that two dry crossings could result in cumulative downstream impacts to the waterbody. It was determined that a dry crossing minimized potential impacts from the crossing. Geotechnical data indicated probably cobbles at the site. HDD would have also required additional upland clearing for workspace between two transmission line corridors. DNR agrees with the dry (isolated) crossing method for this site.

v. Crossing 44 (Pine River). Enbridge originally proposed a dry (isolated) crossing for this location. DNR and Enbridge discussed the possibility of using an HDD crossing at this location during a January 9, 2019 site visit. Enbridge was initially concerned about glacial till and boulders in the area, which could cause problems for the HDD drill. Based on further investigation of geotechnical studies, this crossing method was changed to an HDD crossing. Geotechnical data supports an HDD crossing. DNR concurs that an HDD crossing minimizes resource impacts from the crossing.

vi. Crossing 48 (Spring Brook). As more fully discussed above in paragraph 55, Enbridge is proposing a dry (isolated) crossing method for this crossing. DNR concurs the HDD crossing method is not prudent or feasible for this site. The moderately steep slopes on either approach to the streambed valley create excessive risk for an HDD crossing. The valley floor is approximately 180 feet wide, which is too narrow for an HDD crossing. The steep slopes on either side of the valley significantly

increase the risk of an inadvertent return at the drill entrance and require an extreme drill path configuration. This would make the HDD drill highly susceptible to a pullback failure. The medium soft clay sand and gravel substrate also may not provide sufficient strength to contain hydraulic drilling fluid pressures. A dry crossing results in a lower impact crossing than an open cut (non-isolated) method.

vii. Crossings 63a and 63B (Unnamed Stream at Little Otter Creek AMA). Enbridge is proposing a dry (isolated) crossing for this location. During a January 10, 2019 site visit, DNR staff indicated a preference to crossing using an HDD crossing method. HDD would minimize disturbance and surface clearing. After additional review, DNR concurs that a dry (isolated) crossing is best suited to minimize overall resource impacts. The HDD crossing would be over one mile in length and there is limited area to set up a pullback string. This creates a situation where the pull string could not be strung in one section. Enbridge would have to start and stop the pullback process, which could lead to complications. Enbridge met with DNR staff in March 2019 to develop workspace modifications to minimize workspace impacts on the state land crossing.

60. The DNR provided resource review comments on the third version of the Application to Enbridge on May 20, 2020. This included comments on the PCVMP (previously referred to as the Vegetation Management Plan), Winter Construction Plan, and EPP.

61. On August 14, 2020, Enbridge responded to DNR's resource review comments on the third version of the Application. The DNR and Enbridge engaged in discussions over the next several weeks to resolve DNR's remaining resource review comments.

E. Enbridge Submits Final Application to DNR for a License to Cross Public Waters

62. On November 8, 2020, Enbridge submitted a revised Application for License to Cross Public Waters for the Line 3 Replacement Project—the final version of the Application.

63. Many of DNR's resource review comments on the Application have been incorporated by Enbridge directly into the final Application materials, including the plans attached to the Application. Because the Application will be incorporated into and become part of the utility license upon issuance, some of DNR's resource review comments are not independently listed in the license document outside of the Application materials.

IV. ANALYSIS OF STATUTORY AND REGULATORY REQUIREMENTS

64. The policy underlying DNR's utility licensing system is to minimize the environmental impact which may result from utility crossings and to provide maximum protection and preservation of the natural environment. *See* Minn. Stat. § 84.415, subd. 1; Minn. R. 6135.0100 and .1000, subp. 1.

A. The Application is Complete and Contains All Required Information

65. Enbridge properly submitted the Application for a license to cross public waters because the Project would cross public waters under the jurisdiction of the DNR in Kittson, Marshall, Pennington, Red Lake, Clearwater, Hubbard, Wadena, Cass, Aitkin, St. Louis, and Carlton Counties. *See* Minn. Stat. § 84.415, subd. 1.

66. All utility license applications must provide the information identified in Minn. R. 6135.1000, subp. 2, and meet the requirements of Minn. Stat. § 84.415, subd. 3. The application must be in quadruplicate and include a legal description of the lands or waters affected, a metes and bounds description of the required right-of-way, a map showing said features, and a detailed design of any necessary structures. Minn. Stat. § 84.415, subd. 3. In lieu of these application requirements, the DNR may require a utility license application to be in another form and include other descriptions, maps or designs. Minn. Stat. § 84.415, subd. 3. For each environmental standard in Minnesota Rules chapter 6135, a utility license applicant must indicate whether the application is satisfying the standard, where applicable, or if not, why not. Minn. R. 6135.1000, subp. 2. The application must also supply data on relevant site conditions where applicable. Minn. R. 6135.1000, subp. 2. Except when the DNR determines it is not feasible and prudent, or not in the best interests of the environment, the applicant is required to comply with the standards set forth in Minn. R. 6135.1000-.1500 in designing, constructing, and maintaining utility crossings. Minn. R. 6135.1000, subp. 2.

67. Enbridge submitted the Application electronically in a format providing for quadruplicate copies. The Application includes descriptions of the locations of the waters to be crossed (attachment A); length and width descriptions (attachment A); proposed crossing method, construction timing restrictions, depth of cover, crossing plans, and restoration approach (attachment A); depictions of the required right-of-way (attachment B); maps showing the utility features (attachment B); and a detailed design of any necessary structures (plans attached to the Application). To the extent any application information specified in Minn. Stat. § 84.415, subd. 3 was not included, the Application contains information in the form required by the DNR, as communicated to Enbridge by DNR during the course of review of the Application materials and resource review process. *See* Minn. Stat. § 84.415, subd. 3. The Application also indicates whether Enbridge is satisfying the environmental standards under the administrative rules or, if

not, why not, and the Application supplies data on relevant site conditions in various locations and in supplemental submittals to the DNR. *See* Minn. R. 6135.1000, subp. 2.

68. Enbridge has paid to the DNR the $2,250 application fee, per Minn. Stat. § 84.415, subd. 6(a)(1) and Minn. R. 6135.0400, subp. 2.

69. Enbridge has paid to the DNR the $22,541.00 water crossing fee, per Minn. R. 6135.0400, subp. 3(A), and .0620.

70. Enbridge has paid to the DNR a $367,944.00 monitoring fee to cover the projected reasonable costs for monitoring the construction of the utility line and preparing special terms and conditions of the license to ensure proper construction, per Minn. Stat. § 84.415, subd. 6(a)(2).

71. As outlined above, the Application is complete because all necessary and applicable information for evaluation has been provided by Enbridge or is otherwise available to the DNR. The information available to the DNR is adequate to determine whether the proposed utility can be constructed and operated in such a manner to have a minimum adverse impact on the environment. Minn. Stat. § 84.415, subd. 1; Minn. R. 6135.1000, subp. 1. Enbridge has also submitted adequate information for DNR to determine that the crossing of public waters will not cause pollution, impairment, or destruction of the air, water, land or other natural resources. *See* Minn. Stat. § 116D.04, subd. 6.

B. Consideration of Standards in Minn. R. 6135.1000 through Minn. R. 6135.1500.

72. Minn. R. 6135.1000. Rule 6135.1000 provides "[i]t is essential to regulate utility crossings of public lands and waters in order to provide maximum protection and preservation of the natural environment and to minimize any adverse effects which may result from utility crossings." Minn. R. 6135.1000, subp. 1. Based on DNR's thorough review of the Application and Project, the license, including the license special provisions and Applications materials incorporated into the license, contains numerous stringent environmental requirements and protections pertaining to the public waters crossings. Examples of these requirements and protections include the following. The wetland/peatland winter construction and mitigation special provision requires Enbridge to construct in sensitive areas along six public water crossings during winter to the maximum extent feasible, contains enhanced construction monitoring requirements, and ensures that Enbridge will mitigate impacts to these areas. SSRPs have been prepared for 31 crossings and include site-specific, tailored restoration techniques for the construction workspace as it crosses the subject public waters, including restoration of the pipeline trench, bridge setting, and adjacent areas within the construction workspace. Enbridge has extended the depth of cover two lateral feet from the top of bank on either side of the

waterbody for certain crossings. Enbridge has increased the depth of cover and extent of cover at crossing 54 (Unnamed Stream) and has extended depth of cover at crossings 63a and 63b (Unnamed Stream). Enbridge prepared and is subject to special plans for two particularly sensitive crossings. The Spring Brook Construction and Restoration Plan, which is attachment B to the Application, contains detailed crossing and restoration information for crossing 48 (Spring Brook), which is located south of DNR's Spire Valley Fish Hatchery. The LaSalle Creek Construction and Restoration Plan, which is also attachment B to the Application, contains detailed crossing and restoration information for crossing 29 (LaSalle Creek). Enbridge will use the dry crossing method at these two crossings. Enbridge is subject to trout stream work exclusion dates for in-channel work at crossings 33, 48, 63a, 63b, 65, and 67. The DNR granted a limited exception to the trout stream restrictions at crossing 29 (LaSalle Creek) between November 1 and March 31 and an exception to restrictions at crossing 54 (Unnamed Stream) to allow for construction during winter conditions to minimize the overall environmental impact from these two crossings. The requirements and protections summarized above provide maximum environmental protection and preservation and minimize any adverse effects from construction, operation, and maintenance of the project across public waters crossings.

73. Minn. R. 6135.1100 through Minn. R. 6135.1500 detail design, construction, and maintenance standards for utility crossings. An applicant for a utility crossing license is required to comply with these standards, except when the DNR determines that it is not feasible and prudent, or not in the best interests of the environment. *See* Minn. R. 6135.1000, subp. 2. The DNR's consideration of each of the applicable standards is set forth in greater detail below.

74. Minn. R. 6135.1100 sets forth standards for route design for a DNR utility crossing license. The Project is subject to the jurisdiction of the PUC and was required to obtain a routing permit issued by the PUC under Minnesota law applicable to certain pipelines. *See* Minn. Stat. §§ 216B.2421, subd. 2(4) and 216G.02. The PUC has re-issued the RP establishing the route for the Project. *See In the Matter of the Application of Enbridge Energy, Limited Partnership, for a Certificate of Need for the Line 3 Replacement Project in Minnesota from the North Dakota Border to the Wisconsin Border,* Docket No. PL-9/PPL-15-137, Reissuance Notice (May 1, 2020). Because the Project requires a route permit from the PUC under Minnesota law and that process entails a thorough route review process, the DNR deems the Project route to be established by the RP for purposes of the license. The PUC, not the DNR, has the authority to issue the routing permit for the Project. The DNR has therefore applied the route design standards under rule 6135.1100 within the scope of the route established by the RP.

75. Minn. R. 6135.1100, subp. 1(A), requires utility crossings to avoid steep slopes. Due to the nature of the Project and the route prescribed by the RP, the DNR determines that it is not feasible and prudent for the project to avoid all steep slopes along the RP for public waters crossings. In accordance with the Application and license terms, Enbridge will be required to

mitigate the impact of this item by undertaking temporary erosion and sediment control best management practices at the base of sloped approaches to waters and in other areas determined by the environmental inspector, including across the entire construction workspace and temporary access roads at the base of slopes greater than five percent. Pursuant to the EPP, the temporary erosion and sediment control BMPs will be maintained until permanent cover—surface types that will prevent soil failure under erosive conditions—is established. Enbridge will be required to install temporary slope breakers in steep slope areas to minimize concentrated or sheet flow runoff in disturbed areas. Enbridge will be required to install trench breakers at all waterbody crossings, as necessary, and taking into account the degree and length of slope, to prevent diversion of water into upland portions of the pipeline trench and to keep accumulated trench water out of the waterbody. Enbridge will be required to stabilize steep slopes with erosion and sediment control best management practices. Enbridge will be required to restore and stabilize steep slopes, including using approved seed mixes, pursuant to the EPP or SSRPs.

76. Minn. R. 6135.1100, subps. 1(B) and 1(C), requires utility crossings to avoid scenic intrusions into stream valleys and open exposures of water and to avoid scenic intrusions by avoiding ridge crests and high points. Due to the nature of the Project and the RP, the DNR determines that Enbridge has minimized scenic intrusions into stream valleys and open exposures of water to the maximum extent possible by co-locating the pipeline with other utilities. For the public waters crossings, 53 of 62 crossings are co-located with existing utilities. All proposed crossings are underwater crossings, and vegetation will be restored within the cleared right-of-way following construction. Complete avoidance of scenic intrusions into stream valleys and open exposures of water is not feasible and prudent. Enbridge will be required to minimize the impact from this item by restoring all slopes of banks at public water crossings on state land to pre-construction conditions. If the slope is unstable, Enbridge will be required to reshape the disturbed areas to transition into the natural stream bank and create a blended, natural appearance. Water bodies are not typically located at ridge crests or other high points.

77. Minn. R. 6135.1100, subp. 1(D), requires utility crossings to avoid creating tunnel vistas by, for example, building deflections into the route or using acceptable screening techniques. The DNR determines it is not feasible to have deflections in the route, due to the nature of the Project and route set by the RP. The PUC, not the DNR, has the authority to issue the pipeline RP. Following construction, Enbridge will be required to restore vegetation within the cleared right-of-way according to the Application and terms of the license. Pipeline safety is regulated by the U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration under Title 49 of the Code of Federal Regulations. To comply with inspection requirements under these federal regulations and maintain integrity of the pipeline, Enbridge will maintain a 50-foot operational right-of-way. At the riparian area of trenched waterbody crossings, the right-of-way will be a 10-foot wide corridor centered on the pipeline free of woody

shrubs and a 30-foot wide corridor free of trees. The Application complies with this standard to the extent it is feasible and prudent.

78. Minn. R. 6135.1100, subp. 2(A), requires utility crossings to, with regard to vegetation, avoid wetlands. The PUC, not the DNR, has the authority to issue the pipeline RP and therefore entirely avoiding wetlands is not feasible. Enbridge will be required under the Application and license terms and conditions to minimize the impact to wetlands by limiting construction workspaces across wetlands to a width of 95 feet, flagging wetland boundaries and boundaries of construction workspace by survey crews so wetlands can be easily identified and managed according to applicable plans, cutting off vegetation and trees within wetlands at ground level to leave existing root systems intact, and locating ATWS outside wetlands where possible. Enbridge will minimize wetland impacts at public waters crossings through the use of best management practices described in the EPP, including implementing temporary erosion/sediment control practices and conducting post-construction monitoring pursuant to the Post-Construction Wetland and Waterbody Monitoring Plan. To minimize impact while accessing the construction workspace across wetlands, Enbridge will install construction mats in accordance with the EPP. Enbridge will be required to locate staging areas, additional spoil storage areas, and ATWS in upland areas at least 50 feet from wetland boundaries where safe work practices or site conditions permit. If a 50-foot setback is not permitted by site conditions, Enbridge will be required to locate the areas as far from the wetland as practicable. Enbridge will not be authorized to conduct any construction activities, including vegetation clearing, between the ATWS and the wetlands.

79. Minn. R. 6135.1100, subp. 2(B), requires utility crossings to, with regard to vegetation, run along the 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. This requirement is not applicable to the Application for crossing of public waters, and will instead be addressed in Enbridge's separate application to cross public lands.

80. Minn. R. 6135.1100, subp. 3, requires utility crossings to avoid soils whose high susceptibility to erosion would create sedimentation and pollution problems during and after construction, avoid areas of plastic soils which would be subject to extensive slippage, and avoid areas with high water tables, especially if construction requires excavation. Due to the nature of the Project and the RP, the DNR determines it is not feasible and prudent for the Application to strictly comply with this standard. Because the PUC, not the DNR, has the authority to issue the pipeline routing permit, any alternative involving a different route is not a feasible alternative. The route designated by the RP crosses some areas of soils with high susceptibility to erosion, some areas of plastic soils, and some areas of high water tables. Pursuant to the EPP, Enbridge will be required to minimize the impact of this item by suspending construction activities in wet weather conditions to prevent soil rutting and compaction, employing temporary and permanent

erosion and sediment control best management practices, segregating topsoil, and implementing spill prevention, containment and control measures to avoid soil contamination. Impacts are also minimized by construction dewatering requirements under the EPP and Water Appropriation Permit No. 2018-3420, the Stormwater Pollution Prevention Plan under the MPCA Construction Stormwater General Permit, and use of trench breakers as described in section 1.13 of the EPP. Enbridge will consider switching to the alternate open cut crossing technique at a waterbody previously identified as a dry or modified dry crossing, which is subject to DNR approval, if 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.

81. Minn. R. 6135.1100, subp. 4(A), requires utility crossings to avoid streams, but if that is not feasible or prudent, to cross at the narrowest places wherever feasible and prudent, or at existing crossings of roads, bridges, or utilities. Due to the nature of the Project and the RP, the DNR determines it is not feasible and prudent for the Application to completely avoid streams. The Application proposes tailored crossing methods for each crossing based on site characteristics. The crossing methods were designed to minimize the impact of each crossing. The Application proposes the HDD crossing method at 21 crossings. The HDD entry and exit workspaces are sited to prevent or reduce physical alteration of riparian habitat at public waters crossings. The Application proposes non-HDD crossing methods, such as dry crossing or modified dry crossing, at crossings where HDD would result in greater environmental impact. The Application complies with the standard of crossing at the narrowest places wherever feasible and prudent and to the extent consistent with the RP. The Application co-locates 53 of 62 public water crossings with existing utilities, which achieves the standard for crossing at existing utility crossings. Additionally, Enbridge would be required under the MPCA Clean Water Act section 401 Water Quality Certification to use the Minnesota Stream Quantification Tool, including the Debit Tool, to determine the Project's functional loss to streams ecologies resulting from unavoidable impacts to streambeds due to open trench crossing methods and permanent impacts due to loss of riparian buffers. The Debit Tool is used for identifying the linear footage of stream restoration activity needed to compensate for project impacts. Enbridge would be required to provide a monetary amount to the MPCA for use in a stream restoration project or projects within watershed(s) impacted by the Project to address the debit.

82. Minn. R. 6135.1100, subp. 4(B), requires utility crossings to avoid lakes, but where there is no feasible and prudent alternative route, minimize the extent of encroachment by crossing under the water. The Application complies with the requirement to avoid lakes. The Project does not cross any lakes.

83. Minn. R. 6135.1100, subp. 4, requires that crossings on or under the beds of streams designated by the DNR 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. Due to the nature of the Project and the RP, the DNR determines it is not feasible and

prudent for the Application to avoid all trout waters. The project crosses five designated trout streams and three non-designated trout tributaries in close proximity to designated trout waters. Because the PUC, not the DNR, has the authority to issue the pipeline routing permit, any alternative involving a different route is not a feasible alternative. The crossings of three designated trout streams are subject to work-exclusion dates to allow for trout spawning and migration. These are crossings 33, 48, and 65. Per a special provision in the license, crossing 29 is subject to work-exclusion dates, but work is authorized from November 1 to March 31 to allow for winter construction of the crossing. Crossing 54 is a designated trout stream, but DNR has excepted this crossing from trout stream work-exclusion dates to allow for winter construction of the crossing, per a special provision in the license. The crossings of trout waters were individually analyzed to determine the crossing method for each crossing that will minimize impacts to the resource. Crossing numbers 29 (LaSalle Creek) and 48 (Spring Brook) are subject to site-specific construction and restoration plans, which are attachment B to the Application. The three other trenched trout stream crossings are subject to SSRPs. Enbridge will be required to install and maintain redundant erosion and sediment control measures immediately after clearing and prior to initial disturbance at trout waters located within 100 feet of the Project.

84. Minn. R. 6135.1100, subp. 5, requires utility crossings to avoid special use areas (defined as scientific and natural areas, units of the Minnesota Wild and Scenic River System, and those areas subject to special regulation for recreational, scenic, natural, scientific, or environmental purposes), but if there is no feasible alternative route, then utilities are required to be placed underground and located with existing public facilities such as roads and utilities. The PUC, not the DNR, has the authority to issue the pipeline routing permit. The Project route is set by the RP. The Project does not cross any scientific and natural areas or units of the Minnesota Wild and Scenic River System. The pipeline is located underground and is generally co-located with existing facilities. For the public waters crossings, all but nine crossings are co-located with existing pipeline, utility, or transportation corridors. The Application complies with this standard.

85. Minn. R. 6135.1200, subp. 1(A), indicates applicants for a utility license must give primary consideration to underwater placement in order to minimize visual impact. If the proposal is for overhead placement, the applicant shall explain the economic, technological, or land characteristic factors which make underground placement infeasible. The Project proposes underwater crossings. The Application complies with this rule.

86. Minn. R. 6135.1200, subp. 1(B), indicates if overhead placement of the utility is necessary, the crossing must be hidden from view as much as practicable. The pipeline will be located underground. The Application complies with this rule.

87. Minn. R. 6135.1200, subp. 2, requires utility crossings to be made as compatible as practicable with the natural area with regard to height, width, materials used, and color. The pipeline will be located underground. The Application complies with this rule.

88. Minn. R. 6135.1200, subp. 3, requires the right-of-way width to be kept to a minimum. The PUC, not the DNR, has the authority to issue the pipeline routing permit. Section 3.1 of the RP establishes the pipeline's 50-foot permanent right-of-way width. *In the Matter of the Application of Enbridge Energy, Limited Partnership, for a Certificate of Need for the Line 3 Replacement Project in Minnesota from the North Dakota Border to the Wisconsin Border,* Docket No. PL-9/PPL-15-137, Reissuance Notice (May 1, 2020). Enbridge will be required to neck down the construction right-of-way by 25 feet starting 20 feet from the ordinary high water level at waterbody crossings. The Application complies with this rule.

89. Minn. R. 6135.1300 requires utility crossings to leave a screen of vegetation between the structures and rivers when crossing rivers. Applicants are required to take steps to prevent excessive erosion of lake or stream banks and to construct temporary sediment traps to reduce sedimentation when crossing public waters. Utility license applicants are required to construct across wetlands in the winter in order to minimize damage to vegetation and in order to prevent erosion and sedimentation. Applicants are also required to construct at times when local fish and wildlife are not spawning or nesting. The Application complies with the screen of vegetation requirement by proposing underwater crossings. The Application also complies with the requirement to prevent excessive erosion of stream banks. In accordance with the Application and license terms, Enbridge will be required to use temporary erosion and sediment control best management practices at the base of sloped approaches to waters and in other areas determined by the independent environmental monitor. Enbridge will also be required to install temporary slope breakers in steep slope areas to minimize concentrated or sheet flow runoff in disturbed areas. Enbridge will be required to stabilize steep slopes with erosion and sediment control best management practices. Enbridge will be required to use approved seed mixes to restore and stabilize steep eroding slopes. Enbridge will be required to install and maintain redundant erosion and sediment control measures immediately after clearing and prior to initial disturbance at trout waters located within 100 feet of the Project. Enbridge will be subject to the wetland/peatland winter construction and mitigation requirements at six water crossing locations, as more fully described in paragraph 50. It is not feasible to require winter construction at all wetlands. The majority of the large peatland areas are within construction Spread 4. Depending on when construction begins, requiring winter construction in all these wetlands would extend the construction period over two winter seasons. The delay in getting the project completed and sites restored could create larger environmental impacts than the benefits from winter construction. Enbridge is generally subject to work exclusion dates for PWI cool and warm water fisheries and is subject to work exclusion dates relating to designated trout streams and tributaries and three non-designated trout stream tributaries. As more fully explained in

paragraph 53, under special provisions in the license, Enbridge is excepted from the PWI fisheries exclusion dates on five crossings, is partially excepted from trout stream restrictions on one crossing, and is excepted from trout stream restrictions on one crossing. The Application complies with this rule to the extent it is feasible and prudent.

90. Minn. R. 6135.1400 requires applicants for a pipeline utility crossing to adhere to federal and state safety regulations regarding prevention (such as safety valves and circuit breakers) and emergency procedures in the event of failure (fire suppression, oil spill cleanup). This rule has additional requirements for the heights of overhead crossings above waterways. The height requirement for overhead crossings above waterways is inapplicable. The Application proposes only underground crossings. Under federal regulations, Enbridge is subject to reporting, design, construction, pressure testing, operation, maintenance, integrity management, corrosion, and qualifications of pipeline personnel requirements. Enbridge is also required to identify high consequence areas prior to construction and must develop and submit a written Integrity Management Plan within one year of the start of construction. MPCA reviews the Project's oil and hazardous substance discharge prevention and response plan. Enbridge will install 37 mainline valves with permanent road access to each valve along the Project in Minnesota. Enbridge will be required to protect the entire pipeline with a cathodic protection system. The license requires Enbridge to comply with all applicable federal, state and local laws and regulations. The Application complies with this rule.

91. Minn. R. 6135.1500 requires applicants for a pipeline utility crossing to allow natural vegetation of value to fish or wildlife to grow in the right-of-way as long as it does not pose a hazard to or restrict reasonable use of the utility. Where vegetation has been removed, new vegetation consisting of native grasses, herbs, shrubs, and trees, recommended by the DNR, shall be planted and maintained on the right-of-way. Chemical control of vegetation must be in accordance with rules, regulations, and other requirements of all state and federal agencies with authority over the use. Enbridge will be required to conduct maintenance operations according to the EPP and PCVMP, which have been reviewed, updated, and approved by the DNR. Enbridge will replant woody vegetation at some public waters crossings pursuant to the SSRPs. To comply with inspection requirements under federal regulations, 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. Enbridge will be required to use DNR recommended native seed mixes to revegetate the right-of-way. Enbridge will be allowed to use chemical control of invasive or noxious weeds only if approved by the DNR. The Application complies with the rule to the extent it is feasible and prudent.

92. As outlined in paragraphs 72-91, the DNR has considered the Application under Minn. R. 6135.1000-.1500 as well as Minn. Stat. § 84.415. The Application satisfies the applicable regulatory requirements thereunder.

C. Additional Terms and Conditions Pursuant to Minn. R. 6135.1700.

93. Minn. R. 6135.1700 provides that the DNR may, in granting a utility license, include any terms, conditions, or reservations which may be necessary to minimize the adverse effect on the environment or to carry out the policies of chapter 6135. *See* Minn. R. 6135.1700. Due to the nature, location, and scope of the Project, the proposed license contains numerous special terms and conditions. Five significant conditions that are being implemented to minimize adverse effects on the environment are the requirements for the wetland/peatland adaptive management strategy; the SSRPs; HDD restrictions in frozen conditions; rutting and construction mats; and crossing completing timing requirements.

94. Wetland/Peatland Construction Requirements. Six water crossings, crossing numbers 41, 50, 51, 54, 55, and 56, are subject to the wetland/peatland winter construction and mitigation requirements under a special provision in the license. Under this special provision, Enbridge must attempt to construct in these areas during winter to the maximum extent feasible, depending on construction start dates for the Project. In the event Enbridge cannot completely construct in the sensitive areas during winter, Enbridge must submit for DNR review and approval a revised peatland/wetland site construction plan that demonstrates how winter construction will be implemented to the maximum extent feasible, including information to support why any specific winter construction is not feasible. This plan must also provide construction details for wetland/peatland construction that will be implemented to minimize impacts to these resources. In addition, Enbridge must minimize impacts by the following site specific construction plans for these six water crossings and implementing enhanced environmental construction monitoring to ensure that Enbridge properly utilizes best management practices. The enhanced monitoring requires an additional independent environmental monitor at each construction spread where non-winter construction will occur and additional DNR staff monitoring of these sites, with Enbridge responsible for the costs of this additional DNR staff monitoring. If this monitoring identifies unanticipated impacts to these areas, Enbridge will be required to submit a corrective action plan for DNR review and approval. Enbridge will be required to implement the corrective action plan within one year. If the DNR determines the corrective action plan did not sufficiently remediate the impacts, the DNR can conduct an assessment of the impacted area to determine if additional mitigation is needed. This assessment could result in additional mitigation by Enbridge or result in a monetary fine to Enbridge. Any money received from Enbridge as a result of this assessment will be used for administration, planning and implementation of wetland restoration activities on state land. Enbridge is also required under the special provision in the license and the PCMP Plan to provide financial assurance that DNR can access to perform the restoration work, restore other wetlands and waterbodies in the area, or purchase wetland credits if Enbridge fails to meet its site restoration requirements.

95. Site-Specific Restoration Plans. The DNR required Enbridge to develop, and will require Enbridge to adhere to as part of the license, SSRPs for 31 complex and sensitive water crossing locations. The SSRPs are based on field survey data of these areas, as more fully described in paragraph 51. SSRPs contain tailored restoration plans for each site. This information includes a revegetation plan and streambank/streambed cross-section, including areas for woody vegetation planting and use of natural materials for streambank stabilization; restoration information for areas outside the ordinary high water level for some crossings; bank restoration cross-sections for centerline excavation and bridge setting and in-stream supports; streambed restoration plan view that shows the thalweg and stream features; pre-construction photos; and restoration typicals used for implementation of restoration methods. Under a special provision in the license, SSRPs are subject to additional review and revision by DNR based upon final construction plans, site visits, or other updated information. Enbridge must obtain DNR's final approval for a particular SSRP before beginning construction of the pipeline within the identified area subject to that SSRP. SSRPs minimize impacts to these sensitive crossing areas by factoring in local conditions to ensure the sites can be restored to pre-construction condition.

96. HDD Restrictions in Frozen Conditions. Under a special provision in the license, Enbridge is not allowed to conduct HDD stream crossing construction activities when streams are ice covered, unless the DNR and MPCA give separate approval on a case-by-case basis. The purpose of this restriction is to address the risk of a frac out into a stream that is covered with ice.

97. Rutting and Construction Mats. The license contains a special provision requiring Enbridge to minimize rutting during construction of the pipeline to protect productivity, hydrologic function, and water quality; reduce erosion; and minimize impacts to flora and fauna. Enbridge is required to avoid repeated and excessive rutting. Enbridge cannot allow rutting of six inches deep and/or rutting that results in the mixing of topsoil and subsoil materials. Enbridge is required to immediately cease operations and resume only when conditions are adequate to support equipment. Enbridge is required to use mats as needed. Mats must be cleaned before being brought onto public water crossings. Enbridge must clean mats during activities to avoid the spread of invasive species. Enbridge cannot use gravel or other fill material to establish a base for mats.

98. Crossing Completion Timing Requirements. The license contains a special provision requiring Enbridge to complete in-stream pipeline installation activities for crossings of streams or lakebeds within specific timeframes. First, for minor waterbodies (all waterbodies 10 feet or less in width at the water edge at time of crossing), Enbridge must complete the in-stream installation activities in 24 hours. Second, Enbridge is required to complete crossings of intermediate waterbodies (all waterbodies greater than 10 feet but less than 100 feet wide at the water edge at time of crossing) within 48 hours. Lastly, Enbridge must complete crossings of

major waterbodies (all waterbodies greater than 100 feet wide at the water edge at time of crossing) as specified in the Application materials or other regulatory permits. These timing requirements do not apply to crossings using the HDD or guided bore crossing methods or where the DNR has provided different approval under an SSRP. Enbridge is required to initiate stabilization on stream banks and buffer areas next to streams within 24 hours after pipeline placement in the stream.

D. A Public Waters Work Permit is Not Required for the Proposed Work

99. Minnesota Statutes section 103G.245 requires the state, a political subdivision of the state, a public or private corporation, or a person to have a public waters work permit for various activities within public waters, including excavating and placing materials in the beds of public waters. A public waters work permit must be obtained for work that changes or diminishes the course, current, or cross-section of public waters by any means. Minn. Stat. § 103G.245, subd. 1. Depending on the crossing method, some of the crossings authorized under the license would change the course, current, or cross-section of public waters and others would not.

100. There are exceptions in Minnesota Rule 6115.0160 to the general public waters work permit requirement under section 103G.245. One of the exceptions is for utility crossings of public waters that are regulated under Minnesota Statutes section 84.415 and rules adopted thereunder. Minn. R. 6115.0160, subp. A. The work proposed in the Application will be regulated under Minnesota Statutes section 84.415 and Minnesota Rules chapter 6135 and is therefore exempt from the requirement of a public waters work permit.

E. The Proposed License for Utility to Cross Public Waters Satisfies the Prohibition on State Actions Affecting the Environment

101. The Minnesota Environmental Policy Act ("MEPA") prohibits State actions that cause pollution, impairment or destruction:

> "No state action significantly affecting the quality of the environment shall be allowed, nor shall any permit for natural resources management and development be granted, where such action or permit has caused or is likely to cause pollution, impairment, or destruction of air, water, land, or other natural resources located within the state, so long as there is a feasible and prudent alternative consistent with the reasonable requirements of the public health, safety, and welfare and the state's paramount concern for the protection of its air, water, land and other natural resources from pollution, impairment, or destruction."
> *See* Minn. Stat. § 116D.04, subd. 6.

102. "Pollution, impairment or destruction" is defined by Minnesota law as "conduct . . . which violates, or is likely to violate, any environmental quality standard, limitation, rule, order, license, stipulation agreement, or permit of the state or any instrumentality, agency, or political subdivision thereof which was issued prior to the date the alleged violation occurred or is likely to occur or any conduct which materially adversely affects or is likely to materially adversely affect the environment." *See* Minn. Stat. § 116B.02, subd. 5.

103. In reviewing the administrative record, including the FEIS, and the Application, DNR considered the quality and severity of any adverse effects of the proposed crossing of public waters, including any potential long-term adverse effects, whether the public waters are unique or rare, the potential significant consequential effects of the proposed utility on other natural resources, and the direct and consequential impacts of the proposed utility on the environment.

104. As detailed herein, the proposed utility, subject to the conditions of the License to Cross Public Waters, will comply with all applicable state environmental protection standards, including the requirements of Minnesota Statutes section 84.415 and Minnesota Rules chapter 6135 governing utility licenses.

105. The potential effects on natural resources resulting from the project and project alternatives were comprehensively analyzed within the Application.

106. The project will be also subject to other state and federal requirements and must comply with all applicable environmental protection standards. Wetland mitigation for unavoidable wetland impacts will be required under a federal wetlands permit issued by the USCOE. Wetland monitoring will be required under these federal wetland requirements.

107. Compliance with these regulatory requirements serves to ensure that the proposed utility under the license to cross public waters will not result in pollution, impairment, or destruction of natural resources. The crossing of state waters by the utility will not cause pollution, impairment, or destruction because the project complies with utility license regulations, the license to cross public waters will contain numerous special terms and conditions to address site specific issues, and the Applicant has incorporated feedback during the regulatory review process to further minimize the impact on the state waters.

108. As outlined above, the DNR has considered the proposed utility crossing under the license in accordance with MEPA, and determines that the proposed utility crossing satisfies the applicable statutory requirements.

Based upon the above Findings of Fact, the DNR makes the following:

CONCLUSIONS

1. It is the regulatory policy of the State to "insure that all projects for which [utility] licenses are sold will have a minimum adverse impact on the environment." Minn. Stat. § 84.415, subd. 1. The Legislature delegated to the DNR the authority to adopt rules "containing standards and criteria governing the sale of licenses permitting the passage of utilities over public lands and waters." Minn. Stat. § 84.415, subd. 1.

2. The DNR has authority to grant licenses permitting passage of mains or pipe lines for gas, liquids, or solids in suspension over, under, or across any public waters pursuant to Minn. Stat. § 84.415, subd. 1.

3. Enbridge's proposed construction of the Project across public waters requires a license to cross public waters. *See* Minn. Stat. § 84.415, subd. 1; Minn. R. 6135.1000.

4. The DNR has the authority to impose conditions on any utility crossing license it issues. *See* Minn. Stat. § 84.415, subd. 1; Minn. R. 6135.1700.

5. The Application is complete and Enbridge has provided all information required for review under applicable statutes and rules. *See* Minn. Stat. § 84.415, subd. 3; Minn. R. 6135.1000, subp. 2.

6. As detailed in the factual findings above, the DNR has reviewed and analyzed the information before the agency in connection with its consideration of the Application.

7. Any application information required under Minn. Stat. § 84.415, subd. 3 not discussed herein was accepted by the DNR in another form. *See* Minn. Stat. § 84.415, subd. 3.

8. The Application for License for Utility to Cross Public Waters No. UWAT011547 satisfies the requirements set forth in Minn. Stat. § 84.415 and Minn. R. 6135.0100-.1800.

9. The Project is capable of being constructed and operated across public waters pursuant to the license and conditions set forth in the issued license.

10. Pursuant to Minn. R. 6135.1000, subp. 2, Enbridge has complied with the standards in Minn. R. 6135.1100-.1500 in design, construction, and maintenance of the utility crossing, except when the DNR determined that it was not feasible and prudent.

11. Pursuant to Minn. R. 6135.1700, the DNR has included, and Enbridge is subject to, additional terms and conditions in the license necessary to minimize any adverse effects on the environment.

12. Pursuant to Minn. Stat. § 84.415, subd. 1 and Minn. R. 6135.1800, the DNR may upon 90-day written notice cancel the license for substantial violation of its terms, or if at any time its continuance will conflict with a public use of the land or water over or upon which it is granted, or for any other cause.

13. Pursuant to Minn. Stat. § 84.415, subd. 3, the DNR may at any time order such changes or modifications respecting construction or maintenance of structures or other conditions of the license as the DNR deems necessary to protect the public health and safety.

14. Any Findings of Fact that might properly be termed Conclusions of Law, and any Conclusions of Law that might properly be termed Findings of Fact, are hereby adopted as such.

Based on the foregoing Findings of Fact and Conclusions, the DNR enters the following:

ORDER

1. Based upon all the files, records, and proceedings in this matter and upon the DNR's Findings of Fact and Conclusions, the License for Utility to Cross Public Waters No. UWAT011547 is hereby issued to Enbridge for construction, operation, and maintenance of the Project across the public waters crossings described in the license, subject to the conditions set forth in the license.

DNR Authorized Signature

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Approved and adopted this 12th day of November, 2020
Deputy Commissioner Barb Naramore
STATE OF MINNESOTA
DEPARTMENT OF NATURAL RESOURCES