



Wild Rice

Wild rice is an important economic and environmental resource in Minnesota, and has significant cultural value to the native Ojibwe people, including the local Bois Forte Band of Chippewa, Fond du Lac Band of Lake Superior Chippewa, and Grand Portage Band of Chippewa. Wild rice beds have been identified downstream of the proposed NorthMet project.

Sulfate has been identified as a chemical that could affect the growth and viability of wild rice. The Minnesota Pollution Control Agency (MPCA) has established a standard for sulfate of 10 milligrams per liter (mg/L – also sometimes referred to as parts per million, ppm) in water used for the production of wild rice. The MPCA is overseeing a variety of studies relating to sulfate and wild rice, with the goal of informing decisions about potential changes to this water quality standard or its application. Should the application of the standard change, it would be addressed at that time.

The Final Environmental Impact Statement (Final EIS) uses the sulfate concentration standard of 10 mg/L as the evaluation criterion for potential effects to wild rice. This evaluation criterion was applied to points in both the Partridge and Embarrass rivers that are identified in the draft MPCA staff recommendations as wild rice production waters and thus subject to where the 10 mg/L sulfate standard would apply. MPCA considered all available information in providing their guidance for these evaluation locations. Current sulfate concentrations in both the Partridge and Embarrass rivers where the Final EIS evaluation criterion applies are greater than 10 mg/L. However, modeling results indicate the proposed NorthMet project is not likely to increase sulfate concentrations in those waters.

How would the proposed NorthMet project affect wild rice?

The proposed NorthMet project would produce waste rock and tailings as a result of mining and processing operations. Chemical reactions in the waste rock and tailings would produce sulfate that could affect wild rice if not reduced to acceptable levels before release to the environment.

Based upon pilot testing, the proposed treatment plants are expected to be able to discharge sulfate at or below 10 mg/L. It is likely that the proposed NorthMet project would not increase the magnitude of sulfate impacts in the Partridge River by more than 1.0 percent, which would be little change from existing conditions. For the Embarrass River watershed, sulfate is currently leaving the existing tailings basin through surface water and groundwater. The proposed NorthMet project would significantly reduce these discharges. In addition, the project proposer would build a wastewater treatment plant for treating sulfate to concentrations that would meet the wild rice sulfate standard.

How were the effects determined?

MPCA provided draft staff recommendations of where the wild rice standard applies in the Partridge and Embarrass Rivers. Potential sulfate releases from the proposed NorthMet project to these waters were determined using the water quality model developed for the Final EIS.

What would be done to avoid or minimize these effects?

PolyMet would capture and treat sulfate in water at the Mine and Plant Sites using reverse osmosis or other treatment technologies. Sulfate release from the existing tailings basin would be reduced by installing and operating a surface water and groundwater containment system and treating captured water at the wastewater treatment plant. The sulfate wild rice standard would be met at the discharge from the treatment system. Engineering controls would be employed at the Mine Site to capture water from the pit and waste rock stockpiles for treatment at the wastewater treatment facility proposed for the Mine Site. PolyMet would also monitor both groundwater and surface water quality during operations, reclamation, and closure at discharge points and downstream. This information would be used to understand actual effects, improve predictions of future effects, and inform possible mitigation measures that could be used to prevent environmental impacts.

For more information about how wild rice in the area would be affected by the NorthMet Mining Project and Land Exchange, see the Executive Summary, Sections 4.2.2 (Affected Environment, Water Resources) and 4.2.9 (Affected Environment, Cultural Resources), Sections 5.2.2 (Environmental Consequences, Water Resources) and 5.2.9 (Environmental Consequences, Cultural Resources), and Chapter 6 (Cumulative Effects) of the Final EIS. Also, refer to additional Fact Sheets about the NorthMet Mining Project and Land Exchange Final EIS:

- 1. Project and Land Exchange Overview**
- 2. What is the Environmental Review Process?**
- 3. What's Changed since the Draft EIS?**
- 4. What's Changed since the Supplement Draft EIS?**
- 5. Supplemental Draft EIS Comment Response Process**
- 6. Effective Commenting on the Final EIS**
- 7. A Guide to the Final EIS Document**
- 8. Air Quality**
- 9. Water Quantity**
- 10. Wetlands**
- 11. Water Quality**
- 12. Wild Rice**
- 13. Mercury**
- 14. Threatened & Endangered Species**
- 15. Cultural Resources**
- 16. Land Exchange**
- 17. Reclamation & Financial Assurance**
- 18. Cumulative Effects**
- 19. Tailings Basin Stability**
- 20. Water Modeling**
- 21. Northward Flowpath**
- 22. Duration of Treatment & Financial Assurance**
- 23. Human Health**