

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 73-12256
Exam Date: 08/08/2023

1. Current Owner:
STATE OF IDAHO
DEPT OF FISH AND GAME
PO BOX 25
BOISE ID 83707-0025

2. Accompanied by:
None

3. **SOURCE:**
PAHSIMEROI RIVER

Tributary
SALMON RIVER

Method of Determination: Field Exam and GIS

B. OVERLAP REVIEW

1. Other water rights with the same place of use: YES Overlap

Water Right No.	Source	Purpose of Use	Basis
73-11500	Unnamed Stream	Stockwater	Decreed
73-11636	Pahsimeroi River	Stockwater	Decreed

2. Other water rights with the same point-of-diversion: YES Overlap

Water Right No.	Source	Purpose of Use	Basis
73-11501	Pahsimeroi River	Stockwater	Decreed
73-10061	Pahsimeroi River	Irrigation	Decreed
73-152A	Pahsimeroi River	Irrigation	Decreed
73-10100	Pahsimeroi River	Irrigation	Decreed
73-12045	Pahsimeroi River	Irrigation	Decreed
73-12046	Pahsimeroi River	Irrigation	Decreed
73-12081	Pahsimeroi River	Irrigation, Stockwater	Decreed
73-12252	Pahsimeroi River	Irrigation	Decreed
73-12274	Pahsimeroi River	Irrigation	Decreed
73-12276	Pahsimeroi River	Irrigation	Decreed

Comments: This right provides Idaho Fish & Game with a bypass to prevent fish from entering the pipeline supplying water for the above water rights. This pipeline is also known as the P16 Pipeline.

C. DIVERSION AND DELIVERY SYSTEM1. **LOCATION OF POINT(S) OF DIVERSION:**

PAHSIMEROI RIVER NE¼ SW¼, Sec. 35, Twp 14N, Rge 22E, B.M. LEMHI County

Method of Determination: GPS

PLACE OF USE: FISH PROPAGATION

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
14N	22E	35									X								

Method of Determination: GPS

D. FLOW MEASUREMENTS

1. Measurements: None. Fish propagation portion of the diversion is combined with water for ten other rights until it is piped at the fish screen. The system does not allow for a direct measurement.

E. FLOW CALCULATIONS

Measured Method:

The following equation has been used historically by IDWR for similar IDFG fish bypass structures:

$$Q = C_d A_o \sqrt{2gh}$$

Where:

Q = flowrate (cfs)

C_d = coefficient of discharge

A_o = Area of orifice opening (ft²)

g = gravitational acceleration $\left(32.2 \frac{\text{ft}}{\text{s}^2}\right)$

h = Measured head above center of orifice opening (ft)

The orifice diameter for this structure is 4 inches, which results in $A_o = 0.09 \text{ ft}^2$.

The high water mark measured above the orifice center was 2.525 ft.

The standard coefficient of discharge used by IDWR for similar IDFG diversion structures is 0.67.

$$Q = 0.72 \text{ cfs}$$

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation: N/A

2. Volume Calculations for Other Uses:

$$0.72 \text{ cfs} \times 1.9835 \text{ AF/cfs/day} \times 214 \text{ days/season} = 306 \text{ AF/season}$$

G. NARRATIVE/REMARKS/COMMENTS

This fish screen structure is a similar design to 73-12263 in the Pahsimeroi Valley. The calculated flowrate is less than the permitted rate; therefore, it is recommended that the right is licensed at the calculated rate of 0.72 cfs. POD and POU shapes were updated in Ad Hoc based on GPS locations.

Have conditions of permit approval been met? ☒ Yes ☐ No

H. RECOMMENDATIONS**1. Recommended Amounts**

<u>Beneficial Use</u>	<u>Period of Use</u>	<u>Rate of Diversion</u>	<u>Volume</u>
FISH PROPAGATION	04/01 to 10/31	0.72 CFS	306 AF

Totals: 0.72 CFS 306 AF

2. Recommended Amendments

☐ Change P.D. as reflected above ☐ Add P.D. as reflected above ☒ None

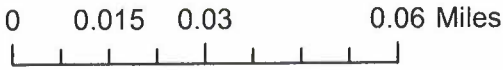
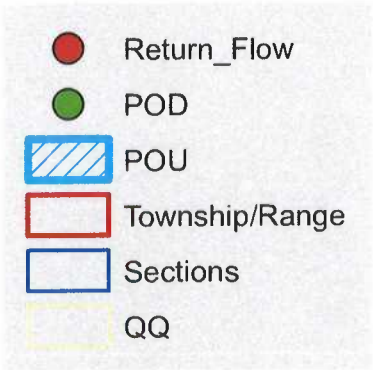
☐ Change P.U. as reflected above ☐ Add P.U. as reflected above ☒ None

I. AUTHENTICATION Thomas Lafortune -

Field Examiner's Name Thomas Lafortune Date 12/20/2023

Reviewer James Cefalo Date 12/21/2023

73-12256 Field Exam





Photos 1 and 2: Diversion and headgate from Pahsimeroi River



Photo 3: Approach to fish screen and bypass structure. Fish bypass pipe is at top left of the photo.



Photo 4: Board with 4" orifice for fish passage.



Photos 5 and 6: Return flow to Pahsimeroi River through 10" pipe.