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Comments: BACKGROUND: Chemical reactions between rock and water have the potential to release acid and toxic metal ions into groundwater and surface water. Groundwater quality and quantity will be adversely impacted by the project. These impacts will then affect surface water which in turn affects aquatic organisms. Groundwater and surface water have many interactions and should be thought of as two parts of a single integrated system, the primary distinction between the two being the time scales of their respective processes. Modeling in the DEIS shows that arsenic, antimony, mercury, and other metals will contaminate water for many years after mine closure. Keep in mind this detrimental prediction likely represents a best case scenario.

COMMENT: The effects analysis in the DEIS focuses on predictive numerical modeling. In attempting to quantify changes to water quality and quantity at different times during the mining operation and upto one hundred years in the future, the DEIS relies on certain assumptions that contain significant error. This error is primarily based on the methodology employed to analyze uncertainty in the model outputs.

For example, the faults and fracture zones present in the area are acknowledged as having potentially significant influence on groundwater movement and quality. However, they are not taken into account in the modeling. This omission is identified at C? hapter 4.8.8.2.1.3?.

Further, the plan to treat surface water i? n perpetuity t? o meet state water quality standards relies on an assumption that whatever company mines the site will put money into a trust fund to support the operational costs to treat the water forever. The infrastructure to do so (powerline, roads, treatment facilities) will remain forever. However, the contamination is modeled to still require treatment 100 years in the future. The DEIS assumes, without support that chemical reactions causing contamination will slowly decrease to a point where contaminants will be

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below state standards. When this time comes is unknowable. Moreover, state water quality standards have equal chances of becoming more strict in the future as remaining the same.

See ? Chapter 4.8.7?, ? 4.8.8?, ? 4.9.7, ? and ? Ch 4.9.8? for more detail. In particular ? 4.8.8.2.3 expresses an unsupported opinion that it is "unrealistic" to bring water quality up to a standard that is better than what exists currently at the mine site.