

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 37-8385

Exam Date: 7/8/2014

1. Current Owner: JAY A LOESCHE
694 W 4 MILE RD
SHOSHONE ID 83352

LORI L LOESCHE
694 W 4 MILE RD
SHOSHONE ID 83352

2. Accompanied by: George Gallop

Phone No: 541-419-4872
Address: 694 W 4 MILE RD
Shoshone, ID 83352

Relationship to Permit Holder: Present Owner of the property.

3. SOURCE

WASTE WATER

TRIBUTARY

BIG WOOD RIVER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: Big Wood canal shares.
2. Other water rights with the same point of diversion: None

C. DIVERSION AND DELIVERY SYSTEM

1. LOCATION OF POINT(S) OF DIVERSION:

WASTE WATER NE1/4NW1/4NE1/4 Sec. 10, Twp 05S, Rge 16E, B.M.
LINCOLN County

Method of Determination: Darmin GPS at time of field exam.

2.

PLACE OF USE: IRRIGATION

Twp	Rge	Sec	NE				NW				SW				SE				Totals
05S	16E	10	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	35.0
				35.0															

Total Acres: 35

Method of Determination: 2011 aerial imagery.

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.

<u>Well or Diversion ID No.*</u>	<u>Motor Make</u>	<u>Hp</u>	<u>Motor Serial No.</u>	<u>Pump Make</u>	<u>Pump Serial No. or Discharge Size</u>
		7.5			

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

D. FLOW MEASUREMENTS

1.

<u>Measurement Equipment</u>	<u>Type</u>	<u>Make</u>	<u>Model No.</u>	<u>Serial No.</u>	<u>Size</u>	<u>Calib. Date</u>
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2. Measurements: The old diesel 7.5 HP pump is no longer in use. The original system has been replaced with a low pressure pivot.

E. FLOW CALCULATIONS☐ Additional Computation Sheets Attached

Measured Method:

A theoretical calculation was used to obtain the flow rate since a measurement was not available at the time of the exam.

$$Q = \frac{8.8 \times \text{Pump Efficiency} \times \text{Horse Power}}{\text{Lift} + (2.31 \times \text{PSI})}$$

Assume 70 % pump efficiency
 Lift to system 10 ft.
 Pump HP 7.5
 Gated pipe 10 PSI

$$\frac{8.8 \times 0.7 \times 7.5}{10 + (2.31 \times 10)} = \frac{45.2}{33.1} = 1.4 \text{ cfs or } 612.9 \text{ gpm}$$

Calculated flow exceeds the standard inch to the acre for this area. Recommend 0.7 cfs for this license. (0.02 in/ac X 35 acres = 0.7 cfs)

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 35 \text{ acres} \times 4 = 140 \text{ AF}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.7 \text{ cfs} \times 246 \text{ days} \times 1.9835 = 341.6 \text{ AF}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 140 \text{ AF}$$

G. NARRATIVE/REMARKS/COMMENTS

Application for permit was filed on April 12, 1991 in the name of JR Scientific Inc. for 1.4 cfs of Big Wood Canal Co. waste water for the irrigation of 70 acres. The permit was approved on April 5, 1991 and proof of beneficial use was filed on March 15, 1993. Permit 37-8385 was assigned to Jay and Lori Loesche on July 3, 2000.

The original system consisted of a 7.5 HP pump, a pond and 8 inch gated pipe. Although the original system is no longer in place the waste water when available can still be used for flood irrigation.

The application and the map submitted with the application did not reflect each other. The legal description for the place of use on the application was described as 70 acres in the NWNE of section 10. The map identified the place of use as the SWNE and the NWNE tracts of section 10. Somehow the permit was approved for the irrigation of 70 acres in only the NWNE tract of section 10. At the time of the exam the new owner stated that he only purchased the NWNE tract of section 10. After discussion with the State Office it was decided to drop the SWNE acres identified on the map from the license and reduce the license proportionately.

A measurement was not obtainable at the time of the exam so a theoretical horse power equation was calculated. A flow of 1.4 cfs or 612.9 gpm was calculated which is what the permit is for but exceeds the standard inch to an acre for the area. (0.02 in/ac X 35 acres = 0.7 cfs) The volume was calculated with the standard 4 feet to the acre. (35 acres X 4 = 140 AF)

Recommend a flow rate and volume of 0.8 cfs and 140 AF for the irrigation of 35 acres for this license.

After licensing George Gallup will file for a change of ownership.

Have conditions of permit approval been met? X Yes ____ No

H. RECOMMENDATIONS**1. Recommended Amounts**

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
IRRIGATION	03/15 to 11/15	0.70 CFS	140.00 AF
<u>Totals:</u>		0.70 CFS	140.00 AF

2. Recommended Amendments

____ Change P.D. as reflected above ____ Add P.D. as reflected above ____ None

X Change P.U. as reflected above ____ Add P.U. as reflected above ____ Other

I. AUTHENTICATION

Field Examiner's Name Sara Reeder Date 8/14/14

Reviewer Amber Smith Date 8/15/14

