Rev. 07/18

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OCT 08 2021
DEPARTMENT OF WATER RESOURCES

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

Transfer No. 85397

MINIMUM REQUIREMENTS CHECKLIST
TO BE SUBMITTED WITH APPLICATION FOR TRANSFER

An application for transfer must be prepared in accordance with the minimum requirements listed below to be acceptable for processing by the Department. Incomplete applications will be returned. The instructions, fee schedule, Part 2A reports and additional Part 2B forms are available from any Department office or on the Department's website at idwr.idaho.gov.

Name of Applicant(s) Perpetua Resources Idaho, Inc.

Check whether each item below is *attached* (Yes) or *not applicable* (N/A) for the proposed transfer.

Yes	N/A	
		* Means the item is always required and must be included with the application.
☑	*	Completed Application for Transfer of Water Right form, Part 1.
☑	*	Signature of applicant(s) or applicant's authorized representative on Application for Transfer Part 1. Include evidence of authority labeled Attachment #3 (see below) if signed by representative.
☑	*	Application for Transfer Part 2A. Attach a Part 2A report describing each water right in the transfer as currently recorded.
☐	☑	Complete and attach an Application for Transfer Part 2B for each water right for which only a portion is proposed to be changed through this transfer application.
☑	*	Application for Transfer Part 3A is always required (see Attachment #7a below); Parts 3B and 3C must be completed for transfer applications proposing to change the nature of use of the water right(s) or proposing changes to supplemental right(s).
☑	*	Correct fee submitted with transfer application form. (Fee schedule is on website and instructions for application for transfer.)

Attachments to Application - Label each attachment with the corresponding number shown below as Attachment #1-10.

☐	☑	#1 If the applicant is a business, partnership, organization, or association, and not currently registered in the State of Idaho as a business entity, attach documentation identifying officers authorized to sign or act on behalf of right holder. (See Part 1.)
☑	☐	#2a Water Right ownership documentation if Dept. records do not show the applicant as the current water right owner. **
☐	☑	#2b If the ownership of the water right will change as a result of the proposed transfer to a new place of use, attach documentation showing land and water right ownership at the new place of use. Include documentation for all affected land and owner(s).** ** Additional fee(s) required for water right ownership changes; see fee schedule.
☐	☑	#3 Documentation of authority to make the change if the applicant is not the water right owner.
☑	☐	#4 Power of Attorney or documentation providing authority to sign or act on the applicant's behalf. (See Part 1.)
☐	☑	#5 If the transfer application proposes to change the point of diversion for a water right affecting the Eastern Snake Plain Aquifer (ESPA), attach the results of an ESPA analysis and a detailed mitigation plan to offset any depletions to hydraulically connected reaches of the Snake River. ESPA transfer spreadsheet and model grid labeled cells are available on the Department's website at idwr.idaho.gov/water-rights/transfers/resources.html.
☐	☑	#6 Notarized statement of agreement or a statement on official letterhead signed by an authorized representative from each lien holder or other entity with financial interest in the water right(s) or land affected by the proposed transfer. (See Part 1.5.c.)
☑	*	#7a Attach a map identifying the proposed point(s) of diversion, place(s) of use, and water diversion and distribution system details as described on the application. Include legal description labels. If only a portion of the right is proposed to be changed, identify the current location of the part of the existing right(s) proposed to be changed. (See Part 3A.)
☐	☑	#7b If the transfer application proposes to change the place or purpose of use of an irrigation right attach a Geographic Information System (GIS) shape file, or an aerial photo or other image clearly delineating the location and extent of existing acres and changes to the place of use. If some or all of any right is leased to the Water Supply Bank, you must also show the the specific location and/or acres to be idled at the new, proposed place of use to satisfy lease requirements.
☐	☑	#8a If the transfer application proposes to change the nature of use or period of use for one or more rights, provide documentation describing the extent of historic beneficial use for the water rights proposed to be transferred and document how enlargement will be avoided. (See Part 3B.) Additional fee required for proposed changes to nature of use; see fee schedule.
☐	☑	#8b If the transfer application proposes to change the place of use of a supplemental irrigation right, provide documentation regarding the historic use of the supplemental right(s) and availability or reliability of the primary right(s) being supplemented, both before and after the proposed change. (See Part 3C.)
☐	☑	#9 Water Supply Bank information for all rights proposed for transfer and currently leased to the Bank. (Attachment WSB)
☐	☐	#10 Other. Please describe: _____

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STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

APPLICATION FOR TRANSFER OF WATER RIGHT
PART 1

Name of Applicant(s) Perpetua Resources Idaho, Inc. Phone (208) 901-3060

Mailing address P.O. Box 429, Donnelly, Idaho 83615 Email ahaslam@midasgoldinc.com

☐ If applicant is not an individual and not registered to do business in the State of Idaho, attach documentation identifying officers authorized to sign or act on behalf of the applicant. Label it **Attachment #1**.

☑ Attach water right ownership documentation if Department records do not show the transfer applicant as the current water right owner. Label it **Attachment #2a**.

☐ If the ownership of the water right will change as a result of the proposed transfer to a new place of use, attach documentation showing land and water right ownership at the new place of use. Include documentation for all affected land and owner(s). Label it **Attachment #2b**.

☐ Attach documentation of authority to make the proposed change if the applicant is not the water right owner. Label it **Attachment #3**.

Provide contact information below if a consultant, attorney, or any other person is representing the applicant in this transfer process.

☐ No Representative

Name of Representative Kevin J. Beaton, Stoel Rives LLP Phone (208) 387-4214

Mailing address 101 S. Capitol Boulevard, Suite 1900, Boise, Idaho 83702-7705 Email kevin.beaton@stoel.com

☐ Send all correspondence for this application to the representative and not to the applicant.
OR
☑ Send original correspondence to the applicant and copies to the representative.

☑ The representative may submit information for the applicant but is not authorized to sign for the applicant.
OR
☐ The representative is authorized to sign for the applicant. Attach a Power of Attorney or other documentation providing authority to sign for the applicant and label it **Attachment #4**.

I hereby assert that no one will be injured by the proposed changes and that the proposed changes do not constitute an enlargement in use of the original right(s). The information contained in this application is true to the best of my knowledge. I understand that any willful misrepresentations made in this application may result in rejection of the application or cancellation of an approval.

Alan D. Haslam — Alan D. Haslam VP Permitting — 10/8/2021
Signature of Applicant or Authorized Representative | Print Name and Title if applicable | Date

Signature of Applicant or Authorized Representative | Print Name and Title if applicable | Date

A. PURPOSE OF TRANSFER

1. ☑ Change point of diversion ☑ Add diversion point(s) ☑ Change place of use
   ☐ Change nature of use ☐ Change period of use ☐ Other _____

2. Is this a transfer for changes pursuant to Idaho Code § 42-221.O.8?
   If yes, ☐ attach an explanation and any supporting documentation labeled as **Part1A.2**.

3. Describe your proposal in narrative form, including a detailed description of non-irrigation uses to justify amounts transferred (i.e. number of stock, etc.), and provide additional explanation of any other items on the application. Attach additional pages if necessary and label it **Part 1A.3**.
   The applicant proposes moving the point of diversion and place of use of water right 77-7285 to the site of proposed mining exploration in the area of Stibnite, Idaho. PODs and storage POU will be limited to 18N 9E, Sec 15 due to size of the water right. Water right 77-7285 will be used in combination with a proposed permit for industrial purpose.

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STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

APPLICATION FOR TRANSFER OF WATER RIGHT
PART 1 Continued

B. DESCRIPTION OF RIGHTS AFTER THE REQUESTED CHANGES. IF THE RIGHTS ARE BEING SPLIT, DESCRIBE PORTIONS TO BE CHANGED AS THEY WOULD APPEAR AFTER THE REQUESTED CHANGES.

1. All	Part	Right Number	Amount (cfs/ac-ft)	Nature of Use	Period of Use	Source & Tributary
☑	☐	77-7285	0.5/30.2	mining	1/1 to 12/31	groundwater
☐	☐		0.5 cfs	diversion to storage	1/1 to 12/31	groundwater
☐	☐		9.0 ac-ft	mining storage	1/1 to 12/31	groundwater
☐	☐		9.0 ac-ft	mining from storage	1/1 to 12/31	groundwater
☐	☐				to	
☐	☐				to	
☐	☐				to	
☐	☐				to	
☐	☐				to	

Total authorized under rights 0.5 cfs and/or 30.2 acre-feet.

2. Total amount of water proposed to be transferred or changed 0.5 cubic feet per second and/or 30.2 acre-feet per year.

3. Point(s) of Diversion:

☐ No changes to point(s) of diversion are proposed - the following chart is therefore not completed. (Proceed to #4.)
☐ Attach Eastern Snake Plain Aquifer analysis if this transfer proposes to change a point of diversion affecting the ESPA. Label it **Attachment #5**.

New ?	Lot	¼	¼	¼	Sec	Twp	Rge	County	Source	Local name or tag #

SEE POINT OF DIVERSION/PLACE OF USE SUPPLEMENT

4. Place of use: (If irrigation, identify with number of acres irrigated per ¼ ¼ tract.)

☐ No changes to place of use are proposed - the following chart is therefore not completed. (Proceed to #5.)

Twp	Rge	Sec	NE ¼				NW ¼				SW ¼				SE ¼				Acre Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	

SEE POINT OF DIVERSION/PLACE OF USE SUPPLEMENT

Total Acres (for irrigation use)

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DEPARTMENT OF WATER RESOURCES

Ident. No. T85397 Amended
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Point of Diversion/Place of Use Supplement

Attachment to: ☐ Application for Permit to Appropriate Water ☒ Application for Transfer** ☐ Adjudication Claim
☐ Application for Amendment of Permit ☐ Beneficial Use Field Report ☐ Statutory Claim

Location of points of diversion (POD):

New POD?	Twp	Rge	Sec	Govt Lot	¼	¼	¼	County	Source	Local name or well/diversion tag #
☒ Yes	18N	9E	15			SW	SW	Valley	groundwater	15SWSW-SW1
☒ Yes			15			SE	SW	Valley	groundwater	15SESW-SW1
☒ Yes			15			SE	SW	Valley	groundwater	15SESW-SW2
☒ Yes			15			SE	SW	Valley	groundwater	15SESW-SW3
☒ Yes			15			SE	SW	Valley	groundwater	15SESW-SW4
☒ Yes			15	6		NW	SE	Valley	groundwater	15NWSE-SW1
☒ Yes			15	6		NW	SE	Valley	groundwater	15NWSE-SW2
☒ Yes			15	6		NW	SE	Valley	groundwater	15NWSE-SW3
☒ Yes			15			SW	SE	Valley	groundwater	15SWSE-SW1
☒ Yes			15			SW	SE	Valley	groundwater	15SWSE-SW2

Description of place of use (POU):

a. If water is for irrigation, indicate acreage in each subdivision in the tabulation below.
b. If water is used for other purposes, place a symbol of the use (example: D for Domestic) in the corresponding place of use below.

TWP	RGE	SEC	NE				NW				SW				SE				TOTALS
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
19N	9E	34															X	X	
																	L3	L4	
		35											X	X			X	X	
18N	9E	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
			L1	L2			L3	L4											
		3	X	X	X	X									X	X	X	X	
			L1	L2															
		10	X			X									X			X	
		11					X	X	X	X	X	X	X	X					
		14					X	X	X										
		15	X	X	X	X				X	X	X	X	X	X	X	X	X	
			L1	L2	L3	L4									L5	L6			
		16											X	X			X	X	

**If this supplemental sheet is for an Application for Transfer, insert this page into Part 1B of the application.

This page supersedes Oct 8, 2021 page

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

Ident. No. _____

Point of Diversion/Place of Use Supplement

Attachment to: ☐ Application for Permit to Appropriate Water ☒ Application for Transfer** ☐ Adjudication Claim
☐ Application for Amendment of Permit ☐ Beneficial Use Field Report ☐ Statutory Claim

Location of points of diversion (POD):

New POD?	Twp	Rge	Sec	Govt Lot	¼	¼	¼	County	Source	Local name or well/diversion tag #
☒ Yes	18N	9E	15			SW	SW	Valley	groundwater	15SWSW-SW1
☒ Yes			15			SE	SW	Valley	groundwater	15SESW-SW1
☒ Yes			15			SE	SW	Valley	groundwater	15SESW-SW2
☒ Yes			15			SE	SW	Valley	groundwater	15SESW-SW3
☒ Yes			15			SE	SW	Valley	groundwater	15SESW-SW4
☒ Yes			15	6		NW	SE	Valley	groundwater	15NWSE-SW1
☒ Yes			15	6		NW	SE	Valley	groundwater	15NWSE-SW2
☒ Yes			15	6		NW	SE	Valley	groundwater	15NWSE-SW3
☒ Yes			15			SW	SE	Valley	groundwater	15SWSE-SW1
☒ Yes			15			SW	SE	Valley	groundwater	15SWSE-SW2

Description of place of use (POU):

a. If water is for irrigation, indicate acreage in each subdivision in the tabulation below.
b. If water is used for other purposes, place a symbol of the use (example: D for Domestic) in the corresponding place of use below.

Symbol Key: X = Mining; S = Mining Storage

TWP	RGE	SEC	NE				NW				SW				SE				TOTALS
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
19N	9E	34															X	X	
																	L3	L4	
		35											X	X			X	X	
18N	9E	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
			L1	L2			L3	L4											
		3	X	X	X	X									X	X	X	X	
			L1	L2															
		10	X			X									X			X	
		11					X	X	X	X	X	X	X	X					
		14					X	X	X										
		15	X	X	X	X				X	X	X	X	X	X	X	X	X	
			L1	L2	L3	L4									L5	L6			
		16												X			X	X	

**If this supplemental sheet is for an Application for Transfer, insert this page into Part 1B of the application.

This page is superseded by Nov 18, 2021 page

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Point of Diversion/Place of Use Supplement

Attachment to: ☐ Application for Permit to Appropriate Water ☒ Application for Transfer** ☐ Adjudication Claim
☐ Application for Amendment of Permit ☐ Beneficial Use Field Report ☐ Statutory Claim

Location of points of diversion (POD):

New POD?	Twp	Rge	Sec	Govt Lot	¼	¼	¼	County	Source	Local name or well/diversion tag #
☒ Yes	18N	9E	15			SW	SE	Valley	groundwater	15SWSE-SW3
☒ Yes			15			SW	SE	Valley	groundwater	15SWSE-SW4
☐ Yes			15			SE	NE	Valley	groundwater	15SENE-ESW1
☐ Yes										
☐ Yes										
☐ Yes										
☐ Yes										
☐ Yes										
☐ Yes										
☐ Yes										

Description of place of use (POU):

a. If water is for irrigation, indicate acreage in each subdivision in the tabulation below.
b. If water is used for other purposes, place a symbol of the use (example: D for Domestic) in the corresponding place of use below.

TWP	RGE	SEC	NE				NW				SW				SE				TOTALS
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
18N	9E	17																X	
		20	X			X									X				
		21	X	X	X	X	X	X	X	X	X	X	X	X					
		22					X	X	X										
		28					X	X											
18N	9E	15			S	S								S	S	S			

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This page supersedes Oct 8, 2021 page

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

Ident. No. _____

Point of Diversion/Place of Use Supplement

Attachment to: ☐ Application for Permit to Appropriate Water ☒ Application for Transfer** ☐ Adjudication Claim
☐ Application for Amendment of Permit ☐ Beneficial Use Field Report ☐ Statutory Claim

Location of points of diversion (POD):

New POD?	Twp	Rge	Sec	Govt Lot	¼	¼	¼	County	Source	Local name or well/diversion tag #
☒ Yes	18N	9E	15			SW	SE	Valley	groundwater	15SWSE-SW3
☒ Yes			15			SW	SE	Valley	groundwater	15SWSE-SW4
☐ Yes			15			SE	NE	Valley	groundwater	15SENE-ESW1
☐ Yes										
☐ Yes										
☐ Yes										
☐ Yes										
☐ Yes										
☐ Yes										

Description of place of use (POU):

a. If water is for irrigation, indicate acreage in each subdivision in the tabulation below.
b. If water is used for other purposes, place a symbol of the use (example: D for Domestic) in the corresponding place of use below.

Symbol Key: X = Mining; S = Mining Storage

TWP	RGE	SEC	NE				NW				SW				SE				TOTALS
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
18N	9E	20	X			X									X				
		21	X	X	X	X	X	X	X	X	X	X	X	X					
		22					X	X											
		28					X	X											
18N	9E	15			S	S								S	S	S			

**If this supplemental sheet is for an Application for Transfer, insert this page into Part 1B of the application.

This page is superseded by Nov 18, 2021 page 85397

Attachment to Point Of Diversion/Place Of Use Supplement

Transfer Application - Point of Diversion Descriptions

Page No	New POD?	Twp	Rge	Sec	Govt Lot	¼	¼	¼	County	Source	Mineral Survey Tract	POD Type	Public/ Private	ID No
1	Y	18N	9E	15			SW	SW	Valley	groundwater		Supply Well	private	15SWSW-SW1
	Y	18N	9E	15			SE	SW	Valley	groundwater		Supply Well	private	15SESW-SW1
	Y	18N	9E	15			SE	SW	Valley	groundwater		Supply Well	private	15SESW-SW2
	Y	18N	9E	15			SE	SW	Valley	groundwater		Supply Well	private	15SESW-SW3
	Y	18N	9E	15			SE	SW	Valley	groundwater		Supply Well	private	15SESW-SW4
	Y	18N	9E	15	6		NW	SE	Valley	groundwater		Supply Well	public	15NWSE-SW1
	Y	18N	9E	15	6		NW	SE	Valley	groundwater		Supply Well	public	15NWSE-SW2
	Y	18N	9E	15	6		NW	SE	Valley	groundwater		Supply Well	public	15NWSE-SW3
	Y	18N	9E	15			SW	SE	Valley	groundwater		Supply Well	public	15SWSE-SW1
	Y	18N	9E	15			SW	SE	Valley	groundwater		Supply Well	public	15SWSE-SW2
2	Y	18N	9E	15			SW	SE	Valley	groundwater		Supply Well	public	15SWSE-SW3
	Y	18N	9E	15			SW	SE	Valley	groundwater		Supply Well	public	15SWSE-SW4
		18N	9E	15			SE	NE	Valley	groundwater		Existing Supply Well	private	15SENE-ESW1

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

APPLICATION FOR TRANSFER OF WATER RIGHT
PART 1 Continued

5. General Information:

a. Describe the complete diversion system, including how you will accommodate a measuring device and lockable controlling works should they be required now or in the future:
The diversion system will include pumps and distribution piping to the place of use. The works will be constructed to accommodate a measuring device and lockable controlling works as required by IDWR or a local water district.

b. Who owns the property at the point(s) of diversion? applicant and USFS

If other than the applicant, describe the arrangement enabling the applicant to access the property for the diversion system:
The applicant has land use applications pending with the USDA-USFS.

c. Are the lands from which you propose to transfer the water right subject to any liens, deeds of trust, mortgages, or contracts?
If yes, ☐ attach a notarized statement from the holder of the lien, deed of trust, mortgage or contract agreeing to the proposed changes on official letterhead signed by an authorized representative. Label it **Attachment #6**. List the name of the entity and type of lien: _____

It is the applicant's responsibility to provide notice to lien holder, trustee, mortgagor, or contract holder of the proposed changes that may impact or change the value of the water rights or affected real property. Any misrepresentation of legal encumbrance on this application may result in rejection of the application or cancellation of an approval.

d. Are any of the water rights proposed for transfer currently leased to the Water Supply Bank?
If yes, ☐ complete Attachment WSB.

e. Describe the effect on the land now irrigated if the place or purpose of use is changed pursuant to this transfer:

f. Describe the use of any other water right(s) for the same purpose or land, or the same diversion system as right(s) proposed to be transferred at both the existing and proposed point(s) of diversion and place(s) use:
There are no overlapping groundwater rights for mining use at the existing point of diversion or place of use. The applicant proposes the combination of water right 77-7285 with a new water right for industrial use from the points of diversion and place of use proposed by this transfer application. Rights 77-7122 and 77-7293 for mining and related uses have places of use that overlap the proposed place of use.

g. To your knowledge, has/is any portion of the water right(s) proposed to be changed:

Yes No

- ☑ ☐ undergone a period of five or more consecutive years of non-use,
- ☐ ☑ currently leased to the Water Supply Bank,
- ☐ ☑ currently used in a mitigation plan limiting the use of water under the right, or
- ☐ ☑ currently enrolled in a Federal set-aside program limiting the use of water under the rights?

If yes, describe:
A portion of the water right that has undergone five or more consecutive years of non-use is protected from forfeiture under Idaho Code 42-223(11).

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STATE OF IDAHO
PARTMENT OF WATER RESOURCES

APPLICATION FOR TRANSFER OF WATER RIGHT
PART 2

A. DESCRIPTION OF RIGHT(S) AS RECORDED

For each water right listed in Part 1B.1 of the application, attach a **Part 2A** report obtained from any Department office or from the Department's website @ idwr.idaho.gov, Water Right Transfers, Step 1.
Insert Part 2A reports into the application following Part 1.

B. IF ONLY A PORTION OF THE RIGHT IS PROPOSED TO BE CHANGED, DESCRIBE THE PORTION BEING CHANGED AS IT APPEARS BEFORE THE REQUESTED CHANGES

☐ Complete and attach one copy of Part 2B for each right for which only a portion is proposed to be changed. If the entire right is proposed to be changed, Part 2B is not applicable. Additional copies of the **Part 2B** form can be obtained from any Department office or from the Department's website @ idwr.idaho.gov, Water Right Transfers, Step 3, or Water Right Forms, Changes in Use. Insert completed Part 2B forms into the application following Part 2A of the same water right.

Right Number: ______________

1. amount ________________ (cfs/ac-ft) for ________________________ purposes from __________ to __________

   amount ________________ (cfs/ac-ft) for ________________________ purposes from __________ to __________

   amount ________________ (cfs/ac-ft) for ________________________ purposes from __________ to __________

   amount ________________ (cfs/ac-ft) for ________________________ purposes from __________ to __________

   amount ________________ (cfs/ac-ft) for ________________________ purposes from __________ to __________

   amount ________________ (cfs/ac-ft) for ________________________ purposes from __________ to __________

   amount ________________ (cfs/ac-ft) for ________________________ purposes from __________ to __________

   amount ________________ (cfs/ac-ft) for ________________________ purposes from __________ to __________

2. Lands irrigated or place of use: (If irrigation, identify with number of acres irrigated per ¼ ¼ tract.)

Twp	Rge	Sec	NE ¼				NW ¼				SW ¼				SE ¼				Acre Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	

Total Acres (for irrigation use) ______

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IDAHO DEPARTMENT OF WATER RESOURCES
APPLICATION FOR TRANSFER OF WATER RIGHT
PART 2A

Current Water Right No.: 77-7285

Current Owner: STIBNITE GOLD COMPANY

Priority Date: 11/7/1988

Origin: Water Right

Status: Active

Basis: License

Source **Tributary**

GROUND WATER

Beneficial Use	From To	Diversion Rate	Annual Volume
MINING	1/01 to 12/31	0.5 CFS	30.2 AF
DIVERSION TO STORAGE	1/01 to 12/31	0.5 CFS	
MINING STORAGE	1/01 to 12/31		9 AF
MINING FROM STORAGE	1/01 to 12/31		9 AF
	Total Diversion	0.5 CFS	30.2 AF

Location of Point(s) of Diversion

GROUND WATER L4(SE1/4NE1/4) Sec. 15, Twp 18N, Rge 09E B.M.
VALLEY County

Place of Use

MINING Within VALLEY County

T18N R09E S15	Lot 1	NENE	T18N R09E S15		SWNE
T18N R09E S15	Lot 4	SENE			

Place of Use: DIVERSION TO STORAGE same as MINING

Place of Use: MINING STORAGE same as MINING

Place of Use: MINING FROM STORAGE same as MINING

Conditions of Approval:

1. Any outflow from settling ponds must be authorized with a National Pollution Discharge Elimination System Permit issued by the U.S. Environmental Protection Agency.
   Any underground seepage from settling ponds must be authorized by Department of Health and Welfare, Division of Environmental Quality.
   The mining and milling operation that utilizes this water right must comply with all local, state and federal air and hazardous substance standards.

2. 09E Water used under this right when discharged into a natural channel or subsurface system shall meet Idaho Water Quality Standards.

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STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

APPLICATION FOR TRANSFER OF WATER RIGHT
PART 3

A. PLAT MAP (See Part 3A of Instructions for application for transfer for complete requirements.)

☑ Attach a map of the diversion, measurement, control, and distribution system. Label it **Attachment #7a.**
☐ If the transfer application proposes to change the place or purpose of use of an irrigation right attach a Geographic Information System (GIS) shape file, or an aerial photo or other image clearly delineating the location and extent of existing acres and changes to the place of use. Label it **Attachment #7b.**

If the place of use currently consists of a permissible place of use, then the attachment is not required if the application contains a clear statement that the boundaries for the place of use are not proposed to be changed by the transfer and the total number of irrigated acres within the place of use before and after the transfer is clearly stated.

If any part of the irrigation water right is leased to the Water Supply Bank, you must also specify the location and number of acres that will remain idled for the duration of the lease contract at the new, proposed place of use.

B. CHANGES IN NATURE OF USE (Water Balance)

☐ If you propose to change the nature of use or period of use of all or part of the rights(s) listed in this application, attach documentation describing the extent of historic beneficial use of the portion of the right(s) proposed to be changed. Also attach documentation showing that the portion of the right(s) to be changed will not be enlarged in rate, volume, or consumptive use through the proposed change. Label it **Attachment #8a.**

C. PLACE OF USE CHANGES TO SUPPLEMENTAL IRRIGATION RIGHTS

☐ If you propose to change the place of use of a supplemental irrigation right, answer below and attach supporting documentation. Label it **Attachment #8b.**

Describe how the supplemental water rights have been used historically in conjunction with other water rights at the existing place of use. Describe the time during the irrigation season that the supplemental rights have been used. Include information about the availability or reliability of the primary right(s) being supplemented, both before and after the change. If the applicant is proposing to change a supplemental irrigation right to a primary right, provide the information required on Part 3B above:

FOR DEPARTMENT USE ONLY

Transfer contains _____ pages and _____ attachments.

Received by Ku Date 10.8.21 Preliminary check by SN Date 11-12-21

Fee paid 500 Date 10.8.21 Receipted by Ku Receipt # C111105

Add'l fee paid _____ Date _____ Receipted by _____ Receipt # _____

Check all that apply: Attachment WSB ☐ (copy sent to state office) Lessor Designation form ☐ &/or W-9 ☐ (originals to state office)

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STATE OF IDAHO
Office of the secretary of state, Lawerence Denney
ANNUAL REPORT
Idaho Secretary of State
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Boise, ID 83720-0080
(208) 334-2301
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Entity Name and Mailing Address:

Entity Name:	IDAHO GOLD RESOURCES COMPANY, LLC
The file number of this entity on the records of the Idaho Secretary of State is:	0000494660
Address	PO BOX 429 DONNELLY, ID 83615-0429

Entity Details:

Entity Status	Active-Existing
This entity is organized under the laws of:	IDAHO
If applicable, the old file number of this entity on the records of the Idaho Secretary of State was:	W163022

The registered agent on record is:

Registered Agent

CORPORATION SERVICE COMPANY
Commercial Registered Agent

VOID

Agent or Address Change

☐ Select if you are appointing a new agent

Limited Liability Company Managers or Members

Name	Title	Business Address
– ~~MIDAS GOLD CORP.~~	~~Member~~	~~890 999 W. HASTINGS ST.~~ ~~VANCOUVER BC V6C 2W2~~ ~~CANADA~~
+ Perpetua Resources Corp	Member	405 S 8TH STREET, STE. 201 BOISE, ID 83702

The annual report must be signed by an authorized signer of the entity.

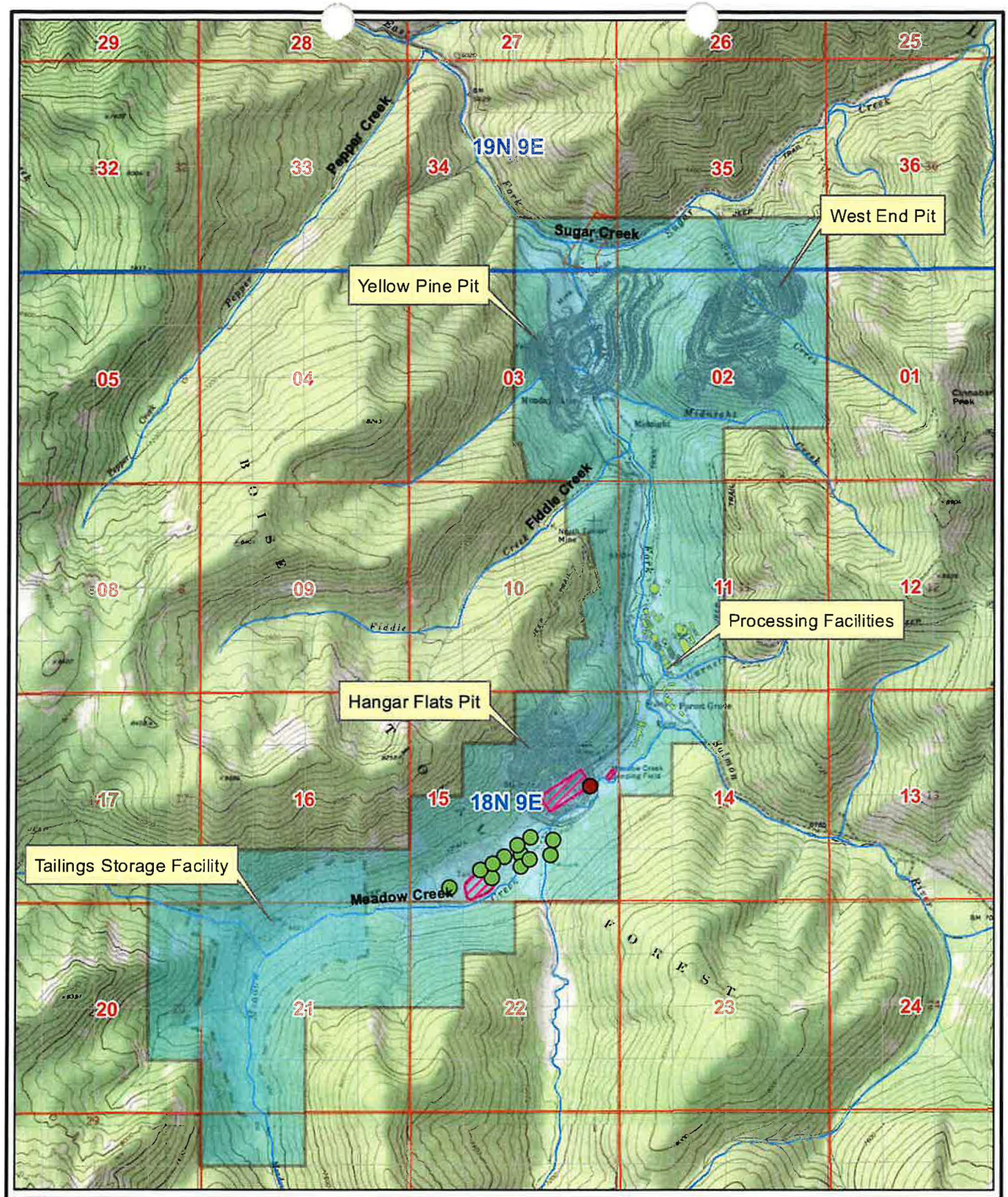
Job Title: Secretary

Tanya Nelson — Sign Here

03/31/2021 — Date

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Pepper Creek
Sugar Creek
West End Pit
Yellow Pine Pit
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02
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Fiddle Creek
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Processing Facilities
Hangar Flats Pit
17
16
15
18N 9E
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13
Tailings Storage Facility
Meadow Creek
20
21
22
23
24
Proposed Point of Diversion (Existing Well)
Proposed Points of Diversion (Supply Wells)
Proposed Places of Use (Storage - Contact Water Ponds)
Proposed Place of Use (Mining)
Planned Full Extent of TSF
Attachment 7a - Perpetua Resources Idaho, Inc.
N
2,500
Feet
SPF WATER ENGINEERING

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77-7285

$500

Attachment 1

Stibnite Gold Project Water Right Diversion Rate and Storage Volume Justification Memo
May 7, 2021 draft

85397

Brown AND Caldwell

1290 West Myrtle Street, Suite 340
Boise, ID 83702

T: 208.389.7700

Technical Memorandum

Prepared for: Perpetua Resources Idaho, Inc. (Perpetua Resources)

Project Title: Stibnite Gold Project

Project No.: 156123-002

Technical Memorandum

Subject: SGP Water Right Diversion Rate and Storage Volume

Date: May 7, 2020

To: Perpetua Resources

From: Brown and Caldwell

Copy to: SPF Water Engineering, LLC.

Prepared by: _____
Dan Stanaway, Brown and Caldwell

Reviewed by: _____
Terry Scanlan, PE, PG

Limitations:

This document was prepared solely for Perpetua Resources in accordance with professional standards at the time the services were performed and in accordance with the contract between Perpetua Resources and Brown and Caldwell dated January 1, 2021 This document is governed by the specific scope of work authorized by Perpetua Resources; it is not intended to be relied upon by any other party except for regulatory authorities contemplated by the scope of work. We have relied on information or instructions provided by Perpetua Resources and other parties and, unless otherwise expressly indicated, have made no ›pendent investigation as to the validity, completeness ›ccuracy of such information.

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List of Abbreviations

ac-ft	acre-feet
cfs	cubic feet per second
EFSFSR	East Fork of the South Fork of the Salmon River
gpm	gallon per minute
IDWR	Idaho Department of Water Resources
ModPRO2	refined Modified Plan of Restoration and Operations
Perpetua Resources	Perpetua Resources Idaho, Inc.
SGP	Stibnite Gold Project
SWWB	Site-wide Water Balance [model]
TM	technical memorandum
TSF	Tailings Storage Facility
WSWR	Wild and Scenic Water Right

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Section 1: Introduction

This Technical Memorandum (TM) is an attachment to the water right permit application for the Stibnite Gold Project (SGP) and describes the information used to determine the industrial use diversion rate of 9.6 cubic feet per second (cfs) (Section 3), the diversion to storage rate of 9.6 cfs, and the 600 acre-feet storage volume (Section 4). This storage volume accounts for the one-time fill (428 acre-feet) of the Tailings Storage Facility (TSF) prior to the first year of mill operation and the annual stormwater runoff[1] volume detained on-site for water quality protection. Data and modeling used to determine industrial water demand and water management are described in the SGP Site Wide Water Balance Model (SWWB) Refined Modified Proposed Action (ModPRO2) Report (Perpetua Resources Idaho, Inc. [Perpetua Resources] 2021 in progress). The SWWB simulates the water balance based on the ModPRO2 Alternative (Midas Gold Idaho, Inc. 2020). The information contained in this TM is limited to the specific conditions, assumptions, and data used to determine the appropriate water right diversion rates and storage volume necessary to satisfy industrial use and stormwater detention needs to protect water quality[2].

Section 2: SGP Water Requirements

Industrial water requirements for SGP operations are mill demand for ore processing, dust suppression, drilling water, and dewatering (Figure 1, Table 1). Existing water rights (Table 2) are held for mining and domestic purposes, but only satisfy a small portion of the project demand. Applications for transfer of existing mining water rights 77-7122, 77-7285 and 77-7293 are submitted to change the places of use and points of diversion. Additional water for industrial use is requested in this water right application. The industrial water demand will be met by groundwater from pit dewatering wells and/or water supply wells, surface water from the East Fork of the South Fork of the Salmon River (EFSFSR), direct diversion of contact water (stormwater runoff or groundwater that has contacted mining features), and detained contact water. Detained water is contact water runoff in excess of instantaneous industrial demand or water treatment system capacity that will be detained on-site for water quality protection. This water will either be treated and discharged or beneficially used for industrial demand, thereby offsetting demand for groundwater and EFSFSR water. In addition, process water from the TSF supernatant pool will be reclaimed and reused. Industrial use and contact water detention are detailed in Sections 3 and 4, respectively.

[1] Contact water, stormwater, and stormwater runoff are interchangeable for purposes of this Memorandum and refer to water that has been in contact with mine features and has not entered a natural water course. Perpetua Resources is required to manage contact water by diversion, detention, treatment, and/or use in operations to prevent water quality impacts to the East Fork of the South Fork of the Salmon River and tributaries.

[2] Because of water quality restrictions, Perpetua Resources must detain contact water in stormwater ponds when runoff rates exceed the combined capacity to treat and discharge and/or utilize the water for industrial purposes. Perpetua Resources' site-wide water balance predicts month-end stormwater pond volume. This modeling is used to understand monthly stormwater accrual volume and to support the water rights application. Stormwater that is retained for more than 24 hours, whether beneficially used or treated and discharged, is considered stored water in this Mitigation Plan and the water right permit application.

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Table 1. Operations Industrial Water Requirements[a]

Use	Peak Rate (cfs)	Estimated Average Annual Volume (acre-feet)[e]
Mill Demand	9.7	TSF Reclaim (average): 4,832 Mill Diversion Demand (average): 1,438
Mill Diversion Demand[b]	4.5	1,438
Dust Control	0.7	186
Drilling Water	0.1	40
Excess Dewatering Water[c]	4.3	608
Total Diversion Demand[d]	9.6	2,272

Notes:
[a]Values based on SWWB 14-year climate scenario (2004 to 2017) used in the predictive modeling as the "average climate scenario"
[b]Mill diversion demand is water needed in addition to the TSF reclaim water
[c]Dewatering water in excess of dewatering water used for industrial water supply. This water is treated and discharged.
[d]Total Diversion Demand is the sum of the mill diversion demand, dust control, drilling water, and dewatering water
[e]Volumes shown are the actual volumetric requirement for each use estimated by the SWWB model
Abbreviations:
cfs = cubic feet per second
SWWB = site-wide water balance
TSF = tailings storage facility

Table 2. Current Water Rights

Water Right	Current Owner	Source	Beneficial Use(s)	Diversion Rate (cfs)	Annual Volume (acre-feet)
77-7122	Idaho Gold Resources Company	East Fork South Fork Salmon River	Diversion to Storage Mining Storage Mining from Storage	0.33	7.1
77-7141	Idaho Gold Resources Company	Groundwater	Domestic	0.20	11.4
77-7285	Stibnite Gold Company	Groundwater	Mining Diversion to Storage Mining Storage Mining from Storage	0.50	30.2
77-7293	Stibnite Gold Company	Unnamed Stream (Hennessy Creek)	Mining	0.25	20

Abbreviations:
cfs = cubic feet per second

Section 3: Industrial Use

Peak diversion rate for industrial uses is estimated to sum to approximately 9.6 cfs and is primarily for ore processing (Table 1). Water used in ore processing will be supplied from multiple sources and the water right permit application seeks to authorize water diversion from groundwater, EFSFSR, contact water, and

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detained water. Figure 1 shows the industrial use components and ore processing demand. The relative volumes of the water sources used in ore processing will fluctuate and are dependent on availability of reclaimed TSF water, contact water, and dewatering water during mine operations and are also dependent on water quality requirements. The time series is based on a historical meteorologic sequence and the mine plan sequence (Perpetua Resources 2021 in progress). The maximum monthly diversion rate is therefore coincidental to the mine phase and the annual meteorologic data applied.

Total ore processing water demand is represented by the green line in Figure 1, and is the rate required by the mill to process ore. The first-priority water source for the mill is reclaimed water from the TSF supernatant pool when available and does not require a water right[3]. Remaining water demand (make-up water) will then be supplied by groundwater from pit dewatering, direct diversion of contact water, and detained contact water (Figure 2). When mill demand is greater than the available supply from TSF reclaim water, contact water, and dewatering water, the remaining demand will be met with groundwater from groundwater supply wells and surface water from the EFSFSR.

Mill diversion demand is represented by the blue line in Figure 1, and is the total make-up water (non-TSF reclaim water) diversion rate that is required by the mill to process ore. The mill diversion demand sums pit dewatering groundwater, contact water, water supply well groundwater, and the EFSFSR.

Excess dewatering water is represented by the yellow line in Figure 1, and is the quantity of dewatering water that is in excess of the quantity that can be used to operate the mill. Water produced by dewatering is variable through the mine life and, at times, it is anticipated that more dewatering water will be produced than will be utilized in the mill. Perpetua Resources is seeking appropriation of the total estimated quantity of dewatering water as discussed below.

Drilling water demand is represented by the orange line in Figure 1, and is the estimated water required for well and exploration drilling.

Dust suppression demand is represented by the grey line in Figure 1, and is the estimated water required for dust control in pits, in-pit roads, and stockpiles.

Total diversion demand is represented by the black line in Figure 1, and is the sum of the make-up water demand (i.e., water demand is additional to TSF reclaim water), excess dewatering water, drilling water, and dust suppression. This is the total diversion demand that requires appropriation.

[3] The reason that recycling of the supernatant pool water does not require a water right is because the reclaimed/recycled water originated as contact water, groundwater, and EFSFSR diverted under this proposed permit or existing water rights for industrial use and retained in control of the appropriator for continued industrial use. The recycled wastewater is not being appropriated but rather is being utilized under the original authorization for industrial use.

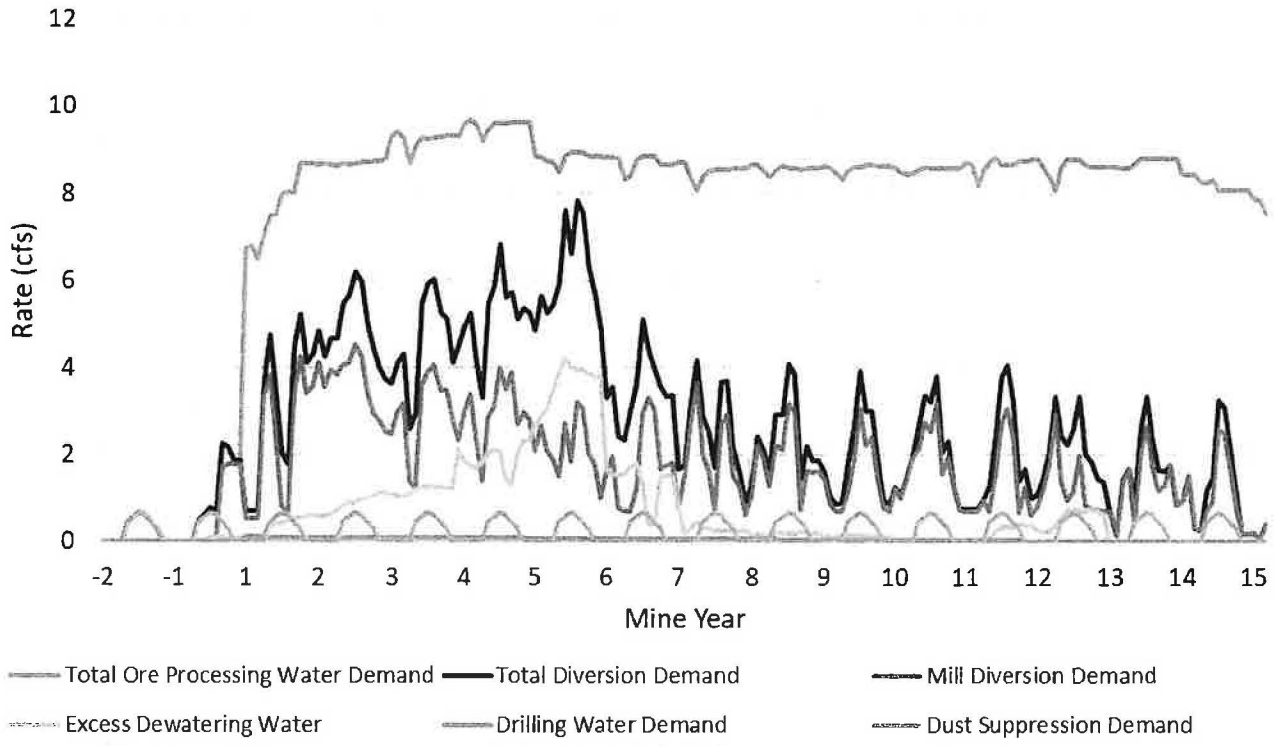


Figure 1. SGP Water Requirements

The industrial use diversion rate requested in the water rights application (9.6 cfs) is based on the maximum estimated rates for mill diversion demand rate (4.5 cfs), excess dewatering rate (4.3 cfs), dust suppression rate (0.7 cfs) and drilling water rate (0.11 cfs) (Table 1). The maximum values for these diversion rates are not modeled to coincide; the maximum mill demand is modeled to occur in mine year 2 and the maximum dewatering is modeled to occur in mine year 5. While not modeled to coincide, estimated mill diversion demand is coincidental to the climate sequence used in the model, quantity of TSF reclaim water, and ore processing rate. Peak mill diversion demand may not occur in the year modeled, but it is not expected to be more than the peak estimated rate. Likewise, monthly dewatering estimates are based on currently modeled pit dewatering phasing and modeled dewatering rates that may adjust based on Project needs. Peak drilling water demand is minimal and occurs in year 1 declining linearly to zero in year 15 and dust suppression demand is a cycle with an annual peak of approximately 0.7 cfs.

The water right permit application seeks authorization for the total quantity of dewatering water that is anticipated to be produced. Pursuing water right authorization for all of the dewatering water is the preferred option of the three alternatives presented by the Idaho Department of Water Resources (IDWR) in a letter received July 27, 2020. Water right authorization of all dewatering water is the most secure approach to ensure adequate water supply and satisfy fluctuating industrial demand for dewatering water amid a variable dewatering rate. In the July 27, 2020 letter, IDWR states the Department recognizes that dewatering is essential to mining and has recognized dewatering as a beneficial use in previous water right permits. The excess dewatering rate is estimated by subtracting the monthly dewatering water used for ore processing from the monthly total dewatering water produced. Dewatering supply, in conjunction with TSF reclaim water and contact water, can be at times insufficient to satisfy industrial demand. This unmet industrial demand is satisfied by groundwater from the groundwater supply wells and surface water from the EFSFSR water.

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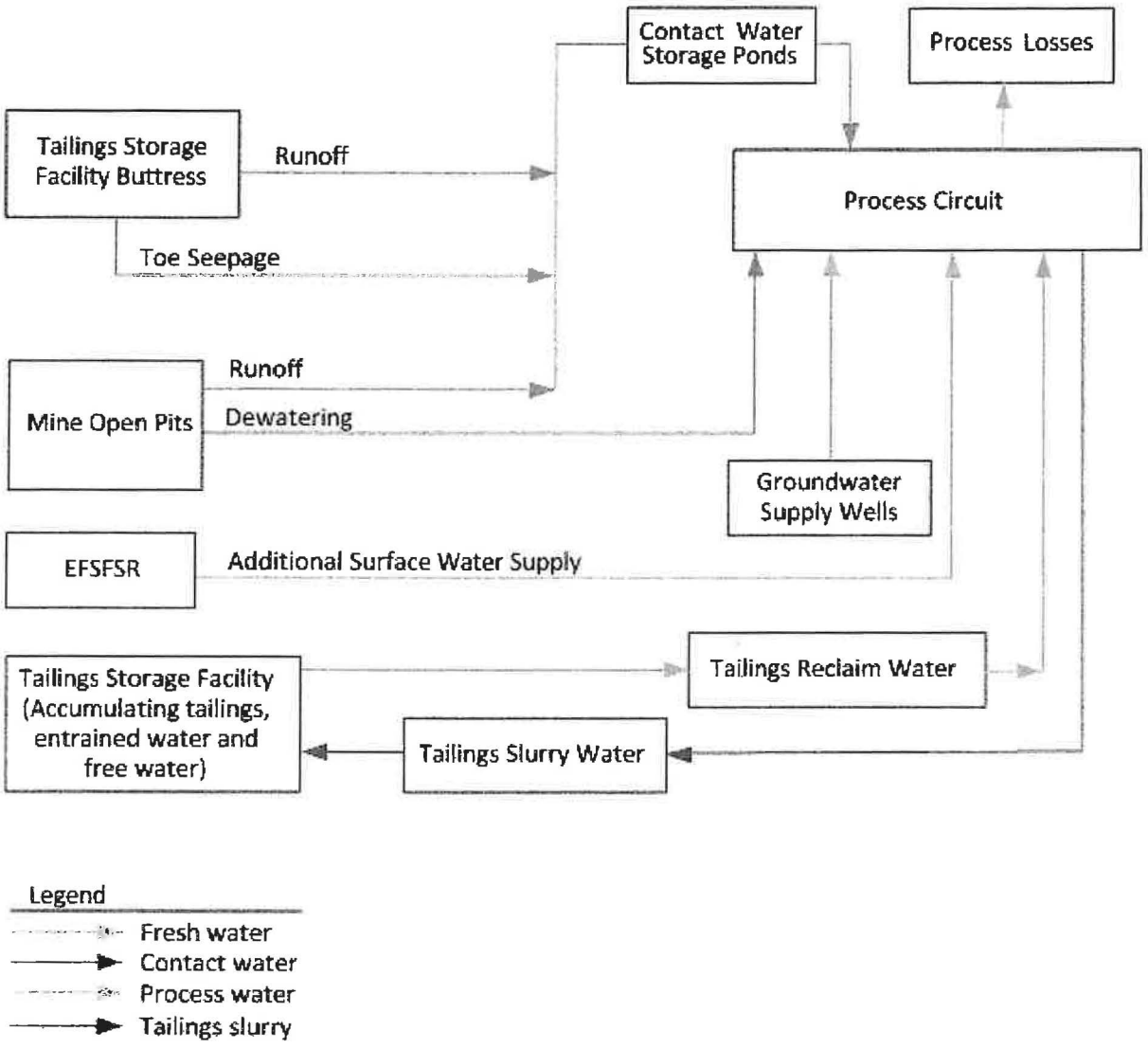


Figure 2. Process Circuit Flow Chart

Section 4: Contact Water Storage

The water right application requests authorization for 600 acre-feet of storage. This storage volume accounts for the estimated contact water detention volume (126 acre-feet)[4] with an approximate 35 percent contingency and the one-time fill of the TSF starter pool (modeled to be 428 acre-feet) in the year prior to the start of operations (i.e., 428 acre-feet + (126 acre-feet x 135%) = 598 acre-feet, rounded to 600 acre-feet). Contact water will be detained in a system of stormwater detention ponds that are associated with mine facilities throughout the Project site. For the portion of the one-time fill that is not satisfied by contact water,

[4] Value based on SWWB 75th percentile statistical output

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the water right application also seeks authorization for diversion to storage from groundwater and EFSFSR for the fill of TSF starter pool. Contact water diversion and detention is necessary to protect surface water quality from direct discharge of water that is above applicable surface water discharge criteria. Detention is necessary when contact water quantity is greater than the combination of treatment capacity, evaporation capacity, and industrial demand. Detained water will be used to supply the industrial water demand, or the water will be treated and discharged.

Contact water diversion to protect water quality and subsequent detention may not be within the subordination clause of the Wild and Scenic River instream water rights (WSWR) 75-13316 and 77-11941 and, as such, may require mitigation when the WSWR is not met. Perpetua Resources is proposing a mitigation strategy of non-use of irrigation water rights that is described in the accompanying Mitigation Plan. The Mitigation Plan and attachments detail the proposed mitigation, benefits of the proposed mitigation, evaluation of other mitigation options, and how the proposed mitigation strategy enhances the Wild and Scenic character of the Salmon River.

Detained contact water volumes were estimated by the SWWB model (Perpetua Resources 2021 in progress). The SWWB outputs system-wide contact water pond volume estimates at a monthly timestep. Annual accrued contact water volume is estimated by calculating the monthly change in used pond volume and summing the monthly differences for a year. Contact water accrual starts with the pond volume from the previous December as assumed carry-over to begin the water right accrual. Values calculated are subject to revision and are generated with these assumptions:

1. Water treatment rates shown in Table 3
2. Groundwater from dewatering that is not used to satisfy industrial demand is treated and discharged but not stored
3. The total storage volume at the site will be available to detain contact water generated from any source at the site

Table 3. Water Treatment Plant Capacity

Mine Year Beginning	Water Treatment Plant Capacity (gpm)
-2	300
1	1,000
4	2,000
7	1,000

Abbreviations:

gpm = gallon per minute

Median and 95th percentile predicted annual accrued contact water volume is shown in Table 4 (Perpetua Resources 2021 in progress). Detained volume variability results from climatic variability in the SWWB model, industrial demand variability, assumed treatment and/or evaporation capacities, and progression of mine development (i.e., changes in exposed mine surface area during mine life). The water right application requests authorization for 600 acre-feet of storage. This storage volume is based on mine year -1 when the TSF starter pool is developed (estimated 428 acre-feet required) and the estimated annual volume of detained contact water in that year (126 acre-feet at the 75th percentile) with an approximate 35 percent contingency applied to contact water detention. The contingency is applied to account for modeling and climatic uncertainties.

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Table 4. Annual Contact Water Detention Volume

Mine Year	Median Annual Detained Contact Water Volume (ac-ft)[a]	95th Percentile Annual Detained Contact Water Volume (ac-ft)[b]
-1[c]	81	233
1	102	236
2	101	242
3	192	267
4	210	237
5	194	206
6	123	250
7	208	216
8	187	228
9	188	213
10	179	211
11	118	200
12	177	194
13	0.2	149
14	0.5	103

Notes:

[a]Values based on SWWB 50th percentile statistical output from the 120-year climate record

[b]Values based on SWWB 95th percentile statistical output from the 120-year climate record

[c]Initial TSF fill (428 ac-ft) not included in annual volume because fill anticipated to be from groundwater, EFSFSR, and contact water. Fill will either occur at times when mitigation is not required or will be mitigated using available mitigation water right volume or one-time water bank rental volume

Abbreviations:

ac-ft = acre-feet

EFSFSR = East Fork of the South Fork of the Salmon River

SWWB = site-wide water balance

TSF = tailings storage facility

Section 5: Summary

Perpetua Resources seeks a new water right appropriation of contact water runoff, groundwater, and surface water from the EFSFSR for industrial uses at the SGP to augment existing Perpetua Resources water rights. Key elements of the water right permit application include:

- Maximum diversion rate under new and existing water rights will be 9.6 cfs.
- Industrial uses will include ore processing, dust control, drilling, and dewatering.
- Contact water runoff volumes that exceed instantaneous industrial demand and water-treatment system capacity must be detained in storage ponds to protect surface water quality. Use of this water for industrial purposes offsets further diversion demand on groundwater and the EFSFSR.

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- The application seeks a maximum annual storage volume of 600 acre-feet. This volume includes a one-time 428-acre-foot fill of the TSF during mine year –1 along with contact water storage during that year. In all other years, storage volume will consist of contact water only, and is anticipated to be 210 acre-feet or less.
- The United States Forest Service holds a WSWR for the Salmon River. The proposed direct diversions of water for industrial uses are anticipated to fall within the subordination provisions of the WSWR, but proposed storage of water may not be subordinated by the WSWR. Perpetua Resources has secured irrigation water rights as mitigation for storage impacts to the WSWR.

A Mitigation Plan is included with the permit application. Attached to the Mitigation Plan are two supporting documents that describe 1) Perpetua Resources' evaluation of six mitigation alternatives and identifying non-use of an irrigation water right as most practical mitigation strategy that provides significant environmental benefits and 2) a description of how the proposed mitigation plan enhances the wild and scenic character of the Salmon River.

References

Midas Gold Idaho, Inc., 2020. Stibnite Gold Project, Refined Proposed Action ModPRO2, December.

Perpetua Resources Idaho Inc., 2021. Stibnite Gold Project Site-Wide Water Balance Model Refined Modified Proposed Action (ModPRO2) Report, In progress.

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Attachment 2

Mitigation Plan For Midas Gold Industrial Water Right Application For Permit (Draft)

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Water Right Mitigation Plan for the Stibnite Gold Project

May 18, 2021



Introduction

Perpetua Resources Idaho Inc. (Perpetua Resources) has applied for a water right permit to support uses at the Stibnite Gold Project (SGP or Project). The permit seeks authorization for both direct diversions and for storage. Water sources will be groundwater, East Fork of the South Fork of the Salmon River (EFSFSR), and stormwater runoff (contact water)[1].

Certain storage of water under the proposed permit may require mitigation to prevent impacts to the United States Forest Service (USFS) Wild and Scenic River water rights (WSWR) on the Salmon River. As a condition of the industrial use water right permit, Perpetua Resources is proposing to provide mitigation water to the Salmon River to offset impacts to the WSWR that may result from detaining water at the SGP. Mitigation will be provided through non-use of active irrigation water rights in the Salmon River basin. Perpetua Resources has entered into an agreement that secures a property with a water right portfolio that is anticipated to mitigate substantially more than the total volume of water that will be detained annually at the SGP. Further, non-use of those rights would exceed the volume of water that requires mitigation by an even greater amount.

This Mitigation Plan (Plan) provides information on the WSWR, the proposed SGP water right permit application, mitigation requirements, and the proposed mitigation. Two supporting memorandums are attached to this Plan. Both memorandums have been provided to the Idaho Department of Water Resources (IDWR) and the USFS. The *Water Right Mitigation Alternatives Considered for the Stibnite Gold Project* memorandum summarizes Perpetua Resources' evaluation of six mitigation strategies and identifies non-use of an irrigation water right as the preferred alternative because it is most practical, provides significant environmental benefits, and is easily administered. The *Water Rights Mitigation for the Stibnite Gold Project and Protection of Wild and Scenic River Values on the Salmon River* memorandum describes how the proposed mitigation plan enhances the wild and scenic character of the Salmon River that the USFS designation strives to protect.

Background

Wild and Scenic River Water Right. The WSWRs 75-13316 and 77-11941 held by the USFS on the Salmon River have flow targets that approximate the historical median flow rate in the Salmon River. The targets are based on average historical flows at the Shoup Gage in two-week time intervals (Figure 1). Because the flow targets are based on the median streamflow, on any given day there is approximately a 50 percent chance that there is insufficient flow to meet the instream flow specified in the WSWR.

The reach of the Salmon River subject to the WSWR extends upstream and downstream from the mouth of the South Fork Salmon River. As a result, stormwater diversion and detention at the SGP in the EFSFSR watershed could affect flow in a portion of the Wild and Scenic River reach that is downstream of the South Fork Salmon River. This potentially impacted river section is approximately 19 percent of the Salmon River Wild and Scenic reach.

[1] For purposes of this Memorandum contact water, contact water runoff, stormwater, and stormwater runoff are interchangeable and refer to water that has been in contact with mine features and has not entered a natural water course. Perpetua Resources is required to manage contact water runoff by diversion, detention, treatment, and/or use in operations to prevent water quality impacts to the East Fork South Fork Salmon River and tributaries.

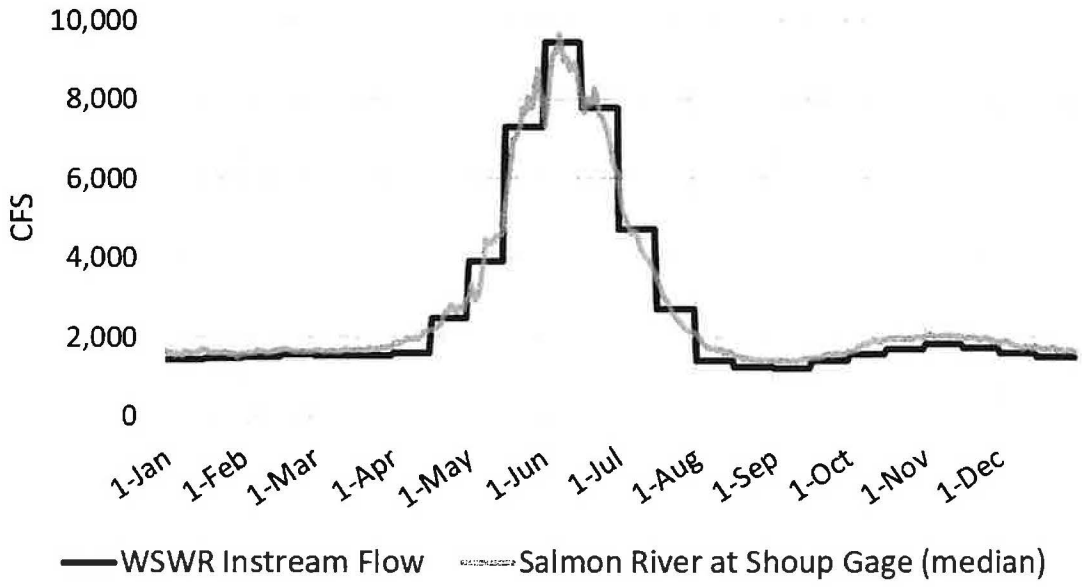


Figure 1. Salmon River at Shoup Streamflow and Wild and Scenic Water Right

Perpetua Resources Application for Permit. Perpetua Resources holds existing water rights for the SGP for mining and domestic purposes. The existing water rights meet some of the Project's water demand and will be utilized to reduce new water appropriations. An application for transfer of place of use and point of diversion has been submitted as a part of this application package[2]. Importantly, existing water rights 77-7285 and 77-7122 authorize a combined 16.1 acre-feet of storage to which the WSWRs are subordinate. In addition to existing water rights, Perpetua Resources proposes to develop new water rights to support the SGP. The industrial use water right permit application will seek 9.6 cubic feet per second (cfs) of direct diversions of groundwater, EFSFSR water, and contact water to industrial uses and 9.6 cfs of diversion to storage from groundwater and the EFSFSR. The permit also seeks to store up to 600 acre-feet to account for the one-time 428 acre-feet fill of the tailings storage facility (TSF) and the modeled 126 acre-feet[3] of contact water detention[4] in the year prior to mill operation. Storage volumes after the initial TSF fill in mine year -1 are projected to be less than 210 acre-feet annually.

Mitigation Requirement. The WSWR is partially subordinated to new water rights within the Salmon River basin proposing direct use of water but the subordination is explicitly not available to new water rights proposing storage of water.

---

[2] Existing water rights are detailed in the *SGP Water Right Diversion Rate and Storage Volume* memorandum that accompanies Perpetua Resources' water right permit application

[3] Value based on Site-wide Water Balance (SWWB) 75th percentile statistical output with an approximate 35% contingency

[4] Because of water quality restrictions, Perpetua Resources must detain contact water in stormwater ponds when runoff rates exceed the combined capacity to treat and discharge and/or utilize the water for industrial purposes. Perpetua Resources' SWWB predicts month-end stormwater pond volume. This modeling is used to understand monthly stormwater accrual volume and to support the water rights application. Stormwater that is retained for more than 24 hours whether beneficially used or treated and discharged is considered stored water in this Mitigation Plan and the water right permit application.

The direct use of water sought by Perpetua Resources' industrial water right permit applications will utilize the subordination provisions of the WSWR. Whether Perpetua Resources' direct diversion of contact water before it reaches a natural stream channel, a required practice to protect water quality, requires a water right, and if so, whether the subsequent detention of stormwater runoff is within the subordination provisions of the WSWR are open questions. Nevertheless, for purposes of this Plan, Perpetua Resources is assuming that detention of stormwater runoff to protect water quality at the SGP may not be included in the WSWR subordination when flows in the Salmon River at Shoup are less than the WSWR, and therefore some form of mitigation may be required.

Modeling of Stormwater Diversion Rate and Detention Volumes. Perpetua Resources has modeled contact water runoff volumes for various storm events. The predicted total runoff volumes have been converted to 24-hour flow rates to estimate contact water flow rates to stormwater ponds. Modeling has predicted that 24-hour contact water flow rates of 27 cfs (one-year storm event) to 36 cfs (25-year storm event) could occur during springtime rain-on-snow storm events. The effective flow rates are 12 cfs less than the total rates because water management (i.e., a maximum of 12 cfs diversion to mill and water treatment)[5] can offset the total modeled detained quantity.

Estimating contact water flow rates that require mitigation is not exact but is anticipated to be approximated by the range of the effective flow rates in Table 1. The effective contact water flow rate ranges from 15 cfs to 24 cfs for these spring runoff events. Those same storm events on bare (snow-free) ground (i.e., summer storms) yield stormwater flows of 5 cfs to 12 cfs and no storage is expected during summer/fall storm events because diversion to mill and water treatment capacity are greater than runoff rates.

Additional modeling predicts that attenuation of flow depletions between the mine site and the Salmon River, approximately 60 miles downstream, will be minimal (less than 3 percent attenuation) during springtime high flow conditions (i.e., flow impacts at the mine site are likely not substantially reduced moving downstream due to high stream-flow velocities). The modeling suggests that more attenuation occurs during low-flow conditions, but water management can already fully offset the need to store stormwater runoff at such times.

Table 1. Diversion Rate Estimates

	Storm Event Average Runoff Rate (cfs)		Effective Storm Event Runoff Rate (cfs)[1]	
Storm Event	No Snow	Average Snow	No Snow	Average Snow
1 Year	5	27	0	15
10 Year	10	34	0	22
25 Year	12	36	0	24

[5] Operational use of the full 12 cfs of stormwater would be a limited operational strategy to reduce the stormwater detention rate that would be employed only under certain circumstances. This is an example of strategies potentially available to Perpetua Resources to reduce impacts to flows in the Salmon River.

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Notes:

[1]The effective storm event runoff rate is 12 cfs less the storm event because of mill use and treatment. This is a limited operational strategy to reduce flow impacts and only employed under specific conditions.

Abbreviations:

cfs = cubic feet per second

Monthly site-wide water balance modeling shows that annual stormwater accrual volumes, under normal runoff conditions, will range from 81 acre-feet to 210 acre-feet, with an average of 158 acre-feet (Table 2).

Table 2. Modeled Stormwater Detention Volume by Mine Year

Mine Year (MY)	Annual Volume (acre-feet)[1]
MY -1[2]	**81**
MY 1	102
MY 2	101
MY 3	192
MY 4	210
MY 5	194
MY 6	123
MY 7	208
MY 8	187
MY 9	188
MY 10	179
MY 11	118
MY 12	177
13-year Average	158

Notes:

[1]Annual detention estimates based on the Site Wide Water Balance 50th percentile scenario. Storage estimates not shown for MY -2, MY 13, or MY 14 because estimated detention volumes are less than 1 acre-foot.

[2] Initial TSF fill (428 acre-feet) not included in annual volume because fill anticipated to be from groundwater, EFSFSR, and contact water. Fill will either occur at times when mitigation is not required or will be mitigated using available mitigation water right volume or one-time water bank rental volume.

Abbreviations:

EFSFSR = East Fork of the South Fork of the Salmon River

MY = mine year

TSF = tailing storage facility

Figure 2 shows the median monthly stormwater volume accrual during the 12-year active mining period[6]. Contact water diversions occur primarily in March, April, and May during high runoff and high streamflow periods, and the modeling shows the potential to divert smaller volumes of contact water in September through February. Some contact water detention that occurs November to March can be authorized without incurring a mitigation

[6] Mill operations continue for an additional 2.25 years to process ore stockpiles, however, contact water detention during these periods is minimal, estimated at less than 1 acre-foot annually, and values were not included in in calculation of median monthly stormwater detention.

obligation by the existing water rights 77-7122 and 77-7285 to which the WSWRs are subordinate. Nevertheless, the non-irrigation season months (November through March) are a challenge to mitigate by non-diversion of irrigation water rights because the season of use for those rights is restricted to April through October and all water rights identified by Perpetua Resources that are available for mitigation purposes have been irrigation water rights.

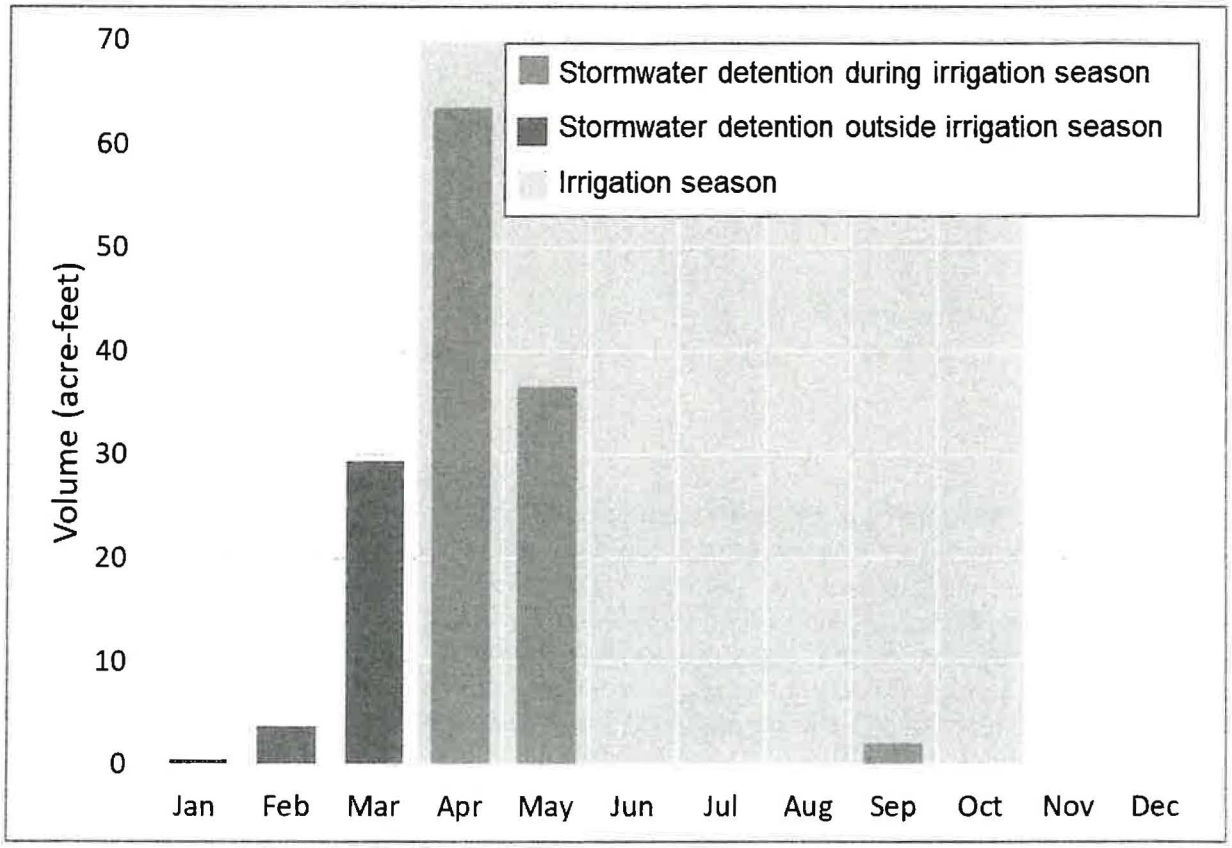


Figure 2. Median Monthly Stormwater Detention – 50th Percentile Scenario

Stormwater detention volume is a function of meteorological conditions (temperature, precipitation quantity, and form), mine operations, and mine phase. Mine operations affect stormwater detention volume by the quantity of contact water that can be used in the mill or treated in a given month. The mine phase affects surface area of mine features that can interact with stormwater. The meteorological conditions affect the quantity of water available to become runoff. Figure 3 shows the stormwater accrual monthly variability in the 12 years of active mining. The lower boundary (25th percentile) of the bars correspond to times of lower stormwater accrual that is partially driven by meteoric conditions that produce low available water. Presumably, these meteoric conditions correspond to times of lower streamflow at the Shoup gage that may be less than the instream flow water rights. While out-of-season detention is still anticipated at the 25th percentile, associated volumes are very small and are generally near zero with the exception of February (less than 2 acre-feet) and March (approximately 11 acre-feet). Conversely, monthly stormwater detention at the upper boundary partially correspond to times of higher water availability when the streamflow at Shoup gage may also be above average conditions.

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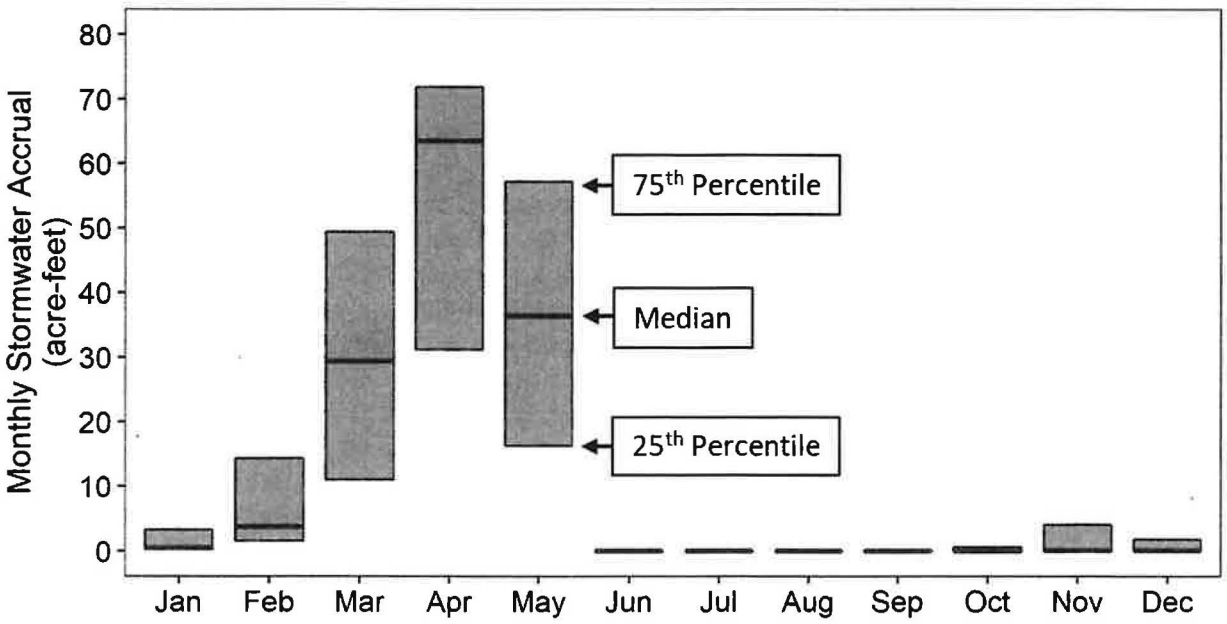


Figure 3. Monthly Stormwater Accrual Variability (12 Years of Active Mining)

As previously noted, mitigation is required only when flows are less than the instream flow rate listed in the WSWR. Streamflow data at the Shoup gage was analyzed for the period of 2004 through 2018 to quantify the monthly frequency of days when streamflow is less than the WSWR (Figure 4). Streamflows exceed the WSWR more than 50 percent of the time in the highest stormwater accrual months. As a result, the amount of stormwater detention that is expected to require mitigation should be less than 50 percent of such projections in Table 2. Accordingly, the required mitigation volume should be less than 100 acre-feet in most years. However, it is not possible to predict with accuracy and meaningful lead time when mitigation will be required because of the uncertainty of streamflow at the Shoup gage and local weather variability. To address this uncertainty, an excess mitigation volume and continuous mitigation rate is proposed.

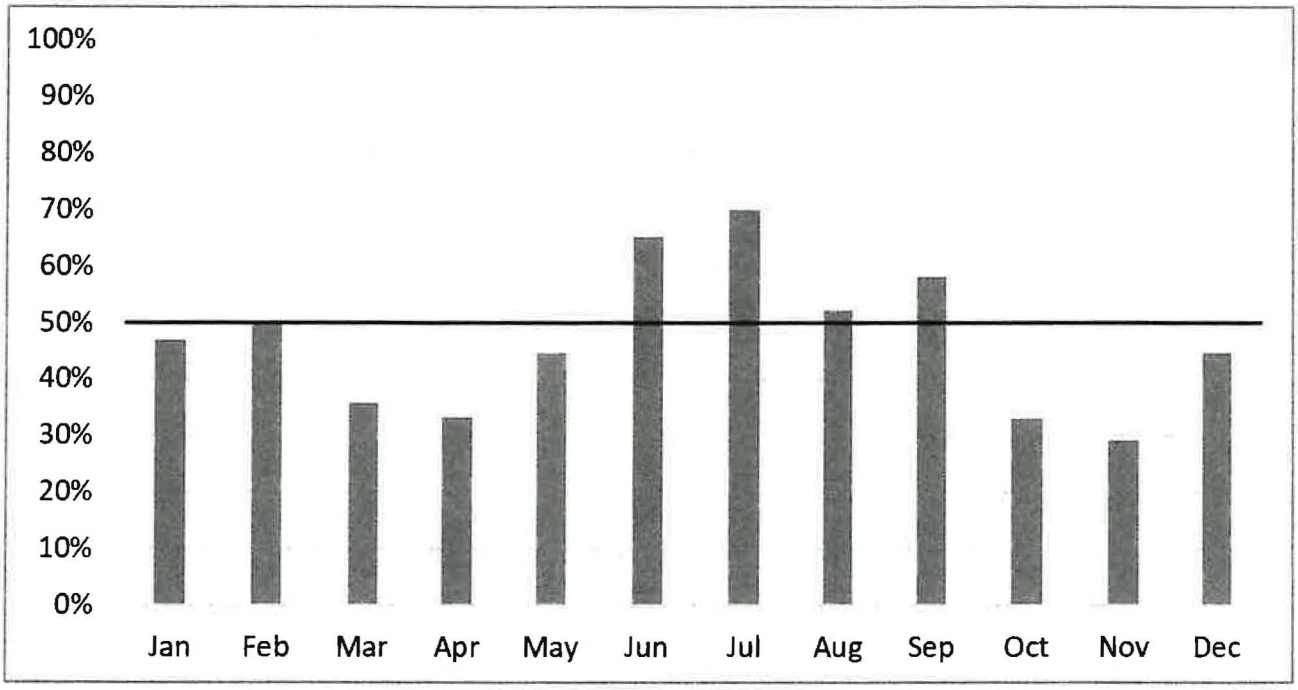


Figure 4. Frequency of Days Streamflow at Shoup Gage is below the WSWR (2004-2018)

Mitigation Plan

Detention of stormwater is necessary to protect water quality and offsets diversion demand from groundwater and the EFSFSR. Perpetua Resources proposes to mitigate for out-of-priority stormwater detention at the mine site by non-use of existing irrigation water rights with places of use and points of diversion upstream of the Wild and Scenic River reach. Non-diversion of existing irrigation water rights will increase streamflow in the Wild and Scenic River reach and provide mitigation for stormwater detention at the SGP.

Perpetua Resources has secured the Ronald and Corrine Jones property, near Challis, Idaho, and associated water rights through an option to purchase agreement (*Figure 5*, *Figure 6*). The Ronald and Corrine Jones property borders the Salmon River downstream from Challis and is a good candidate for mitigation purposes because the appurtenant water right portfolio (1) has a high diversion rate per acre, (2) exceeds the needed consumptive volume, (3) is on the Salmon River upstream of the Wild and Scenic River reach, and (4) is deliverable for the entire irrigation season beginning April 1. An additional benefit is that non-use of the right will benefit fish passage in Morgan Creek which is an important stream for anadromous fish and also flows through the property. Being located entirely upstream of the Wild and Scenic reach, mitigation at the property would increase streamflow throughout the Wild and Scenic reach and a significant length of intervening reach from below Challis to below Salmon, while Perpetua Resources' water detention, on a tributary to the South Fork Salmon River, would only affect the lower 19 percent of the Wild and Scenic reach.

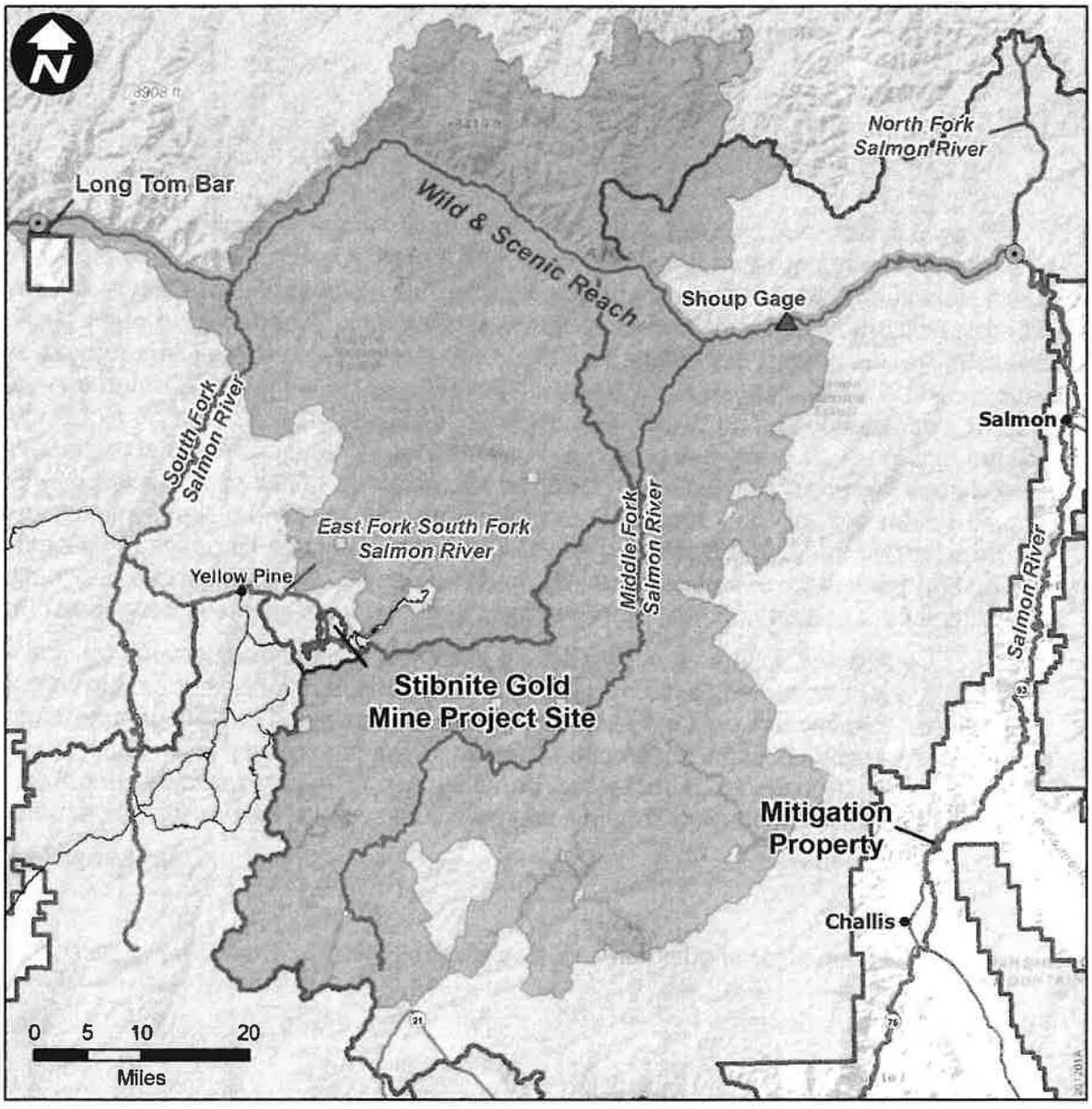


Figure 5. Project, WSR, and Mitigation Property Regional Map

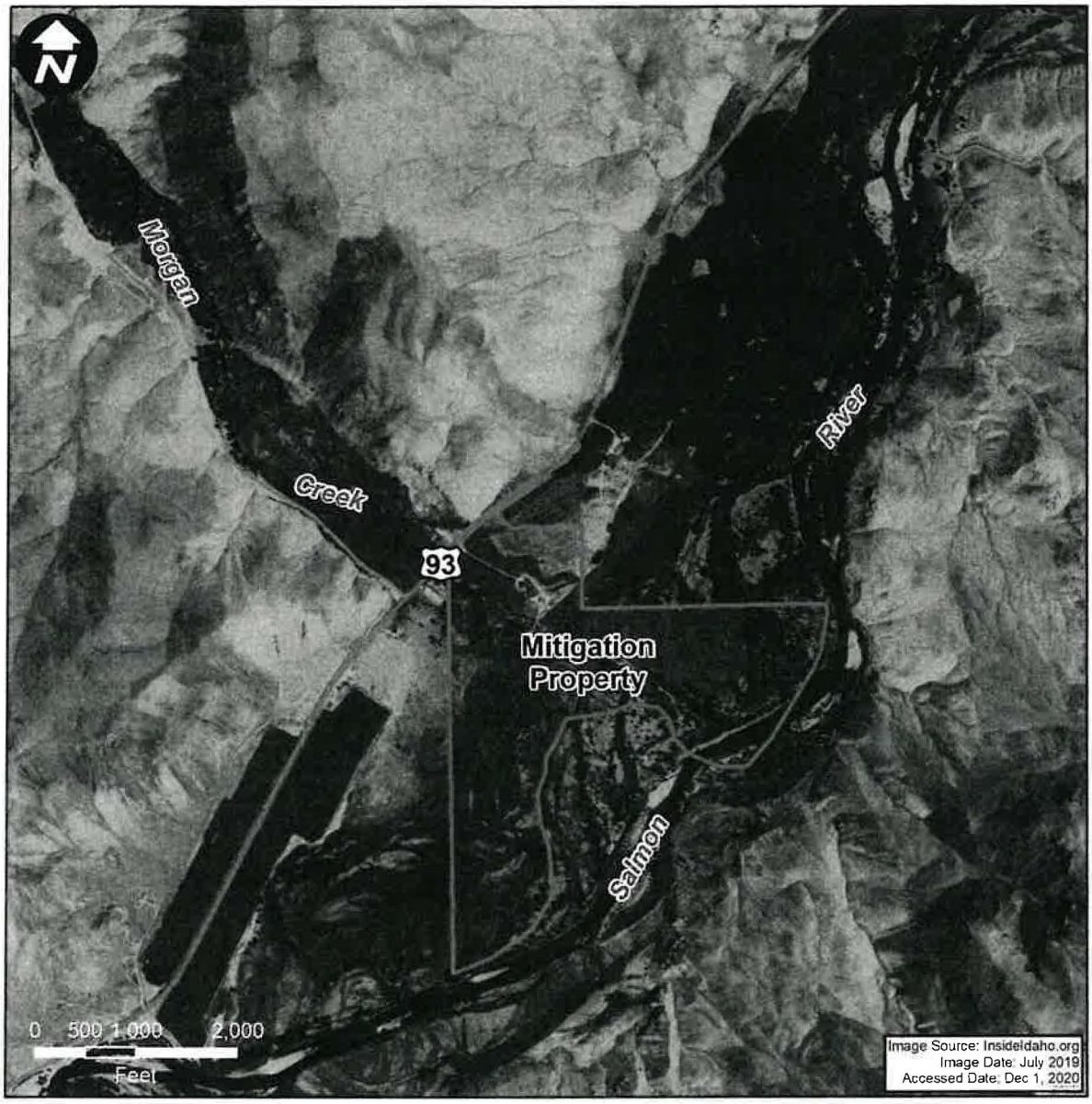


Figure 6. Mitigation Property Vicinity Map

The Jones property has irrigation water rights authorizing a diversion rate of 10.75 cfs for irrigation of 138.8 acres (Table 3). The consumptive mitigation value for these water rights is 2.5 acre-feet per acre, for a total mitigation volume of 347 acre-feet (138.8 acres x 2.5 acre-feet/acre) annually. This is more than three times the anticipated needed annual mitigation volume for stormwater detention at the SGP. Under this Mitigation Plan, the Jones property water would remain undiverted and allowed to flow down the Salmon River through the Wild and Scenic River reach.

The volume of first-year fill of the TSF will exceed the available mitigation water right volume. However, filling from groundwater or the EFSFSR can be accomplished at times when Salmon River flows exceed the minimum streamflow target and do not require mitigation. As a result, TSF filling can be actively managed to stay within the available

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mitigation volume. In the event the hydrologic conditions suggest that the first-year fill will require mitigation that exceeds the mitigation volume available under the Jones water rights, Perpetua Resources will secure a one-time water bank lease for the balance of the required mitigation.

Table 3. Jones Water Rights Proposed for Mitigation

Water Right	Priority Date	Source	Water Use	Season	Total Acres	Acre Limit	Diversion Rate
72-149	5/1/1907	Morgan Creek	Irrigation	04/01-10/31	36.6	36.6	0.67
72-150	9/14/1931	Morgan Creek	Irrigation	04/01-10/31		36.6	0.17
72-4031	4/1/1967	Salmon River	Irrigation	04/01-10/31		36.6	1.52
72-16273	5/3/1935	Morgan Creek	Irrigation	04/01-10/31		36.6	0.69
72-4032	4/1/1961	Salmon River	Irrigation	04/01-10/31	20.2	0.0	1.44
72-4033	4/1/1947	Salmon River	Irrigation	04/01-10/31	28.0	0.0	1.68
72-4034	4/1/1900	Salmon River	Irrigation	04/01-10/31	54.0	0.0	4.58
Total Diversion Rate:		10.75 cfs					
Total Acres:		138.8 acres					

Abbreviations:

cfs = cubic feet per second

While part of the Mitigation Plan, the Jones water rights will be conditioned to show them as unavailable for diversion and they will be protected from forfeiture[7] as long as the water rights remain part of the Plan. In the event the permit or subsequent license is relinquished or abandoned resulting in deactivation of the Mitigation Plan, use of the Jones rights can be resumed at the original place of use and points of diversion.

Benefits of the Proposed Mitigation. This mitigation alternative provides reasonable, proactive assurance of over-mitigation of the potential annual mitigation obligation and provides continuous mitigation flows to surface waters during the irrigation season when water demand is high and through the summer and early fall low-streamflow periods. Continuous mitigation flow alleviates significant administrative challenges of mitigating on an "as-needed" basis only when stormwater is being diverted and detained for more than 24 hours and the WSWR is not met (*Figure 4*). Continuous mitigation flows also provide significant environmental benefits, particularly during low streamflow periods of late summer and fall, when minimal to no stormwater detention is anticipated. Stormwater diversion and detention is expected to occur primarily during high streamflow periods, and as such, will have negligible impact to streamflow during these times. Perpetua Resources believes this mitigation proposal "is consistent with the conservation of water resources[8], is in the public interest, and does not injure other water rights"[9]. Perpetua Resources also believes this is consistent with the full economic development of Idaho water resources[10].

[7] Idaho Code 42-233(10)

[8] Conservation of water resources is realized through both the water quality protection achieved by on-site stormwater detention and by the streamflow augmentation provided through the non-diversion.

[9] Idaho Administrative Procedures Act (IDAPA) 37.03.11, Section 043, page 12.

[10] Idaho Constitution, Article XV, Section 7.

The mitigation volume under the Jones water rights is more than adequate to offset the peak annual contact water volume, and therefore the volume requiring mitigation, that will be diverted under reasonably expected hydrologic conditions. The diversion rate, however, may be less than the peak depletion rate that requires mitigation on any given day (Table 1). In addition, as an irrigation water right, mitigation is provided during the irrigation season only, while contact water diversion and detention to protect water quality occurs both during and outside of the irrigation season. These minor deficiencies are offset by the significant benefits of the high rate of continuous mitigation during the irrigation season.

Mitigation by non-use of an irrigation water right is the most practical method to satisfy Perpetua Resources' potential mitigation obligation. Mitigation by non-use is the preferred method because of the clear advantages over other considered options:

1. **No Adverse Environmental Impact.** Mitigation by non-use has no detrimental environmental consequences, does not incur environmental disturbance, and does not require potential additional National Environmental Protection Act (NEPA) analysis.
2. **Anadromous Fish Benefit.** Streamflow augmentation and benefits to anadromous fish passage are significant with the proposed mitigation strategy. These benefits compensate for the limited occurrence of out-of-season stormwater capture and retention and/or stormwater diversion at rates greater than the mitigation flow rate during times when the WSWR is not met. The non-diversion will improve fish habitat and passage on Morgan Creek, an important anadromous fish watershed, and reduce diversions from the Salmon River in a reach that is also important to anadromous fish.
3. **Practical and Feasible.** The proposed mitigation is the most practical and feasible approach identified. Perpetua Resources, acting on the guidance of the July 27, 2020 IDWR letter, evaluated six mitigation alternatives that are described in the *Water Right Mitigation Alternatives Considered for the Stibnite Gold Project* memorandum (attached; delivered to IDWR and USFS, January 21, 2021). It was demonstrated that it is impractical to develop a mitigation plan that can offset all potential stormwater diversion and detention in real-time. It is also impractical, and indeed unprecedented, for a remote mountainous mine site to have water treatment capacity to adequately treat and discharge stormwater within 24 hours during a significant runoff event. Further, detaining contact water and utilizing it for industrial purposes offsets additional groundwater and surface water diversion otherwise needed to meet industrial demand. Acquisition of an active water right for mitigation is economically and operationally practical, provides continuous instream flows even when mitigation is not required, mitigates more water volume than anticipated to be detained at a reasonable flow rate during the irrigation season, and is easily administered.
4. **No Administrative Burden.** Continuous mitigation throughout the irrigation season does not place an administrative burden on the water district, IDWR, or USFS.
5. **Mitigation Control.** Perpetua Resources has control over the mitigation source. There is no lease, rental or further negotiation required.
6. **Continuous Mitigation Benefit.** Mitigation is anticipated to be required for a limited duration, and only at times of less than average streamflow at the Shoup gauge. It is likely that during high runoff events at the mine, the flow in the Salmon River

will also be above average so that mitigation is not required. Nonetheless, mitigation will be provided for the entire irrigation season (April through October) through non-use of the Jones water rights, regardless of whether water is being diverted and detained at the mine or whether Salmon River target flows are being met. This continuous benefit to streamflow offsets occasional mitigation shortfalls because non-use of the water rights continues to provide a streamflow enhancement at times when there is a minimum streamflow deficit, but Perpetua Resources is not accruing stormwater.

7. **Low-Flow Period Benefit.** Through non-use of a senior irrigation water right located upstream of the Salmon River Wild and Scenic River reach, the mitigation proposal adds water to the river during low-flow summer periods when river flows are significantly diminished by irrigation diversions. Salmon River flows during summer months are reduced by irrigation of thousands of acres in the Salmon River basin upstream of the Wild and Scenic River reach. By adding water back to the river during this time period, the values of the Wild and Scenic River are enhanced. Additional flow during summer is beneficial to both fish and recreation.
8. **Benefit to More than the Affected Reach.** The mitigation benefit occurs above and throughout the Wild and Scenic River reach, even though the impact from Perpetua Resources occurs only in the lower portion of the Wild and Scenic River reach (Figure 6). Although the Wild and Scenic River reach is 124 miles long (North Fork to Long Tom Bar), the impact to the Wild and Scenic River from the SGP stormwater diversions for which mitigation is being provided, will occur only in the lower 23 miles, downstream from the mouth of the South Fork Salmon River to Long Tom Bar, which comprises only approximately 19 percent of the total Wild and Scenic River reach. The mitigation water is provided for 202 miles, including 78 miles upstream of the Wild and Scenic River reach and 101 miles of the Wild and Scenic River reach upstream from the South Fork Salmon River, i.e., the majority of the Wild and Scenic River reach (approximately 81 percent). Therefore, the proposed mitigation provides an instream flow and water quality benefit to many more river miles than are impacted by Perpetua Resources' proposed stormwater retention.
9. **Over-Mitigation is Proposed.** Perpetua Resources will be providing significantly more mitigation volume than is expected to be accrued on an annual basis (*Table 4*). The consumptive mitigation volume is 231 percent to 760 percent over the anticipated mitigation requirement. The majority of contact water detention occurs during spring runoff in March, April, and May when WSWR flows are met approximately 55 percent to 65 percent of the time (*Figure 4*).

Table 4. Annual Stormwater Detention Volume and Excess Mitigation Provided

Mine Year (MY)	Annual Volume (acre-feet)				Over-Mitigation Percent
	Accrued	Mitigation Required (est)[1]	Mitigation Provided	Over-Mitigation Provided	
MY -1[2]	81	40	347	307	760%
MY 1	102	51	347	296	578%
MY 2	101	51	347	296	587%
MY 3	192	96	347	251	261%
MY 4	210	105	347	242	231%
MY 5	194	97	347	250	258%
MY 6	123	61	347	286	466%
MY 7	208	104	347	243	234%
MY 8	187	94	347	253	271%
MY 9	188	94	347	253	270%
MY 10	179	90	347	257	287%
MY 11	118	59	347	288	487%
MY 12	177	89	347	258	292%
Total	**2,060**	**1,030**	**4,511**	**3,481**	**338%**

Notes:

[1] Required mitigation volume estimated at 50 percent of annual stormwater accrual based on WSWR (Figure 1)

[2] Initial TSF fill (428 acre-feet) not included in annual volume because fill anticipated to be from groundwater, EFSFSR, and contact water. Fill will either occur at times when mitigation is not required or will be mitigated using available mitigation water right volume or one-time water bank rental volume.

Abbreviations:

EFSFSR = East Fork of the South Fork of the Salmon River

est = estimated

MY = mine year

TSF = tailings storage facility

WSWR = Wild and Scenic Water Right

10. **Not Fully Consumptive.** Some of the runoff that is detained is not consumed. A portion can be returned to the stream through the water treatment plant a short time after detention.

11. **Imperceptible Impact.** The flow impacts to the Salmon River resulting from SGP stormwater detention are anticipated to be imperceptible. Typical Salmon River flows at the mouth of the South Fork Salmon River during the March through May period when stormwater detention occurs range from 4,000 cfs to 40,000 cfs, and flows are

likely somewhat higher during periods of runoff. As an example, storm event-based modeling analysis estimated that a 25-year rain-on-snow event will produce 36 cfs of contact water for a 24-hour period. Relative to Salmon River flows at the South Fork Salmon River confluence, contact water management at the SGP for a storm of this magnitude has an instream flow impact of 0.09 percent to 0.9 percent. Such a small intermittent depletion in flow is not anticipated to impact Wild and Scenic River values and is more than offset by the continuous benefit from non-diversion of the mitigation water right during April through October as proposed by Perpetua Resources.

12. **Water Quality.** Non-diversion of irrigation water protects Salmon River water quality. Irrigation return flows carry sediment, nutrients, and bacteria, and often have elevated temperatures. By leaving irrigation water in the river, overall Salmon River water quality is enhanced. Water quality is also protected by retaining contact water at the SGP.

Summary

Perpetua Resources seeks authorization to store water at the SGP in the submitted water right permit application. Detention of stormwater runoff on site is required to protect water quality, and detained water will either be treated and discharged or used as a water source for industrial use. Stormwater detention and management protects instream water quality and offsets demand for groundwater and stream water diversion.

Perpetua Resources has worked diligently with the IDWR and the USFS to develop this Plan and respond to feedback received. Through this process Perpetua Resources has evaluated six mitigation alternatives. Mitigation by non-use of an irrigation water right that is upstream of the Wild and Scenic River reach and owned by Perpetua Resources asserts control over the mitigation source and lessens administrative burdens to ensure delivery to the Wild and Scenic reach, thereby addressing IDWR concerns. Indeed, all other mitigation approaches have proved to be impractical, detrimental to the environment and Wild and Scenic values, or administratively cumbersome.

While it is uncertain whether stormwater detention at the SGP to protect water quality qualifies as storage for water right purposes, and further, whether the practice is subordinate to the WSWR, Perpetua Resources is proposing this Plan to mitigate for detained stormwater. The proposed mitigation replaces substantially more annual volume than anticipated to be detained with a continuous flow rate while irrigation water rights are active. It is recognized that under limited circumstances[11] this mitigation strategy may not offset detained water at a one-to-one diversion rate in real-time. The numerous attributes of this Plan, as described and further elaborated in the attachments, are substantial in providing 1) over-mitigation of detained water; 2) streamflow, fishery, and environmental benefits; and 3) easy administration by the regulating agencies and Perpetua Resources. These attributes strongly support endorsement of this Plan.

[11] Occurrence is limited to when streamflows at Shoup gage are below the WSWR and stormwater detention is occurring at rates greater than 10.75 cfs, or when stormwater detention is occurring during the months of November through March.

Brown AND Caldwell

1290 West Myrtle Street, Suite 340
Boise, ID 83702

T: 208.389.7700

Technical Memorandum

Prepared for: Perpetua Resources Idaho, Inc. (Perpetua Resources)

Project Title: Stibnite Gold Project

Project No.: 156123-002

Technical Memorandum

Subject: SGP Water Right Diversion Rate and Storage Volume

Date: October 8, 2021

To: Perpetua Resources

From: Brown and Caldwell

Copy to: SPF Water Engineering, LLC.

Prepared by: Daniel Stanaway
Dan Stanaway, Brown and Caldwell

Reviewed by: Terry M. Scanlan
Terry Scanlan, PE, PG

Limitations:

This document was prepared solely for Perpetua Resources in accordance with professional standards at the time the services were performed and in accordance with the contract between Perpetua Resources and Brown and Caldwell dated January 1, 2021 This document is governed by the specific scope of work authorized by Perpetua Resources; it is not intended to be relied upon by any other party except for regulatory authorities contemplated by the scope of work. We have relied on information or instructions provided by Perpetua Resources and other parties and, unless otherwise expressly indicated, have made no independent investigation as to the validity, completeness, or accuracy of such information.

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List of Abbreviations

ac-ft	acre-feet
cfs	cubic feet per second
EFSFSR	East Fork of the South Fork of the Salmon River
gpm	gallon per minute
IDWR	Idaho Department of Water Resources
ModPRO2	refined Modified Plan of Restoration and Operations
Perpetua Resources	Perpetua Resources Idaho, Inc.
SGP	Stibnite Gold Project
SWWB	Site-wide Water Balance [model]
TM	technical memorandum
TSF	Tailings Storage Facility
WSWR	Wild and Scenic Water Right

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Section 1: Introduction

This Technical Memorandum (TM) is an attachment to the water right permit application for the Stibnite Gold Project (SGP) and describes the information used to determine the industrial use diversion rate of 9.6 cubic feet per second (cfs) (Section 3), the diversion to storage rate of 9.6 cfs, and the 600 acre-feet storage volume (Section 4). This storage volume accounts for the one-time fill (428 acre-feet) of the Tailings Storage Facility (TSF) prior to the first year of mill operation and the annual stormwater runoff[1] volume detained on-site for water quality protection. Data and modeling used to determine industrial water demand and water management are described in the SGP Site-Wide Water Balance Model (SWWB) Refined Modified Proposed Action (ModPRO2) Report (Perpetua Resources Idaho, Inc. [Perpetua Resources] 2021 in progress). The SWWB simulates the water balance based on the ModPRO2 Alternative (Midas Gold Idaho, Inc. 2020). The information contained in this TM is limited to the specific conditions, assumptions, and data used to determine the appropriate water right diversion rates and storage volume necessary to satisfy industrial use and stormwater detention needs to protect water quality[2].

Section 2: SGP Water Requirements

Industrial water requirements for SGP operations are mill demand for ore processing, dust suppression, drilling water, and dewatering (Figure 1, Table 1). Existing water rights (Table 2) are held for mining and domestic purposes, but only satisfy a small portion of the project demand. Applications for transfer of existing mining water rights 77-7122, 77-7285 and 77-7293 are submitted to change the places of use and points of diversion. Additional water for industrial use is requested in this water right application. The industrial water demand will be met by groundwater from pit dewatering wells and/or water supply wells, surface water from the East Fork of the South Fork of the Salmon River (EFSFSR), direct diversion of contact water (stormwater runoff or groundwater that has contacted mining features), and detained contact water. Detained water is contact water runoff in excess of instantaneous industrial demand or water treatment system capacity that will be detained on-site for water quality protection. This water will either be treated and discharged or beneficially used for industrial demand, thereby offsetting demand for groundwater and EFSFSR water. In addition, process water from the TSF supernatant pool will be reclaimed and reused. Industrial use and contact water detention are detailed in Sections 3 and 4, respectively.

---

[1] Contact water, stormwater, and stormwater runoff are interchangeable for purposes of this Memorandum and refer to water that has been in contact with mine features and has not entered a natural water course. Perpetua Resources is required to manage contact water by diversion, detention, treatment, and/or use in operations to prevent water quality impacts to the East Fork of the South Fork of the Salmon River and tributaries.

[2] Because of water quality restrictions, Perpetua Resources must detain contact water in stormwater ponds when runoff rates exceed the combined capacity to treat and discharge and/or utilize the water for industrial purposes. Perpetua Resources' site-wide water balance predicts month-end stormwater pond volume. This modeling is used to understand monthly stormwater accrual volume and to support the water rights application. Stormwater that is retained for more than 24 hours, whether beneficially used or treated and discharged, is considered stored water in this Mitigation Plan and the water right permit application.

Table 1. Operations Industrial Water Requirements[a]

Use	Peak Rate (cfs)	Estimated Average Annual Volume (acre-feet)[e]
Mill Demand	9.7	TSF Reclaim (average): 4,832 Mill Diversion Demand (average): 1,438
Mill Diversion Demand[b]	4.5	1,438
Dust Control	0.7	186
Drilling Water	0.1	40
Excess Dewatering Water[c]	4.3	608
Total Diversion Demand[d]	9.6	2,272

Notes:
[a]Values based on SWWB 14-year climate scenario (2004 to 2017) used in the predictive modeling as the "average climate scenario"
[b]Mill diversion demand is water needed in addition to the TSF reclaim water
[c]Dewatering water in excess of dewatering water used for industrial water supply. This water is treated and discharged.
[d]Total Diversion Demand is the sum of the mill diversion demand, dust control, drilling water, and dewatering water
[e]Volumes shown are the actual volumetric requirement for each use estimated by the SWWB model
Abbreviations:
cfs = cubic feet per second
SWWB = site-wide water balance
TSF = tailings storage facility

Table 2. Current Water Rights

Water Right	Current Owner	Source	Beneficial Use(s)	Diversion Rate (cfs)	Annual Volume (acre-feet)
77-7122	Idaho Gold Resources Company	East Fork South Fork Salmon River	Diversion to Storage Mining Storage Mining from Storage	0.33	7.1
77-7141	Idaho Gold Resources Company	Groundwater	Domestic	0.20	11.4
77-7285	Stibnite Gold Company	Groundwater	Mining Diversion to Storage Mining Storage Mining from Storage	0.50	30.2
77-7293	Stibnite Gold Company	Unnamed Stream (Hennessy Creek)	Mining	0.25	20

Abbreviations:
cfs = cubic feet per second

Section 3: Industrial Use

Peak diversion rate for industrial uses is estimated to sum to approximately 9.6 cfs and is primarily for ore processing (Table 1). Water used in ore processing will be supplied from multiple sources and the water right permit application seeks to authorize water diversion from groundwater, EFSFSR, contact water, and de-tained water. Figure 1 shows the industrial use components and ore processing demand. The relative

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volumes of the water sources used in ore processing will fluctuate and are dependent on availability of reclaimed TSF water, contact water, and dewatering water during mine operations and are also dependent on water quality requirements. The time series is based on a historical meteorologic sequence and the mine plan sequence (Perpetua Resources 2021 in progress). The maximum monthly diversion rate is therefore coincidental to the mine phase and the annual meteorologic data applied.

Total ore processing water demand is represented by the green line in Figure 1, and is the rate required by the mill to process ore. The first-priority water source for the mill is reclaimed water from the TSF supernatant pool when available and does not require a water right[3]. Remaining water demand (make-up water) will then be supplied by groundwater from pit dewatering, direct diversion of contact water, and detained contact water (Figure 2). When mill demand is greater than the available supply from TSF reclaim water, contact water, and dewatering water, the remaining demand will be met with groundwater from groundwater supply wells and surface water from the EFSFSR.

Mill diversion demand is represented by the blue line in Figure 1, and is the total make-up water (non-TSF reclaim water) diversion rate that is required by the mill to process ore. The mill diversion demand sums pit dewatering groundwater, contact water, water supply well groundwater, and the EFSFSR.

Excess dewatering water is represented by the yellow line in Figure 1, and is the quantity of dewatering water that is in excess of the quantity that can be used to operate the mill. Water produced by dewatering is variable through the mine life and, at times, it is anticipated that more dewatering water will be produced than will be utilized in the mill. Perpetua Resources is seeking appropriation of the total estimated quantity of dewatering water as discussed below.

Drilling water demand is represented by the orange line in Figure 1, and is the estimated water required for well and exploration drilling.

Dust suppression demand is represented by the grey line in Figure 1, and is the estimated water required for dust control in pits, in-pit roads, and stockpiles.

Total diversion demand is represented by the black line in Figure 1, and is the sum of the make-up water demand (i.e., water demand is additional to TSF reclaim water), excess dewatering water, drilling water, and dust suppression. This is the total diversion demand that requires appropriation.

[3] The reason that recycling of the supernatant pool water does not require a water right is because the reclaimed/recycled water originated as contact water, groundwater, and EFSFSR diverted under this proposed permit or existing water rights for industrial use and retained in control of the appropriator for continued industrial use. The recycled wastewater is not being appropriated but rather is being utilized under the original authorization for industrial use.

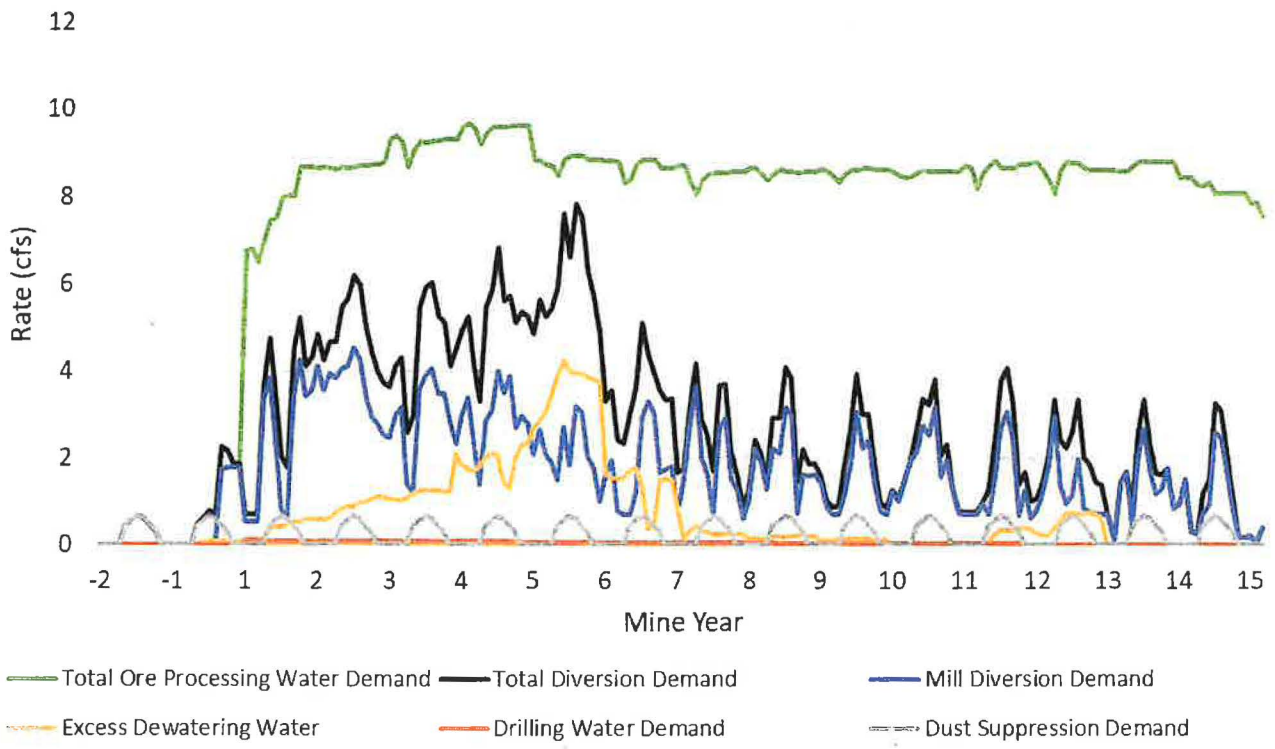


Figure 1. SGP Water Requirements

The industrial use diversion rate requested in the water rights application (9.6 cfs) is based on the maximum estimated rates for mill diversion demand rate (4.5 cfs), excess dewatering rate (4.3 cfs), dust suppression rate (0.7 cfs), and drilling water rate (0.11 cfs) (Table 1). The maximum values for these diversion rates are not modeled to coincide; the maximum mill demand is modeled to occur in mine year 2 and the maximum dewatering is modeled to occur in mine year 5. While not modeled to coincide, estimated mill diversion demand is coincidental to the climate sequence used in the model, quantity of TSF reclaim water, and ore processing rate. Peak mill diversion demand may not occur in the year modeled, but it is not expected to be more than the peak estimated rate. Likewise, monthly dewatering estimates are based on currently modeled pit dewatering phasing and modeled dewatering rates that may adjust based on Project needs. Peak drilling water demand is minimal and occurs in year 1 declining linearly to zero in year 15 and dust suppression demand is a cycle with an annual peak of approximately 0.7 cfs.

The water right permit application seeks authorization for the total quantity of dewatering water that is anticipated to be produced. Pursuing water right authorization for all of the dewatering water is the preferred option of the three alternatives presented by the Idaho Department of Water Resources (IDWR) in a letter received July 27, 2020. Water right authorization of all dewatering water is the most secure approach to ensure adequate water supply and satisfy fluctuating industrial demand for dewatering water amid a variable dewatering rate. In the July 27, 2020 letter, IDWR states the Department recognizes that dewatering is essential to mining and has recognized dewatering as a beneficial use in previous water right permits. The excess dewatering rate is estimated by subtracting the monthly dewatering water used for ore processing from the monthly total dewatering water produced. Dewatering supply, in conjunction with TSF reclaim water and contact water, can be at times insufficient to satisfy industrial demand. This unmet industrial demand is satisfied by groundwater from the groundwater supply wells and surface water from the EFSFSR water.

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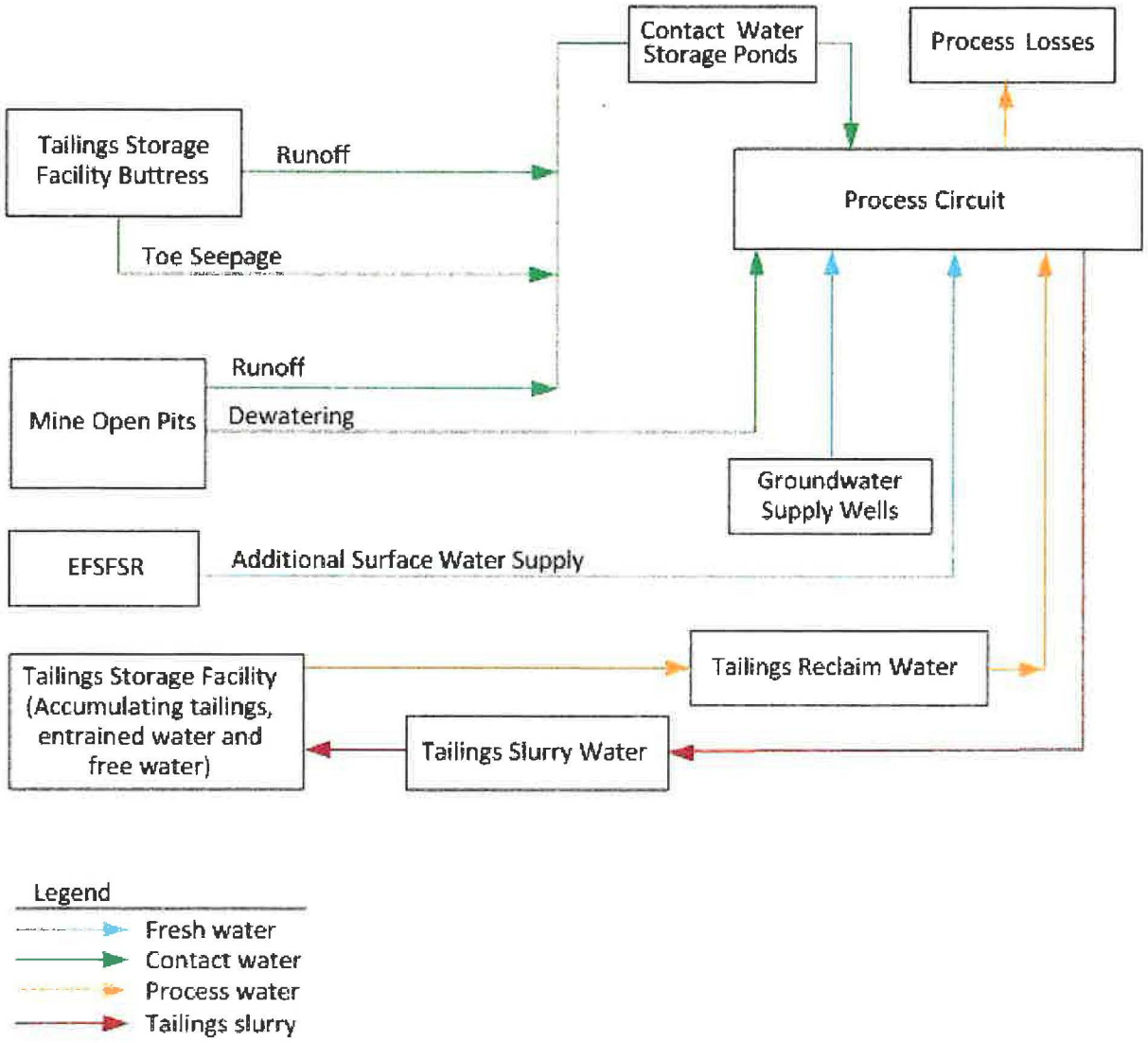


Figure 2. Process Circuit Flow Chart

Section 4: Contact Water Storage

The water right application requests authorization for 600 acre-feet of storage. This storage volume accounts for the estimated contact water detention volume (126 acre-feet)[4] with an approximate 35 percent contingency and the one-time fill of the TSF starter pool (modeled to be 428 acre-feet) in the year prior to the start of operations (i.e., 428 acre-feet + (126 acre-feet x 135%) = 598 acre-feet, rounded to 600 acre-feet). Contact water will be detained in a system of stormwater detention ponds that are associated with mine facilities throughout the Project site.

[4] Value based on SWWB 75th percentile statistical output.

For the portion of the one-time fill that is not satisfied by contact water, the water right application also seeks authorization for diversion to storage from groundwater and EFSFSR for the fill of TSF starter pool. Contact water diversion and detention is necessary to protect surface water quality from direct discharge of water that is above applicable surface water discharge criteria. Detention is necessary when contact water quantity is greater than the combination of treatment capacity, evaporation capacity, and industrial demand. Detained water will be used to supply the industrial water demand, or the water will be treated and discharged.

Contact water diversion to protect water quality and subsequent detention may not be within the subordination clause of the Wild and Scenic River instream water rights (WSWR) 75-13316 and 77-11941 and, as such, may require mitigation when the WSWR is not met. Perpetua Resources is proposing a mitigation strategy of non-use of irrigation water rights that is described in the accompanying Mitigation Plan. The Mitigation Plan and attachments detail the proposed mitigation, benefits of the proposed mitigation, evaluation of other mitigation options, and how the proposed mitigation strategy enhances the Wild and Scenic character of the Salmon River.

Detained contact water volumes were estimated by the SWWB model (Perpetua Resources 2021 in progress). The SWWB outputs system-wide contact water pond volume estimates at a monthly timestep. Annual accrued contact water volume is estimated by calculating the monthly change in used pond volume and summing the monthly differences for a year. Contact water accrual starts with the pond volume from the previous December as assumed carry-over to begin the water right accrual. Values calculated are subject to revision and are generated with these assumptions:

1. Water treatment rates shown in Table 3
2. Groundwater from dewatering that is not used to satisfy industrial demand is treated and discharged but not stored
3. The total storage volume at the site will be available to detain contact water generated from any source at the site

Table 3. Water Treatment Plant Capacity

Mine Year Beginning	Water Treatment Plant Capacity (gpm)
-2	300
1	1,000
4	2,000
7	1,000

Abbreviations:

gpm = gallon per minute

Median and 95th percentile predicted annual accrued contact water volume is shown in Table 4 (Perpetua Resources 2021 in progress). Detained volume variability results from climatic variability in the SWWB model, industrial demand variability, assumed treatment and/or evaporation capacities, and progression of mine development (i.e., changes in exposed mine surface area during mine life). The water right application requests authorization for 600 acre-feet of storage. This storage volume is based on mine year -1 when the TSF starter pool is developed (estimated 428 acre-feet required) and the estimated annual volume of detained contact water in that year (126 acre-feet at the 75th percentile) with an approximate 35 percent contingency applied to contact water detention. The contingency is applied to account for modeling and climatic uncertainties.

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Table 4. Annual Contact Water Detention Volume

Mine Year	Median Annual Detained Contact Water Volume (ac-ft)[a]	95th Percentile Annual Detained Contact Water Volume (ac-ft)[b]
-1[c]	81	233
1	102	236
2	101	242
3	192	267
4	210	237
5	194	206
6	123	250
7	208	216
8	187	228
9	188	213
10	179	211
11	118	200
12	177	194
13	0.2	149
14	0.5	103

Notes:

[a]Values based on SWWB 50th percentile statistical output from the 120-year climate record

[b]Values based on SWWB 95th percentile statistical output from the 120-year climate record

[c]Initial TSF fill (428 ac-ft) not included in annual volume because fill anticipated to be from groundwater, EFSFSR, and contact water. Fill will either occur at times when mitigation is not required or will be mitigated using available mitigation water right volume or one-time water bank rental volume

Abbreviations:

ac-ft = acre-feet

EFSFSR = East Fork of the South Fork of the Salmon River

SWWB = site-wide water balance

TSF = tailings storage facility

Section 5: Summary

Perpetua Resources seeks a new water right appropriation of contact water runoff, groundwater, and surface water from the EFSFSR for industrial uses at the SGP to augment existing Perpetua Resources water rights. Key elements of the water right permit application include:

- Maximum diversion rate under new and existing water rights will be 9.6 cfs.
- Industrial uses will include ore processing, dust control, drilling, and dewatering.
- Contact water runoff volumes that exceed instantaneous industrial demand and water-treatment system capacity must be detained in storage ponds to protect surface water quality. Use of this water for industrial purposes offsets further diversion demand on groundwater and the EFSFSR.

- The application seeks a maximum annual storage volume of 600 acre-feet. This volume includes a one-time 428-acre-foot fill of the TSF during mine year -1 along with contact water storage during that year. In all other years, storage volume will consist of contact water only, and is anticipated to be 210 acre-feet or less.
- The United States Forest Service holds a WSWR for the Salmon River. The proposed direct diversions of water for industrial uses are anticipated to fall within the subordination provisions of the WSWR, but proposed storage of water may not be subordinated by the WSWR. Perpetua Resources has secured irrigation water rights as mitigation for storage impacts to the WSWR.

A Mitigation Plan is included with the permit application. Attached to the Mitigation Plan are two supporting documents that describe 1) Perpetua Resources' evaluation of six mitigation alternatives and identifying non-use of an irrigation water right as most practical mitigation strategy that provides significant environmental benefits and 2) a description of how the proposed mitigation plan enhances the wild and scenic character of the Salmon River.

References

Midas Gold Idaho, Inc., 2020. Stibnite Gold Project, Refined Proposed Action ModPRO2, December.

Perpetua Resources Idaho Inc., 2021. Stibnite Gold Project Site-Wide Water Balance Model Refined Modified Proposed Action (ModPRO2) Report, In progress.

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Water Right Mitigation Plan for the Stibnite Gold Project

October 8, 2021



SPF WATER ENGINEERING

Introduction

Perpetua Resources Idaho Inc. (Perpetua Resources) has applied for a water right permit to support uses at the Stibnite Gold Project (SGP or Project). The permit seeks authorization for both direct diversions and for storage. Water sources will be groundwater, the East Fork of the South Fork of the Salmon River (EFSFSR), and stormwater runoff (contact water)[1].

Certain storage of water under the proposed permit may require mitigation to prevent impacts to the United States Forest Service (USFS) Wild and Scenic River water rights (WSWR) on the Salmon River. As a condition of the industrial use water right permit, Perpetua Resources is proposing to provide mitigation water to the Salmon River to offset impacts to the WSWR that may result from detaining water at the SGP. Mitigation will be provided through non-use of active irrigation water rights in the Salmon River basin. Perpetua Resources has entered into an agreement that secures a property with a water right portfolio that is anticipated to mitigate substantially more than the total volume of water that will be detained annually at the SGP. Further, non-use of those rights would exceed the volume of water that requires mitigation by an even greater amount.

This Mitigation Plan (Plan) provides information on the WSWR, the proposed SGP water right permit application, mitigation requirements, and the proposed mitigation. Two supporting memorandums are attached to this Plan. Both memorandums have been provided to the Idaho Department of Water Resources (IDWR) and the USFS. The *Water Right Mitigation Alternatives Considered for the Stibnite Gold Project* memorandum summarizes Perpetua Resources' evaluation of six mitigation strategies and identifies non-use of an irrigation water right as the preferred alternative because it is most practical, provides significant environmental benefits, and is easily administered. The *Water Rights Mitigation for the Stibnite Gold Project and Protection of Wild and Scenic River Values on the Salmon River* memorandum describes how the proposed mitigation plan enhances the wild and scenic character of the Salmon River that the USFS designation strives to protect.

Background

Wild and Scenic River Water Right. The WSWRs 75-13316 and 77-11941 held by the USFS on the Salmon River have flow targets that approximate the historical median flow rate in the Salmon River. The targets are based on average historical flows at the Shoup Gage in two-week time intervals (Figure 1). Because the flow targets are based on the median streamflow, on any given day there is approximately a 50 percent chance that there is insufficient flow to meet the instream flow specified in the WSWR.

The reach of the Salmon River subject to the WSWR extends upstream and downstream from the mouth of the South Fork Salmon River. As a result, stormwater diversion and detention at the SGP in the EFSFSR watershed could affect flow in a portion of the Wild and Scenic River reach that is downstream of the South Fork Salmon River. This potentially impacted river section is approximately 19 percent of the Salmon River Wild and Scenic reach.

[1] For purposes of this Memorandum contact water, contact water runoff, stormwater, and stormwater runoff are interchangeable and refer to water that has been in contact with mine features and has not entered a natural water course. Perpetua Resources is required to manage contact water runoff by diversion, detention, treatment, and/or use in operations to prevent water quality impacts to the East Fork South Fork Salmon River and tributaries.

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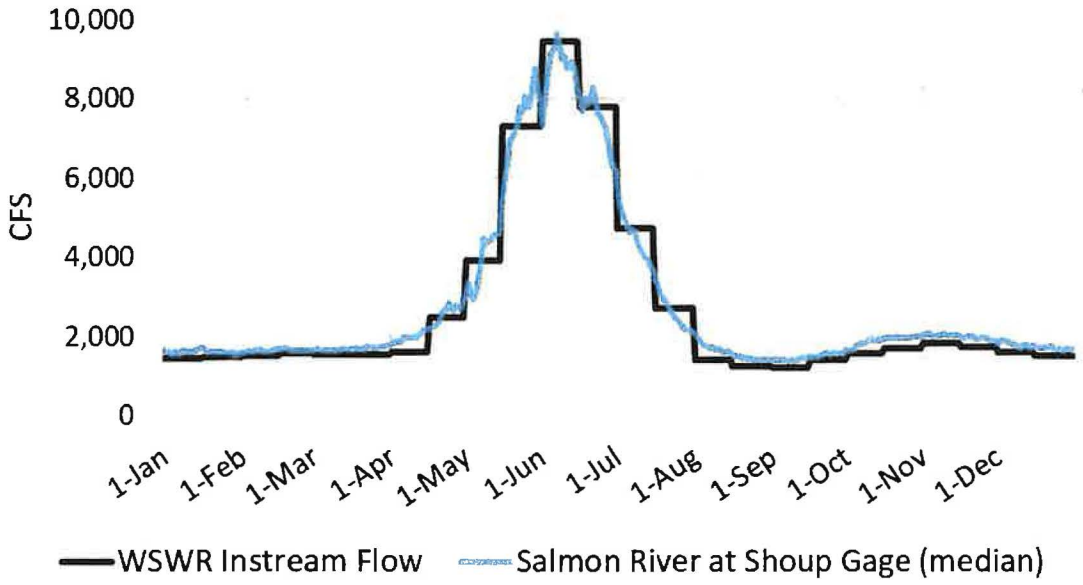


Figure 1. Salmon River at Shoup Streamflow and Wild and Scenic Water Right

Perpetua Resources Application for Permit. Perpetua Resources holds existing water rights for the SGP for mining and domestic purposes. The existing water rights meet some of the Project's water demand and will be utilized to reduce new water appropriations. An application for transfer of place of use and point of diversion has been submitted as a part of this application package[2]. Importantly, existing water rights 77-7285 and 77-7122 authorize a combined 16.1 acre-feet of storage to which the WSWRs are subordinate. In addition to existing water rights, Perpetua Resources proposes to develop new water rights to support the SGP. The industrial use water right permit application will seek 9.6 cubic feet per second (cfs) of direct diversions of groundwater, EFSFSR water, and contact water to industrial uses and 9.6 cfs of diversion to storage from groundwater and the EFSFSR. The permit also seeks to store up to 600 acre-feet to account for the one-time 428 acre-feet fill of the tailings storage facility (TSF) and the modeled 126 acre-feet[3] of contact water detention[4] in the year prior to mill operation. Storage volumes after the initial TSF fill in mine year -1 are projected to be less than 210 acre-feet annually.

Mitigation Requirement. The WSWR is partially subordinated to new water rights within the Salmon River basin proposing direct use of water, but the subordination is explicitly not available to new water rights proposing storage of water.

[2] Existing water rights are detailed in the *SGP Water Right Diversion Rate and Storage Volume* memorandum that accompanies Perpetua Resources' water right permit application

[3] Value based on Site-wide Water Balance (SWWB) 75th percentile statistical output with an approximate 35% contingency

[4] Because of water quality restrictions, Perpetua Resources must detain contact water in stormwater ponds when runoff rates exceed the combined capacity to treat and discharge and/or utilize the water for industrial purposes. Perpetua Resources' SWWB predicts month-end stormwater pond volume. This modeling is used to understand monthly stormwater accrual volume and to support the water rights application. Stormwater that is retained for more than 24 hours whether beneficially used or treated and discharged is considered stored water in this Mitigation Plan and the water right permit application.

The direct use of water sought by Perpetua Resources' industrial water right permit applications will utilize the subordination provisions of the WSWR. Whether Perpetua Resources' direct diversion of contact water before it reaches a natural stream channel, a required practice to protect water quality, requires a water right, and if so, whether the subsequent detention of stormwater runoff is within the subordination provisions of the WSWR are open questions. Nevertheless, for purposes of this Plan, Perpetua Resources is assuming that detention of stormwater runoff to protect water quality at the SGP may not be included in the WSWR subordination when flows in the Salmon River at Shoup are less than the WSWR, and therefore some form of mitigation may be required.

Modeling of Stormwater Diversion Rate and Detention Volumes. Perpetua Resources has modeled contact water runoff volumes for various storm events. The predicted total runoff volumes have been converted to 24-hour flow rates to estimate contact water flow rates to stormwater ponds. Modeling has predicted that 24-hour contact water flow rates of 27 cfs (one-year storm event) to 36 cfs (25-year storm event) could occur during springtime rain-on-snow storm events. The effective flow rates are 12 cfs less than the total rates because water management (i.e., a maximum of 12 cfs diversion to mill and water treatment)[5] can offset the total modeled detained quantity.

Estimating contact water flow rates that require mitigation is not exact but is anticipated to be approximated by the range of the effective flow rates in Table 1. The effective contact water flow rate ranges from 15 cfs to 24 cfs for these spring runoff events. Those same storm events on bare (snow-free) ground (i.e., summer storms) yield stormwater flows of 5 cfs to 12 cfs and no storage is expected during summer/fall storm events because diversion to mill and water treatment capacity are greater than runoff rates.

Additional modeling predicts that attenuation of flow depletions between the mine site and the Salmon River, approximately 60 miles downstream, will be minimal (less than 3 percent attenuation) during springtime high flow conditions (i.e., flow impacts at the mine site are likely not substantially reduced moving downstream due to high stream-flow velocities). The modeling suggests that more attenuation occurs during low-flow conditions, but water management can already fully offset the need to store stormwater runoff at such times.

[5] Operational use of the full 12 cfs of stormwater would be a limited operational strategy to reduce the stormwater detention rate that would be employed only under certain circumstances. This is an example of strategies potentially available to Perpetua Resources to reduce impacts to flows in the Salmon River.

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Table 1. Diversion Rate Estimates

	Storm Event Average Runoff Rate (cfs)		Effective Storm Event Runoff Rate (cfs)[1]	
Storm Event	No Snow	Average Snow	No Snow	Average Snow
1 Year	5	27	0	15
10 Year	10	34	0	22
25 Year	12	36	0	24

Notes:

[1]The effective storm event runoff rate is 12 cfs less the storm event because of mill use and treatment. This is a limited operational strategy to reduce flow impacts and only employed under specific conditions.

Abbreviations:

cfs = cubic feet per second

Monthly site-wide water balance modeling shows that annual stormwater accrual volumes, under normal runoff conditions, will range from 81 acre-feet to 210 acre-feet, with an average of 158 acre-feet (Table 2).

Table 2. Modeled Stormwater Detention Volume by Mine Year

Mine Year (MY)	Annual Volume (acre-feet)[1]
MY -1[2]	81
MY 1	102
MY 2	101
MY 3	192
MY 4	210
MY 5	194
MY 6	123
MY 7	208
MY 8	187
MY 9	188
MY 10	179
MY 11	118
MY 12	177
13-year Average	158

Notes:

[1]Annual detention estimates based on the Site Wide Water Balance 50th percentile scenario. Storage estimates not shown for MY -2, MY 13, or MY 14 because estimated detention volumes are less than 1 acre-foot.

[2] Initial TSF fill (428 acre-feet) not included in annual volume because fill anticipated to be from groundwater, EFSFSR, and contact water. Fill will either occur at times when mitigation is not required or will be mitigated using available mitigation water right volume or one-time water bank rental volume.

Abbreviations:

EFSFSR = East Fork of the South Fork of the Salmon River

MY = mine year

TSF = tailing storage facility

Figure 2 shows the median monthly stormwater volume accrual during the 12-year active mining period[6]. Contact water diversions occur primarily in March, April, and May during high runoff and high streamflow periods, and the modeling shows the potential to divert smaller volumes of contact water in September through February. Some contact water detention that occurs November to March can be authorized without incurring a mitigation obligation by the existing water rights 77-7122 and 77-7285 to which the WSWRs are subordinate. Nevertheless, the non-irrigation season months (November through March) are a challenge to mitigate by non-diversion of irrigation water rights because the season of use for those rights is restricted to April through October and all water rights identified by Perpetua Resources that are available for mitigation purposes have been irrigation water rights.

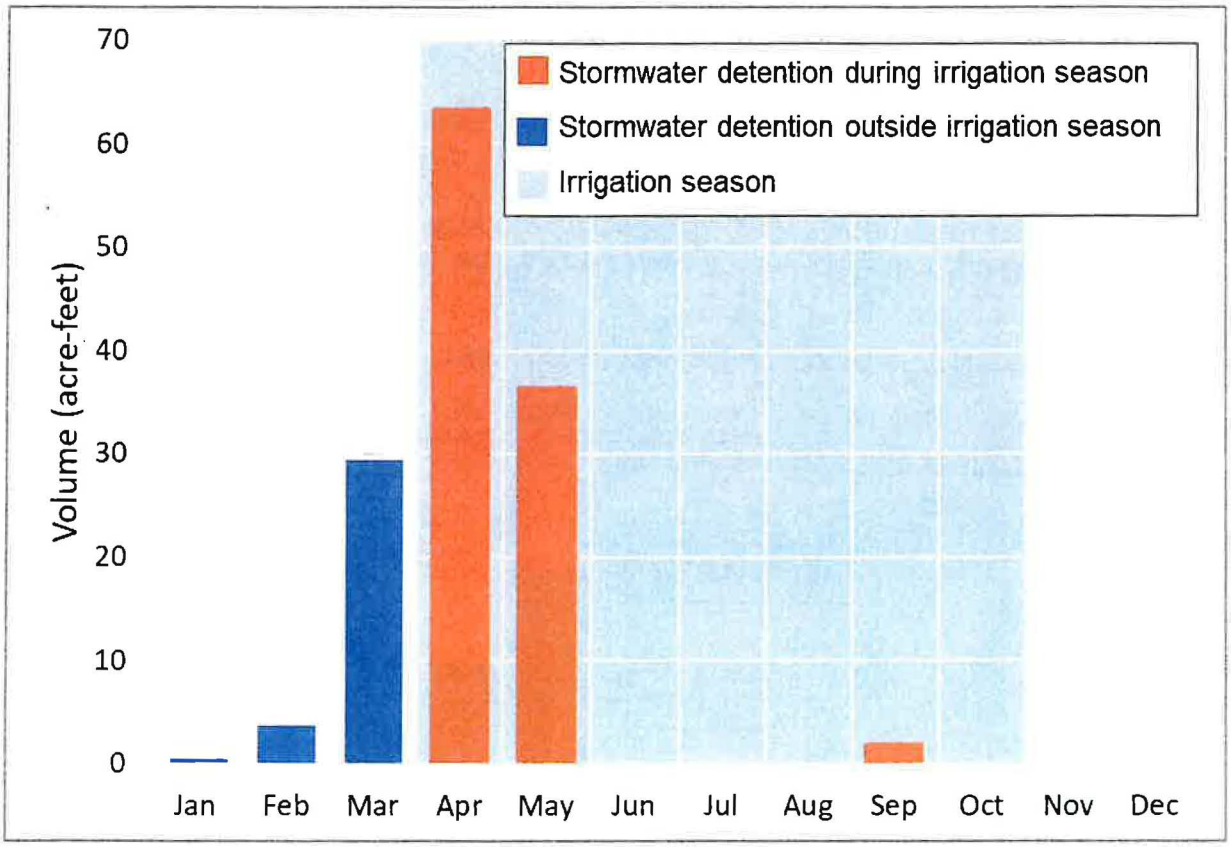


Figure 2. Median Monthly Stormwater Detention – 50th Percentile Scenario

Figure 3 shows the stormwater accrual monthly variability in the 12 years

[6] Mill operations continue for an additional 2.25 years to process ore stockpiles, however, contact water detention during these periods is minimal, estimated at less than 1 acre-foot annually, and values were not included in in calculation of median monthly stormwater detention.

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of active mining. The lower boundary (25th percentile) of the bars correspond to times of lower stormwater accrual that is partially driven by meteoric conditions that produce low available water. Presumably, these meteoric conditions correspond to times of lower streamflow at the Shoup gage that may be less than the instream flow water rights. While out-of-season detention is still anticipated at the 25th percentile, associated volumes are very small and are generally near zero with the exception of February (less than 2 acre-feet) and March (approximately 11 acre-feet). Conversely, monthly stormwater detention at the upper boundary partially correspond to times of higher water availability when the streamflow at Shoup gage may also be above average conditions.

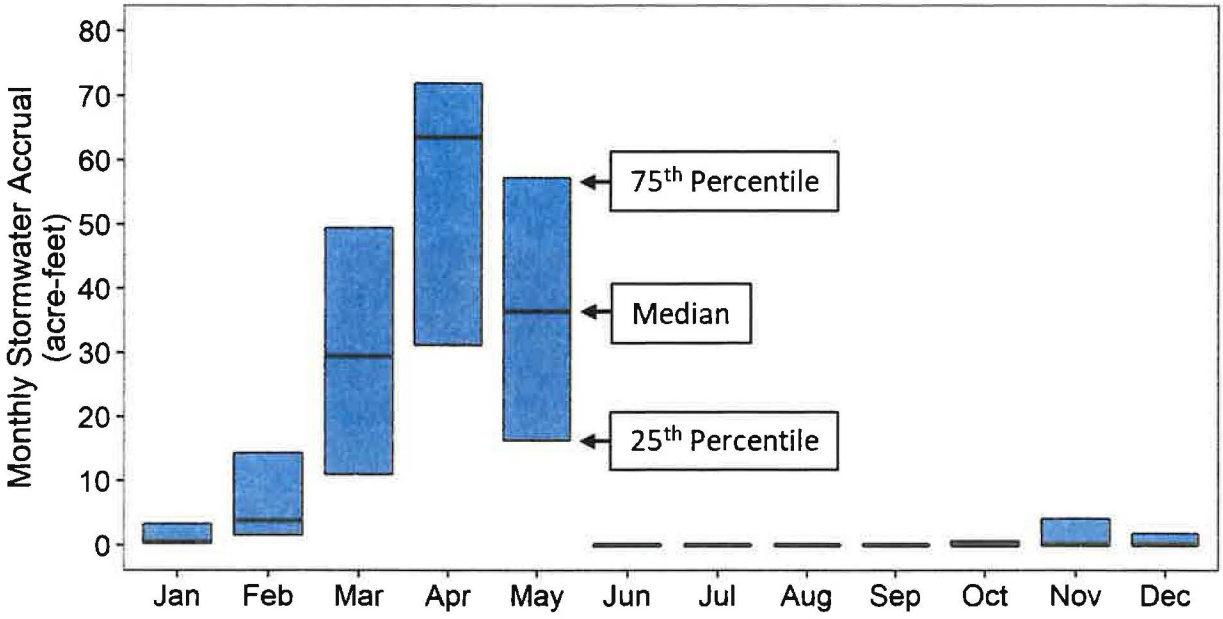


Figure 3. Monthly Stormwater Accrual Variability (12 Years of Active Mining)

As previously noted, mitigation is required only when flows are less than the instream flow rate listed in the WSWR. Streamflow data at the Shoup gage was analyzed for the period of 2004 through 2018 to quantify the monthly frequency of days when streamflow is less than the WSWR (Figure 4). Streamflows exceed the WSWR more than 50 percent of the time in the highest stormwater accrual months. As a result, the amount of stormwater detention that is expected to require mitigation should be less than 50 percent of such projections in Table 2. Accordingly, the required mitigation volume should be less than 100 acre-feet in most years. However, it is not possible to predict with accuracy and meaningful lead time when mitigation will be required because of the uncertainty of streamflow at the Shoup gage and local weather variability. To address this uncertainty, an excess mitigation volume and continuous mitigation rate is proposed.

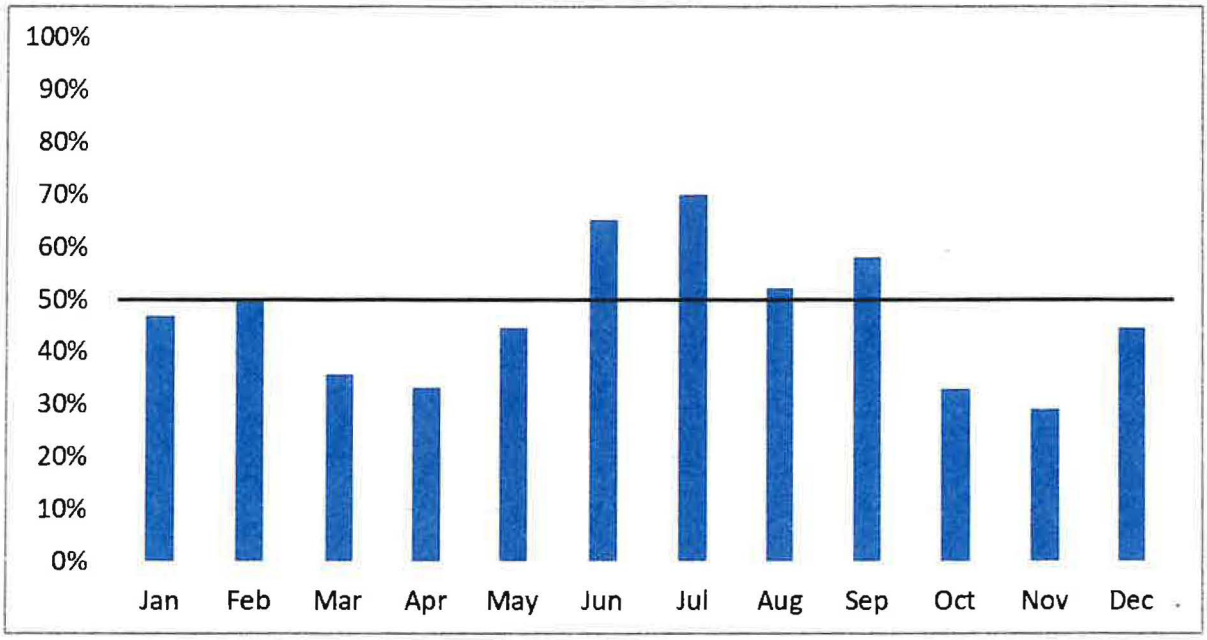
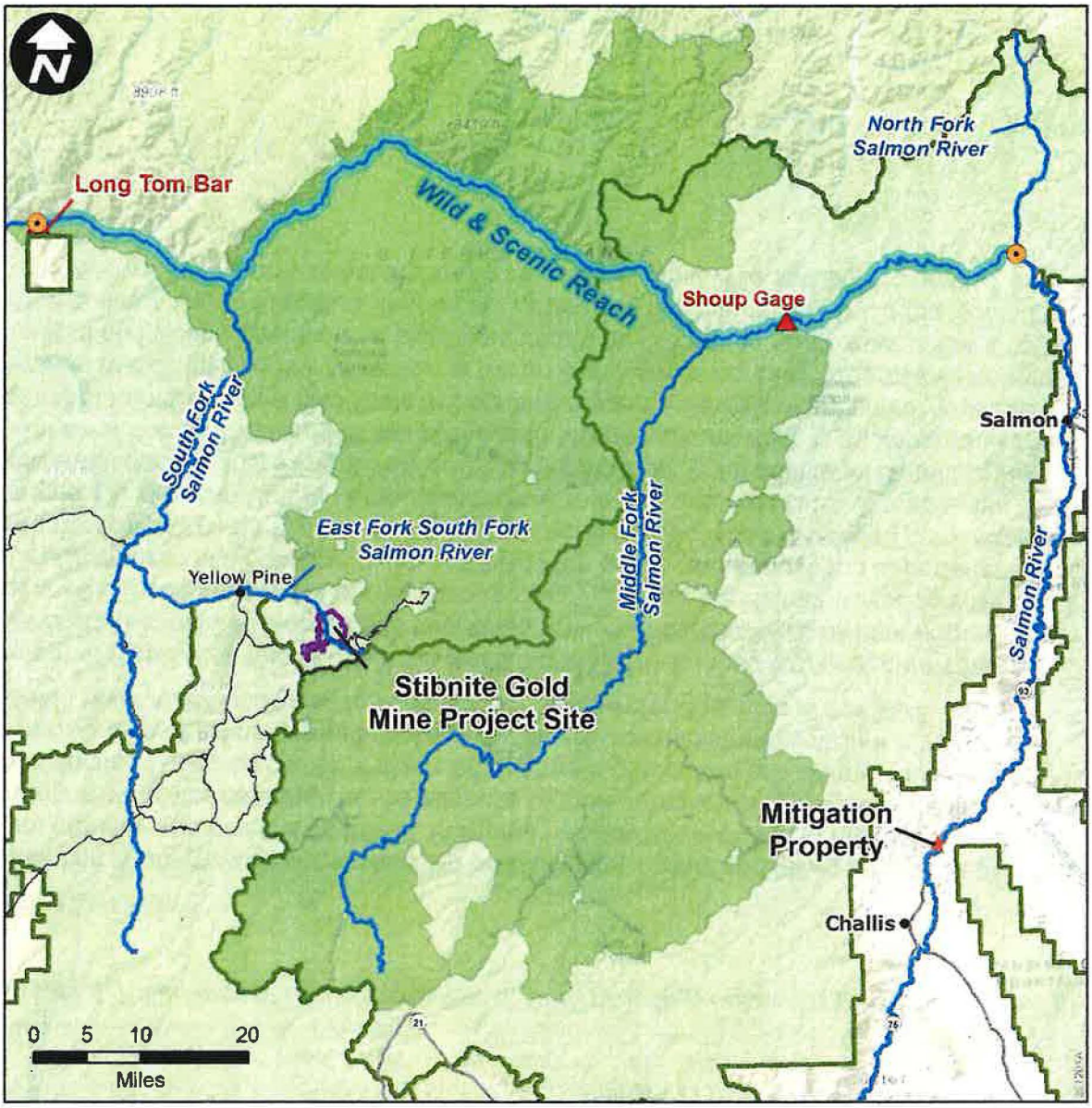


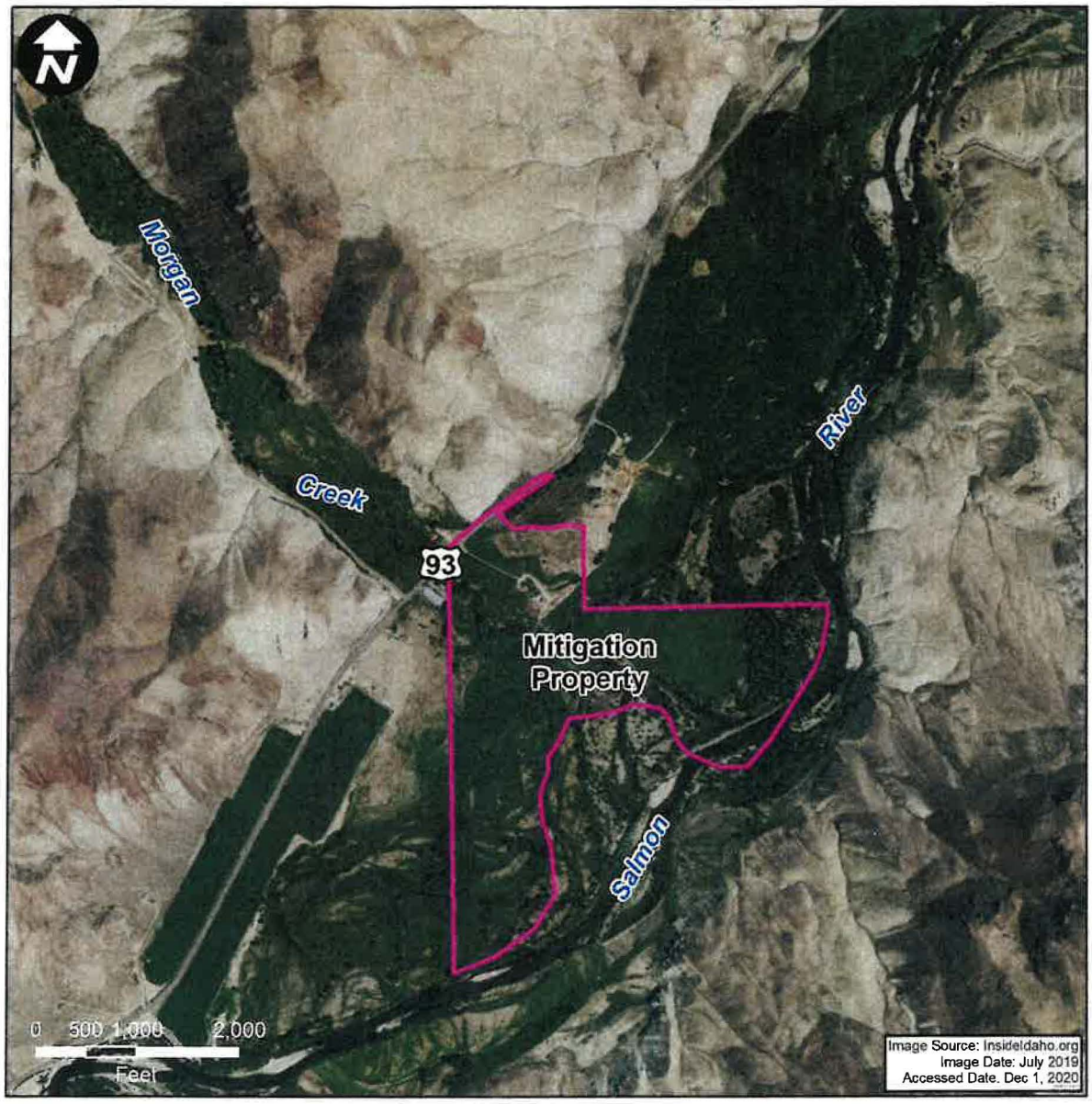
Figure 4. Frequency of Days Streamflow at Shoup Gage is below the WSWR (2004-2018)

Mitigation Plan

Detention of stormwater is necessary to protect water quality and offsets diversion demand from groundwater and the EFSFSR. Perpetua Resources proposes to mitigate for out-of-priority stormwater detention at the mine site by non-use of existing irrigation water rights with places of use and points of diversion upstream of the Wild and Scenic River reach. Non-diversion of existing irrigation water rights will increase streamflow in the Wild and Scenic River reach and provide mitigation for stormwater detention at the SGP.

Perpetua Resources has secured the Ronald and Corrine Jones property, near Challis, Idaho, and associated water rights through an option to purchase agreement (*Figure 5*, *Figure 6*). The Ronald and Corrine Jones property borders the Salmon River downstream from Challis and is a good candidate for mitigation purposes because the appurtenant water right portfolio (1) has a high diversion rate per acre, (2) exceeds the needed consumptive volume, (3) is on the Salmon River upstream of the Wild and Scenic River reach, and (4) is deliverable for the entire irrigation season beginning April 1. An additional benefit is that non-use of the right will benefit fish passage in Morgan Creek which is an important stream for anadromous fish and also flows through the property. Being located entirely upstream of the Wild and Scenic reach, mitigation at the property would increase streamflow throughout the Wild and Scenic reach and a significant length of intervening reach from below Challis to below Salmon, while Perpetua Resources' water detention, on a tributary to the South Fork Salmon River, would only affect the lower 19 percent of the Wild and Scenic reach.


N
Long Tom Bar
Wild & Scenic Reach
North Fork
Salmon River
Shoup Gage
Salmon
South Fork
Salmon River
East Fork South Fork
Salmon River
Middle Fork
Salmon River
Salmon River
Yellow Pine
Stibnite Gold
Mine Project Site
Mitigation
Property
Challis
0 5 10 20
Miles



The Jones property has irrigation water rights authorizing a diversion rate of 10.75 cfs for irrigation of 138.8 acres (Table 3). The consumptive mitigation value for these water rights is 2.5 acre-feet per acre, for a total mitigation volume of 347 acre-feet (138.8 acres x 2.5 acre-feet/acre) annually. This is more than three times the anticipated needed annual mitigation volume for stormwater detention at the SGP. Under this Mitigation Plan, the Jones property water would remain undiverted and allowed to flow down the Salmon River through the Wild and Scenic River reach. Water delivery history of the Jones water rights is described in the attached Salmon River and Morgan Creek Irrigation Water Deliveries to Jones Property.

The volume of first-year fill of the TSF will exceed the available mitigation water right volume. However, filling from groundwater or the EFSFSR can be accomplished at times when Salmon River flows exceed the minimum streamflow target and do not require mitigation. As a result, TSF filling can be actively managed to stay within the available mitigation volume. In the event the hydrologic conditions suggest that the first-year fill will require mitigation that exceeds the mitigation volume available under the Jones water rights, Perpetua Resources will secure a one-time water bank lease for the balance of the required mitigation.

Table 3. Jones Water Rights Proposed for Mitigation

Water Right	Priority Date	Source	Water Use	Season	Total Acres	Acre Limit	Diversion Rate
72-149	5/1/1907	Morgan Creek	Irrigation	04/01-10/31	36.6	36.6	0.67
72-150	9/14/1931	Morgan Creek	Irrigation	04/01-10/31		36.6	0.17
72-4031	4/1/1967	Salmon River	Irrigation	04/01-10/31		36.6	1.52
72-16273	5/3/1935	Morgan Creek	Irrigation	04/01-10/31		36.6	0.69
72-4032	4/1/1961	Salmon River	Irrigation	04/01-10/31	20.2	0.0	1.44
72-4033	4/1/1947	Salmon River	Irrigation	04/01-10/31	28.0	0.0	1.68
72-4034	4/1/1900	Salmon River	Irrigation	04/01-10/31	54.0	0.0	4.58
Total Diversion Rate:		10.75 cfs					
Total Acres:		138.8 acres					

Abbreviations:

cfs = cubic feet per second

While part of the Mitigation Plan, the Jones water rights will be conditioned to show them as unavailable for diversion and they will be protected from forfeiture[7] as long as the water rights remain part of the Plan. In the event the permit or subsequent license is relinquished or abandoned resulting in deactivation of the Mitigation Plan, use of the Jones rights can be resumed at the original place of use and points of diversion.

Benefits of the Proposed Mitigation. This mitigation alternative provides reasonable, proactive assurance of over-mitigation of the potential annual mitigation obligation and provides continuous mitigation flows to surface waters during the irrigation season when water demand is high and through the summer and early fall low-streamflow periods. Continuous mitigation flow alleviates significant administrative challenges of mitigating on an "as-needed" basis only when stormwater is being diverted and detained for more than 24 hours and the WSWR is not met (*Figure 4*). Continuous mitigation flows also provide significant environmental benefits, particularly during low streamflow periods of late summer and fall, when minimal to no stormwater detention is anticipated. Stormwater diversion and detention is expected to occur primarily during high streamflow periods, and as such, will have negligible impact to streamflow during these times. Perpetua Resources believes this mitigation proposal "is consistent with the conservation of water resources[8], is in the public

[7] Idaho Code 42-233(10)

[8] Conservation of water resources is realized through both the water quality protection achieved by on-site stormwater detention and by the streamflow augmentation provided through the non-diversion.

interest, and does not injure other water rights"[9]. Perpetua Resources also believes this is consistent with the full economic development of Idaho water resources[10].

The mitigation volume under the Jones water rights is more than adequate to offset the peak annual contact water volume, and therefore the volume requiring mitigation, that will be diverted under reasonably expected hydrologic conditions. The diversion rate, however, may be less than the peak depletion rate that requires mitigation on any given day (Table 1). In addition, as an irrigation water right, mitigation is provided during the irrigation season only, while contact water diversion and detention to protect water quality occurs both during and outside of the irrigation season. These minor deficiencies are offset by the significant benefits of the high rate of continuous mitigation during the irrigation season.

Mitigation by non-use of an irrigation water right is the most practical method to satisfy Perpetua Resources' potential mitigation obligation. Mitigation by non-use is the preferred method because of the clear advantages over other considered options:

1. **No Adverse Environmental Impact.** Mitigation by non-use has no detrimental environmental consequences, does not incur environmental disturbance, and does not require potential additional National Environmental Protection Act (NEPA) analysis.
2. **Anadromous Fish Benefit.** Streamflow augmentation and benefits to anadromous fish passage are significant with the proposed mitigation strategy. These benefits compensate for the limited occurrence of out-of-season stormwater capture and retention and/or stormwater diversion at rates greater than the mitigation flow rate during times when the WSWR is not met. The non-diversion will improve fish habitat and passage on Morgan Creek, an important anadromous fish watershed, and reduce diversions from the Salmon River in a reach that is also important to anadromous fish.
3. **Practical and Feasible.** The proposed mitigation is the most practical and feasible approach identified. Perpetua Resources, acting on the guidance of the July 27, 2020, IDWR letter, evaluated six mitigation alternatives that are described in the *Water Right Mitigation Alternatives Considered for the Stibnite Gold Project* memorandum (attached; delivered to IDWR and USFS, January 21, 2021). It was demonstrated that it is impractical to develop a mitigation plan that can offset all potential stormwater diversion and detention in real-time. It is also impractical, and indeed unprecedented, for a remote mountainous mine site to have water treatment capacity to adequately treat and discharge stormwater within 24 hours during a significant runoff event. Further, detaining contact water and utilizing it for industrial purposes offsets additional groundwater and surface water diversion otherwise needed to meet industrial demand. Acquisition of an active water right for mitigation is economically and operationally practical, provides continuous instream flows even when mitigation is not required, mitigates more water volume than anticipated to be detained at a reasonable flow rate during the irrigation season, and is easily administered.
4. **No Administrative Burden.** Continuous mitigation throughout the irrigation season does not place an administrative burden on the water district, IDWR, or USFS.

[9] Idaho Administrative Procedures Act (IDAPA) 37.03.11, Section 043, page 12.
[10] Idaho Constitution, Article XV, Section 7.

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5. **Mitigation Control.** Perpetua Resources has control over the mitigation source. There is no lease, rental or further negotiation required.
6. **Continuous Mitigation Benefit.** Mitigation is anticipated to be required for a limited duration, and only at times of less than average streamflow at the Shoup gauge. It is likely that during high runoff events at the mine, the flow in the Salmon River will also be above average so that mitigation is not required. Nonetheless, mitigation will be provided for the entire irrigation season (April through October) through non-use of the Jones water rights, regardless of whether water is being diverted and detained at the mine or whether Salmon River target flows are being met. This continuous benefit to streamflow offsets occasional mitigation shortfalls because non-use of the water rights continues to provide a streamflow enhancement at times when there is a minimum streamflow deficit, but Perpetua Resources is not accruing stormwater.
7. **Low-Flow Period Benefit.** Through non-use of a senior irrigation water right located upstream of the Salmon River Wild and Scenic River reach, the mitigation proposal adds water to the river during low-flow summer periods when river flows are significantly diminished by irrigation diversions. Salmon River flows during summer months are reduced by irrigation of thousands of acres in the Salmon River basin upstream of the Wild and Scenic River reach. By adding water back to the river during this time period, the values of the Wild and Scenic River are enhanced. Additional flow during summer is beneficial to both fish and recreation.
8. **Benefit to More than the Affected Reach.** The mitigation benefit occurs above and throughout the Wild and Scenic River reach, even though the impact from Perpetua Resources occurs only in the lower portion of the Wild and Scenic River reach (Figure 6). Although the Wild and Scenic River reach is 124 miles long (North Fork to Long Tom Bar), the impact to the Wild and Scenic River from the SGP stormwater diversions for which mitigation is being provided, will occur only in the lower 23 miles, downstream from the mouth of the South Fork Salmon River to Long Tom Bar, which comprises only approximately 19 percent of the total Wild and Scenic River reach. The mitigation water is provided for 202 miles, including 78 miles upstream of the Wild and Scenic River reach and 101 miles of the Wild and Scenic River reach upstream from the South Fork Salmon River, i.e., the majority of the Wild and Scenic River reach (approximately 81 percent). Therefore, the proposed mitigation provides an instream flow and water quality benefit to many more river miles than are impacted by Perpetua Resources' proposed stormwater retention.
9. **Over-Mitigation is Proposed.** Perpetua Resources will be providing significantly more mitigation volume than is expected to be accrued on an annual basis (*Table 4*). The consumptive mitigation volume is 231 percent to 760 percent over the anticipated mitigation requirement. The majority of contact water detention occurs during spring runoff in March, April, and May when WSWR flows are met approximately 55 percent to 65 percent of the time (*Figure 4*).

Table 4. Annual Stormwater Detention Volume and Excess Mitigation Provided

Mine Year (MY)	Annual Volume (acre-feet)				Over-Mitigation Percent
	Accrued	Mitigation Required (est)[1]	Mitigation Provided	Over-Mitigation Provided	
MY -1[2]	81	40	347	307	760%
MY 1	102	51	347	296	578%
MY 2	101	51	347	296	587%
MY 3	192	96	347	251	261%
MY 4	210	105	347	242	231%
MY 5	194	97	347	250	258%
MY 6	123	61	347	286	466%
MY 7	208	104	347	243	234%
MY 8	187	94	347	253	271%
MY 9	188	94	347	253	270%
MY 10	179	90	347	257	287%
MY 11	118	59	347	288	487%
MY 12	177	89	347	258	292%
Total	**2,060**	**1,030**	**4,511**	**3,481**	**338%**

Notes:

[1] Required mitigation volume estimated at 50 percent of annual stormwater accrual based on WSWR (Figure 1)

[2] Initial TSF fill (428 acre-feet) not included in annual volume because fill anticipated to be from groundwater, EFSFSR, and contact water. Fill will either occur at times when mitigation is not required or will be mitigated using available mitigation water right volume or one-time water bank rental volume.

Abbreviations:

EFSFSR = East Fork of the South Fork of the Salmon River

est = estimated

MY = mine year

TSF = tailings storage facility

WSWR = Wild and Scenic Water Right

10. **Not Fully Consumptive.** Some of the runoff that is detained is not consumed. A portion can be returned to the stream through the water treatment plant a short time after detention.
11. **Imperceptible Impact.** The flow impacts to the Salmon River resulting from SGP stormwater detention are anticipated to be imperceptible. Typical Salmon River flows at the mouth of the South Fork Salmon River during the March through May period

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when stormwater detention occurs range from 4,000 cfs to 40,000 cfs, and flows are likely somewhat higher during periods of runoff. As an example, storm event-based modeling analysis estimated that a 25-year rain-on-snow event will produce 36 cfs of contact water for a 24-hour period. Relative to Salmon River flows at the South Fork Salmon River confluence, contact water management at the SGP for a storm of this magnitude has an instream flow impact of 0.09 percent to 0.9 percent. Such a small intermittent depletion in flow is not anticipated to impact Wild and Scenic River values and is more than offset by the continuous benefit from non-diversion of the mitigation water right during April through October as proposed by Perpetua Resources.

12. **Water Quality.** Non-diversion of irrigation water protects Salmon River water quality. Irrigation return flows carry sediment, nutrients, and bacteria, and often have elevated temperatures. By leaving irrigation water in the river, overall Salmon River water quality is enhanced. Water quality is also protected by retaining contact water at the SGP.

Summary

Perpetua Resources seeks authorization to store water at the SGP in the submitted water right permit application. Detention of stormwater runoff on site is required to protect water quality, and detained water will either be treated and discharged or used as a water source for industrial use. Stormwater detention and management protects instream water quality and offsets demand for groundwater and stream water diversion.

Perpetua Resources has worked diligently with the IDWR and the USFS to develop this Plan and respond to feedback received. Through this process Perpetua Resources has evaluated six mitigation alternatives. Mitigation by non-use of an irrigation water right that is upstream of the Wild and Scenic River reach and owned by Perpetua Resources asserts control over the mitigation source and lessens administrative burdens to ensure delivery to the Wild and Scenic reach, thereby addressing IDWR concerns. Indeed, all other mitigation approaches have proved to be impractical, detrimental to the environment and Wild and Scenic values, or administratively cumbersome.

While it is uncertain whether stormwater detention at the SGP to protect water quality qualifies as storage for water right purposes, and further, whether the practice is subordinate to the WSWR, Perpetua Resources is proposing this Plan to mitigate for detained stormwater. The proposed mitigation replaces substantially more annual volume than anticipated to be detained with a continuous flow rate while irrigation water rights are active. It is recognized that under limited circumstances[11] this mitigation strategy may not offset detained water at a one-to-one diversion rate in real-time. The numerous attributes of this Plan, as described and further elaborated in the attachments, are substantial in providing 1) over-mitigation of detained water; 2) streamflow, fishery, and environmental benefits; and 3) easy administration by the regulating agencies and Perpetua Resources. These attributes strongly support endorsement of this Plan.

[11] Occurrence is limited to when streamflows at Shoup gage are below the WSWR and stormwater detention is occurring at rates greater than 10.75 cfs, or when stormwater detention is occurring during the months of November through March.

Water Right Mitigation Alternatives Considered for the Stibnite Gold Project

May 18, 2021

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Introduction

The Stibnite Gold Project (SGP) water right permit application is potentially impacted by an existing instream flow water right on the Salmon River. The subordination clause of the instream flow water right allows in-priority diversion of junior water right permits such as the SGP's; however, water storage rights are expected to be an out-of-priority water use. As part of its mining operations SGP will be required to divert and detain impacted stormwater to comply with state and federal water quality requirements. Perpetua Resources Idaho, Inc. (Perpetua Resources; formerly Midas Gold Idaho, Inc.) is proposing to mitigate for diversion and detention of stormwater runoff that has been in contact with mine features (contact water[1]) as a condition of the industrial use water right permit.

Perpetua Resources is proposing that mitigation be provided through non-use of an active irrigation water right in the Salmon River Basin. Perpetua Resources has entered into an agreement that secures a property with a water right portfolio that is anticipated to mitigate for more than the annual volume of diverted stormwater[2] with a reasonably high diversion rate.

This memo provides background information on the proposed SGP water right permit application, the instream flow water right and anticipated mitigation requirements, and the mitigation alternatives that have been considered.

Background

The Wild and Scenic River instream flow water rights 75-13316 and 77-11941 (the Wild and Scenic Right) held by the United States Forest Service (USFS) on the Salmon River have flow targets that approximate the historical mean flow rate in the Salmon River. The targets are based on average historical flows at the Shoup Gage in two-week time intervals (*Figure 1*). Because the flow targets are based on the average streamflow, on any given day there is approximately a 50 percent chance that there is insufficient flow to meet the instream flow specified in the water right.

[1] Contact water, stormwater, and stormwater runoff are interchangeable for purposes of this Memorandum and refer to water that has been in contact with mine features that Perpetua Resources is required to manage by diversion, detention, treatment, and/or use in operations for water quality purposes.

[2] Not all diverted stormwater will require mitigation and therefore the secured water right portfolio is anticipated to over-mitigate the volume required to be mitigated AND total annual volume of diverted stormwater.

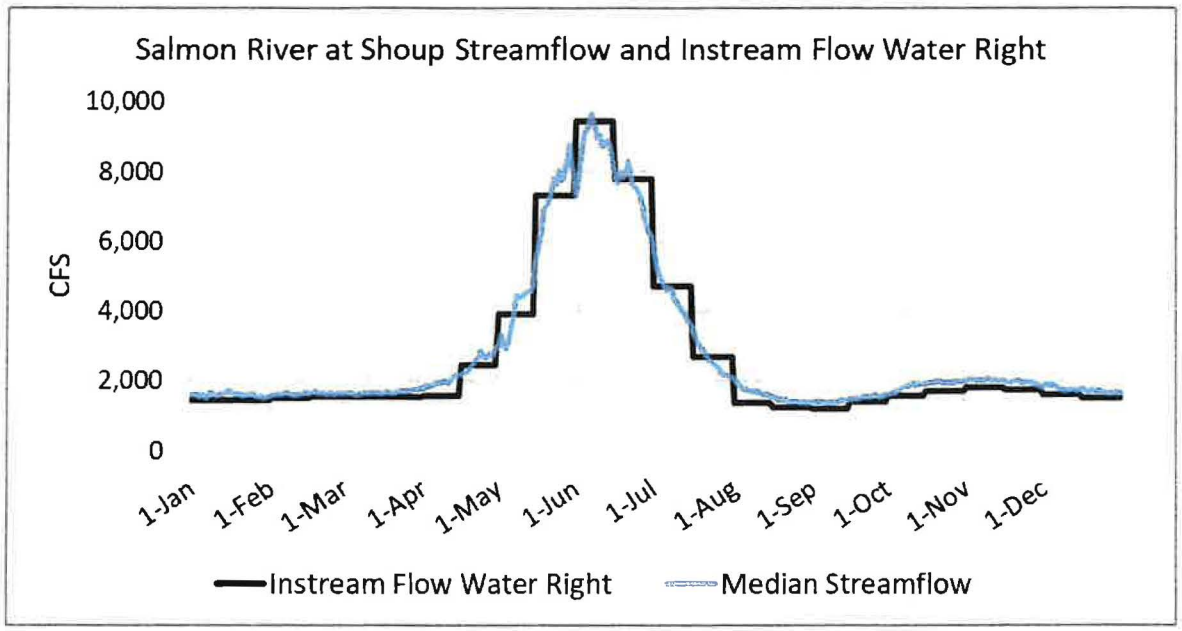


Figure 1. Salmon River at Shoup Streamflow and Wild and Scenic Right

The reach of the Salmon River subject to the Wild and Scenic Right extends upstream and downstream from the mouth of the South Fork Salmon River. As a result, stormwater diversion and detention at the SGP in the East Fork of the South Fork of the Salmon River (EFSFSR) watershed could reduce flow in the lower portion of the Wild and Scenic river reach.

Perpetua Resources proposes to develop new water rights to support the SGP. The new water rights will include direct diversions of groundwater, EFSFSR water, and contact water to industrial and domestic uses that are within the subordination limits. Because of water quality restrictions, however, Perpetua Resources also must divert and detain contact water when runoff rates exceed the combined capacity to treat and discharge and/or utilize the water for industrial purposes. In instances when stormwater must be diverted and detained, this water is temporarily held in stormwater ponds until it is used in the mill or treated and discharged. Perpetua Resources site-wide water balance predicts month-end stormwater pond volume. This modeling is used to understand monthly stormwater accrual volume and to support the water rights application.

The Wild and Scenic Right is partially subordinated to junior-priority water rights within the Salmon River Basin. The subordination is available to a limited amount of new water rights proposing direct use of water but is explicitly not available to new water rights proposing storage of water. The direct use of water proposed in the new Perpetua Resources water right permits will utilize the subordination provisions of the Wild and Scenic Right. For purposes of this Memorandum, we are assuming that diversion and detention of stormwater runoff to protect water quality at SGP will not be included in the Wild and Scenic Right subordination, and therefore, storage water rights at the SGP would not be authorized when flows in the Salmon River at Shoup are less than the instream flow water right unless mitigated.

To our knowledge, no one has attempted to mitigate for a Wild and Scenic Right in the past. The Idaho Department of Water Resources (IDWR) has provided the following guidance to Perpetua Resources relative to mitigation.

> "Because Midas's storage activity, if it can be permitted at all, would not benefit from the subordination provisions of water rights 75-13316 and 77-11941, it would be subject to curtailment unless its mitigation plan ... replaces the rate of flow that would result from the volume of water Midas's onsite storage prevents from reaching the Salmon River."
>
> "If it is Midas's view that it will be impractical to develop a mitigation plan to, with certainty, offset its actual impact on flows in the Salmon River in real time, Midas should demonstrate why it thinks so. The first step would be for Midas to estimate the impact of its proposed water storage practices on the flows in the Salmon River. If the estimate shows that a one-to-one flow rate (cfs) mitigation plan is unachievable, only then should the analysis turn to whether mitigation in acre-feet per day, week, or month is sufficient to prevent injury to the minimum stream flow water rights. Even then, IDWR cannot answer this question with certainty until an application with a mitigation plan has been filed, notice of the application has been published, and IDWR has reviewed comments submitted into the record and evidence offered by Midas and by parties, if any, who protest the application."

Modeling of Stormwater Diversion Rate and Detention Volumes

Perpetua Resources has modeled contact water runoff volumes for various storm events. The predicted volumes have been converted to 24-hour flow rates to estimate contact water diversion rates. The effective diversion rates are less than the overall diversion rates because water management, i.e., a maximum of 12 cubic feet per second (cfs) diversion to mill and water treatment, can offset total diversion quantity. Operational use of the full 12 cfs of stormwater would be a limited operational strategy to reduce stormwater diversion and detention rate that would be employed only under certain circumstances[3]. Estimating diversion rates that require mitigation is not exact and is anticipated to be within the range of the effective flow rate and the overall flow rate (Table 1).

Modeling has predicted contact water diversion of 27 cfs (one-year storm event) to 36 cfs (25-year storm event) will be required to be diverted during springtime rain-on-snow storm events. The effective diversion rate ranges from 15 cfs to 24 cfs for these spring runoff events. Those same storm events on bare ground (i.e., summer storms) yield stormwater diversions of 5 cfs to 12 cfs and no effective diversions are expected during summer/fall storm events because diversion to mill and water treatment capacity are greater than runoff rates.

Additional modeling predicts that attenuation of flow depletions between the mine site and the Salmon River, approximately 60 miles downstream, will be minimal during springtime high flow conditions (i.e., flow impacts at the mine site are not substantially reduced moving

[3] This is one example of the adaptive management strategies potentially available to Perpetua Resources in an effort to reduce impacts to flows in the Salmon River.

downstream due to high flow velocities). The modeling suggests that more attenuation occurs during low-flow conditions, but water management can already fully offset stormwater runoff at such times.

Table 1. Diversion Rate Estimates

	Storm Event Runoff Rate (cfs)		Effective Storm Event Runoff Rate (cfs)[1]	
Storm Event	No Snow	Average Snow	No Snow	Average Snow
1 Year	5	27	0	15
10 Year	10	34	0	22
25 Year	12	36	0	24

Notes:
[1]The effective storm event runoff rate is 12 cfs less the storm event because of mill use and treatment. This is a limited operational strategy to reduce flow impacts and only employed under specific conditions.
Abbreviations:
cfs = cubic feet per second

Monthly site-wide water balance modeling shows that annual stormwater diversion accrual volumes, under normal runoff conditions, will range from 62 acre-feet to 230 acre-feet, with an average of 158 acre-feet (Table 1).

Table 2. Modeled Stormwater Accrual Volume by Mine Year

Mine Year (MY)	Annual Volume (acre-feet)[1]
MY -1	81
MY 1	102
MY 2	101
MY 3	192
MY 4	210
MY 5	194
MY 6	123
MY 7	208
MY 8	187

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Mine Year (MY)	Annual Volume (acre-feet)[1]
MY 9	188
MY 10	179
MY 11	118
MY 12	177
13-year Average	158

Notes:
[1]Values updated since 12/3/2020 presentation for MY -1 to MY 6.
Abbreviations:
MY = mine year

Figure 2 shows the median monthly stormwater accrual volume during the 12-year mine operations period. Contact water diversions occur primarily in April and May, but the modeling shows the potential to divert smaller volumes of contact water in September through March. The non-irrigation season months (November through March) are a challenge to mitigate by non-diversion of irrigation water rights because the season of use for those rights is restricted to April through October.

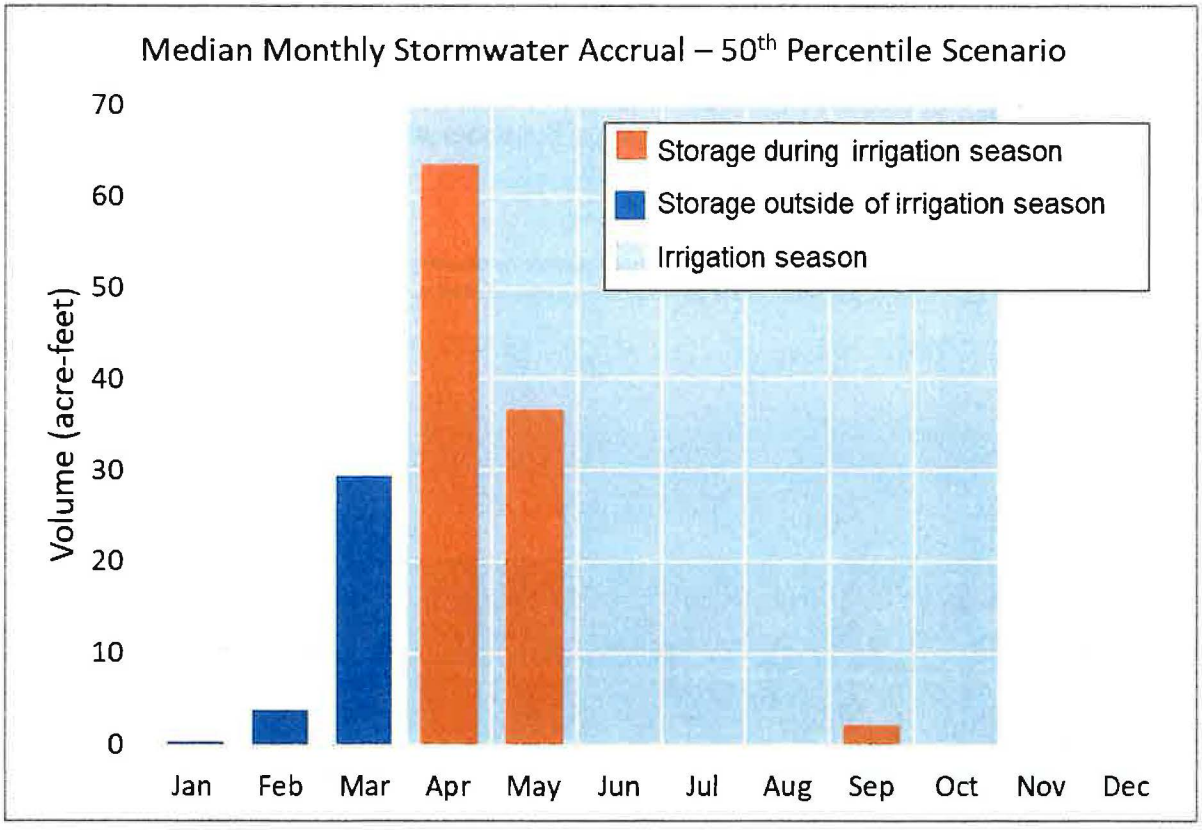


Figure 2. Modeled Median Monthly Stormwater Accrual

Stormwater accrual volume is a function of meteorological conditions (temperature, precipitation quantity, and form), mine operations, and mine phase. Mine operations affect stormwater accrual by the quantity of contact water that can be used in the mill or treated in a given month. The mine phase affects reactive surface area of mine features available to interact with stormwater. The meteorological conditions affect the quantity of water available to runoff. *Figure 3* shows the stormwater accrual monthly variability in the 12 years of mine operations. The lower boundary (25th percentile) of the bars correspond to times of lower storrmwater accural that is partially driven by meteoric conditions that produce low available water. Presumably, these meteoric conditions correspond to lower streamflow at the Shoup gage that may be less than the instream flow water rights. While out-of-season accrual is still anticipated at the 25th percentile, associated volumes are very small and are generally near zero with the exception of February (less than 2 acre-feet) and March (approximately 11 acre-feet). Conversely, monthly stormwater accrual at the upper boundary partially correspond to times of higher water availability when the streamflow at Shoup gage may also be above average conditions.

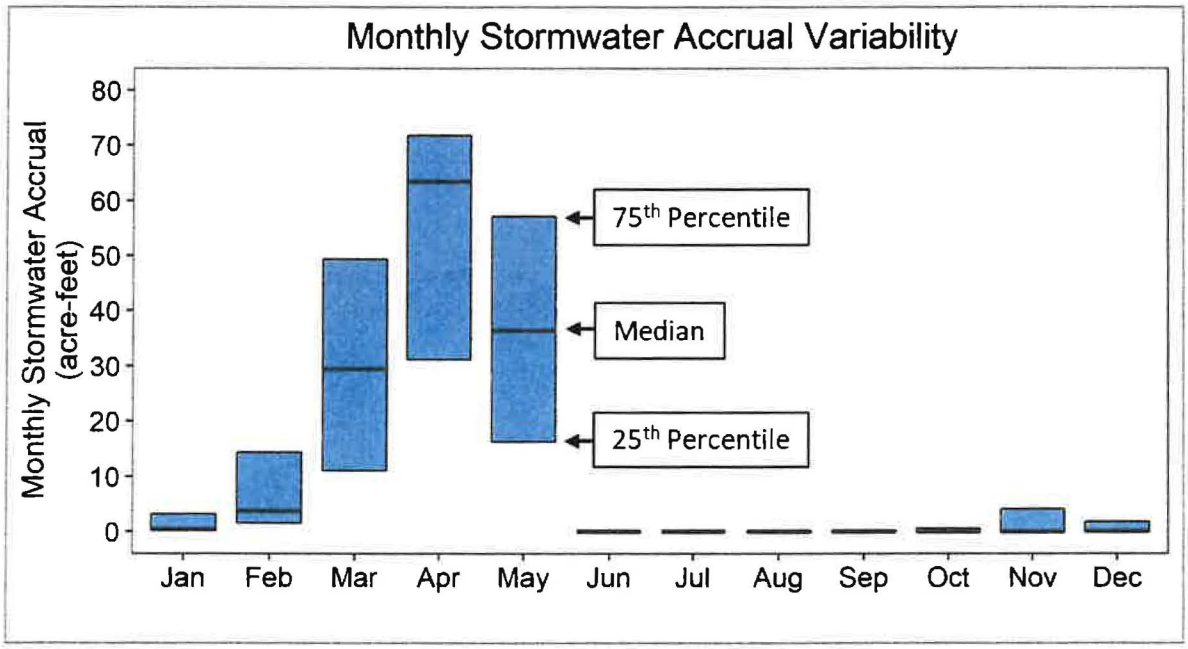


Figure 3. Monthly Stormwater Accrual Variability (12 Years of Operation)

As previously noted, mitigation is required only when flows are less than the instream flow rate listed in the Wild and Scenic Right. Streamflow data at the Shoup gage was analyzed for the period of 2004 through 2018 to quantify the monthly frequency of days when streamflow is less than the Wild and Scenic Right (*Figure 4*). Stream flows exceed the Wild and Scenic Right more than 50 percent of the time in the highest stormwater accrual months. As a result, the amount of stormwater accrual that is expected to require mitigation should be less than 50 percent of such projections in Table 2. Accordingly, the required mitigation volume should be less than 100 acre-feet in most years.

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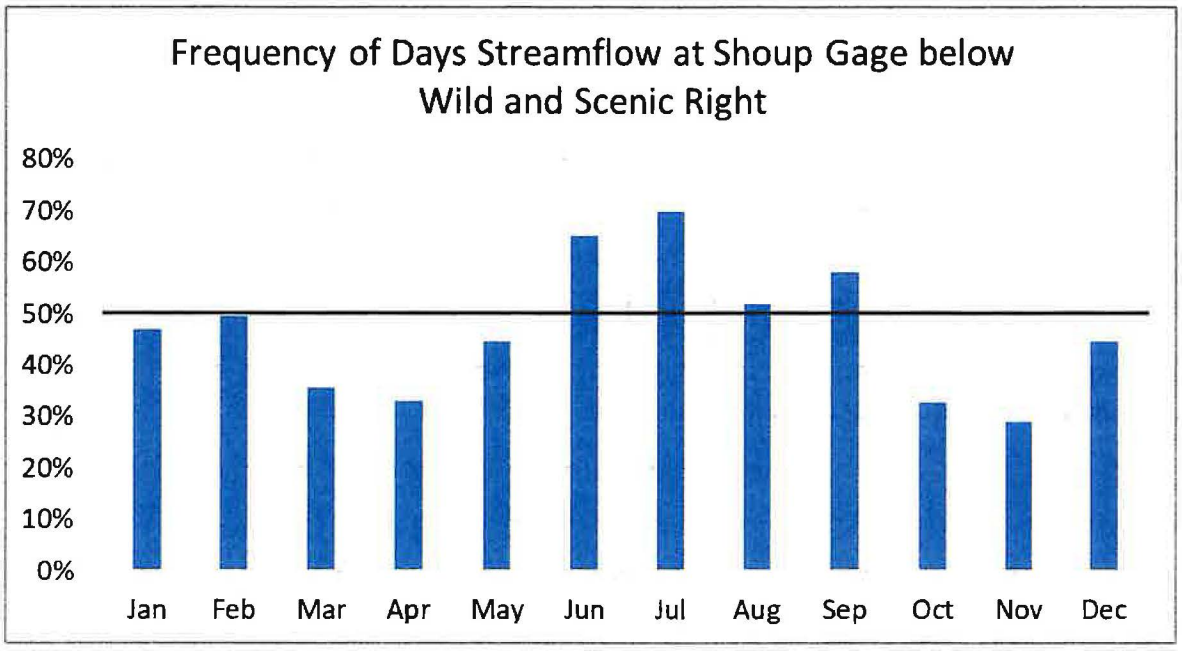


Figure 4. Frequency of Days Streamflow at Shoup Gage is Below the Wild and Scenic Right (2004-2018)

Mitigation Alternatives Considered

Perpetua Resources has considered the following alternatives for mitigation of impacts to the Wild and Scenic Right that could occur from stormwater accrual at the mine site.

1. **Mitigation by Non-Use of an Irrigation Water Right.** Non-diversion of an existing irrigation water right in the Salmon River Basin will increase streamflow in the Wild and Scenic River reach and provide mitigation for stormwater accrual at the SGP.

   The Ronald and Corrine Jones property bordering the Salmon River downstream from Challis has been identified as a good candidate for mitigation purposes because the appurtenant water right portfolio (1) has a high diversion rate per acre, (2) exceeds the needed consumptive volume, (3) is on the Salmon River upstream of the Wild and Scenic River reach, and (4) is deliverable for the entire irrigation season beginning April 1. An additional benefit is that non-use of the right will benefit fish passage in Morgan Creek which is an important stream for anadromous fish and also flows through the property.

   Perpetua Resources has secured the Jones property and associated water rights through an option to purchase agreement. The Jones property has water rights authorizing a diversion rate of 10.75 cfs for irrigation of 138.8 acres. We anticipate that IDWR will recognize a consumptive mitigation value for these water rights of 2.5 acre-feet per acre for a total mitigation volume of 347 acre-feet annually.

   The mitigation volume under the Jones water rights appears to be more than adequate to offset the peak annual volume, and therefore volume requiring mitigation, that will be diverted under reasonably expected hydrologic conditions. The diversion rate,

however, may be less than the peak depletion rate that requires mitigation on any given day (Table 1). In addition, as an irrigation water right, mitigation is provided during the irrigation season only, while contact water diversion and accrual to protect water quality occurs both during and outside of the irrigation season. These deficiencies are offset by the significant benefits of the high rate of continuous mitigation.

Under this mitigation alternative, Perpetua Resources controls the mitigation source, a priority emphasized during discussions with IDWR and, through acquisition of the water rights portfolio, ensures high "reliability of the source of replacement water over the term which it is proposed to be used"[4].

2. **No Mitigation.** A water right is not required in Idaho for capture and use of runoff that does not enter a defined stream channel. As a result, Perpetua Resources does not need a water right to capture stormwater (contact water). Capture and detention of stormwater to prevent water quality impacts or flooding is standard practice for municipalities, industries, road departments, agriculture, and other entities throughout Idaho and the United States. In some instances, the diversion and detention of stormwater to protect water quality is specifically exempt from obtaining a water right. See, Idaho Code 42-201(8). Stormwater is often reused for irrigation purposes, infiltrated into groundwater or slowly released to a natural drainage following treatment. The proposed diversion and detention of contact water at the SGP is no different than the diversion and detention of stormwater elsewhere in the State of Idaho.

   Alternatively, Perpetua Resources would apply for a mining water right that would authorize the diversion of all impacted stormwater for the beneficial uses of mining and water quality protection and not apply for a storage right. This strategy would not seek authorization for storage in the water right application and the diversion of stormwater would therefore be within the subordination clause of the Wild and Scenic Right.

   In order to limit objections and provide the associated environmental benefits, Perpetua Resources is willing to apply for a water right for storage of impacted stormwater and provide mitigation for the detention and beneficial use of such contact water. If mitigation proves impractical or impossible, Perpetua Resources may pursue these other two options.

3. **Mitigation by Storage Release.** Mitigation is commonly accomplished in many areas of Idaho through storage release from onstream reservoirs. This is often an accounting exercise, where out-of-priority diversion are charged for storage use, often through a local rental pool. Such rental opportunities are not available in the Salmon River Basin, however, because there are no large storage reservoirs[5].

   Perpetua Resources could construct their own storage reservoir to store water for mitigation purposes. Because mitigation for storage is not required approximately 50

[4] IDAPA 37.03.11, Section 043, page 12.
[5] The absence of any large storage reservoirs in the Salmon River Basin was likely a key consideration by the parties in not subordinating future storage rights in the Basin.

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percent of the time, it would be possible for Perpetua Resources to fill a storage water facility at times when the Wild and Scenic Right is satisfied. Perpetua Resources could then release water to the Salmon River at times when mitigation is required. For example, a 50 to 100 acre-foot-capacity off-stream reservoir could be constructed in the South Fork Salmon River Basin. This freshwater reservoir could be kept full using water diverted from surface water or groundwater at times when the Wild and Scenic Right is satisfied. During runoff events when contact water is being detained and the flow in the Salmon River is less than Wild and Scenic Right, fresh water could be released from this reservoir to offset the volume and rate of contact water accrual.

The environmental value of such a storage release, at times when local stream flows are already high due to runoff, is questionable. Construction of a storage reservoir will be overly arduous with high cost, additional National Environmental Policy Act (NEPA) requirements, state and local permitting, environmental effects (large disturbance footprint in potentially undisturbed areas, potential water temperature concerns, potential aquatic habitat concerns), and likely would be contrary to the intent of the Wild and Scenic rights.

4. **Increased Water Treatment Capacity.** The projected runoff rates that may require mitigation are modeled to be as high as 36 cfs (Table 1). Larger magnitude storm events may occur while the SGP is active and cannot be adequately forecasted for mine planning purposes. Current water treatment capacity proposed for the SGP is approximately 4.5 cfs. Although it would be possible to increase water treatment capacity, such additional capacity might rarely, if ever, be utilized. Additionally, it is not possible to identify the maximum storm event magnitude for which water treatment and/or mitigation may be required. It is not practical to design for water treatment with capacity to treat and discharge the instantaneous stormwater diversions rate in anticipation of all possible storm event scenarios.

   The cost of 36 cfs (or greater) of treatment capacity is not practicable or warranted when considering these other alternatives.

5. **Water Supply Bank Lease.** Perpetua Resources initial proposal for mitigation was to lease a water right from the Idaho Water Supply Bank (Bank) for offset of annual stormwater accrual impacts. The Bank is a water exchange operated by the Idaho Water Resource Board to facilitate use of natural flow and storage water rights. Water right owners that hold unused water rights can lease the rights into the Bank. The Bank can then lease the water rights to water users that lack adequate water rights to meet their needs. Leases are typically allowed for temporary water uses that do not require long-term or permanent water rights. Water right holders that lease water into the Bank obtain forfeiture protection while the rights are in the bank and receive lease payments if the rights are leased out of the bank.

   Perpetua Resources evaluated irrigation water rights in the Bank that could potentially provide mitigation and identified water rights held by the USFS as potential candidates to provide mitigation. The USFS has more than 100 cfs of water rights from the Stanley Basin vicinity in the Bank. These irrigation water rights are leased in five-year

increments and were anticipated to remain available for lease from the bank throughout the life of the SGP. The rights authorize irrigation of more than 2,000 acres.

Perpetua Resources evaluated leasing adequate portions of the USFS rights to offset both the annual consumptive volume and the projected peak depletion rate resulting from stormwater detention at the mine site. Similar to mitigation non-use of an irrigation water right (Alternative 1), lease of a USFS irrigation water right would be provided throughout the irrigation season, providing additional streamflow benefits at times when mitigation was not required.

Although a potential alternative, Perpetua Resources did not pursue this strategy because of IDWR concerns that Perpetua Resources would not have control of the water rights for the life of the project, USFS concerns about USFS water rights mitigating the Wild and Scenic Right (USFS water right), and the extended timeframe expected to be required for legal negotiations. IDWR was also concerned about the ability to deliver the water from the Stanley Basin to the Shoup gage, although it is not clear whether that is a valid concern. Finally, the season of use for Stanley Basin irrigation water rights is a shorter duration (May 1 through October 31) than proposed in Alternative 1 and only partially coincides with the period of contact water detention.

6. **Groundwater Pumping.** Perpetua Resources could construct a well field that could pump groundwater to the Salmon River for mitigation purposes. The wells could be located anywhere within the Salmon River Basin upstream from the mouth of the South Fork Salmon River, provided that mitigation could be delivered in a timely manner to offset impacts.

   Concerns with groundwater pumping for mitigation include both wellfield capacity and the timing of pumping. Also, depending upon the location of such a wellfield, compliance with water quality requirements may be a concern. Although high-capacity wells can be developed in some locations within the Salmon River Basin, those areas are generally outside of the South Fork Salmon River watershed. In order to provide timely mitigation using a wellfield located near Stanley, Challis, or Salmon, water would likely need to be delivered into the river prior to stormwater detention. This would require continuous pumping when stormwater accrual could occur and could have a detrimental impact to local surface water and groundwater users. Groundwater pumping at the SGP and other locations within the South Fork Salmon River watershed could be considered, but the development of a 25 cfs well field in those areas is probably impractical, could have water quality concerns, and could have adverse effects on water resources in the vicinity of the well field.

Mitigation by non-use (Alternative 1) is the most practical alternative to mitigate for Perpetua Resources' potential mitigation obligation. This mitigation alternative provides reasonable, proactive assurance of over-mitigation of the potential annual mitigation obligation and provides continuous mitigation flows to surface waters during the irrigation season when water demand is high and through the summer and fall low streamflow periods. Continuous mitigation flow alleviates significant challenges of mitigating on an "as-needed" basis while providing significant environmental benefits. Perpetua Resources believes this mitigation

proposal strongly adheres to and "is consistent with the conservation of water resources[6], is in the public interest, and does not injure other water rights"[7]. Perpetua Resources also believes this is consistent with the full economic development of Idaho water resources[8].

Mitigation by non-use is the preferred alternative because of the clear advantages over the other options:

- The proposed mitigation approach avoids a lengthy dispute on the scope and interpretation of the Wild and Scenic Right as it applies to the SGP (advantage over Alternative 2).
- The proposed mitigation strategy maintains a practical diversion rate on Perpetua Resources' water right application that is appropriate for anticipated Project water demand. A water right application that seeks an exaggerated diversion rate to encompass stormwater water diversion and accrual is not desirable (advantage over Alternative 2).
- Diversion by non-use does not incur environmental disturbance nor potential additional NEPA analysis (advantage over Alternative 3). Streamflow augmentation and benefits to anadromous fish passage are significant with the proposed mitigation strategy. These benefits compensate for the limited occurrence of out-of-season stormwater capture and retention and/or stormwater diversion at rates greater than the mitigation flow rate during times when the Wild and Scenic Right is not met.
- Acquisition of an active water right for mitigation is economically and operationally practical, whereas an oversized water treatment plan is impractical (advantage over Alternative 4).
- Perpetua Resources has control over the mitigation source (advantage over Alternative 5). This aspect of the mitigation strategy was emphasized by IDWR when discussing the long-term water bank rental.
- The proposed mitigation strategy does not introduce new water withdrawal into the Salmon River Basin and has no detrimental environmental consequences (advantage over Alternative 6).

Potential for Adaptive Management

Perpetua Resources' proposed mitigation strategy is anticipated to over-mitigate the annual mitigation Perpetua Resources acknowledges that there may be times that the mitigation source does not provide real-time, one-to-one flowrate mitigation because the mitigation water right portfolio is out-of-season, or the mitigation diversion rate is less than the rate of stormwater diversion.

[6] Conservation of water resources is realized through both the water quality protection achieved by on-site stormwater accrual and by the streamflow augmentation provided through the non-diversion.
[7] IDAPA 37.03.11, Section 043, page 12.
[8] Idaho Constitution, Article XV, Section 7.

Operational adaptive management strategies could be considered that reduce the rate of stormwater accrual (

Table 1) and avoid stormwater accrual volume when the mitigation water right portfolio is out-of-season. Limiting or preventing out-of-season stormwater accrual is not operationally nor environmentally favorable and should not be the primary operational strategy. Non-accrual of stormwater when out-of-season stormwater is available increases freshwater dependency once stormwater reserves are depleted and may force increased surface water diversion from the EFSFSR during summer low-flow periods and/or additional groundwater pumping. An adaptive management strategy will require a monitoring plan that provides sufficient lead time to adjust operations (e.g., multiple day trailing average of Salmon River streamflow at Shoup gage) because adaptive management operations cannot initiate instantaneously.

Two adaptive management strategies were modeled to test the project's capability to potentially limit out-of-season stormwater accrual (

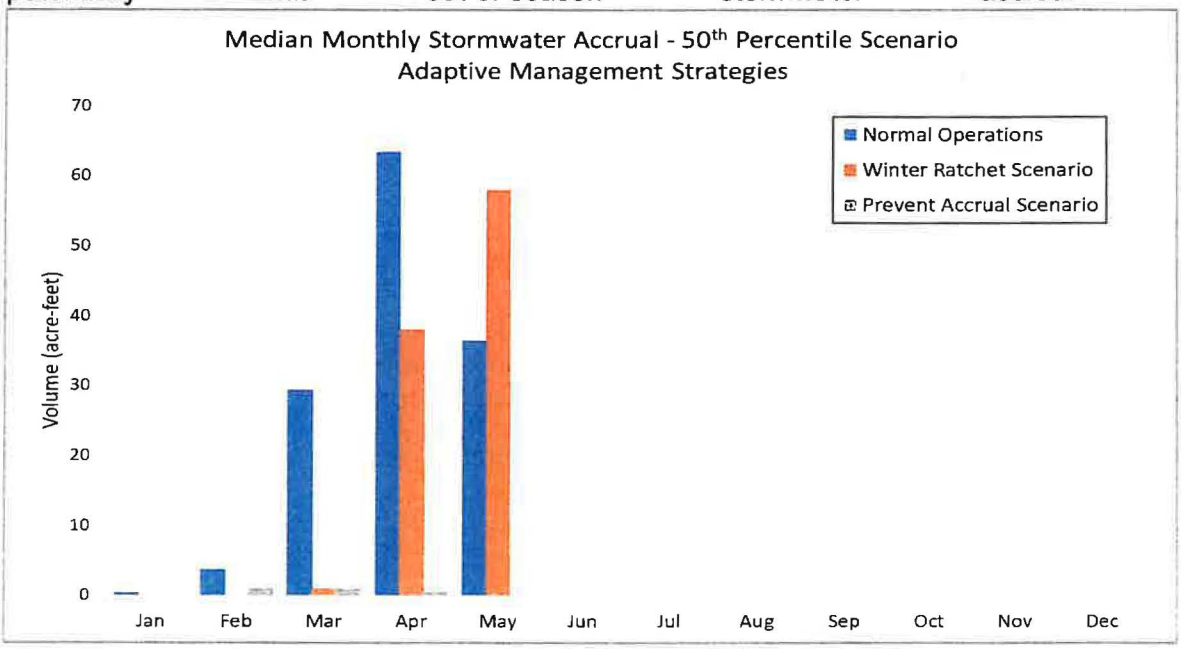


Figure *5*). The "winter ratchet" scenario minimizes stormwater accrual between November and March by treating and discharging stormwater so that month end detention volume does not exceed the previous month's volume. The "prevent accrual" scenario treats and discharges all excess stormwater. Even with these efforts, alleviation of all out-of-season stormwater accrual is not possible. Similarly, there may be times when mitigation is active during large stormwater runoff events, the accrual rate is greater than the combined mitigation rate, stormwater diverted to the mill and water treatment. Both adaptive management scenarios sacrifice a valuable water source to offset a relatively insignificant (0.025 percent[9]) flow depletion in the Salmon River and potentially incur economic and environmental costs.

[9] The 0.025 percent is calculated with the 36 cfs stormwater runoff rate (Table 1) and the approximate 1,400 cfs average low flow at the Shoup gage.

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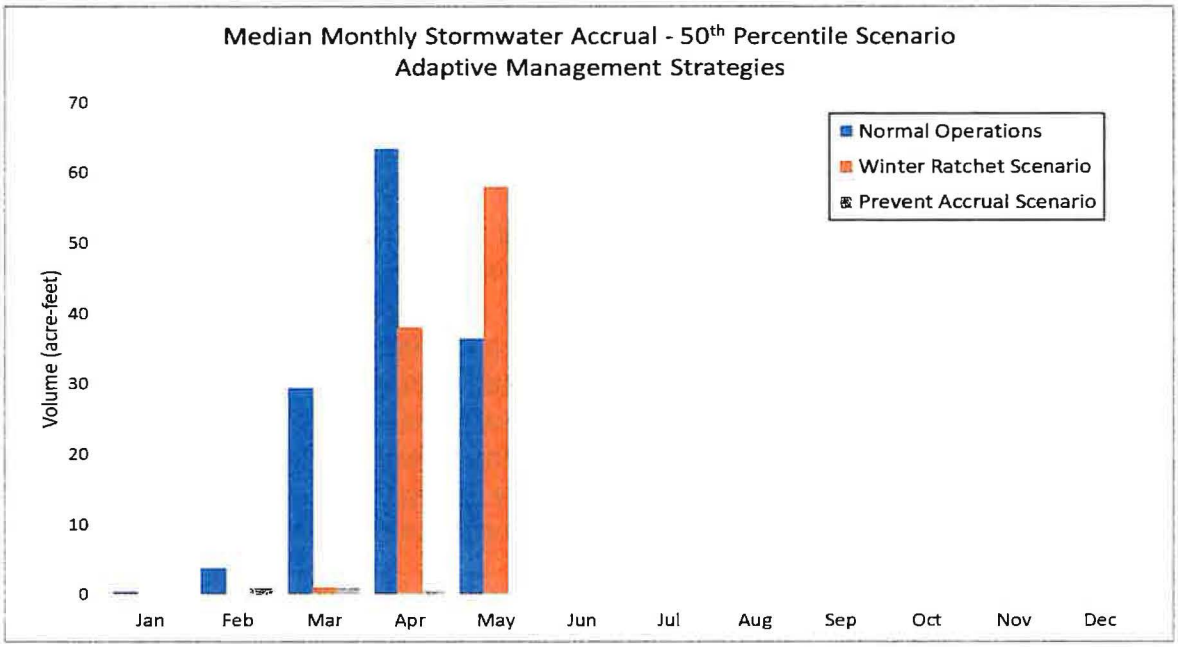


Figure 5. Median Stormwater Accrual with Adaptive Management Scenarios

IDWR Guidance on Mitigation Requirements

Perpetua Resources has received comments from IDWR suggesting that mitigation must compensate real-time flow depletion at the Shoup gage at the rate of stormwater accrual at the SGP. Perpetua Resources interprets IDWR mitigation guidance to afford the Department a certain degree of discretion when evaluating and approving Mitigation Plans. Foremost of this guidance is the 2015 *Evaluation of Mitigation Plans for Water Right Permits*[10] memorandum that states,

> "Department staff members have discretion to adapt the requirements set forth in this memorandum according to the nature and complexity of a proposed mitigation plan. A mitigation plan should ultimately ensure protection of other water rights while providing for efficient implementation and administration by the water user and the Department."

This memorandum also brings forth into consideration environmental concerns and consent of the water delivery entity (USFS in this instance).

Additionally, IDWR identifies the significant challenges of converting storage volumes (i.e., stormwater accrual in this instance) to flow rates in the 2009 *Partial Decrees for Wild and Scenic River Water Rights, Stipulation for Settlement of the Wild and Scenic River Dispute*[11] memorandum,

[10] IDWR, 2015. Evaluation of Mitigation Plans for Water Rights Permits. Application Processing Memo #72. November 4, 2015, page 5.
[11] IDWR, 2009. RE: Partial Decrees for Wild and Scenic River Water Rights, Stipulation for Settlement of Wild and Scenic River Dispute. Application Processing No. 70. Water Delivery No. 3, October 30, 2009, page 5.

> Because water rights for storage volumes cannot be easily converted to a flow rate that can be counted against the flow rates to which the Wild & Scenic water rights are subordinate, IDWR will treat on-stream storage rights in the same way that instream flow water rights and non-consumptive water rights are treated in the partial decrees; they will not be deducted from the flow rate limitations to which the Wild & Scenic water rights will be subordinate.

Perpetua Resources acknowledges that the stormwater accrual differs from on-stream storage, however, the argument carries here that there is substantial difficulty to quantifying and administering stormwater accrual volume as a flow rate requiring one-to-one mitigation. Perpetua Resources advocates that the continuous flow rate mitigation at a rate of 10.75 cfs is compensatory for the anticipated rate of stormwater accrual volumes.

Perpetua Resources believes that the proposed mitigation strategy is the most reasonable alternative evaluated to protect water rights 75-13316 and 77-11941, is easily administered, avoids the accrual volume-to-flow rate complication (i.e., continuous mitigation flows provided), and has substantial environmental benefits to streamflow and aquatic habitat. Perpetua Resources is working in good faith with the USFS to achieve a mutually agreeable mitigation plan and gain this "consent of the water delivery entity". A previous example of such an arrangement is discussed next.

Precedent of Party Agreement of Mitigation of Instream Water Rights

The mitigation resolution of the 2015 shortfall of Idaho Power Company's Snake River instream flow water right at the Murphy gage is an example of a mitigation agreement. Water users were required to provide streamflow mitigation to Idaho Power Company to mitigate for this shortfall. The water users mitigated for the total volume of the shortfall, however mitigation was not provided in real-time nor at the depletion rate of the shortfall. The mitigation of Idaho Power Company's instream flow water right demonstrates that

- involved parties can enter into an agreement where the injured party can determine adequate mitigation conditions,
- mitigation does not need to be provided at the time of the depletion with the injured party authorization,
- mitigation does not need to be provided at the instantaneous flow rate of depletion.

Perpetua Resources' mitigation strategy proposes to over-mitigate the anticipated required volume and, when mitigation is required during April through October, will fully or partially mitigate the flow rate. There may be instances that mitigation is required when Perpetua Resources' mitigation flows are not active in November through March and/or instances when mitigation flow rate is less than the instantaneous stormwater accrual rate. These potential mitigation shortfalls are compensated by the benefits of over-mitigating the required mitigation volume and by continuous streamflow that provide instream water during baseflow periods. The 10.75 cfs of additional streamflow during summer low flow periods, when on-site contact water accrual is not anticipated, is arguably more valuable to aquatic ecosystems and recreationists than the depletion rate to streamflow caused by on-site stormwater detention during the freshet when much of the contact water detention will occur.

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Conclusion

Perpetua Resources is currently proposing mitigation through non-diversion of the Jones water right portfolio that authorizes diversion of 10.75 cfs for irrigation of 138.8 acres along the Salmon River at the mouth of Morgan Creek. The mitigation volume of this water right portfolio is anticipated to be 347 acre-feet annually. Benefits of the proposed mitigation are listed below.

- Mitigation is anticipated to be required for a limited duration, and only at times of less than average streamflow. It is likely that during high runoff events at the mine, the flow in the Salmon River will also be above average so that mitigation is not required. Nonetheless, mitigation will be provided for the entire irrigation season (April through October) through non-use of the Jones water rights, regardless of whether water is being diverted and detained at the mine or whether Salmon River target flows are being met. This continuous benefit to streamflow offsets occasional mitigation shortfalls because non-use of the water rights continues to provide a streamflow enhancement at times when there is a minimum streamflow deficit, but Perpetua Resources is not accruing stormwater.
- The mitigation benefit occurs above and throughout the Wild and Scenic River reach, even though the impact from Perpetua Resources occurs only in the lower portion of the Wild and Scenic River reach (Figure 6). The Jones right is at river mile 315 and the South Fork of the Salmon enters the Salmon River at river mile 135. The Wild and Scenic river begins at river mile 237 and ends at Long Tom Bar, river mile 113. Therefore, mitigation is provided for 202 miles, including the entire 124-mile Wild and Scenic reach, even though the reach requiring mitigation is only 23 miles long.
- Perpetua Resources will be providing significantly more mitigation volume than is expected to be accrued on an annual basis during each year (Table 3). The consumptive mitigation volume provided over-mitigates anticipated mitigation requirement by 231 percent to 760 percent.

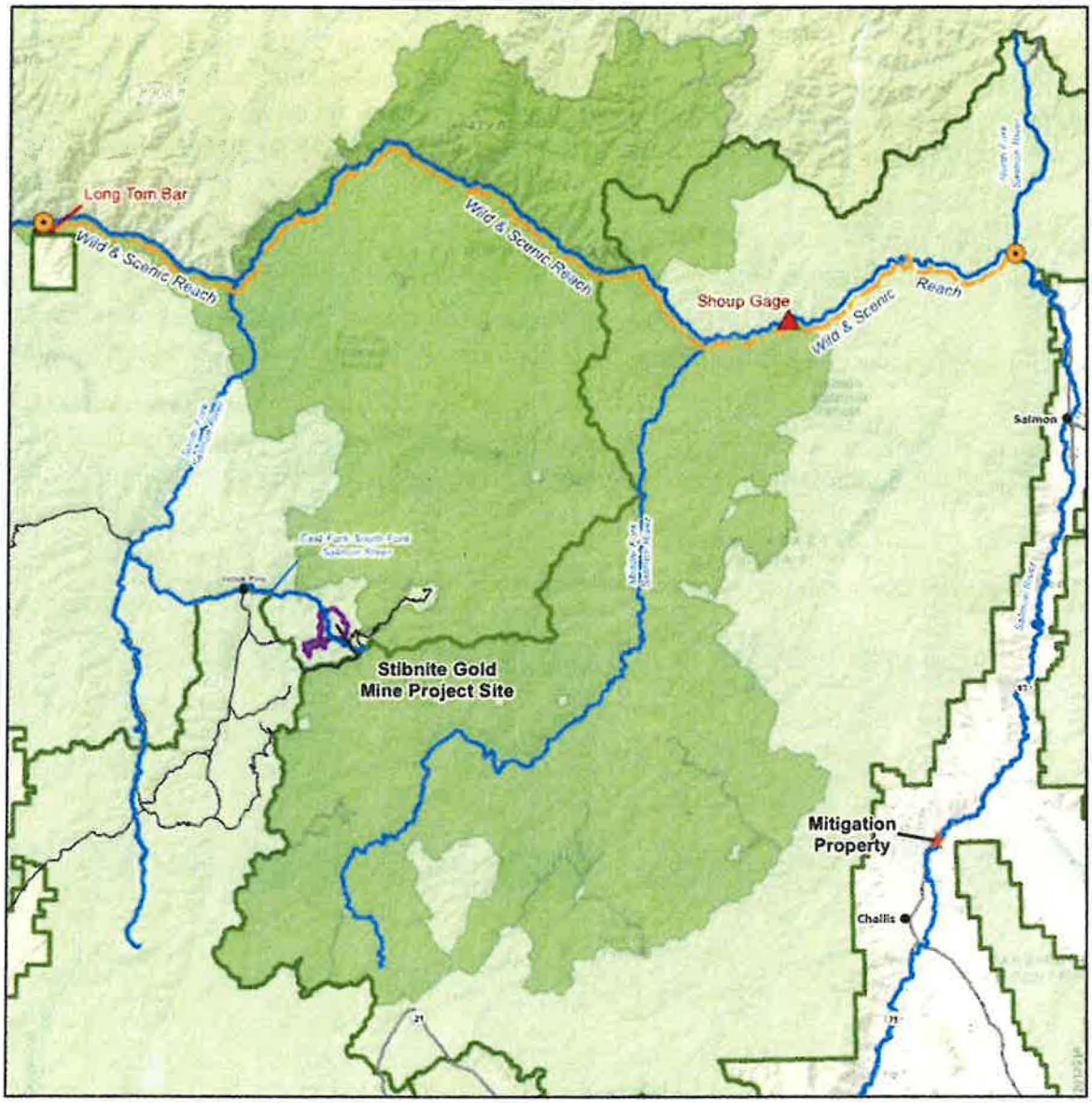


Figure 6. Regional Map

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Table 3. Annual Stormwater Detention Volume and Excess Mitigation Provided

Mine Year (MY)	Annual Volume (acre-feet)				Over-Mitigation Percent
	Accrued	Mitigation Required (est)[1]	Mitigation Provided	Over-Mitigation Provided	
MY -1	81	40	347	307	760%
MY 1	102	51	347	296	578%
MY 2	101	51	347	296	587%
MY 3	192	96	347	251	261%
MY 4	210	105	347	242	231%
MY 5	194	97	347	250	258%
MY 6	123	61	347	286	466%
MY 7	208	104	347	243	234%
MY 8	187	94	347	253	271%
MY 9	188	94	347	253	270%
MY 10	179	90	347	257	287%
MY 11	118	59	347	288	487%
MY 12	177	89	347	258	292%
Total	2,060	1,030	4,511	3,481	338%

Notes:
[1]Required mitigation volume estimated at 50 percent of annual stormwater accrual based on Wild and Scenic Right (Figure 1)
Abbreviations: *est = estimated*
MY = mine year

- The majority of contact water diversion and detention occur during spring runoff in March, April, and May when Wild and Scenic Right flows are met approximately 55 percent to 65 percent of the time.
- Some of the runoff that is detained is not consumed. A portion can be returned to the stream through the water treatment plant a short time after accrual.
- It is not in the public interest to mitigate for all potential flow conditions. Excess mitigation to offset a 500-year storm event through drying up of irrigated lands can impact the local economic base.
- Non-diversion of the Jones water right provides benefits in addition to increasing streamflow in the Wild and Scenic River reach. The non-diversion will improve fish passage on Morgan Creek, an important anadromous fish watershed, and reduce diversions from the Salmon River in a reach that is also important to anadromous fish.

Perpetua Resources Corp.
405 S. 8th Street, Ste 201
Boise, ID 83702
Tel: 208.901.3060
www.perpetuaresources.com

October 8, 2021

VIA EMAIL

Kevin Knesek
Deputy Forest Supervisor
US Forest Service
Payette National Forest
Email: kevin.s.knesek@usda.gov

Shelley Keen
Water Allocation Bureau Chief
Idaho Department of Water Resources
Email: Shelley.Keen@idwr.idaho.gov

Subject: Water Rights Mitigation for the Stibnite Gold Project and Protection of Wild and Scenic River Values on the Salmon River

Dear Mr. Knesek and Mr. Keen:

Prefacing Note: In a news release dated February 16, 2021, Midas Gold Corp. announced that it had changed its name to Perpetua Resources Corp. ("Perpetua Resources" or the "Company") effective February 15, 2021. Midas Gold Idaho, Inc., the Company's wholly owned subsidiary, also updated its name to "Perpetua Resources Idaho, Inc.". The name change not only follows the Company's recent announcement that it has relocated its corporate headquarters to Boise, Idaho, but the name also better aligns with the company's vision and reflects the natural evolution in this next phase of project development. This letter references a memorandum submitted to you on January 21, 2021, from Midas Gold Idaho, Inc., (Midas Gold) which is hereinafter referred to as Perpetua Resources Idaho, Inc. (Perpetua Resources).

On January 21, 2021, Midas Gold submitted to you a memorandum; *Water Right Mitigation Alternatives Considered for the Stibnite Gold Project*, prepared by SPF Water Engineering. The memorandum analyzed several alternatives for mitigating impacts to flows in the Salmon River (and associated instream flow rights held by USFS) that Midas Gold considered in developing a mitigation plan to be filed with a water rights application this year in support of the Stibnite Gold Project (SGP).

This letter further describes how Perpetua Resources proposes to implement the Water Right Mitigation Plan alternative selected in the memorandum (non-diversion of Jones irrigation water right). It also describes how that mitigation will conform with and protect Wild and Scenic River values in the Salmon River.

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Background

Perpetua Resources' proposed water right permit for the SGP seeks to divert and detain certain stormwater runoff from project facilities (contact water) to protect water quality in the East Fork South Fork Salmon River (EFSFSR). Contact water that is held in stormwater retention ponds could eventually be treated and discharged. However, it is logical to beneficially use a portion of the captured stormwater for industrial purposes rather than divert fresh water from the stream or groundwater.

Wild and Scenic Rivers (WSR) were designated by Congress to protect the scenic, recreational, geologic, fish and wildlife, historic, cultural, or similar values associated with those rivers. WSR designations seek to preserve free-flowing conditions and protect water quality.

The Salmon River WSR instream flow water rights are for the Salmon River from the North Fork to Long Tom Bar, a total distance of 124 miles. The SGP is in the South Fork Salmon River watershed. The South Fork Salmon River enters the Wild and Scenic reach 23 miles from the end of the reach. The Salmon River WSR instream water right is partially subordinated to junior-priority water rights within the Salmon River Basin. The subordination is available to a limited amount of new water rights proposing direct use of water but is explicitly not available to new water rights proposing storage of water (i.e., detention of water for more than 24 hours). The direct beneficial use of water proposed in the new Perpetua Resources water right permit application will utilize the subordination provisions of the Wild and Scenic Right. For purposes of our proposal, we are assuming that diversion and detention of certain stormwater runoff to protect water quality at the SGP may not be included in the Wild and Scenic Right subordination. In the event that stormwater detention is not included in the Wild and Scenic Right subordination, then detaining stormwater would be out-of-priority water use only when streamflow at the Salmon River at the Shoup gage is less than the instream flow water right. In order to avoid protests of its water right, Perpetua Resources will submit a mitigation plan that will preserve the WSR values in the Salmon River.

Proposed Mitigation

Perpetua Resources proposes to mitigate for detention of stormwater at the SGP (and commensurate impact to the lower portion of the Salmon River WSR reach) by non-diversion of a senior-priority irrigation water right located upstream from the full WSR reach in the Salmon River (Jones water right). By not diverting the proposed mitigation irrigation water right, water that otherwise would be removed from the Salmon River upstream from the WSR reach will flow downstream through the WSR reach. The consumptive volume of the mitigation water right (i.e., the net annual volumetric benefit to the river) will exceed the annual volume of contact water stored at the SGP, and far exceed the required annual mitigation volume.

The mitigation water right is available continuously from April through October. Contact water detention at the SGP occurs primarily in March, April, and May, with minor amounts of contact water retention during winter months.

Protection of Wild and Scenic River Values

Although the timing of contact water detention and mitigation water do not exactly match, the mitigation water protects WSR values in the following ways.

1. Through non-use of a senior irrigation water right located upstream of the Salmon River WSR reach, the mitigation proposal adds water to the river during low-flow summer periods when river flows are significantly diminished by irrigation diversions. Salmon River flows during summer months are reduced by irrigation of thousands of acres in the Salmon River Basin upstream of the WSR reach. By adding water back to the river during this time period, the values of the WSR are enhanced. Additional flow during summer is beneficial to both fish and recreation.

2. Non-diversion of irrigation water protects Salmon River water quality. Irrigation return flows carry sediment, nutrients, and bacteria, and often have elevated temperatures. By leaving irrigation water in the river, Salmon River water quality is enhanced. Water quality is also protected by retaining contact water at the SGP.

3. The proposed stormwater diversion and detention at the SGP does not impact the free-flowing condition of the Salmon River or tributary streams (i.e., no in-channel detention features). Diversions would not be from natural channels or streams but from diffuse runoff and detention would occur in off-stream stormwater ponds, with water detained prior to entering a stream.

4. The flow impacts to the Salmon River resulting from SGP stormwater detention are anticipated to be imperceptible. Typical Salmon River flows at the mouth of the South Fork Salmon River during the March through May period when stormwater detention occurs range from 4,000 cubic feet per second (cfs) to 40,000 cfs, and flows are likely somewhat higher during periods of runoff. As an example, storm event-based modeling analysis estimated that a 25-year rain-on-snow event will produce 36 cfs of contact water for a 24-hour period. Relative to Salmon River flows at the South Fork Salmon River confluence, contact water management at the SGP for a storm of this magnitude has an instream flow impact of 0.09 percent to 0.9 percent. Such a small intermittent depletion in flow is not anticipated to impact WSR values and is more than offset by a continuous benefit of non-diversion of the mitigation water right from April to November as proposed by Perpetua Resources.

5. Although the WSR reach is 124 miles long (North Fork to Long Tom Bar), the impact to the WSR from the SGP stormwater diversions for which mitigation is being provided, will occur only in the lower 23 miles, downstream from the mouth of the South Fork Salmon River to Long Tom Bar, which comprises only 18.5 percent of the WSR reach. The mitigation water is provided for 202 miles, including 78 miles upstream of the WSR reach and 101 miles of the WSR reach upstream from the South Fork Salmon River that is the majority of the WSR reach (81.5 percent). Therefore, the proposed mitigation provides an instream flow and water quality benefit to many more river miles than are impacted by Perpetua Resources' proposed stormwater retention. The limited portion of the WSR reach affected by SGP activities is consistent with the size of the project drainage area

relative to the contributing drainage area of the WSR reach. The SGP will impact approximately 0.6 percent of the Main Salmon River drainage area above the South Fork Salmon River confluence[1].

Summary

To summarize, the benefits of Perpetua Resources' proposed mitigation far exceed the impact of diminished flow in the WSR reach that is caused by detention of stormwater runoff. Specifically, Perpetua Resources' proposed stormwater management and associated mitigation enhances, or does not impact, the WSR values in the following ways:

- Scenic Values are not impacted by the proposed stormwater management and associated mitigation.
- Recreational Values are enhanced by the proposed mitigation by non-diversion of the irrigation water right thereby increasing WSR streamflow, particularly during the low flow period when stormwater is not anticipated to be detained.
- Geologic Values are not impacted by the proposed stormwater management and associated mitigation.
- Fish and Wildlife Values are enhanced by the proposed mitigation by increasing streamflow during the low flow period, avoiding water quality concerns of irrigation return flows through non-use of the mitigation water right, and protecting water quality by managing stormwater runoff at the SGP.
- Historic Values are not impacted by the proposed stormwater management and associated mitigation.
- Cultural Values are not impacted by the proposed stormwater management and associated mitigation.

Water quality is protected and enhanced in the River and the free-flowing values of the River are maintained.

Sincerely,
Perpetua Resources

Alan Haslam
Vice President Permitting

[1] Estimate is based on the EFSFSR drainage area near the Sugar Creek confluence and Meadow Creek drainage area above the EFSFSR confluence (62 square miles [mi^2]) and the Main Salmon River above the South Fork Salmon River confluence (10,384 mi^2).

Brown AND Caldwell

1290 West Myrtle Street, Suite 340
Boise, ID 83702

Subject: Beneficial Use of Contact Water and Mitigation

Date: October 8, 2021

To: Alan Haslam, VP Permitting, Perpetua Resources Idaho, Inc.

From: Dan Stanaway, Senior Associate, Brown and Caldwell

Perpetua Resources Idaho, Inc. (Perpetua Resources) has prepared this synopsis of the management and utilization of contact water at the Stibnite Gold Project (SGP) and the proposed mitigation for detention of contact water. Perpetua Resources will be managing contact water (i.e., stormwater runoff that has been in contact with mine facilities) to protect in-stream water quality and provide a water source for the mill. Contact water will be beneficially used by direct diversion to the mill or diverted and detained in contact water ponds prior to being utilized in the mill. During peak dewatering periods some contact water could be treated and discharged. Water right authorization for the beneficial use of contact water and storage is being sought in the forthcoming water right application.

Industrial water uses are within the subordination clause of the Wild and Scenic River water rights (WSWR) (75-13316, 77-11941) however, subordination is not available to new storage uses. Whether Perpetua Resources' direct diversion of contact water before it reaches a natural stream channel, a required practice to protect water quality, requires a water right, and if so, whether the subsequent detention of stormwater runoff is within the subordination provisions of the WSWR are open questions. Nevertheless, Perpetua Resources is assuming that detention of stormwater runoff to protect water quality at the SGP may not be included in the WSWR subordination when flows in the Salmon River at Shoup are less than the WSWR and is proposing mitigation by non-use of an irrigation water right upstream of the Wild and Scenic River reach.

This summary highlights key points that have been presented during presentations and in three documents prepared for the United States Forest Service describing the WSWR, the SGP water right application, and the proposed mitigation. These documents include the Water Right Mitigation Alternatives Considered for the Stibnite Gold Project, Water Rights Mitigation for the Stibnite Gold Project and Protection of Wild and Scenic River Values on the Salmon River, and Off-Stream Reservoir Alternative Analysis for Wild and Scenic Water Right.

Simulated Contact Water Annual Storage Volume

Contact water accrual varies by mine year based on mine development and climatic conditions. Annual contact water generation and accrual has been estimated in the site wide water balance model. Estimates of annual contact water accrual volumes range from 81 to 210 acre-feet under an average climate scenario (Table 1; further detail in Water Right Mitigation Alternatives Considered for the Stibnite Gold Project, page 5).

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Table 1. Modeled Stormwater Accrual by Mine Year

Mine Year (MY)	Annual Volume (acre-feet)
MY -1	81
MY 1	102
MY 2	101
MY 3	192
MY 4	210
MY 5	194
MY 6	123
MY 7	208
MY 8	187
MY 9	188
MY 10	179
MY 11	118
MY 12	177
13-year Average	158

Abbreviations:
MY = mine year

Simulated Contact Water Diversion Rate

Contact water will be diverted and detained predominantly during the spring melt and during storm events. The rate of contact water runoff has been modeled for 1-year, 5-year, and 25-year storm events (Table 2; further detail in Water Right Mitigation Alternatives Considered for the Stibnite Gold Project, page 4). Runoff rates range from 27 cubic feet per second (cfs) to 36 cfs during rain on snow events and from 5 cfs to 12 cfs during summer and fall storms. The effective diversion rate reduces the modeled rate because of the anticipated ability to directly utilize contact water (detain less than 24 hours) and/or treat and discharge. These practices could be employed to reduce the diversion rate as adaptive management strategies for mitigation purposes.

Table 2. Stormwater Runoff Rate Estimates

	Storm Event Runoff Rate (cfs)		Effective Storm Event Runoff Rate (cfs)[1]	
Storm Event	No Snow	Average Snow	No Snow	Average Snow
1 Year	5	27	0	15
10 Year	10	34	0	22
25 Year	12	36	0	24

Notes:
[1]The effective storm event runoff rate is 12 cfs less the storm event because of mill use and treatment. This is a limited operational strategy to reduce flow impacts and only employed under specific conditions.
Abbreviations:
cfs = cubic feet per second

Beneficial Use of Contact Water

Contact water will be beneficially used in the mill (Figure 1; new figure not included in previous deliverables). Utilizing this water source for the mill reduces demand on freshwater diversions and lowers the water treatment need. There is a greater volume of contact water used in the mill than modeled to accrue in contact water ponds. This is because contact water that is directly diverted (held less than 24 hours in contact water ponds) is not included in the annual accrual volume.

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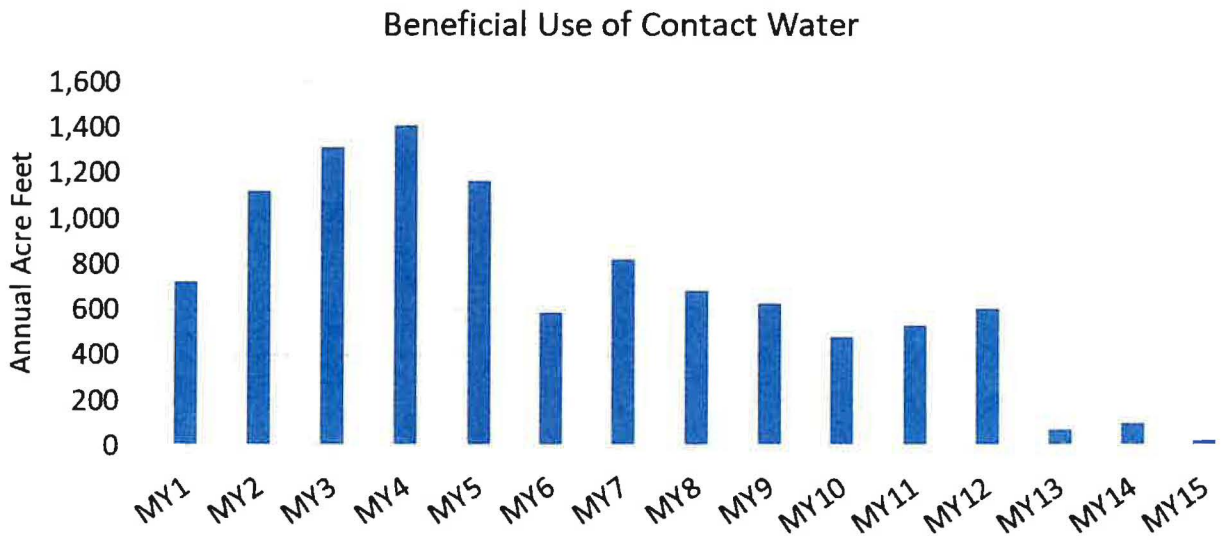


Figure 1. Beneficial Use of Contact Water Annual Volume

Mitigation of Detained Contact Water

Perpetua Resources has secured an option to purchase agreement on a property near Challis, Idaho on the Salmon River to mitigate the WSWR for the detention and beneficial use of contact water. It should be noted again that it is uncertain whether stormwater detention at the SGP qualifies as storage for water right purposes and whether this practice is subordinate to the WSWR.

This property has an irrigation water right portfolio that will provide a continuous 10.75 cfs during the irrigation season and a total mitigation volume of 347 acre-feet. The mitigation water right portfolio will provide significant over-mitigation of the anticipated annual volume of detained contact water (Table 3; originally in the *Midas Gold's Mitigation Property and Proposed Plan* presentation[1]) but may at times be less than the instantaneous rate of contact water accrual to contact water ponds (Table 2) and is not active November to March when some contact water will be accrued (Figure 2; figure slightly modified from *Midas Gold's Mitigation Property and Proposed Plan* presentation).

Table 3. Annual Stormwater Detention Volume and Excess Mitigation Provided

Mine Year (MY)	Annual Volume (acre-feet)				Over-Mitigation Percent
	Accrued	Mitigation Required (est)[1]	Mitigation Provided	Over Mitigation Provided	
MY -1[2]	81	40	347	307	790%
MY 1	102	51	347	296	578%
MY 2	101	51	347	296	587%
MY 3	192	96	347	251	261%
MY 4	210	105	347	242	231%
MY 5	194	97	347	250	258%

[1] Table has been updated with current values since original presentation.

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Mine Year (MY)	Annual Volume (acre-feet)				Over-Mitigation Percent
	Accrued	Mitigation Required (est)[1]	Mitigation Provided	Over Mitigation Provided	
MY 6	123	61	347	286	466%
MY 7	208	104	347	243	234%
MY 8	187	94	347	253	271%
MY 9	188	94	347	253	270%
MY 19	179	90	347	257	287%
MY 11	118	59	347	288	487%
MY 12	177	89	347	258	292%
Total	**2,060**	**1,030**	**4,511**	**3,481**	**338%**

Notes:

[1] Required mitigation volume estimated at 50 percent of annual stormwater accrual based on WSWR instream flow target that approximates the historic median streamflow at the Shoup gage

[2] Initial TSF fill (428 acre-feet) not included in annual volume because fill anticipated to be from groundwater, EFSFSR, and contact water. Fill will either occur at times when mitigation is not required or will be mitigated using available mitigation water right volume or one-time water bank rental volume.

Abbreviations:

EFSFSR = East Fork of the South Fork of the Salmon River
est = estimated
MY = mine year
TSF = tailings storage facility
WSWR = Wild and Scenic Water Right

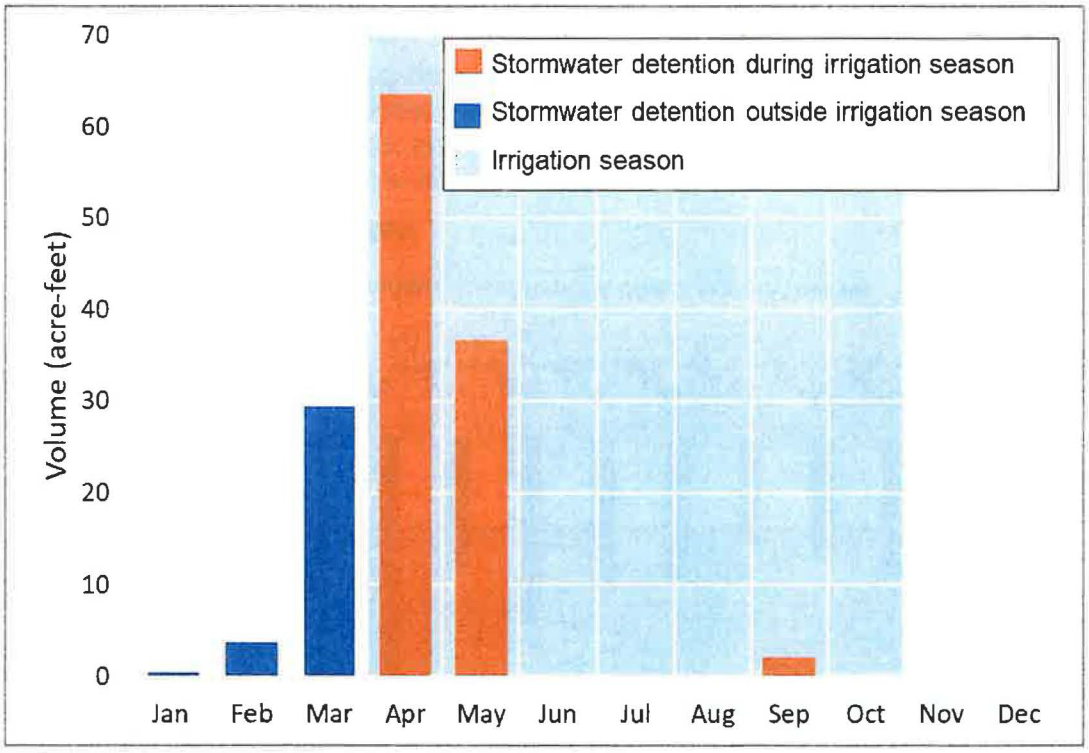


Figure 2. Median Monthly Stormwater Detention – 50th Percentile Scenario

DRAFT for review purposes only. Use of contents on this sheet is subject to the limitations specified at the beginning of this document.
11008_PRII_Beneficial Use of Contact Water and Mitigation

IDAHO DEPARTMENT OF
WATER RESOURCES

322 E Front Street, Suite 648, Boise ID 83702 • PO Box 83720, Boise ID 83720-0098
Phone: 208-287-4800 • Fax: 208-287-6700 • Email: idwrinfo@idwr.idaho.gov • Website: idwr.idaho.gov

Governor Brad Little **Director Gary Spackman**

November 29, 2021

PERPETUA RESOURCES IDAHO INC
PO BOX 429
DONNELLY, ID 83615-0429

RE: Transfer No. 85396- Water Right No(s). 77-7122, 85397- Water Right No(s). 77-7285, Transfer No. 85399- Water Right No(s). 77-7141, Transfer No. 85398- Water Right No(s). 77-7293, Exchange No. 85538- Water Right No(s). 77-7122
Applications for Permit No. 65-24089, 77-14377, 77-14378, 77-14379, 77-14381

Dear Applicant(s):

The Department of Water Resources has received your water right transfer applications and applications for permit. Please refer to the transfer/water right number referenced above in all future correspondence regarding these applications.

A legal notice of the application has been prepared and is scheduled for publication in the STAR NEWS on 12/2/2021 and 12/9/2021. Protests to these applications may be submitted for a period ending ten (10) days after the second publication.

If the applications are protested, you will be sent a copy of each protest. All protests must be resolved before the application can be considered for approval. If the protest(s) cannot be resolved voluntarily, the Department will conduct a conference and/or hearing on the matter.

If the applications are not protested, the Department will process your application and notify you of any action taken on the application. If your applications are approved, the Department will send you a copy of the approval documents.

Please contact this office if you have any questions regarding the application.

Sincerely,

Jean Hersley
Technical Records Specialist

CC: STOEL RIVES LLP

NOTICE OF PROPOSED CHANGE OF WATER RIGHT

TRANSFER NO. 85396

PERPETUA RESOURCES IDAHO INC, PO BOX 429, DONNELLY, ID 83615-0429 has filed Application No. 85396 for changes to the following water rights within VALLEY County(s): Right No(s). 77-7122; to see a full description of these rights and the proposed transfer, please see https://research.idwr.idaho.gov/apps/waterrights/querynewtransfers. The purpose of the transfer is to change a portion of the above rights as follows:

The purpose of the transfer is to change the point of diverion and change the place of use. The proposed location is for the new mining exploration area. Water will be used at the current place of use near Stibnite, ID, approx. 38 miles east of McCall, ID.

TRANSFER NO. 85399

PERPETUA RESOURCES IDAHO INC, PO BOX 429, DONNELLY, ID 83615-0429 has filed Application No. 85399 for changes to the following water rights within VALLEY County(s): Right No(s). 77-7141; to see a full description of these rights and the proposed transfer, please see https://research.idwr.idaho.gov/apps/waterrights/querynewtransfers. The purpose of the transfer is to change a portion of the above rights as follows:

The purpose of the transfer is to change the point of diversion, add points of diversion, and change the place of use. The new points of diversion are to be used with Application for Permit 77-14377. Water will be used at the current place of use near Stibnite, ID, approx. 38 miles east of McCall, ID.

TRANSFER NO. 85397

PERPETUA RESOURCES IDAHO INC, PO BOX 429, DONNELLY, ID 83615-0429 has filed Application No. 85397 for changes to the following water rights within VALLEY County(s): Right No(s). 77-7285; to see a full description of these rights and the proposed transfer, please see https://research.idwr.idaho.gov/apps/waterrights/querynewtransfers. The purpose of the transfer is to change a portion of the above rights as follows:

The purpose of the transfer is to change the point of diverion, add new points of diversion, and change the place of use. The proposed location is for the new mining exploration area. Water will be used at the current place of use near Stibnite, ID, approx. 38 miles east of McCall, ID.

TRANSFER NO. 85398

PERPETUA RESOURCES IDAHO INC, PO BOX 429, DONNELLY, ID 83615-0429 has filed Application No. 85398 for changes to the following water rights within VALLEY County(s): Right No(s). 77-7293; to see a full description of these rights and the proposed transfer, please see https://research.idwr.idaho.gov/apps/waterrights/querynewtransfers. The purpose of the transfer is to change a portion of the above rights as follows:

The purpose of the transfer is to change the place of use for mining use for 77-7293. The proposed POU incorporates the entire mining/ore processing area. This transfer proposes to only change the POU and was accompanied by Exchange 85538 which proposes to change the point of diversion for the same water right. Water will be used at the current place of use near Stibnite, ID, approx. 38 miles east of McCall, ID.

EXCHANGE NO. 85538

PERPETUA RESOURCES IDAHO INC, PO BOX 429, DONNELLY, ID 83615-0429 has filed Application No. 85538 for changes to the following water rights within VALLEY County(s): Right No(s). 77-7293; to see a full description of these rights and the proposed transfer, please see https://research.idwr.idaho.gov/apps/waterrights/querynewtransfers. The purpose of the transfer is to change a portion of the above rights as follows:

The purpose of the exchange of water is to relocate the source for 77-7293 from current Unnamed Stream to proposed East Fork South Fork Salmon River. This exchange proposes to only change the POD and was accompanied by Transfer 85398 which proposes to change the POU. Water will be used near Stibnite, ID, approx. 38 miles east of McCall, ID.

For additional information concerning the property location, contact Western Region office at (208)334-2190. Protests may be submitted based on the criteria of Idaho Code Sec. 42-222. Any protest against the proposed change must be filed with the Department of Water Resources, State Office, PO Box 83720, BOISE ID 83720-0098 together with a protest fee of $25.00 for each application on or before 12/20/2021. The protestant must also send a copy of the protest to the applicant.

GARY SPACKMAN, Director

Published on 12/2/2021 and 12/9/2021

The following application(s) have been filed to appropriate the public waters of the State of Idaho:

65-24089
PERPETUA RESOURCES IDAHO INC
PO BOX 429
DONNELLY, ID 83615-0429
Point of Diversion NESW S7 T14N R05E VALLEY County
Source GROUND WATER
Use: COMMERCIAL
01/01 to 12/31
0.04 CFS
Use: DOMESTIC
01/01 to 12/31
0.04 CFS
Total Diversion:
0.04 CFS
Date Filed: 10-08-2021
Place Of Use: COMMERCIAL, DOMESTIC
T14N R05E S7 SENW,L3(NWSW),NESW

77-14377
PERPETUA RESOURCES IDAHO INC
PO BOX 429
DONNELLY, ID 83615-0429
Point of Diversion NENE S24 T18N R09E VALLEY County
Point of Diversion SWSE S13 T18N R09E VALLEY County
Point of Diversion SWSE S13 T18N R09E VALLEY County
Point of Diversion SWSE S13 T18N R09E VALLEY County
Source GROUND WATER
Use: DOMESTIC
01/01 to 12/31
0.2 CFS
Total Diversion:
0.2 CFS
Date Filed: 10-08-2021
Place Of Use: DOMESTIC
T18N R09E S13 SWSE
Place Of Use: DOMESTIC
T18N R09E S24 NENE,NWNE
This application proposes the diversion and use of water from ground water tributary to the Salmon Wild & Scenic River. The decreed minimum stream flow rights for the federal Wild & Scenic Rivers are subordinate to certain categories of water use and to specific amounts of water use established after the minimum stream flow. The water use proposed in this application will benefit from the subordination provision because the diversion rate will be applied to the subordination amounts specified in the decree for the Wild & Scenic River listed above.

77-14378
PERPETUA RESOURCES IDAHO INC
PO BOX 429
DONNELLY, ID 83615-0429
Point of Diversion L2(NWNE) S2 T18N R09E VALLEY County
Point of Diversion SWNE S2 T18N R09E VALLEY County
Point of Diversion SENE S2 T18N R09E VALLEY County
Point of Diversion L3(NENW) S2 T18N R09E VALLEY County
Point of Diversion NENW S2 T18N R09E VALLEY County
Point of Diversion L4(NWNW) S2 T18N R09E VALLEY County
Point of Diversion L4(NWNW) S2 T18N R09E VALLEY County
Point of Diversion SWNW S2 T18N R09E VALLEY County
Point of Diversion NESW S2 T18N R09E VALLEY County
Point of Diversion NWSW S2 T18N R09E VALLEY County
Point of Diversion L1(NENE) S3 T18N R09E VALLEY County
Point of Diversion L1(NENE) S3 T18N R09E VALLEY County
Point of Diversion NWNE S3 T18N R09E VALLEY County
Point of Diversion NESE S3 T18N R09E VALLEY County
Point of Diversion NESE S3 T18N R09E VALLEY County
Point of Diversion NESE S3 T18N R09E VALLEY County
Point of Diversion NWSE S3 T18N R09E VALLEY County
Point of Diversion NWSE S3 T18N R09E VALLEY County
Point of Diversion NWSE S3 T18N R09E VALLEY County
Point of Diversion SESE S3 T18N R09E VALLEY County
Point of Diversion SWNW S14 T18N R09E VALLEY County
Point of Diversion SENE S15 T18N R09E VALLEY County
Point of Diversion SENE S15 T18N R09E VALLEY County
Point of Diversion SENE S15 T18N R09E VALLEY County
Point of Diversion SENE S15 T18N R09E VALLEY County
Point of Diversion SENE S15 T18N R09E VALLEY County
Point of Diversion SENE S15 T18N R09E VALLEY County

Point of Diversion SWSW S15 T18N R09E VALLEY County
Point of Diversion SESW S15 T18N R09E VALLEY County
Point of Diversion SESW S15 T18N R09E VALLEY County
Point of Diversion SESW S15 T18N R09E VALLEY County
Point of Diversion SESW S15 T18N R09E VALLEY County
Point of Diversion L5(NESE) S15 T18N R09E VALLEY County
Point of Diversion L5(NESE) S15 T18N R09E VALLEY County
Point of Diversion L5(NESE) S15 T18N R09E VALLEY County
Point of Diversion L5(NESE) S15 T18N R09E VALLEY County
Point of Diversion L5(NESE) S15 T18N R09E VALLEY County
Point of Diversion L5(NESE) S15 T18N R09E VALLEY County
Point of Diversion L6(NWSE) S15 T18N R09E VALLEY County
Point of Diversion L6(NWSE) S15 T18N R09E VALLEY County
Point of Diversion L6(NWSE) S15 T18N R09E VALLEY County
Point of Diversion NWSE S15 T18N R09E VALLEY County
Point of Diversion L6(NWSE) S15 T18N R09E VALLEY County
Point of Diversion L6(NWSE) S15 T18N R09E VALLEY County
Point of Diversion L6(NWSE) S15 T18N R09E VALLEY County
Point of Diversion L6(NWSE) S15 T18N R09E VALLEY County
Point of Diversion SWSE S15 T18N R09E VALLEY County
Point of Diversion SWSE S15 T18N R09E VALLEY County
Point of Diversion SWSE S15 T18N R09E VALLEY County
Point of Diversion SWSE S15 T18N R09E VALLEY County
Point of Diversion NWNE S2 T18N R09E VALLEY County
Point of Diversion SENE S3 T18N R09E VALLEY County
Point of Diversion SWNE S15 T18N R09E VALLEY County
Point of Diversion SENE S15 T18N R09E VALLEY County
Source GROUND WATER
Point of Diversion L2(NWNE) S2 T18N R09E VALLEY County
Point of Diversion NWSW S2 T18N R09E VALLEY County
Point of Diversion NESW S11 T18N R09E VALLEY County
Point of Diversion NWSW S11 T18N R09E VALLEY County
Point of Diversion NWSW S11 T18N R09E VALLEY County
Point of Diversion NWNW S14 T18N R09E VALLEY County
Point of Diversion SWNW S14 T18N R09E VALLEY County
Point of Diversion SWNE S15 T18N R09E VALLEY County
Point of Diversion SESW S15 T18N R09E VALLEY County
Point of Diversion NWNE S2 T18N R09E VALLEY County
Point of Diversion SENE S3 T18N R09E VALLEY County
Point of Diversion SENE S15 T18N R09E VALLEY County
Point of Diversion NENW S22 T18N R09E VALLEY County
Point of Diversion SWNE S15 T18N R09E VALLEY County
Source RUN OFF
Point of Diversion NESE S3 T18N R09E VALLEY County
Source EAST FORK SOUTH FORK SALMON RIVER Tributary SALMON RIVER
Use: INDUSTRIAL
01/01 to 12/31
9.6 CFS
Use: DIVERSION TO STORAGE
01/01 to 12/31
9.6 CFS
Use: INDUSTRIAL STORAGE
01/01 to 12/31
600 AF
Use: INDUSTRIAL FROM STORAGE
01/01 to 12/31
600 AF
Use: WATER QUALITY IMPROVEMENT STORAGE
01/01 to 12/31
600 AF
Total Diversion:
9.6 CFS
600 AF
Date Filed: 10-08-2021

Place Of Use: INDUSTRIAL
T18N R09E S10 NENE,SENE,NESE,SESE
Place Of Use: INDUSTRIAL
T18N R09E S11
NENW,NWNW,SWNW,SENW,NESW,NWSW,SWSW,SESW
Place Of Use: INDUSTRIAL FROM STORAGE,INDUSTRIAL STORAGE,WATER QUALITY IMPROVEMENT STORAGE
T18N R09E S11
NESW,NWSW,SWSW
Place Of Use: INDUSTRIAL
T18N R09E S14

NENW,NWNW,SWNW
Place Of Use: INDUSTRIAL FROM STORAGE,INDUSTRIAL STORAGE,WATER QUALITY IMPROVEMENT STORAGE
T18N R09E S14
NWNW,SWNW
Place Of Use: INDUSTRIAL
T18N R09E S15
L1(NENE),NESW,L5(NESE),L2(NWNE),NWSW,L6(NWSE),L3(SWNE),SWSW,SWSE,L4(SENE),SENW,SESW,SESE
Place Of Use: INDUSTRIAL FROM STORAGE,INDUSTRIAL STORAGE,WATER QUALITY IMPROVEMENT STORAGE
T18N R09E S15 NESE,L6(NWSE),SWNE,SENE,SESW
Place Of Use: INDUSTRIAL
T18N R09E S16 SWSW,SESW,SWSE,SESE
Place Of Use: INDUSTRIAL FROM STORAGE,INDUSTRIAL STORAGE,WATER QUALITY IMPROVEMENT STORAGE
T18N R09E S16 SESW,SWSE
Place Of Use: INDUSTRIAL
T18N R09E S17 SESE
Place Of Use: INDUSTRIAL
T18N R09E S2
L1(NENE),L3(NENW),NESW,NESE,L2(NWNE),L4(NWNW),SWNE,SENE,SWNW,SENW,NWSW,SWSW,SESW,NWSE
Place Of Use: INDUSTRIAL FROM STORAGE,INDUSTRIAL STORAGE,WATER QUALITY IMPROVEMENT STORAGE
T18N R09E S2 L2(NWNE),SWNE,NWSW,SWSW
Place Of Use: INDUSTRIAL
T18N R09E S20 NENE,SENE,NESE
Place Of Use: INDUSTRIAL
T18N R09E S21 NENE,NWNE,SWNE,SENE,NENW,NWNW,SWNW,SENW,NESW,NWSW,SWSW,SESW
Place Of Use: INDUSTRIAL FROM STORAGE,INDUSTRIAL STORAGE,WATER QUALITY IMPROVEMENT STORAGE
T18N R09E S21 NWNE,SWNE,NENW,NWNW,SWNW,SENW,NESW,NWSW
Place Of Use: INDUSTRIAL
T18N R09E S22 NENW,NWNW,SWNW
Place Of Use: INDUSTRIAL
T18N R09E S28 NENW,NWNW
Place Of Use: INDUSTRIAL
T18N R09E S3 L1(NENE),NESE,L2(NWNE),SWNE,SENE,NWSE,SWSE,SESE
Place Of Use: INDUSTRIAL FROM STORAGE,INDUSTRIAL STORAGE,WATER QUALITY IMPROVEMENT STORAGE
T18N R09E S3 SENE,NESE
Place Of Use: INDUSTRIAL
T19N R09E S34 L3(SWSE),L4(SESE)
Place Of Use: INDUSTRIAL
T19N R09E S35 SWSW,SESW,SWSE,SESE
Place Of Use: INDUSTRIAL FROM STORAGE,INDUSTRIAL STORAGE,WATER QUALITY IMPROVEMENT STORAGE
T19N R09E S35 SWSE
This application proposes the diversion and use of water from ground water tributary to the Salmon Wild & Scenic River. The decreed minimum stream flow rights for the federal Wild & Scenic Rivers are subordinate to certain categories of water use and to specific amounts of water use established after the minimum stream flow. The water use proposed in this application will benefit from the subordination provision because the diversion rate will be applied to the subordination amounts specified in the decree for the Wild & Scenic River listed above. Mitigation is proposed for storage use.

77-14379
PERPETUA RESOURCES IDAHO INC
PO BOX 429
DONNELLY, ID 83615-0429
Point of Diversion SWSW S11 T18N R09E VALLEY County
Source GROUND WATER
Use: DOMESTIC
01/01 to 12/31
0.06 CFS
Total Diversion:
0.06 CFS
Date Filed: 10-08-2021
Place Of Use: DOMESTIC
T18N R09E S11 SWNW,NESW,NWSW,SWSW,SESW
T18N R09E S14 NENW,NWNW,SWNW
This application proposes the diversion and use of water from ground water tributary to the Salmon Wild & Scenic River. The decreed minimum stream flow rights for the federal Wild & Scenic Rivers are subordinate to certain categories of water use and to specific amounts of water use established after the minimum stream flow. The water use proposed in this application will benefit from the subordination provision because the diversion rate will be applied to the subordination amounts specified in the decree for the Wild & Scenic River listed above.

77-14381
PERPETUA RESOURCES IDAHO INC
PO BOX 429
DONNELLY, ID 83615-0429
Point of Diversion NWSE S4 T15N R08E VALLEY County
Source GROUND WATER
Use: INDUSTRIAL
01/01 to 12/31

0.04 CFS
Use: DOMESTIC
01/01 to 12/31
0.04 CFS
Total Diversion:
0.04 CFS
Date Filed: 10-08-2021
Place Of Use: DOMESTIC,INDUSTRIAL
T15N R08E S4 NWSE,SWSE
This application proposes the diversion and use of water from ground water tributary to the Salmon Wild & Scenic River. The decreed minimum stream flow rights for the federal Wild & Scenic Rivers are subordinate to certain categories of water use and to specific amounts of water use established after the minimum stream flow. The water use proposed in this application will benefit from the subordination provision because the diversion rate will be applied to the subordination amounts specified in the decree for the Wild & Scenic River listed above.

Permits will be subject to all prior water rights. For additional information concerning the property location, contact the State office at (208) 287-4800; or for a full description of the right(s), please see https://idwr.idaho.gov/apps/ExtSearch/WRApplicationResults/. Protests may be submitted based on the criteria of Idaho Code § 42-203A. Any protest against the approval of this application must be filed with the Director, Dept. of Water Resources, State Office, 322 E Front St, PO Box 83720, Boise, ID 83720 together with a protest fee of $25.00 for each application on or before 12/20/2021. The protestant must also send a copy of the protest to the applicant.

GARY SPACKMAN, Director

Published on 12/2/2021 and 12/9/2021

Hersley, Jean

From: Hersley, Jean
Sent: Wednesday, November 24, 2021 3:56 PM
To: Starclass@frontier.com
Subject: Legal Notice for the Star News- Valley County
Attachments: Legal Notice.docx

Dear LEGAL NOTICE DEPARTMENT:

Enclosed you will find a legal notice which we wish to have published in your newspaper on the dates indicated (once a week for two consecutive weekly issues). If you cannot publish the notice on the proposed dates, please contact us immediately.

An affidavit of publication must be submitted to the Department along with the publication bill. Please send the affidavit and bill to this office, PO Box 83720, Boise, Idaho, 83720-0098 before December 20,2021. Your cooperation is appreciated.

Sincerely

Jean Hersley
Technical Records Specialist II
IDWR State Office
322 E Front St
Boise ID 83720
208-287-4942
jean.hersley@idwr.idaho.gov

Hersley, Jean

From: Hersley, Jean
Sent: Monday, November 29, 2021 9:09 AM
To: Pozzanghera,Casey; dgreen@idl.idaho.gov; Sujata Connell; Buyer, Remington; Clark, Cynthia Bridge; sspencer@fs.fed.us
Subject: Transfer No. 85396- Water Right No(s). 77-7122, 85397- Water Right No(s). 77-7285, Transfer No. 85399- Water Right No(s). 77-7141, Transfer No. 85398- Water Right No(s). 77-7293, Exchange No. 85538- Water Right No(s). 77-7122

Dear Interested Party:

The Department of Water Resources (IDWR) is seeking written comment and/or recommendations from your organization regarding the above referenced water right applications in the name of Perpetua Resources Idaho Inc. You can find a copy of the applications at: https://idwr.idaho.gov/apps/ExtSearch/WRAJSearch/WRADJSearch.aspx. The documents will be scanned by the end of today.

IDWR can finish reviewing unprotested applications as soon as the protest period has past. Therefore, your prompt response to this request is appreciated. If your organization desires to formally protest the approval of these applications, you may do so after the notice is published by filing a written protest along with a $25.00 filing fee within 10 days of the final publication. The protest end date is December 20, 2021.

Please contact this office if you have any questions regarding the application.

Jean Hersley
Technical Records Specialist II
Idaho Dept Water Resources
(208) 287-4942

Novak, Shilynn

From: Alan Haslam <Alan.Haslam@Perpetua.us>
Sent: Thursday, November 18, 2021 9:32 PM
To: Novak, Shilynn; Beaton, Kevin J.
Cc: Hansen, Angela; Rauhut, Manuel; Terry Scanlan (TScanlan@spfwater.com); Dan Stanaway; Dale Kerner; Kristan Robbins (krobbins@brwncald.com); Alan Haslam
Subject: RE: IDWR - Perpetua Applications
Attachments: T85398_POD-POU_p2_11_18_21_prt_ADH Signed.pdf; T85398_POD-POU_p1_11_18_21_prt_ADH Signed.pdf; T85397_POD-POU_p2_11_18_21_prt_ADH Signed.pdf; T85397_POD-POU_p1_11_18_21_prt_ADH Signed.pdf; T85396_POD-POU_p2_11_18_21_prt_ADH Signed.pdf; T85396_POD-POU_p1_11_18_21_prt_ADH Signed.pdf; 77-14378 POD-POU_p3_11_18_21_prt_ADH Signed.pdf; 77-14378 POD-POU_p2_11_18_21_prt_ADH Signed.pdf; 77-14378 POD-POU_p1_11_18_21_prt_ADH Signed.pdf

Importance: High

Categories: important

Shilynn –
Thanks so much for working with us on these corrections.
We determined that the maps were correct and we had missed some of POU descriptions on the tables.
I've attached all Amended pages and we have highlighted the changes and I've initialed/dated each page.

Note that page 3 of application 77-14378 has no highlights but needs to replace original page 3. The new page does not have any changes to the POUs, but a highlighted change on page 2 brought a line of data from page 2 to page 3.

Please let us know if you find anything else or need any additional information
Thanks again for working through this with us.
Alan

Alan Haslam
VP PERMITTING

Perpetua Resources

405 S 8th St. #201 Boise, ID 83702
T 208.901.3053 M 208.351.9813

TSX: PPTA NASDAQ: PPTA

Facebook | Twitter | LinkedIn | Instagram
www.perpetuaresources.com

From: Novak, Shilynn <Shilynn.Novak@idwr.idaho.gov>
Sent: Wednesday, November 17, 2021 10:09 AM

To: Alan Haslam <Alan.Haslam@Perpetua.us>; Beaton, Kevin J. <kevin.beaton@stoel.com>
Cc: Hansen, Angela <Angela.Hansen@idwr.idaho.gov>; Rauhut, Manuel <Manuel.Rauhut@idwr.idaho.gov>
Subject: RE: IDWR - Perpetua Applications

Good morning Alan,

Thank you for this information. I will be updating the amended applications that were submitted.

I will need either amendments to the POU descriptions or amended maps for the below applications because the map and POU descriptions do not match each other. Below is a table that shows what applications have this discrepancy.

- If the POU descriptions on the applications are correct and the maps are wrong, you can email me amended maps for these applications.
- If the maps are correct and the POU descriptions on the applications are wrong, you can email me the amended pages with your initials and the date next to the amendments.
    - I can scan and email the POU description pages from each application for you to amend or you can email me amended pages that supersede the old ones

I have attached an example of common discrepancy for sections 16, 17, and 22 as well as the storage discrepancy. Please note Application for Permit 77-14378 have both the common and storage discrepancies although only the storage example is shown on the attachment.

Number	Type	Source	cfs	af	Use	Summary
77-14378	App for Permit	Groundwater, Runoff, East Fork South Fork Salmon River	9.60	600.0	industrial, diversion to storage, industrial storage, from storage	50 wells f processin dewaterir
85396	Transfer	East Fork South Fork Salmon River	0.33	7.1	mining storage, mining from storage, diversion to storage	Change P 77-7122.
85397	Transfer	Groundwater	0.50	30.2	mining, diversion to storage mining storage, from storage	Change P POD. 77-7
85398	Transfer	Unnamed Stream	0.25	20.0	mining	Change P

Please let me know how you would like to handle this and if you have any questions. I will continue working to have them in the next advertising cycle but will need the amendments before the applications can be advertised. I would like to have this to the advertising staff by November 22 so there is enough time for them to prepare on their end. If you can get the amendments to me by November 19th, I should be able to get the applications into the upcoming advertising cycle.

Thank you,

Shilynn Novak

Water Resource Agent, Sr. | Water Rights
Idaho Dept. of Water Resources
322 E Front St Ste 648 | Boise ID 83702-7371
Phone: (208) 287-4915

From: Alan Haslam <Alan.Haslam@Perpetua.us>
Sent: Monday, November 15, 2021 1:10 PM
To: Novak, Shilynn <Shilynn.Novak@idwr.idaho.gov>; Terry Scanlan <TScanlan@spfwater.com>
Cc: Hansen, Angela <Angela.Hansen@idwr.idaho.gov>; Rauhut, Manuel <Manuel.Rauhut@idwr.idaho.gov>; Beaton, Kevin J. <kevin.beaton@stoel.com>; Kristan Robbins (krobbins@brwncald.com) <krobbins@brwncald.com>; Dan Stanaway <dstanaway@BrwnCald.com>; Alan Haslam <Alan.Haslam@Perpetua.us>; Dale Kerner <Dale.Kerner@Perpetua.us>
Subject: RE: IDWR - Perpetua Applications
Importance: High

Shilynn,
Thank you for your email of November 8, 2021 seeking additional information on Perpetua Resources water right applications.

Regarding the transfer of 77-7293, Perpetua is submitting an Application for Exchange to allow processing of the point of diversion change. We are not planning to withdraw the application for transfer, as a transfer is needed to modify the place of use for 77-7293. The transfer will be amended to remove the request to change the point of diversion.

Regarding the Application for Permit for domestic and commercial uses, the listed combined diversion rate quantity of 0.04 cfs is correct. However, we noticed an error in the place of use and we are submitting an amended permit to correct this.

Regarding the Application for Permit for domestic and industrial uses, the listed combined diversion rate quantity of 0.04 cfs is also correct. However, we noticed an error in the place of use and point of diversion on this application, and we are submitting an amended permit to correct this.

The applications described above will be hand delivered to your office today, along with the $500.00 application fee for the exchange application filing fee.
Please let us know if you have any further questions.

Thanks so much,
Alan

Alan Haslam
VP PERMITTING

Perpetua Resources

405 S 8th St. #201 Boise, ID 83702
T 208.901.3053 M 208.351.9813

TSX: PPTA NASDAQ: PPTA

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www.perpetuaresources.com

From: Novak, Shilynn <Shilynn.Novak@idwr.idaho.gov>
Sent: Friday, November 12, 2021 8:31 AM
To: Terry Scanlan <TScanlan@spfwater.com>
Cc: Hansen, Angela <Angela.Hansen@idwr.idaho.gov>; Rauhut, Manuel <Manuel.Rauhut@idwr.idaho.gov>; Alan Haslam <Alan.Haslam@Perpetua.us>; Beaton, Kevin J. <kevin.beaton@stoel.com>
Subject: RE: IDWR - Perpetua Applications

Angie and I discussed your questions and determined that you could:

1. Leave the information on the transfer application and submit a separate exchange referencing Transfer 85398 or
2. Submit an amendment for Transfer 85398 dropping the POD change and submit an exchange.

If you submit an amendment and an exchange, it could be cleaner and more clear what each application is doing which may be easier for the public to understand. We were looking into options and to see if an exchange could also be used to accomplish the POU change as well, but in the interest of time, the above options are available.

Thank you,

Shilynn

From: Terry Scanlan <TScanlan@spfwater.com>
Sent: Monday, November 8, 2021 5:06 PM
To: Novak, Shilynn <Shilynn.Novak@idwr.idaho.gov>
Cc: Hansen, Angela <Angela.Hansen@idwr.idaho.gov>; Rauhut, Manuel <Manuel.Rauhut@idwr.idaho.gov>; Alan Haslam <alan.haslam@perpetua.us>; Beaton, Kevin J. <kevin.beaton@stoel.com>
Subject: RE: IDWR - Perpetua Applications

Shilynn,

The message below was forwarded to me. Regarding the application for exchange, transfer guidance memo #24 is clear that an exchange is required for the point of diversion change we propose. But we are also changing the place of use, suggesting a transfer is required.

1. So should we submit both a transfer and an exchange as "companion" applications?
2. If we submit both applications, would you like us to amend the transfer application to eliminate the point of diversion change or leave the application "as is"?

Thanks.

Terry

From: Novak, Shilynn <Shilynn.Novak@idwr.idaho.gov>
Sent: Monday, November 8, 2021 9:25 AM
To: kevin.beaton@stoel.com; Alan Haslam <Alan.Haslam@Perpetua.us>
Cc: Hansen, Angela <Angela.Hansen@idwr.idaho.gov>; Rauhut, Manuel <Manuel.Rauhut@idwr.idaho.gov>
Subject: IDWR - Perpetua Applications

I am reviewing the Applications for Permit and Transfers for Perpetua Resources Idaho, Inc. Upon initial review it was noted that the Application for Transfer for water right 77-7293 is to change the source from Unnamed Stream to the East Fork South Fork Salmon River. This specific source change requires an Application for Exchange of Water and not an Application for Transfer of a Water Right. An exchange is needed because water sourced from the Unnamed Stream is physically not available at the proposed location on the East Fork South Fork Salmon River. Please submit an Application for Exchange of Water to replace the Application for Transfer for 77-7293 submitted on Oct 8,2021.

I would also like to verify the values used in a couple applications:

- Application for Permit for domestic and commercial use for 50 employees, assay lab, and warehouse:
  - The application is for 0.04 cfs total for both uses and not a cumulative total of 0.08 cfs, correct?
- Application for Permit for domestic and industrial use for temporary housing and for use in the maintenance facility for vehicles and equipment:
  - The application is for 0.04 cfs total for both uses and not a cumulative total of 0.08 cfs, correct?

These applications are being reviewed and I am aiming to have them ready for advertising in a couple weeks. I will have a more definitive date as I continue working through the applications and can send an update once they are ready to be advertised.

If you have any questions about the Application for Exchange of Water, please let me know. Additionally, please let me know if there are any other questions.

Thank you,

Shilynn Novak

Water Resource Agent, Sr. | Water Rights
Idaho Dept. of Water Resources
322 E Front St Ste 648 | Boise ID 83702-7371
Phone: (208) 287-4915

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OCT 08 2021
DEPARTMENT OF
WATER RESOURCES

Perpetua Resources

Perpetua Resources Corp.
405 S. 8th Street, Ste 201
Boise, ID 83702
Tel: 208.901.3060
www.perpetuaresources.com

October 8, 2021

Shelley W. Keen, Chief
Water Allocation Bureau
Idaho Department of Water Resources
P.O. Box 83720
Boise, ID 83720-0098

Subject: Water Right Applications by Perpetua Resources for the Stibnite Gold Project

Dear Mr. Keen:

Perpetua Resources Idaho, Inc. (Perpetua Resources) is pleased to submit the nine enclosed water right applications for the Stibnite Gold Project (Project) in Valley County. These applications are the result of many years of planning, research, and modeling of water needs for the Project. Water uses proposed by the applications seek to optimize the use of available water resources in the Project vicinity while protecting water quality and environmental values. Existing water rights held by Perpetua Resources will be used to the maximum extent possible, with the balance of Project water needs provided from new appropriations.

The nine applications include four applications for transfer and five applications for permit. Seven of the applications are for water uses at the Project site and two applications are for off-site support facilities. The first application for permit, proposing appropriation of water for industrial purposes at the Project, is somewhat complex due to the multiple sources and uses involved and the potential requirement for mitigation. As a result, that application includes supporting documents to further explain and support the application. The remaining eight applications are relatively simple and readily described in this letter and on the application forms. Supporting documents in this application are:

- SGP Water Right Diversion Rate and Storage Volume
- Water Right Mitigation Plan for the Stibnite Gold Project
- Water Right Mitigation Alternatives Considered for the Stibnite Gold Project
- Water Rights Mitigation for the Stibnite Gold Project and Protection of Wild and Scenic River Values on the Salmon River
- Beneficial Use of Contact Water and Mitigation
- Salmon River and Morgan Creek Irrigation Water Deliveries to Jones Property

Each application is described in the following paragraphs, beginning with the application for permit proposing industrial uses at the Project site.

- **Application for Permit - Industrial, Industrial Storage, and Industrial from Storage Uses at the Mill and Mine Facility.** This application seeks a diversion rate of 9.6 cubic feet per second (cfs) from groundwater, runoff (contact water)[1], and East Fork South Fork Salmon River (EFSFSR) sources and proposes storage of a maximum annual volume of 600 acre-feet in contact water ponds, mine pits, and the tailings storage facility (TSF). The application proposes diversion from up to 50 wells, 10 contact water ponds, 2 underdrain outfalls, and one EFSFSR pump station. The 9.6 cfs diversion rate is based on the sum of modeled peak water requirements for mill demand (4.5 cfs), dust control (0.7 cfs), and drilling water (0.1 cfs), and excess groundwater dewatering (4.3 cfs) that will be treated and discharged. A memo describing the water demands is provided as an attachment to the application.

  The 600-acre-foot storage volume was determined based on hydrologic modeling for Mine Year -1 when water must be diverted for initial filling of the TSF starter pool. The starter pool volume requirement is estimated to be 428 acre-feet. The balance of the 600-acre-foot volume allows for up to 172 acre-feet of contact water storage in Mine Year -1. Diversion to storage in the TSF is not contemplated in mine year 1 and beyond, and storage in those years will occur in contact water ponds. Storage is defined as water that is held for more than 24 hours. The annual volume may include cycles of filling and emptying storage space, so that the maximum amount of water stored at any particular time is less than the annual storage volume. A maximum of approximately 500 acre-feet of storage volume will be available in contact water ponds; this volume will vary by mine year.

  The 9.6 cfs diversion to storage rate assumes that there will be 9.6 cfs of diversion capacity available from groundwater and EFSFSR sources at the time of initial fill of the TSF. A diversion to storage rate is not provided for runoff because runoff will not be diverted from a natural watercourse.

  The federal Wild and Scenic River water right 77-11941 on the Salmon River is not subordinated to storage. To allow for diversion and detention of water at times when flows in the Salmon River are less than the amounts quantified by Wild and Scenic River right 77-11941, mitigation will be provided to the river in the form of non-diversion of an irrigation water right in the Salmon River basin upstream of the Wild and Scenic River reach. A mitigation plan is attached to the application.

  The application fee is $610.00 based on the 9.6 cfs diversion rate.

- **Application for Transfer - Mining Right 77-7285.** Water right 77-7285 authorizes diversion of 0.5 cfs and 30.2 acre-feet of groundwater for mining purposes, including 9.0 acre-feet for mining storage and mining from storage. The application for transfer

[1] "Contact water" is Project-area stormwater runoff. This diffuse flow must be captured to prevent water quality impacts to surface streams. Captured contact water will be either treated and discharged or beneficially used for industrial purposes. While a water right is not necessarily required to capture stormwater runoff that has not entered a waterway, Perpetua proposes to include contact water at this time as a source as part of the application.

proposes to change the place of use to the proposed mine and mill area. Up to 12 proposed supply wells and one existing well in the Hangar Flats vicinity are contemplated as points of diversion. Storage will occur in contact water ponds near the wells.

The application fee is $500.00 based on the 0.5 cfs diversion rate. An ownership change fee is not included because the current owner (Stibnite Gold Company) merged with Idaho Gold Resources Company, LLC, the surviving company. Perpetua Resources Idaho, Inc. and Idaho Gold Resources Company. LLC are affiliates of Perpetua Resources Corp.

Application for Transfer - Mining Right 77-7122. Water right 77-7122 authorizes diversion of 0.33 cfs and 7.1 acre-feet annually from the EFSFSR for mining and diversion to storage purposes. The application for transfer proposes to change the point of diversion to the pump station on the EFSFSR and the place of use to the proposed mine and mill area.

The application fee is $500.00 based on the 0.33 cfs diversion rate. An ownership change fee is not included because Idaho Gold Resources Company, LLC (the current owner) and Perpetua Resources Idaho, Inc. are both affiliates of Perpetua Resources Corp.

- **Application for Transfer - Mining Right 77-7293.** Water right 77-7293 authorizes diversion of 0.25 cfs and 20 acre-feet per year from an unnamed stream tributary (locally known as Hennessy Creek) to the EFSFSR for mining purposes. The application for transfer proposes to change the point of diversion to the pump station on the EFSFSR and the place of use to the proposed mine and mill area.

  The application fee is $500.00 based on the 0.25 cfs diversion rate. An ownership change fee is not included because the current owner (Stibnite Gold Company) merged with Idaho Gold Resources Company, LLC, the surviving company. Perpetua Resources Idaho, Inc. and Idaho Gold Resources Company, LLC are affiliates of Perpetua Resources Corp.

- **Application for Permit - Truck Shop and Ore Processing Facility Domestic Use.** A potable domestic water system will serve the truck shop and ore processing facility. An application for permit seeks 0.06 cfs of groundwater to supply this water system. The point of diversion will be an existing public water system well that was constructed in 2012.

  The application fee is $100.00 based on the 0.06 cfs diversion rate.

- **Application for Transfer of Domestic Right 77-7141.** A potable domestic water system will serve the worker housing facility, with a maximum capacity of 750 persons using 50 gallons per person per day. This use is equivalent to an average daily rate of 26 gallons per minute (gpm) (0.06 cfs) and annual volume of 42 acre-feet. An application for transfer of water right 77-7141 (0.20 cfs and 11.4 acre-feet per year) will seek to change

the point of diversion to four wells at the lodge location. The place of use will be around the worker housing facility.

The application fee is $200.00 based on the 0.20 cfs diversion rate. An ownership change fee is not included because Idaho Gold Resources Company LLC (the current owner) and Perpetua Resources Idaho Inc. are both affiliates of Perpetua Resources Corp.

- **Worker Housing Facility Domestic Use Application for Permit.** Existing water right 77-7141 has adequate diversion rate to meet peak day demands at the worker housing facility but lacks adequate diversion volume to satisfy annual use. An application for permit seeks 0.20 cfs of groundwater, in combination with water right 77-7141, for domestic purposes at the worker housing facility. Proposed points of diversion will be the same four wells listed on the transfer application for 77-7141.

  The application fee is $100.00 based on the 0.20 cfs diversion rate.

- **Landmark Maintenance Facility Application for Permit.** An application for permit will seek 0.04 cfs (18 gpm) of groundwater for domestic and industrial use at the Landmark Maintenance Facility. Industrial uses will include filling of water trucks and vehicle maintenance. One well is proposed.

  The **application fee is $100.00 based on the 0.04 cfs diversion rate.**

- **Stibnite Gold Logistics Facility Application for Permit.** An application for permit will seek 0.04 cfs (18 gpm) of groundwater for domestic and commercial use at the Stibnite Gold Logistics Facility near Cascade. Commercial uses will include an assay lab. Domestic uses will occur in offices, warehouses, and the assay lab. One well is proposed.

  The application fee is $100.00 based on the 0.04 cfs diversion rate.

A check in the amount of $2,710.00 is enclosed for application fees. We look forward to working with the Idaho Department of Water Resources during processing of these permits. Please do not hesitate to contact us with questions or comments.

Thank you for reviewing this information.

Sincerely,
Perpetua Resources

Alan D. Haslam

Alan Haslam
Vice President of Permitting