US Army Corps of Engineers
St. Paul District

MNDNR

Duration of Treatment and Financial Assurance

Would water treatment be needed for the proposed NorthMet Project?

Yes. Modeling indicates that water treatment would be needed at the Mine Site and Plant Site. The primary treatment need is to meet the sulfate standard that is applicable to waters used for the production of wild rice. Reductions in metals concentrations would also result from treatment.

What kind of water treatment is offered for the proposed NorthMet project?

PolyMet proposes to use mechanical water treatment facilities to treat tailings basin water at the Plant Site and pit lake water at the Mine Site. In particular, the mechanical system includes reverse osmosis, or equivalently performing technologies, to control sulfate to meet the wild rice standard.

How long would mechanical water treatment be needed?

The Final Environmental Impact Statement (Final EIS) assumes mechanical treatment would be required indefinitely at both the Mine Site and Plant Site. This is because the water modeling was not designed to predict how long the proposed NorthMet project would require water treatment. Rather, the model was designed to evaluate whether the proposed NorthMet project could meet the evaluation criteria when it was producing peak amounts of pollutants and to estimate when those peaks might occur. This conservative approach to modeling was a form of worst-case scenario planning. PolyMet would be required to conduct research to explore the possibility of transitioning to non-mechanical systems. The mechanical treatment system would only be replaced if a non-mechanical (or passive) system were proven to provide the sufficient level of treatment to meet applicable water quality standards. Any replacement would require approval by the regulatory agencies.

What is the overall strategy to protect natural resources from long-term water effects of the proposed NorthMet project?

The proposed NorthMet project would rely on various approaches to protect natural resources, including:

- Using known, low-risk water treatment technologies such as reverse osmosis (or equivalently performing technology) that have a long track record of reliable performance in numerous applications.

- Decrease and minimize water treatment activity over time. PolyMet would be required to conduct pilot-tests/studies on non-mechanical treatment systems. If and when a non-mechanical system is demonstrated to be viable and fully protective, PolyMet would be required to transition to them. Non-mechanical systems would require less infrastructure and energy to operate.

- Operate under an adaptive management plan that identifies mitigation that can be implemented or adjusted to respond to changing circumstances. Changes would be based on monitoring and predictive modeling to help prevent or minimize environmental impacts.

- PolyMet would accountable for maintenance and monitoring required under permits, and would only be released from permits and financial assurance when all permit conditions have been met.

- Financial assurance (provided by PolyMet) would ensure that environmental management, including planned water treatment needs, would occur for as long as needed to meet environmental standards. The detailed terms and amounts of financial assurance would be evaluated during the permitting process for the Minnesota Department of Natural Resources Permit to Mine.

For more information about duration of water quality treatment for the NorthMet Mining Project and Land Exchange, see the Executive Summary and Section 5.2.2 (Environmental Consequences, Water Resources) 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 Supplemental 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**