

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
IN-OFFICE REVIEW/BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Exam Date: 02/26/2024

1. Does this qualify for an in-office field exam (IDAPA 37.03.02.035.01.r)? X Y ___ N

- a. X Irrigation of 5 acres or less
 b. ___ Storage of up to 14.6 AF for stockwater purposes only
 c. ___ Any use other than irrigation or storage, if the combined diversion rate is 0.24 cfs or less
 d. ___ Other < >

2. Current Owner: **LLOYD & PAMELA CARR**

Owner of Record Correct? ___ N

Address of Record Correct? ___ N

If No Explain:

3. Beneficial Use Fees have been paid: X Y ___ N Receipt No: C117520

4. Source: Tributary:

SALMON RIVER**SNAKE RIVER**Method of Determination: Custer County Maps, GIS, and Tax Lot Data.Change in Source: ___ Y X N**B. OVERLAP REVIEW**1. Other water rights with the same place of use: X No Overlap

Water Right No.	Source	Purpose of Use	Basis
NONE	NA	NA	NA

Comments: No irrigation rights overlap the permit place of use (POU).2. Other water rights with the same point of diversion: X No Overlap

Water Right No.	Source	Purpose of Use	Basis
NONE	NA	NA	NA

Comments: There are no rights sharing the permit point of diversion (POD). However, the POD is within the reach of Minimum Streamflow (MSF) right 72-16664. After reviewing the conditions of the MSF right it is subordinate to the Wild and Scenic decree, which the proposed license will be applied to the subordination amounts.

C. DIVERSION AND DELIVERY SYSTEM

1. Location of Point(s) of Diversion:

Source	Govt. Lot	¼	¼	¼	Sec.	Twp.	Rge.		County
Salmon River	8		SW	SE	11	11N	18E	B.M.	Custer

Method of Determination: GIS and Taxlot data.Change in POD? ___ Y X N Amendment Required? ___ Y X N

2. Place of Use: IRRIGATION

TWP	RGE	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
11N	18E	11															2.3		2.3
		Lot #															8		
																	Total Acres =		2.3

Method of Determination: Custer County Maps, GIS, and Tax Lot Data.Change in POU? ___ Y X N Amendment Required? ___ Y X N

X Delivery System Diagram Description (required). Indicate all major components and distances between components.

Indicate weir size/pipe as applicable:

X Aerial Photo Attached (required for irrigation of 10+ acres).

___ Photo of Diversion and System Attached

3. Diversion Id No.*	Motor Make	HP	Pump Model	Pump Make	Pump Serial No. or Discharge Size
Screened inlet in River	Unknown	2.0	LP200B	MUNRO	1 1/2" discharge,

*Code to correspond with No. on map and aerial photo

D. FLOW MEASUREMENTS

1. Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
NONE	NA	NA	NA	NA	NA	NA

2. Measurement Comments: The permit holder stated the system operates on a 2 Hp pump. A maximum head of approximately 25 ft was estimated for POU using the DRG map, Google Earth, and the permit holders system description.

E. FLOW CALCULATIONS

___ Additional Computation Sheets Attached

Measured Method:

A theoretical calculation and Administrative Memo #17 were used to determine a reasonable rate of diversion.

$$Q = (2 \text{ Hp})(8.8)(0.80 \text{ efficiency})/(25 \text{ ft lift}) + (2.31)(45 \text{ psi}) = 0.11 \text{ cfs}$$

Theoretical Calculation= 0.11cfs

Permit allowed = 0.08cfs

Recommendation= 0.07cfs

Comments:

Approximately 2.3 acres of irrigation was measured via GIS aerial imagery and confirmed with the permit holder. The pump used for the system is a 2 Hp Munro (single phase) with a 1 1/2" discharge.

Approximately 0.11cfs is possible with the 2 Hp pump. According to Administrative memo #17 up to 0.03cfs per acre is standard for the irrigation of up to 5 acres. I am recommending a diversion rate of 0.07cfs for the irrigation of 2.3 acres on the license.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 2.3\text{-acre} \times 3.5 \text{ AF} = 8.1 \text{ AF}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.07\text{cfs} \times 214 \text{ days} \times 1.9835 = 29.7 \text{ AF}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 8.1 \text{ AF}$$

Comments:

This permit was issued for irrigation use from a natural stream/river source. According to the IDAPA Beneficial Use Examination Rules 37.03.02.35. 01j.viii a diversion volume is not required for irrigation if water is diverted from a natural flowing stream/river or spring.

G. PURPOSE OF USE

Irrigation X Y N # Stock NA Domestic # of Homes NA

Change in Purpose of Use? Y X N

Method of Determination: Custer County Maps, GIS, and Taxlot Data

H. NARRATIVE/REMARKS/COMMENTS

This permit for the irrigation of 4.0 acres qualifies for an in-office examination for license. The permit holder submitted the Proof of Beneficial Use, received by IDWR on December 15, 2023, stating in section #3 that the beneficial use was developed for 4.0 acres of irrigation. I was able to confirm approximately 2.3 acres irrigation was developed using aerial imagery (figures 1, 2, & 3). The permit holder stated in section #6 of the proof of beneficial use that lockable controlling works and a fish screen was installed. I called the permit holder on February 23, 2024, to discuss the documentation submitted. The permit holder called back the following Monday and described the irrigated areas, confirming approximately 2.3 acres of irrigation within the permitted POU.

A detailed system description was provided in the Proof of Beneficial Use. The system was described by and permit holder as a 2" intake with a Sure-Flo Self Cleaning Strainer diverting from the river to a 2 Hp single phase Munro pump, which has a 1 1/2" discharge to 80" of 2" PVC pipe with a "T" coupler at the end of it. The line from the coupling to the south delivers water to a 1 1/2" riser for a 5 pod, 2-acre tripod kit and 2 hydrants for a garden and small orchard. The other line from the "T" coupling conveys water east to a second riser for a 5 pod, 2-acre tripod kit.

A theoretical calculation found that the pump output could provide the rate allowed on the permit. However, the irrigated area confirmed with the permit holder is approximately 2.3 acres. I am recommending the license be issued with a rate of 0.07cfs, as per Administrative Memo #17. As the diversion is from streamflow the volume was not reported on the license (IDAPA Rules 37.03.02.35, 01j.viii).

I am recommending the license be issued with a rate of 0.07cfs and conditions R05, R02, 196, 197, and 198. Condition 029 was removed at licensing as the permit holder confirmed there is a screen installed at the intake and no comments were received from IDFG regarding the permit. Condition 01H was replaced with condition R02 at licensing as per current guidance. Condition 26A was removed at licensing, as per current guidance. Although the permit POD is within the reach of Minimum Streamflow (MSF) right 72-16664 for the Salmon River, the MSF right is subordinate to Wild and Scenic designation and rights thereof. The water use licensed will benefit from the subordination provision, as 0.07cfs and 2.3 acres will be applied to the subordination amounts specified in the decree for the Salmon Wild and Scenic River.

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

I. RECOMMENDATIONS

1. Recommended Amounts:

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
IRRIGATION	04/01 TO 10/31	0.07CFS	Not Stated
<u>Totals:</u>		0.07CFS	Not Stated

2. Recommended Amendments:

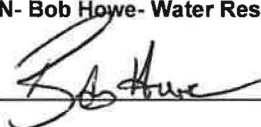
☐ Change P.D. as reflected above ☐ Add P.D. as reflected above ☒ None

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

Other: < >

J. AUTHENTICATION- Bob Howe- Water Resource Agent

Field Examiner's



Date

2/28/2024

Reviewer



Date

3/1/24

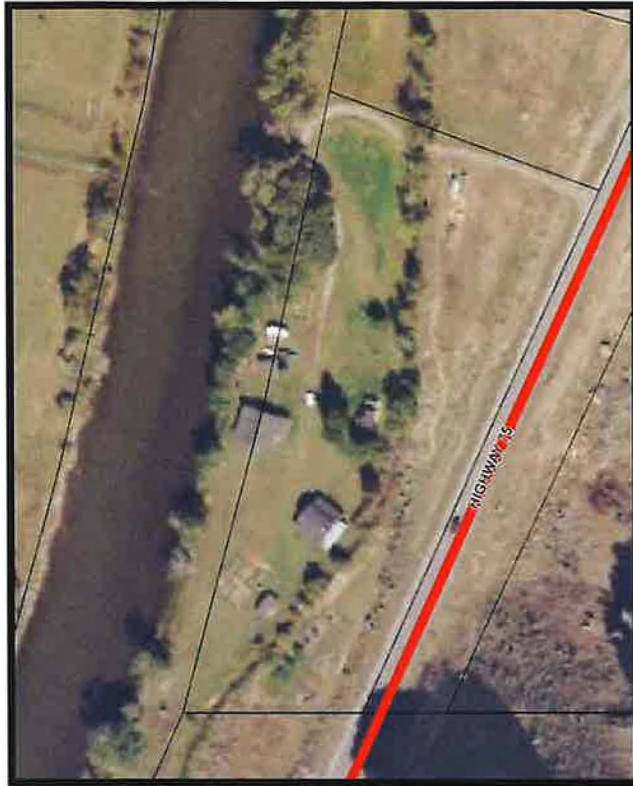


Figure 1- Custer County 2022-GIS- imagery of the permit POU parcel (centered in image). The small orchard and garden area are in the lower right of the parcel.

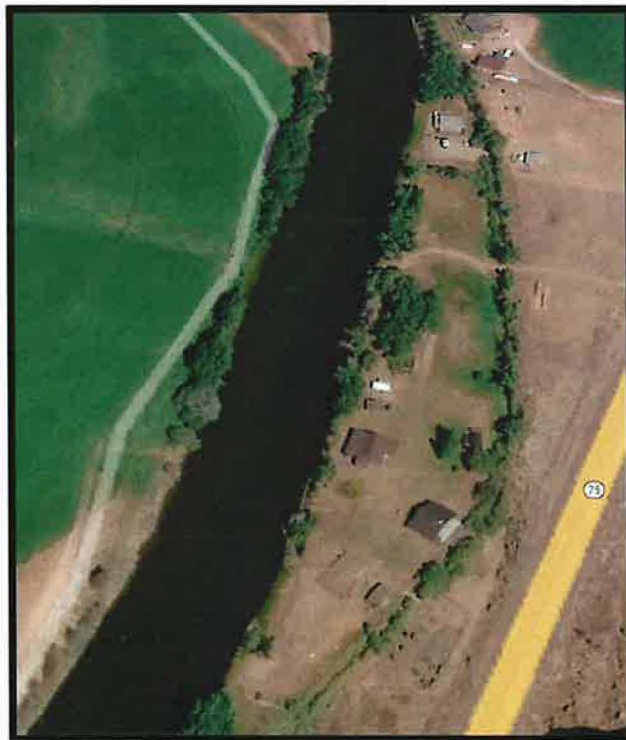


Figure 2- Google Earth-2020- Aerial image of the property. The orchard and garden area are seen in the lower right of the image.



Figure 3- GIS-2022-Image of the irrigation POU, outlined in yellow. The POD is indicated by the light blue point.