

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 74-16206
Exam Date: 06/13/2024

1. Current Owner:
RUBY MILLER 176 RED ROCK STAGE RD SALMON ID 83467-5201 AND/OR
JOHN W MILLER 176 RED ROCK STAGE RD SALMON ID 83467-5201
2. Accompanied by: John Miller
Phone No: (208) 756-3217 (cell)
Address: Same as mailing address for permit.
Relationship to permit Holder: Permit Holder

3. **SOURCE:** WASTE WATER **Tributary**
LEMHI RIVER
Method of Determination: Garmin TREX 20 GPS, GIS, and Lemhi County tax parcel information.

B. OVERLAP REVIEW

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

Water Right No.	Source	Purpose of Use	Basis
74-662	LEMHI RIVER	IRRIGATION	DECREED 2007
74-15604	LEMHI RIVER	IRRIGATION	DECREED 2007

Comments: The only rights overlapping the permitted place of use (POU) are Lemhi River irrigation rights held by the permit holder. The waste water source on the permit is resulting from the irrigation conducted under the overlapping rights.

2. Other water rights with the same point-of-diversion: NO Overlap

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

Comments: No rights share the permit point of diversion (POD)

C. DIVERSION AND DELIVERY SYSTEM

1. **LOCATION OF POINT(S) OF DIVERSION:**

WASTE WATER SE¼ SE¼, Sec. 10, Twp 20N, Rge 23E, B.M. LEMHI County

GPS COORDS: **N45° 04.306', W113° 42.784'**

Method of Determination: Garmin TREX 20 GPS, GIS, and Lemhi County tax parcel information.

PLACE OF USE: IRRIGATION

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
20N	23E	15	0.2																0.2
20N	23E	10																8.0	8.0

Total Acres: 8.2

Method of Determination: Garmin TREX 20 GPS, GIS, and Lemhi County tax parcel information.

3.
 - ☒ Delivery System Diagram Attached (required). Indicate all major components and distances between components.
 - ☒ Indicate weir size/pipe as applicable.
 - ☒ Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.
 - ☒ Aerial Photo Attached (required for irrigation of 10+ acres).
 - ☒ Photo of Diversion and System Attached

4.

Well or Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
Flat Weir	Gravity fed	NA	NA	NA	0.6 ft water depth

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
Flat Weir Staff Gauge	Wooden	NA	NA	NA	1'6" wide flat weir	NA

2. Measurements: IDAPA Beneficial Use Examination Rules 37.03.02.35.01.r.i. states that a direct measurement of the diversion rate is not required for up to five acres of irrigation. However, a staff gauge measurement was recorded at the end of the weir discharging into the ditch distributing water to the POU.

E. FLOW CALCULATIONS

Additional Computation Sheets Attached

Measured Method: The observed staff gauge reading was recorded. The wooden flat weir installed, though able to control the diversion to the POU is not a Department accepted measuring device. Google earth PRO and ArcGIS were used to determine the slope from the weir to the POU boundary, and the Manning's Equation Calculator for flow rate in an open channel was used to make a theoretical calculation (Figures 1 & 2).

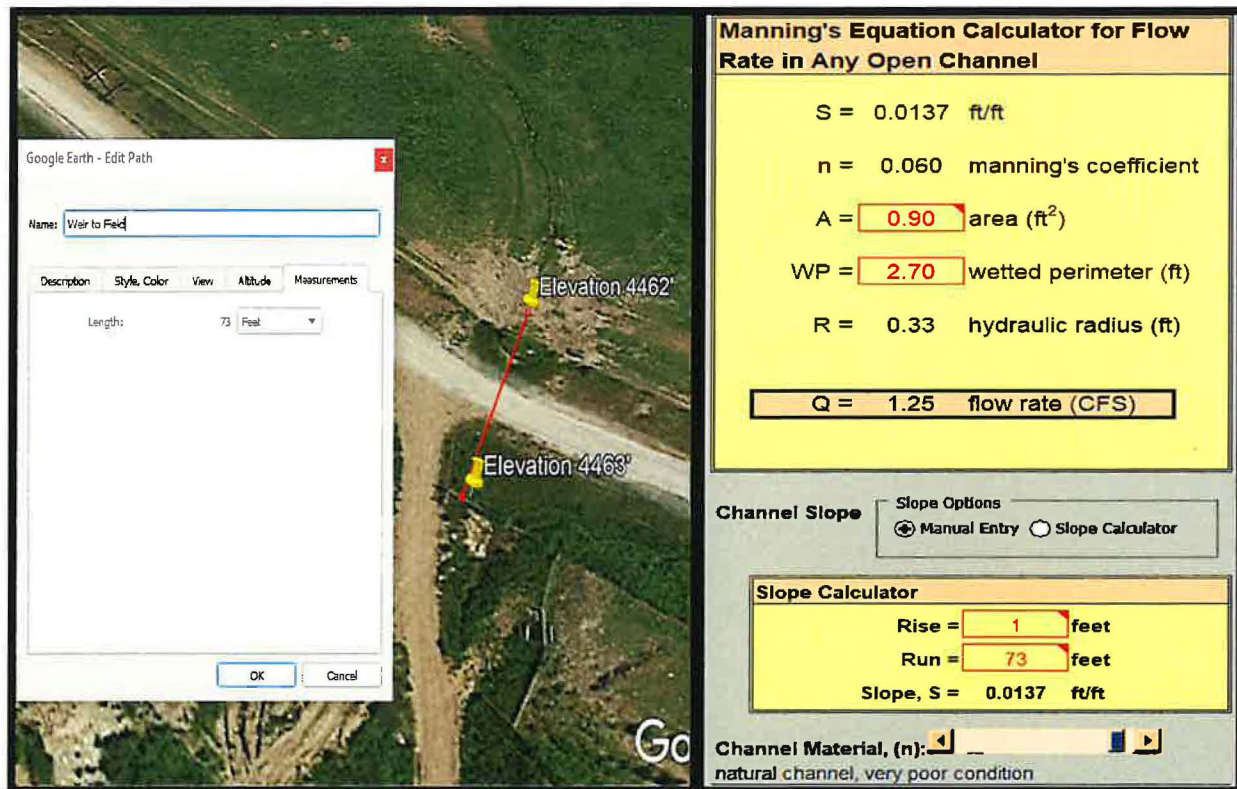


Figure 1 (left)- Google Earth Pro measurement of ditch from the weir into the field. Figure 2 (right)- Mannings equation calculation based on the 0.6 ft water depth within the 1.5ft wide flat weir.

Comments: A review of water measurement publications by USBR and a discussion with the Watermaster determined that the weir in place is not a standard measuring device and the Watermaster does not use it to measure the wastewater diverted for irrigation, or that returning to the Lemhi River. A straight and mostly uniform 73ft reach of the irrigation ditch just downstream of the weir was determined to have slope of approximately 0.0137. The 1'6" wide flat bottom weir with a measured discharge depth of 0.6' in a channel with a 0.0137 slope has a calculated rate of approximately 1.25cfs. The straight reach of the irrigation ditch near the weir was used to determine the slope as slope increases approaching the river, and a coefficient representative of poor channel conditions were used to provide a more conservative estimate of the rate. The permit holder explained that the wastewater system is gravity fed and the slope prevents delivery east of the ditch returning water to the Lemhi river (east boundary of POU shape). The irrigation POU was reduced to the areas described by the permit holder. The GIS measured irrigation POU is approximately 8.2 acres. I recommend that the license is issued with a maximum diversion rate of 0.016cfs (0.02cfs/acre).

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 8.2 \text{ Acres} \times 3.5 \text{ AFA} = 28.7 \text{ AF annually}$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.16\text{cfs} \times 246 \text{ days} \times 1.9835 = 78.1 \text{ AF}$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = 28.7 \text{ AF annually}$$

2. Volume Calculations for Other Uses: NA.

Comments: The permitted POU was reduced to only include the areas being irrigated gravity fed via irrigation ditches distributing wastewater in the field. Per the guidance of the permit holder the area east of the ditch running north to the Lemhi River was not included as the western slope of the land beyond that point does not allow for gravity fed irrigation from the wastewater ditch. The GIS measured irrigated POU is approximately 8.2 acres. I recommend the license is issued with an annual volume of 28.7 AF, per the headgate standard calculation above.

G. NARRATIVE/REMARKS/COMMENTS

The Proof of Beneficial Use for the irrigation use developed under permit 74-16206 was received by IDWR on February 10, 2020. In section #5 that the extent of beneficial use developed as the irrigation of 10 acres. A field examination was conducted with John Miller (permit holder) as escort, on June 13, 2024. GIS coordinates were recorded for the weir diverting wastewater into the irrigation ditch and photos were taken documenting the irrigation use. Waste water used for the permitted irrigation is due to drainage from the irrigation occurring upslope of the POU authorized under rights 74-662 & 74-15604. Both rights overlap the entire permitted POU, are rights for irrigation diverted from the Lemhi River, and both rights are owned by the permit holder. The weir is a flat bottom wooden "t" shaped structure 1' 6" wide which allows flow to continue north to the irrigation ditch for distribution within the permitted POU, simultaneously flow is diverted east to a drainage ditch crossing the east end of the POU and discharging into the Lemhi River. A board is wedged into the structure to divert the entire flow into the drainage ditch. The weir does not meet the criteria for a crested weir, or other standard measuring device. The depth of flow measured 0.6 feet at the weir discharge at the time of the examination. To The irrigation ditch is somewhat straight while maintaining a consistent width for approximately 73 feet past the weir. Google Earth and GIS were used to measure an approximate slope (0.0137). A conservative theoretical calculation made using the Manning's Equation indicated that the discharge exceeds the permitted rate.

The permit holder described the irrigation system as a network of ditches distributing water throughout the permitted POU, with the exception of the area east of a drainage ditch crossing the field to the east of the weir. The slope prevents water gravity fed from the permitted POD reaching the area east of the drainage ditch. GIS measurement of irrigated POU confirmed with the permit holder is approximately 8.2 acres.

I recommend the license is issued with a rate of 0.16cfs (0.02cfs/acre per IC), an annual volume of 28.7AF(per field headgate standard requirement), and with conditions R05, R02, 196, 197, 198, 176, and R63. Condition 01H should be replaced with R02 at licensing, per current guidance. Condition 029 should be removed as no correspondence was received from Idaho Fish and Game regarding fish screening requirements.

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>Annual Volume</u>
IRRIGATION	03/15 to 11/15	0.16 CFS	28.7 AF

Totals: 0.16 CFS 28.7 AF

Amendment: No volume recommendation for Irrigation Rights taking from surface water according to Beneficial Use Exam IDAPA Rule 35.01.(i).viii, the volume will not be reported on the license.

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

Bob Howe - Water Resource Agent, Sr.
Izzy Crichton – Amendments – Water Resource Agent (4/17/2026)

Field Examiner's Name _____ Date _____

Reviewer Izzy Crichton Date July 9, 2026



Photo 1- Wooden flat weir facing north. The diversion to the POU runs north and the ditch returning directly to the Lemhi River exits to the east (right of photo).



Photo 2- A discharge measurement made using a staff gauge. The bottom of the weir is flat. The structure and installation of the weir is not identifiable as any standard measuring device.



Photo 3- On the north side of the road facing north the channel exiting the weir is mostly symmetrical until it crosses under the fence into the field.



Photo 4- Kadley running NW along the southwest fence line then returning to the Lemhi River across the west end of the POU.



Photo 5- Standing near waste water ditch entering the POU, facing north. Ditch splits several times running northwest along the fence line, mid field, and at the north end of the field distributing water to the northwest.



Photo 6- Facing NE at the roadside near the west end of the POU.

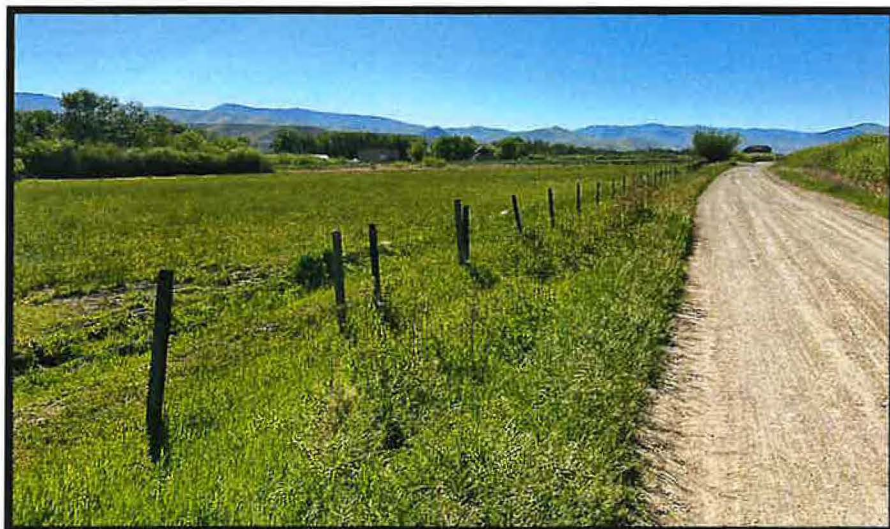
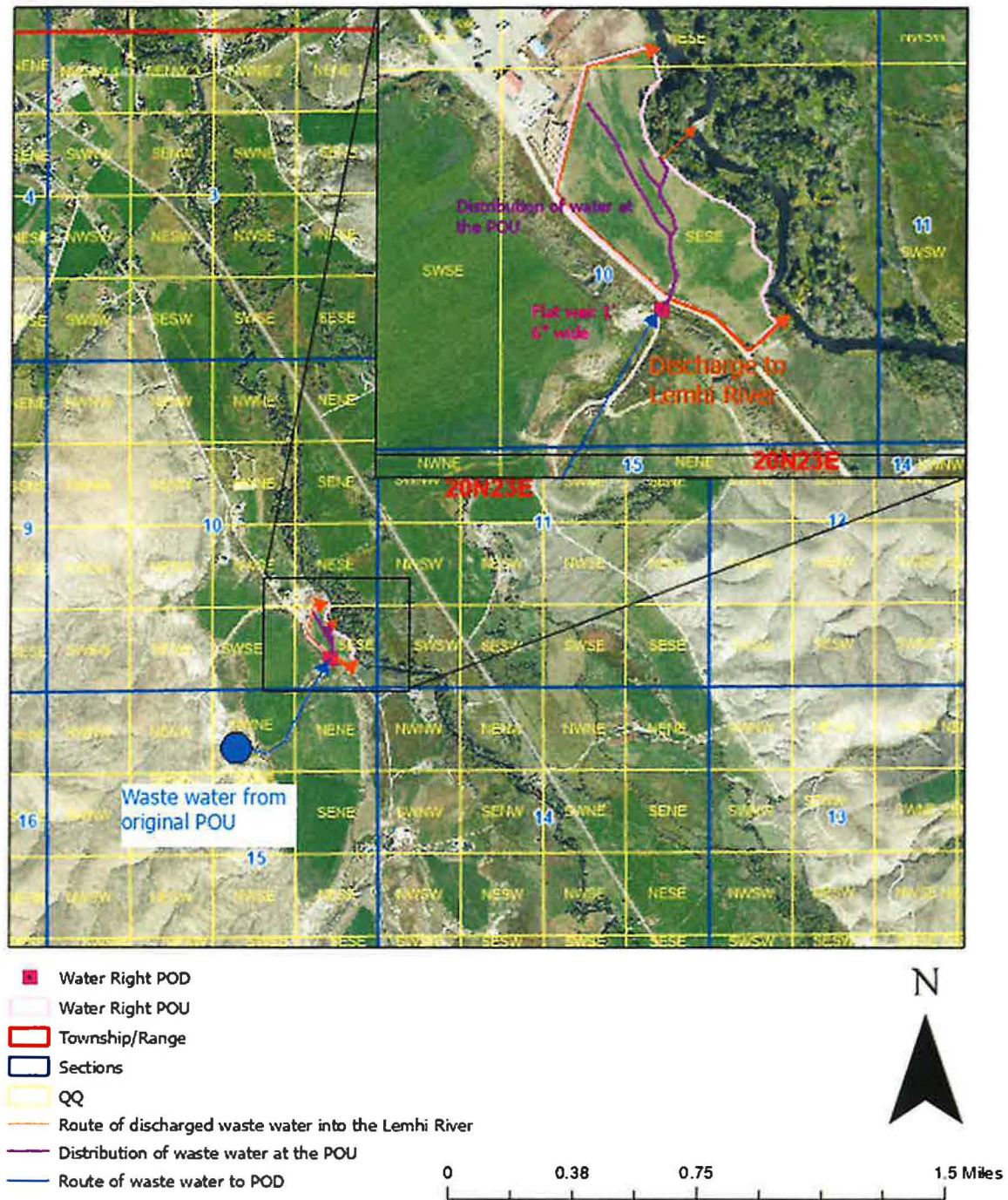


Photo 7- Facing east at the SW corner of the POU.



Prepared by: Izzy Grikton

Figure 1: System Diagram