

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

A. GENERAL INFORMATION

Permit No: 63-33954

Exam Date: 11/26/2014

1. Does this qualify for an in-office field exam (IDAPA 035.02.r)? ☒ Yes ☐ No
- a. 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: Name: Stephen Burton
- Owner of Record Correct? ☒ Yes ☐ No
- Address of Record Correct? ☒ Yes ☐ No
- If No: Address

3. Beneficial Use Fees have been paid: ☒ Yes ☐ No Receipt No: CO99449

4. **SOURCE** **TRIBUTARY**

Ground Water

Method of Determination: Well drillers report was submitted with application for permit.Change in Source: ☐ Yes ☒ No**B. OVERLAP REVIEW**

1. Other water rights with the same place of use: Overlap? ☐ Yes ☒ No

Water Right No.	Source	Purpose of Use	Basis

Comments: No POU overlap.

2. Other water rights with the same point of diversion: Overlap? ☐ Yes ☒ No

Water Right No.	Source	Purpose of Use	Basis

Comments: No POD overlap.**C. DIVERSION AND DELIVERY SYSTEM****1. LOCATION OF POINT(S) OF DIVERSION:**

Source	Govt. Lot	1/4	1/4	1/4	Sec.	Twp.	Rge.		County
GROUND WATER			NW	NW	36	05N	02W		ADA

Method of Determination: Legal Description in permit validated by PLS data and mapping.Change in POD? ☐ Yes ☒ NoAmendment Required? ☐ Yes ☒ No

2. **PLACE OF USE:** Use: Domestic & 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	
05N	02W	36						D											
								2.0											2.0

Method of Determination: Map of property submitted by land owner identifies POU clearly. Aerial photography used with ArcMap tools to measure irrigated land area.

Change in POU? ☐ Yes ☒ NoAmendment Required? ☐ Yes ☒ No

3.

☒ Delivery System Diagram Attached (required). Indicate all major components and distances between components.

Indicate weir size/pipe as applicable.

☒ Aerial Photo Attached (required for irrigation of 10+ acres).☐ Photo of Diversion and System Attached

4. Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
Unk.	Unk	Unk	Unk	Unk	Unk

*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

2. Measurements: In-office field exam. Theoretical flow included in report.**E. FLOW CALCULATIONS**☒ Additional Computation Sheets Attached

Measured Method:

$$Q = \frac{8.8 * (\text{Efficiency}) * \text{hp}}{\text{depth to water} + 2.31 * (\text{psi}) + \text{friction}}$$

Efficiency = 0.70

Depth to water = 195 ft.

psi = 40-60

hp = 5

See attached theoretical sheet.

Measurement = 0.10 cfs**Permit allowed = 0.08 cfs****License recommend for 0.08 cfs.**

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 2.0 \times 4.5 = 9.0$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.08 \times 260 \times 1.9835 = 41.3 \text{ af}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 9.0 \text{ af}$$

2. Volume Calculations for Other Uses:

Administrator memo #22 recommends a volume of 0.6 af per home when irrigation is identified under irrigation component of the right.

G. PURPOSE OF USE

Irrigation ☒ Yes ☐ No # Stock 0 Domestic # of Homes 1

Other: < >

Change in Purpose of Use? ☐ Yes ☒ No

Method of Determination: Information in the water right file is consistent with aerial photography of the property.

If Yes: From Use _____ To Use _____ Amount _____ CFS _____ AFA _____

H. NARRATIVE/REMARKS/COMMENTS

Permit 63-33954 authorized the diversion of 0.08 cfs from ground water for stockwater and domestic purposes. Because of the small permitted diversion rate and POU, this qualifies for an in-office field exam. The exam was completed on Nov 26, 2014 by WRA Patrick Kelly.

Legal description of POU & POD on the permit were found to be accurate for the property in the name of Stephen & Vicki Burton. A map outlining the POU and POD was submitted with the application for permit was useful in outlining the place of use. Aerial photography of the land showed grape fields and domestic structures.

Overlap review showed another irrigation right for the Jacob Canal Company. This is an irrigation company that provides water to the area. Combined use limits will be placed on conditions of approval to prevent an enlargement of water use. The well was drilled prior to any development of the land. I found no information that would suggest an overlap at the point of diversion exists.

Applicant indicated on application for permit a 5 horsepower pump was used for the system. A static water level of 185 ft was taken from the well drillers report. 10 feet were added to account for some drawdown of the well. A range of discharge pressures were used under what we would expect to see from in home domestic tanks (40-60 psi). Theoretical average flow rate is 0.10 cfs.

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>
Domestic	01/01-12/31	0.02 cfs	0.6 af
Irrigation	03/01 – 11/15	0.06	9.0
	<u>Totals</u>	0.08 cfs	9.6 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

Other: < >

J. AUTHENTICATION

Field Examiner's Name Patricia Willey Date 11-26-2014

Reviewer Camela Skaggs Date 12-02-2014

State of Idaho
Department of Water Resources
Field Exam Map
63-33954

This map depicts the IRRIGATION place of use boundary for this water right at the time of this approval and is attached to the approval document solely for illustrative purposes.

02W



-  Point of Diversion
-  Place Of Use Boundary
-  Townships
-  PLS Sections
-  Quarter Quarters

0 0.05 0.1 0.2 Miles



THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 63-33954
 Reviewer: Patrick Kelly
 Date of Review: 11/26/2014

P/D No.:	Senerio 1	Senerio 2	Senerio 3
PUMP HORSEPOWER	5	5	5
BOOSTER HORSEPOWER	0	0	0
PUMPING LEVEL	195	195	195
DISCHARGE PRESSURE	40	50	60
RATE OF FLOW (cfs)	0.11	0.10	0.09 0.10

The above calculates the formula =
$$Q = \frac{8.8 * (\text{Efficiency}) * \text{hp}}{\text{depth to water} + 2.31 * (\text{psi}) + \text{friction}}$$

Assumptions: %70 efficiency.
 No Friction

Examiners Notes:

Applicant indicated on application for permit a 5 horsepower pump was used for the system. A static water level of 185 ft was taken from the well drillers report. 10 feet were added to account for some drawdown of the well. A range of discharge pressures were used under what we would expect to see from in home domestic tanks (40-60 psi). Theoretical average flow rate is 0.10 cfs.