

## Oppose the PolyMet NorthMet Sulfide Mine Protect Environmental Justice, Human Health & Climate Resilience

### PolyMet Sulfide Mine – Centuries of Waste and Pollution for Minnesota

The proposed PolyMet NorthMet sulfide mine would blast and dig 533 million tons of waste rock and ore from the ground over 20 years. The PolyMet deposit is a low-grade deposit, with more sulfur than copper and nickel – over 99% of what is dug out of the ground would be waste.

PolyMet mine pits are likely to be permanent sources of water pollution for Minnesota.

Contaminated seepage from PolyMet's permanent unlined 526-acre waste rock pile would require at least 200 years of water quality treatment. Billions of gallons of seepage from PolyMet's unlined tailings waste piles would remain polluted for at least 500 years.

PolyMet mine pollution would degrade our Minnesota streams and rivers in the Lake Superior and Boundary Waters watersheds, contaminate fish with toxic methylmercury, destroy wetlands and wild rice, and injure the developing brains of Minnesota babies and children.



### Sulfide Mining Track Record of Failure

Every time sulfide mining has been tried in a water-rich environment (like Minnesota's), it has resulted in contamination of surface and/or ground water with sulfates and toxic metals.

The U.S. Environmental Protection Agency (EPA) has concluded that the probability of potential *failure* of water collection and treatment during operations for a mine like PolyMet mine is 93 percent. If the PolyMet site were to be abandoned, sulfide mining's track record suggests that failure of water collection and treatment becomes "certain."

### PolyMet Mercury Contamination of Fish & Threat to Human Health in Minnesota



The PolyMet mine and tailings sites would be particularly *bad locations* for a sulfide mine due to Minnesota's wetlands and peatlands in the Lake Superior Basin.

Leading mercury scientist Dr. Brian Branfireun concluded that PolyMet sulfate and mercury pollution and hydrological changes to adjacent wetlands would "create a substantial risk of increased methylmercury in project site tributary streams, in the Partridge and Embarrass Rivers and downstream in the St. Louis River."

Many of the lakes and rivers downstream of the PolyMet site already have dangerous levels of mercury in fish. The Minnesota Department of Health recently found 1 in 10 infants in Minnesota's Lake Superior region are born with unsafe levels of mercury in their blood.

A Duluth psychiatrist explains, "Methylmercury is a strong toxin. . . Even lower level exposure can result in lower intelligence, poor concentration, poor memory, speech and language disorders, and decrease in visual spatial skills in children exposed to methylmercury in utero. Fetuses, infants, and young children are four to five times more sensitive to the adverse effects of methylmercury exposure than adults." Such disorders can be managed, but not cured.

**No Assessment has been done of PolyMet Health Risks/Impacts** despite requests by Minnesota Nurses Association (2014), Minnesota Public Health Association (2014), Minnesota Medical Association (2014), Minnesota Academy of Family Physicians (2015) and hundreds of individual doctors, nurses and health professionals.

## PolyMet Environmental Injustice

The PolyMet mine site would be located on Treaty lands, where Lake Superior Chippewa retain rights to hunt fish and gather. Negative impacts of the PolyMet mine on wetlands, fish, plants and wildlife would disproportionately affect Ceded Territory and downstream tribal resources.

Rights to fish and hunt for subsistence are core values to Minnesota's Ojibwe Bands and is a part of their cultural identity. As explained by the Fond du Lac Band, "the exercise of these rights requires access to natural resources that are not contaminated."

The PolyMet project would destroy critical habitat for endangered species, like wolf and Canada lynx, and for moose, a species critical to tribes that has declined by 52% in Minnesota since 2010.

The PolyMet project would directly destroy 914 acres of wetlands, indirectly impair or destroy up to 8,608 acres of wetlands, and result in a net loss of 6,026 acres of Minnesota High Biodiversity Sites. Scientists working for Bands determined that cumulative wetland loss and degradation in the Partridge River watershed (Ceded Territory) could reach *26.9 percent*.

The Bands explain "many tribally harvested resources are only available in coniferous bogs (e.g. cranberries, soft-leaved blueberries, sweet flag)." "The ecological term 'biodiversity' equates to 'abundance' and 'subsistence for the Bands.'"



## PolyMet Greenhouse Gas Impacts on Climate Change



The potential greenhouse gas emissions from the PolyMet sulfide mine and processing facility are staggering. Including fossil fuels burned to run vehicles and the PolyMet plant, potential carbon dioxide equivalent emissions in Minnesota would be 707,342 metric tons per year.

PolyMet alone would have more than one-fourth of the CO<sub>2</sub> equivalent impact of the whole city of Duluth including commercial, industrial, residential, transport, and waste.

Over a 20-year mine plan, PolyMet admits that it would produce 15.8 million tons of CO<sub>2</sub> equivalent pollution, more than 10 million tons from burning fossil fuels.

PolyMet underestimates the climate change impact of wetlands destruction. Destroying 1,000 acres of peatlands would release 2.7 million tons of CO<sub>2</sub>, increasing Minnesota's annual CO<sub>2</sub> emissions by 2% over 2005 levels.

## What Can We Do?

- 1) **Oppose issuance of any permits for the PolyMet sulfide mine** to prevent pollution in the Lake Superior and Boundary Waters watersheds and to protect health, environmental justice and climate resilience.
- 2) **Insist that existing mining pollution be controlled** by Minnesota agencies to restore clean water and to restore trust in our government;
- 3) **Support copper recycling**, which uses only 10% of the energy consumed by extraction and is cheaper than mining new copper.

**Learn more and support our work to oppose the PolyMet sulfide mine and protect clean water, health, and sustainability at [www.WaterLegacy.org](http://www.WaterLegacy.org) & follow us on [Facebook](#)**