

Bryan Hurlbutt (ISB # 8501)
Laurence (“Laird”) J. Lucas (ISB # 4733)
Advocates for the West
P.O. Box 1612
Boise, ID 83701
208.730.6961 (Hurlbutt)
208.342.7024 x201 (Lucas)
bhurlbutt@advocateswest.org
llucas@advocateswest.org

Julia Thrower (ISB # 10251)
Mountain Top Law PLLC
614 Thompson Ave.
McCall, ID 83638
208.271.6503
jthrower@mtntoplw.com

Attorneys for Petitioners

**BEFORE THE BOARD OF ENVIRONMENTAL QUALITY
STATE OF IDAHO**

IDAHO CONSERVATION	)	
LEAGUE, SAVE THE SOUTH	)	Agency Case No. 0102-24-02
FORK SALMON, IDAHO RIVERS	)	OAH Case No. 24-245-05
UNITED, EARTHWORKS	)	
	)	PETITIONERS’ OPENING
Petitioners,	)	MERITS BRIEF
	)	
v.	)	
	)	
IDAHO DEPARTMENT OF	)	
ENVIRONMENTAL QUALITY,	)	
	)	
Respondent.	)	
_____	)	

TABLE OF CONTENTS

TABLE OF AUTHORITIES.....	i
LEGAL BACKGROUND ON 401 CERTIFICATIONS.....	3
OVERVIEW OF STIBNITE GOLD PROJECT & DEQ’S 401 CERTIFICATION.....	6
APPLICABLE LEGAL STANDARDS.....	10
ARGUMENT.....	10
I. DEQ FAILED TO CONSIDER WATER QUALITY IMPACTS FROM ATMOSPHERIC DEPOSITION.....	10
A. DEQ’S Failure to Include Impacts of Atmospheric Deposition of Haul Road Dust on Water Quality is Inconsistent with the CWA and its Regulations.....	11
B. Atmospheric Deposition May Be Significant from the Project.....	14
II. DEQ FAILED TO CONDUCT TIER I AND TIER II ANTIDEGREDATION REVIEWS FOR, AND FAILED TO PROTECT WATER QUALITY FROM, POLLUTION PROJECTED BY THE FOREST SERVICE AND PERPETUA.....	17
A. Tier I and Tier II Reviews Under Idaho’s Antidegradation Policy & Summary of Argument.....	17
B. East Fork SFSR Antimony & Temperature Increases.....	20
C. Meadow Creek Mercury & Temperature Increases.....	21
D. West End Creek Antimony, Arsenic & Mercury.....	23
III. DEQ FAILED TO CONSIDER MERCURY IMPACTS FROM REROUTING WEST END CREEK.....	25
IV. DEQ FAILED TO CONSIDER WATER QUALITY IMPACTS RELATED TO THE WEST END PIT LAKE.....	25
A. Background & Summary of Argument.....	25
B. West End Pit Lake Metals Contamination.....	27
C. Degradation of West End Creek Below the Pit Lake.....	27
V. DEQ FAILED TO FULLY EVALUATE SOCIOECONOMIC FACTORS.....	28
CONCLUSION.....	33

TABLE OF AUTHORITIES

	Page(s)
Cases	
<i>Am. Lung Ass’n of Idaho/Nev. v. Idaho State Dep’t of Agric.</i> , 142 Idaho 544 (2006).....	10
<i>917 Lusk v. City of Boise</i> , 158 Idaho 12 (2015).....	10
<i>PUD No. 1 of Jefferson Cnty v. Washington Dep’t of Ecology</i> , 511 U.S. 700 (1994).....	11
 Statutes	
33 U.S.C. §§ 1251-1388.....	3
33 U.S.C. § 1313.....	3, 4
33 U.S.C. § 1341.....	2, 4, 5, 13, 27, 33
33 U.S.C. § 1362.....	4
 Regulations	
40 C.F.R. § 121.1.....	5
40 C.F.R. § 121.2.....	11
40 C.F.R. § 121.3.....	11, 13, 27, 33
40 C.F.R. § 121.5.....	9
40 C.F.R. § 121.7.....	9
40 C.F.R. § 131.....	4
40 C.F.R. § 131.11.....	4
40 C.F.R. § 131.21.....	3

Idaho Code

Idaho Code § 39-107(5).....	1
Idaho Code § 67-5279.....	2, 3, 10, 16, 25, 28, 33

Idaho Administrative Procedure Act

IDAPA 04.11.01.210.....	2
IDAPA 58.01.23.....	1
IDAPA 58.01.02.....	4, 9
IDAPA 62.01.01.....	2

Idaho Water Quality Standards (IDAPA 58.01.02)

IWQS 000.....	4
IWQS 010.113.....	5
IWQS 010.20.....	18
IWQS 050.02.a.....	4, 5, 27
IWQS 050.02.b.....	4
IWQS 051.....	5, 17, 29
IWQS 051.01.....	17
IWQS 051.02.....	17
IWQS 052.....	5, 17
IWQS 052.01.....	17
IWQS 052.02.....	23
IWQS 052.06.....	5, 18
IWQS 052.06.a.....	18
IWQS 052.07.....	6, 17, 21, 22, 24, 27, 28
IWQS 052.08.....	6, 9, 17, 23, 28, 29, 33
IWQS 52.08.d.....	28, 29, 30, 31, 32, 33

IWQS 080.01.....	5
IWQS 210.....	5
Federal Register Notices and Regulatory Decisions	
88 Fed. Reg. 66558 (Sept. 27, 2023).....	11, 12

This Petition for Contested Case challenges the Clean Water Act Section 401 Water Quality Certification (the “401 Certification”) issued by the Idaho Department of Environmental Quality (“DEQ”) on May 22, 2024, to mining company Perpetua Resources Idaho, Inc. (“Perpetua”) for its proposed Stibnite Gold Project.

The Stibnite Gold Project site is in the headwaters of the East Fork of the South Fork of the Salmon River (“East Fork SFSR”), approximately ten miles east of the town of Yellow Pine, Idaho. As proposed, Perpetua would use conventional mining techniques to extract ore from three open pits, process gold, and dispose of mine waste at the site over sixteen years.

Section 401 of the federal Clean Water Act, 33 U.S.C. § 1341, requires that Perpetua seek certification from DEQ that the Stibnite Gold Project will comply with applicable water quality standards in order to obtain any federal permit authorizing pollution discharges at the mine. Among other federal permits, Perpetua has applied for a Clean Water Act Section 404 permit from the U.S. Army Corps of Engineers (“Army Corps”), seeking authorization to discharge pollutants to fill over twenty-one miles of streams and over 150 acres of wetlands. PET 014330. In the 401 Certification challenged here, DEQ certified that the requested 404 permit for the Stibnite Gold Project will comply with all applicable Idaho water quality standards.

When it issued the 401 Certification, DEQ failed to comply with Clean Water Act Section 401, the U.S. Environmental Protection Agency’s (“EPA”) Clean Water Act regulations, and Idaho water quality rules, its decision was not supported by substantial evidence in the record, and it otherwise acted on unlawful procedure, arbitrarily and capriciously, and/or abused its discretion under the Idaho Administrative Procedure Act, Idaho Code § 67-5279, in five ways: (1) DEQ failed to consider water quality impacts from atmospheric deposition of pollution from the Stibnite Gold Project; (2) DEQ ignored information from the U.S. Forest Service that

determined there would be decreased water quality from the mine to many streams at the Stibnite Gold Project site; (3) DEQ ignored increased mercury and other pollution in West End Creek that is projected to occur due to Perpetua's rerouting of West End Creek; (4) DEQ failed to include the West End pit lake in the waters certified and failed to address post-mining conditions in West End Creek; and (5) DEQ ignored numerous factors in its socioeconomic analysis.

Petitioners respectfully request that the Hearing Officer declare the 401 Certification invalid, and set aside and remand the 401 Certification to DEQ to correct these errors as required under Idaho Code § 67-5279.

LEGAL BACKGROUND ON 401 CERTIFICATIONS

Congress enacted the Clean Water Act, 33 U.S.C. §§ 1251–1388, “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” *Id.* § 1251(a). To those ends, the Clean Water Act requires states to develop water quality standards that establish, and then protect, the desired conditions of each waterway within the state’s regulatory jurisdiction. *Id.* § 1313(a). Water quality standards must be sufficient to “protect the public health or welfare, enhance the quality of water and serve the purposes of [the Clean Water Act].” *Id.* § 1313(c)(2)(A). State water quality standards must be reviewed and approved by the EPA before they become a component of the state’s regulatory scheme deemed consistent with the federal Clean Water Act. *See* 40 C.F.R. § 131.21(c).

Water quality standards must include three elements: (1) one or more designated uses of a waterway; (2) numeric and narrative criteria specifying the water quality conditions, such as maximum allowable amounts of pollutant, maximum allowable temperatures, and the like, that are necessary to protect the designated use; and (3) antidegradation policy requirements that ensure that uses are protected and high quality waters will be maintained and protected.

33 U.S.C. §§ 1313(c)(2), 1313(d)(4)(B); 40 C.F.R Part 131, Subpart B. For water with multiple use designations, the criteria must support the most sensitive use. 40 C.F.R. § 131.11(a)(1).

Section 401 of Clean Water Act, entitled “Certification,” requires that “[a]ny applicant for a Federal license or permit to conduct activity . . . which may result in any discharge into navigable waters, shall provide the licensing or permitting agency a certification from the State in which the discharge originates. . .” 33 U.S.C. § 1341(a)(1). The state is specifically required to certify “that any such discharge will comply with the applicable provisions of sections 1311, 1312, 1313, 1316, and 1317” of the Clean Water Act, which include a state’s EPA-approved water quality standards. *Id.* “Any certification” provided by a certifying authority “shall set forth any effluent limitations and other limitations, and monitoring requirements necessary” to ensure compliance with these water quality standards. *Id.* § 1341(d).

DEQ is the agency designated to make 401 certification decisions in Idaho. The Idaho Water Quality Standards, IDAPA 58.01.02 (hereafter “IWQS”), includes EPA-approved water quality standards and requirements that apply in Idaho. DEQ is “charged with the supervision and administration of a system to safeguard the quality of the waters of the state including the enforcement of standards relating to the discharge of effluent into the waters of the state.” IWQS 000. “Wherever attainable, surface waters of the state shall be protected for beneficial uses which for surface waters includes all recreational use in and on the water surface and the preservation and propagation of desirable species of aquatic life.” IWQS 050.02.a. “In all cases, existing beneficial uses of the waters of the state will be protected.” IWQS 050.02.b.

A 401 certification must cover all “navigable waters”, which are “waters of the United States,” as such terms are used in the Clean Water Act. 33 U.S.C. §§ 1341(a)(1), 1362(7). Additionally, 401 certifications require states to issue certification based on any other applicable

requirements of state law. *Id.* § 1341(d). As relevant here, Idaho defines “waters” to include “[a]ll accumulations of water, surface and underground, natural and artificial, public and private, or parts thereof which are wholly or within, which flow through or border upon the state.” IWQS 010.113. Idaho requires surface waters of the state be protected for beneficial uses, including recreation in and on the water surface, as well as “preservation and propagation of desirable species of aquatic life.” IWQS 050.02.a.

The scope of a 401 water quality certification is broad in that it shall certify compliance with any “water quality requirements,” which include any limitation, standard, or other requirement under any applicable Clean Water Act provision, any Federal and state laws or regulations implementing those sections, and any other water quality-related requirement of state law. 40 C.F. R. § 121.1(j).

Among other water quality requirements, the Idaho Water Quality Standards includes concentrations of pollutants that must be met, including for mercury, arsenic, antimony, temperature, and other pollutants, designed to protect beneficial uses. *See* IWQS 052.06, 210. In particular, the Idaho Water Quality Standards require:

No pollutant shall be discharged from a single source or in combination with pollutants discharged in other sources in concentrations or in a manner that:

Will or can be expected to result in violation of the water quality standards applicable to the receiving water body or downstream waters; or

Will injure designated or existing beneficial uses

IWQS 080.01.

As part of a 401 Certification, DEQ is required to conduct an antidegradation review any time an activity is calculated to cause a lowering of water quality (or “degradation”). IWQS 051; IWQS 052. For every water body that will suffer degradation, DEQ must conduct a “Tier I”

review to ensure the activity will not degrade water quality to the point that the water body no longer meets applicable water quality standards. IWQS 052.07. For “high quality” waters, DEQ cannot allow any degradation of water quality, unless it conducts a Tier II analysis and determines there are no source controls and alternatives available to prevent the degradation, and determines the degradation is socioeconomically necessary. IWQS 052.08.

OVERVIEW OF STIBNITE GOLD PROJECT & DEQ’S 401 CERTIFICATION

Perpetua is currently in the process of seeking multiple permits and other approvals from federal and state agencies for the proposed Stibnite Gold Project. As described by DEQ in the 401 Certification:

The Stibnite Gold Project (SGP) proposed by Perpetua Resources Idaho, Inc. (PRII) is a mining and reclamation operation near Yellow Pine in Valley County, Idaho. The operation footprint impacts federal, state, and private lands in both the North Fork Payette River and South Fork Salmon River subbasins. The Stibnite Mining District was first mined in the early 1900s and experienced intermittent mining activities through 1997. During that time, mining related facilities were constructed in the basin and ultimately abandoned. Various remediation and reclamation activities have taken place to remove structures and contaminated/hazardous material, but environmental concerns still exist in the basin resulting from previous mining activities. Many of the mining impacts for the proposed SGP will overlap with historic mining impacts already present in the Meadow Creek subbasin, although the proposal will also include new impacts from new and improved infrastructure, and active mining operations. All previous mining activities and remediation efforts predate PRII’s ownership.

Under the proposed action plan, the project proponent would be spending the first 3 years constructing infrastructure and preparing for mining operations. PRII has also proposed remediating and restoring some areas unaffected by mining operations early in the project, including portions of Blowout Creek. Next, operational construction and mining activities would take place over an estimated 15 years, while mine closure and reclamation would take place during years 16 to 25. Activities proposed for Clean Water Act § 404 permitting and § 401 water quality certification under the action plan include the following:

- Transmission line construction and improvements

- Access road construction and improvements, including stream crossings
- Mining and backfill activities
- Dewatering and diversion activities
- Construction and maintenance of tailings storage
- Construction of tailing storage buttress
- Construction of Stibnite Gold Logistics facility
- Road maintenance facilities
- Worker housing facilities

Extensive groundwater and surface water monitoring will be required during construction and operation phases. Project activities will also include construction for restoration and remediation efforts. Postclosure and reclamation will include environmental monitoring to demonstrate the efficacy of remediation at the site.

Over the life of the project, dredge and fill activities for the SGP would impact an estimated combined 111,737 linear feet of streams in the North Fork Payette River and South Fork Salmon River subbasins. Additionally, the project would impact an estimated 150.44 acres of jurisdictional wetlands between the two subbasins. Mitigation and remediation projects are proposed to compensate for both permanent and temporary impacts to water bodies in the two subbasins. More details on project background and activities found in the *Stibnite Gold Project Supplemental Draft Environmental Impact Statement (SDEIS)* (USDA 2022).

PET 014329–014330.¹

On April 7, 2023, Perpetua submitted an application to the Army Corps for discharging dredge and fill material under Section 404 of the Clean Water Act for the Stibnite Gold Project. DEQ 000001–000725 (application).

On April 21, 2023, DEQ received a prefiling meeting request from Perpetua concerning 401 certification for the Army Corps Section 404 permit. *See* PET 014328. DEQ hosted a pre-filing meeting on May 17, 2023. *Id.* And on May 26, 2023, DEQ received a certification request.

¹ Petitioners cite using bates numbers for the following documents filed in this case: DEQ’s October 11, 2024 initial disclosures (DEQ 000001–010681); Perpetua’s November 1, 2024 initial disclosures (PER 000001–003540); Petitioners’ November 1, 2024 initial disclosures (PET 000001–014327); DEQ’s December 13, 2024 response to discovery requests (DEQ 10682–11428); and Petitioners’ First Supplemental Disclosures (PET 014328–014772).

Id. DEQ issued notice of a public comment period on the draft certification on March 6, 2024, through April 5, 2024. *Id.* DEQ extended the comment period through April 12, 2024. *Id.*

Petitioners ICL, IRU, SSFS, and Earthworks submitted joint written comments on April 12, 2024. DEQ 010023–0010148. Petitioners raised numerous concerns, including that DEQ failed to consider water quality impacts from atmospheric deposition of metals like mercury and arsenic that could occur from the large amounts of dust the Stibnite Gold Mine is projected to generate; that DEQ failed to consider water quality impacts projected by the U.S. Forest Service; that DEQ failed to certify whether the West End pit lake will comply with water quality standards; and that DEQ failed to consider important socioeconomic factors to justify water quality degradation of Tier II waters. *See id.*

The Nez Perce Tribe also submitted comments on April 12, 2024. DEQ 010011–010022. The Nez Perce Tribe raised similar concerns to Petitioners, including DEQ’s failure to certify whether the West End pit lake will comply with water quality standards, specifically mercury, and DEQ’s insufficient socioeconomic justification for the degradation of Tier II waters. *See id.*

On May 22, 2024, DEQ issued the final 401 Certification, along with its response to comments. PET 014328–014467. While DEQ made limited updates to the 401 Certification, it rejected most of the issues raised by Petitioners and other commenters.

DEQ found the Stibnite Gold Project will impact 33 Assessment Units within the North Fork Payette River and South Fork Salmon River subbasins. PET 014331. DEQ conducted antidegradation reviews for 28 high-quality waters it determined will be impacted by the Stibnite Gold Project. *See* PET 014333. DEQ determined degradation will occur in 16 of those waters, and DEQ relied on Perpetua’s Alternatives Analysis and Socioeconomic Justification (“AASJ”)

to conclude those degradations were necessary to accommodate important economic and social development. *See* PET 014358.

However, DEQ never included the water quality impacts from atmospheric deposition of metals-laden dusts expected during construction and mining, instead relying on a policy that it does not consider “operational” impacts in 401 certifications. *See* PET 014368.

DEQ also admitted that there were numerous “pollutants of concern” for the Stibnite Gold Project, including temperature, antimony, arsenic, and mercury among others. PET 014331. But the 401 Certification’s antidegradation reviews narrowly focused on temperature increases only (*see* PET 014367, 014384, 014387, 014396, 014456), ignoring other pollutants of concern which are projected to increase in concentration due to constructing mine pits and a mine waste facility, among other 404 dredge and fill activities occurring in, over, under, and next to streams and wetlands throughout the Stibnite Gold Project site. *See* PET 009955.

Moreover, although the AASJ relied upon by DEQ reviewed the benefits of the Project, it failed to consider the social, economic, and environmental costs associated with the proposed degradation in water quality, as required under the Idaho Water Quality Standards antidegradation policy for Tier II waters. *See* IWQS 052.08; *see generally* PET 014392–014450.

Nevertheless, DEQ concluded in the 401 Certification:

Based upon review of the federal permit application, readily available water quality materials, and certification request in accordance with 40 C.F.R. §§ 121.5 (b) and (c), and 121.7(c), received on 5/26/2023, DEQ certifies that if the permittee complies with the terms and conditions imposed by the federal permit and the conditions set forth in this water quality certification, then it is reasonable for DEQ to conclude that the activity will comply with water quality requirements, including applicable requirements of the Clean Water Act §§ 301, 302, 303, 306, and 307, Idaho’s “Water Quality Standards” (IDAPA 58.01.02), and other appropriate water quality requirements of state law.

PET 014328.

APPLICABLE LEGAL STANDARDS

Under the Idaho APA, an agency action like DEQ issuing the 401 Certification will be overturned where its findings, inferences, conclusions, or decisions are: “(a) in violation of constitutional or statutory provisions; (b) in excess of the statutory authority of the agency; (c) made upon unlawful procedure; (d) not supported by substantial evidence on the record as a whole; or (e) arbitrary, capricious, or an abuse of discretion.” Idaho Code § 67-5279(3). *See 917 Lusk v. City of Boise*, 158 Idaho 12, 14 (2015).

“An action is capricious if it was done without a rational basis. It is arbitrary if it was done in disregard to the facts and circumstances presented or without adequate determining principles.” *Am. Lung Ass’n of Idaho/Nev. v. Idaho State Dep’t of Agric.*, 142 Idaho 544, 547 (2006) (citations omitted).

ARGUMENT

I. DEQ FAILED TO CONSIDER WATER QUALITY IMPACTS FROM ATMOSPHERIC DEPOSITION

In their comments on the draft 401 certification, Petitioners raised the issue that DEQ should consider water quality impacts from atmospheric deposition of dust the Stibnite Gold Project will generate, including dust laden with mercury, arsenic and other metals. PET 014368. However, DEQ dismissed Petitioners’ comment without any analysis, stating that dust created from the Stibnite Gold Project are “operational impacts, which are outside the scope of the 401 Certification.” PET 014368.

DEQ’s failure to consider atmosphere deposition on water quality is arbitrary and in direct conflict with Federal water quality certification rules. The 401 Certification should therefore be vacated and remanded back to DEQ to consider the impact of atmospheric deposition of fugitive dust, including arsenic and mercury, on water quality.

A. DEQ’s Failure to Include Impacts of Atmospheric Deposition of Haul Road Dust on Water Quality is Inconsistent with the CWA and its Regulations.

Under the Clean Water Act, section 401, an agency may not issue a license or permit to conduct any activity that may result in a discharge into waters of the United States unless the authorized agency issues a CWA section 401 certification, or waives the requirement. 40 C.F.R. § 121.2. Although the regulations limit the certifying agency’s evaluation to “water quality-related impacts from the activity,” that evaluation includes impacts “from the activity subject to the Federal license or permit, including the activity’s construction and operation.” *Id.* § 121.3.

EPA’s 401 regulations, which apply to DEQ 401 certifications, were first adopted in 1971, and then revised in 2020, and again in 2023 (“2023 Rule”). 88 Fed. Reg. 66558 (Sept. 27, 2023). When promulgating the 2023 Rule, EPA explicitly stated that consideration of water quality-related impacts considers both point sources and nonpoint sources:

[O]nce there is a prerequisite potential for a point source discharge into waters of the United States, then the certifying authority may evaluate and place conditions on the “activity,” which includes consideration of water quality-related impacts *from both point sources and nonpoint sources*.

Id. at 66569 (emphasis added).

Furthermore, EPA emphasized that the 2023 Rule returned to evaluating the activity as a whole “best reflects congressional intent,” “appropriately restores consistency with the ‘activity as a whole’ scope that the Supreme Court affirmed . . . over a quarter of a century before,” as opposed to a “discharge-only” approach, and “allowed states . . . to protect their water quality from the *full activity* made possible by a Federal license or permit.” *Id.* at 66593 (emphasis added) (citing *PUD No. 1 of Jefferson Cnty. v. Washington Dep’t of Ecology*, 511 U.S. 700, 712 (1994) (“EPA’s conclusion that *activities*—not merely discharges—must comply with the state water quality standards is a reasonable interpretation of § 401, and is entitled to deference.”));

see also id. at 66593–66601 (stating rational for consideration of “activity as a whole” in 401 certifications). EPA explained that this “activity as a whole” approach is necessary to certify that the applicant “will comply” with water quality requirements, as required under Section 401 of the Clean Water Act. *Id.* at 66594.

In response to Petitioners’ comments that the impacts to water quality from deposition of dust generated by constant heavy truck trips along miles of haul roads must be considered (DEQ 010037), DEQ deflected Petitioners’ concerns, claiming consideration of dust is “outside the scope of the 401 Certification.” PET 014368. In dismissing Petitioners’ request to consider atmospheric deposition, DEQ referenced its memorandum *Scope Directive 2023 Clean Water Act Section 401 Water Quality Certifications for Section 404 Permits* (May 6, 2024) (“*Scope Directive*”). PET 014368. The *Scope Directive* states that:

DEQ’s evaluation of project activities seeking certification of Clean Water Act § 404 permit authorization from the Army Corps of Engineers has been and will remain focused on the potential water quality impacts from the proposed project’s activity and not the operation. Potential adverse effects from a proposed project’s activity on water quality may include evaluation of direct and indirect, short and long term, upstream and downstream water quality-related impacts. DEQ will not expand the scope of review to include the operation that may be subject to a different federal or state license or permit.

DEQ 010680–010681. DEQ’s *Scope Directive* and its reliance on it to exclude consideration of dust from haul roads on water quality in this case is directly at odds with EPA’s 401 certification regulations updated in 2023, which requires agencies to consider water quality impacts of the “activity as a whole,” not just the discharge, when issuing 401 certifications. *See* 88 Fed. Reg. at 66559.

Here, the 55-miles of haul roads at the mine site that are used to transport ore from mining pits to ore processing facilities and that emit arsenic and mercury laden fugitive dust are

unequivocally part of the Stibnite Gold Project’s “operation” facilitated by the 404 Permit, and the emissions from these haul roads are subject to the Permit to Construct issued by DEQ, and thus the impacts to water quality from atmospheric deposition should have been considered. PET 010796 (The Stibnite Gold Project “will required the construction of . . . onsite haul roads. * * * Conventional open-pit mining methods, including . . . hauling will be used to extract ore and waste rock.”); PET 010797 (“Ore will be hauled to the primary crusher area”); PET 010810–010811 (discussing fugitive dust from haul roads as part of the air permit analysis). In the *Scope Directive*, DEQ acknowledges the EPA’s 2023 Rule, which addresses the scope of certification at 40 C.F.R. § 121.3. DEQ 010680. DEQ even quoted the part of the regulations which states that the certifying authority’s evaluation is of “water quality-related impacts from the activity subject to the Federal license or permit, including the activity’s construction and operation.” *Id.* While the regulations include “construction and operation” as part of the “activity,” DEQ still, however, dismissed Petitioners’ comment stating that the heavy metal-laden dust created by the very operation of the mine site were “*operational* impacts [] outside the scope of the 401 certification.” PET 014368 (emphasis added).

There is no legal authority in the *Scope Directive* and no rationale provided by DEQ in its response to comments that supports how excluding atmospheric deposition in this instance complies with the 401 certification process or Idaho’s Water Quality Standards. To the extent that DEQ argues that there was no need to consider atmospheric deposition because the impacts were speculative, it is incumbent on DEQ to develop a record based on substantial evidence to support that determination; it did not do so.

DEQ’s 401 Certification thus violates Clean Water Act, 33 U.S.C. § 1341, EPA’s 401 regulations, 40 C.F.R. § 121.3, and Section 010.01 of Idaho’s Water Quality Standards,

which require considering water quality impacts from the activity as a whole, including operations such as mine hauling trucks and other operations that will generate dust.

B. Atmospheric Deposition May Be Significant from the Project.

Unpaved roads have been recognized as a potentially significant source of dust pollution that becomes sediment in nearby streams, impacting water quality and thus fisheries and aquatic life and recreational uses. PET 000561, 000771, 000794; *see also* PET 001133 (“Dust that the wind carries off-site can impact nearby waterbodies due to direct deposition or transport by stormwater.”); PET 011391 (During a rain event, accumulated dust could be washed into nearby waterbodies over a short period and increase turbidity, total suspended solids, and other pollutant concentrations depending on the makeup of the source material.”). Dust that carries heavy metals, such as arsenic and mercury, have been reported to impact stream loads. PET 009910; *see also* PET 000349. (“Dust from unpaved roads is known to affect streams, so it is included in this assessment.”).

For other proposed mines in Idaho, federal agencies have recognized the potential for dust deposition and evaluated the impacts (including site specific pollutants of concern) on water quality because “[a]erial deposition from [a project’s] air emissions [can] contribute[] incrementally to increased surface water concentrations of [metals] . . . depending on the surface water location and its proximity to the current mining phase.” *See* PET 014772; *see also* PET 014767–014771 (atmospheric deposition analysis for the Caldwell Canyon mine).²

The Stibnite Gold Project is located in the headwaters of the East Fork SFSR watershed in steep terrain with numerous headwaters streams and rivers flowing throughout the mine site.

² In the case of the Caldwell Canyon mine, the Bureau of Land Management analyzed the impacts of atmospheric deposition of selenium as it is a well known site specific pollutant of concern within eastern Idaho’s phosphate mining patch.

Within the mine site, mining will take place directly in some streams, and the Project will have 55 miles of gravel haul roads primarily adjacent to these streams and rivers³ that will service a continuously operating fleet of 32 haul trucks weighing between 37 and 357 tons, PET 010811, and will generate large quantities of dust laden with heavy metals, and, in particular, substantial amounts of arsenic. *See* PET 010810 (Mining Fugitive Emissions Table); PET 010813 (Table 6 listing arsenic and mercury emissions).

Dust deposition, particularly dust laden with toxics, poses a dual threat to human health and the environment. According to the Forest Service’s Water Quality Specialist Report for the Stibnite Gold Project, “[a]ir emissions from the [Stibnite Gold] project have the potential to contribute metals to the ground surface via wet and dry deposition that have the potential to affect surface water chemistry.” PET 009909. “Increased sediment in streams due to dust deposition can have significant impacts to fisheries habitat for species, such as bull trout, that require “clean water quality that is relatively free of sediment and contaminants.” PET001577.

Arsenic, particularly inorganic arsenic, is a toxic carcinogen to aquatic life and humans. PET 008289. It concentrates in the tissues of fish and poses a risk to recreational users from direct contact to contaminated water and through the consumption of contaminated fish. PET 008289; PET 000029. Mercury bioaccumulates in tissues of living organizations and poses a hazard to human health from the consumption of fish living in contaminated waters. PET 008289. “[R]egionally, the most significant source of mercury in Idaho is air deposition.” PET 008289. Both arsenic and mercury are identified by DEQ as “pollutants of concern” for this Project in the 401 Certification. PET 014331.

³ *See* PET 014750 (ROD, Figure 2-1: Mine Site Layout, Stibnite Gold Project, Stibnite, ID), reproduced *infra* at 19.

The record documents demonstrate that DEQ knew that significant fugitive dust containing arsenic and mercury will be emitted from haul roads. According to DEQ’s Statement of Basis for the Permit to Construct it issued to Perpetua in June 2022, the Stibnite Gold Project will generate up to 3,569 tons per year (T/yr) of particulate matter from haul roads alone.⁴ PET 010810. This will include 2.4 T/yr of arsenic and a potential to emit 244 pounds per year (lbs/yr) of mercury under the current air permit. PET 010813. The Forest Service’s Water Quality Specialist Report for the Stibnite Gold Project recognized that aerial deposition of mercury “would have a minor to moderate, long-term effect on particulate mercury load in streams.” PET 009910.⁵

Yet, DEQ never analyzed the impacts that atmospheric deposition of either arsenic or mercury will have on water quality at the site.

DEQ’s decision to ignore water quality impacts from atmospheric deposition is not supported by substantial evidence in the record as a whole, is in violation of the above-referenced statutory and regulatory provisions, was made upon unlawful procedure, and is arbitrary, capricious, and/or an abuse of discretion under Idaho Code § 67-5279. It should therefore be vacated and remanded back to DEQ with instructions to consider the impact of atmospheric deposition of fugitive dust, including arsenic and mercury, on water quality.

⁴ The Mining Fugitive Emissions rates are based on a controlled emission rate and account for dust control measures established in the permit. PET 10808.

⁵ The Water Quality Specialist Report does not address aerial deposition from arsenic. *See* PET 009963–010067. EPA’s comment letter on the FEIS criticized the FEIS for underpredicting arsenic emissions and recommended that the “FEIS include an expanded cumulative analysis to disclose project airborne arsenic impacts to the environment.” PET 013471. Moreover, EPA criticized the FEIS’s analysis of aerial deposition of mercury, recommending “the FEIS assess the potential for enhanced local deposition of Hg²⁺ and HgP of mercury to the local watershed and how this will impact water concentrations” and “reassess[ing] the ratio [of stream mercury loads to atmospheric mercury deposition rates] used and make corrections [to the analysis] accordingly.” PET 013477–013478.

II. DEQ FAILED TO CONDUCT TIER I AND TIER II ANTIDEGRADATION REVIEWS FOR, AND FAILED TO PROTECT WATER QUALITY FROM, POLLUTION PROJECTED BY THE FOREST SERVICE AND PERPETUA

A. Tier I and Tier II Reviews Under Idaho's Antidegradation Policy & Summary of Argument

Idaho's Water Quality Standards include an antidegradation policy and implementation procedures. IWQS 051, 052. Idaho's antidegradation policy provides three levels of protection to Idaho waters, two of which are relevant here: Tier I and Tier II waters. IWQS 051.01.

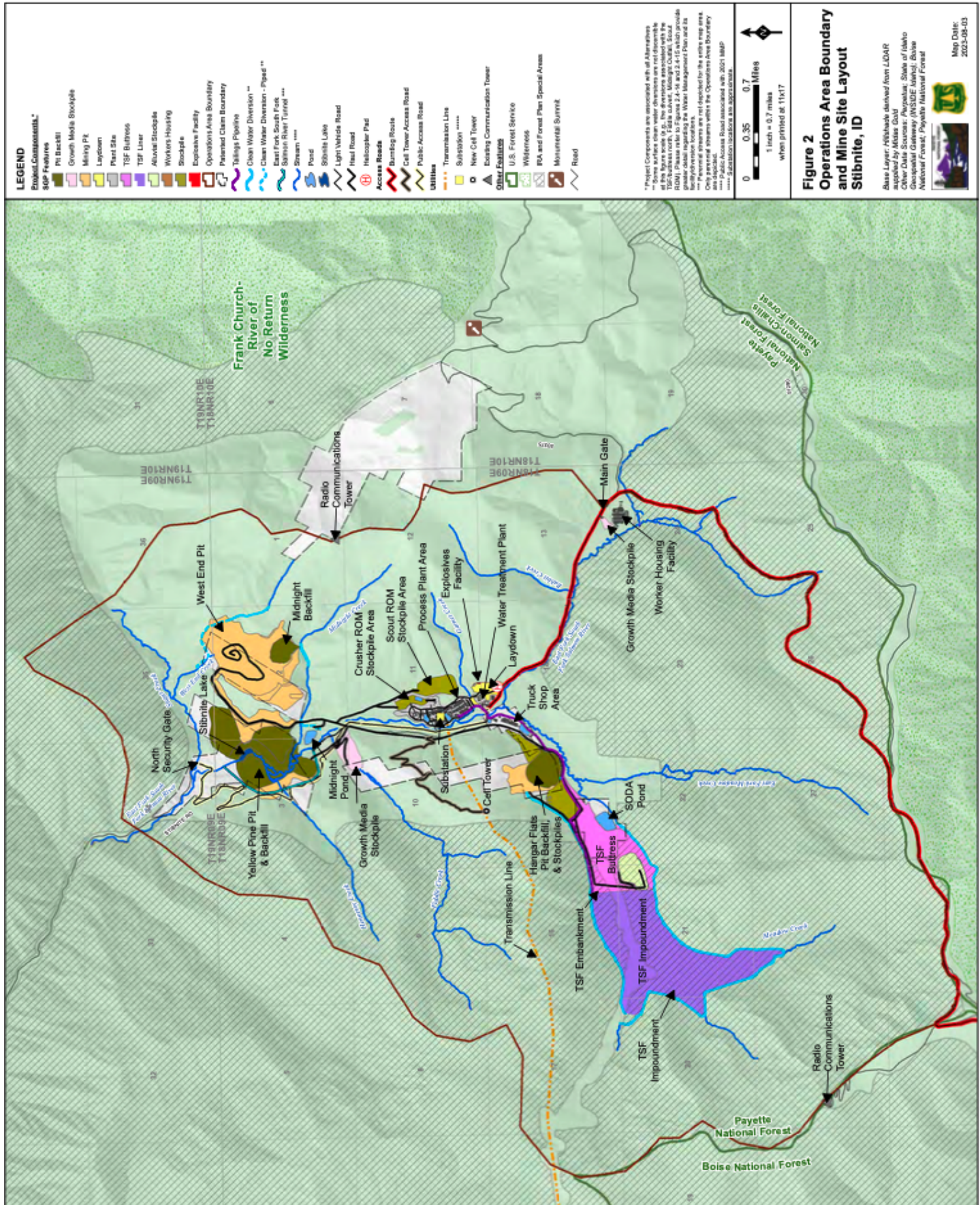
Every waterbody subject to Clean Water Act jurisdiction in Idaho receives Tier I protection, which ensures existing uses and the level of the water quality necessary to protect the existing uses will be maintained. IWQS 051.01; IWQS 052.01. DEQ must conduct a Tier I review for all new permits. IWQS 052.07. Tier I prohibits DEQ from allowing any degradation or lowering of water quality that would cause or contribute to a violation of applicable water quality standards. *Id.*

Tier II protection is an additional protection for "high quality" waters, which are water bodies with water quality that is better than applicable standards. IWQS 051.02. High quality waters are still afforded Tier I protection, so DEQ cannot authorize an activity that will lower water quality to the point that it will cause or contribute to a violation of applicable water quality standards in a high quality water. IWQS 052.07. In addition to Tier I protection, high quality waters receive Tier II protection, which prohibits *any* degradation or lowering of water quality, unless DEQ analyzes the availability of other source controls, the existence of reasonable alternatives, and whether there is a socioeconomic justification for allowing a high quality water to be degraded. IWQS 051.02; IWQS 052.08. For new permits like the Stibnite Gold Project 404 permit, DEQ must conduct a Tier II analysis if a permitted activity will cause any "degradation" or "lowering of water quality" that is more than insignificant. IWQS 052.08.

To evaluate the effect of an activity or discharge on water quality during an antidegradation review, DEQ “will evaluate the effect on water quality for each pollutant.” IWQS 052.06. DEQ “will determine whether an activity or discharge results in an improvement, no change, or degradation of water quality.” *Id.* “Effect on water quality will be based on the calculated change in concentration of the receiving water as a result of a new . . . permit or license.” IWQS 052.06.a. “Degradation or Lower Water Quality . . . means . . . a change in a pollutant that is adverse to designated or existing uses, as calculated for a new point source” IWQS 010.20.

In support of the Final Environmental Impact Statement for the Stibnite Gold Project, the Forest Service prepared a Water Quality Specialist Report. PET 009745–009962. The Report uses information from USGS baseline studies plus baseline information and Project modeling prepared by Perpetua’s contractors. *See, e.g.*, PET 009772, 009775, 009776–009778, 009804, 009808, 009811, 009812, 009819. Table 7-29. *See also* PET 008262 (Forest Service Fisheries Specialist Report summary of information sources). Table 7-29 in the Report, “Comparison of Surface and Groundwater Quality Impacts by Alternative”, summarizes water quality impacts calculated from the Stibnite Gold Project. PET 009954–009956.

As Table 7-29 shows, the Forest Service (relying on USGS and Perpetua data and modeling) calculated that the Stibnite Gold Project will cause *increased* concentrations of some pollutants within the three main stream segments at the mine site: East Fork SFSR, Meadow Creek, and West End Creek. PET 009955. As shown on the next page in Figure 2 from the Forest Service’s Record of Decision (PET 014750), mining open pits, a mine waste dump (the “TSF Impoundment”), and other Stibnite Gold Project features will be constructed directly in, under, over, and next to these three streams.



In their comments, Petitioners provided DEQ this information and urged DEQ to consider and address these water quality impacts on all streams. DEQ 010037–010044. But when it issued the 401 Certification, DEQ ignored many of these calculated degradations, failed to conduct required Tier I and Tier II antidegradation reviews, and failed to afford Tier I and Tier II protections to the water bodies and for the pollutants discussed in the sections below.

B. East Fork SFRS Antimony & Temperature Increases

The East Fork SFRS runs through the heart of the mine site and will be significantly transformed during mining and afterward. Among other polluting activities, Perpetua will divert the East Fork SFRS and run it through a tunnel in order to conduct open pit mining *underneath the river* in the Yellow Pine Pit, and later route the East Fork SFRS back through the Pit. *See* PET 002561, 002580–002581, 002584, 002588, 002607–002608. Remarkably, the 401 Certification does not even discuss these specific activities. *See* PET 014328–014346.

At the mine site, DEQ classifies the lower reach of the East Fork SFRS as “impaired” because it fails to meet applicable water quality standards for temperature and antimony. *See* PET 009824. As such, this lower portion (referred to as the “3rd order” of the East Fork SFRS) is afforded Tier I protection from degradation. PET 014352. The Forest Service and Perpetua calculated that antimony concentrations will increase from a baseline range of 0.005 to 0.037 mg/L to a Project range of 0.004 to 0.041 mg/L in the East Fork SFRS. PET 009955. They also calculated summer maximum temperature to increase from a baseline range of 17.9 to 19.8 °C to a Project range of 14.6 to 24.5 °C. *Id.*

But nowhere in the Final 401 Certification did DEQ acknowledge these antimony and temperature increases in the East Fork SFRS, nor did it consider whether these degradations or lowerings of water quality would cause or contribute to violations of water quality criteria, as

DEQ is required to do for Tier I waters under IWQS 052.07. DEQ's failure to even conduct a Tier I review for these lowerings of water quality is arbitrary and capricious, is not based on substantial evidence, and failed to follow Idaho's Tier I antidegradation review procedures, rendering the 401 Certification unlawful.

Moreover, DEQ's 401 Certification is also unlawful because these increases in temperature and antimony show that the Stibnite Gold Project will cause or contribute to exceedances of water quality standards, in violation of IWQS 052.07. Again, the East Fork SFSR is already impaired by excess temperature and antimony that exceed water quality standards. And the Forest Service and Perpetua calculations show that the Stibnite Gold Project will cause *increases* in water temperature and antimony concentrations in the East Fork SFSR. PET 009955. Thus, the Project will contribute to the East Fork SFSR's exceedances of temperature and antimony standards in violation of the prohibition in IWQS 052.07.

C. Meadow Creek Mercury & Temperature Increases

Meadow Creek, which is a tributary of the East Fork SFSR, will also be significantly transformed by the Stibnite Gold Project, though this is not apparent in the 401 Certification. *See* PET 014328–014346. Among other activities, Perpetua will mine the Hanger Flats Pit adjacent to Meadow Creek and, further upstream, will fill the Meadow Creek Valley to create a massive, permanent mine waste dump (the Tailings Storage Facility), which Meadow Creek will later flow over and through forever. *See* PET 002561, 002573–002577, 002583, 002585.

With respect to temperature, DEQ classifies Meadow Creek as “impaired” because it fails to meet applicable temperature water quality standards for temperature. *See* PET 009824. With respect to some other pollutants including mercury, DEQ classifies Meadow Creek as fully supporting primary contact recreation and meeting applicable standards (not impaired). *Id.*

Meadow Creek is thus afforded Tier I protections for temperature and afforded both Tier I and Tier II protections for mercury. *See* PET 014352 (Meadow Creek is part of the East Fork SFSR “1st and 2nd order” in the table). In Meadow Creek, the Forest Service and Perpetua calculated mercury concentrations to increase from a baseline range of 1 to 2 ng/L to a Project range of 1 to 5 ng/L. PET 009955. They also calculated summer maximum temperature to increase from a baseline range of 17.9 to 19.8 °C to a Project range of 14.6 to 24.5 °C. *Id.*

But nowhere in the Final 401 Certification did DEQ acknowledge these mercury and temperature increases in Meadow Creek, nor did it consider whether these degradations or lowerings of water quality would cause or contribute to violations of water quality criteria, as DEQ is required to do as part of a Tier I review for all waters in Idaho under IWQS 052.07. DEQ’s failure to even conduct a Tier I review for these lowerings of water quality is arbitrary and capricious, not supported by substantial evidence, and violates Idaho’s antidegradation review procedures, rendering the 401 Certification unlawful.

Moreover, DEQ’s 401 Certification is also unlawful because this increase in temperature will cause or contribute to an exceedance of water quality standards, in violation of IWQS 052.07. Again, Meadow Creek is already impaired for failing to meet temperature water quality standards. And the evidence shows that the Stibnite Gold Project will cause increased water temperatures in Meadow Creek. PET 009955. Thus, the Project will contribute to the existing impairments for those pollutants in violation of the prohibition in IWQS 052.07.

Additionally, DEQ failed to conduct a Tier II review for mercury. Because Meadow Creek is a high quality water with respect to mercury, the rules prohibit *any* lowering of water quality, unless DEQ conducts a Tier II antidegradation analysis, considering whether there are other source controls, reasonable alternatives, and a sufficient socioeconomic justification.

IWQS 052.02 and 052.08. DEQ never conducted a Tier II analysis to determine whether to allow mercury degradation in Meadow Creek. Allowing this degradation without conducting a Tier II analysis is arbitrary and capricious, not supported by substantial evidence, and violates Idaho's antidegradation review procedures, rendering the 401 Certification unlawful.

D. West End Creek Antimony, Arsenic & Mercury

West End Creek is a tributary to Sugar Creek and will be significantly transformed by the Stibnite Gold Project. Among other degrading activities, Perpetua will re-route West End Creek in order to mine the West End Pit, and after mining will run the Creek back through the Pit, creating the permanent West End Pit Lake. PET 002561, 002582, 002589, 002608.

DEQ classifies West End Creek as “fully supporting” all beneficial uses (not impaired). PET 009824. It is thus a high quality water afforded both Tier I and Tier II protection from degradation. PET 014353 (West End Creek is part of the Sugar Creek and tributaries 1st and 2nd order in the table). In West End Creek, the Forest Service and Perpetua calculated antimony concentrations to increase from a baseline range of 0.008 to 0.012 mg/L to a Project range of 0.002 to 0.014 mg/L. PET 009955. They also calculated arsenic concentrations to increase from a baseline range of 0.064 to 0.088 mg/L to a Project range of 0.008 to 0.095 mg/L. *Id.* They also calculated mercury concentrations to increase from a baseline range of 4 to 6 ng/L to a Project range of 4 to 63 ng/L. *Id.* And they calculated summer maximum temperature to increase from a baseline of 12.9 °C to a Project range of 16.8 to 21.7 °C. *Id.*

For high quality waters like West End Creek, the rules prohibit *any* lowering of water quality, unless DEQ conducts a Tier II antidegradation analysis, considering whether there are other source controls, reasonable alternatives, and a sufficient socioeconomic justification. IWQS 052.02 and 052.08. However, in the 401 Certification, DEQ limited all Tier II analyses to

temperature only, including its Tier II analysis for West End Creek. *See* PET 014367, 014384, 014387, 014396, 014456. DEQ never conducted any Tier II analyses to determine whether to allow antimony, arsenic, or mercury degradation in West End Creek. Allowing these lowerings of water quality without conducting a Tier II analysis is arbitrary and capricious, not supported by substantial evidence, and violates Idaho's antidegradation review procedures, rendering the 401 Certification unlawful.

DEQ also failed to conduct Tier I reviews of West End Creek for these degradations. Nowhere in the Final 401 Certification did DEQ acknowledge these antimony, arsenic, and mercury increases in West End Creek, nor did it consider whether these degradations or lowerings of water quality would cause or contribute to violations of water quality criteria, as DEQ is required to do as part of a Tier I review for all waters in Idaho under IWQS 052.07. DEQ's failure to even conduct a Tier I review for these lowerings of water quality is arbitrary and capricious, not supported by substantial evidence, and violates Idaho's antidegradation review procedures, rendering the 401 Certification unlawful.

Moreover, DEQ's 401 Certification is unlawful because these increases in antimony, arsenic, and mercury will cause or contribute to exceedances of water quality standards, in violation of IWQS 052.07. The Forest Service and Perpetua's calculations show that the Project will cause an increase in antimony, arsenic, and mercury concentrations in West End Creek to concentrations that exceed the applicable standards. PET 009955. This degradation is prohibited by IWQS 052.07, rendering the 401 Certification unlawful.

In summary, DEQ failed to conduct required Tier I reviews and Tier II analyses for degradations the Stibnite Gold Project will cause in the East Fork SFSR, Meadow Creek, and West End Creek. DEQ also failed to prohibit degradations that will contribute to a violation of

water quality standards in the East Fork SFSR, Meadow Creek, and West End Creek, and failed to prohibit or properly justify any lowering of high quality water in Meadow Creek and West End Creek. For each of these reasons, DEQ's 401 Certification fails to comply with the Idaho Water Quality Standards, is not supported by substantial evidence, was made upon unlawful procedure, and is arbitrary, capricious, and/or an abuse of discretion under Idaho Code § 67-5279 and must be vacated and remanded.

III. DEQ FAILED TO CONSIDER MERCURY IMPACTS FROM REROUTING WEST END CREEK

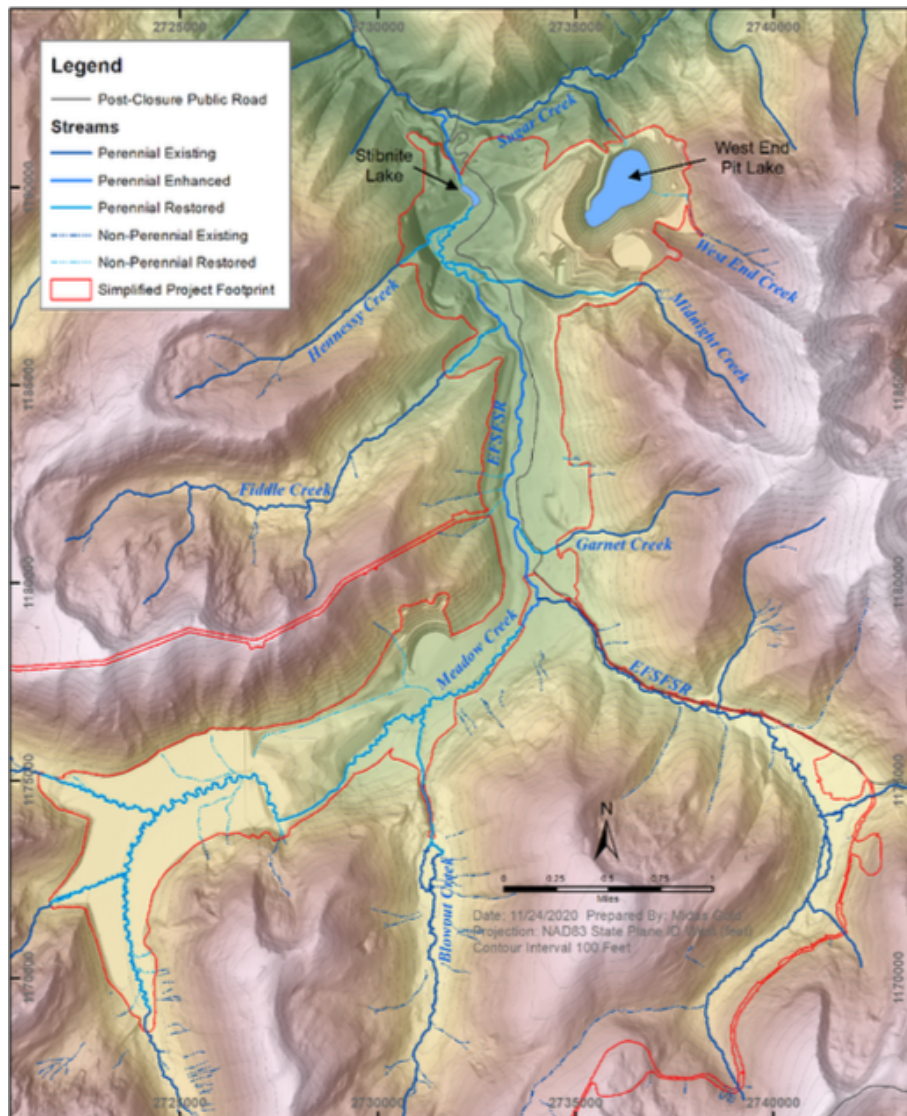
This third basis for relief in the Petition to Initiate Contested Case is subsumed under Argument Section II.C above, which addresses DEQ's failure to consider the impacts from mercury (and other pollutants) in West End Creek during mine construction, operation, and reclamation activities, including the mining period when West End Creek is rerouted.

IV. DEQ FAILED TO CONSIDER WATER QUALITY IMPACTS RELATED TO THE WEST END PIT LAKE

A. Background & Summary of Argument

Among other open pit mining, the Stibnite Gold Project includes mining the "West End Pit." *See* PET 002561, 002582, 002589, 002608. Perpetua will re-route West End Creek around the open pit during mining operations. *Id.* At the conclusion of mining the West End Pit, the West End Creek diversion and re-route will be removed, and West End Creek will flow generally back through the area where it currently flows. *Id.* When it does so, the upper portions of West End Creek will flow into the West End Pit where it will create the West End Pit Lake, up to 400 feet deep. *Id.* *See also* PET 001817.

The West End Pit will not be refilled by Perpetua and the Lake will remain on the landscape in perpetuity, as shown in the figure below from the Forest Service's FEIS: Figure 2.4-18, "Post Closure and Reclamation Condition." PET 002604.



In comments, Petitioners warned DEQ that water quality in the West End Pit Lake will exceed applicable water quality standards, and that contaminated water from the West End Pit Lake will degrade water quality downstream in West End Creek. DEQ 010039–001041.

However, not only did DEQ fail to address the degradations of West End Creek calculated to occur while construction, mining, and reclamation activities are underway (addressed above at Supra II.D), but DEQ also failed to address these post-mining, permanent degradations the Project will cause in the West End Pit Lake and West End Creek discussed more below.

B. West End Pit Lake Metals Contamination

The Forest Service identified a number of ways in which the Stibnite Gold Project is predicted to cause or contribute to water quality standard violations in the West End Pit Lake, stating:

The West End pit lake would not be reclaimed or restored and would not meet water quality criteria for fish occupancy. Based on the pit lake geochemical model (**Section 4.9**), predicted West End pit lake water chemistry exhibits circumneutral pH conditions with TDS concentrations below 130 mg/L. Antimony, arsenic, and mercury concentrations that exceed the strictest potentially applied water quality standards would occur in the West End pit throughout the operating and closure period. Predicted concentrations of copper and lead are predicted to exceed the strictest potentially applied water quality standards during pit dewatering operations, when produced water is routed for consumptive use and water treatment but decrease below those levels during as the lake fills. Concentrations of arsenic, mercury, and antimony are predicted to slightly exceed the strictest potentially applied water quality standards permanently post-closure.

PET 003633.

Without considering the water quality impacts to West End Pit Lake, DEQ failed to comply with the Clean Water Act, 33 U.S.C. § 1341, EPA's 401 regulations, 40 C.F.R. § 121.3(a), and IWQS 050.02.a, which requires DEQ to certify that all water quality standards will be met for all navigable waters and all waters subject to state water quality standards. DEQ also failed to comply with IWQS 052.07, which prohibits degradation that will cause or contribute to water quality standard violations in West End Pit Lake. Instead, DEQ is allowing expected violations to occur, including some violations that are expected to occur permanently beyond the mine's closure.

C. Degradation of West End Creek Below the Pit Lake

The Forest Service found that post mine closure, water from the West End Pit Lake will seep underground and then enter West End Creek. PET 9894. The Forest Service and other

agencies also recognized that the West End Pit Lake could overflow. PET 003633; PET 001817–001818, 001931 (National Marine Fisheries Service); PET 013110–0013111 (U.S. Fish and Wildlife Service). The U.S. Fish and Wildlife Service found that downstream effects from West End Pit Lake contaminants “will be permanent” and “[c]ontaminants could contribute to elevated concentrations under existing . . . operations and post-closure conditions.” PET 013197.

Since contaminated water in West End Pit Lake will seep underground and enter West End Creek, and given the additional possibility that contaminated water in the West End Pit Lake can overflow, DEQ was required to consider whether this seepage and potential overflow will cause or contribute to water quality standards violations in West End Creek. IWQS 052.07. And because West End Creek is a high quality water entitled to Tier II protections, DEQ was also required to evaluate whether there are other controls and alternatives, and conduct a socioeconomic analysis before allowing any such degradation. IWQS 052.08. But it never did so.

In summary, DEQ’s decision to issue the 401 Certification without considering post-Project water quality in the West End Pit Lake and West End Creek downstream of the Pit Lake violates the Idaho Water Quality Standards, is not supported by substantial evidence in the record, was made upon unlawful procedure, and is arbitrary, capricious, and/or an abuse of discretion under Idaho Code § 67-5279, and must be vacated and remanded.

V. DEQ FAILED TO FULLY EVALUATE SOCIOECONOMIC FACTORS

DEQ failed to comply with the Idaho Water Quality Standards by failing to fully consider and evaluate the socioeconomic factors associated with degradation of water quality of rivers and streams at the mine site. There is no showing in the record demonstrating that degradation of water quality is “necessary to accommodate important economic and social development”—a requirement for approval of the 401 certification. IWQS 052.08.d.iii. The 401 Certification should therefore be vacated and remanded back to DEQ.

As already discussed, the Idaho Water Quality Standards' antidegradation policy categorizes Idaho waters into three levels and provides for mandates for the maintenance and protection of water quality. IWQS 051. Relevant to this section are Tier II or "high quality" waters, which are protected from any degradation (or lowering of water quality) that is more than insignificant. IWQS 052.08. DEQ can allow such degradation to occur in Tier II waters,⁶ only if it first makes several determinations, including: (1) assuring the highest statutory and regulatory requirements for point sources and best management practices for nonpoint sources are achieved; (2) determining there are no other reasonable alternatives to discharging at the levels proposed; and (3) finding degradation of water quality is necessary to accommodate important economic and social development. IWQS 052.08. For the latter determination—or socioeconomic justification—DEQ must "identify the relevant social, economic and environmental health benefits *and costs* associated with the proposed degradation in water quality" by considering several factors, including, but not limited to:

- (1) Economic benefits to the community such as changes in employment, household incomes and tax base;
- (2) Provision of necessary services to the community;
- (3) Potential health impacts related to the proposed activity;
- (4) Impacts to direct and indirect uses associated with high quality water, e.g., fishing, recreation, and tourism; and
- (5) Retention of assimilative capacity for future activities or discharge.

IWQS 052.08.d.iii (emphasis added). Here, DEQ, relying on Perpetua's Alternatives Analysis and Socioeconomic Justification ("AASJ"), *see* PET 014392–014450, failed to show how any of the alleged socioeconomic benefits were specific to the community at issue and failed to discuss

⁶ Here, DEQ identified a subset of 16 Assessment Units ("AU") warranting Tier II protection as socioeconomic justification for the potential degradation due to temperature increases. PET 014404-014407.

any potential costs or adverse impacts to either the local economy or to uses associated with high quality water.

First, the AASJ fails to convincingly demonstrate the necessity of the Project's benefits for local community development, as mandated under the Idaho Water Quality Standards. Significant degradation of surface water quality is allowed "only if it is determined *to be necessary* to accommodate important economic or social development in the area" IWQS 052.08.d. While the socioeconomic benefits of the Stibnite Gold Project may be considered "important" in a vacuum, the Idaho Water Quality Standards and Tier II socioeconomic justification requirements call for the "importance" of these benefits to be judged within the context of the surrounding community. IWQS 52.08.d. For example, the AASJ solely focuses on the alleged economic benefit of the "increase in jobs and influx of money spent in the local economy." PET 014435–014438. But it failed to discuss any costs or adverse impacts to the local economy that, without mining, has already "outperformed the national economy across a broad range of indicators of local economic vitality: population, employment, and real personal income." DEQ 010052.

The AASJ also failed to consider how those alleged economic benefits from "well-paying local area employment and labor income from the [Project]" will be short-lived, and how a rapid reduction in workforce between operations phase (580 workers), closure and reclamation phase (160 workers), and monitoring phase (40 workers) will destabilize the local economy to the community's detriment. PET 014436–014437; PET 008934 ("Such potential "boom and bust" effects from a mine's closure are commonly recognized as potential source of adverse socioeconomic impacts on the local area economy."). Or how the mine might have "impacts to direct and indirect uses associated with high quality water . . . and tourism,"

IWQS 052.08.d.iii(4), in an area where “[p]eople have chosen to move to [] because of its natural beauty and the outdoor recreational opportunities that surround them.” PET 017805.

[T]he proposed Stibnite Gold Project represents a gamble that puts at risk a known and existing outdoor economy that is supporting economic vitality in Valley County. What is being offered in its stead is a speculative but threatening multiple open pit mining venture that, if commercially successful, will bring only a relatively small and short run “bump” in additional economic activity in Valley County.

DEQ 010092.

Furthermore, DEQ ignored negative socioeconomic impacts from the Forest Service’s Social and Economic Conditions Specialist Report for the Project, including stresses from immigration of workers on affordable housing and schools, PET 008943–008945, local businesses,⁷ transportation infrastructure,⁸ the local government, PET 008945,⁹ telecommunications, PET 008973,¹⁰ and emergency services. PET 008973.¹¹ The AASJ also wrongly portrayed the proposed economic benefits from Project cleanup activities as the only way to address historical

⁷ “In addition, the SGP also would degrade recreation experiences for customers participating in guided activities near construction of these components due to construction noise and activity. This could negatively affect their ability to provide their licensed activities and may degrade their customer’s recreation experiences.”

⁸ The Social and Economic Conditions Specialist report fails to consider impacts to transportation infrastructure outside of the limited geographic scope of the main access road to the mine. *See* PET 008949.

⁹ “Consequently, Valley County’s public agencies and service sectors also would have greater potential of possible adverse impacts from wage-inflation and/or understaffing. These jobs are important for the functioning of the local economies. A lack of employees able to fill these positions could negatively affect the local government service sectors, assuming new workers do not move into the area and government agencies have limited flexibility to adjust wages and/or increase funding to pay contractors.”

¹⁰ “Estimated telecommunication and internet infrastructure demand for 198 new households. Adams and Valley counties’ telecommunications and internet infrastructure operate at near capacity and, therefore, may have difficulty in maintaining service levels from increased service demand in some locations.”

¹¹ “If [population growth is] concentrated in individual communities such as McCall, there could be localized long-term, substantial adverse impacts to those public services.”

contamination without any support and ignoring the benefits of the Nez Perce Tribe's long-standing fisheries supplementation, research, and watershed restoration efforts near the site which will be negatively impacted by the Stibnite Gold Project. *See* PET 010013–010014.

Moreover, the AASJ completely ignored significant concerns regarding the “potential health impacts related to the proposed activity.” IWQS 052.08.d.iii(3). The AASJ limits its discussion to potential health and safety impacts at the mine site itself without any consideration of how increased truck traffic and resultant impacts to travel, air, and noise creates negative effects on neighboring communities, and the increased risk of spills that threaten drinking water. *See* PET 014441–014442. Many of these impacts to community health and safety were identified in the Forest Service's Transportation and Access Management Report;¹² all were ignored by the AASJ and DEQ. *See, e.g.*, PET 007746 (“The [Stibnite Gold Project] has the potential to have a negative effect on the neighboring communities by adding additional traffic to SR 55.”); PET 007754 (“With the additional traffic on SH 55 and in the surrounding communities anticipated as a result of the SGP, there would be a corresponding increase in the probability of accidents or emergency involving hazardous materials.”)

In the response to comments, DEQ stated that Petitioners misinterpret the socioeconomic justifications requirements to be much more rigid and narrow than what is required, but never provided a reason of why these factors were ignored in the antidegradation analysis. *See* PET 014358. DEQ also improperly justified failing to consider certain impacts because certain

¹² Note that impacts to the City of McCall—including spill risks to the North Fork of the Payette River south of town and to Payette Lake in the north of town, and noise, odor, increased accident risk, and impacts due to increased traffic—were neither analyzed by the the Forest Service, nor by DEQ. *See* PET 007727 (Figure 5-1), PET 007731; *see also* PET 004430-004431 (FEIS Response to Comments discussing spill risk); PET 004716-004717 (FEIS Response to Comments discussing omission of McCall in geographic scope of transportation analysis).

activities were outside of the 401 certification process because they were “operational impacts,” which, as discussed above, is contrary to the 401 certification regulations. PET 014371.

Without considering or giving proper weight to the above socioeconomic factors and data, DEQ failed to comply with the Clean Water Act, 33 U.S.C. § 1341, and EPA’s 401 regulations, 40 C.F.R. § 121.3(a), which requires DEQ to certify that all water quality standards will be met. DEQ also failed to comply with Idaho Water Quality Standard for authorizing degradation of Tier II waters requiring a socioeconomic justification finding degradation is necessary “to accommodate important economic or social development” through following a number of steps outlined in Idaho’s Water Quality Standards. IWQS 052.08.d.

To the extent that DEQ considers and finds that atmospheric deposition of mercury or arsenic degrades water quality of Tier II waters, DEQ must also perform an antidegradation analysis for those pollutants pursuant to IWQS 052.08 on the applicable Tier II waters.

DEQ’s decision, which was based on a failure to consider these factors in the socioeconomic justification, is not supported by substantial evidence in the record, is not in accordance with the law, was made upon unlawful procedure, and is arbitrary, capricious, and/or an abuse of discretion under Idaho Code § 67-5279.

CONCLUSION

For each reason above, DEQ’s 401 Certification failed to adequately protect the public and environment from water quality degradation that will be caused by the Stibnite Gold Project. DEQ’s issuance of the 401 Certification violates of the Clean Water Act, Clean Water Act regulations, and Idaho Water Quality Standards, and is otherwise unlawful, not supported by substantial, arbitrary, capricious, made on unlawful procedure, and an abuse of discretion and must be set aside and remanded under I.C. § 67-5279.

Dated: February 7, 2025

Respectfully submitted,

/s/ Bryan Hurlbutt

Bryan Hurlbutt

*Attorney for Idaho Conservation League
and Idaho Rivers United*

/s/ Julia S. Thrower

Julia S. Thrower

*Attorney for Save the South Fork Salmon
and Earthworks*

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that I have on this 7th day of February 2025, served the foregoing
Petitioners' Opening Merits Brief upon all parties of record in this proceeding, by e-mail to:

Office of Administrative Hearings
P.O. Box 83720
Boise, ID 83720-0104
filings@oah.idaho.gov

Diane Cutler
Hearing Coordinator
Rules and Planning Analyst
Department of Environmental Quality
1410 N Hilton
Boise ID 83706
diane.cutler@deq.idaho.gov

Merritt Dublin
Hearing Officer
Office of Administrative Hearings
P.O. Box 83720
Boise, ID 83720-0104
merritt.dublin@oah.idaho.gov
Michael A. Short
Deputy Attorney General
Department of Environmental Quality
1410 N. Hilton, 2nd Floor
Boise, ID 83706
(208) 373-0481
michael.short@deq.idaho.gov
Attorney for Respondent Idaho
Department of Environmental Quality

Murray D. Feldman
Katy D. Riker
Holland & Hart LLP
800 W. Main Street, Ste. 1750 Boise, ID
83702-7714
mfeldman@hollandhart.com
kdriker@hollandhart.com
Ashley A. Peck, *pro hac vice*
Holland & Hart LLP
222 S. Main Street, Suite 2200
Salt Lake City, UT 84010
aapecck@hollandhart.com
Attorneys for Intervenor-Respondent
Perpetua Resources Idaho, Inc.

/s/ Bryan Hurlbutt
Bryan Hurlbutt