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Comments: My family and I have recreated in the Yellow Pine area for years. My mother lives in Lowman, and I was raised in Menan Idaho. My love for the wilderness and wildness that is Idaho is engrained in my soul. My occupation as a professional fly fisher and talent for Discovery Channel Animal Planet has taken me to over 27 countries around the world where I have fished for some of the most unique fish species on the planet in some of the most incredible landscapes. The EF South Fork Salmon River is still a destination that stands out in my mind from all my travels as an incredible area that is worthy to stand among the great wilderness areas my travels have taken me to and is worthy to preserve for my children and future generations.

The proposal of the Stibnite Mine by Midas Gold is stunning and alarming. I have reviewed the DEIS and there are several factors that were not adequately covered or even addressed.

The recreational fishing and fly fishing community was completely ignored for input on the DEIS.

Recently family members and myself have caught and released several what would be potential Idaho State Record Bull Trout, including one that measured over 34 inches less than 2 miles downriver from the Stibnite Pit Lake. There is no doubt that the EF South Fork Salmon River is "critical" spawning habitat and area for Bull Trout. During 2020 I personally saw more Chinook salmon moving up the river than I have ever witnessed in years past.

After reviewing the DEIS here are my concerns.

All four species of salmonids (Family Salmonidae) evaluated in the DEIS are of conservation concern, with Chinook (*Oncorhynchus tshawytscha*), steelhead (*O. mykiss*), and bull trout (*Salvelinus confluentus*) listed under the US Endangered Species Act, and westslope cutthroat trout (*O. clarki lewisi*) federally designated as a sensitive species. In general, with some exceptions especially for steelhead, the DEIS predicts Stibnite Mine development will result in net decreases in habitat quantity and quality relative to current baseline conditions for the species evaluated. However, the habitat decreases predicted in the DEIS are vast underestimates of direct, indirect, and cumulative impacts that would result from mining due to the currently impacted nature of the habitat, mischaracterization of current baseline conditions, underpredictions of impacts to water quantity and quality, and glaring omissions of physical, chemical, and biological components of fish habitat productivity.

1. Comparing impacts to current habitat conditions drastically underestimates cumulative impacts of mining. In the DEIS, mine impacts are compared to current baseline conditions (which are poorly characterized as addressed below). Habitat considered in the DEIS is already severely impacted by historic mining in the area.

Undoubtedly, historic mining impacts contributed to the current conservation status of all species evaluated. While the proposed alternatives describe some remediation of historic impacts, mine cleanup efforts simply cannot restore habitat to pre-mining conditions and cannot outweigh impacts from currently proposed mining. Previous domestic and global efforts have shown habitat restoration and mitigation is difficult, expensive, and often ineffective. Impacts should be predicted relative to estimated habitat conditions prior to mine development.

2. Current baseline conditions are insufficiently-and frequently inaccurately-characterized, rendering predictions of impact unreliable.

a. Hydrologic models lack appropriate spatial and temporal resolution, fail to robustly integrate groundwater and surface water interactions, and include additional flaws and inadequacies, ultimately resulting in mischaracterization of existing hydrologic conditions.

b. With the exception of descriptions of proposed mitigation methods, physical habitat characteristics-past or present-are virtually ignored in the DEIS despite their primary role in fish population productivity. Besides stream channel dimensions, gradient, and (to a limited extent) substrate, off-channel habitat, floodplain connectivity, and other habitat elements known to influence salmonid productivity receive virtually no consideration in the main body of the document or the main appendix regarding fish resources and habitat.

c. While current water quality may be accurately described, many area waters are considered impaired due to high temperatures and excessive sedimentation, antimony, arsenic, and mercury. As discussed above, the current state of impaired water quality should not be measured as baseline from which to predict allowable impact.

d. Multiple models used to describe various aspects of habitat are flawed oversimplifications of salmonid ecosystems, and/or rely on model inputs generated by other flawed and inaccurate models. This renders their utility for predicting and measuring impact questionable at best. Flawed models include the Stream and Pit Lake Network Temperature (SPLNT), Intrinsic Potential, Occupancy, and Physical Habitat Simulation (PHABSIM) models.

e. Salmonid distribution, abundance, and density estimates use flawed methodology and interpretation, and lack the spatial and temporal resolution to characterize baseline variability. Consequently, adequate characterization of existing, listed salmon and trout populations are lacking. The DEIS concludes that population level impacts to salmonids are unlikely to result from Stibnite Mine development. However, given underestimations of impacts (addressed below) and the lack of adequate baseline characterization of salmon populations, population level impacts from mine development (and other contributing factors) could simply not be detected.

3. Physical habitat impacts from mining are underestimated in the DEIS. While some important aspects of habitat complexity and connectivity were characterized in baseline assessments referenced in the document (e.g., off channel and riparian habitat, existing large woody debris, zones of groundwater and surface water exchange, etc.), they are ignored in the DEIS predictions of impacts. Degradation of those habitats from decreased flows, road crossings, increased sediment loads, spills, and other activities associated with mine development will inevitably impact salmonid populations.

4. Impacts to water quantity and quality from Stibnite Mine development are vastly underestimated in the DEIS. Flawed assumptions and conclusions from the baseline hydrologic model are compounded in predictions of hydrological impacts. Water temperature predictions rely on the same baseline hydrologic model outputs (indicating they are also flawed), predict substantial temperature increases, but fail to incorporate well documented impacts of climate change. Because water temperature is fundamental to salmonid growth and survival during multiple (and for some species all) aspects of their freshwater life history, seemingly small deviations from predictions could result in drastic underestimations of mining impacts. Water chemistry impact predictions consider unjustifiably limited parameters of concern. The DEIS qualitatively evaluates impacts to fish from potential increases in concentrations of five metals. Those described impacts are largely minimized in the document, but multiple other contaminants of significant concern to salmonids and other aquatic life receive no consideration.

5. Impacts to salmonids from project related groundwater changes are ignored in the DEIS. Groundwater and hyporheic inputs increase salmonid incubation and emergence success, and often support higher densities of fish due to their temperature and oxygen profiles relative to surface waters. Not only are groundwater flows poorly predicted in the DEIS, their role in salmonid survival and resulting impacts to it from changing groundwater levels is unaddressed.

6. Temperature increases are underestimated and impacts are unreasonably minimized. In addition to other shortcomings of the model used to predict project related temperature changes, it fails to incorporate substantial temperature increases due to climate change. Temperature increases related to climate change are already impacting bull trout and cutthroat trout and those impacts will only be compounded by project and climate related temperature increases. Moreover, even impacts of predicted temperature changes (up to about 4[ordm]) are minimized despite the pivotal role of temperature in determining spawn and emergence timing, incubation rates, and salmonid growth and subsequent survival.

7. Impacts to all non-salmon/trout species-fish and other aquatic life that support them-are ignored in the DEIS. Mountain whitefish (*Prosopium williamsoni*), suckers (*Catostomus* sp.), anadromous Pacific lamprey (*Entosphenus tridentatus*) and other important fish, freshwater insects, algae, and other primary producers are all critical elements of the foodwebs supporting salmonids considered in the EIS. Ignoring impacts to salmonid foodwebs is equivalent to ignoring impacts to salmonids at large.

8. The DEIS assumes no interactions among impacts. By considering fish species, stream reaches, and limited habitat impacts (e.g., stream dewatering, temperature increases, increases of metals concentrations, road impacts) all separately, the DEIS fails to acknowledge the broad ecological understanding that multiple stressors will amplify one another's effects on the ecosystem. This leads to a serious underestimate of impacts to fish and their habitat.

9. Loss of headwater streams are falsely assumed to have no downstream impacts. While loss of stream miles are estimated for the project area itself (and considered the only streams impacted), those estimates exclude

consideration of the function of upstream, contributing waterbodies, and downstream, receiving waterbodies. Impacts to waters downstream of the Yellow Pine Pit Lake-which may arguably be the most impacted waters-are simply not evaluated. Headwater and/or upstream habitats are fundamental drivers of physical, chemical, and biological characteristics of their downstream receiving waters. Failure to incorporate those impacts in the DEIS result in a substantial underestimation of project development.

10. The DEIS ignores climate change. Despite the widespread evidence of warming climate, the DEIS assumes the effects of climate on mining impacts are negligible. Climate is already impacting bull trout and westslope cutthroat trout habitat. Mining activity will only compound those impacts. Virtually all scientific, peer-reviewed literature substantiates that truth.

11. The DEIS assumes that mitigation and restoration efforts are possible and effective. The DEIS assumes that mitigation for historic mining efforts will offset impacts from proposed mining efforts. Experience has shown that habitat restoration and mitigation are difficult, expensive, and often ineffective.

How, when, and what method was used to contact licensed recreational fishers and fly fishers regarding commenting or concerns on the proposed mine project?

With the increased population of employees of Midas Gold what will the result be in an increase of risk for wildfires?

Is the US Forrester Service willing to risk acid mine drainage, tailings dam failure, cyanide spills?

Under the current DEIS, the only reasonable alternative is Alternative 5, No Mine.

Thank you for your time.

Regards,

Thad Robison

ATTACHMENT: Photograph of fishermen with large fish