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BEFORE THE DEPARTMENT OF WATER RESOURCES
OF THE STATE OF IDAHO

IN THE MATTER OF APPLICATIONS
FOR PERMIT 77-14377, 77-14378, 77-
14379, APPLICATIONS FOR
TRANSFER 85396, 85397, 85398, and
85399, AND APPLICATION FOR
EXCHANGE 85538 IN THE NAME OF
PERPETUA RESOURCES IDAHO, INC.

**PERPETUA RESOURCES IDAHO,
INC.'S POST HEARING BRIEF**

I. INTRODUCTION

Perpetua Resources Idaho, Inc. (“Perpetua”) has, under Idaho law, applied for water rights to facilitate its development and operation of a modern gold and antimony mine called the Stibnite Gold Project (“SGP”). Perpetua will dedicate revenues obtained from the SGP to clean up and restore legacy mining impacts at an abandoned site that has had over 100 years of impact. The consequences of the SGP being responsibly developed by Perpetua will include volitional fish passage above the Yellow Pine Pit for the first time since 1938 and improvement of water quality and aquatic habitat at the site.

Protestants maneuvered this matter to a five-day hearing based, largely, on “concerns” about Perpetua’s proposed operations. At the hearing Perpetua put on thorough, credible

evidence that it satisfied the factors of I.C. §§ 42-203A and 42-202. Perpetua clearly demonstrated that it has taken a practical, administrable, and transparent approach to developing its water rights applications, based on its water needs to develop and operate the SGP.

Protestants, on the other hand, offered little in the way of credible evidence to counter Perpetua's lawful water rights applications and its significant showing. At the hearing, it was apparent that Protestants had only raised this protest because they are primarily opposed to the SGP and have concerns about what Perpetua's Idaho water rights might mean for fish and fish habitat. However, Protestants offered little evidence to demonstrate that the SGP would *not* offer a net benefit for fish. And, the evidence they did present was largely based on underinformed speculation and a misunderstanding of Perpetua's proposed water use.

Accordingly, Perpetua respectfully requests that the Hearing Officer grant Perpetua's water rights under Idaho law.

II. STATEMENT OF FACTS

A. The Stibnite Gold Project

Perpetua¹ has applied for water rights to provide water for its development and operation of the SGP, which will be a modern gold and antimony mine. Transcript ("Tr.") at 16, 22; Ex. 22 at 2.² Perpetua is an Idaho-based, publicly-traded company, with its stock listed on the NASDAQ. Tr. at 14; *see* Ex. 58 at 21. Perpetua's goal in developing the SGP is

to take historic mining site, mining district, that's been heavily impacted by over a hundred years of previous mining and through modern mining methods and transparency, working with the stakeholders, to take that site and clean it up, restore fish passage, improve the water quality, at the same time as providing a critical mineral for Department of Defense needs, as well as supplying of production of gold.

¹ Perpetua Resources Idaho, Inc. was previously referred to as Midas Gold Idaho, Inc. and changed its name in 2021. Tr. at 21; Ex. 59 at 7.

² Exhibit page numbers reference the pdf page of the document for ease of reference.

Tr. at 14. To ensure that the local community has input on the design and operation of the SGP, Perpetua created a local advisory committee to provide oversight and feedback on the SGP and Perpetua's operations. *Id.* at 15.

The SGP site is located in Valley County, Idaho approximately 35 air miles east of McCall, Idaho. *Id.* at 17; Ex. 22 at 17. The SGP site has been impacted by over 100 years of mining. Tr. at 14; Ex. 29 at 38. Over 50 percent of the SGP footprint will be located on land that has been impacted by past mining activity. Tr. at 50; *see* Ex. 23 at 24. The majority of past mining that occurred on the site was conducted before the enactment of the National Environmental Policy Act ("NEPA"), Clean Water Act ("CWA"), Comprehensive Environmental Response, Compensation, and Liability Act, and other modern environmental protection laws. Previous resource development (including mining to support World War II) left a legacy of environmental damage at the site. Tr. at 24-25; Ex. 23 at 28-29. When the Yellow Pine Pit ("YPP") was excavated in the 1930s it blocked fish passage to the upper reaches of the East Fork South Fork of the Salmon River ("EFSFSR"), Tr. at 16, 27, preventing anadromous fish from reaching spawning grounds above the YPP and isolating the remaining populations of westslope cutthroat trout and bull trout, *id.* at 633, 836. An earthen dam was constructed on the East Fork of Meadow Creek, referred to as Blowout Creek, which failed in the 1960s, thus introducing a significant amount of sediment downstream and leaving a scarp that annually dumps more sediment downstream. *Id.* at 28; Ex. 29 at 70. Additionally, these past mining operations created legacy sources of environmental contamination including the Bradley tailings, Spent Ore Disposal Area, and Hecla Heap Leach Pad. Tr. at 28-31, 443; Ex. 22 at 41. These legacy features contain high levels of contaminants that are picked up by runoff, percolating rain,

and snowmelt and impair groundwater and instream water quality. Tr. at 28-30, 35, 443, 582-83; *see* Ex. 58 at 4.

The SGP is located on a combination of patented mining claims, which are Perpetua's private lands, and unpatented mining claims on National Forest System lands. Tr. at 18, 21; Ex. 22 at 16; Ex. 23 at 10. Perpetua is required to comply with multiple federal and state laws and regulations to build and operate the SGP.³ Tr. at 35, 63-64, 387-88; *see* Ex. 23 at 30; Ex. 26 at 17-19 (listing regulatory requirements related to water management). Because the SGP is partially located on National Forest System lands, Perpetua is subject to rigorous federal land-use and mining laws, requiring it to prepare, and obtain approval of, its Plan of Restoration and Operations. Tr. at 387-88; Ex. 23 at 30. Perpetua's Plan of Restoration and Operations (its current version called the ModPRO2) provides detailed requirements for the construction, operation, and restoration of the SGP. Tr. at 37-39; Ex. 22.

The United States Forest Service ("USFS") is currently reviewing the ModPRO2,⁴ and issued a Supplemental Draft Environmental Impact Statement ("SDEIS"), as required by NEPA, in October 2022. Tr. at 64. The USFS identified the ModPRO2 as its preferred alternative.⁵ *Id.* at 48-49. The public comment period for the SDEIS closed in January 2023, and of the 30,000 public comments received the vast-majority supported the SGP. *Id.* at 66. Additionally, the mayors of Cascade and Donnelly, nearby communities, submitted letters in support of the SGP.

³ To date, Perpetua has received its Permit to Construct, issued by the Idaho Department of Environmental Quality ("IDEQ") pursuant to the Clean Air Act and its Point of Compliance from IDEQ, as well as conditional approval for its dam safety permit from the Idaho Department of Water Resources. Tr. at 389-90. Additionally, Perpetua has submitted applications for its dredge and fill permit pursuant to section 404 of the CWA, its IPDES permit, and its state cyanide facility permit. *Id.* at 389.

⁴ Perpetua had developed two previous versions of the Plan of Restoration and Operation, and in response to public feedback under NEPA, revised the plan to reduce the environmental impacts of the SGP. *Id.* at 38-39, 46-47, 65-66; Ex. 23 at 6-8.

⁵ The SDEIS only evaluated two action alternatives, which involve different access routes to the SGP. Under either alternative, the mine footprint and water needs would remain the same. Tr. at 49, 110-11.

Id. at 70. Following completion of the USFS’s review of public comments on the SDEIS, the USFS will issue a Final Environmental Impact Statement and the Record of Decision. Perpetua expects the USFS will approve the ModPRO2, and authorize Perpetua to construct and operate the SGP. *Id.* at 90, 110. In addition, prior to commencing operations, Perpetua will be required to post a substantial financial assurance bond, which will provide for reclamation of the SGP should Perpetua be unable to complete such restoration. *Id.* at 35-36, 88-89; Ex. 22 at 93-94.

The SGP will be constructed over three years, followed by 12 years of actual mining, three years of post-mining ore processing, and approximately eight years of post-mining restoration. Tr. at 41, 91-92, 457; Ex. 22 at 36, 83; Ex. 29 at 68. The SGP will employ approximately 600 people throughout construction and operation,⁶ Tr. at 56, and provide two indirect jobs for every one direct job created, *id.* The SGP will produce ore from three open pits, two of which were previously mined – the YPP and the West End Pit (“WEP”) – and the newly constructed Hangar Flats Pit (“HFP”). *Id.* at 16-17; Ex. 22 at 36. Ore from the pits will be safely hauled to the ore processing plant, located on site, or stockpiled on site for future processing. Ex. 22 at 38. Additionally, Perpetua will reprocess tailings from past mining activities that occurred onsite. *Id.* at 41; Tr. at 29-30. Tailings from the ore processing facility will be piped to the fully lined Tailings Storage Facility (“TSF”), which has a design capacity of approximately 120 million tons and will occupy approximately 423 acres. Ex. 22 at 50. Perpetua will also construct a truck shop, worker housing, and related support facilities. Tr. at 50-51. Ex. 22 at 32-33.

The SGP will produce approximately 4.5 million ounces of gold and approximately 115 million pounds of antimony. *Id.* at 22; Ex. 23 at 8, 18. Antimony has been designated as one of 35 critical minerals that are vital to the nation’s security and economic prosperity. Tr. at 22; Ex.

⁶ The average wage for workers at the SGP will be approximately \$70,000 per year. Tr. at 56.

23 at 39. Antimony is used in the production of fire retardants, batteries, and, importantly for national security, ammunition.⁷ Tr. at 22. There is currently no domestic production of antimony, and the United States is reliant on foreign sources, often from nations at odds with U.S. interests. Ex. 23 at 40. China, Russia, and Tajikistan currently produce 92 percent of the world's antimony. *Id.* The Department of Defense has recognized the SGP as a strategic center to develop a domestic supply of antimony and awarded Perpetua two grants, one for \$24.8 million and one for \$15.5 million, to assist in development of the SGP and demonstration of a fully domestic antimony trisulfide supply chain, respectively. Tr. at 23-24, 113; Ex. 59 at 67.⁸ Although other reserves of antimony exist in the United States, none of them are as near production or as sizable as the SGP. Tr. at 24.

Beyond producing a critical mineral, mining operations will fund significant restoration of legacy mining impacts at the SGP. Consistent with its mission to restore the site, Perpetua has already expended over \$17 million to reroute live water around legacy waste rock and remove 300,000 tons of waste rock and tailings pursuant to a voluntary administrative settlement agreement and order on consent ("ASAOC") with the United States Environmental Protection Agency and the USFS. *Id.* at 76-77; Ex. 59 at 8. The ASAOC work is removing legacy materials to improve water quality at the site. Tr. at 76-77, 581, 585-86.

In addition to the ASAOC work, Perpetua has planned and is committed to begin conducting restoration at the SGP during the construction phase, before any mining occurs. *See* Ex. 29 at 60. Specifically, Perpetua has committed to install a tunnel with a fishway around the YPP to provide fish passage into the upper reaches of the EFSFSR and Meadow Creek, restoring

⁷ During both World War II and the Korean War, the SGP played a critical role in the war effort by producing antimony for use by the military in manufacturing munitions. Tr. at 24, 26.

⁸ Exhibit 59 does not list the second Department of Defense grant because the grant was obtained after Perpetua's 10-K was issued.

volitional fish passage to the site before the first year of operation. Tr. at 44, 364-65; Ex. 22 at 62; Ex. 34 at 61-62. Perpetua will also begin work on Blowout Creek to restore wetlands and prevent sediment discharge into Meadow Creek and downstream into the EFSFSR in the third year of construction. Tr. at 34, 636, 728-31; Ex. 22 at 64. Perpetua is also planning to remove fish barriers throughout the SGP site and restore legacy mining impacts to the EFSFSR from Meadow Creek to the YPP, even though Perpetua will not directly impact these areas. Tr. at 732-33.

These restoration measures will begin during the third year of construction and continue throughout the life of the SGP. *Id.* at 734-35; Ex. 29 at 60. In mine year 10, the YPP will be backfilled, and a natural stream channel will be restored across the top of the YPP backfill to allow volitional fish passage.⁹ Tr. at 59, 82; Ex. 22 at 86-88. Following restoration of the YPP, the tunnel and fishway will be decommissioned. Tr. at 423-24. The HFP will also be backfilled following the completion of mining. Ex. 22 at 90-91. Finally, during closure of the TSF, a geosynthetic liner will be placed on top of the TSF, which will be covered with soil allowing the construction of wetlands and restoration of Meadow Creek and its tributaries across the top of the TSF. Tr. at 54; Ex. 22 at 89; Ex. 29 at 69.

The Idaho Legislature has recognized the important role the SGP will play for national security, the local economy, and restoring legacy mining impacts and improving the environment. Ex. 72. In 2018, the Legislature passed a Joint Memorial in support of the SGP, supporting action by the federal and state agencies to approve the SGP in a timely and cost-effective manner to permit the redevelopment and restoration of the site. *Id.* at 2.

⁹ Perpetua is not legally required to backfill the YPP but is doing so as part of its commitment to restoring the SGP site. Tr. at 115.

B. Idaho Water Rights for the SGP

Water is a critical component of the SGP. Tr. at 51; Ex. 26 at 15. Water will be used in mining for drilling, to control dust along haul roads, and throughout the mill process circuit to process the ore. Tr. at 51-53; Ex. 26 at 24, 83-85. Additionally, Perpetua will need to dewater the mine pits and will either beneficially use or treat and discharge dewatering water. Tr. at 51-52, Ex. 26 at 27; Ex. 25b at 37. Finally, a domestic water supply is required for the 600 workers who will be onsite. Tr. at 52; Ex. 26 at 80, 82-83.

Perpetua holds existing water rights at the SGP site, Tr. at 125; Ex. 61 at 1-2, however, these water rights are not sufficient for the water needs of the SGP. Tr. at 125; Ex. 61 at 1-2. Therefore, under Idaho law, Perpetua has applied for additional water rights to meet its needs for domestic use and industrial use.¹⁰ See Ex. 61 at 2-4.

1. Domestic Water Rights

To supply water for the worker housing facility, Perpetua has applied for 0.20 cfs from groundwater at up to four wells through application for permit number 77-14377. Tr. at 128; Ex. 1f; Ex. 61 at 4. Also, to supply the worker housing facility, Perpetua has filed an application for transfer of Water Right 77-7141, to move the point of diversion and place of use of the water right to the worker housing facility. Tr. at 128; Ex. 1b; Ex. 61 at 4. Perpetua proposes to use these water rights in combination to authorize a total of 0.20 cfs of diversion from groundwater for domestic purposes, Tr. at 175; Ex. 26 at 83, because Water Right 77-7141 does not have enough annual volume to supply the worker housing facility. Tr. at 128-29.

¹⁰ Perpetua has also submitted an application for permit number 65-24089 for commercial and domestic uses at the Stibnite Gold Logistics Facility near Cascade and an application for permit number 77-14381 for industrial and domestic use at the Burntlog Maintenance Facility, neither of which is at issue in this proceeding. Tr. at 127; Ex. 61 at 3-4.

To supply water for domestic purposes at the truck shop and mill, Perpetua submitted an application for permit number 77-14379, which proposes a diversion rate of 0.06 cfs to be diverted from a well that has been permitted as a public drinking system well in the past and has been tested at a higher rate. *Id.* at 130-31; Ex. 1h; Ex. 61 at 4.

The amount of water required for the domestic water rights was determined by estimating that each person would use 50 gallons of water per day. Tr. at 129, 439-40; Ex. 26 at 85; Ex. 61 at 1. Fifty gallons per day is a conventional amount of water for a remote construction camp. Tr. at 440. During summer 2023, the worker housing facility that housed workers conducting cleanup under the ASAOC used between 30 and 50 gallons per person per day. *Id.*

After domestic water is used, it will be treated using a membrane bioreactor wastewater treatment plant (or similar technology) at the worker housing facility and discharged to the EFSFSR via an Idaho Pollutant Discharge Elimination System (“IPDES”) permitted outfall near the facility. *Id.* at 131, 439; Ex. 26 at 172. Due to the nature of the water use, the discharge rate of treated sanitary wastewater will be relatively constant. Ex. 26 at 172.

2. Industrial Water Rights

To fully understand water availability, water management, and water demand at the SGP, Perpetua developed two models that work in concert. Tr. at 188, 210; Ex. 25b at 8; Ex. 27a at 10. The Site-Wide Water Balance (“SWWB”) model was used to predict monthly non-potable water needs at the site under a range of climatic conditions. Tr. at 192; Ex. 61 at 1; Ex. 27a at 10. The Stibnite Hydrologic Site Model (“SHSM”) was used to determine necessary dewatering rates, and the effects of withdrawals and contact water management on surface and groundwater resources at the SGP. Tr. at 212; Ex. 25b at 8. Both models use industry standard modeling

software and are typical of the types of models used in the mining industry. Tr. at 195, 213-14; *see also* Ex. 64.

The SHSM was used to determine the amount of water that would need to be pumped from the YPP, HFP, and WEP to dewater those pits and allow mining to occur. *Id.* at 226-27; Ex. 25b at 31. The SHSM also evaluated the effects of Perpetua's proposed operations, including water diversions and withdrawals against a no-action scenario, Tr. at 212; Ex. 25b at 38, 44-45, allowing Perpetua to predict what effect its water operations and water withdrawals would have on surface and groundwater at the site.¹¹ Tr. at 222; Ex. 25b at 50-61.

The SWWB integrates all of the components of the mine reflected in the ModPRO2, including the ore processing circuit, TSF, dewatering water, and contact water¹² management features into a single model to provide an operational model of water use and demand at the SGP. Tr. at 192, 197; Ex. 27a at 23. The SWWB then uses a 120-year climate record to simulate the potential range of water demands at the SGP over the life of the project. Tr. at 196. The 120-year climate record accounts for a wide range of climatic conditions and climatic uncertainty. *Id.* at 194-95, 249-50; Ex. 27a at 19, 38. The SWWB provides both stochastic output, showing the probabilistic water demands, and deterministic output based on a climatic sequence that approximates the average long-term climate condition, for each month of SGP operation. Tr. at 204-06; Ex. 27a at 54. In a water deficit, the SWWB prioritizes the use of water reclaimed from

¹¹ The SHSM was calibrated using a large volume of site-specific data including gauge data for the U.S.G.S. gauges located within the site, 77 points of hydraulic conductivity, and a site-specific meteoric water balance. Tr. at 217, 222-23; Ex. 25b at 90, 102, 124-25. The model calibration demonstrated that it produced a tight fit to the observed flows at existing U.S.G.S. gauges at the SGP under the no-action simulation. Tr. at 218-19; Ex. 25b at 131-36.

¹² Contact water is water that has come in contact with mine features and could contribute metals and other contaminants to surface water or groundwater. Ex. 26 at 26, 107-08. Perpetua generally refers to contact water as diffuse surface runoff that has contacted mine features; however, dewatering water is also considered contact water due to the potential for it to contain metals and other contaminants.

the TSF first, followed by dewatering water, contact water, and finally fresh makeup water from industrial supply wells or surface water diversions. Tr. at 190, 428; Ex. 27a at 51-52.

Based on the outputs from the SWWB model, Perpetua determined that the peak rate of diversion would be 4.5 cfs for industrial makeup, which is the water needed in addition to the TSF reclaim water to operate the mill. Tr. at 139; Ex. 1g at 52; *see also* Ex. 27a at 81. The peak dust control demand would be 0.7 cfs. Tr. at 139; Ex. 1g at 52; *see also* Ex. 27a at 83. Drilling water was set at a constant rate of 0.1 cfs in the model. Tr. at 209; Ex. 26 at 84. The SWWB also integrated the predicted pit dewatering rates to determine how much pit dewatering water would be used in the mill process circuit and how much would need to be treated and discharged to predict the maximum rate of excess pit dewatering water, which was 4.3 cfs. *Id.* at 139, 157-58, 201; Ex. 1g at 52; *see* Ex. 27a at 79. These values were summed to determine the maximum diversion rate that would be required for the SGP, which is 9.6 cfs.¹³ Tr. at 139; Ex. 1g at 52. The SWWB was also used to model the amount of contact water generated and stored onsite. Tr. at 190; Ex. 27a at 72-75.

Based on the outputs of the SWWB, Perpetua submitted an application for permit number 77-14378, which requests a maximum diversion rate of 9.6 cfs for mining and industrial uses and diversion to storage.¹⁴ Tr. at 132; Ex. 1g at 1, 52. Application 77-14378 also requests 600 acre-feet of storage per year. Tr. at 132-33, 191; Ex. 1g at 1, 55-57. The storage volume is based on a one-time fill of the TSF starter pool of 428 acre-feet. Tr. at 191; Ex. 1g at 56.

¹³ Although the SWWB predicts that maximum diversions for each of the identified uses are not likely to overlap, the SWWB reports results in monthly time-step and the instantaneous demand may be higher than modeled for short periods of time – as short as a few hours or a few days. Tr. at 206, 209, 427, 545.

¹⁴ Although not the basis for Perpetua's requested diversion rate, the maximum total mill demand is projected to be 9.7 cfs, much of which is planned to be met with water reclaimed from the TSF. However, if the TSF reclaim system fails it is anticipated that the full 9.6 cfs applied for in Application 77-14378 will be needed to meet mill demand. Tr. at 140.

Perpetua proposes to divert water under Application 77-14378 from a network of 50 groundwater wells that includes dewatering wells, Tr. at 135-36, underdrains from the TSF, *id.* at 134, 13 freshwater supply wells, *id.* at 136, and a surface water diversion on the EFSFSR at the southern portal of the tunnel,¹⁵ *id.* at 135. *See* Ex. 1g at 14-15. The location of the surface water diversion was specifically chosen for two reasons. First, it would put the surface water diversion on the downstream end of the site to reduce impacts to upstream flows. Tr. at 135. Second, the location at the southern portal of the tunnel would make engineering and construction easier. *Id.*

At the time Perpetua submitted Application 77-14378, Idaho law was unclear whether diffuse surface runoff was subject to appropriation. *Id.* at 120-21. Due to this uncertainty, and to provide a full and transparent disclosure of Perpetua's proposed water diversions, Perpetua included the diversion and storage of contact water from diffuse surface runoff in Application 77-14378. *Id.* In a previously issued order, the Hearing Officer held that diffuse surface runoff that had not entered a natural channel was not subject to appropriation, and that Perpetua did not need a water right to capture and use diffuse surface runoff. Ex. 5.

In addition to Application 77-14378, Perpetua has filed applications for transfer and an application for exchange, which would align its existing water rights with the points of diversion and place of use identified in Application 77-14378. *See* Ex. 61 at 4.

Specifically, Application for Transfer 85396, for Water Right 77-7122,¹⁶ proposes to change the place of use to the common place of use, and the point of diversion to the surface water intake, identified in Application 77-14378. Tr. at 146; Ex. 1a. Application for Transfer

¹⁵ The freshwater intake is described in detail in Exhibit 34, pages 122 through 154.

¹⁶ Water Right 77-7122 authorizes a maximum diversion rate of 0.33 cfs and an annual volume of 7.1 acre-feet. Ex. 1a.

85397 proposes to move the point of diversion for Water Right 77-7285¹⁷ to the 13 supply wells in the Meadow Creek valley and move the place of use to the common place of use, both identified in Application 77-14378. Ex 1c. Application for Transfer 85398 and Application for Exchange 85538 are both related to Water Right 77-7293.¹⁸ Tr. at 142-44; Ex. 1d; Ex. 1e. The exchange would move the point of diversion from an unnamed stream (Hennessy Creek) to the common surface water diversion on the EFSFSR and the transfer would move the place of use to the common place of use, both identified in Application 77-14378. Tr. at 142-44; Ex. 1d; Ex. 1e. Because Perpetua proposes to move the point of diversion upstream from the currently permitted point of diversion, it is required to submit an application for exchange in addition to an application for transfer. Tr. at 142.

As part of its application process, Perpetua evaluated the potential impact from its water rights applications on existing water rights. All of the water rights in the immediate area of the SGP are held by Perpetua or one of its affiliates. Tr. at 150; Ex. 1g at 117. Likewise, all existing wells were drilled by Perpetua or one of its subsidiaries or predecessors.¹⁹ Ex. 1g at 117-18. The only water rights near the SGP not held by Perpetua are state minimum instream flow rights; however, those rights are subordinated to industrial uses.²⁰ Tr. at 150.

¹⁷ Water Right 77-7285 authorizes a maximum diversion rate of 0.5 cfs and an annual volume of 30 acre-feet. Ex. 1c.

¹⁸ Perpetua notes that there is a mistake on page 2 of Application for Transfer 85398. Tr. at 144-45. The application states that the purpose is to change the point of diversion, but it should be to change the place of use. *Id.* The rest of the application is correct. *Id.* Water Right 77-7293 authorizes a maximum diversion rate of 0.25 cfs and an annual volume of 20 acre-feet per year. Ex. 1d; Ex. 1e.

¹⁹ As noted in Perpetua's Rule 40.05 disclosure, it appears that there are several wells listed in T19N but are likely located in T18N. Ex. 1g at 118.

²⁰ There are 11 water rights from groundwater within 10 miles of the SGP, with the closest being seven miles away in the Yellow Pine/Johnson Creek area. Those groundwater sources are not indicative of the aquifer conditions in the SGP area and would not be affected by Perpetua's groundwater withdrawal. Ex. 1g at 122.

C. Water Management and Protection of Water Resources at the SGP

Consistent with Perpetua's mission to address legacy mining impacts, improve aquatic habitat and fisheries resources, and improve water quality at the SGP, Perpetua has designed its water management strategies, operational plans, and restoration plans to protect water resources at the SGP to the maximum extent practicable throughout the life of the SGP.

With regard to water rights, specifically, Perpetua has committed to implementing a mitigation plan that will protect the United States' federal reserved water rights and offset diversions to storage when the Wild and Scenic Salmon River is below flow targets. Tr. at 147; Ex. 1g at 59; *see also* Ex. 4.²¹

Perpetua requested technical assistance from the Idaho Department of Fish and Game and Office of Species Conservation, and has proposed voluntary conditions to ensure protection of fishery and aquatic habitat resources. Ex. 206. As part of its technical assistance request, Perpetua voluntarily agreed that diversions from the EFSFSR and groundwater under water rights 77-7122, 77-7285, 77-7293, and 77-14378 will not cause more than 20 percent depletion to the unimpaired streamflow in the EFSFSR below its confluence with Sugar Creek when unimpaired streamflow is less than 25 cfs ("Low Flow Condition"). Tr. at 136-37, 171; Ex. 206 at 9. For purposes of this voluntary condition, unimpaired streamflow is the gauged flow at Sugar Creek (USGS 13311450), plus the gauged flow at the EFSFSR above Sugar Creek (USGS 1331250), plus the net diversion from EFSFSR and groundwater under water rights 77-7122, 77-7285, 77-7293, and 77-14378. *Id.* Net diversion is the sum of groundwater and EFSFSR

²¹ The USFS had initially filed a protest against Perpetua's water rights applications at issue in this proceeding. *See* Ex. 4. Upon Perpetua agreeing to implement the mitigation plan, Ex. 1g at 52, and curtail diversions to storage when the Wild and Scenic reach of the Salmon River was below flow targets at the point of compliance identified in Exhibit 4, the USFS entered a settlement to dismiss its protest. Ex. 4.

diversions minus discharge of treated water to the EFSFSR and its tributaries. Tr. at 137; Ex. 206 at 9.

The point of quantification for the Low Flow Condition was located downstream of the confluence of the EFSFSR and Sugar Creek because dewatering from the YPP and WEP will have effects on groundwater and tributaries to Sugar Creek and the EFSFSR below U.S.G.S. Gauge 1331250. Tr. at 402, 983. Perpetua selected this location because it was important to be able to quantify the full effects of water withdrawals from the SGP on stream flows. *Id.* at 402.

To ensure that the voluntary condition is protective of fishery resources, Perpetua conducted additional modeling to demonstrate that flows through the fishway in the tunnel and in the reach between the outlet of the tunnel and the confluence of Sugar Creek would still allow fish passage during 5 percent and 95 percent exceedance flows. Tr. at 743-44; Ex. 219 at 5-6, 9-10. In conducting the updated fish passage flow evaluation, Perpetua followed NMFS Guidance, which is general guidance that must be adapted in consultation with National Marine Fisheries Service (“NMFS”).²² Tr. at 664. To conduct the site-specific evaluation, Perpetua utilized Standard Operating Procedures for Critical Riffle Analysis for Fish Passage in California (“CDFW Guidance”), Ex. 238. Ex. 219 at 5-6, 9-10. According to the guidance, “[c]ritical riffles are particularly shallow and sensitive to changes in stream flow.” Ex. 238 at 7. Fish passage through critical riffles is more likely to be impaired by flow depletions than step-pool reaches such as the EFSFSR below the outlet of the tunnel, or the tunnel fishway because the length of a shallow riffle in a riffle-pool system is typically much longer than the length of a shallow step in a step-pool system. Tr. at 745. Therefore, applying the CDFW Guidance provides an inherently conservative criteria for evaluating fish passage. *Id.* The CDFW Guidance recommends that

²² NMFS is also referred to as “NOAA Fisheries.”

minimum depths for Chinook salmon passage should be 0.9 ft, while minimum depths for steelhead (also applied to bull trout, based on having similar body size as steelhead) passage should be 0.7 ft. Ex. 238 at 20.

Based on the updated modeling flows through both the tunnel fishway and the EFSFSR would continue to ensure fish passage at 95 percent exceedance flows during times Perpetua is withdrawing water under its water rights. Ex. 219 at 5-6, 9-10. Due to water withdrawals, the EFSFSR saw a slight reduction in the number of sections of the reach that were out of compliance with the CDFW Guidance at 95 percent exceedance flows. Tr. at 759. However, the reach would still have far more sections in compliance with the CDFW Guidance than Sugar Creek, *id.* at 744, which has no identified passage issues, *id.*, and in which the Nez Perce Tribe has identified multiple redds of both Chinook salmon and bull trout. *Id.* at 899-900.

In addition to the voluntary water rights conditions, Perpetua will implement a suite of design features and management practices to protect water resources, fisheries, and aquatic habitat.

Perpetua has designed its water treatment system such that treated water will be pumped up to the Meadow Creek valley and discharged above the confluence with Blowout Creek for stream-flow augmentation. *Id.* at 433, 438; *see* Ex. 26 at 97. This practice will help ensure that Meadow Creek stays watered even while the HFP is being dewatered near Meadow Creek. Tr. at 438. In addition, Perpetua will install a geosynthetic liner under the Meadow Creek floodplain to prevent losses from the creek to groundwater when the water table is drawn down by dewatering. Tr. at 456, 746-47; Ex. 29 at 69. The liner would be placed below the maximum scour depth beneath the entire floodplain to ensure that the stream functions naturally. Tr. at 746-47.

Perpetua will manage water at the SGP to ensure that clean water stays clean. *Id.* at 441; Ex. 26 at 24. Perpetua will convey non-contact water (i.e., streams, runoff, and groundwater that have not been impacted by mining activity), around mine features to keep it clean and keep it in the natural system.²³ Tr. at 441-42; Ex. 26 at 98, 100-07. Perpetua has conducted extensive surveys and mapping of wetlands and streams at the SGP as required by the U.S. Army Corps of Engineers for its dredge and fill permit application. Tr. at 459, 464-67; *see* Ex. 68. All identified sources of non-contact water will be routed around mine features and routed to an existing stream or creek. Tr. at 455; Ex. 26 at 98. To the extent that a source of non-contact water is identified that does not report to a diversion, it will be rerouted when identified. Tr. at 467-77.

As part of the tunnel design to route the EFSFSR around the YPP, Perpetua will install a fishway to allow volitional fish passage above the YPP for the first time since 1938. *Id.* at 44, 424, 639; Ex. 34; Ex. 47. The fishway has been designed pursuant to NMFS Guidance to provide fish passage for Chinook salmon, steelhead trout, and bull trout when Perpetua is withdrawing water under its water rights during 95 percent exceedance flows. Tr. at 381, 384, 664, 678; Ex.34 at 26. Moreover, NMFS will review the final fishway design as part of its consultation under the Endangered Species Act and may require additional improvements to the fishway design to further ensure fish passage. Tr. at 638, 664; Ex. 29 at 20; Ex. 34 at 52. The Nez Perce Tribe will have the opportunity to participate in that review through its right to government-to-government consultation, Tr. at 915-16. Once mining of the YPP pit is completed, the YPP pit will be filled back to grade and the EFSFSR will be rerouted across the top of the YPP, ensuring permanent volitional fish passage at which time the tunnel will be

²³ This water management will be undertaken by Perpetua as part of the ModPRO2 and associated Water Management Plan, both of which will be adopted and made enforceable by USFS. Tr. at 425.

decommissioned. *Id.* at 82, 424-25; Ex. 29 at 69. Without construction of the fishway and restoration of the YPP, there will be no volitional fish passage above the YPP.²⁴ Tr. at 424.

In addition to the ASAOC work removing legacy waste rock and tailings to improve water quality, Perpetua will remove, reprocess and deposit legacy mine tailings in the TSF during the first four years of operations, *id.* at 29-32, 414. The TSF will be fully lined to prevent future water quality contamination. *Id.* at 405-06; *see id.* at 119-20; Ex. 27 at 31-32. Removing these legacy wastes will help improve water quality at the SGP and throughout the EFSFSR. Tr. at 773; Ex. 58 at 4.

Finally, Perpetua will undertake stream restoration and enhancement work throughout the life of the SGP and after mining has ended to improve aquatic habitat, restore stream function, and increase the amount of vegetation to provide shade and cool water temperatures. Tr. at 727-30; Ex. 29 at 69-70. Although there will be impacts from mining during mining operations, there will be a net improvement to aquatic habitat and stream function in the project area as restoration is completed, and the temporal impacts during operations, both to wetlands/waters of the U.S. and to the Wild and Scenic Salmon River instream flow rights, will be fully mitigated. Tr. at 735; Ex. 1g at 60-73. The restoration and enhancement efforts will also have the effect of reducing stream temperatures during both mine operations and post-closure. Ex. 58 at 5.

²⁴ The YPP is partially located on patented mining claims, which Perpetua owns in fee simple. *See* Ex. 23 at 10. There is no way to restore fish passage above the YPP without the cooperation of the landowner who owns the land on which the YPP is located. Tr. at 910-11.

III. ARGUMENT

A. **Perpetua Mas Met the Criteria of I.C. §§ 42-203A(5), 42-222, and IDAPA 37.03.08.045**

1. **Perpetua's Water Rights Will Not Reduce the Quantity of Water Under Existing Rights**

At the outset, Perpetua notes that this factor is not contested.²⁵ Tr. at 9-10.

Notwithstanding the stipulation, Perpetua has demonstrated that its water rights will not reduce the quantity of water under existing water rights. Ex. 1g at 117-19. There are no water rights within the vicinity of the SGP that are not owned by Perpetua or its affiliates, Ex. 1g at 117, and to the extent that there are groundwater rights within 10 miles, Perpetua's groundwater withdrawals will not impact those rights,²⁶ *id.* at 122. The State of Idaho minimum streamflow rights that are within five miles of the SGP are subordinated to new industrial uses, and Perpetua's applications fall within this subordination. Ex.1g at 119. Finally, to the extent that the USFS had concerns about the federal reserved water rights for the Wild and Scenic Salmon River, it has settled its protest and Perpetua will comply with the conditions of that settlement. Ex. 4.

2. **The Water Supply Is Sufficient for the Purpose for Which It Is Sought to Be Appropriated**

Perpetua has applied for 9.6 cfs for industrial use and diversion to storage uses with a year-round period of use. Tr. at 138-39; Ex. 1g at 52, 119; Ex. 61. The requested diversion rate is based on the sum of the modeled maximum estimated rate of the industrial water uses and

²⁵ The parties have also stipulated that the criteria related to injury and enlargement for the transfer applications are not at issue. Tr. at 9-10.

²⁶ At the hearing, Protestants questioned whether Perpetua had fully complied with Rule 40.05.c.ii. Tr. at 129. Perpetua submitted a map showing all well records within a half mile of its proposed points of diversion. Ex. 1g at 129. The intent of Rule 40.05.c.ii is to ensure the protection of existing water rights. *See* 40.05.c.i (requiring disclosure of surface water rights) & iii (requiring description of techniques to minimize impacts on existing water rights). Therefore, Perpetua complied with the intent of Rule 40.05.c by disclosing all groundwater wells and water rights within the SGP.

sources during the life of the SGP. Tr. at 138-39; Ex. 1g at 52. Although the maximum value of these diversion rates is not currently modeled to coincide, the timing of peak demand by source will depend on variations in industrial processes, weather, and/or mine plan sequencing.²⁷ Tr. at 139-40. Additionally, due to water withdrawal reductions during the Low Flow Condition, Perpetua will be required to divert additional water during high flow conditions. *Id.* at 544. Therefore, the application builds in a margin of operational flexibility.²⁸ *Id.* at 140.

To ensure that Perpetua can meet its anticipated demand, Perpetua has conducted extensive modeling of both groundwater and surface water resources at the SGP based on substantial site-specific data. *See* Ex. 25b at 99-149. This analysis demonstrates that there is sufficient water available to economically operate the SGP.

Mining in the YPP, HFP, and WEP will occur below the water table at the site, Ex. 25b at 37, therefore dewatering wells will be required to draw down groundwater levels within and around the pits, *id.* The SHSM predicts that maximum diversion rates from pit dewatering will range from 0.8 cfs in the WEP to 3.3 cfs within the HFP. *Id.* at 50-52, 71. During operations freshwater makeup supply will also be provided from alluvial wells in the Meadow Creek valley; the maximum diversion rate from these wells is predicted to be approximately 0.5 cfs.²⁹ *Id.* at 44,

²⁷ To the extent that Protestants' experts attempted to call into question Perpetua's determination of the amount of water it needs for the SGP, they were not credible. *See* Ex. 64. Ms. Semmens testified that Perpetua applied for more water than it needed; however, she also admitted that she had not reviewed the SWWB, which is exactly what determined the amount of water Perpetua would need to operate the SGP. Tr. at 973. Ms. Semmens can hardly opine on Perpetua's water needs when she has not reviewed the information that forms the basis of the calculations. Likewise, Dr. Kaiser assumed that Perpetua would withdraw a constant 9.6 cfs throughout the life of the project, Tr. at 1050, even though Perpetua has no place to put that much water and would risk endangering its entire operations if it operated continually at that diversion rate, Tr. at 416.

²⁸ The total mill demand is predicted to be 9.7cfs, although much of this demand will be provided by reclaim water from the TSF, the potential exists for the reclaim system to go down, in which case the entire 9.7cfs would need to be met through non-reclaim sources including dewatering, supply wells, or diversions from storage. Tr. at 140.

²⁹ Perpetua modeled the maximum diversion rate of the water supply wells at 0.5 cfs, *id.* at 225, however the actual withdrawal rate will be determined based on site-specific factors at the time of the withdrawal, *id.* at 259-60.

49. The SHSM demonstrates that groundwater resources are sufficient to meet the water requirements of the SGP.

The SHSM also evaluates effects to stream flow within the SGP from all water withdrawals and diversions. Ex. 25b at 56. Under predicted withdrawal rates, the point of quantification for the Low Flow Condition on the EFSFSR below Sugar Creek will experience a maximum reduction of 20 percent in unimpaired stream flows. Ex. 63 at 23. Prior to agreeing to acceptance of the Low Flow Condition, the greatest streamflow depletion at the EFSFSR below Sugar Creek was predicted to be 30 percent. *Id.*. The SHSM predicts that under expected operating conditions, Meadow Creek downstream of the stream liner will have a maximum depletion of 42 percent, which occurs in February of mine year 7. *Id.* at 21. Streamflow depletions in this location are expected to be less than 20 percent in 142 out of 168 months of mine operations. *Id.* at 21-22; *see also* Ex. 25b at 58.

The SHSM works in concert with the SWWB to evaluate water management and operational requirements of the SGP throughout the life of the project. *See* Tr. at 419-20. The evaluation presented in the SHSM and SWWB demonstrate that there will be sufficient water for Perpetua to develop and operate the SGP. *See id.* at 188.

3. The Applications Are Made in Good Faith

As part of its commitment to developing and operating a modern gold and antimony mine, Perpetua has expended significant resources to date and fully intends to put the water applied for to beneficial use.

Perpetua has developed the ModPRO2 and has submitted it to the USFS for approval. Tr. at 88. Although the ModPRO2 has yet to be approved, the USFS is proceeding with the ModPRO2 as its identified preferred alternative. *Id.* Moreover, the USFS is only evaluating two action alternatives in the SDEIS, both of which would have the same water requirements and

onsite operational footprint. *Id.* at 90. Because Perpetua has submitted the ModPRO2 to the USFS for approval it satisfies Rule 45.1.c.i.

Perpetua is also in the process of securing all of the necessary state and federal permits required for the SGP. Rule 45.1.c.ii. Perpetua has submitted applications for its dredge and fill permit under section 404 of the CWA, State of Idaho cyanide permit, and state IPDES permit. Tr. at 389-90. Perpetua is actively working on other required permit applications. Finally, Perpetua has obtained its Permit to Construct as required by the Clean Air Act and its point of compliance for groundwater quality monitoring, and has obtained conditional approval of its dam safety permit from Idaho Department of Water Resources (“IDWR”). *Id.*

Finally, there are no obvious impediments to prevent successful completion of the SGP. Rule 45.1.c.iii.

4. Perpetua Has Sufficient Financial Resources with Which to Complete the Work

At the outset of the hearing, the parties stipulated that this element was not contested. Tr. at 9-10. Notwithstanding that stipulation, Perpetua has nonetheless demonstrated that it has sufficient financial resources with which to complete the work. Perpetua is a publicly-traded company with access to capital markets and has the ability to raise money to fund additional phases of the SGP until paying production is achieved. *Id.* at 79; *see* Ex. 59; Ex. 23 at 37. Additionally, Perpetua has been awarded \$40.3 million to date by the U.S. Department of Defense to assist in permitting and developing the SGP. Tr. at 23-24, 113; Ex. 59 at 67.

As a further demonstration of Perpetua’s ability to fund its operations, and its commitment to the SGP, Perpetua has already spent over \$17 million on pre-final permitting restoration work pursuant to the ASAOC, which will not directly benefit Perpetua’s mining

operations. Tr. at 76-77; Ex. 59 at 8. Accordingly, Perpetua has demonstrated that it is probable that funding will be available for project construction. Rule 45.1.d.i.

5. The Proposed Use Is Not Contrary to the Conservation of Water Resources

Perpetua has proposed a comprehensive Water Management Plan to ensure that water within the SGP site is conserved to the maximum extent practicable, while still putting the water to beneficial use. Ex. 60 at 1. Under the Water Management Plan, Perpetua has committed to recycling water that has already been diverted to industrial use for further ore processing. Ex. 26 at 84. During normal operations, approximately 80 percent of the water used in ore processing will be reclaim water. *Id.* Following the use of reclaim water, groundwater from pit dewatering will be used followed by direct use of contact water, and stored water from the contact water ponds. Ex. 26 at 87-88, 126-27; Ex. 60 at 1. Reclaimed water and use of contact water (including dewatering water) accounts for approximately 90 percent of the ore processing and dust control water demand in the 14.25 years of mill operation. Ex. 60 at 1. The remaining demand will be met by the water supply wells and the surface diversion from the EFSFSR. This practice, along with direct use or containment and treatment of contact water, will minimize impacts on water quality, reduce diversion of freshwater, and reduce associated streamflow impacts. *Id.*

B. Perpetua's Proposed Use Will Not Conflict with the Local Public Interest

The "local public interest" is defined as the interests that the people in the area directly affected by a proposed water use have in the effects of such use on the public water resource. I.C. § 42-202B. In evaluating the local public interest, the Hearing Officer may consider the effect the project will have on recreation, fish and wildlife resources in the local area affected by the proposed use. Rule 45.01.e.ii. Under Rule 40, Perpetua bears the burden of providing evidence for the evaluation of any factor affecting local public interest for which the company is

knowledgeable or is reasonably expected to be knowledgeable. Rule 40.04.b.ii. The Protestants bear the burden of coming forward with evidence for those factors relevant to the local public interest of which the protestant can reasonably be expected to be more cognizant than the applicant. *Id.* The ultimate burden of persuasion remains with the applicant. Rule 40.04.c.

Here, Perpetua has met its burden to demonstrate that its water rights, and the SGP, are firmly in the local public interest. The Protestants, on the other hand, have failed to carry their burden. The primary dispute in this case is the effects the SGP will have on fishery resources. Although the Protestants questioned Perpetua's evidence, they failed to present evidence that the SGP would be contrary to the local public interest.

It is undisputed that fish passage is currently blocked above the YPP and has been since 1938. Tr. at 27, 1071-72; Ex. 29 at 38. Presently, fish are only able to pass above the YPP by a turbulent 40-mile journey in the back of a truck. Tr. at 706. Through the use of its water rights, and the development of the SGP, Perpetua will provide volitional fish passage to the stream reaches above the YPP. Tr. at 44-46; Ex. 22 at 62, 88. Protestants may quibble about whether fish are able to pass at 0.9 ft of water depth instead of a full 1.0 ft of water depth, but they lose the forest for the trees – at an irreducible minimum, the SGP is the only viable option to restore passage above the YPP. Moreover, the SGP will restore legacy impacts from past mining practices that will enhance fish habitat at the site – these restoration measures include installing habitat features like pools and large woody debris, restoring channelized streams, increasing floodplain connectivity and vegetation density to provide stream shade and reduce water temperatures, and all while removing legacy mine features improving water quality for fish. Tr. at 721-22, 732-34; Ex. 29 at 64-70. Protestants may hope that these restoration efforts happened faster, or that the vegetation grew more quickly, but again, there is little if any restoration being

conducted at the site other than by Perpetua. Even though Protestants testified to the importance of the short-term impacts of the SGP to fish, it is Perpetua, not them, conducting the restoration work.

Perpetua has committed to installing a tunnel around the YPP with a fishway to provide fish passage for the first time since 1938.³⁰ Tr. at 44-46; Ex. 22 at 62, 88; Ex. 34. While the tunnel will be 0.9-mile long, the fishway is based on conventional fishway design. Tr. at 424; *see also* Ex. 34 at 29-38. It is low gradient and provides extensive resting pools. Tr. at 360-61. Additionally, Perpetua will install lights that simulate natural conditions to encourage fish passage. *Id.* at 373-74.

The fishway is currently designed to provide at least 0.9 ft of flow depth over each weir at flows down to 6.6 cfs. *Id.* at 514; Ex. 47. Perpetua demonstrated that even with its water withdrawals under the Low Flow Condition at 95 percent exceedance flows, there will still be 6.6 cfs flowing through the tunnel. Tr. at 500-01; Ex. 219 at 4. The fishway is being designed pursuant to NMFS Guidance on fish passage structures, Ex. 34 at 26, which allow that the fish passage be evaluated using site-specific factors, Tr. at 549-53, 664. The depth criteria of 0.9 ft was specifically provided by the CDFW Guidance. Ex. 219. The CDFW Guidance applies to critical riffles, where fish passage can be impacted by minor flow depletions due to their consistent shallow nature. Ex. 238 at 7. The CDFW Guidance is conservative as applied to the tunnel because the tunnel will provide adequate depths behind each weir in the resting pool, as the lowest elevation of weir notch is two feet above the adjacent tunnel floor and the 0.9-ft depth is measured from the notch not the floor. *See* Tr. at 745; Ex. 34 at 27-28. Moreover, NMFS is reviewing the fishway design and may require additional enhancements to encourage fish

³⁰ Removing fish passage barriers from legacy mine sites is one of the priorities listed in the NMFS recovery plan for anadromous fish, issued under the Endangered Species Act. Tr. at 655.

passage. Tr. at 664; Ex. 34 at 51. Additionally, to the extent that additional depth through the weirs is required to ensure passage, Perpetua can easily adjust the design of the weir notch to increase the depth even at flows expected while Perpetua is withdrawing water during low flow conditions. Tr. at 385-86.

Likewise, Perpetua demonstrated that the fish species of concern would be able to volitionally pass upstream between the confluence of Sugar Creek and the outlet of the tunnel. Ex. 219 at 7. Rio ASE conducted a rigorous hydraulic analysis of the reach between the tunnel and Sugar Creek. *Id.* at 23, 33. Rio ASE then applied the flow reduction from Perpetua's water use with the Low Flow Condition during 95 percent exceedance flows and demonstrated that fish passage would be minimally affected and therefore viable. *Id.* at 43, 47. To be sure, there will be a minor reduction in the number of sections of the reach meeting the CDFW Guidance. However, Sugar Creek has considerably more sections out of compliance with the CDFW Guidance now than the EFSFSR below the tunnel will have even with water withdrawals, and yet fish still volitionally pass up Sugar Creek. Tr. at 744. This indicates at the very least that the species of interest will be able to pass up to the tunnel. *Id.*

Perpetua's experts testified that depths are not an on/off switch for fish passage. *Id.* at 644. Indeed, Chinook salmon are able to pass at depths lower than 0.9 ft. *Id.*

The Protestants failed to present credible evidence that fish passage will not occur. Remarkably, ICL and SSFS failed to present *any* expert fisheries witness who could opine on fish passage conditions on the site. To the extent that Protestants attempt to rely on Mr. Kinzer's testimony, that reliance is ineffectual. *See* Ex. 63. Instead of using the *volumes* of available site-specific data, Mr. Kinzer relied on 30-year-old data for vastly different streams (e.g., Scotland and Asotin Creek near Lewiston, Idaho) to somehow magically infer that Perpetua's water

withdrawals will negatively impact fish. Tr. at 1144-47. However, as Mr. Kinzer admitted, he did not conduct a transferability analysis to determine if the data he was relying on was transferable to or representative of the reaches he purportedly analyzed. *Id.* at 1098. Further, Mr. Kinzer agreed that the passage analysis conducted by Rio ASE was exactly the type of analysis that fisheries biologists would rely on. *Id.* at 1103. Finally, Mr. Kinzer agreed that despite his assumption that flow reductions have a 1:1 impact on fish productivity, the relationships between flows and fish productivity are extremely complex and require more detailed information to fully understand. *Id.* at 1097. No such detailed information was provided by Protestants.

Protestants' reliance on Dr. Kaiser fares no better. First, Dr. Kaiser faulted Perpetua for not using complex climate predictions in its hydrologic modeling, even though those climate models do not produce a dataset that can be integrated into the models used by Perpetua. *Id.* at 249. More importantly, Dr. Kaiser failed to recognize that Perpetua did use a 120-year climate record that included both precipitation and temperature to account for wide variations in climate throughout the 14.25-year life of the SGP. *Id.* at 204. In order to adequately evaluate water management at the site, Perpetua needed to be able to predict month-to-month precipitation. Ex. 27a at 38. The climate change models discussed by Dr. Kaiser do not provide the level of granularity Perpetua requires to evaluate realistic management of the SGP. Tr. at 204; Ex. 64 at 5, 10-12. The 120-year climate record was used exactly because it provided monthly data that could be used and provided a broad range of potential climate scenarios that bracketed the variability induced by potential climate change effects within the next 20 years. *Id.*

Next, Dr. Kaiser assumed that Perpetua would withdraw 10.43 cfs consistently through the life of the mine and based her analysis on this *constant* diversion rate, instead of the actual expected diversions. Tr. at 1032. Dr. Kaiser conveniently reworked her analysis after issuing her

expert report and determined that even at 9.6 cfs, her analysis would still be valid, but there is no evidence in the record to this effect. *Id.* at 1033. More importantly, Perpetua analyzed its water demand and impacts based on realistic water withdrawals, not a constant diversion rate like Dr. Kaiser evaluated. *Id.* at 416. Applying the full water right withdrawal rate at all times and within all reaches misrepresents the anticipated use and impacts of Perpetua's water rights. Ex. 64 at 5-6.

Finally, Dr. Kaiser reanalyzed Rio ASE's flow analysis of the EFSFSR above Sugar Creek and below the tunnel outlet. Even under Dr. Kaiser's worst-case scenario, Protestants have not demonstrated that fish will not be able to pass the reach at 95 exceedance flows while Perpetua is withdrawing water under the Low Flow Condition. First, the flow rates evaluated by Dr. Kaiser are not significantly different than the flow rates evaluated by Rio ASE. *Compare* Ex. 215 at 14 *with* Ex. 19 at 35. Rio ASE determined that the daily average exceedance discharge between June 30 to September 30 (Chinook passage window) would be 6.6 cfs, while Dr. Kaiser determined that the exceedance discharge for those same months would be between 7.1 and 6.4 cfs. Again, Protestants quibble over a distinction of degrees. More importantly, Perpetua offered testimony that Chinook salmon would be able to pass at depths below 0.9 ft. Tr. at 643-45. The Protestants offered no evidence tying Dr. Kaiser's evaluation back to fish passage – effectively, even taking Dr. Kaiser's numbers at face value, Rio ASE's analysis demonstrates that fish passage will continue to occur in the EFSFSR at 95 percent exceedance flows while Perpetua is operating under the Low Flow Condition.

At bottom, Protestants speculate about what a roughly one inch difference, Tr. at 679, might mean for fish passage. But they did not offer credible evidence that fish passage would be precluded during Perpetua's water withdrawals even though without the proposed SGP, fish

passage will continue to be precluded only another half mile farther upstream. Ex. 39 at 52; Ex. 63 at 11. Perpetua also provided extensive evidence of its restoration and water quality improvements that will be enabled by its water rights and the development of the SGP as well as the associated benefits those restoration and water quality improvements will have for the site's fisheries resource. Perpetua will repair the damage to Blowout Creek from the earthen dam that failed, thus reducing fine sediment loading to Meadow Creek and the EFSFSR and directly benefiting fish. Ex. 29 at 69. This restoration work will begin in the third year of construction before Perpetua has begun full-scale mining. *Id.* at 68. Perpetua will also enhance the EFSFSR between Meadow Creek and the YPP, Tr. at 732-33, which even Mr. Kinzer recognized was "degraded" and does not provide good habitat for fish, *id.* at 1172-73.

Perpetua also provided evidence that the SGP will result in water quality improvements by reducing arsenic and antimony and decreasing temperatures in most stream reaches. *Id.* at 584; Ex. 58. Although Protestants questioned the basis of Perpetua's analysis, they did not present any evidence that such improvements would *not* occur. These water quality improvements will have direct benefits for fish at and downstream from the SGP site.

Finally, to the extent that Protestants attempt to rely on recreation to support their public interest argument, they failed to present any evidence that Perpetua's water withdrawals would negatively impact their interests in recreation. Mr. Robison testified that he was concerned about potential impacts to his recreation in the EFSFSR below the SGP, but never tied those concerns to any specific harms or recreational impairment *caused by* the SGP. Tr. at 821. Likewise, Mr. Coriell testified that his members' interests would be harmed if they did not have fish to observe while snorkeling, but like Mr. Robison, he failed to substantiate these concerns or explain how Perpetua's project would impact those concerns. Tr. at 869-70. Contrary to these unsubstantiated

assertions, Perpetua has offered extensive evidence that the SGP and its use of its water rights will have a net benefit for fish for Mr. Robison's and Mr. Coriell's members to enjoy, *see* Ex. 29; Ex. 58, and a negligible effect on the high stream flows utilized by river users. *See* Ex. 25b at 61 (describing average decrease in baseflow from 22.1 cfs to 20.1 cfs below the confluence of Sugar Creek and the EFSFSR, and lower impacts at higher flows).

C. Perpetua's Proposed Conditions

Perpetua anticipates and accepts that the Hearing Officer will place conditions on its water rights upon approval. Perpetua proposes the following Standard Conditions:

1. 01J as applicable to Water Right 77-14378, 77-7122, 77-7285, and 77-7293.
Although Perpetua does not believe that Condition 01J is necessarily applicable to the domestic water rights at the SGP, Perpetua is willing to accept condition 01J as applicable to Water Right 77-14377, 77-7141, and 77-14379 to address Protestants' concerns that Perpetua will use these domestic water rights for other than domestic use.
2. 121 as applicable to Water Right 65-24089, 77-14377, 77-14378, 77-14379, and 77-14381.³¹
3. 26A as applicable to Water Right 65-24089, 77-14377, 77-14378, 77-14379, and 77-14381.
4. 046 as applicable to Water Right 65-24089, 77-7141, 77-7285, 77-14377, 77-14378, 77-14379, 77-14381.
5. 198 as applicable to all water rights.
6. 020 as applicable to Water Right 77-14378, 77-7285, 77-7293 to fully implement the Stipulated Joint Motion to Approve Settlement and Dismiss Protest, Ex. 4.
7. T07 as applicable to Water Right 77-7122, 77-7141, 77-7285, 77-7293.
8. T08 as applicable to Water Right 77-7122, 77-7141, 77-7285, 77-7293.
9. 09E as currently reflected in Water Right 77-7285 and 77-7293, and as applicable to Water Right 77-14378 and 77-7122.

³¹ Perpetua notes that Water Right 65-24089 and 77-14381 are not at issue in this proceeding, but references them here for efficiency of future application processing.

In addition to the Standard Conditions, Perpetua proposes the following conditions:

1. Rights 77-14378, 77-7122, 77-7285, and 77-7293, in combination, shall not exceed an instantaneous diversion rate of 9.6 cfs.
2. Rights 77-14377 and 77-7141 are limited to a combined diversion rate of 0.20 cfs.
3. A fish screen meeting the National Marine Fisheries Service fish screen criteria shall be installed and maintained at the point of diversion.³²
4. Net diversions from EFSFSR and groundwater under Water Rights 77-7122, 77-7285, 77-7293, and 77-14378 shall not cause more than 20 percent depletion to the unimpaired streamflow in the EFSFSR below its confluence with Sugar Creek when unimpaired streamflow is less than 25 cfs. For purposes of this condition:
 - a. Percent depletion is equal to net diversion divided by unimpaired streamflow.
 - b. Net diversion is the sum of groundwater and EFSFSR diversions minus discharge of treated water to the EFSFSR and its tributaries.
 - c. Unimpaired streamflow is defined as the gauged flow at Sugar Creek (USGS 13311450), plus the gauged flow at EFSFSR above Sugar Creek (USGS 1331250), plus the net diversion from EFSFSR and groundwater under Water Rights 77-7122, 77-7285, 77-7293, and 77-14378.
 - d. Calculations shall be based on running three-day averages of net diversion and gauged stream flows.

Finally, Perpetua proposes removing or amending the following conditions in existing water rights that are transferred. For Water Right 77-7293, Perpetua requests that standard condition R06, requiring use of settling ponds prior to discharge, be removed because a water treatment plant will treat the water prior to discharge and this condition would create a potential management conflict. Also, for Water Right 77-7293, the condition stating that “mining use is for dust control in association with mining activities,” should be removed as it does not reflect the full use to which the water in the transferred right will be put. For Water Right 77-7285, references to the National Pollutant Discharge Elimination System Permit should be updated to the Idaho Pollutant Discharge Elimination System Permit and the references to the U.S.

³² This condition is offered in lieu of Standard Conditions 029 or X15. This condition is applicable to Water Right 77-14378, 77-7122, and 77-7293.

Environmental Protection Agency and Department of Health and Welfare, should be updated to IDEQ.³³ For Water Right 77-7141, Perpetua asks that the description that “domestic use is for 19 homes” be removed.

IV. CONCLUSION

For the foregoing reasons, Perpetua respectfully requests that the Hearing Officer grant Perpetua’s applications for the water rights for the SGP with the suggested conditions.

DATED: January 31, 2024

STOEL RIVES LLP

/s/ Wade C. Foster

Wade C. Foster

Elijah M. Watkins

Kevin J. Beaton

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³³ Perpetua notes that the condition related to settling ponds is not applicable because a water treatment plant will be used instead of settling ponds. Perpetua is required to obtain an IPDES permit and otherwise comply with IDEQ regulations and is not opposed to the water rights being conditioned to reflect those requirements.

CERTIFICATE OF SERVICE

I hereby certify that on January 31, 2024, true and correct copies of the foregoing document was served on the parties by Email:

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