

METALLIC SULFIDE MINING

ENVIRONMENTAL IMPACTS

Supporting Groups:

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The Problem

With the skyrocketing prices of copper, nickel and other metals, mining companies for the first time are looking to mine sulfide ores in northern Minnesota. Specifically, foreign-owned companies are drilling in the Duluth Complex, a rock formation at the edge of the Mesabi Iron Range that stretches from around Hoyt Lakes northeast into the Boundary Waters Canoe Area Wilderness.

Sulfide mining digs up tons of rock in order to remove tiny amounts of metal. In Canada, for every ton of copper produced, 99 tons of waste rock is discarded. Not only does that tear up huge tracts of forests, wetlands and soils, but the mountains of waste rock become the source of sulfide mining's biggest hazard: acid mine drainage.

When this rock is exposed to air and moisture, the chemical reaction causes sulfuric acid. The acid and heavy metals can leach into nearby lakes and streams, as well as down into the groundwater. The acid has been responsible for killing fish and other organisms in and near the water. In 1995, more than 300 snow geese were killed when they drank the contaminated water at the Berkley Pit, a closed copper mine in Butte, Mont.

Despite repeated assurances over the past several decades that new technology would prevent acid mine drainage, no such technology exists to prevent or eliminate its adverse effects. The mining industry is unable to identify a single sulfide mine that has failed to contaminate its surroundings. The acid drainage and heavy metal leaching may occur during mining or it may happen years after the mine closes. Roman mine sites in Great Britain continue to generate acid drainage 2,000 years after mining ceased. So, any treatment suggested by mining companies could require its upkeep for hundreds of years.

Acid mine drainage is almost always underestimated by the mining companies. The U.S. Environmental Protection Agency calls the drainage the "largest problem facing the U.S. mining industry." The numbers are astounding. More than 7,000 kilometers of streams in the eastern United States are affected by acid drainage. In the western U.S., the Forest Service estimates that between 20,000 and 50,000 mines are currently generating acid on Forest Service land.

Minnesota had a brush with acid mine drainage at the LTV Steel Mining Company's closed Dunka mine site in Hoyt Lakes. Even though it was a taconite mine, which ordinarily does not cause acid mine drainage, part of the waste rock was in the Duluth complex and it generated acid mine drainage which eventually found its way into Birch Lake's Bob Bay near Ely. The company was forced to use a wide range of technologies to slow the release of toxic concentrations of copper and nickel into the bay.

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METALLIC SULFIDE MINING: ENVIRONMENTAL IMPACTS

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The Problem, continued ...

Unfortunately, lack of foresight and insufficient bonds have resulted in taxpayers footing the bill for cleaning up the toxins from the abandoned mines. In the United States, it was estimated in 1988 that it would cost \$30 billion to clean up acid mine drainage. Too often, the mining companies walked away or declared bankruptcy.

The Solution

Any proposed sulfide mine must be closely scrutinized by state agencies and show that they can mine without damaging our valuable wetlands, rivers, lakes, groundwater and forests.

Further, the state should require letters of credit with no expiration date in amounts sufficient to ensure that no matter what happens to the company, state taxpayers don't get stuck cleaning up any mining mess.