

November 22, 2017

Mr. Scott Ek
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
St. Paul, MN 55101

RE: 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
MPUC Docket No. PL-9/CN-14-916; OAH Docket No. 65-2500-32764

In the Matter of the Application of Enbridge Energy, Limited Partnership for a
Pipeline Route Permit for the Line 3 Replacement Project in Minnesota from the
North Dakota Border to the Wisconsin Border
MPUC Docket No. PL-9/PPL-15-137; OAH Docket No. 65-2500-33377

**Comments on behalf of the Minnesota Pollution Control Agency to the Minnesota Public
Utilities Commission on (1) Potential Effects of Alternatives on Environmental Justice
Communities; and (2) Potential Effects of Alternatives on Surface Water and Groundwater
Resources**

Dear Mr. Ek:

The Minnesota Pollution Control Agency (MPCA) files these comments to the Minnesota Public Utilities Commission (Commission) on the potential effects that several of the pipeline alternatives under consideration in these matters may have on: (1) Areas of concern for environmental justice; and (2) Minnesota's surface water and groundwater resources. The MPCA offers these comments consistent with Minn. R. 7853.0130, B(3) and C(4) and Minn. R. 7852.1900, subp. 3, which addresses the environmental impacts of the proposed project and alternatives. See also Minn. Stat. 216B.243, subd. 7, which authorizes a state agency with permit authority to present its position in the need proceeding for a large energy project.

The MPCA recognizes that our comments only address a few of the many criteria discussed in the Final Environmental Impact Statement (Final EIS) and OAH Dockets that the Commission will consider in making its need and route determinations. The MPCA offers this analysis to assist the Commission, which is responsible for making the final need and route decisions in these proceedings.

1. Potential Effects of the Project and Alternatives on Areas of Concern for Environmental Justice

Purpose: The MPCA offers the following analysis to assist the Commission in evaluating the impact of the proposed pipeline alternatives (Applicants Preferred Route (APR); RA-03AM, RA-06, RA-07, RA-08, and Certificate of Need Alternative SA-04) on low-income Minnesotans and people of color. The Final EIS presents an analysis of the potential environmental justice impacts of different alternatives. (See Chapter 11 of Final EIS). In this letter, the MPCA offers additional analysis that indicates:

- 1) The number and percentage of miles of each route that cross through census tracts that the MPCA considers to be areas of concern for environmental justice.
- 2) The number of low-income people living in all census tracts crossed by each route, not only the census tracts that meet environmental justice criteria.
- 3) The SA-04 route, which is not addressed in Chapter 11 of the Final EIS.

MPCA Analysis: The MPCA's analysis indicates that SA-04 would have the lowest impact on low-income residents, people of color, and tribal lands, with only 8 miles, or 3%, of the route in Minnesota, crossing through areas of concern for environmental justice. SA-04 also has the fewest number of low-income people along the entire route who would be impacted. The APR and other route alternatives have significantly more miles (and percentage of route) crossing environmental justice areas. The APR and other route alternatives also would impact at least 5,000 more low-income people across the entire route length, except for RA-06, which would impact approximately the same number of low income people along the entire route as SA-04.

The MPCA's analysis of the potential environmental justice impacts is based upon the methodology the Agency has followed in developing its Environmental Justice Framework.¹ The MPCA uses the U.S. Census tract as the geographic unit to identify areas of concern for Environmental Justice. The Agency considers a census tract to be an area of concern for environmental justice if it meets one or both of these demographic criteria:

- The number of people of color is greater than 50%.
- At least 40% of people reported income of less than 185% of the federal poverty level. This is a family of four living on \$44,123 a year.
- All tribal lands are areas of concern for environmental justice.

Table 1 below assesses the impact on environmental justice communities from two aspects. First, the table lists the miles of each route or system alternative that cross through a census tract that is an area of concern for environmental justice. Second, the table identifies the number and percentage of low-income people within each census tract that the route crosses. For example, Applicant's Route would have 155 miles that cross environmental justice census tracts, which is 46% of its total miles in Minnesota. Along the entire 340-mile length of Applicant's Route, there are 24,909 people who are low income, which is 31% of the total population, living in the census tracts crossed by that route.

¹ See MPCA Environmental Justice Program resources at: <https://www.pca.state.mn.us/about-mpca/mpca-and-environmental-justice>

Table 1. Potential Environmental Justice Impacts

Route	Miles of route crossing through areas of concern for environmental justice	Number of low-income people living along the route *
Applicant's Preferred (340 miles)	155 (46% of the route)	24,909 (31% of all people living along the route)
RA-03AM (395 miles)	177 (45%)	39,415 (30%)
RA-06 (316 miles)	146 (46%)	19,449 (30%)
RA-07 (288 miles)	112 (39%)	26,612 (31%)
RA-08 (285 miles)	108 (38%)	26,801 (32%)
SA-04 (250 miles)	8 (3%)	19,312 (22%)

* Number of people living in census tracts along the route with incomes of less than 185% of the federal poverty level.

As mentioned above, Table 1 indicates that SA-04 would have the lowest environmental justice impacts, both by low-income population and miles in environmental justice areas of concern. SA-04 does not cross any tribal lands and therefore would also have the lowest impact on tribal lands. The Applicant's Route and other route alternatives would impact significantly more miles of environmental justice areas and at least 5,000 more people who meet environmental justice criteria along the entire route (except for RA-06, which would have close to the same population impact as SA-04.)

2. Potential Effects of Alternatives on Surface Water and Groundwater Resources

Purpose: The MPCA offers the following analysis based on the potential environmental effects of the pipeline project alternatives to the state's surface water and groundwater resources. This analysis compares the APR; RA-03AM; RA-07, which is located within or in close proximity to the existing Line 3 route (Existing Corridor); and SA-04. Route Alternatives RA-06 and RA-08 were not included in this analysis. However, RA-08 closely parallels RA-07 and the Existing Corridor along a significant length of the route and would be expected to cause similar impacts. RA-06 (northern route) was not evaluated and is considered not viable as it has the lowest proportion of its route co-located within existing rights-of-way and would thus result in the greatest environmental impacts from right-of-way (ROW) clearing activities and consequent habitat fragmentation.

The MPCA's mission includes protection of the environment, and it is the state agency with responsibility and authority related to state and federal programs for construction stormwater, industrial stormwater, wastewater, Section 401 water quality certification, and overseeing spill preparedness and the cleanup of spills. In addition, the MPCA is charged by statute with monitoring and assessing the condition of lakes and streams in all 80 major watersheds of the state and preparing

Watershed Restoration and Protection Strategies for those watersheds. Route alternatives under consideration are in conflict to greater and lesser degrees with some of these surface and groundwater protection strategies, due to the presence (or absence) of high quality surface and shallow groundwater resources.

MPCA Analysis. The MPCA's analysis of the potential effects of the pipeline alternatives on surface and drinking water sources focused on the impacts caused by 1) creation of new corridor ROW; and 2) construction in sensitive areas or areas of known high surface or groundwater quality. The analysis indicates that RA-07, which involves construction of a new pipeline primarily in the existing Line 3 corridor, offers the greatest potential to minimize potential adverse effects to surface water and groundwater resources. In addition, SA-04 offers lower potential environmental effects on surface water and groundwater resources than other proposed new corridor options (APR or RA-O3AM).

In general, because of impacts due to ROW clearing, the use of existing and/or common or shared infrastructure corridors for pipeline projects will have fewer environmental impacts than a new corridor. If new corridor construction cannot be avoided, designing the route to avoid areas with higher water quality, and building along routes where the potential impacts to the environment and human health can be minimized, will help mitigate adverse environmental effects in the event of future accidental spills. It should also be noted that the closer a pipeline corridor is to population centers, the higher the risk to human safety if a fire were to occur as a result of a release, and the higher the risk of contaminating drinking water for a larger number of people.

Pipeline construction will involve soil excavation, vegetation removal, the crossing of water bodies, and the alteration or loss of wildlife habitat. These activities, particularly when occurring during the creation of a new pipeline corridor, can result in forest fragmentation affecting numerous species of wildlife that require expanses of undisturbed forest. Wetland perches may be broken, causing alteration of natural hydrology in wetland areas, and stream geomorphology can be altered by damaging banks or stirring up stream bottoms. Herbicides used to control vegetation in pipeline corridors can adversely affect pollinators, resulting in hidden impacts that are difficult to trace, but nonetheless exist.

The MPCA has evaluated the proposed pipeline alternatives by identifying Geographic Information System (GIS) layers that allow a direct comparison of environmental sensitivity in three aspects: 1) the presence of altered water courses; 2) soil erodibility; and 3) groundwater sensitivity. Each of these aspects is discussed below, with an accompanying Figure to illustrate the analysis.

A. Analysis of altered watercourses. Altered stream channels (i.e., ditching and straightening of stream channels) reduce habitat complexity and are often negatively impacted. Altered watercourses typically have decreased ecological function and diversity, and are therefore considered to be less valuable. For these reasons, construction in unaltered, or natural, watercourses should be avoided.

Figure 1 below indicates the presence of altered watercourses along the various alternatives under consideration. A statewide inventory has been developed showing streams that have been hydrologically modified (e.g., channelized, ditched or impounded). In Figure 1, the red-shaded areas indicate the presence of altered watercourses, while the green shaded areas indicate natural, unaltered

watercourses. Without more specific data on the precise location of all the proposed route alternatives and SA-04, a detailed quantification is not possible; however, the MPCA presents this high-level approach to help identify the route alternatives that appear to most effectively meet the considerations identified above.

Figure 1. Presence of Modified Watercourses

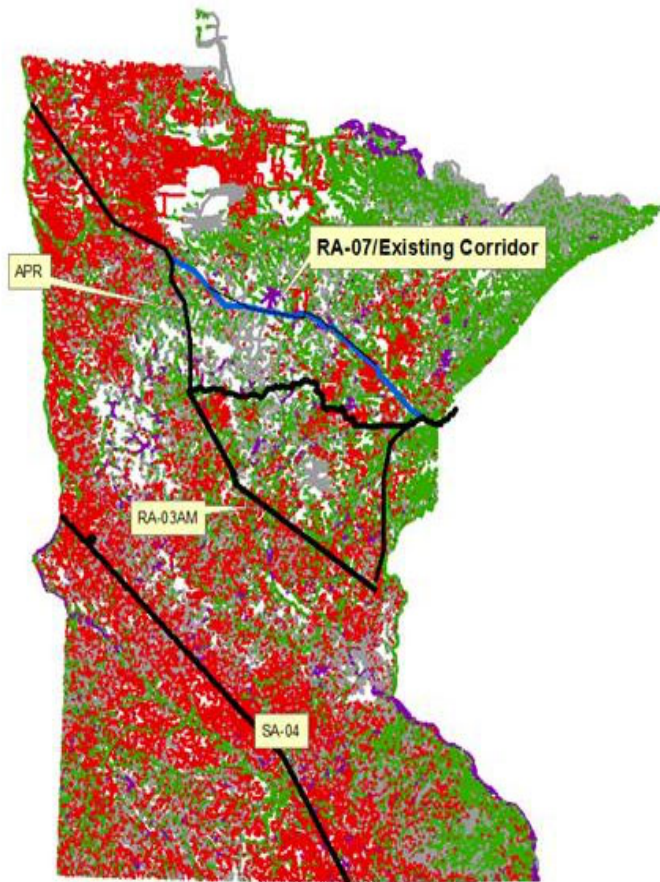


Figure 1 indicates that, aside from the northwestern portion of the state, the APR and the RA-07/Existing Corridor tend to cross a higher percentage of unaltered, natural watercourses than do RA-03AM or SA-04. However, the use of the existing infrastructure corridor (RA-07/Existing Corridor) would avoid the clearing and establishment of new ROW and additional water body crossings that would result from the APR, RA-03AM or SA-04.

B. Analysis of soil erodibility and sloped areas. Figure 2 below depicts soil erodibility (darker red indicates high erodibility) with additional weighting for sloped areas. High soil erodibility is a significant concern during construction as well as post-construction due to a greater likelihood that pipe can become exposed or undermined due to water movement above or below soils. The “undermining effect” was observed by MPCA staff during the construction of another oil pipeline project, and resulted in impacts to wetlands during the construction process.

Figure 2. Soil Erodibility Weighted by Slope

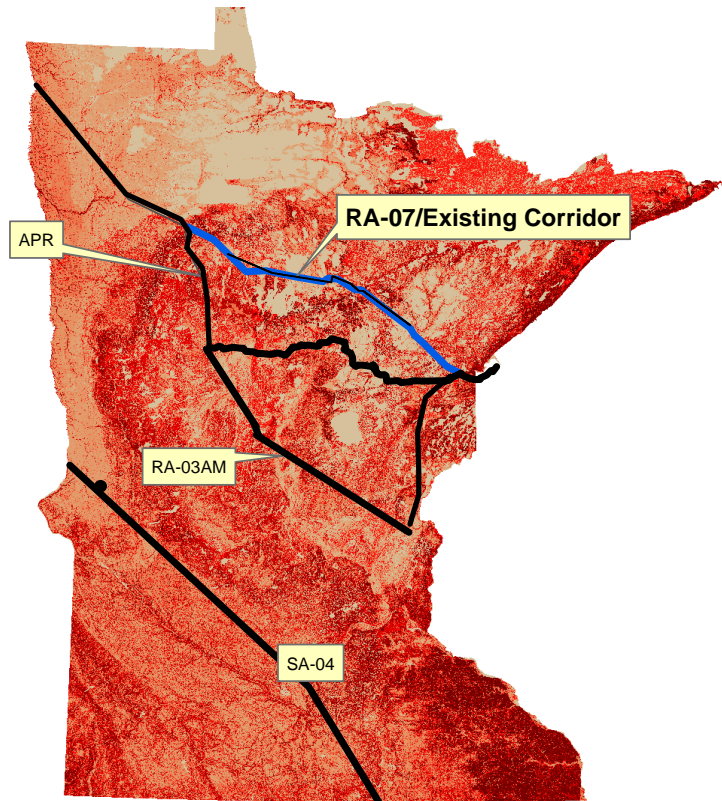


Figure 2 - Soil Erodibility Weighted by Slope. Darkest red areas are most erodible due to a combination of natural erodibility and steep slopes. Not all dark red areas are steep, and not all may be the most highly erodible without slope factored in, but all dark red areas are erodible as a result of some degree of both characteristics.

Figure 2 indicates that the RA-07/Existing Corridor shows relatively low erodibility, while the APR includes areas of high or very high erodibility. SA-04 shows overall lower erodibility (when weighted by slope) while RA-03AM has similar erodibility values to that of APR.

C. Analysis of Groundwater Vulnerability. Figure 3 below represents data that was provided to MPCA by the Minnesota Department of Health (MDH) during recent Watershed Restoration and Protection Strategy development. The dark red areas represent areas of highest groundwater vulnerability, followed by orange (medium vulnerability), olive green (low vulnerability) and finally light green (lowest vulnerability).

Figure 3. Groundwater Vulnerability

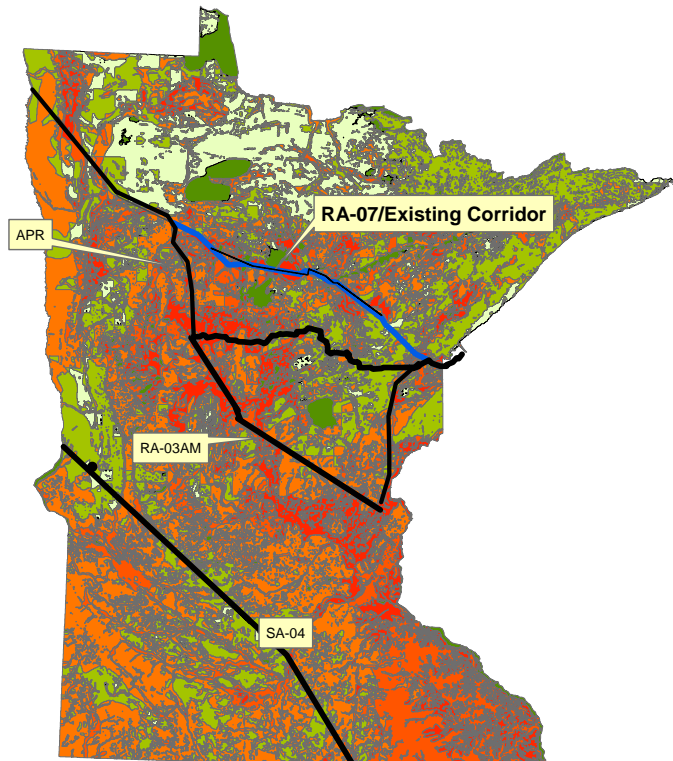


Figure 3 - Groundwater vulnerability -This MDH dataset shows areas of groundwater most vulnerable (dark red) to those least vulnerable (light green).

Based on this dataset, the RA-07/Existing Corridor and SA-04 occupy areas of lesser groundwater vulnerability, while the APR crosses (from Clearbrook eastward), a relatively high percentage of high or highest groundwater vulnerability. This dataset does not show a clear difference between RA-03AM and APR.

Environmental Impact Analysis Summary

The available data provided by state agencies indicates that in several areas, including altered watercourses, groundwater susceptibility, topography, connectivity, and quality of habitat (among others), the APR offers a less environmentally protective alternative. In addition, the APR and RA-03AM would require more crossings of the Mississippi River and several of its tributaries, which are primary source of drinking water for the downstream communities of St. Cloud, Minneapolis and St. Paul.

A review of the Final EIS and summary review of key GIS sensitivity layers above indicates that locating the Project in or as close to the RA-07/Existing Corridor as possible represents the lowest overall potential environmental impact to surface water and groundwater resources. The existing Line 3 corridor has already experienced natural resource impacts, such as crossing of water bodies, alteration and loss of habitat, forest fragmentation and similar effects. RA-07 is either located in or closely follows the existing corridor.

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In addition, SA-04 has lower potential environmental effects compared to the APR or RA-03AM, when considering altered watercourse, soil erodibility, and elevation change data. The majority of vegetative cover in the proposed SA-04 corridor is hay/pasture and cultivated cropland, as opposed to forested uplands and woody wetlands found in the APR and RA-03AM corridors. Agricultural areas tend to be less environmentally sensitive and would result in lesser habitat fragmentation during corridor clearing.

Conclusion

The MPCA sincerely thanks the Public Utilities Commission for the opportunity to comment on this project. Thank you for consideration of these comments.

Sincerely,



Bill Sierks, Manager
Certification, Environmental Review and Rules Section
Minnesota Pollution Control Agency

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