

To: Payette National Forest  
ATTN: Forest Supervisor - Linda Jackson

Subject: Stibnite Gold Project #50516 - Comments - Focus on: Impacts to Warm Lake

Dear Ms. Jackson

Thank you for the opportunity to provide this information for use by yourself, the United States Army Corps of Engineers (USACE), the Environmental Protection Agency (EPA), and other federal, state, and county agencies regarding the Supplemental Draft Environmental Impact Statement (SDEIS) for the proposed Stibnite Gold project.

Please know that these comments and the information I have provided are unique. I reviewed hundreds of comments posted by others and only saw a few that briefly mention the large risks the Plan imposes on the water quality of Warm Lake. Please take time to thoughtfully review my comments and thoroughly consider my requested actions which are focused on protecting and preserving the water quality of Warm Lake.

I also want you to know that I attended both sessions of the USFS open house in Boise on Friday, 12/09/22. Spending several hours during each session visiting with USFS employees, USFS contractors, and Perpetua staff about my specific questions and concerns. All were cordial, but none were capable of allaying the many concerns I still have.

My comments begin with Requested Actions, followed by Background on why these specific actions are needed.

#### **REQUESTED ACTIONS:**

##### **No Chemical Deicers (NaCl, MgCl, etc.) used within the Warm Lake drainage**

- 1) **The Plan and Draft EIS** be revised to **specifically state and contractually affirm** that **no chemical deicers** will be applied to any section of Warm Lake Highway (Valley County road #10-579) to the **East of Big Creek Summit**.
- 2) Requirements in any **Special Use permit** issued by the Forest Service for transportation of materials to and from the mine site must **specifically prohibit** use of **chemical deicers** on the section of Warm Lake Highway (Valley County road #10-579) to the **East of Big Creek Summit**. With **any violation** of this prohibition serving as **basis for immediate revocation** of the USFS permit.
- 3) Any **Memorandum of Understanding (MOU)** or **Memorandum of Agreement (MOA)** or **other agreement** between **Valley County** and Perpetua Resources for operations and maintenance of roads in the County shall **specifically state and contractually affirm** that **no chemical deicers** will be applied to any section of Warm Lake Highway (Valley County road #10-579) to the **East of Big Creek Summit**.

##### **Water Quality Monitoring - Periodic Sampling / Testing / and Public Reporting of Results**

- 4) The **Plan and Draft EIS** be revised to **specifically state and contractually affirm** that **Baseline water quality values** for **Warm Lake** and its tributary **Warm Lake Creek** (from its initial source at Landmark Summit to the creek's inlet at Warm Lake) will be **independently secured and published** before any stage of mine preparation or operations begins.
- 5) Any **Special Use permit** issued by the Forest Service for transportation of materials to and from the mine site must require **MONTHLY sampling / testing / and public reporting** of **water quality results** for **Warm Lake** and its tributary **Warm Lake Creek** (from its initial source at Landmark Summit to the creek's inlet at Warm Lake) during the multi-year period that mine preparation, operations, and restoration is conducted. Sampling and testing should be conducted **more frequently following any reported or suspected spill**.
- 6) Any **permit** issued to Perpetua Resources by the **IDEQ** (Idaho Department of Environmental Quality) concerning water quality must require **MONTHLY sampling / testing / and public reporting** of **water quality results** for **Warm Lake** and its tributary **Warm Lake Creek** (from its initial source at Landmark Summit to the creek's inlet at Warm Lake) during the multi-year period that mine preparation, operations, and restoration is conducted. Sampling and testing should be conducted **more frequently following any reported or suspected spill**.

- 7) A cognizant, **lead agency** for **water quality** impacts **generated by the transportation** of materials to and from the mine **must be identified** (presumably, this is IDEQ or a federal agency).
- 8) The identified **lead agency** will directly **conduct**, or contract with a qualified third-party to perform, **MONTHLY sampling / testing / and public reporting of water quality results** for **Warm Lake** and its tributary **Warm Lake Creek** (from its initial source at Landmark Summit to the creek's inlet at Warm Lake) during the multi-year period that mine preparation, operations, and restoration is conducted.
- 9) **Public Reporting** will include **water quality measurements** presented in **table and graph format** maintained and **publicly accessible** on the identified **lead agency's website**.
- 10) Baseline and Monthly measurements are needed for these **water quality attributes**. [Note: these include the water quality measurements currently conducted in Valley County for Payette Lake and Lake Cascade] :
  - a. Dissolved Oxygen
  - b. Total Phosphorus
  - c. Water Clarity (turbidity)
  - d. Water Temperature
  - e. Nitrogen
  - f. Salinity
  - g. Trace readings for Petroleum Distillates and Solvents

**Permanently-placed Enhanced Spill Kits at Key Points along the Landmark Grade section of Warm Lake Highway**

The Plan calls for pilot cars and spill response units to accompany each transport of liquid hazardous materials, but that is not enough. Due to the incline of the Landmark Grade section of Warm Lake Highway and its proximity to the creek, any spilled liquids will quickly drain into and immediately contaminate Warm Lake Creek (ergo, Warm Lake itself). For this reason, extra resources are needed to effectively respond to spills on this section of the transportation route. Permanently-placed spill response kits with sufficient capacity and enhanced capabilities are needed to respond and contain spills up to 10,000 gallons in volume on this section of road.

- 11) **The Plan and Draft EIS** need to be revised to **acknowledge the need** for and **describe the planned placement of enhanced spill kits at key points along the Landmark Grade section of Warm Lake Highway**.
- 12) Any **Special Use permit** issued by the Forest Service for transportation of materials to and from the mine site must **specifically require the permanent placement of enhanced spill kits at key points along the Landmark Grade section of Warm Lake Highway**.
- 13) Any **permit** issued to Perpetua Resources by the **IDEQ** (Idaho Department of Environmental Quality) concerning water quality and spill mitigation measures **must require the permanent placement of enhanced spill kits at key points along the Landmark Grade section of Warm Lake Highway**.

**BACKGROUND:**

The SDEIS (Supplemental Draft Environmental Impact Statement) does not address risks to water quality for a uniquely sensitive, key waterway along the project's transportation route - **Warm Lake and its tributary, Warm Lake Creek**. Specifically, the SDEIS fails to identify impacts or provide clearly defined actions and countermeasures to sufficiently address spills of liquid hazardous materials (fuels, solvents, etc.) into the Warm Lake watershed.

**Warm Lake - a unique ecosystem reliant on clean, unpolluted water**

Warm Lake is the largest natural lake within the Boise National Forest, at a relatively small 420 acres. By comparison, Payette Lake is 5,000 acres and Lake Cascade is over 27,000 acres in size. Warm Lake's small size makes it many times more vulnerable to introduced pollutants. Even one spill of liquid hazardous materials into the Warm Lake drainage would be devastating.

Importantly, Warm Lake is home to a unique, highly sensitive fish species. It is commonly known that the native Kokanee salmon in Warm Lake is genetically unique to only Warm Lake. Concern for this species is on par with the widely-voiced and published concerns for Chinook salmon, bull trout, and cutthroat trout. **“The 1990 sample from Warm Lake was quite distinctive, bearing little genetic similarity to any of the stocks known or likely to have been planted there. The distinctiveness and the low level of genetic variability found in this sample are consistent with the hypothesis that it represents a native gene pool that has been isolated ...”**

[source: Population Genetic Structure and Life History Variability in *Oncorhynchus nerka* from the Snake River Basin, p. 729]<https://digitalcommons.unl.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=1477&context=usdeptcommercepub> ]

The lake's abundance of wildlife makes it highly popular for; camping, fishing, and hunting. Large mammals present in the area include moose, mule deer, black bear, and elk. Large birds present in the area include bald eagles and osprey. The lake contains rainbow, brook, lake, and bull trout as well as mountain whitefish and Kokanee salmon. [source: [https://en.wikipedia.org/wiki/Warm\\_Lake](https://en.wikipedia.org/wiki/Warm_Lake)]

All these human activities and animal species are dependent on preservation and protection of current water quality of the lake and its tributary, Warm Lake Creek (which provides 90% of total inflow to the lake).

### **Risks Introduced on Water Quality:**

The SDEIS does not establish quantifiable measures or identify baseline values to assess proposed impacts to water quality on Warm Lake or its tributary Warm Lake Creek.

At a minimum, before this SDEIS or Section 402 or 404 permits could be approved for this project, the SDEIS and project transportation plan would need to be revised to include requirements for; prohibition on use of chemical deicers on the Warm Lake Highway anywhere East of Big Creek summit, monthly sample testing of water in Warm Lake Creek at its entrance to Warm Lake by a federal agency or independent third party engaged by a federal agency, monitoring and follow up action by a federal waterways agency to enforce water quality compliance when pollution levels are detected, and that test results must be formally published each month to provide for public review and ensure transparency. Test results should be published in table and graph form that evidence the absolute levels of pollutants in the water over time (salts, fuel, hazardous materials, etc.) and the historic trends in those levels month-to-month over the life of the project. Federal waterways agencies need this information to hold the project management's team accountable for mitigation and clean up actions necessary to protect and preserve the water quality of Warm Lake Creek and Warm Lake itself.

### **Spills of Fuel and Liquid Hazardous Materials - Magnified Risk Along a Treacherous Stretch of Road**

The remote location of the proposed mining site relies on extremely heavy, unprecedented use of transportation infrastructure corridor (roads and bridges) in the National Forest System (NFS). In many sections of the corridor, the road's alignment and configuration are not designed or constructed to accommodate the proposed level of use or prevent hazardous material spills from immediately flowing to fragile, pristine waterways which flow into Warm Lake and then to the South Fork of the Salmon River.

Under the Plan, **ALL** materials and supplies transported to the site and **ALL** minerals and antimony concentrate extracted from the site would be transported through a single treacherous and regionally notorious 5-mile segment of Warm Lake Road - from Warm Lake to the Landmark summit (Valley County road #10-579).

The level of risk for accidents and rollovers and the direct impact hazardous spills would have within this segment are self-evident when considering the natural terrain and configuration of the road. This section of road was constructed in the 1930's by the CCC, is not sufficiently crowned, and its turns are not sufficiently banked for modern, large truck configurations. This road segment traverses and crosses over the primary headwaters of Warm Lake at numerous points and has extreme grade (8+%) through many tight, low-speed switchbacks through a steep, narrow canyon where all waters collected by Warm Lake Creek flow directly into Warm Lake. Warm Lake Creek is the primary tributary to Warm

prepared and submitted: 01-10-23

Joel Drake

Lake, providing over 90% of all flowing water to the lake. **Note:** Perpetua's recap of route miles within 100 feet of streams on SDEIS page ES-18 **omits** miles for **this section of road**, which if added (5-miles) would represent **43% of total miles** (11.5-miles) **within 100 feet of streams**. The hazardous features and location of this road segment are clearly insufficient to ensure reliable, safe, contained *daily* transport of the tons of environmentally destructive toxic mining chemicals, liquid fuels / oils / lubricants / solvents, and mining ore proposed for shipment to and from the mining site year-round through extremely severe weather conditions, over the extended twenty-year period call for under the Plan. **Table 4.6-1** on page 4-98 of the SDEIS identifies this 5-mile section as having **36% of total route miles affected by avalanche hazard** and that **29% of total avalanche chutes** within the entire route, further increasing risk for transit of liquid hazardous materials during winter months. Due to the unique, physical attributes of the canyon and the road, it is hard to comprehend how risks to water quality imposed by the Plan on this fragile, unprotected watershed can be sufficiently managed or mitigated by any reasonable level of investment in the reconstruction / reconfiguration of the road or use of existing spill containment technologies.

Given the Plan's projected volume of liquid hazardous material runs, the road's condition and configuration, and harsh weather conditions during much of the year, spill events are inevitable. The Plan and SDEIS do not even quantify the spill risk over the transportation route, which is common practice. Other similar proposals have included calculated spill risks. **Why has Perpetua elected to omit project-specific spill risk calculations** in the Plan and this SDEIS?

The Plan and SDEIS fail to demonstrate how water quality of Warm Lake can or will be protected and preserved. Again, even **one** spill of liquid hazardous materials into the Warm Lake drainage would be **devastating** with **long-term** impacts to the lake, its aquatic life, and its residents. Simply put, **Risk introduced by the Plan and the SDEIS on this fragile, unprotected water resource is NOT ACCEPTABLE - the risk is simply TOO HIGH.**

Illustrations of the canyon's configuration, road layout, and water crossings are displayed on, the following page.



Valley County road #10-579 - Warm Lake to Landmark summit

5.1 miles in length

2,055 ft. elevation gain (from 5,336 ft. to 7,246 ft.)

8.1% grade (average slope)

4 crossings directly over Warm Lake Creek through the canyon - road runs directly parallel to the creek for several miles

Hazardous spills within the narrow canyon would rapidly find their way directly to the creek, the lake, and the river

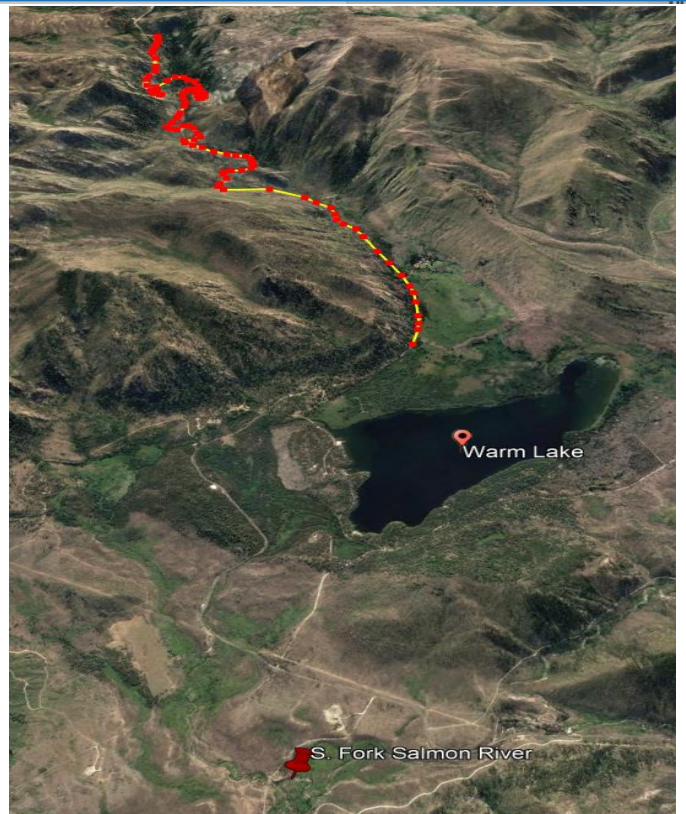
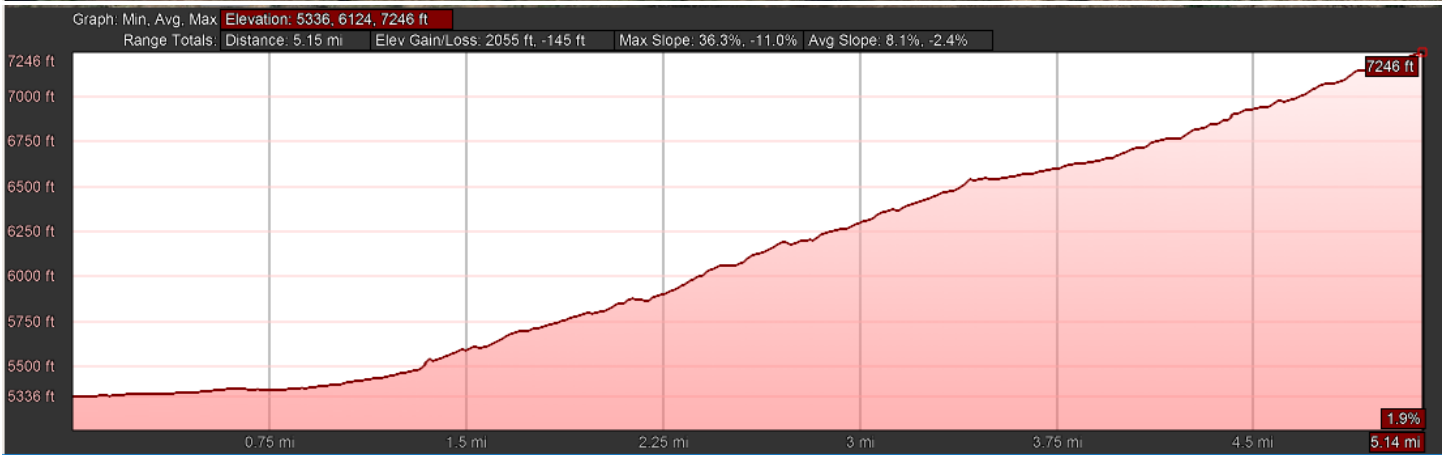
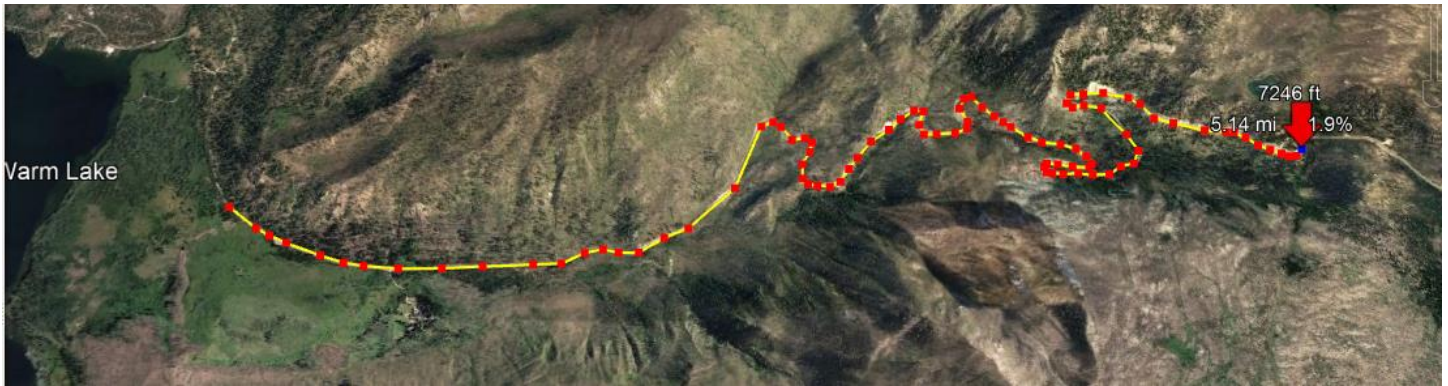


Table - calculated volume: hazardous liquid deliveries during period of proposed Operations using: values and information published in the 2020 Plan

Estimated Deliveries during Operations source: Table 12-4			Estimated Deliveries during period of Operations	
Hazardous Liquid	Gallons per Delivery	Deliveries per Year	Years of Operation*	Total Deliveries during Operations
Diesel Fuel	10,000	580	13.5	7,830
Gasoline	5,000	100	13.5	1,350
Lubricants (oils)	3,000	99	13.5	1,337
Antifreeze	3,000	13	13.5	176
Delivery of Hazardous Liquids		792	13.5	10,692

\* average of the Plan's stated range of Operations (12 to 15 years)

During the Plan's proposed period of operations, approximately 11,000 truckloads carrying environmentally hazardous liquids would navigate through the precarious 5.1 mile section of transportation corridor described in pages 3 through 6.

Within the Plan, Perpetua discloses that fact that they experienced a reportable spill in 2012. They do not specify what substance was spilled. Given the much lower volume of transports conducted prior to and since that date, the incident reported in 2012 represents a spill rate per delivery much greater than 1/11,000. Given the high volume of proposed delivery instances which would occur during all weather and road conditions over the course of each year, one or more catastrophic spills of liquids damaging to water quality are inevitable. As noted earlier, spills within the constricted canyon would rapidly flow to Warm Lake and then to the S. Fork of the Salmon River.

Acting within their authority and responsibilities called for under the CWA, the USACE / EPA / USFS are compelled to weigh this information and assess the great risk imposed on water quality in this pristine area by the Plan. The probability of and damaging impacts from spills are supported by information disclosed in the Plan itself. The SDEIS clearly cannot be accepted as drafted, and action to impose restrictions which sufficiently mitigate the risk to Warm Lake, or a decision to fully deny the Sec 402 and 404 permits sought by the Plan, must be made.

Sincerely,



Joel Drake  
 10429 West Rockwood Street, Boise, Idaho 83704  
 January 10, 2023