



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 Lake Superior Chippewa. Wild rice beds have been identified downstream of the proposed NorthMet Mining 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. Consistent with the standard, the Supplemental Draft EIS uses a sulfate concentration of 10 mg/l as the evaluation criterion for effects to wild rice. This evaluation criterion was applied to both the Partridge and Embarrass rivers where MPCA staff has recommended the standard applies. Current sulfate concentrations in both the Partridge and Embarrass rivers where the standard applies are greater than 10 mg/l. However, modeling results indicate the project does not increase sulfate concentrations in those waters.

How would the NorthMet Mining Project affect wild rice?

The proposed 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. The NorthMet Mining Project would increase the sulfate concentration in the Partridge River by 0.1 percent over existing levels, which would be little change from existing conditions. For the Embarrass River, sulfate is currently being delivered from water leaving the existing tailings basin, which is entering groundwater and eventually entering surface water and the river. The NorthMet Project would stop this. In addition, they would build a wastewater treatment plant that would meet the wild rice sulfate standard.

How were the effects determined?

MPCA staff have recommended where the wild rice standard applies in the Partridge and Embarrass Rivers. Potential sulfate releases from the proposed project to these waters were determined using the water quality model developed for the Supplemental Draft 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 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 that proposed wastewater treatment facility. 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 SDEIS. Also, refer to additional Fact Sheets about the NorthMet Mining Project and Land Exchange SDEIS:

- 1. What is the Environmental Review Process?**
- 2. Effective Commenting**
- 3. A Guide to the SDEIS Document**
- 4. What's Changed Since the DEIS?**
- 5. Project & Land Exchange Overview**
- 6. Land Exchange**
- 7. Reclamation and Financial Assurance**
- 8. Water Quality**
- 9. Wetlands**
- 10. Air Quality**
- 11. Wild Rice**
- 12. Mercury**
- 13. Threatened & Endangered Species**
- 14. Cumulative Effects**
- 15. Cultural Resources**
- 16. Water Quantity**