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Of all of the water in the world, only about 2.5% of it is freshwater that we can drink. Of that 2.5%, only 1% is available for us as the rest is frozen in glaciers, deep underground, etc. That 1% is 0.007% of the world's total amount of water. Rising global temperatures due to climate change are melting glaciers which is just one of the events leading to a reduction in the freshwater we have available to us. We need to do what we can now to preserve what little freshwater we have for future generations. Open pit mining is destroying this water.

Open pit mining has been used in extracting ore since the 1800s. It involves removing layers of the earth to remove ore that is close to the surface. While it is successful in gathering tons of metals we use (85% of all mineral mining), it is extremely taxing to the environment because of land degradation and habitat loss. Additionally, 78% of all of the rock and minerals extracted during an open pit mining process are waste and cannot be used as compared to 7% with underground mining. Open pit mining is much cheaper than underground mining, however at what cost to the environment?

The environmental impact of open pit mining can be seen in the case of Butte, Montana. Once a booming mining town in the 1850s, it was producing 51% of America's copper supply and 26% of the world's. Emigrants to the US used to say, "Don't stop in America, go straight to Butte!" Now, Butte is no longer a home for people looking for jobs and a better life, but home to the largest Superfund site in the country.

Open pit mining in Butte has led to a massive pit (Berkeley Pit) that is a mile long, half a mile wide, over 1,700 feet deep and full of over 50 billion gallons of wastewater. Birds that have landed in it to take breaks during migrations have died from drinking the water as the high levels of iron and copper in it corroded their digestive systems.

Berkeley Pit was deemed a Superfund site in 1983 and has been damaging the groundwater that the people in Butte depend on ever since it was first dug up. Currently, there is a plan to clean the water in the Berkeley Pit, however the process will not begin until 2023 which frustrates a lot of the people in Butte. The plan is that 7 million gallons of water will be removed from the pit each day, treated, and then the treated water will be discharged into nearby streams. By these measurements, the cleanup process will take at minimum, 20 years.

Butte, Montana is just one example of the damages that open pit mining causes to the environment. There is currently a proposal to open an open pit mine near Bristol Bay, Alaska that would leave a pit with 60 billion gallons of wastewater, 20 billion more than Berkeley Pit. Instead of opening more mines that will leave future generations to deal with our waste, we should start to look at alternatives to open pit mining.

Although open pit mining is very inexpensive as compared to other mining methods, we should be valuing the environment over cost saving methods. One form of mining, In Situ Leach mining (ISL), is much better for the environment and is cheaper than many forms of mining.

ISL is commonly used in Uranium mining. It involves pumping water into ore underground in order to dissolve the minerals from the ore. The water, with the minerals in it, is then removed and the minerals are taken out of it. Because there is no ore removed from the ground, there is no rock waste and very little disturbance to the ground above it. If you did not know what one of these mines looked like, you probably wouldn't even realize it was there.

One downfall to it is the wastewater it creates. The water that has been used with this mining process has never been able to be fully cleaned. One mine in Australia predicts that throughout the entire course of the mine, it will generate 2.5 billion gallons of wastewater. While this number is still quite high, Berkeley Pit generated 16 times more than that number with open pit mining.

Additionally, since ISL goes below the water table, there is a risk of the water spilling into drinking water. This unfortunately has happened on multiple occasions, however with the proper planning, it can be easily avoided.

There are currently over 100 open pit mines around the world with the most being in Australia at 14. The US is close behind with 13 mines. With climate change already hurting our planet, we should do all we can now to preserve it for future generations. By doing open pit mining and continuing to open new mines, we are only hurting it even more. We should start to implement ISL when building new mines and stop creating new open pit mines when we haven't even fixed the ones that we have had in the past.

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