

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

A. GENERAL INFORMATION

Permit No: 95-10171

Exam Date: 4/18/2014

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: SABO Well Water Assn
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: CO98483

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.

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.

C. DIVERSION AND DELIVERY SYSTEM**1. LOCATION OF POINT(S) OF DIVERSION:**

Source	Govt. Lot	¼	¼	¼	Sec.	Twp.	Rge.		County
Ground water			SE	NE	10	52N	04W		Kootenai

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	
52N	04W	10	D			D													
			1.5			1.5													3.0

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
Well	Unk	5	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 flow measurements not applicable.**E. FLOW CALCULATIONS**☒ Additional Computation Sheets Attached

Measured Method:

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

>>> 3.0 acres * 0.03 cfs/acre = 0.09 cfs

See the theoretical calculation sheet with a number of scenarios providing a calculated average flow rate of 0.06 cfs.

Administrator memo #22 authorizes a domestic flow rate of 0.04 cfs.

Measurement = 0.06 cfs**Permit allowed = 0.10 cfs****License recommend for 0.06 cfs.****F. VOLUME CALCULATIONS**

1. Volume Calculations for Irrigation:

0.5 acre/lot * 5 lots * 3.0 = 7.5 afV_{I.R.} = (Acres Irrigated) x (Irrigation Requirement) = _____V_{D.R.} = [Diversion Rate (cfs)] x (Days in Irrigation season) x 1.9835 = 0.06 X 365 X 1.9835 = 43.0

$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = \underline{7.5}$

2. Volume Calculations for Other Uses:

Domestic = 5 lots x 0.6 af = 3.0 af for in-house use.

Total volume = Domestic in house use + Domestic outside use = 3.0 af + 7.5 af = 10.5 af

G. PURPOSE OF USE

Irrigation ☒ Yes ☐ No # Stock 0 Domestic # of Homes 5

Other: < >

Change in Purpose of Use? ☒ Yes ☐ No

Method of Determination: Land owner has not developed 3 of the 5 lots and we are removing the irrigation component to the water right.

If Yes: From Use Irrigation To Use Delete Amount CFS AFA

H. NARRATIVE/REMARKS/COMMENTS

Permit 95-10171 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.

The application contained a map of POU & POD. The domestic component of the water right is for 5 homes. Aerial photography of the place of use shows that 3 of these lots within the POU have not been developed. A phone conversation with Herbert Loftin on April 18, 2014 confirmed that these homes have not yet been built, but that the water lines have been constructed and stubbed in. Because the properties' water lines have been established we are able to approve domestic use for the land.

The irrigation that was granted under permit 95-10171 will be removed at licensing. 1.5 acres of irrigation was permitted in the NENE QQ and 1.5 acres of irrigation was permitted in the SENE QQ. This would have stressed the southern 4 lots to share 1.5 acres to irrigate. By removing the irrigation component, each lot is allowed 0.5 acres to irrigate upon and the Department does not grant an irrigation right that at the time of licensing is not in use. Instead, IDWR will identify the volume of inhouse use of 0.5 acre per lot with the local headgate requirement. This totaled 10.5 af for both in and outside domestic use.

There was no information regarding pump horsepower in the application. The phone conversation with Mr. Loftin confirmed that there is a 5 hp pump in use on the well. Theoretical calculations were completed and attached to this report. Drillers report was included in the application for permit. The well did not find water until it reached 461 feet. Static water level was recorded at 310 feet. Given the geologic profile of the well and the small one foot aquifer deep below the surface, significant drawdown is expected. The well test data recorded a pumping level of 480. This is used in the theoretical. I also used 40-60 pressure using standard turn on shut off limits for domestic pressure tanks. Average rate of flow is 0.06 cfs. Average rate of flow for this described system is an estimated 0.06 cfs. Permit 95-10171 granted a higher flow rate of 0.10 cfs, however the system appears to be limited and will recommend 0.06 cfs for license.

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	0.06	10.5
	<u>Totals</u>	0.06 cfs	10.5 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 ☒ None

Other: < >

J. AUTHENTICATION

Field Examiner's Name Patricia Kelly Date 01/18/2014

Reviewer _____ Date _____

State of Idaho
Department of Water Resources

Field Exam Map

95-10171

This map depicts the DOMESTIC 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.



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

0 0.125 0.25 0.5 Miles



THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 95-10171
 Reviewer: Patrick Kelly
 Date of Review: 4/18/2014

P/D No.:	Senerio 1	Senerio 2	Senerio 3
PUMP HORSEPOWER	5	5	5
BOOSTER HORSEPOWER	0	0	0
PUMPING LEVEL	480	480	480
DISCHARGE PRESSURE	40	50	60
RATE OF FLOW (cfs)	0.05	0.05	0.05 0.0518

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:

Drillers report was included in the application for permit. The well did not find water until it reached 461 feet. Static water level was recorded at 310 feet. Given the geologic profile of the well, significant drawdown is expected. The well test data recorded a pumping level of 480. This is used in the theoretical. I used 40-60 pressure using standard turn on shut off limits for domestic pressure tanks. Average rate of flow is 0.06 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 Permit	95-10171	N	SABO WELL WATER ASSN	GROUND WATER	POD				X													0
Water Permit	95-10171	N	SABO WELL WATER ASSN	GROUND WATER	POU	1.5			1.5													3
Water Permit	95-10171	N	SABO WELL WATER ASSN	GROUND WATER	POU	X			X													0
Water Right	95-10588	N	GRIER, LONNA J; GRIER, ROBERT	GROUND WATER	POD													X				0
Water Right	95-10588	N	GRIER, LONNA J; GRIER, ROBERT	GROUND WATER	POU													2.0				2
Water Right	95-4606	N	LOFTIN, HERBERT H; LOFTIN, LOIS	GROUND WATER	POU	X																0
Water Right	95-8486	N	GRIER, ROBERT	GROUND WATER	POD													X				0
Water Right	95-8466	N	GRIER, ROBERT	GROUND WATER	POU													X				0
Water Right	95-8992	N	NORMS PLUMBING & HEATING INC; RAMSEY ESTATES HOMEOWNER S ASSN	GROUND WATER	POU	X			X									X				0
Water Right	95-9012	N	ELKHORN RANCH HOMEOWNER S ASSN INC	GROUND WATER	POD								X									0
Water Right	95-9012	N	ELKHORN RANCH HOMEOWNER S ASSN INC	GROUND WATER	POU		X	X	X	X												0

SECTION 11.

PROPERTIES TO THE EAST.