

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

A. GENERAL INFORMATION

Permit No: 63-33212

Exam Date: 11/17/2014

1. Does this qualify for an in-office field exam (IDAPA 035.02.r)? ☒ Yes ☐ No
- Irrigation of 5 acres or less
 - Storage of up to 14.6 AF for stockwater purposes only
 - Any use other than irrigation or storage, if the combined diversion rate is 0.24 cfs or less
 - Other < >

2. Current Owner: Name: David Beardmore
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: NA

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

Groundwater

Method of Determination: Permit review contains an aerial photo map that outlined POD & POU. A 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
United Water WR's	Groundwater/Boise River	Municipal	Decreed

Comments: POU overlap review shows 63-9103B for Harris; land is west neighbor.

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	¼	¼	¼	Sec.	Twp.	Rge.		County
GROUNDWATER			NW	SW	8	2N	2E		ADA

Method of Determination: Legal Description in permit validated by PLS data and mapping.

Change in POD? ☐ Yes ☒ No

Amendment 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	
2N	2E	8										1.0							1.0

Method of Determination: Map of property submitted by land owner identifies POU clearly. ArcMap tools used to measure beneficial use area.

Change in POU? ☐ Yes ☒ No

Amendment 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 = 216 ft.

psi = 35-55

hp= 1-5

See attached theoretical sheet.

Average flow rate is 0.05 cfs

Conditions state 0.03 cfs/acre * 1 acre = 0.03 cfs

Measurement = 0.05 cfs

Permit allowed = 0.15 cfs

License recommend for 0.03 cfs.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 1.0 \times 4.5 = 4.5 \text{ af}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.03 \times 260 \times 1.9835 = 15.5 \text{ af}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 4.5 \text{ af}$$

2. Volume Calculations for Other Uses: None.**G. PURPOSE OF USE**Irrigation ☒ Yes ☐ No # Stock 0 Domestic # of Homes 0

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 63-33212 authorized the diversion of 0.15 cfs from groundwater for irrigation purposes. Based on the small permitted diversion rate and POU, this qualifies for an in-office field exam. The exam was completed on Nov 17, 2014 by WRA Patrick Kelly.

Legal descriptions identified on the permit were used to locate the property in the name of David Beardmore. Aerial photography was used to measure the area of development and irrigation water used on the land. ArcMap tools calculated an area of 1.0 acres which included trees and a yard irrigated on the property. The permit allowed the irrigation of 5.0 acres, however only 1 acre of irrigated ground was found.

Overlap review shows a number of water rights in the name of United Water. These are municipal water rights. WR 63-9103B is a decreed right for 5.0 acres of land immediately west of the Beardmore property and not pertinent to their land. No overlap of POD was found.

A range of small hp pumps were assumed given this is for a relatively small POU. Static water level of 206 feet was recorded on well drillers log. An additional 10 feet was added for drawdown purposes. A total of 216 ft was used for pumping level. A range of discharge pressures were used under what we would expect to see from a domestic irrigation system (35-55 psi). Theoretical average flow rate is 0.05 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>
Irrigation	03/01-11/15	0.03 cfs	4.5 af
<u>Totals</u>		0.03 cfs	4.5 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 Wiley Date 11/17/2014

Reviewer Camille Skaggs Date 11-19-2014

State of Idaho
Department of Water Resources
Field Exam Map
63-33212

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.

02E



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

0 0.04 0.08 0.16 Miles



THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 63-33212
 Reviewer: Patrick Kelly
 Date of Review: 11/17/2014

P/D No.:	Senerio 1	Senerio 2	Senerio 3
PUMP HORSEPOWER	1	2	5
BOOSTER HORSEPOWER	0	0	0
PUMPING LEVEL	216	216	216
DISCHARGE PRESSURE	35	45	55
RATE OF FLOW (cfs)	0.02	0.04	0.09 0.05

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:

A range of small hp pumps were assumed given this is for a relatively small POU. Static water level of 206 feet was recorded on well drillers log. An additional 10 feet was added for drawdown purposes. A total of 216 ft was used for pumping level. A range of discharge pressures were used under what we would expect to see from a domestic irrigation system (35-55 psi). Theoretical average flow rate is 0.05 cfs.

Process	Basin Sequence	Draft	Owner	Source	POD/POU	NENE	NWNE	SWNE	SENE	NENW	NWNW	SWNW	SENW	NESW	NWSW	SWSW	SESW	NESE	NWSE	SWSE	SESE	Total Acres
Water Right	63-10010	N	LEE, MONROE M, LEE, RITA F	GROUND WATER	POD	X																0
Water Right	63-10010	N	LEE, MONROE M, LEE, RITA F	GROUND WATER	POU	X																0
Water Right	63-10150	N	UNITED WATER IDAHO	GROUND WATER	POU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0
Water Right	63-10386	N	UNITED WATER IDAHO	GROUND WATER	POU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0
Water Right	63-10391	N	UNITED WATER IDAHO	GROUND WATER	POU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0
Water Right	63-10405	N	UNITED WATER IDAHO	GROUND WATER	POU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0
Water Right	63-10928	N	PEREGRINE FUND INC	GROUND WATER	POU											0.6						0.6
Water Right	63-10928	N	PEREGRINE FUND INC	GROUND WATER	POU											X						0
Water Right	63-11558	N	UNITED WATER IDAHO	GROUND WATER	POU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0
Water Right	63-12363	N	UNITED WATER IDAHO	GROUND WATER	POU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0
Water Right	63-169F	N	UNITED WATER IDAHO	BOISE RIVER	POU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0
Water Right	63-243E	N	UNITED WATER IDAHO	BOISE RIVER	POU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0
Water Right	63-243H	N	UNITED WATER IDAHO	BOISE RIVER	POU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0
Water Right	63-2500	N	UNITED WATER IDAHO	GROUND WATER	POU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0
Water Right	63-2506	N	UNITED WATER IDAHO	GROUND WATER	POU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0
Water Right	63-2576	N	UNITED WATER IDAHO	GROUND WATER	POU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0
Water Right	63-2595	N	UNITED WATER IDAHO	GROUND WATER	POU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0
Water Right	63-2605	N	UNITED WATER IDAHO	GROUND WATER	POU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0
Water Right	63-2668	N	UNITED WATER IDAHO	GROUND WATER	POU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0
Water Right	63-2703	N	UNITED WATER IDAHO	GROUND WATER	POU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0
Water Right	63-2808	N	UNITED WATER IDAHO	GROUND WATER	POU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0
Water Right	63-2874	N	UNITED WATER IDAHO	GROUND WATER	POU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0
Water Right	63-2892	N	UNITED WATER IDAHO	GROUND WATER	POU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0
Water Right	63-2915	N	UNITED WATER IDAHO	GROUND WATER	POU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0
Water Right	63-2954	N	UNITED WATER IDAHO	GROUND WATER	POU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0
Water Right	63-2956	N	UNITED WATER IDAHO	GROUND WATER	POU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0
Water Right	63-2989	N	UNITED WATER IDAHO	GROUND WATER	POU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0
Water Right	63-3064	N	UNITED WATER IDAHO	GROUND WATER	POU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0
Water Right	63-3073	N	UNITED WATER IDAHO	GROUND WATER	POU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0
Water Right	63-3105	N	UNITED WATER IDAHO	GROUND WATER	POU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0
Water Right	63-3112	N	UNITED WATER IDAHO	GROUND WATER	POU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0
Water Right	63-3128	N	UNITED WATER IDAHO	GROUND WATER	POU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0
Water Right	63-3164	N	UNITED WATER IDAHO	GROUND WATER	POU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0
Water Right	63-3172	N	UNITED WATER IDAHO	GROUND WATER	POU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0
Water Right	63-31797	N	UNITED WATER IDAHO	GROUND WATER	POU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0
Water Right	63-31798	N	UNITED WATER IDAHO	GROUND WATER	POU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0
Water Right	63-31856	N	UNITED WATER IDAHO	GROUND WATER	POU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0
Water Right	63-31857	N	UNITED WATER IDAHO	GROUND WATER	POU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0
Water Right	63-31879	N	UNITED WATER IDAHO	GROUND WATER	POU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0
Water Right	63-3202	N	UNITED WATER IDAHO	GROUND WATER	POU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0
Water Right	63-3239	N	UNITED WATER IDAHO	GROUND WATER	POU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0
Water Right	63-3291	N	UNITED WATER IDAHO	GROUND WATER	POU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0
Water Right	63-3292	N	UNITED WATER IDAHO	GROUND WATER	POU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0
Water Right	63-3293	N	UNITED WATER IDAHO	GROUND WATER	POU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0
Water Right	63-3295	N	UNITED WATER IDAHO	GROUND WATER	POU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	0
Water Permit	63-33212	N	BEARDMORE, DAVID	GROUND WATER	POD										X							0

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