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Title:

Comments: Thank you for the opportunity to comment on the Draft Environmental Impact Statement and for extending the comment period until October 28, 2020. I am writing to 1) express my concern with the alternatives outlined in the Stibnite Gold Project's DEIS and 2) to request once again that the Forest Service extend the public comment review period to the full 120 days to allow for adequate review of this document. I am writing as a concerned citizen, stakeholder, whitewater kayaker who enjoys paddling in the South Fork Salmon watershed, and scientist holding a PhD specializing in fish biology and genetics.

I am troubled by the incomplete or unavailable information provided in Table 4.1-1. Although the DEIS has met CEQ regulation requirements to provide documentation of where information is incomplete or unavailable, it is clear that this missing information is critical to developing a "reasoned choice among alternatives".

I am concerned that the preliminary data used are not sufficient to adequately implement the Biotic LIgand Model to determine copper criteria for fish ["the Biotic Ligand Model-based criteria are preliminary and do not encompass the range of monitoring nodes and the range of variability required for Biotic Ligand Model implementation" (pg. 4.12-50)]. However, I am still more concerned that exceedances of copper criteria are predicted even with the preliminary data that are available (pg. 4.12-48). As the DEIS discloses, copper toxicity can have significant adverse effects on fish and aquatic species. The public should be informed about which, and how many, nodes would be expected to see an excess in copper to develop a well informed opinion about the degree of the adverse effect on fish and aquatic species. A Supplemental Environmental Impact Statement that includes the adequate parameters for the Biotic Ligand Model (including more nodes and increased duration of data collection) must be completed and made available to the public to reveal the entirety of the impacts to fish and aquatic species.

The DEIS also states that "information on the adequacy of the leak detection layer for Alternative 2 has not yet been provided" (pg. 4.1-3). And, "the functionality of the MicroDrain liner/leak configuration proposed under Alternative 2 is relatively new technology, thus adequacy of performance over long time frames has not been fully described" (pg. 4.1-3). This liner is critical in containing the millions of tons of toxic mining waste. If information is not publicly available about how well the liner will function or how long it will last, no reasonable determination can be made about the impacts to the affected environment and environmental consequences under Alternative 2. The Forest Service admits that this information is essential to a reasoned choice among alternatives. A Supplemental Draft Environmental Impact Statement should be developed disclosing the adequacy of the liner so that the public can review and comment on the relevant information.

I request that ecosystem services are analyzed for each resource. Ecosystem services have garnered much attention at the federal level as a way to capture the benefits that people and their communities derive from the natural environment in which they live. Contributions to water for consumption, improving fish habitat that support subsistence fisheries through bettering water quality measures, buffering against crop failure through pollination, and maintaining places that people value living or experiencing are some examples of benefits that flow from nature to people. Because these ecosystem services contribute to people's "health, wealth, and well-being," but often cannot be quantified in the same way as services sold in marketplaces, projects that could impact ecosystems and natural resources should require an ecosystem services assessment to illuminate how the project will enhance, sustain, or degrade the benefits that nature provides. The DEIS does not describe the ecosystem services that would be impacted either adversely or beneficially as a result of the project, and doing so would enable the public to better evaluate the impacts of the project. Please be sure to assess ecosystem services with respect to tribal values. Although the Nez Perce Tribe is participating in discussions to identify project mitigation measures, the formal opposition of the Nez Perce Tribe (pg 5-3) indicates that tribal values would be impacted by the project. Cultural services associated with tribal values are important for the public to

review to make an informed decision about this project.

Please assess the four federally identified ecosystem service categories for the project for each resource:

- (1) Provisioning services: tangible goods provided for direct human use and consumption, such as food, fiber, water, timber or biomass;
- (2) Regulating services: services that maintain a world in which it is possible for people to live, providing critical benefits that buffer against environmental catastrophe-examples include flood and disease control, water filtration, climate stabilization, or crop pollination;
- (3) Cultural services: services that make the world a place in which people want to live-examples include spiritual, aesthetic viewsheds, or tribal values; and
- (4) Supporting services: services that refer to the underlying processes maintaining conditions for life on Earth, including nutrient cycling, soil formation, and primary production.

Under Section 7(a)(2), "Federal agencies will insure that no discretionary action authorized or funded by them will result in jeopardy to the species, or in adverse modification of critical habitat". It is clear that under all action alternatives analyzed (Alt 1-4), loss of critical habitat to federally listed fish species will occur. In the case of Alternative 3, this loss is estimated to be as much as 69.5% in bull trout critical habitat (pg. ES-29 and Section 4.12). Because the alternatives, as they are devised, would contribute to adverse modification of critical habitat, I suggest that SGP explore other mining alternatives such as dry stack mining to determine if the adverse impacts of mining to critical habitat could be mitigated. Through a supplemental EIS, please evaluate and identify alternatives that would not result in adverse modification of critical habitat.

Thank you for considering my comments. This DEIS is large and I feel that I have not had adequate time to review, to the fullest degree possible, the impacts to fish and aquatic species. I have a full time job (writing environmental assessments) and other projects that take time. Please extend the comment period to the full 120 day length permitted so that I can better review items in the Appendices such as the Fish Passage Barriers, Critical Habitat, Intrinsic Potential, and Occupancy Models Impacts Technical Memo.

Regards,

Dr. Kristin Alligood