

A. GENERAL INFORMATION

Exam Date: 12/20/13

- COLUMBIA RIVER

PLACE OF USE: DOMESTIC

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Method of Determination:

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</u> <u>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</u> <u>Size</u>
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*Code to correspond with No. on map and aerial photo

D. FLOW MEASUREMENTS

1.

<u>Measurement</u> <u>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:

E. FLOW CALCULATIONS

____ Additional Computation Sheets Attached

Measured Method:

Theoretical pump flow rate for 0.5 HP, 0.75 HP, and 1.0 HP (using 70% efficiency, 20 feet of lift, and 40 psi):

$$Q = (8.8 \times 0.5 \times 0.7) / (20 + (40 \times 2.31)) = 0.03 \text{ cfs}$$

$$Q = (8.8 \times 0.75 \times 0.7) / (20 + (40 \times 2.31)) = 0.04 \text{ cfs}$$

$$Q = (8.8 \times 1.0 \times 0.7) / (20 + (40 \times 2.31)) = 0.05 \text{ cfs}$$

The diversion rate to be licensed under this right will be limited to the requested 0.04 cfs

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) =$$

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

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

2. Volume Calculations for Other Uses:

Standard in-house domestic use = 0.6 AF

Standard exterior use = 0.6 AF

Total = 1.2 AF

G. NARRATIVE/REMARKS/COMMENTS

This permit was in-office field examined on 12/20/13 by myself, Craig Tesch. This permit authorizes the diversion of surface water to be used for domestic purposes. Surface water is supplied from the Snake River by an electric pump south of Lewiston, Idaho, in Hells Canyon.

Water is used for domestic purposes including standard indoor use for one household (cabin). Water is also used to irrigate a small lawn. The river and pump are located approximately 100 feet southwest of the cabin. Typical pump power for cabin use in that area would range from approximately 0.5 HP to 1.0 HP. Theoretical pump flow rate was calculated over a range of pumps (0.5 HP, 0.75 HP, and 1.0 HP) with the following variables: 70% efficiency, 20 feet of lift, and 40 psi resulting in discharge rates between 0.03 cfs to 0.05 cfs.

The diversion rate to be licensed under this right will be limited to the requested 0.04 cfs. The standard diversion volume is 0.6 AF each for internal and external domestic use, for a combined maximum volume of 1.2 AF. There are two other water rights in the same 40-acre tract. Water right 03-10195 is in the same 40-acre tract, but is for a different owner on a different tax lot. Water right 03-10191 has an overlapping POU on the tax lot for this right (03-10266) for a different owner.

The license will be conditioned to include a fish screen on the pump intake line. A small system such as this would need a small trash screen on the intake for the pump to operate and not burn out, and the size of the pump shouldnt produce a significant approach velocity.

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

H. RECOMMENDATIONS

1. Recommended Amounts

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
DOMESTIC	01/01 to 12/31	0.040 CFS	1.20 AF
<u>Totals:</u>		0.040 CFS	1.20 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 ☐ Other

I. AUTHENTICATION

Field Examiner's Name Craig Teal Date 12/20/13

Reviewer David A. Mohr Date 12-31-13



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