



## Water quality

*PolyMet Mining's NorthMet Project will meet or exceed applicable federal and state water quality standards and regulations, including the strict sulfate standard for wild rice in Minnesota. The water we discharge back into the environment will be both swimmable and fishable.*

### **Will PolyMet pollute the Boundary Waters?**

- No. PolyMet will not pollute any waters. The PolyMet project is in the Lake Superior watershed. PolyMet's commitment to protecting water quality and complying with all applicable water quality standards remains steadfast regardless of the watershed.

### **Some people continue to suggest that water from the NorthMet Project could potentially flow northward into the Boundary Waters in spite of what the environmental review found.**

- After exhaustive review by state and federal agencies, the Final Environmental Impact Statement for the NorthMet Project concludes that groundwater flows from the NorthMet Project will not directly, indirectly, or cumulatively affect the Boundary Waters Canoe Area Wilderness Area.
- The FEIS concludes that the NorthMet Project is capable of meeting applicable state and federal environmental standards for water quality.
- State and federal regulators also agree that groundwater monitoring and potential future mitigation are appropriate measures in the highly unlikely event northward flow is detected.

### **Will PolyMet operations release acidic water (acid rock drainage) into the environment?**

- No. Most of the water PolyMet will manage on its property is in the pH neutral range – neither acidic or basic – including the water in the tailings basin, the mine pits, and water from the largest and only permanent stockpile on the mine site. The small portion of waste rock that has the potential to generate acidic water, representing about 6 percent of the total waste rock, will be temporarily stored onsite on a lined pad then returned to the open pit as backfill during reclamation. Once in the pit, this waste rock will be covered by water and therefore no longer able to generate acid.
- Rainwater that comes in contact with PolyMet's reactive waste rock and tailings will be contained, collected, and reused in the processing operations, and eventually treated to meet all state and federal standards before it is discharged from the property.

### **Will PolyMet be protective of wild rice?**

- The project will meet the strict Minnesota standard for wild rice that currently limits sulfate to 10 milligrams per liter. By comparison, Minnesota's drinking water standard for sulfate is 250 mg/L. PolyMet will build and operate a water treatment plant on site that uses membrane filtration to remove sulfate and metals from water to below water quality standards before it's discharged into the environment during operations and closure. The company built and operated a similar plant as a pilot that successfully treated about three million gallons of water from the project site to demonstrate to regulators it could meet the wild rice standard using its planned treatment technologies.

### **Will PolyMet release mercury into the environment?**

- The water on the PolyMet project site will have low concentrations of mercury, and surface water discharges will comply with the Great Lakes Initiative standard of 1.3 nanograms per liter for mercury. This is eight to nine times cleaner than the rainwater (which ranges from 10 to 12 ng/L) that falls on the site and two to three times cleaner than what is found in

natural runoff from the watershed (which ranges from 3.5 to 6 ng/L). See our separate Mercury Fact Sheet for additional details.

**What will PolyMet's effect be on the St. Louis River as it pertains to sulfate and mercury?**

- Because of legacy issues created by iron ore processing at the site, long-term water care is needed regardless of whether the PolyMet project moves forward. Obtaining construction and operating permits will enable us to implement a comprehensive water treatment program to address those legacy issues. The NorthMet project will lead to a net reduction in mercury and sulfate loading reaching the St. Louis River even when the emissions and their potential effect on water quality from the new project are factored in.

**Besides water treatment, what other methods will PolyMet use to protect water quality?**

- The project is designed to minimize the potential for negative environmental effects to the watershed. Extensive monitoring began more than a decade ago, will continue through construction and operation, and will extend long after operations cease to ensure the planned engineered controls work as expected. In the unlikely event a system fails, there are backup systems and controls already identified that will be deployed to ensure the operation remains in compliance with environmental standards.
- PolyMet has already collected a tremendous amount of monitoring data using a number of wells and surface water sampling locations located strategically throughout the plant and mine site areas. This data today helps inform decisions on what types of protections will be required. These same monitoring locations, and many more, will be used during operations and long after closure to ensure any potential issues are caught and addressed long before they could ever trigger an environmental problem. Monitoring wells, located at varying distances away from potential sources, are like radar for an airplane – they are designed to identify and stop a problem before it becomes an environmental issue.
- One of the engineering controls is a seepage capture system. This includes installation of cutoff walls – think of them as impermeable dams that extend underground from the surface to bedrock -- that will be constructed around a large portion of the tailings impoundment and permanent waste rock stockpile to stop water from migrating off-site. This also resolves legacy water issues created by iron-ore mining activities at the site between 1957 and 2001, prior to PolyMet's involvement.
- Water control and treatment methods have been used successfully in mining and many other industrial and municipal applications for decades. They will be used at the PolyMet site to meet all applicable water quality requirements.