

1/16/22

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Secretary Deb Haaland,

I sat in on the 1st zoom meeting over the withdraw of leases from 225,328 acres in the Superior National Forest. These mineral leases are very important in many ways. It was because of these leases that this valuable ore deposit was discovered. Because of exploratory drilling, the properties of this ore deposit were also discovered. With this information, plans can be made on how to extract and process the ore without adversely affecting the environment. Twin Metals has proposed such a mining process and should be allowed to proceed with the permitting process.

While listening to the statements made during the 3 hr. zoom meeting, I was disappointed to hear so many people who were illinformed and fearful that the BWCA would be destroyed if mining were allowed. I was disturbed when I heard the District Ranger of the Superior National Forest say, "there are unanswered questions. Those questions will be answered during the permitting process."

I have enjoyed the Boundary Waters for over 60 yrs. and plan to continue until I can no longer paddle a canoe. I feel blessed to have this wonderful area in my backyard, so to speak. I worked in the mining industry for 31½ yrs. and have no fear of the BWCA being destroyed.

Twin Metals discovered that there is only 3% sulphides in this ore body and it also doesn't have many of the nasty properties that other ore bodies have. You can't compare

this ore body to those that were mined in the past and polluted the area without looking at the different characteristics of the ore bodies and the methods of extraction and processing.

Twin Metals is proposing an underground mine with a dry-stacking method for the waste rock. When the voids are created while mining, waste rock would then be used to fill the voids. This keeps the above ground footprint relatively small. The sulfides remain with the ore so the dry-stacking pile is non-reactive and won't be able to release sulfuric acid.

Let me explain the watershed itself. People who are fearful that the entire BWCA will be destroyed are not aware of the flow of water. From the site of the proposed mine, it would not be possible to destroy the entire area. None of the area from Basswood Falls to the Gunflint Trail has any possibility of being affected by any amount of pollution from mining. If the mine was to be completely negligent and not monitored but actually pumped pollutants into the water, it would affect less than 10% of the BWCA. Nobody wants that any amount to be negatively impacted, but let me explain why it won't.

There is a massive amount of fresh water constantly flowing into this Rainy River Watershed. The solution to pollution is dilution. If pollutants were to enter the watershed from the proposed mine site, it would 1st enter into the north end of Birch Lake that contains about 4.5 billion cubic feet of water. This water flows north into White Iron Lake

which contains about 3.5 billion cubic feet of water. During this 1st half of January, there has been an average of over 182,000 gal. per minute coming into White Iron from Birch Lake. This is occurring even after a summer drought and the fact that all the lakes are completely frozen over. This amount will at least triple in the spring.

From White Iron Lake, the flowage is joined by water from South Farm Lake, Farm Lake, and the north Kawishiwi River before entering Garden Lake. This great amount of water then enters Fall Lake before entering the BWCA. The mine would have to literally pump pollutants into the water for it to even have a chance to be detected by the time it enters the BWCA.

If the withdraw of leases stands, what will we gain? It will increase our dependency on other countries for what we can produce here. Our increasing demand for these precious metals will cause other countries to ramp up their production without any care for worker safety, or pollution standards. While paying for their products, we are actually paying for more global pollution.

We can mine these precious metals here with integrity. Trust the process.

Respectfully,

Chris A. Norman



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