

# Recycling For A Sustainable Future

## Metal Grades In Ore Are Falling Rapidly

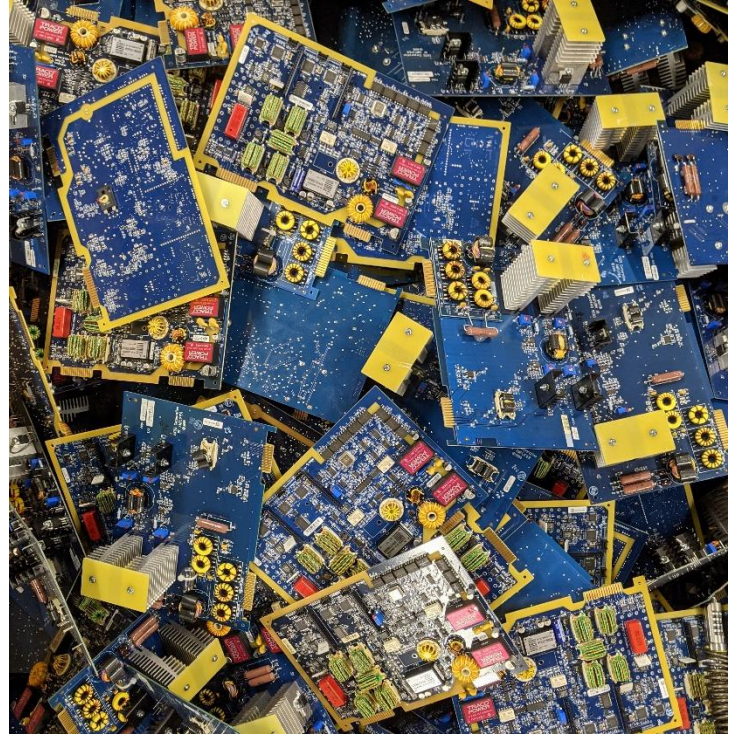
- Twin Metals - 0.55% copper, 0.17% nickel
- NewRange / Polymet - 0.33% copper, 0.088% nickel
- For these mines, more than 99% of the ore is waste!
- Once these ore bodies are mined ...what's left?

## Recycling Works!

- USGS – steel scrap recycling data indicates that between 70-75% of steel produced in the US is from recycled scrap.
- USGS - nickel recovered from scrap accounts for 60% of apparent consumption in 2025
- USGS reports between 30-35% of US copper consumption is from recycled sources

## Recycling Can Be Good Business

- A new startup called Reclaiming Critical Metals (RCM) on the Iron Range is working to provide a Minnesota solution.
- Uses new processes using innovative mechanical separation at room temperature, crushing and grinding followed by magnets, eddy currents, optical sensors and air classifiers to sort metals into high-purity streams.
- Macalester College's CollectED project is a Minnesota-based education and outreach initiative designed to increase consumer battery recycling, reprocessing, and collection.



- According to EPA data, the hard rock/metal mining industry is consistently ranked as **the largest industrial source of toxic pollution** in the U.S.
- Metal mining **releases over 1 billion pounds of toxic chemicals** annually, including arsenic, lead, and mercury.
- Lloyd's Register Foundation World Risk Poll report indicates that **mining and quarrying is the sector with the third highest prevalence of workplace harm** globally
- Mining is not a sustainable activity – RECYCLE!

Only 0.22% of the world's supply of Nickel comes from the US  
US only possesses 0.24% of the worldwide reserves of Nickel (all

From the USGS <https://pubs.usgs.gov/periodicals/mcs2025/mcs2025-nickel.pdf>

**Learn more at [www.tamarackwateralliance.org/recycling.html](http://www.tamarackwateralliance.org/recycling.html)**

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