

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

A. GENERAL INFORMATION

Permit No: 65-23583

Exam Date: 11/18/2014

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: Big Willow Ranch LLC
- 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: CO99426

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

Big Willow Creek

Payette River

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: No POU overlap. 65-2601 & 65-3126 in application refers to stockwater use for land west of section 12.

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

Water Right No.	Source	Purpose of Use	Basis

Comments: Individual pump at same location as POD 65-13974.

C. DIVERSION AND DELIVERY SYSTEM

1. **LOCATION OF POINT(S) OF DIVERSION:**

Source	Govt. Lot	¼	¼	¼	Sec.	Twp.	Rge.		County
BIG WILLOW CREEK			NW	NW	8	08N	02W		PAYETTE

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	
08N	02W	12													S				

Method of Determination: Map of property submitted by land owner identifies POU clearly. Aerial photography confirms location of use.

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	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. 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 = 20 ft.

psi = 50-70

hp= 5

See attached theoretical sheet.

Average flow rate is 0.20 cfs

Measurement = 0.20 cfs**Permit allowed = 0.10 cfs****License recommend for 0.10 cfs.****F. VOLUME CALCULATIONS**

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = \underline{\hspace{2cm}}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = \underline{\hspace{2cm}}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = \underline{\hspace{2cm}}$$

2. Volume Calculations for Other Uses:

$$12 \text{ gh/d} \times 1,000 \text{ h} \times 365 \text{ d} / 1 \text{ af}/325,851.4 \text{ g} = \underline{13.4 \text{ af}}$$

G. PURPOSE OF USEIrrigation ☐ Yes ☒ No # Stock 1,000 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 65-23583 authorized the diversion of 0.10 cfs from Big Willow Creek for stockwater purposes. Given that the permitted diversion rate is less than 0.24 cfs, the license qualifies for an in-office field exam. The exam was completed on Nov 18, 2014 by WRA Patrick Kelly.

Legal description of POU & POD on the permit were used to locate the property in the name of JG Schwarz.. A map outlining the POU and POD was submitted with the application for permit and I found no errors in the information that was presented. Further inspection of aerial photography confirms location of livestock pens and corrals.

Overlap review showed no existing water rights POU on the lands within the NE SE QQ of Sec. 12. Permit owner suggested 2 water right numbers in the application for permit form, however these are stockwater and irrigation rights for property owned by the ranch to the east of the suggested 63-23583 POU. The POD is indicated to share the same location in the creek, however because the ranch uses a separate pump for the stockwater purpose, there is no overlap in POD.

Horsepower of pump was provided on application for perm. Lift was measured using the DRG map. Topography from the POD to the stalls shows an average rise of 20 feet. A range of discharge pressures were used under what we would expect to see at the pump (50-70psi). Theoretical average flow rate is 0.2 cfs. The permitted diversion rate of 0.10 will be the limiting factor on the 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>
Stockwater	01/01-12/31	0.10 cfs	13.4 af
	<u>Totals</u>	0.10 cfs	13.4 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 ☐ Other

Other: < >

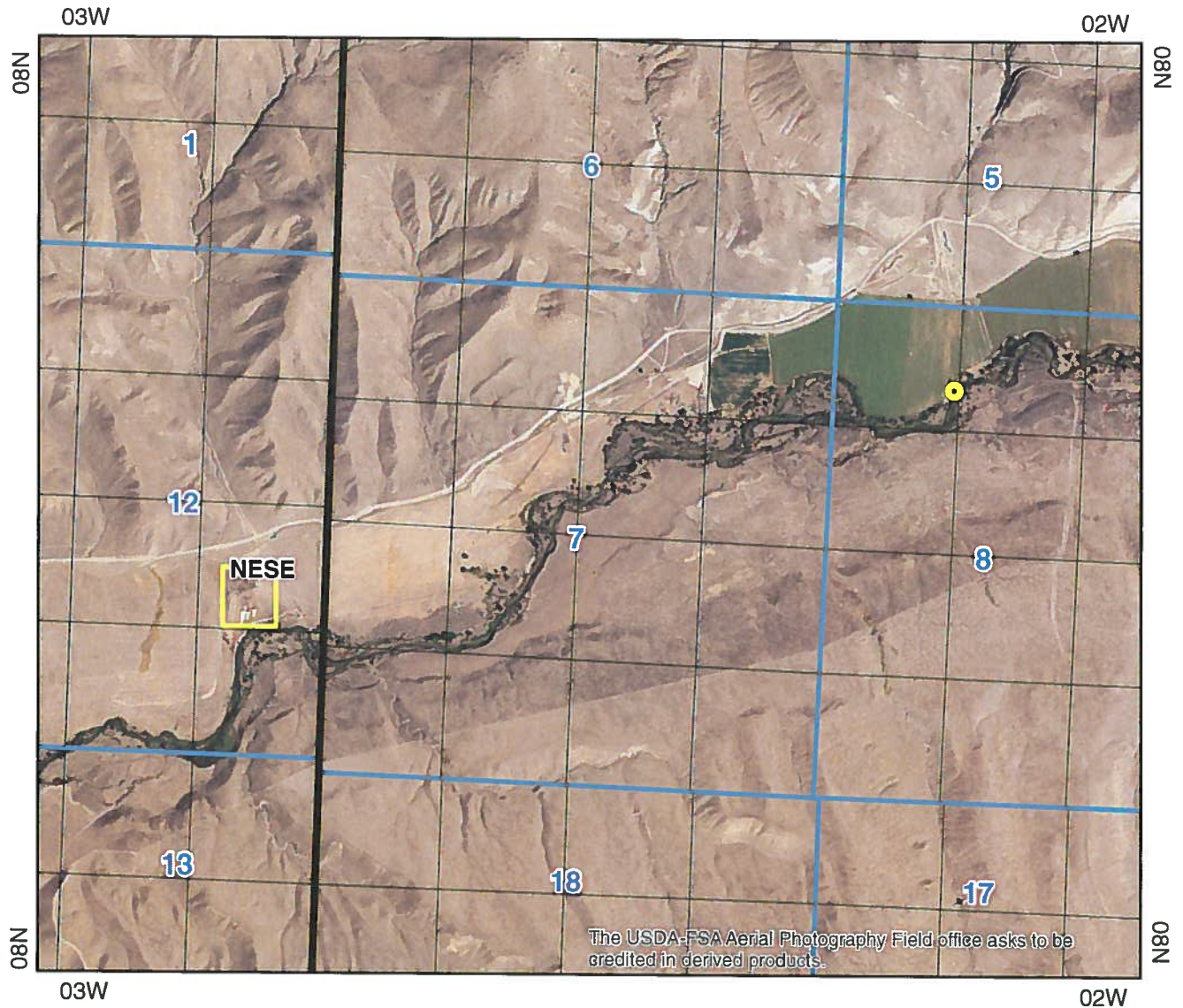
J. AUTHENTICATION

Field Examiner's Name Patricia Wiley Date 11/18/2014

Reviewer Camela Skuggs Date 11-19-2014

State of Idaho
Department of Water Resources
Field Exam Map
65-23583

This map depicts the STOCKWATER 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 0.225 0.45 0.9 Miles



THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 65-23583
 Reviewer: Patrick Kelly
 Date of Review: 11/18/2014

P/D No.:	Senerio 1	Senerio 2	Senerio 3
PUMP HORSEPOWER	5	5	5
BOOSTER HORSEPOWER	0	0	0
PUMPING LEVEL	15	20	25
DISCHARGE PRESSURE	50	60	70
RATE OF FLOW (cfs)	0.24	0.19	0.16 0.20

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:

Hp of pump was provided on application for permt. Lift was measured using the DRG map. Topography from the POD to the stalls shows an average rise of 20 feet. A range of discharge pressures were used under what we would expect to see at the pump (50-70psi). Theoretical average flow rate is 0.2 cfs.