

June 29, 2021

Chad Konickson
U.S. Army Corps of Engineers
Regulatory Branch Chief
180 Fifth Street East, Suite 700
St. Paul, MN 55101-1678

Andrea Hayden
Environmental Manager
Northshore Mining Company
10 Outer Drive
Silver Bay, MN 55614

RE: 2015-02528-RMM 401 Northshore Mining Company
Lake County, Minnesota
Section 401 Water Quality Certification

Dear Chad Konickson and Andrea Hayden:

This letter is submitted by the Minnesota Pollution Control Agency (MPCA) under authority of Section 401 of the Clean Water Act (CWA) (33 U.S.C. § 1251 et seq.), Minn. Stat. chs. 115 and 116 and Minn. R. 7001.1400 to 7001.1470, 7050, 7052, and 7053 in response to the request for Section 401 Water Quality Certification by Northshore Mining Company (applicant) for the West Ridge Railroad Relocation and Tailings Basin Progression Project (project). The project is located near Silver Bay, in Lake County, Minnesota in the following sections: Sections 6, 20, 21, 28, 29, 30, 31, and 32, Township 56 North, Range 8 West.

Section 401 of the CWA requires that before a federal permit may be issued for an activity potentially discharging into Waters of the United States (WOTUS), the applicant must provide to the federal permitting agency a Certification (or Waiver of Certification) from the state in which the discharge originates that the discharge will comply with state water quality standards. Any conditions included in a state certification then become conditions of the federal permit. Section 401 does not limit the MPCA to review of discharges solely within WOTUS, but rather opens the project to review of impacts to all areas subject to applicable state water law.

The applicant proposes to directly impact 264.08 acres of wetland and deepwater Waters of the State (WOTS) (193 acres of which are WOTUS); indirectly impact 45.49 acres of wetland and deepwater WOTS (33.16 acres of which are WOTUS) by inundation and watershed alteration (a total of 309.57 acres of WOTS); and directly impact 5,150 feet of Big Thirtynine Creek and 3,420 feet of Little Thirtynine Creek (both streams are WOTUS and WOTS). These impacts are in the Lake Superior South (#2) (HUC 04010102) major watershed, with most of the impacts in the Lower Beaver River minor watershed, and the remainder of the impacts in the Thirtynine Creek minor watershed, and East Branch Beaver River minor watershed, and constitute the "project site."

For mitigation, the applicant: (1) has secured the purchase of 264.27 credits from Wetland Bank Account 1609, located in Bank Service Area 1, in the St. Louis River (03) watershed, consistent with the U.S. Army Corps of Engineers (USACE) Final St. Paul District Policy for Wetland Compensatory Mitigation in Minnesota (2009); and (2) agreed to restoration of 5,700 feet of the Little Thirtynine Diversion site, 1,700 feet of the Big Thirtynine Diversion site, 3,000 feet of the East Branch Beaver River and Culvert

Replacement site, 4,855 feet of the East Branch Tributaries sites, 2,766 feet of the Berm Removal site, and 3,501 feet of the White Rock Creek site, all of which constitute the “mitigation sites.” In addition, the applicant must purchase a total of 309.57 (an additional 45.3) acres of wetland bank credits to offset wetland impacts due to the tailings basin expansion. No temporary or permanent direct or indirect wetland impacts are authorized by this Certification for the purpose of stream mitigation.

Decision:

The MPCA has examined the Final Environmental Impact Statement (EIS), dated March 1977; Mile Post 7 Railroad Realignment and Tailings Basin Progression Assessment of EIS Supplement Requirement, dated March, 2017 (a memo stating no supplemental EIS is required); the Minnesota Department of Natural Resources’ (DNR) decision on the need for a supplemental EIS, dated June 2021 (a decision stating no supplemental EIS is required); Project Joint Application Form for Activities Affecting Water Resources in Minnesota, dated June 2018 (“Wetland Replacement Plan”); the U.S. Environmental Protection Agency response to the USACE public notice, dated November 2018; MPCA Northeast Watershed response to USACE public notice, dated November 2018; Wetland Conservation Act Notice of Decision, dated May 2019; USACE request for additional information, dated May 2019; Watershed Assessment: Tailings Basin Progression and West Ridge Railroad, dated April 2020; Technical Memo on Diversion Ditch/Wetland 17b Characterization, dated 2020; Response to Denial without Prejudice, dated June 2020 (the applicant’s response to MPCA); Antidegradation Assessment, dated June 2020; Stream Mitigation Plan, dated June 2020, and updated August 2020; and other information furnished by the applicant, or otherwise available to MPCA that is relevant to water quality considerations. The MPCA has reviewed these documents and information under the federal and state statutes and rules in place at the time of application, and determined there is reasonable assurance that the activities proposed in the Wetland Replacement Plan; the Response to Denial Without Prejudice, dated June 2020; the Antidegradation Assessment, dated August, 2020; and the Stream Mitigation Plan, dated August 2020 will be conducted in a manner that will not violate applicable water standards, including antidegradation standards, should this Certification be issued as crafted by MPCA, and certifies the project with the following conditions:

1. Best Management Practices (BMPs)

A. The applicant shall:

- i. Design, update, and maintain a Stormwater Pollution Prevention Plan (SWPPP).
- ii. Identify and implement BMPs to ensure runoff and/or erosion from the project and mitigation sites do not cause or contribute to a water quality impairment of any WOTS. These BMPs must be implemented prior to commencement of the project and mitigation, and maintained until the sites are stabilized.
- iii. Operate under approved public waters work permit.
- iv. Follow the recommendations in the Environmental Assessment Worksheet completed for the stream mitigation sites project.

2. Stream Water Chemistry Monitoring (for potential basin contributions)

A. The applicant shall:

- i. Conduct stream monitoring in accordance with the requirements of the National Pollution Discharge Elimination System (NPDES)/State Disposal System (SDS) Permit MN 0055301.
- ii. Collect water samples from Little Thirtynine Creek from upstream and downstream of the tailings basin at MPCA-approved locations. The upstream sampling location will be at Little Thirtynine Creek and County Road 15 (Forest

Highway 11), and the downstream sampling location will be at a Little Thirtynine Creek location immediately upstream of its confluence with Big Thirtynine Creek.

- iii. Collect samples for the following parameters: pH, dissolved oxygen, total suspended solids, total dissolved solids, specific conductivity, total sulfate, and water temperature.
 - iv. Collect and test for all parameters at each location once a month, but not in the same seven-day period as the last month's sampling (two months of sampling cannot occur in one week), from issuance of this certification through one year after cessation of mining operations.
 - v. Sample at the designated monitoring stations including when this requires the applicant to remove ice to sample the water. Should a station be completely frozen (have no liquid water below ice), or be dry, the applicant must make reasonable attempts to return to check for unfrozen conditions or water throughout a designated sampling period.
- B. The applicant may request an earlier end to the stream water chemistry monitoring required in this condition if monitoring to-date shows no difference in water quality between the upstream and downstream monitoring sites, or temporally attributable to the project, but no sooner than one year after the project's Construction Stormwater permit is terminated by MPCA. The request must present the rationale and supporting data for no project-attributable change to water quality. MPCA will approve or deny the request in writing.

3. Stream Mitigation Sites

A. The applicant shall:

- i. Complete two functional stream restorations per year in 2022, 2024, and 2026, at locations identified in and using plans included in the June 2020 Stream Restoration Plan.
- ii. Submit to MPCA two as-builts per year by January 31 in 2023, 2025, and 2027 of stream work completed the previous year.
- iii. At each restoration site, annually measure and report floodplain connectivity, large woody debris, lateral migration, bed form diversity, and riparian vegetation until the project obtains the mitigation objectives of the June 2020 Stream Mitigation Plan.
- iv. Ensure at each restoration site that invasive species cover does not increase by more than 5% from pre-project levels to the end of monitoring; and new invasive species are not introduced by equipment or contractors during that time.
- v. Comply with any USACE mitigation escrow requirements for stream mitigation sites.
- vi. Submit an adaptive management plan to achieve mitigation goals if data in the assessment show deviation beyond a cumulative -10% for the mitigation plan.
- vii. Engage in erosion and sedimentation minimization measures to prevent increases in sediment loading to any stream where restoration activities occur. The applicant's stream restoration activities shall not result in an increase in sediment load to the stream.

- viii. Design and implement a SWPPP for soils exposed by any stream restoration work.

4. Wetland Monitoring

- A. The applicant shall monitor the wetlands along the stream restoration sites to verify wetland impacts as follows:
 - i. Prior to restoration work, delineate the wetlands impacted by the stream mitigation work to verify no loss in the quantity of wetland resources.
 - ii. Prior to restoration work, for each delineated wetland conduct Floristic Quality Index (FQI) surveys to assess the health and type of the vegetation communities to verify no loss in the quality of wetland resources.
 - iii. For each delineated wetland record observations of the hydrologic regime to ensure no more than 20% departure from the hydroperiod (magnitude and timing) existing prior to stream restoration activities to verify no loss of wetland resources.
 - iv. For each wetland delineated, monitoring shall occur prior to the beginning of stream restoration work, and every five years after the stream restoration occurs until the hydrology and vegetation have stabilized.
 - v. Monitoring reports containing the information in items i. through iv. shall be submitted to MPCA in 2027, 2029, and 2031 onward for streams restored in 2022, 2024, and 2026. Contact MPCA if an extension is required.
- B. The applicant shall monitor all wetlands within 2,000 feet of the tailings basin progression (project site) to verify wetland impacts as follows:
 - i. Prior to initiating project work, delineate the wetlands impacted by the tailings basin progression to verify no loss in the quantity of wetland resources.
 - ii. Prior to initiating project work, conduct FQI surveys to assess the health and type of the vegetation communities to verify no loss in the quality of wetland resources.
 - iii. For each delineated wetland, record observations of the hydrologic regime to ensure no more than 20% departure from the hydroperiod (magnitude and timing) existing prior to tailings basin progression activities to verify no loss of wetland resources.
 - iv. For each delineated wetland, monitoring shall occur prior to the beginning of project work, and every five years thereafter until the hydrology and vegetation have stabilized.
 - v. Monitoring reports containing the information in items i. through iv. shall be submitted to MPCA in the year following the monitoring required in item iv.
- C. Impacts identified by the applicant in the requirements of sections A. and B. above, shall be compared to wetland impacts approved by this Certification; and the applicant shall mitigate for any unapproved additional direct or indirect impacts to WOTS.
- D. If project activities cause stress to any wetland community in areas without mitigation approved in this Certification, the MPCA may require the applicant to undertake adaptive management strategies, and/or mitigation for indirect impacts.

5. Data Quality

- A. For all laboratory results, the applicant shall ensure a laboratory certified by the Minnesota Department of Health and/or registered by the MPCA conducts any analyses required by this Certification.
- B. For all field results, industry standard field sampling, collection, and analysis protocols must be consistently used by the applicant. The applicant must utilize field analysts trained and experienced in field data collection. The applicant must monitor in accordance with written Standard Operating Procedures. The applicant must ensure all field instrumentation and ancillary equipment are properly calibrated and maintained in accordance with manufacturer's specifications. At a minimum, the applicant must inspect and calibrate field instruments before deployment, and at least once a month, and document calibration results. All the applicant's water sample handling and laboratory analytical results must comply with Minn. R. 4740.2010, and Minn. R. 4740.2050 to 4740.2120.

6. Reporting

- A. All annual submissions required from the applicant shall meet the following timing, formatting, and content requirements:
 - i. Reports must be submitted annually by January 31, for the preceding calendar year (or partial year), with the first report arriving January 31, 2022.
 - ii. Raw data in Microsoft Excel (or a comparable tabular spreadsheet format, as approved by the MPCA for loading into EQUIS) for each active monitoring site. Alternatively, the applicant may directly load these data into EQUIS (facility code 2015-02528-RMM). The applicant must notify MPCA 401 staff (401certification.pca@state.mn.us) when data are submitted.
 - iii. Documentation of any hydrologic conditions that prevented collection of any required sample [Minn. R. 7001.0150, subp. 2(B)].
 - iv. A description of any project work near monitoring sites that could impact monitoring results.
 - v. Geographic Information Systems (GIS) shapefiles of project progression with sampling locations.
 - vi. Analysis of data including any statistical assumptions and methodologies;
 - vii. Identification, interpretation, explanation and significance of data trends or abnormalities.
 - viii. Comparison of data to reference sites and/or local weather data.
 - ix. Comparison of data to water quality standards in effect at the time of sampling;
 - x. Reports on water quality must include a comparison of upstream values to downstream values, and temporal changes.
 - xi. Conclusions regarding monitoring results and recommendations for any necessary adaptive management, which could include additional monitoring locations and/or frequencies and mitigation (either treatment, or, in the case of physical alterations, potential compensatory mitigation) methods (collectively herein "adaptive management").
 - a) Should the state adopt water quality standards during the life of this Certification that MPCA determines to be relevant to this project, the MPCA shall require the applicant to alter monitoring to show compliance, and the applicant shall implement said monitoring;

- b) The MPCA will review and approve or disapprove recommendations from the applicant for adaptive management in writing.
 - If approved, the applicant must implement the proposed adaptive management strategy in accordance with the schedule provided in the written approval from the MPCA.
 - If the proposed adaptive management strategy is disapproved by the MPCA, the applicant must provide a modified plan addressing the MPCA comments within 30 days of receipt of MPCA's comments.
- B. All submissions specific to stream mitigation sites required from the applicant shall meet the following timing, formatting, and content requirements:
 - i. Must contain information required in condition three (Stream Mitigation Sites) above.
 - ii. GIS shapefile (or a comparable format approved by MPCA) with an as-built of the stream mitigation sites.
 - iii. Must contain an evaluation of the effectiveness of mitigation for five years post-construction, including parameters listed in condition three. Evaluations of mitigation effectiveness using parameters outlined in the Stream Mitigation Plan must rely only on data collected in a statistically significant quantity.
 - iv. Must contain a narrative explaining deviations from the approved stream mitigation plan, data and calculations quantifying mitigation, and as appropriate, adaptive management strategies to meet mitigation goals.
 - v. The first stream mitigation site report must be submitted by January 31, 2032.
- C. All submissions specific to wetlands (at the tailings basin and stream mitigation sites) required from the applicant shall meet the following timing, formatting, and content requirements:
 - i. Must contain GIS shapefile (or a comparable format approved by MPCA) of the most recent delineation, with wetland labels consistent with the pre-project delineation.
 - ii. Must contain FQI (observations of wetland community condition and integrity), including an analysis of whether the existing and beneficial uses of each wetland has been affected, and a proposal for mitigation, as appropriate, to address any loss of existing use(s). Examples of wetland stressor indicators include: changes in hydrology indicators; and/or additional presence of non-native species, facultative or non-wetland plant species, and stressed or dying vegetation.
 - iii. It is expected the first project site wetland report will be submitted by January 31, 2036.
 - iv. It is expected the stream mitigation sites will be completed in 2026, and expected that five year post-construction wetland delineations will be completed by 2031, such that the report evaluating the condition of wetlands associated with stream mitigation sites will be submitted by January 31, 2032. If timelines require modification, contact MPCA for an extension, which may only be granted in writing.

7. Adaptive management

- A. If monitoring indicates a measurable change in water chemistry parameters between the upstream and downstream monitoring sites, or temporally; wetland stressors; or stream degradation attributable to the project or its stream or wetland mitigation, the applicant must submit an analysis of whether the existing and beneficial uses of the waterbodies have been affected. The MPCA will determine if additional monitoring (such as biological, hydrological, chemical, wetland delineation, stream survey), an adaptive management plan, and/or a proposal for mitigation to address any loss of existing and beneficial use(s) is necessary to quantify and/or prevent additional impacts, as further described in Standard Conditions below.
- B. The applicant must implement the adaptive management strategy and/or existing and beneficial use mitigation as directed by the schedule included in any written approval from the MPCA. If the adaptive management strategy and/or existing and beneficial use mitigation is disapproved by the MPCA, the applicant must provide a modified plan addressing the deficiencies identified in the MPCA's comments within 30 days of receipt of such comments.

8. Compensatory Mitigation

- A. This Certification prohibits the loss of existing uses resulting from physical alterations to a surface water unless appropriately replaced through mitigation. To ensure compliance with Minn. R. 7050.0186 and 7050.0265, the applicant must provide compensatory mitigation in advance of all direct and indirect surface water impacts.
 - i. It is expected that the project's impacts will begin in early 2021, with the dam construction (stream impacts) beginning in 2024. It is expected all wetland mitigation will be completed by Wetland Bank purchase before project commencement, and two to four stream mitigation sites are complete before the start of stream impacts, with mitigation credits remaining ahead of stream impact throughout the project.
- B. Any deviations from the proposed Wetland Replacement Plan and Stream Mitigation Proposal as listed in the examined documents above must be approved by the MPCA in writing.
 - i. The MPCA understands the applicant will purchase 264.27 acres of wetland mitigation from Wetland Bank Account 1609, located in Bank Service Area 1, in the St. Louis River (03) watershed. The applicant must purchase a total of 309.57 acres for the project impacts, plus at least 1:1 wetland mitigation credits for any wetland impacts from stream mitigation.
 - ii. Stream mitigation must be at least 21,522 feet of total mitigation.
 - iii. The MPCA must be notified within 30 days of changes in replacement credits available to the applicant.

9. Standard Conditions

- A. The applicant must inform all employees and/or contractor(s) who will be performing this project's construction activities of the need to comply with all conditions of this Section 401 Water Quality Certification from the MPCA.
- B. The applicant shall notify MPCA within 30 days of a violation of this Certification, such as unauthorized direct or indirect impacts to state jurisdictional waters. The applicant shall notify MPCA of any proposed additional water quality impacts this project or mitigation may

- have, before they occur, to determine if further review or modification of this Certification is required. This includes any additional proposed surface water impacts resulting from dredging, excavation, fill, additional structures, and temporary impacts not shown in the final plans or expressly authorized by the USACE Section 404 permit or the Section 401 Certification from the MPCA.
- C. Should monitoring data indicate that the project or mitigation has caused or contributed to a violation of a water quality standard contained in Minn. R. chs. 7050 and 7052, the applicant must report to the MPCA as follows: a violation that could endanger human health or the environment must be reported within 24 hours; other violations must be reported within 30 days. Also, within 30 days of discovery of a violation, the applicant must submit to the MPCA for review and approval an adaptive management plan to monitor and remedy the cause of the violation and a proposal to mitigate any lost existing and beneficial use(s).
 - D. The applicant shall copy MPCA 401 staff (401certification.pca@state.mn.us) on notices of violation.
 - E. The applicant shall grant access to the site at all reasonable times during and after construction to authorized representatives of the MPCA Commissioner for inspection of the work authorized hereunder.
 - F. This Certification includes and incorporates by reference the general conditions of Minn. R. 7001.0150, subp. 3 and 7001.1080 subp. 2 to 9.
 - G. If the applicant wishes to modify any monitoring plans or procedures approved pursuant to this document, the applicant must obtain written approval from the MPCA prior to implementing any changes.

The MPCA coordinates with several regulatory programs to review the impacts of mining operations. A Section 401 Certification does not release the applicant from obtaining all necessary federal, state, and local permits, nor does it limit more restrictive requirements set through any such program. It does not eliminate, waive, or vary the applicant's obligation to comply with all state water statutes and rules through the construction, installation, and operation of the project or mitigation, including, but not limited to, the NPDES/SDS permitting program, and Minn. R. ch. 7050.

USACE has stated that projects shall be reviewed under the federal rules in place at the time the application is received. This project and its mitigation were reviewed under the federal and state statutes and laws in place at the time the application was received. If the USACE determines any part or condition of this Certification is not lawful or is waived and unenforceable, the determination shall apply only to the part or condition so determined. The determination shall not apply to nor invalidate any remaining parts or conditions of this Certification. If the USACE makes such a determination, the applicant remains responsible for meeting state water quality statutes and rules, and, if a violation occurs, may be subject to state enforcement.

The MPCA decision is based, in part, on the applicant's representations that environmental review under the Minnesota Environmental Quality Board's rules, Minn. R. ch. 4410, is not needed, or that all necessary environmental reviews and related decisions have been completed. If environmental review for this project is needed and not complete, the MPCA does not have the legal authority to issue a Section 401 Certification. In that situation, the MPCA reserves the right to make a Section 401 Certification decision after completion of the environmental review process.

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No activity affecting the bed of a protected water may be conducted between September 15 and June 30, to minimize impacts on fish spawning and migration. If work during this time is essential, it shall be done only upon written approval of the DNR Area Fisheries Manager and a copy of this approval shall be sent immediately to MPCA 401 staff.

This letter does not release the applicant from any liability, penalty, or duty imposed by Minnesota or federal statutes, regulations, rules or local ordinances, and it does not convey a property right or an exclusive privilege.

If you have any questions or require additional information regarding this Certification, please contact Jen Oknich at 651-757-2886.

Sincerely,

A handwritten signature in black ink, appearing to read "Anna M. Hotz". The signature is fluid and cursive, with the first name "Anna" and last name "Hotz" clearly legible.

Anna Hotz
Supervisor
Agency Rules Unit
Resource Management and Assistance Division

AH/JO:ds

cc: Colleen Sullivan, DNR
Ryan Malterud, USACE
Jen Oknich, MPCA