

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

A. GENERAL INFORMATION

Permit No: 85-15709

Exam Date: 3/24/2014

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: Ted & Linda Zmak
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: CO98307

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

Groundwater

Method of Determination: Applicant submitted an aerial photo map that outlined POD & POU.

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: There are no other water rights that share POU. 85-15392 is for a domestic/irrigation right directly north. 85-7652 & 85-7651 are for neighbors to the east. Permit 85-15730 is use for the neighbor directly west.

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

Water Right No.	Source	Purpose of Use	Basis

Comments: There are no other water rights that share POD. All of the referenced water rights in POU overlap have their own diversion well.

C. DIVERSION AND DELIVERY SYSTEM1. **LOCATION OF POINT(S) OF DIVERSION:**

Source	Govt. Lot	¼	¼	¼	Sec.	Twp.	Rge.		County
Ground water			SE	SW	13	35N	05W		NEZ PERCE

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	
35N	05W	13												X					
													4.2						4.2

Method of Determination: Map of property submitted by land owner identifies POU clearly. PLSS data through ArcMap match.

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

☐ 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
0054436	Unk	65	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 so theoretical not applicable.

E. FLOW CALCULATIONS

☒ Additional Computation Sheets Attached

Measured Method:

According to administrator memo #22, domestic use for 1 home is authorized a flow rate up to 0.04 cfs

Administrator memo #17 authorizes a irrigation flow rate of 0/03 cfs per acre.

@ 4.2 acres * 0.03 cfs/acre = 0.13 cfs

See the theoretical calculation sheet for a calculated measurement ranging a number of scenarios providing an average flow rate of 0.50 cfs.

Measurement = 0.13 cfs

Permit allowed = 0.10 cfs

License recommend for 0.10 cfs.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 4.2 \times 4.0 = 16.8$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.10 \times 289 \times 1.9835 = 57.3$$

V = Smaller of $\frac{V}{I.R.}$ and $\frac{V}{D.R.}$ = 16.8

2. Volume Calculations for Other Uses:
Domestic use for in house use only is authorized 0.06 afa.

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 are consistent with aerial photography of the property.

Conversation with Mr. Zmac confirmed system and beneficial use.

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

H. NARRATIVE/REMARKS/COMMENTS

Permit 85-15709 authorized the use of 0.10 cfs from a well for domestic and irrigation water purposes. Based on the information provided in the water right file, this qualifies for an in-office field exam.

There was not a lot of description in the application for permit. A map of the property was sent in for a parcel of land that had not been developed. I was able to locate the property easily from the legal description on the permit. Historical aerial photography does show that a home and garage/barn have been built since the permit was issued. Irrigation to the property has been done and shows on photos as well.

I contacted Mr. Zmak by phone to confirm that no surface water shares existed on the property as well as requesting information about his system in place, such as horsepower. He confirmed that there were no other shares used on the property and that the well they drilled is the sole source of water to the property. Neighbors in the area use single wells for water use. There is no issue of overlap.

Theoretical calculations were completed and attached to this report. The well drillers report was included in the application and used this to identify lift. Mr. Zmak indicated on the phone that he runs a 65 hp pump. This gave a strong theoretical flow rate of 0.50 cfs. The limit on flow rate turned out to be the limit that was requested by permit, so the full 0.10 on permit is being recommended.

Theoretical calculations for flow were done to verify the ability to supply the requested water rate. There were no further issues or reasons to request information.

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	0.03 cfs	0.6 af
Irrigation	02/15-11/30	0.10 cfs	16.8 af
	<u>Totals</u>	0.10 cfs	17.4 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 ☒ None

Other: < >

J. AUTHENTICATION

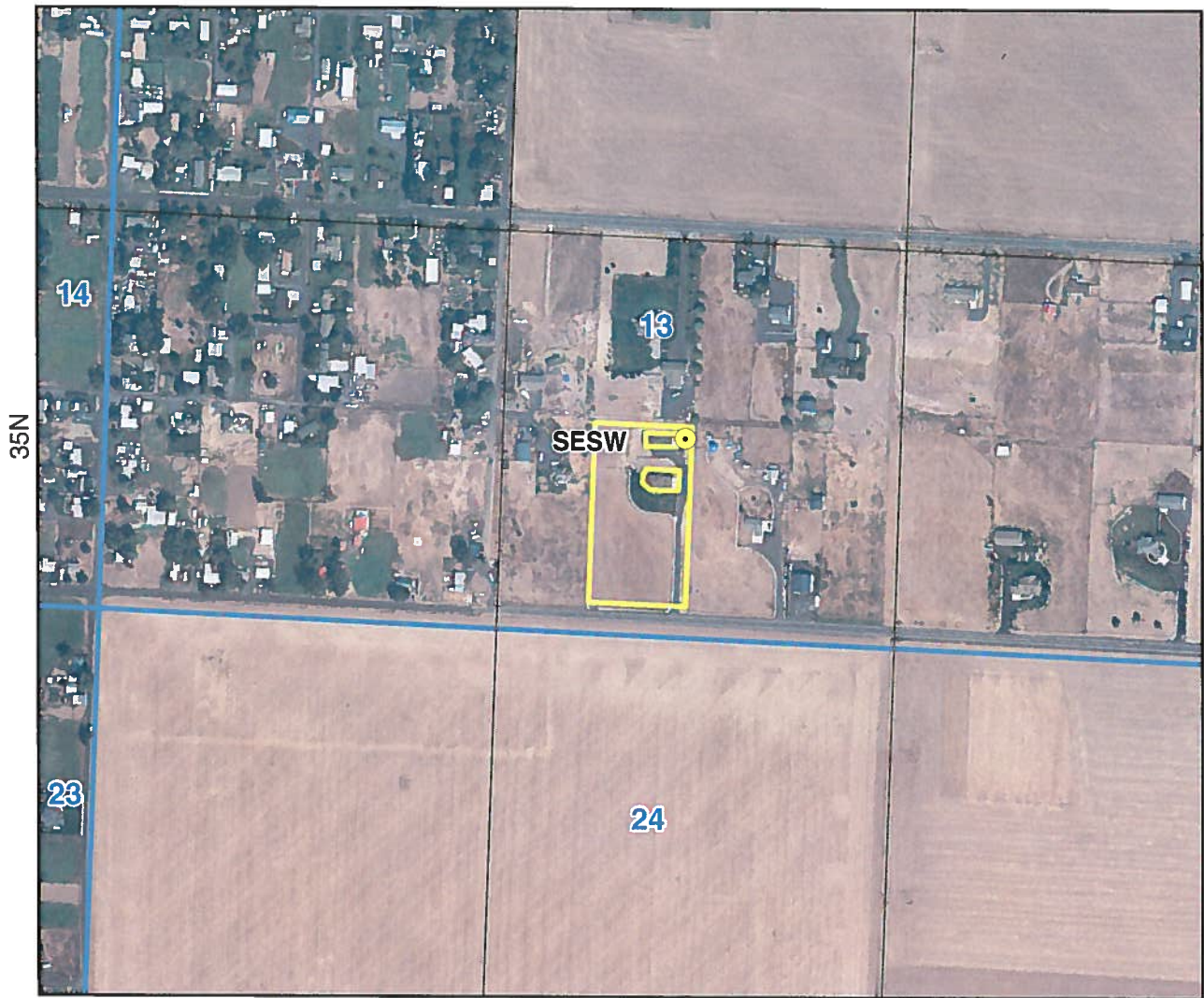
Field Examiner's Name Patrick Kelley Date 03/27/14

Reviewer Daniel A. McKee Date 4-8-14

State of Idaho
Department of Water Resources
Field Exam Map
85-15709

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.

05W



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

0 0.075 0.15 0.3 Miles



THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 85-15709
 Reviewer: Patrick Kelly
 Date of Review: 3/26/2014

P/D No.:	Senerio 1	Senerio 2	Senerio 3
PUMP HORSEPOWER	65	65	65
BOOSTER HORSEPOWER	0	0	0
PUMPING LEVEL	685	685	685
DISCHARGE PRESSURE	40	50	60
RATE OF FLOW (cfs)	0.52	0.50	0.49 0.50

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:

Lift was taken from well drillers report. Used 40-60 pressure using standard turn on shut off limits for domestic pressure tanks. Average rate of flow is 0.50 cfs. This represents that the permitted 0.04cfs is capable of being supplied to the property.

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	85-11076	N	ESTATE OF NEIL LITCHFIELD, GEIGER	SPRING, UNNAMED STREAM	POD					X		X	X									0
Water Right	85-11076	N	ESTATE OF NEIL LITCHFIELD, GEIGER	SPRING, UNNAMED STREAM	POU					X	X	X	X									0
Water Right	85-11087	N	UNITED STATES OF AMERICA ACTING	SWEETWATER CREEK	POU				X			X	X	X	X	X	X	X		X	X	0
Water Right	85-11103	N	HOWARD, DALLAS R	LINDSAY CREEK, UNNAMED STREAM	POD								X									0
Water Right	85-11103	N	HOWARD, DALLAS R	LINDSAY CREEK, UNNAMED STREAM	POU								X									0
Water Right	85-15343	N	FAGAN, MARK B	GROUND WATER	POD															X		0
Water Right	85-15343	N	FAGAN, MARK B	GROUND WATER	POU															2.5		2.5
Water Right	85-15343	N	FAGAN, MARK B	GROUND WATER	POU															X		0
Water Right	85-15356	N	LEWISTON ORCHARDS IRRIGATION DISTRICT	GROUND WATER	POU							X	X	X	X	X	X	X		X	X	0
Water Right	85-15392	N	GRECO, JOE; GRECO, TRACI	GROUND WATER	POD												X					0
Water Right	85-15392	N	GRECO, JOE; GRECO, TRACI	GROUND WATER	POU												2.2					2.2
Water Right	85-15392	N	GRECO, JOE; GRECO, TRACI	GROUND WATER	POU												X					0
Water Right	85-15424	N	UNITED STATES OF AMERICA ACTING	WAHA LAKE	POU				X			X	X	X	X	X	X	X		X	X	0
Water Permit	85-15709	N	ZMAK, LINDA; ZMAK, TED	GROUND WATER	POD												X					0
Water Permit	85-15709	N	ZMAK, LINDA; ZMAK, TED	GROUND WATER	POU												5.0					5
Water Permit	85-15709	N	ZMAK, LINDA; ZMAK, TED	GROUND WATER	POU												X					0
Water Permit	85-15730	N	ARD, CAROL; ARD, DAVID	GROUND WATER	POD												X					0
Water Permit	85-15730	N	ARD, CAROL; ARD, DAVID	GROUND WATER	POU												4.2					4.2
Water Right	85-16	N	UNITED STATES OF AMERICA ACTING	SWEETWATER CREEK	POU				X			X	X	X	X	X	X	X		X	X	0
Water Right	85-2049	N	UNITED STATES OF AMERICA ACTING	WAHA LAKE	POU				X			X	X	X	X	X	X	X		X	X	0
Water Right	85-2063	N	UNITED STATES OF AMERICA ACTING	WAHA LAKE	POU				X			X	X	X	X	X	X	X		X	X	0
Water Right	85-2065	N	UNITED STATES OF AMERICA ACTING	WEBB CREEK	POU				X			X	X	X	X	X	X	X		X	X	0
Water Right	85-2146	N	UNITED STATES OF AMERICA ACTING	WEBB CREEK	POU				X			X	X	X	X	X	X	X		X	X	0
Water Right	85-2147	N	UNITED STATES OF AMERICA ACTING	BROWNS CREEK, UNNAMED STREAM	POU				X			X	X	X	X	X	X	X		X	X	0
Water Right	85-4483	N	UNITED STATES OF AMERICA ACTING	LINDSAY CREEK, SWEETWATER CREEK	POU				X			X	X	X	X	X	X	X		X	X	0
Water Right	85-7146	N	LEWISTON ORCHARDS IRRIGATION DISTRICT	GROUND WATER	POU							X	X	X	X	X	X	X		X	X	0
Water Right	85-7428	N	LEWISTON ORCHARDS IRRIGATION DISTRICT	GROUND WATER	POU				X			X	X	X	X	X	X	X		X	X	0
Water Right	85-7651	N	BEST, ELAINE; CASTEEL	GROUND WATER	POD												X					0
Water Right	85-7651	N	BEST, ELAINE; CASTEEL	GROUND WATER	POU												1.5					1.5
Water Right	85-7651	N	BEST, ELAINE; CASTEEL	GROUND WATER	POU												X					0
Water Right	85-7652	N	BEST, DAVE D	GROUND WATER	POD												X					0
Water Right	85-7652	N	BEST, DAVE D	GROUND WATER	POU												4.5					4.5
Water Right	85-7652	N	BEST, DAVE D	GROUND WATER	POU												X					0