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

January 23, 2024
Correspondence # MCE 2023-00832

Katie Lueth
HDR Inc

RE: Natural Heritage Review of the proposed **Mankato – Mississippi River Transmission Project,** Blue Earth, Goodhue, Le Sueur, Nicollet, Olmsted, Rice, Wabasha, and Waseca 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 **crosses multiple state lands**. Please contact the MN DNR Regional Environmental Assessment Ecologist for the Central region (Melissa Collins, melissa.collins@state.mn.us) and for the Southern region (Haley Byron, haley.byron@state.mn.us) with subject line MCE-2023-00832 to discuss any concerns they may have regarding this project.

- The proposed project is **within an old-growth forest in T109N R22W Section 18 within the Townsend Woods Scientific and Natural Area (SNA).** 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. **Given the ecological significance of this area, disturbance should be minimized to the extent feasible.** Please contact the MN DNR Regional Ecologist for the Southern Region 4 (Megan Benage, megan.benage@state.mn.us) with subject line MCE-2023-00832 to discuss any concerns she may have regarding this project.

- Several lakes in the vicinity of the project have been identified as a Lake of Biological Significance. Lakes of Biological Significance were ranked as *Outstanding* (**Lily Lake** and **Mississippi River - U.S. Lock & Dam #5 Pool**), *High* (**Fish Lake**), *or Moderate* (**Tetonka Lake**, **Eagle Lake**, and **Madison Lake**) based on unique plant and animal presence. It is important that **effective erosion prevention and sediment control practices be implemented and maintained near lakes throughout the project**. Indirect impacts, such as the introduction or spread of invasive species, should also be considered and minimized.

- Many calcareous fens [**Holden 1 West** (13336), **Wanamingo 22** (29025), **Kasota 7** (34551), **McCarthy Lake** (31975), **Haverhill 19** (31983), and **Lime 30** (38219)] have been documented in within five miles of the proposed project. A calcareous fen is a rare and distinctive peat-accumulating wetland that is legally protected in Minnesota. The Wetlands Conservation Act (WCA), authorized by Minnesota Statutes, section 103G.223, states that calcareous fens may not be filled, drained, or otherwise degraded, wholly or partially, by any activity, except as provided for in a management plan approved by the commissioner of the Department of Natural Resources. Many of the unique characteristics of calcareous fens result from the upwelling of groundwater through calcareous substrates. Because of this dependence on groundwater hydrology, calcareous fens can be affected by nearby activities or even those several miles away. For more information regarding calcareous fens, please see the Calcareous Fen Fact Sheet. To minimize stormwater impacts, please refer to the Minnesota Pollution Control Agency's General Principles for Erosion Prevention and Sediment Control in the Minnesota Stormwater Manual. Please note that calcareous fens are "Special Waters" and a buffer zone may be required.

  Calcareous fens may be impacted by activities within the fen, activities that affect surface water flows (e.g., stormwater flow, erosion), or activities that affect groundwater hydrology (e.g., groundwater pumping, contamination, discharge, or excavation). **To ensure compliance under WCA, please contact the Calcareous Fen Program Coordinator, Keylor Andrews (Keylor.Andrews@state.mn.us).**

- The Minnesota Biological Survey (MBS) has identified **26** Sites of Biodiversity Significance within the project boundary: **4** *Outstanding*, **8** *High*, and **14** *Moderate*. 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. Sites ranked as *Outstanding* contain the best occurrences of the rarest species, the most outstanding examples of the rarest native plant communities, and/or the largest, most intact functional landscapes present in the state. Sites ranked as *High* contain very good quality occurrences of the rarest species, high quality examples of the rare native plant communities, and/or important functional landscapes. Sites ranked as *Moderate* contain occurrences of rare species and/or

moderately disturbed native plant communities, and/or landscapes that have a strong potential for recovery. Please see your MCE generated Conservation Planning Report for a comprehensive list of MBS Sites of Biodiversity Significance.

There are many MN DNR Native Plant Communities (NPCs) within 330 feet of the proposed project. There are 23 unique types of Native Plant Communities; 9 are ranked S2 which is considered **imperiled**, 10 are ranked S3 which is considered **vulnerable to extirpation**, 3 are ranked S4 which is considered **uncommon but not rare**, and 1 is ranked S5 which is considered **secure, widespread, and abundant** in Minnesota. Please see your MCE generated Conservation Planning Report for a comprehensive list of Native Plant Communities in your proposed project area.

Activities in road rights-of-way can negatively affect adjacent native plant communities, especially through the introduction of invasive plant species. As such, disturbance near these ecologically significant areas should be minimized. Actions to minimize disturbance may include, but are not limited to, the following recommendations:

- Avoid working in MBS Sites and rare (S1-S3) Native Plant Communities.
- As much as possible, operate within already-disturbed areas.
- Retain a buffer between proposed activities and the MBS Sites.
- Confine construction activities to the opposite side of the road from the MBS Sites. If this is not feasible, confine construction activities to the existing road rights-of-way.
- 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.
- If possible, conduct the work under frozen ground conditions.
- Inspect and clean all equipment prior to bringing it to the site to prevent the introduction and spread of invasive species.
- Use effective erosion prevention and sediment control measure.
- Revegetate disturbed soil with native species suitable to the local habitat as soon after construction as possible.
- 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.

Construction in streambeds, lakes, and wetlands should be avoided whenever possible. We recommend spanning waterbodies and wetlands to avoid such areas. We also recommend:

- Work in watercourses should be conducted during low flow whenever possible.
- Winter construction in frozen soils is the preferred method for line placement in wetlands.
- Wetland basins, lake beds, and stream/riverbeds should be restored to preconstruction contours. The work should not promote wetland drainage.

The Minnesota Biological Survey (MBS) considered the area surrounding the proposed project for a Site of Biodiversity Significance. There are **17 areas** that were determined to be ***Below*** the minimum biodiversity threshold for statewide significance. This area, however, may have conservation value at the local level as habitat for native plants and animals, corridors for animal movements, buffers surrounding higher quality natural areas, or as areas with high potential for restoration of native habitat. **As such, indirect impacts from surface runoff or the spread of invasive species should be considered during project design and implementation.**

MBS Sites of Biodiversity Significance and DNR Native Plant Communities can be viewed using the Explore page in 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. To receive a list of MBS Sites of Biodiversity Significance and DNR Native Plant Communities in the vicinity of your project, create a Conservation Planning Report using the Explore Tab in Minnesota Conservation Explorer.

- If the Wetland Conservation Act (WCA) is applicable to this project, please note that wetlands within ***High*** or ***Outstanding*** MBS Sites of Biodiversity Significance and/or Native Plant Communities (NPC) 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.

State-listed Species

- The loggerhead shrike (*Lanius ludovicianus*), a state-listed endangered bird, has been documented in the vicinity of the project site. 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. 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 endangered or threatened plants or animals, including their parts or seeds, without a permit. Given the potential for this species to be found in the vicinity of the project, **tree and shrub removal must not occur within potential habitat during the breeding season, April through July.**

If avoiding tree or shrub removal within potential habitat from April through July is not feasible, a qualified surveyor will need to conduct a survey for active nests before any trees or shrubs will be removed. Requirements for surveys and lists of DNR certified lists of surveyors can be found at the Natural Heritage Review website. Survey results should be sent to the NH Review Team at Reports.NHIS@state.mn.us with subject line MCE-2023-00832; survey results are valid for 3 years. Please contact the NH Review team at Review.NHIS@state.mn.us with subject line MCE-2023-00832 if you have any questions regarding this species.

- Blanding's turtles (*Emydoidea blandingii)* and wood turtles (*Glyptemys insculpta*), both state-listed threatened species, have been documented in the vicinity of the proposed project and may be encountered on site. Both species are semi-aquatic, spending time both on land and in water. Any added fatality can be detrimental to these populations of 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 these rare turtles through direct fatalities and habitat disturbance/destruction due to excavation, fill, and other construction activities associated with the project. 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. As such, **the following avoidance measures are required**:

  - Avoid wetland and aquatic impacts during hibernation season, between September 15th and April 15th, if the area is suitable for hibernation.
  - Erosion and sediment control should be limited to wildlife friendly erosion control to avoid the inadvertent take of Blanding's turtles.
  - Hydro-mulch products should not contain any materials with synthetic (plastic) fiber additives, as the fibers can re-suspend and flow into waterbodies.
  - Construction areas, especially aquatic or wetland areas, should be thoroughly checked for turtles before the use of heavy equipment or any ground disturbance.
  - Check any holes that have been left unattended for prolonged periods for turtles before being filled.

- The Blanding's turtle flyer must be given to all contractors working in the area. Illegal collection is a concern with wood turtles; therefore, please do not post any signs that would bring attention to the presence of wood turtles.
- Monitor for turtles during construction. Report any sightings to Reports.NHIS@state.mn.us; please include date, observer, location, and photograph of the turtles.
- If turtles are in imminent danger, they must be moved by hand out of harm's way, otherwise they are to be left undisturbed. Please see Helping Turtles Across the Road for guidelines on how to move turtles safely out of danger.
- If the above avoidance measures are not feasible, please contact Review.NHIS@state.mn.us with subject line MCE-2023-00832 as further action may be needed.

For additional information, see the Blanding's turtle fact sheet, which describes the habitat use and life history of this species. The fact sheet also provides two lists of recommendations for avoiding and minimizing impacts to this rare turtle. **Please refer to both lists of recommendations and apply those that are relevant to your project.**

- Timber rattlesnake (*Crotalus horridus)*, a state-listed threatened species, have been reported from the vicinity of the proposed project and may be encountered on site. In Minnesota, the ideal habitat for this species is forested bluffs, south-facing rock outcrops, and bluff prairies, particularly in the Mississippi River Valley. Nearby forests, prairies, and agricultural lands are used as summer feeding grounds.

  Timber rattlesnake mortality in Minnesota is most commonly caused by poaching, vehicle collisions, and habitat destruction. The loss of a single adult, especially a female, can impact the population significantly. 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. As such the following avoidance measures are **required**:

  - **Crews working in the area should be advised that if they encounter any snakes, the snakes should not be disturbed.**
  - **Erosion and sediment control should be limited to wildlife friendly erosion control to avoid the inadvertent take of timber rattlesnakes.**
  - If the above avoidance measures are not feasible, please contact Review.NHIS@state.mn.us with subject line MCE-2023-00832 as further action may be needed.

Timber rattlesnake precautions may include, but are not limited to, the following recommendations:

  - Wear appropriate personal protection equipment, such as thick pants, boots, and leather gloves.
  - Care should be taken around stockpiled materials as snakes may be using these materials as shelter.
  - Report any sightings to Reports.NHIS@state.mn.us; please include date, observer, location, and photograph of the timber rattlesnake.

- Many rare aquatic species, including state-listed endangered and threatened species, have been documented in the project vicinity. These species are vulnerable to deterioration in water quality, particularly increased siltation. 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. **Therefore, it is important that stringent erosion prevention and sediment control practices are maintained throughout the duration of the project to prevent adverse debris and material from impacting downstream populations.** As per proposed project details, waterbodies will be spanned, and no work is proposed within the water. If project details change and work within water is proposed, please submit a new Natural Heritage Review request as our requirements may change.

- Many rare plant species, including state-listed endangered and threatened species, have been documented in the project vicinity. The table below lists state-listed plant species within the project vicinity; species found within the proposed project area are marked with an asterisk (*). **All known occurrences of state protected plant species and all potential habitats must be avoided.** If this is not feasible, a qualified surveyor will need to (1) resurvey known occurrences and (2) determine if suitable habitat exists within the activity impact area and, if so, conduct a survey prior to any project activities.

  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. Surveys must be conducted by a qualified surveyor and follow the standards contained in the Rare Species Survey Process and Rare Plant Guidance. Visit the Natural Heritage Review page for a list of certified surveyors and more information on this process. Project planning should take into account that any botanical survey needs to be conducted during the appropriate time of the year, which may be limited. Please consult with the NH Review Team at Reports.NHIS@state.mn.us with subject line MCE-2023-00832, if you have any questions regarding this process.

Name		Status		Habitat	
Common	Scientific	State	Federal	Habitat	Water Regime
Dwarf Trout Lily	*Erythronium propullans*	END	END	Mesic Hardwood Forest, Floodplain Forest	terrestrial
Sweet-smelling Indian Plantain	*Hasteola suaveolens*	END		Marsh, Wet Meadow/Carr, River Shore	wetland
Butternut	*Juglans cinerea*	END		Mesic Hardwood Forest	terrestrial
Tuberous Indian Plantain *	*Arnoglossum plantagineum*	THR		Upland Prairie	terrestrial
Clasping Milkweed	*Asclepias amplexicaulis*	THR		Savanna, Upland Prairie	terrestrial
Stream Parsnip	*Berula erecta*	THR		Small Rivers and Streams, Non-forested Rich Peatland, Wet Meadow/Carr	aquatic, wetland
Davis' Sedge	*Carex davisii*	THR		Floodplain Forest	wetland
Prairie Bush Clover	*Lespedeza leptostachya*	THR	THR	Upland Prairie, Rock Outcrop	terrestrial
Glade Mallow *	*Napaea dioica*	THR		Small Rivers and Streams, Floodplain Forest	wetland
One-flowered Broomrape	*Orobanche uniflora*	THR		Savanna, Upland Prairie, Mesic Hardwood Forest, Fire Dependent Forest	terrestrial
Tubercled Rein Orchid	*Platanthera flava var. herbiola*	THR		Wet Meadow/Carr, Savanna, Lowland Prairie	wetland
Hooded Arrowhead	*Sagittaria montevidensis ssp. calycina*	THR		Rivers and Streams, River Shore, Lake Shore, Marsh	aquatic, wetland
Edible Valerian	*Valeriana edulis var. ciliata*	THR		Wet Meadow/Carr, Non-forested Rich Peatland, Lowland Prairie, Upland Prairie, Rock Outcrop, Cliff	terrestrial, wetland
* = Known to occur within the project area. Please see your license for specific locations.					

- The Natural Heritage Information System (NHIS) tracks bat roost trees and hibernacula plus some acoustic data, but this information is not exhaustive. Even if there are no bat records listed nearby, all seven of Minnesota's bats, including the federally endangered northern long-eared bat (*Myotis septentrionalis*), can be found throughout Minnesota. During the active season (approximately April-November) bats roost underneath bark, in cavities, or in crevices of both live and dead trees. 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 cannot yet fly. To minimize these impacts, **the DNR recommends that tree removal be avoided from June 1 through August 15.**

- Please visit the DNR Rare Species Guide for more information on the habitat use of these species and recommended measures to avoid or minimize impacts.

Federally Protected Species

- The area of interest overlaps with a U.S Fish and Wildlife Service (USFWS) Rusty Patched Bumble Bee High Potential Zone. The rusty patched bumble bee *(Bombus affinis)* is federally listed as endangered and is likely to be present in suitable habitat within High Potential Zones. From April through October this species uses underground nests in upland grasslands, shrublands, and forest edges, and forages where nectar and pollen are available. From October through April the species overwinters under tree litter in upland forests and woodlands. The rusty patched bumble bee may be impacted by a variety of land management activities including, but not limited to, prescribed fire, tree-removal, haying, grazing, herbicide use, pesticide use, land-clearing, soil disturbance or compaction, or use of non-native bees. If applicable, **the DNR recommends reseeding disturbed soils with native species of grasses and forbs using** BWSR Seed Mixes **or** MnDOT Seed Mixes**.**

  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 prohibited take is likely to occur and, if not, will generate an automated letter. The USFWS RPBB guidance provides guidance on avoiding impacts to rusty patched bumble bee and a key for determining if actions are likely to affect the species; the determination key can be found in the appendix.

- As mentioned above dwarf trout lily and prairie bush clover are both federally listed. These were documented in the vicinity of the project but not within the project area.

- **To ensure compliance with federal law, 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

- Please include a copy of this letter and the MCE-generated Final Project Report in any state or local license or permit application. 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. Visit the Natural Heritage Review website for additional information regarding this process, survey guidance, and other related information. 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,

Molly Barrett
Natural Heritage Review Specialist
Molly.Barrett@state.mn.us

Cc: Melissa Collins, Regional Environmental Assessment Ecologist, Region 3 (Central)
Cc: Haley Byron, Regional Environmental Assessment Ecologist, Region 4 (South)
Cc: Amanda Weise, Regional Ecologist, Region 3 (Central)
Cc: Megan Benage, Regional Ecologist, Region 4 (South)
Cc: Keylor Andrews, Calcareous Fen Program Coordinator
Cc: Jennie Skancke, Wetlands Program Coordinator
Cc: Cynthia Warzecha, Energy Projects Review