Minnesota Department of Natural Resources
Division of Ecological & Water Resources
500 Lafayette Road
St. Paul, MN 55155-4040
August 05, 2024

Jim Sullivan
Minnesota Department of Commerce
85 7th Place East, Suite 280
St. Paul, MN 55101

RE: In the Matter of the Environmental Assessment of Minnesota Power and Great River Energy's 180-mile, double circuit 345 kV transmission line from Itasca County to Benton County (Northland Reliability Project)
PUC Docket Numbers: ET2/CN-22-416; E015, ET2/TL-22-415

Dear Mr. Sullivan,

The Minnesota Department of Natural Resources (DNR) has reviewed the Environmental Assessment (EA) and related documents for the Northland Reliability Project. DNR offers comments and recommendations regarding potential environmental impacts among each route alternative that was considered in the EA.

Early Coordination

Before sharing DNR's detailed comments, we want to inform and address the challenges encountered with attempts at early coordination. The DNR is committed to meeting the increasing demands of Minnesota's energy infrastructure development while protecting its natural resources. Ideally, early coordination occurs prior to the submittal of a permit application and serves to collaboratively identify areas of concern, make project adjustments, and balance multiple siting factors. Early coordination helps inform route selection during project development and helps to ensure efficient permitting and licensing.

The DNR has concerns regarding the nature of the pre-application coordination that occurred with Minnesota Power, Great River Energy, and their consultants (hereby referred to as "the applicant") on the Northland Reliability Project. Coordination between DNR and the applicant started in January of 2023 with the goal of discussing specific routes. However, these meetings included few project details or route information. The DNR identified significant natural resource concerns in a June 30, 2023 early coordination letter and Natural Heritage (NH)

Review (MCE# 2023-00324) letter to the applicant. Subsequently, an interdivisional group of DNR technical staff met with the applicant on July 25th, 2023.

During the July 25, 2023, meeting, the applicant declined to consider modifications of the proposed route. Rather than modifying the proposed route, the applicant advised DNR develop route alternatives. The applicant submitted the Alternate Route Permit Application on August 4, 2023, and did not include any resource considerations or route changes proposed by the DNR. Although DNR believes the duty to identify and develop the least impactful preferred and alternative routes remains with a project proposer, DNR staff invested significant staff time and effort and submitted several route alternatives during EA Scoping for consideration on November 21, 2023. In a letter from the applicant to the Department of Commerce, (dated December 1, 2023), the applicant requested that the majority of DNR alternatives not be included for consideration in the EA.

General Comments on the EA

Our agency appreciates the inclusion of DNR and public alternative analyses into the EA. The applicant's focus on using the Alternative Process on their proposed route for a 180-mile new high voltage transmission line, has led the public and governmental agencies to propose an unusually large number of route alternatives. The wide range of alternatives for each region creates challenges in adequately comparing the potential impacts and benefits of each, suggesting that an Environmental Impact Statement may have been more appropriate for this project.

The DNR has identified the following issues with the adequacy of the EA alternatives analysis.

Inconsistent Analysis of Alternatives

It is important that the EA provide consistency and clarity in fully evaluating and comparing each of the alternatives for a given region to inform decision makers on route selection. As written, the alternative comparisons throughout the EA do not consistently utilize the information provided in the supporting appendices to adequately quantify and compare alternatives within each region. The appropriate level of analysis and comparison is only provided in Section 7 for the applicant's proposed route compared to two example routes that utilize a single alternative for each region. Without the same level of analysis for all segments it is not possible to know if the least impactful alternative is being chosen for each region. We suggest that route selection occur on a region-by-region level (as defined in the EA) rather than the using the two example route options selected for project-wide comparison, and that the more detailed resource criteria listed in Appendix N and used in Section 7 is examined when comparing and selecting the final project route.

Modifications of DNR's Proposed Alternatives

DNR prioritized the submission of route alternatives during EA scoping for the areas with the most significant natural resource impacts of the applicant's proposed route. Within the EA, several of DNR's proposed alternatives have been analyzed in a way that does not capture their intended benefit to natural resources. Alternatives J1 and J3 through the Elk River corridor are

intended to be used together to minimize impacts to the Elk River. Instead, they are separated and combined with the applicant's proposed route for several miles, resulting in significantly increased impacts. These alternative combinations are also used in the EA to compare wetland impacts, tree removal, floodplain impacts, and stream crossings between routes in a way that fails to maximize natural resource impact comparison between the suggested alternatives and the applicant's proposed route.

Consideration of Alternate Technologies/Modifications

The EA does not sufficiently explore the opportunities for the selective use of route modification through stacking and/or by running lines underground. DNR understands the added cost and maintenance challenges that would result from utilizing these route modification alternatives and does not propose the widespread use of either option. However, in some of the most complicated and challenging areas of the route, these options should be more fully analyzed to avoid significant impacts to natural resources and/or direct impacts to residences. The Cuyuna area and the Long Lake area are examples of regions with many siting challenges where such modifications should be fully assessed.

Effects on the Environment and Rare and Unique Natural Resources

The consideration of state-listed species and rare and unique natural resources is not complete. The EA should include and refer to the June 30, 2023 NH Review letter (MCE# 2023-00324) regarding state-listed plant and animal species and the measures required to avoid impacts to these rare species. Since the applicant did not submit any of the route alternatives to MCE for evaluation within the EA, route alternatives have not yet been evaluated for impacts to state-listed species, and survey results are not yet undertaken or complete. It is likely there will be significant impacts to state-listed plant species based on the habitat impacts being proposed by the applicant, but the full extent of natural resource impact cannot be meaningfully compared. Furthermore, the criteria for evaluating potential impacts to state-listed species and rare natural resources is not used consistently or accurately throughout the EA to compare alternatives. Some sections state that state-listed species will not be impacted, directly contradicting the comments and guidance the applicant has received from DNR.

Ecologically Significant Areas

The EA should consistently summarize and compare the presence of ecologically significant areas between alternatives and discuss measures to avoid or minimize impacts to these resources. Resources including Minnesota Biological Survey (MBS)-assigned Sites of Biodiversity Significance, Lakes of Biological Significance, areas that are candidates for Old Growth designations, and others are identified in the attached NH Review letter, dated June 30, 2023.

The potential impact to *Lakes of Biological Significance* has not been quantified and compared between alternatives for each region.

Impacts to these rare natural resources are not adequately quantified or compared between alternatives for each region. This information is only evaluated in Section 7 between the applicant's proposed route and two example options. The applicant states repeatedly that

impacts to the environment are minimized through ROW paralleling or sharing, but this is not necessarily accurate if the proposed route would further impact these rare and imperiled plant communities.

ROW Paralleling and Sharing

The Commission also considers under Minn. Rule 7850.4100 when selecting a final route, if the route follows existing road ROW to the greatest extent possible to limit vegetation clearing. Road ROW, section lines, and field lines are also considered and given priority in project siting when evaluating the extent to which the project parallels or shares ROW. Throughout the EA, the applicant claims that their proposed route minimizes potential impacts by parallelling or sharing existing transmission line ROW. Many of the alternatives proposed minimize impacts to a greater extent by utilizing existing road ROW to reduce the extent of vegetation and natural resource disturbance, but this is not represented as intended in the alternative comparison.

DNR Regulatory Considerations, Permits, and Approvals

The nature of early coordination with the applicant and the time constraints of the alternate route permitting process have not allowed for full consideration of potential obstacles that may arise through DNR regulatory and permitting processes. The following section outlines DNR permitting and regulatory responsibilities for the selected route.

License to Cross Public Lands and Waters

The project will be required utility licenses to cross state lands and public waters from the DNR. The utility license review will identify potential natural resource and recreation concerns. The utility license to cross state lands review determines deed, contract, funding, or other restrictions on state lands. Such restrictions could impact licensing and routing of the transmission line. Some DNR-administered lands have been purchased using funds that put restrictions on the lands. Before the DNR can grant a utility license over state lands with a funding restriction, our agency must receive written approval from the funding provider. The DNR will identify if and where there are funding restrictions on state lands when the final route is selected. The funding provider review can take up to a year or more. Approval may or may not be granted by the funding provider.

DNR Proposed Route Alternatives

The DNR proposed route alternatives that were included in the EA, with some modifications. However, our Lands and Minerals (LAM) staff have not performed a full review of DNR-administered properties crossed by the alternatives and will wait to pursue further information on affected DNR parcels upon PUC's decision of the final route selection. There is potential for aggregate, peat, and ferrous resources, in addition to potential funding restrictions on certain properties. This research is extensive, therefore, our agency will be focusing staff time on the most relevant project components, until the route is finalized. Note that it is the financial

and/or physical responsibility of the permittee to relocate infrastructure to access certain resources if they are affected.

Additional Right-of-way on DNR Administered Lands

The DNR does not support additional ROW on DNR-administered lands. In areas where DNR land crossings already exist, DNR would like to see the infrastructure consolidated or stacked to reduce impacts on the ground. There are 95 proposed crossings of state land in the northern portion of the applicants proposed route. Our agency manages a diverse portfolio of School Trust Lands by promoting revenue generation activities that are also protective of the natural resources that Minnesotan's enjoy and value. As the trustee for these lands, the DNR must consider the impacts to these properties now and into the future.

Mineral and Ferrous Resource Considerations

DNR has fiduciary responsibilities and must consider impacts to three types of parcel ownership: the mineral estate, the surface estate, and personal property in the form of iron-bearing stockpiles and tailings basins when reviewing projects and working with applicants on legal agreements to utilize state administered properties and mineral resources. ___

Public Water Wetlands

Section 2.6.2 State of Minnesota Approvals and Table 2-2 of the EA should be updated to include a DNR Public Waters Work Permit for the crossing of public water wetlands. Although a utility license in not needed in areas where a route crosses public water wetlands that occur on private land, a DNR Public Waters Work Permit is required. The DNR Public Waters Work Permit may be obtained through the Minnesota DNR Permitting and Reporting System (MPARS). In accordance with Minn. R. 6115.0210, our agency permit review process requires an alternative analysis that examines additional routes to minimize impacts to public water wetlands and permit the least impactful alternative.

Water Appropriation

Section 2.6.2 State of Minnesota Approvals and Table 2-2 of the EA should be updated to include a DNR Water Appropriation Permit. Dewatering activities may be necessary during construction, and a Water Appropriation Permit is required if the water pumped exceeds 10,000 gallons in a day, and/or one million gallons in one year. The DNR General Permit for Temporary Appropriation, with its lower permit application fee and reduced time for review, may be used for the dewatering if the dewatering volume is less than 50 million gallons and the time of the appropriation is less than one year. MPARS can be used to apply for a DNR Water Appropriation Permit.

State Threatened and Endangered Species

Minnesota's endangered species law (*Minnesota Statutes*, section 84.0895) and associated rules (*Minnesota Rules*, part 6212.1800 to 6212.2300 and 6134) prohibit the taking of

threatened or endangered species without a permit. While an individual NH Information System (NHIS) license can be used to screen an area for rare features and state-listed species, if rare features are identified within one mile of the project, further coordination with DNR is required to determine potential impacts to rare features and state-listed species and to obtain recommendations, requirements, and next steps. Please note that only DNR can determine if a project is likely to result in impacts to state-listed species.

The EA does not refer to the June 30, 2023 NH Review letter (MCE# 2023-00324) regarding state-listed plant and animal species and measures required to avoid impacts to these rare species. The NH Review letter is attached along with DNR comments and informs the applicant of potential impacts to many state-listed species and ecologically significant areas. Extensive rare plant surveys, avoidance plans, and other avoidance measures are required for this project. Depending on the results of the surveys, a Takings Permit may be required for the project. **We request that the PUC include permit conditions that require the applicant to complete coordination regarding rare species, including the Takings Permit process if needed, prior to the initiation of project activity including vegetation removal and disturbance.**

- State-listed threatened and endangered plant species: Many state-listed threatened and endangered plant species have been identified near the proposed project boundary. To demonstrate avoidance of state-protected species, **a qualified surveyor needs to conduct a habitat assessment within the selected project boundary for each of the species listed in the NH Review letter**. The goal of this habitat assessment is to identify potential locations where threatened and endangered species may occur to help formulate an avoidance plan. If avoidance of habitat is not feasible, botanical surveys will be needed.

  In additional to potential habitat, there are known occurrences of rare plant species in the project boundary. **Known occurrences of state-listed threatened or endangered plants must be resurveyed to determine current their current extent within the selected project boundary and within any potential alternative disturbance areas. If avoidance of state-protected species is not feasible, the applicant will need to apply for a permit to take.**

- Blanding's turtles: Blanding's turtles (*Emydoidea blandingii*), a state-listed threatened species, have been documented in the vicinity of the proposed project in Sherburne, Benton, Crow Wing, and Morrison counties. The Northland Reliability Project has the potential to impact this rare turtle through direct fatalities and habitat disturbance/destruction due to excavation, fill, and other construction activities associated with the project. **Given the project details and the potential for a take of a Blanding's turtle, an avoidance plan is required**.

- Loggerhead shrike: The loggerhead shrike (*Lanius ludovicianus*), a state-listed endangered bird, has been documented in the vicinity of the project site in Sherburne and Benton counties. Loggerhead shrikes can be found in native prairie, pastures, shelterbelts, old fields or orchards, cemeteries, grassy roadsides, and farmyards. **Given the potential for this species to be found in the vicinity of the project, tree and shrub removal is required to be avoided during the breading season, April through July, in the Sherburne and Benton counties**.

Our NH Review team will need a species survey proposal per the guidance documents at Natural Heritage Review. Survey proposals should be submitted a minimum of two weeks before initial surveys.

Please note that the applicant has not yet submitted any alternative routes to NH Review staff for evaluation of potential impacts to state-listed species. Also, rare plant survey results for the applicant's proposed route are not yet complete and have not been used to evaluate natural resource impacts or compare alternatives. Please refer to the attached NH Review letter for further details. The final selected route, required access routes, and staging areas will need to be submitted for evaluation into MCE. Additional rare species surveys and/or avoidance plans may need to be required to account for any changes to the route.

DNR Comments on the EA

Summary and Introduction

1. Table S-2 (page xxxii); Rare and Unique Natural Resources (page xli): The consideration of state-listed and federally-listed species is not accurate since alternate routes have not yet been evaluated for impacts to state-listed species, and survey results are not yet undertaken or complete. It is likely there will be significant impacts to state-listed plant species based on the habitat impacts being proposed by the applicant. This resource impact is unable to be compared and considered based upon the amount of coordination that has occurred to date. Please note that the total cost of the project for the applicant's proposed route does not include the cost of a Takings permit for state-listed species and the cost of mitigation.
2. Water Resources (page xl): This section states, "Impacts to floodplains and groundwater are anticipated to be minimal and independent of the route selected for the project. This discussion addresses watercourses and waterbodies, and wetlands." This may not be accurate, however, as there are significant differences in potential impacts to river corridors and floodplains depending on which route is selected, especially along the Elk River corridor in Benton County.

Section 2: Regulatory Framework

3. Page 14, Table 2-2; Page 15, Section 2.6.2 State of Minnesota Approvals, DNR Permits:

a. Please note that a DNR Takings Permit and associated mitigation may be required if sufficient avoidance for state-listed threatened and endangered species cannot be achieved.

b. Please also note that a Public Waters Work Permit is required to cross public water wetlands.

c. Please include a DNR Water Appropriation Permit in the list of DNR permits and approvals.

Section 3: Overview of Project and Routing Alternatives

4. Page 37, Section 3.1.6.2, Route Alternative J1:

    a. DNR only proposed the small segment of Alternative J1 that departs from the applicant's proposed route along the Elk River and turns west to connect to Alternative J2. We proposed this small section of route alternative to be used in conjunction with Alternative J3 to bypass the two most impactful sections of the applicant's proposed route through the Elk River corridor. **We do not support the extension of Alternative J1 south of the MN Trunk Highway 23 intersection (T36N, R30W, Section 23) along the applicant's proposed route.** The inclusion of the applicant's proposed route south of MN Trunk Highway 23 alters the analysis and comparison of this route alternative to show greater watercourse, wetlands, and tree canopy impacts than was otherwise proposed during scoping. Please refer to *Figure 1: DNR Alternatives Proposed During Scoping (J1 and J3 Combined Alternatives)* below.

    b. Route Alternative J1 closely follows existing road ROW to the greatest extent possible to limit vegetation clearing. Road ROW paralleling and sharing is one of the 14 factors the Commission considers under Minn. Rule 7850.4100 when selecting a final route and should be given equal priority in siting. In this section of the route, running parallel or sharing ROW with the existing line located within the Elk River corridor would have far greater natural resource impacts than sharing road ROW in a transportation corridor. DNR has also encountered ongoing issues with the stability of pole structures placed within the Elk River floodplain and along the banks.

    c. It is also not clear if the acreage totals presented in Appendix N and Section 7, incorporate the entire half-mile wide corridor when considering wetland crossings, which would be considerably greater than the final total number of crossing and impacts once a final route is identified through the corridor. By including the applicant's proposed route in the southern portion of the alternative rather than combining this alternative with J3 as proposed, the wetland, floodplain, river crossing, and tree removal impacts are far greater than what was proposed during scoping. **We strongly recommend considering Alternatives J1 and J3 as a combined alternative.**

d. The half-mile wide corridor width proposed for sections of Alternative J1 provide flexibility in siting the line to accommodate landowners as well as allow for flexibility in angles and other infrastructure considerations. While some portions of the half-mile wide corridor are needed to consider a route that avoids residences, we do not recommend routes within the corridor that cross streams outside of an existing bridge crossing. We also do not support placing the route in wooded areas that would require significant tree removal. Figure 1 below shows areas where a half-mile wide corridor was originally intended to create flexibility in siting and areas that DNR suggests would avoid impacts to stream crossings and wooded areas.

5. Page 37, Section 3.1.6.3, Route Alternative J2:

    a. Route Alternative J1 closely follows existing road ROW to the greatest extent possible to limit vegetation clearing. Road ROW sharing is one of the 14 factors the Commission considers under Minn. Rule 7850.4100 when selecting a final route and should be given equal priority in siting. In this section of the route, running parallel or sharing ROW with the existing line located within the Elk River corridor would have far greater natural resource impacts than sharing road ROW in a transportation corridor. DNR has also encountered ongoing issues with the stability of pole structures placed within the Elk River floodplain and along the banks.

    b. While some portions of the half-mile wide corridor are needed to consider a route that avoids residences, we do not recommend routes within the corridor that cross streams outside of an existing bridge crossing. We also do not support placing the route in wooded areas that would require significant tree removal. Figure 1 below shows areas where a half-mile wide corridor was originally intended to create flexibility in siting and areas that DNR suggests would avoid impacts to stream crossings and wooded areas.

6. Page 37, Section 3.1.6.4, Route Alternative J3:

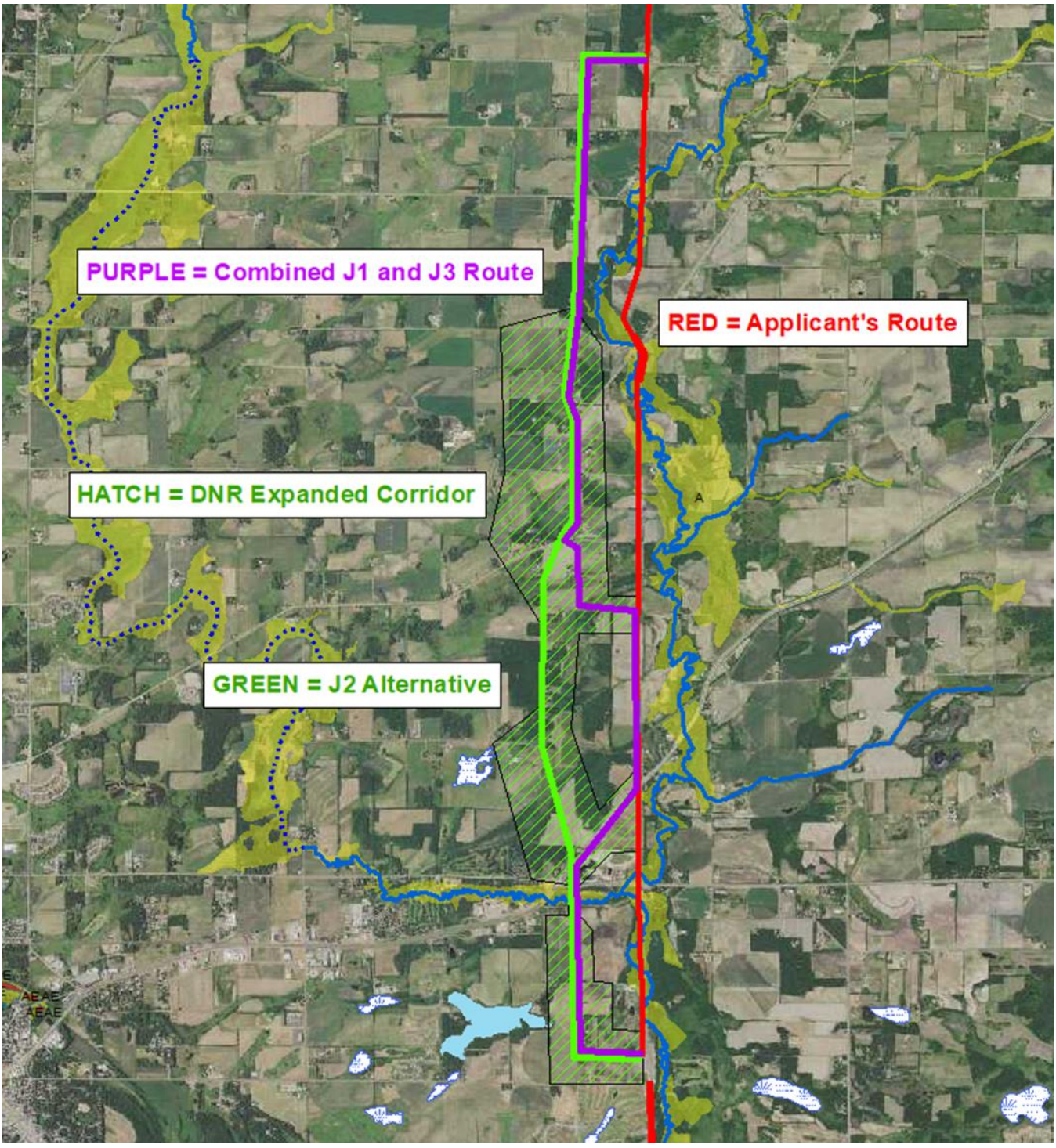
    a. DNR only proposed the small segment of Alternative J3 that works in conjunction with Alternative J1 as originally proposed by DNR. **We do not support the extension of Alternative J3 north of 35th Street NE (T36N, R30W, Section 11) along the applicant's proposed route.** By adding significant portions of the applicant's route along with this alternative, the analysis of alternatives is no longer accurate when comparing the number of stream crossings, wetland impacts, and tree clearings. We proposed this small section of route alternative to be used in conjunction with Alternative J1 to bypass the two most impactful sections of the applicant's proposed route through the Elk River corridor. Please see Figure 1 below. The inclusion of the applicant's proposed route north of 35th Street NE alters the analysis and comparison of this route alternative to show greater watercourse, wetlands, and tree canopy impacts than was otherwise proposed.

b. Route Alternative J3 closely follows existing ROW to the greatest extent possible to limit vegetation clearing. Road ROW sharing is one of the 14 factors the Commission considers under Minn. Rule 7850.4100 when selecting a final route and should be given equal priority in siting. In this section of the route, running parallel or sharing ROW with the existing line located within the Elk River corridor would have far greater natural resource impacts than sharing road ROW in a transportation corridor. DNR has also encountered ongoing issues with the stability of pole structures placed within the Elk River floodplain and along the banks.

c. It is also not clear if the acre totals presented in Appendix N and Section 7, use the entire half-mile wide corridor when considering wetland crossings, which would be considerably greater than the final total number of crossing and impacts once a final route is identified through the corridor. By including the applicant's proposed route in the northern portion of the alternative rather than combining this alternative with J1 as proposed, the wetland, floodplain, river crossing, and tree removal impacts are far greater than what was proposed during scoping. **We strongly recommend considering the J1 and J3 as a combined alternative.**

d. The half-mile wide corridor width proposed for sections of Alternative J3 provide flexibility in siting the line to accommodate landowners as well as allow for flexibility in angles and other infrastructure considerations. While some portions of the half-mile wide corridor are needed to consider a route that avoids residences, we do not recommend routes within the corridor that cross streams outside of an existing bridge crossing. We also do not support placing the route in wooded areas that would require significant tree removal. Figure 1 below shows areas where a half-mile wide corridor was originally intended to create flexibility in siting and areas that DNR would avoid impacting, such as stream crossings, and wooded areas.

Figure 1: DNR Alternatives Proposed During Scoping (J1 and J3 Combined Alternatives)



7. Page 53, Section 3.4.5 Restoration and Cleanup: The transmission line will cross high quality habitat within MBS Sites, Native Plant Communities (NPCs), state land, and areas containing threatened and endangered species. It will be important that restoration

efforts identify these sensitive areas and use appropriate native seed mixes to limit the introduction and establishment of invasive and non-native species. There may also be required avoidance measures, depending on the results of rare plant surveys. There may also be specific timing required for construction activities to achieve avoidance for state-listed species. Please note that all construction, restoration, and maintenance activities will be subject to required avoidance plans as indicated in the NH Review letter. These plans must be incorporated into relevant construction plans, SWPPP's, vegetation management plans, etc. to achieve compliance with MN Endangered Species laws.

8. Page 54, Section 3.5, Project Costs: Project surveys and coordination for state-listed species is not yet complete, but impacts are expected given the level and type of habitat disturbance proposed for the project. If a Takings Permit and mitigation is required, this will raise the project costs associated with the applicants proposed route and potentially the selected final route.

Section 4: Alternatives to the Proposed Project

9. Page 71, Section 4.8: The widespread use of the underground alternative would have many barriers, including cost. There may be line segments where the cost to natural resources, displacement of homes, or other factors, is high enough to warrant its consideration, such as in the Cuyuna or Long Lake areas. Given this information, it does not seem consistent to show this alternative to have a maximum impact on Table 4-2 (page 74).
10. Page 71, Section 4.8. The widespread use of infrastructure stacking and/or consolidation would have barriers such as cost. There are a couple of alternatives that were evaluated in the EA that incorporated this method, such as AA4, AA16, and E1. DNR is supportive of these alternatives and use of this method. There are additional routes that could use this method as an avoidance measure in select sensitive locations such as in Route Alternative B and C where there are potential impacts to Old Growth Forest, floodplains, or near lakes of high or outstanding biological significance.

Section 5: Affected Environment, Potential Impacts, and Mitigation Measures

11. Page 85, Section 5.3.3 Zoning and Land-Use Compatibility:
    a. This section does not address the zoning incompatibilities that would occur from extensive shoreland and floodplain impacts in Benton County, Aitkin, and Crow Wing County.
    b. The impacts in and around the Riverton/Cuyuna area is of special concern for all routes and alternatives that are presented. Shoreland, public waters, and floodplain impacts should be considered for the selected route and avoidance measures should be utilized to the greatest extent possible, in addition to mitigation.

c. Mining potential is present in this area, and there is a possibility that mineral resources may need to be accessed in the future. If this requires re-location of infrastructure the cost would be the responsibility of the company.

12. Page 115, Section 5.6.2 Climate Resilience: This section identifies increased flood risks as well as wildfire risks but does not discuss how the project would account for these factors. The applicant's proposed route does not minimize these risks by siting the route within a river corridor and by proposing to place the route in ecologically significant forested systems.

13. Section 5.10, Natural Environment: This section does not accurately reflect the extensive natural resource impacts of the proposed 180-mile transmission line and provides very little data to help reviewers understand the size and scope of the natural resource impacts or compare alternatives. This section should utilize the information from Appendix N, *Northland Reliability Project Analytical Data Summary,* and give an accurate representation of the number, type, and acres of wetlands, public waters, floodplains, MBS Sites, acres of tree removal, and many of the other resources impacts that are proposed for the project as is provided in Section 7. This section should be consistent with the type of data that is used in Section 7 to compare the applicant's prepared route with the two selected example route options. The data provided in Appendix N should be summarized when describing and comparing alternatives summarized within the document narrative. The EA does not quantify the impact or compare impacts between alternatives and is insufficient for the purpose of informing permitting and siting decisions for specific regions of the transmission line.

14. Section 5.11.1.3.1 – For informational purposes, the NHIS does track Canada lynx observations.

15. Section 5.11.1.3.2 – State Species:

    a. This section is incomplete and lacking detail about avoidance measures. Not impacting potential habitat for state-protected species would be a good avoidance measure, as the document says. Given the length of the project and variety of habitats the species in table 5-16 might occur in, it seems unlikely that all potential habitats can all be avoided. The NH Review letter called for surveys of potential habitat for state-protected plant species that would be impacted by the project and surveys if there was going to be disturbance near known records of state-protected species (listed in the letter). The project documentation should, at a minimum, address the NH Review letter dated June 30, 2023 (MCE #2023-00324) and the conditions in there. Note, NH Review letters are valid for one year so future steps in this project should submit a new NH Review request through Minnesota Conservation Explorer.

    b. The avoidance measures for Blanding's turtles are not sufficient to minimize the chance of potential take of this state-protected turtle. The NH Review letter (MCE # 2023-00324) calls for a project-specific avoidance plan, but this is not

mentioned in the project documentation. Avoidance plans should be submitted to the DNR at Reports.NHIS@state.mn.us for review and approval.

c. For loggerhead shrikes, bird diverters and general avoidance measures for avian species would be helpful. There is no mention of the species-specific avoidance measures from the NH Review letter, specifically, seasonal avoidance of tree and shrub clearance in Sherburne and Benton Counties. If seasonal avoidance of tree and shrub clearing is not feasible, the area will need to be surveyed for active loggerhead shrike nests prior to initiation of project activities in the area.

16. Page 130, Section 5.10.1.1.2 Public Water: Please note that a DNR Public Waters Work Permit is required to cross public water wetlands. For example, the applicant's proposed route crosses Hay Lake in Crow Wing County along one of the longest stretches of the lake possible, resulting in greater public water impacts than necessary, as there are lower impact options in other locations. In accordance with Minn. R. 6115.0210 our agency permit review process requires an alternative analysis that examines additional routes to minimize impacts to public water wetlands and permit the least impactful feasible alternative.

17. Page 131, Section 5.10.1.2.1 Floodplains, Potential Impacts and Mitigation Measures: This section misrepresents the floodplain impacts of the applicant's proposed route and fails to identify the extensive floodplain impacts as well as the potential risks to pole structures. Vegetation clearing, especially tree removal, within a floodplain can greatly destabilize the area and make it more prone to ongoing erosion and sediment issues and can also destabilize the riverbank further contributing to water quality issues. Once the soil within a floodplain and along the riverbank is destabilized, it can lead to pole stability issues and create long-term maintenance challenges. These issues have already occurred in pole structures located within the Elk River corridor, and DNR permitting and coordination has been required to address these ongoing challenges. Further impacting the floodplains and river corridor in this area by clearing an additional 120-150 feet of vegetation would be a significant impact and pose long-term risk to both the river and the transmission line infrastructure.

18. Page 138, Section 5.10.5 Wildlife: This section does not reference the information provided in the June 30, 2024 NH Review letter, or the information available regarding species list from Important Bird Areas, or state parks and forests. An avoidance plan has been required for this project and should be described in detail and incorporated into project plans and documents. Once a final route is selected, the temporary access roads and staging areas will also need to be submitted to MCE to be evaluated for potential impacts to rare features. Please consider that rare plant surveys and work restrictions could apply to these areas as well, and so it is in the applicant's best interest to coordinate with DNR as soon as the final route is identified. Please work with DNR on the placement of flight diverters once a final route is selected.

19. Page 140, Section 5.11 Rare and Unique Resources: This section does not reference the June 30, 2024 NH Review letter, nor does it describe the potential impacts to state-listed species that were identified by DNR. It does not reference the extensive

coordination that is required due to these potential impacts to rare features, including habitat and species surveys, avoidance plans, and potentially Takings Permits. Please see the attached NH Review letter.

20. Page 143, Section 5.11.1.3.1 Federal Species: It is unclear if the applicant has sufficiently coordinated with U.S. Fish and Wildlife Service (USFWS) given the extensive scope of the project and tree removal within natural areas. Given the extent of the impacts to habitat, surveys and even a takings permit could be required for the impacts to federally protected species. **We recommend that coordination with USFWS on the selected route be included as a permit condition.**
21. Page 147, Section 5.11.2.1, Sensitive Ecological Impacts, Potential Impacts and Mitigation Measures: This section state, "Potential project impacts to sensitive ecological resources are anticipated to be minimal, as these resources can often be avoided and/or spanned." This statement is not supported with any data. Permanent conversion by Clear-cutting trees and maintaining an open state in sensitive forests is a significant impact. The EA does not discuss or address the extensive impacts to sensitive ecological areas that are proposed by the project. The EA does not quantify the impact or compare impacts between alternatives and is insufficient for the purpose of informing permitting and siting decisions. The information that is presented in Appendix N that was used to complete Section 7 example alternatives should be the same criteria that is used to compare alternatives in specific regions.
22. Page 154, Section 5.15.8, Rare and Unique Natural Resources: In this and other related sections, the applicant states that impacts to rare and unique natural resources are expected to be minimal without providing any data to support this claim. The project proposes significant and extensive tree clearing as well as new ROW through sensitive ecological areas. The EA narrative does not accurately convey or characterize these permanent impacts.

Section 6: Impacts and Mitigation Measures by Region

23. Section 6, Impacts and Mitigation Measures by Region: This section does not use or summarize the information presented in Appendix N to accurately compare resource impacts for alternatives in specific regions. It would be useful to quantify the number of wetlands >1,000 feet where spanning is not possible. It would also be helpful to show all MBS Sites of High and Outstanding Biodiversity and NPCs with a ranking of S1-S3 to better understand the difference in impacts to rare features and sensitive ecological resources.

Iron Range Substation Region

24. Section 6.1.2: Route Alternatives A1 through A4 - Iron Range Substation Region
    a. Crossing state land as depicted in the applicant's proposed route is unnecessary since the company owns the adjacent property. All infrastructure should be contained within the applicant's property and not encroach upon, degrade, or

de-value public land. The applicant's proposed crossing of Swan River includes a wide expanse of floodplain and riparian habitat/oxbows and wetlands. The DNR recommends crossing options that can significantly reduce impacts to the ecological function in this area, reduce impacts to available habitat for many species, reduce potential impacts to water quality, and protect native mussels downstream.

b. **DNR prefers crossing A2.** Both A1 and A2 avoid crossing public land and utilize existing crossings of the Swan River. Additionally, alternatives A1 and A2 reduce the amount of riparian area to be permanently impacted for ROW clearing and maintenance. A1 and A2 then both follow roadways and head straight back west to the existing transmission line corridor and meet to continue along the applicants proposed route.

c. A3 and A4 both increase the amount of riparian area impacted and increase the amount of new ROW corridor, and maintain encroachment onto School Trust Fund Lands, and therefore are not preferred by DNR. We encourage the PUC to select either of the A1 or A2 alternatives.

Hill City to Little Pine Region

25. Page 188, Section 6.2.1.5.1 Hill City to Little Pine: There are three state-listed threatened plant species within 150-750 feet of centerline; two within the Route Width. Habitat for these species is likely within the Route Width. Surveys are required to verify the extent of the populations so avoidance measures can be developed or, if these are not feasible, a permit to take applied for.

26. Page 190, Section 6.2.2 Route B:

    a. Route B was originally proposed as an option by the applicant and was removed with no explanation in early coordination. **This route is preferred by DNR as compared to the applicants proposed route,** as it markedly reduces the amount of state land crossings by over 120 acres, Wildlife Management Area (WMA) crossings, High Conservation Value Forests (HCVF) by over 90 acres, and of MBS Sites by over 100 acres. There are a couple places along this route where the ROW is adjacent to candidate Old Growth forests. In these cases, it would be preferable to utilize alternative methods such as underground or infrastructure stacking and/or consolidation to reduce impacts to these communities.

    b. Even though Route B shows an increase in total wetlands forested wetlands, and forested landcover, these acres are adjacent to the existing ROW. In the most sensitive locations and across state lands, infrastructure stacking, consolidation, and/or underground methods would help to avoid impacts.

27. Page 203, Section 6.2.3 Route C - Mud Brook:

    a. Route C reduces the number of wetlands crossed within the ROW, as well as impacts to MBS Sites, NPCs, and reduces public waters crossings by half.

b. Additionally, there will be future large infrastructure needs in this floodplain area. DNR has concerns about the integrity of large structures being installed in floodplain ecosystems and is concerned with impacts to subsurface water flow, shallow aquifers, sensitive species and ecosystems.

c. The selection of Route C would have some ecological benefits, however there is also concern about creating a new corridor, which is not ideal for the landscape due to habitat fragmentation. This is a stretch where alternative avoidance measures could be explored such as infrastructure stacking or underground lines.

d. If Route B is not selected, then DNR supports the selection of Route C.

28. Page 216, Section 6.2.5 Alternative Alignment AA16: Double circuit alternative alignment in NE corner of hill city to Little Pine Region

    a. **DNR is supportive of efforts to consolidate infrastructure and reduce installing new or wider ROW corridors, including alternative AA16.** Alternative AA16 shows a significant decrease in forested land cover acreage from 151 acres to 70 acres. Additionally, a decrease in acreage of MBS Sites from 227 acres (proposed route) to 195 acres (alternative AA16). Other notable items include a reduction in NPCs, a reduction in the amount of affected state forest lands, and a slight decrease in affected homes.

Cole Lake-Riverton Region

29. Page 236, Section 6.3.1.5.1 Protected Species: There are Blanding's turtle records near the proposed project. The applicants note that mobile species may leave project impact areas. While that is possible, Blanding's turtles may also enter workspaces and even be drawn to areas such as bare dirt or sand/gravel piles created by the project, be entrapped by pits or trenches, or otherwise be harmed by project activities. As stated in the NH Review letter of June 30, 2023 (MCE #2023-00324), an avoidance plan should be created to minimize the likelihood of impacts to this state-protected species.

30. Page 238, Section 6.3.2: Route Alternative D3, Alignment Alternatives AA4 and AA6:

    a. **AA4 follows existing transmission lines and a preferred alternative from the perspective of DNR**. AA4 would have fewer impacts on forestry resources than other routing alternatives because AA4 follows an existing transmission line ROW that has been cleared and is already maintained in this condition.

    b. AA4 illustrates a reduction compared to the applicant's route in MBS Sites DNR managed forestlands, total wetlands, and state trust fund lands.

    c. Cost is shown to be much higher for AA4 however that's based on the need to consolidate infrastructure at this location. There could be additional ways to keep this general alignment and reduce costs.

    d. **DNR does not support alternative D3** as it impacts state forest lands, timber production, and forest habitat sustainability.

31. Page 248, Section 6.3.3 Alignment Alternative AA3 Cole lake-Riverton Region:

    a. AA3 Serves the same purpose of AA4 by staying on the existing transmission line corridor at the northern part of this alternative, but this alternative extends beyond the Cole Lake area and down to the newly proposed Cuyuna Substation, while consolidating infrastructure into a smaller footprint and limiting the new infrastructure to the existing ROW. The overall reduction in project footprint illustrated in AA3 reduces the amount of affected forestland cover, MBS Sites and shows a significant reduction to state managed forest and school trust fund lands.

    b. DNR supports alternative AA3 as it reduces the amount of ROW and consolidates lines through this area.

32. Page 255, Section 6.3.4 Route Alternatives E1 through E5 Cole Lake Riverton Region:

    a. E1 is the favorable route for DNR in the Cole Lake Riverton Region, as consolidating infrastructure and reducing the amount of new ROW is favorable to DNR.

        i. The E1 alternative reduces the number of wetlands impacted, forested wetlands, water crossings, and a significant decrease in overall forested landcover through this area. There is a reduction in MBS Sites and NPCs Spanning any high-quality habitats and lakes of high and outstanding biodiversity significance in this area would be preferred.

        ii. The applicant's route as reflected in their joint application crosses over Hay Lake, at one of the longest possible areas, and would require footings be placed in the lakebed in several locations. Since Hay Lake is a Public Water Wetland, it is not covered under a utility license, but instead a Public Waters Work permit. In accordance with Minn. R. 6115.0210 our agency permit review process requires an alternative analysis that examines additional routes to minimize impacts to public water wetlands and permit the least impactful feasible alternative. The applicant's route identified in the joint application does not appear to be the least impact alternative at this time. **DNR does not support the applicant's route through this area.**

        iii. We ask that PUC adopt this alternative (E1) through this area.

    b. E2 could be an acceptable option in conjunction with alignment AA8 along highway 59 on the east side of the road that runs adjacent to the Sagamore Unit of the Cuyuna Recreation Area.

    c. There is a slight increase to WMA crossings in this alternative, however those acres are located along an existing transmission line. It is better for wildlife habitat to reduce additional fragmentation of the landscape.

33. Page 270, Section 6.3.5 Route Alternative F - Cole Lake-Riverton Region:

a. Route segment F creates new corridor unnecessarily. DNR prefers to follow existing infrastructure. This alternative increases the amount of wetland impacts by nearly 20 acres. Additionally, it would negatively impact a greater amount of MBS Sites from 7 to 13, increases NPCs from 5 to 13. DNR prefers applicants' route in this area, rather than Alternative Route F.

34. Page 283, Section 6.3.7 Alignment Alternative AA7 - Cole Lake Riverton Region:

    a. **DNR supports the use of alternative AA7** which is similar in impacts to the applicant's proposed route but places the route onto the company's own property and off DNR lands. Crossing state land as depicted in the applicant's proposed route is unnecessary since the company owns the adjacent property. All infrastructure should be contained within the applicant's property and not encroach upon, degrade, or de-value public land.

35. Page 289, Section 6.3.8 Alignment Alternatives AA8 (DNR) and AA9 (Applicant):

    a. AA8 follows County Highway 59 along the east side of the Sagamore Unit of the Cuyuna Recreation Area. AA8 is outside of the unit on the east side of the highway; while AA9 runs along the west side of highway 59 and within the recreation area.

    b. **DNR Supports E1 which would make these alternatives (AA8 and AA9) unnecessary**, as that alternative (E1) crosses this area on the west side of the Sagamore Unit of the Cuyuna Recreation Area. However, if route alternative E2 is selected**, DNR prefers the selection of AA8** to pass by outside of the Cuyuna Recreation Area. DNR has invested significant time and money to improve infrastructure and add additional recreational opportunities for our diverse user groups in the Cuyuna Recreation area, and installation of the transmission line across this area would greatly impact visitor experiences.

    d. The applicant's route as reflected in their joint application crosses over Hay Lake, at one of the longest possible areas, and would require footings be placed in the lakebed in several locations. Since Hay Lake is a Public Water Wetland, it is not covered under a utility license, but instead a Public Waters Work permit. In accordance with Minn. R. 6115.0210 our agency permit review process requires an alternative analysis that examines additional routes to minimize impacts to public water wetlands and permit the least impactful feasible alternative. The applicant's route identified in the joint application does not appear to be the least impact alternative at this time.

    e. The proposed ROW crosses the Carlson-Nelson Fine Tailings Basin on the Cuyuna Range. This basin may be valuable personal property and owned by many undivided interests. Please see Figure 2 and Figure 3 below that show the applicant's proposed ROW through the Cuyuna area. The map shows the proposed route, mapped mineral resources, and existing high-voltage transmission lines, and indicates where the proposed route would leverage an existing corridor or create a new mineral resource encumbrance. DNR prefers to

concentrate expansion efforts by focusing on existing mineral resource encumbrance and not create a new one.

Figure 2: Overview of Proposed ROW Encumbrance to Mineral Resources

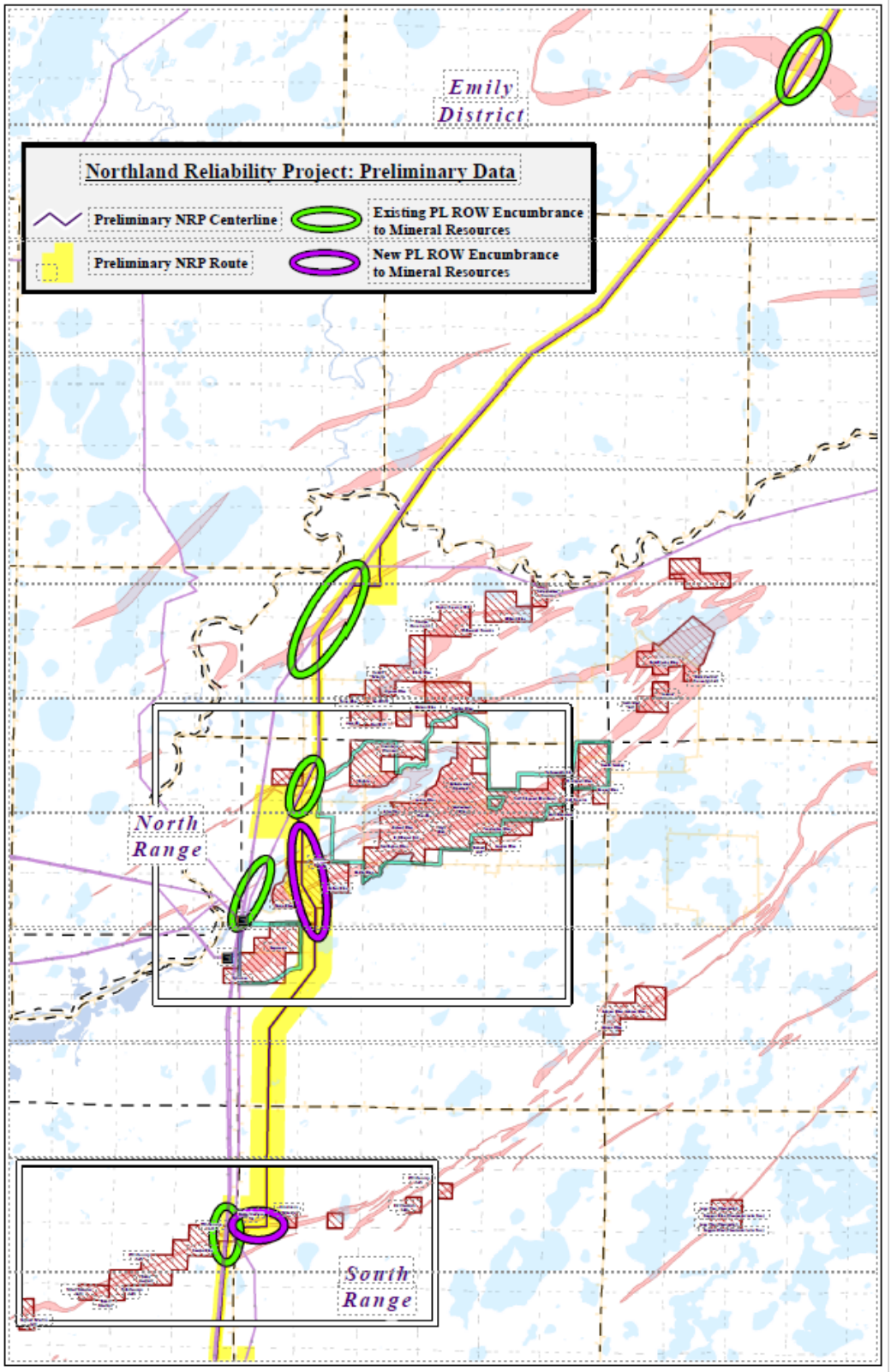
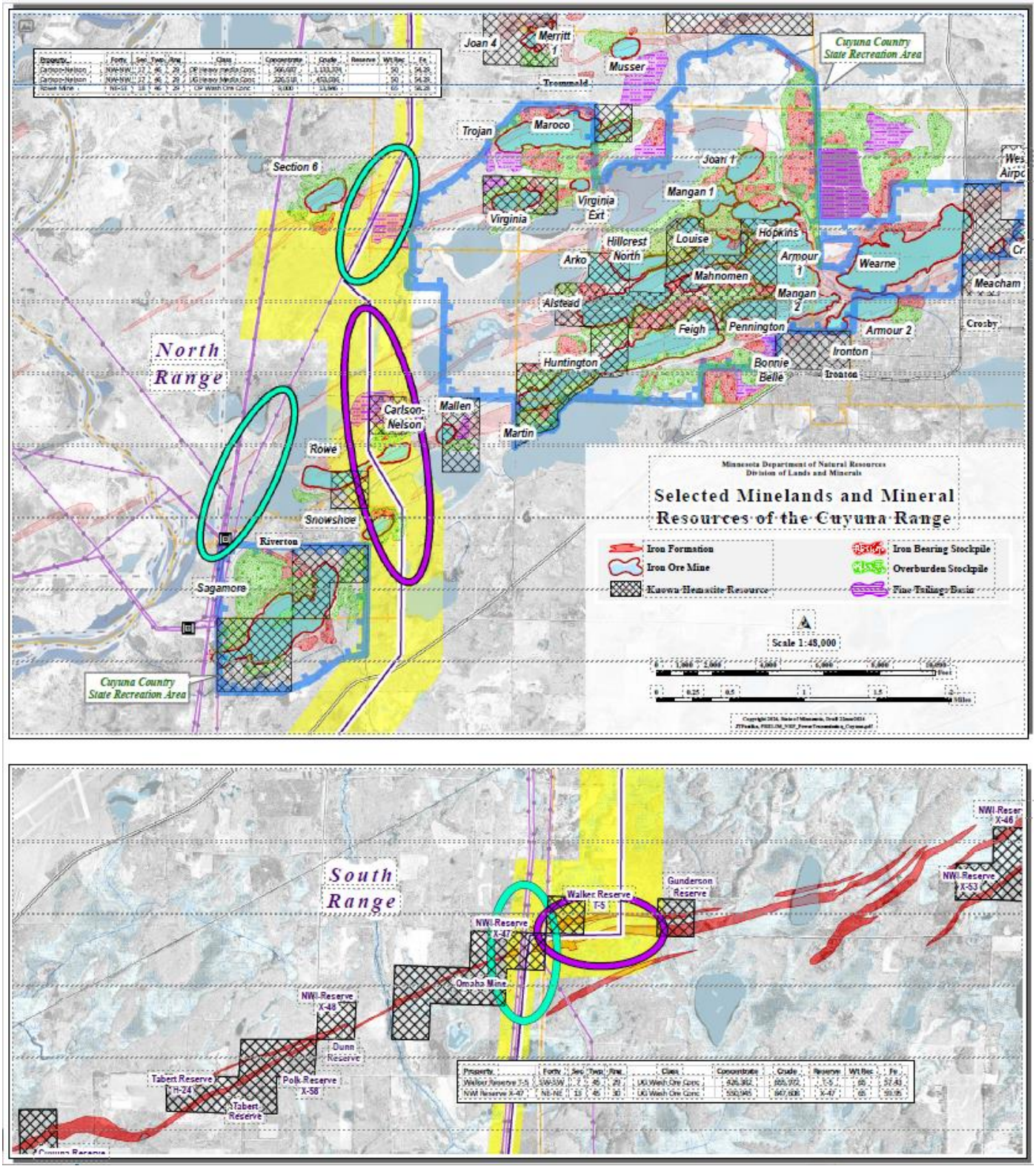


Figure 3: Detailed View of Proposed ROW Encumbrance to Mineral Resources



Long Lake Region

36. Page 301, Section 6.4 Long Lake Region:
    a. **DNR prefers route K overall in this region, however alternatives H1 or H2, or a hybrid could be acceptable also.** Avoiding state managed forest land in this area appears to be achievable while avoiding wetland impacts, and large areas of MBS Sites that are present in the applicants' route. Some residential impacts could be mitigated by utilizing a mixture of alternatives at the northern end of the long lake section (where the applicant's route, H1, and H2 begin). Merging the lines back to the main artery of infrastructure as soon as possible after passing the lakes in the Long Lake section is favorable to reduce creation of a new corridor.
    b. **DNR does not support any of the other alternatives or alternative alignments presented in this area, or the applicants route.**
37. Page 325, Section 6.4.3 Route Alternative K – Long Lake Region:
    a. **Route K would be the most favorable route in this area**, as it follows existing infrastructure across the entirety of the alternative. However, the amount of wetland impacts is significantly lower along route K. The amount of forested area disturbance with this alternative would be markedly lower than the applicant's route in addition to many MBS Sites. This alternative also avoids all School trust Fund Lands. There could be options such as infrastructure stacking, or underground options that could help mitigate issues with spacing in the narrow corridor between the lakes.

Morrison County Region

38. Page 359, Section 6.5.1.5.1 Protected Species: There are Blanding's turtle records near the proposed project. The applicants note that mobile species may leave project impact areas. While that is possible, Blanding's turtles may also enter workspaces and even be drawn to areas such as bare dirt or sand/gravel piles created by the project, be entrapped by pits or trenches, or otherwise be harmed by project activities. As stated in the NH Review letter of June 30, 2023 (MCE #2023-00324), an avoidance plan should be created to minimize the likelihood of impacts to this state-protected species.

Benton County Elk River Region

39. Page 360, Section 6.6 Benton County: The evaluation of Alternative J1 and Alternative J3 as compared to the applicant's proposed route reflect significantly greater natural resource impacts than what was proposed by DNR during scoping. **We recommend that Alternatives J1 and J3 be considered as a combined route** as depicted in Figure 1 above. If this is not feasible, then **DNR considers Alternative J2 to be the only acceptable route through the Benton County Elk River region.**
40. Page 364, 6.6.1.4.1 Water Resources (Benton County): This section states that impacts to floodplains are expected to be minimal, however the applicant's route is proposing to

locate the route within approximately 40 acres of floodplain requiring extensive tree clearing in the floodplain and along the banks of the Elk River.

41. Page 365, Section 6.6.1.4.1.1 Watercourses and Waterbodies (Benton County): This section states that the applicant's proposed route would cross one NHD waterbody, however it does not specify that the route would cross the Elk River a total of 26 times, including 6 times within a quarter-mile. The tree removal along this corridor would be a significant impact to the river, and surrounding wetlands and floodplain as well as wildlife in this predominantly agricultural area where river corridors are important habitat. Clear-cutting trees from this river corridor has the potential to destabilize the river corridor and create long-term issues with erosion, sedimentation, and infrastructure stability and maintenance. The ROW expansion proposed by the applicant through Benton County will require at least 120 additional feet of tree clearing along 40 miles of a significant riparian corridor. Even though the applicant's proposed route is following an existing route, clearing so much additional vegetation even closer to the river than the existing route would result in greater natural resource impacts than other potential greenfield routes through the county that avoid the river corridor. The applicant's proposed route closely follows the Elk River, crossing over it as many as six times in less than a quarter of a mile in one section. This route would clear an approximate 40 acres of trees in shoreland or floodplains within Benton County. In a region dominated by agriculture, this riparian corridor is essential for water quality, wildlife habitat, erosion control, and flood control.
42. Page 366, Table 6-132 Land Cover Types in the 150-foot ROW of the Applicant's Proposed Route in the Benton County Elk River Region: This table would be more helpful to decision makers if it included the amount of floodplain within the ROW, and the acres of ROW that are located within shoreland. Tree removal within floodplains and shoreland is subject to greater local regulation and poses a more significant impact to natural resources.
43. Page 366, Section 6.6.1.4.3 Wildlife: This section states that paralleling an existing line, the applicant's proposed route would minimize new impacts associated with habitat fragmentation. This statement is not accurate. The Elk River corridor provides some of the only significant wildlife habitat in an area dominated by agriculture, urbanization, and development. The applicant's proposed route would significantly impact wildlife habitat by locating the route extensively within shoreland and further removing the tree canopy.
44. Page 367, Section 6.6.1.5.1 Protected Species: There are Blanding's turtle records near the proposed project. The applicants note that mobile species may leave project impact areas. While that is possible, Blanding's turtles may also enter workspaces and even be drawn to areas such as bare dirt or sand/gravel piles created by the project, be entrapped by pits or trenches, or otherwise be harmed by project activities. As stated in the NH Review letter of June 30, 2023 (MCE #2023-00324), an avoidance plan should be created to minimize the likelihood of impacts to this state-protected species. There are also state-protected plant species documented near the proposed project line. These

species may be present in suitable habitat that is impacted by the project. To avoid taking state-protected species, surveys should be done in any potential habitat impacted by project activities. See the NH Review letter of June 30, 2023 (MCE #2024-00324) for details on survey requirements.

45. Page 368, Section 6.6.2 Route Alternatives J1 through J3: This section remarks that the alternatives proposed do not share ROW with or parallel existing lines but does not describe the extent to which the proposed alternatives follow or share road ROW, field lines, and section lines, which are also considered and preferred in route siting. Table 6-136 shows that Alternative J3 shares more ROW (99%) than the applicant's proposed route.

46. Page 369, Table 6-134 Human and Environmental Impacts; Table 6-135 Proximity of Residences:

    a. The proposed J1 through J3 alternatives have a half-mile wide corridor in some areas to allow for finding the best ways to reduce impacts to residences. It is unclear from the tables if a 150-foot ROW was used as a representative for Alternatives J1 through J3? If so, it is difficult to accurately compare these alternatives without knowing what 150-foot corridor was selected to represent each alternative. Also, the number of residents listed within the vicinity of the ROW, and the acres of impacts for each resource are not accurate based on the half-mile corridor width, and the flexibility it provides in selecting a route to reduce impacts.

    b. These tables use, "75 feet – 250 feet, "proximity to residences as a category for comparing alternatives, but later in Section 6.6.2.1.2, the EA states that Alternatives J1 and J2 do not have any permanent residences, churches, childcare centers, or schools located within the 150-foot ROW that would be displaced. Once again, the corridor in these areas in a half-mile wide to allow for sufficient negotiation with landowners and avoidance of residences. It would be helpful if this information was presented consistently throughout the EA using the information provided in Appendix N and presented in Section 7 to compare alternatives within regions.

    c. The applicant's route should also reflect the additional maintenance and repair that could be necessary if pole structures are located within the floodplain. The existing transmission line has encountered destabilization after pole structures were built directly in the floodway/floodplain, on the bank, or in the water of the Elk River. Erosion and meandering occurred around the structures. Placing pole structures in wetlands and floodplain areas creates challenges for building stable foundations that would have to be managed for the entire life of the project. Avoiding these areas is beneficial for wildlife, the water resource, and the applicant.

47. Page 375, Section 6.6.2.4 Natural Environment: Please note that the analysis of impacts for Alternatives J1 and J3 do not reflect what DNR proposed during scoping. Many of the

potential benefits are minimized due to the combining of these alternatives with the applicant's proposed route. We suggest that the alternatives be re-evaluated as proposed by DNR with the combining of J1 and J3 as depicted on Figure 1 above. Overall, the J1 and J3 Combined Alternative and the J2 Alternative avoid the most significant impacts to the Elk River Corridor, and associated wetlands, floodplains, wildlife habitat, tree removal, and the river itself. Both Alternatives follow road ROW and field lines to the greatest extent possible. **We strongly advise choosing either the J1 and J3 Combined Alternative or the J2 Alternative depending on which alternative allows for the least impact to local residences.**

Section 7: Relative Merits of the Project as a Whole

48. Page 388, Section 7 Relative Merits of the Project as a Whole: The DNR believes that factors E. and F. listed in Minn. Rule 7850.4100 as part of the 14 factors for the Commission to consider in its route permitting decisions have not been adequately considered during the development of the route or described within the EA. The project has the potential for significant natural resource impacts to high quality natural areas and rare features.
49. Section 7.1 Applicant's Proposed Routes and Example Full Route Options: Using the J1 Alternative in the Example Route 2 does not consider the other alternatives that were proposed to avoid significant impacts to the Elk River corridor, which did not include large sections of the applicant's route as proposed during scoping.
50. Page 397, Table 7-2 Human and Environmental Impacts for the Applicant's Proposed Route and Example Full Route Options:
    a. Table 7-2 includes a breakdown of water resources that is helpful to compare alternatives. The resources listed in the table should be used consistently throughout the EA to compare all alternatives in specific regions.
    b. This table does not accurately address potential impacts to state-listed species. Table7-2 only identifies the number of species identified within the corridor but should consider the entire project area. This is not in line with DNR NH practices and training. This criterion is not applied consistently throughout the EA making it difficult to analyze the differences between routes. DNR must determine what is an impact to a state-listed species. The alternatives must be submitted to Minnesota Conservation Explorer for coordination on the need for surveys, avoidance plans, or a Takings Permit. This information is not available and so this part of the analysis is not complete.
51. Page 400, Table 7-4 and Figure 7-2 ROW Paralleling and Sharing of Applicants' Proposed Routes and Example Full Route Options: Throughout the EA, the applicants states that they are minimizing natural resource impacts through paralleling and sharing of ROW. Figure 7-2 and Table 7-4 show that the Example 1 and Example 2 routes are shorter and utilize more existing ROW paralleling and sharing than the applicant's proposed routes, therefore, this argument is not sufficient to justify extensive natural resource impacts.

52. Page 410, Table 7-10 Relative Merits of Applicants' Proposed Routes and Example Full Route Options: Table 7-10 does not accurately depict the size and scale of the natural resource impacts of the project or compare them across alternatives.

Summary of DNR Preferred Alternatives

Table 1: DNR Preferred Alternatives

Region	DNR Preferred Alternative	Second Choice	DNR Opposed to Alternative
Iron Range Substation	**Alternative A2** *Reduces Riparian area impacts, reduces fragmentation, and uses existing roads and river crossings	**Alternative A1** * Reduces Riparian area impacts- uses existing roads and river crossings	**We do not support the applicant's proposed route** *Extensive Riparian encroachment and wetland impacts
Hill City to Little Pine	**Alternative B and Alternative AA16, or Alternative C** *Reduces impacts to state land, sensitive features and wetlands; consolidates ROW and infrastructure needs		**We do not support the applicant's proposed route without modifications** **D3 and AA1** *Wetland impacts, forest health concerns, public land impacts
Cole Lake-Riverton	**Alternative AA4 in combination w/ Alternative E1** *These options follow existing corridor and then consolidate/stack infrastructure	**Alternatives AA3, AA7 to E2 and Alternatives AA8 to E2** *These corridors should be run along the **east** side of Highway 59 and not within the Cuyuna recreation area avoiding the	**We do not support the applicant's proposed route** *The impacts to Hay Lake are substantial and unnecessary

		unnecessarily long crossing of Hay Lake	
Long Lake	**Alternative K** *Reduces impacts to wetlands, forested habitat, sensitive features, school trust and state land	**Alternatives H1 or H2, AA14** *Reduces impacts to residences and state land	**We do not support the applicant proposed route or the use of Alternatives H3, H4, H5, H6, AA12, or AA13**
Benton County Elk River	**Alternative J2 or Combined J1 and J3 Alternative as proposed in Figure 1 (above)** *Avoids the Elk River corridor and floodplain		**We do not support the applicant's route or the use of Alternatives J1 or J3 as proposed in the EA.** *These routes propose significant impacts to the Elk River corridor

DNR Permit Condition Requests

Natural Heritage Review: Minnesota Conservation Explorer (MCE)

The NH Review letter (attached) is based on the applicant's proposed route. The final route may need to be re-evaluated and any route changes would require an updated NH Review via MCE to identify rare resources and mitigate potential impacts. The applicant should also submit plans for temporary access roads and staging areas. We request that required avoidance measures, plans, surveys, habitat assessments and/or DNR Takings Permit be listed as a permit requirement.

Coordination with the USFWS

We recommend that coordination with USFWS regarding avoidance and permitting of federally protected species on the selected route be included as a permit condition.

Facility Lighting

The DNR advises that LED lighting is often high in blue light, which is harmful to birds, insects, and other animals. Potential project impacts related to illuminated facilities can be avoided or minimized by using shielded and downward facing lighting and lighting that minimizes blue light.

Dust Control

Our agency recommends avoiding products containing calcium chloride or magnesium chloride, which are often used for dust control. Chloride products that are released into the environment do not break down, and instead accumulate to levels that are toxic to plants and wildlife.

Wildlife-Friendly Erosion Control

Due to entanglement issues with small animals, the DNR recommends that erosion control blankets be limited to “bio-netting” or “natural netting” types, and specifically not products containing plastic mesh netting or other plastic components. Hydro-mulch products may contain small synthetic (plastic) fibers to aid in its matrix strength. These loose fibers could potentially re-suspend and make their way into waterways.

The DNR appreciates the opportunity to comment on the Northland Reliability Project. If you have questions about our agency’s comments, please contact Kate Fairman at Kate.Fairman@state.mn.us.

Sincerely,

Melissa Kuskie

Digitally signed by Melissa Kuskie
Date: 2024.08.05 12:49:11 -05'00'

Melissa Kuskie

Attachments: Natural Heritage Review Letter (June 30, 2023)

EC: Craig Janezich, Minnesota Public Utilities Commission
Shelly Patten, DNR NE Region Director
Grant Wilson, DNR Central Region Director
Melissa Collins, DNR Regional Environmental Assessment Ecologist
Jessica Parson, DNR Regional Environmental Assessment Ecologist

Equal Opportunity Employer

Minnesota Department of Natural Resources
Division of Ecological & Water Resources
500 Lafayette Road, Box 25
St. Paul, MN 55155-4025

June 30, 2023
Correspondence # MCE 2023-00324

Katie Lueth
HDR Engineering

RE: Natural Heritage Review of the proposed Northland Reliability Project,
Aitkin, Benton, Crow Wing, Itasca, Morrison, and Sherburne Counties

Dear Katie Lueth,

As requested, the Minnesota Natural Heritage Information System has been reviewed to determine if the proposed project has the potential to impact any rare species or other significant natural features. Based on the project details provided with the request, the following rare features may be impacted by the proposed project:

Ecologically Significant Areas

- The proposed project passes through many sites identified by the Minnesota Biological Survey (MBS) as Sites of Biodiversity Significance, including much of the northern half of the project area. Several Sites along the proposed route are ranked *Outstanding* or *High*. Sites of Biodiversity Significance have varying levels of native biodiversity and are ranked based on the relative significance of this biodiversity at a statewide level. Factors taken into account during the ranking process include the number of rare species documented within the site, the quality of the native plant communities in the site, the size of the site, and the context of the site within the landscape. The project boundary includes or is adjacent to 38 mapped native plant communities (nearly all are within MBS Sites) , including 12 native plant community classes/types that are or may be rare (Conservation Status Rank of S1 through S3; some native plant communities may need to be further classified to determine rarity):
    - FPn73a: Alder – (Red Currant – Meadow-Rue) Swamp, S3 - Vulnerable to Extirpation,
    - FDc34: Central Dry-Mesic Pine-Hardwood Forest, S2 or S3 – Imperiled or Vulnerable to Extirpation,
    - Ups14a: Dry Barrens Oak Savanna (Southern), S1 or S1S2 – Critically Imperiled or Critically Imperiled/Imperiled
    - Ups14b: Dry Sand – Gravel Oak Savanna (Southern), S1S2 - Critically Imperiled/Imperiled,

- FPn63: Northern Cedar Swamp, S3 or S4 - Vulnerable to Extirpation or Apparently Secure,
- MRn83: Northern Mixed Cattail Marsh, S2 - Imperiled,
- MHn47: Northern Rich Mesic Hardwood Forest, S3 - Vulnerable to Extirpation,
- MHn44: Northern Wet-Mesic Boreal Hardwood-Conifer Forest, S2 or S3 or not rare - Imperiled or Vulnerable to Extirpation or not rare,
- WFn53: Northern Wet Cedar Forest, S3 or S4 - Vulnerable to Extirpation or Apparently Secure,
- FDc34a: Red Pine – White Pine Forest, S2 - Imperiled,
- FDs37: Southern Dry-Mesic Oak (Maple) Woodland, S3 or S4 - Vulnerable to Extirpation or Apparently Secure,
- FPs63a: Tamarack Swamp (Southern), S2S3 - Imperiled/Vulnerable to Extirpation.

There is an area that is a candidate for Old Growth designation by the DNR that overlaps the proposed project in T52N R26W Section 31 in Hill River State Forest. Old-growth forests are natural forests that have developed over a long period of time, generally at least 120 years, without experiencing severe, stand-replacing disturbances such as fires, windstorms, or logging. Old-growth forests are a unique, nearly vanished piece of Minnesota's history and ecology; less than 4% of Minnesota's old-growth forests remain.

To protect these ecologically significant areas, we recommend that native plant communities ranked S1-S3, MBS Sites ranked *Outstanding* or *High*, and the candidate for Old Grow designation be treated as avoidance areas and disturbance in or near all Sites be minimized. Actions to minimize disturbance may include, but are not limited to, the following recommendations:

- Confine construction activities to the existing, maintained rights-of-way,
- As much as possible, operate within already-disturbed areas,
- Retain a buffer between proposed activities and the MBS Site,
- Minimize vehicular disturbance in the area (allow only vehicles necessary for the proposed work),
- Do not park equipment or stockpile supplies in the area,
- Do not place spoil within MBS Sites or other sensitive areas,
- Inspect and clean all equipment prior to bringing it to the site to prevent the introduction and spread of invasive species,
- If possible, conduct the work under frozen ground conditions,
- Use effective erosion prevention and sediment control measures,
- Revegetate disturbed soil with native species suitable to the local habitat as soon after construction as possible, and
- Use only weed-free mulches, topsoils, and seed mixes. Of particular concern is birdsfoot trefoil (*Lotus corniculatus*) and crown vetch (*Coronilla varia*), two invasive species that are

sold commercially and are problematic in prairies and disturbed open areas, such as roadsides.

When working in wetlands, additional recommendations include

- Work in watercourses should be conducted during low flow whenever possible,
- Wetland basins, lake beds, and stream/riverbeds should be restored to preconstruction contours. The work should not promote wetland drainage,
- Appropriate erosion control measures, such as fabric, straw bales, mulch, and silt fences should be used to prevent sedimentation of adjacent wetlands, lakes, or watercourses.

MBS Sites of Biodiversity Significance and DNR Native Plant Communities can be viewed using the Minnesota Conservation Explorer or their GIS shapefiles can be downloaded from the MN Geospatial Commons. Please contact the NH Review Team if you need assistance accessing the data. Reference the MBS Site Biodiversity Significance and Native Plant Community websites for information on interpreting the data.

- If the Wetland Conservation Act (WCA) is applicable to this project, please note that wetlands with a Conservation Status Rank of S1-S3 (listed above) or wetlands within *High* or *Outstanding* MBS Sites of Biodiversity Significance may qualify as "rare natural communities" under this Act. Minnesota Rules, part 8420.0515, subpart 3 states that a wetland replacement plan for activities that modify a rare natural community must be denied if the local government unit determines the proposed activities will permanently adversely affect the natural community. If the proposed project includes a wetland replacement plan under WCA, please contact your DNR Regional Ecologist for further evaluation. For technical guidance on Rare Natural Communities, please visit WCA Program Guidance and Information.

- Several Lakes of Biological Significance may be impacted by the proposed project. Lakes of Biological Significance are high quality lakes based on the aquatic plant, fish, bird, or amphibian communities present within the lake. To be included in this layer, a lake only needs to meet the criteria for one of these four community types. The lake is assigned a biological significance of *Outstanding*, *High*, or *Moderate* based on the community with the highest quality. These are, with their ranks,

  - Split Hand Lake (Itasca County) – *Outstanding*,
  - Little Rabbit (Crow Wing County) – *Moderate*,
  - Mud Lake (Crow Wing County) – *Outstanding*,
  - Upper South Long (Crow Wing County) – *Outstanding*.

  Given the ecological significance of these lakes, disturbance should be minimized during construction, operation, and maintenance activities. Actions to avoid or minimize disturbance include, but are not limited to, the following recommendations:

- Avoid lakebed disturbance / span waterbodies,
- Avoid the removal of shoreline vegetation,
- Implement stringent/redundant erosion prevention and sediment control practices,
- Prevent the spread of invasive species,
- Use only herbicides approved for application within shoreline/riparian areas,
- Minimize use of fertilizer.

State-listed Species

- Many state-listed threatened and endangered plant species have been found near the proposed project boundary and this project may impact potential habitat. Minnesota's Endangered Species Statute (*Minnesota Statutes*, section 84.0895) and associated Rules (*Minnesota Rules*, part 6212.1800 to 6212.2300 and 6134) prohibit the take of threatened or endangered species without a permit. In order to demonstrate avoidance of state-protected species, **a qualified surveyor needs to conduct a habitat assessment within the proposed project boundary for each of the species listed below.** The goal of this habitat assessment is to identify potential locations where threatened and endangered species may occur to help formulate an avoidance plan. If avoidance of habitat is not feasible, botanical surveys will be needed.

  - Seaside three-awn (*Aristida tuberculosa*) – Threatened
  - Narrow triangle moonwort (*Botrychium angustisegmentum*) – Threatened
  - Upswept moonwort (*Botrychium ascendens*) – Endangered
  - Slender moonwort (*Botrychium campestre* var. *lineare*) – Endangered
  - Spatulate moonwort (*Botrychium spathulatum*) – Endangered
  - Cuckoo flower (*Cardamine pratensis*) – Threatened
  - Beach heather (*Hudsonia tomentosa*) – Threatened
  - Butternut (*Juglans cinerea*) – Endangered
  - Tubercled rein orchid (*Platanthera flava* var. *herbiola*) – Threatened
  - Bog bluegrass (*Poa paludigena*) – Threatened
  - Blunt-lobed grapefern (*Sceptridium oneidense*) – Threatened
  - Purple-flowered bladderwort (*Utricularia purpurea*) – Endangered

  In addition to potential habitat, there are known occurrences of rare plant species in the proposed project boundary. **Known occurences of state-listed threatened or endangered plants must be resurveyed to determine current extent within the project boundary and within any potential alternative disturbance areas. If avoidance of state-protected species is not feasible, the project proposer will need to apply for a permit to take.** Species of special concern are also rare and an important component of Minnesota's natural heritage; we strongly encourage project alternatives that avoid or minimize impacts to known occurrences of these species as well. Known occurrences of rare species, organized by state-listing and listed with approximate locations, are

- *Threatened*
  - Cuckoo flower (*Cardamine pratensis*) – T52N R25W Section 10,
  - Bog bluegrass (*Poa paludigena*) – T51N R26W Section 31

- *Species of special concern*

  - Barren strawberry (*Waldstenia fragarioides*) – T55N R23W Section 19. This small plant grows in a variety of upland northern forests in Minnesota. It is found most often where there are small openings or relatively open tree canopies in a forested setting. This species tolerates some disturbance but significant change from things like clearcutting, road building, development, and aggressive invasive species are threats.

- Blanding's turtles (*Emydoidea blandingii*), a state-listed threatened species, have been documented in the vicinity of the proposed project in Sherburne, Benton, Crow Wing, and Morrison Counties. Blanding's turtles use upland areas up to and over a mile distant from wetlands, waterbodies, and watercourses. Uplands are used for nesting, basking, periods of dormancy, and traveling between wetlands. Factors believed to contribute to the decline of this species include collisions with vehicles, wetland drainage and degradation, and the development of upland habitat. Any added mortality can be detrimental to populations of Blanding's turtles, as these turtles have a low reproduction rate that depends upon a high survival rate to maintain population levels.

  This project has the potential to impact this rare turtle through direct fatalities and habitat disturbance/destruction due to excavation, fill, and other construction activities associated with the project. **Given the project details and the potential for a take of a Blanding's turtle, an avoidance plan is required.**

  We do not have a template for avoidance plans. The plan needs to:
  - Provide a description of the project activities and construction methods,
  - Identify measures that will be taken to avoid take and minimize disturbance to the species, and
  - Include a map of disturbance areas.

  Measures to avoid or minimize disturbance include, but are not limited to, the following:
  - Avoidance of suitable habitat,
  - Timing the impacts to avoid incidental take,
  - The recommendations listed in the Blanding's turtle fact sheet,
  - Training for construction crew.

  Please submit the completed avoidance plan to the NH Review Team (Reports.NHIS@state.mn.us).

- The loggerhead shrike (*Lanius ludovicianus*), a state-listed endangered bird, has been documented in the vicinity of the project site in Sherburne and Benton Counties. Loggerhead shrikes use grasslands that contain short grass and scattered perching sites such as hedgerows, shrubs, or small trees. They can be found in native prairie, pastures, shelterbelts, old fields or orchards, cemeteries, grassy roadsides, and farmyards. **Given the potential for this species to be found in the vicinity of the project, tree and shrub removal is required to be avoided during the breeding season, April through July, in Sherburne and Benton Counties.** If you cannot avoid tree removal during loggerhead shrike breeding period, a qualified surveyor needs to conduct a survey for active nests before any trees or shrubs will be removed.

- Several state-listed animals of special concern (refer to HDR's License Agreement 2022-034) have been documented in the vicinity and may be impacted by the proposed project if suitable habitat exists within the project boundary. In particular, the following known occurrences of state-listed species of special concern have been documented within the project boundary:

    - Red-shouldered hawk (*Buteo lineatus*) – T52N R25W Section 21. This species requires large, contiguous forest tracts interspersed with wetlands. We recommend, to the extent possible, the retention of forest cover to help maintain habitat connectivity to other forest tracts in the area. Check any trees scheduled to be removed from April through July for active nests. If feasible, disturbance near active nests should be avoided during the critical nesting time, April and May. Please contact the Regional Nongame Specialist if any nests are discovered.

    - Least darter (*Etheostoma microperca*) – Little Blackhoof Lake, T46N R29W Section 17. This species prefers clear, low velocity lakes and streams with an abundance of submerged vegetation such as eelgrass, Canadian elodea, pondweed, and muskgrass. As this species is intolerant of environmental degradation, especially turbidity and siltation, it is important that effective erosion and sediment control practices be implemented and maintained for the duration of the project.

    - Four-toed salamander (*Hemidactylium scutatum*) – T52N R25W Sections 15-16. Four-toed salamanders are typically found in small, isolated colonies. Adults generally inhabit mature hardwood forests associated with wetland depressions or small streams. They find shelter in the forest floor under leaf litter, woody debris, rocks, and moss. Females lay eggs in sphagnum moss hummocks, in shallow wetlands, or stream-side pools where hatchlings move into the water after emerging from the egg. The greatest threat to four-toed salamanders is loss and degradation of upland forest habitat and the loss of wetlands, which are used as nesting sites. Please see the "Forest Management Guidelines for the Protection of Four-toed and Spotted Salamander Populations" for recommendations to minimize adverse impacts to these rare species. Although these

guidelines were written for DNR Forestry staff, we strongly encourage you to consider adopting relevant measures for this project.

- Creek heelsplitter (*Lasmigona compressa*) – Elk River in T36N R30W Section 23, and T37N R30W Sections 26, 35, and Sand Creek, T55N R23W Section 32. Mussels are particularly vulnerable to deterioration in water quality, especially increased siltation. As such, it is important effective erosion prevention and sediment control practices be implemented and maintained throughout the duration of the project.

- A jumping spider (*Pelegrina arizonensis*) – T34N R29W Section 24. This species prefers the seed heads of prairie flowers common to fire-dependent plant communities such as dry prairies and savannas. Avoiding dry prairie and savanna will preserve potential habitat for this species.

- Gophersnake (*Pituophis catenifer*) – T35N R29W Sections 25, 36. These snakes prefer grassy areas with sandy and gravel soils. Given the presence of these rare snakes, the DNR recommends that the use of erosion control mesh, if any, be limited to wildlife-friendly materials. Construction and maintenance crews working in the area should be advised that if they encounter any snakes, the snakes should not be disturbed.

State-listed Species Survey Process

- Visit the Natural Heritage Review website for additional information regarding this process, survey guidance, and other related information. Surveys must follow the standards contained in the Rare Species Survey Process. The lists of approved DNR Animal and Plant Surveyors are attached to your project in the Minneosta Conservation Explorer (MCE). Project planning should take into account that the survey needs to be conducted during the appropriate time of the year, which may be limited.

- Please visit the DNR Rare Species Guide for more information on the habitat use of the species mentioned above and recommended measures to avoid or minimize impacts. For further assistance with these species, please contact the appropriate DNR Regional Nongame Specialist or Regional Ecologist.

Federally Protected Species

- The northern long-eared bat (*Myotis septentrionalis*), little brown bat (*Myotis lucifugus*), and big brown bat (*Eptesicus fuscus*), all state-listed as a species of special concern, have been documented in the vicinity of the proposed project. During the winter these species hibernate in caves and mines. During the active season (approximately April-November) they roost underneath bark, in cavities, or in crevices of both live and dead trees; and in human structures such as buildings and bridges. Activities that may impact these species include, but are not limited to, wind farm operation, any disturbance to hibernacula, and destruction/degradation of habitat.

Tree removal can negatively impact bats by destroying roosting habitat, especially during the pup rearing season when females are forming maternity roosting colonies and the pups are not able to fly. To minimize impacts to these species, the DNR recommends that tree removal be avoided from June 1 through August 15.

The northern long-eared bat is also federally listed as endangered. To ensure compliance with federal law, please conduct a federal regulatory review using the U.S. Fish and Wildlife Service's online Information for Planning and Consultation (IPaC) tool. Please note that all projects, regardless of whether there is a federal nexus, are subject to federal take prohibitions. The IPaC review will determine if take is reasonably certain to occur and, if not, will generate an automated letter. Please see USFWS Northern Long-eared Bat for additional information.

- To ensure compliance with federal law for other species, conduct a federal regulatory review using the U.S. Fish and Wildlife Service's (USFWS) online Information for Planning and Consultation (IPaC) tool.

Environmental Review and Permitting

- We understand that the planning for this project was not finalized when this Natural Heritage Review was conducted. This review was done only based on information available at this time. To ensure compliance with state law, another Natural Heritage Review should be conducted when alternate routes, access roads, and staging areas are identified. Please use the Clone Project option within MCE.

- Please include a copy of this letter and the MCE-generated Final Project Report in any state or local license or permit application. The Public Utilities Commission (PUC) Route Permit Application should address potential impacts to the above rare features, and identify avoidance or mitigation measures that will be implemented. Please note that measures to avoid or minimize disturbance to the above rare features may be included as restrictions or conditions in any required permits or licenses.

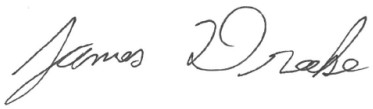
The Natural Heritage Information System (NHIS), a collection of databases that contains information about Minnesota's rare natural features, is maintained by the Division of Ecological and Water Resources, Department of Natural Resources. The NHIS is continually updated as new information becomes available, and is the most complete source of data on Minnesota's rare or otherwise significant species, native plant communities, and other natural features. However, the NHIS is not an exhaustive inventory and thus does not represent all of the occurrences of rare features within the state. Therefore, ecologically significant features for which we have no records may exist within the project area. If additional information becomes available regarding rare features in the vicinity of the project, further review may be necessary.

For environmental review purposes, the results of this Natural Heritage Review are valid for one year; the results are only valid for the project location and project description provided with the request. If project details change or the project has not occurred within one year, please resubmit the project for review within one year of initiating project activities.

The Natural Heritage Review does not constitute project approval by the Department of Natural Resources. Instead, it identifies issues regarding known occurrences of rare features and potential impacts to these rare features. For information on the environmental review process or other natural resource concerns, you may contact your DNR Regional Environmental Assessment Ecologist.

Thank you for consulting us on this matter and for your interest in preserving Minnesota's rare natural resources.

Sincerely,



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