

STATE OF IDAHO  
DEPARTMENT OF WATER RESOURCES  
BENEFICIAL USE FIELD REPORT

**A. GENERAL INFORMATION**

Permit No: 85-15767  
Exam Date: 06/10/2020

1. Current Owner:  
MARK WITTMAN 6045 CACTUS LN LEWISTON ID 83501 AND  
JOAN WITTMAN 6045 CACTUS LN LEWISTON ID 83501
2. Accompanied by: Mark Wittman  
Phone No: 208-553-8709  
Address: Same as above  
Relationship to permit Holder: Permit Holder.

3. **SOURCE:**  
GROUND WATER

Method of Determination: DRG and Arcmap.

**B. OVERLAP REVIEW**

1. Other water rights with the same place of use: YES Overlap

Water Right No.	Source	Purpose of Use	Basis
85-15792	TAMMANY CREEK	IRRIGATION	PERMIT IN PROCESS FOR LICENSE

Comments: WR 85-15792 and this water right, 85-15767, have overlapping irrigation POU, but use separate water sources. Condition X35 was applied to mitigate overlap concerns.

2. Other water rights with the same point-of-diversion: YES Overlap

Water Right No.	Source	Purpose of Use	Basis
85-15768	GROUNDWATER	IRRIGATION/STOCKWATER	PERMIT IN PROCESS FOR LICENSE

Comments: WRs 85-15768 and this water right, 85-15767, use the same well D0067672 as their POD; well services 2 separate parcels owned by applicant.

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

GROUND WATER SE¼ SE¼, Sec. 23, Twp 35N, Rge 06W, B.M. NEZ PERCE County

Method of Determination: GPS; POD is a well located at -117°02.712, 46°21.483.

**PLACE OF USE:** IRRIGATION

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
35N	06W	23																2.4	2.4

Total Acres: 2.4

**PLACE OF USE: STOCKWATER**

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
35N	06W	23																X	

Method of Determination: Arcmap and Field Exam.

3.

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

☒ Indicate weir size/pipe as applicable.☒ Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.☒ Aerial Photo Attached (required for irrigation of 10+ acres).☒ Photo of Diversion and System Attached

4.

Well or Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
D0067672	UNKOWN	5			

**D. FLOW MEASUREMENTS**

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
5 GAL BUCKET TEST						

2. Measurements: Three 5 gallon bucket tests were completed from frost free hydrant, with average of three resulting in diversion flow rate of 5 gal / 11.98 sec x 60 sec/min = 25 gpm = **0.06 cfs**.

**E. FLOW CALCULATIONS**☒ Additional Computation Sheets Attached

Measured Method: 5 GAL Bucket Test = (5 gal / 11.77 sec) x 60 sec/min = 25.49 gpm  
 = (5 gal / 11.48 sec) x 60 sec/min = 26.13 gpm  
 = (5 gal / 12.77 sec) x 60 sec/min = 23.49 gpm

Average of 3ea 5 GAL Bucket Tests = (25.49 gpm + 26.13 gpm + 23.49 gpm) / 3 = 25.04 gpm = 0.06 cfs

**F. VOLUME CALCULATIONS**

1. Volume Calculations for irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 2.4 \text{ acres} \times 4.0 \text{ afa} = 9.6 \text{ af}$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.06 \text{ cfs} \times 294 \text{ days} \times 1.9835 = 35.00$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = \mathbf{9.6 \text{ af}}$$

2. Volume Calculations for Other Uses:

Stockwater Diversion Rate = **0.02 cfs** for 1 horse and 4 cows

Stockwater Annual Volume = 5 head mixed stock x 12 gpd x 365 days = 21,900 gal / 325,850 gal/af = 0.067 af = **0.1 af**, after applying rounding in accordance with department admin memo, application processing memo No. 6, significant figures

Maximum Diversion Volume = 9.6 af (irrigation component) + 0.1 af (stockwater component) = **9.7 af**

**G. NARRATIVE/REMARKS/COMMENTS**

Field exam conducted on 6/10/2020 with applicant, Mark Wittman, showed a well with 5 hp pump diverting water to a 120 gal pressure tank for irrigation and stockwater use. With applicants help the pressure tank was isolated and shut off, and 3ea 5-gal bucket tests were completed from the systems frost free hydrant with the following results:

5 GAL Bucket Tests = (5 gal / 11.77 sec) x 60 sec/min = 25.49 gpm  
= (5 gal / 11.48 sec) x 60 sec/min = 26.13 gpm  
= (5 gal / 12.77 sec) x 60 sec/min = 23.49 gpm

Average of 3ea 5 GAL Bucket Tests = (25.49 gpm + 26.13 gpm + 23.49 gpm) / 3 = 25.04 gpm = 0.06 cfs

In addition to the 5 gal bucket test, a Theoretical Pumping equation was completed that supports the **0.06 cfs** diversion rate (see attached), which will be applied as the Maximum Diversion Rate for licensing. The applicant is authorized a diversion rate of **0.02 cfs** for the stockwater component, but is limited by pump performance at time of field exam, and as such the 0.02 cfs is not additive to the 0.06 cfs applied to license.

At time of exam, applicant used his well to irrigate portions of two parcels. For this WR, irrigation was occurring from an above ground sprinkler system, and the irrigated area was clearly defined. Irrigation acreage was traced out using arcmap equaling 2.4 acres, and the annual volume associated with irrigation component equals 2.4 acres x 4.0 afa = **9.6 af**, which will be applied to license.

Applicant had 4 cows and 1 horse annotated on Statement of Completion form, and stock was observed at property during field exam. Applicant stated he rotates stock from field to field in conjunction with irrigating throughout the season, and fills stock tanks from frost free hydrants. The stockwater component annual volume equals 5 head mixed stock x 12 gpd x 365 days = 21,900 gal / 325,850 gal/af = 0.067 af = **0.1 af**, after applying rounding in accordance with department admin memo, application processing memo No. 6, significant figures. The overall Maximum Diversion Volume for license equals 9.6 af (irrigation component) + 0.1 af (stockwater component) = **9.7 af**

At time of field exam, the domestic component from permit had not been put to beneficial use, and was removed during licensing review. Conditions 046, R62, and WB5 were removed from license. Condition X02 was adapted to reflect 5 head mixed stock. Condition R66 was added to identify irrigation of no more than 0.03 cfs per acre nor more than 4.0 afa per acre at the field head gate for irrigation of the POU. Condition F06 was added due to WR 85-15767 and 85-15768 sharing same well. Condition X35 was added due to this water right and WR 85-15768 using the same well for diversion, and limiting the two water rights to a combined diversion rate of 0.06 cfs. A second condition X35 was added due to this water right and WR 85-15792 having irrigation overlap at POU. All other conditions remain on license. WR 85-15792 and this water right, 85-15767, have overlapping irrigation POU, but use separate water sources. Condition X35 was applied to mitigate overlap concerns limiting both water rights when combined to 0.03 cfs per acre or 4.0 afa per acre, and the irrigation of 4.3 acres at POU.

Have conditions of permit approval been met?  X  Yes   No

**H. RECOMMENDATIONS****1. Recommended Amounts**

<u>Beneficial Use</u>	<u>Period of Use</u>	<u>Rate of Diversion</u>	<u>Annual Volume</u>
IRRIGATION	02/15 to 11/30	0.06 CFS	9.6 AF
STOCKWATER	01/01 to 12/31	0.02 CFS	0.1 AF
<b><u>Totals:</u></b>		0.06 CFS	9.7 AF

**2. Recommended Amendments**

\_\_\_\_\_ Change P.D. as reflected above      \_\_\_\_\_ Add P.D. as reflected above      X None

\_\_\_\_\_ Change P.U. as reflected above      \_\_\_\_\_ Add P.U. as reflected above      X None

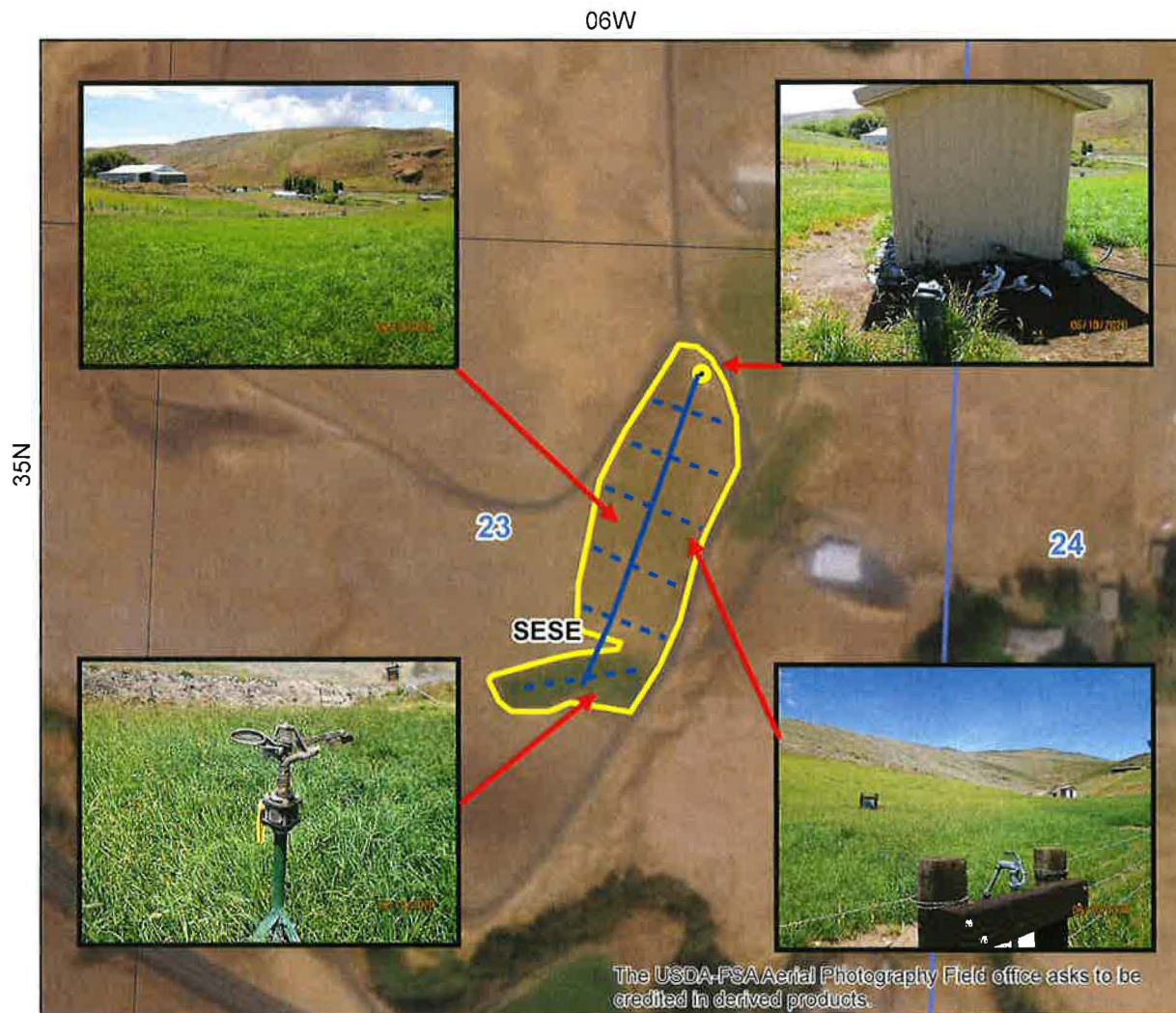
**I. AUTHENTICATION**      Luke Bates - Water Resource Agent

Field Examiner's Name  Date 6/30/2020

Reviewer Adam Fink Date 6/30/2020

State of Idaho  
Department of Water Resources  
**Attachment to Field Exam**  
85-15767

IRRIGATION system diagram.



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

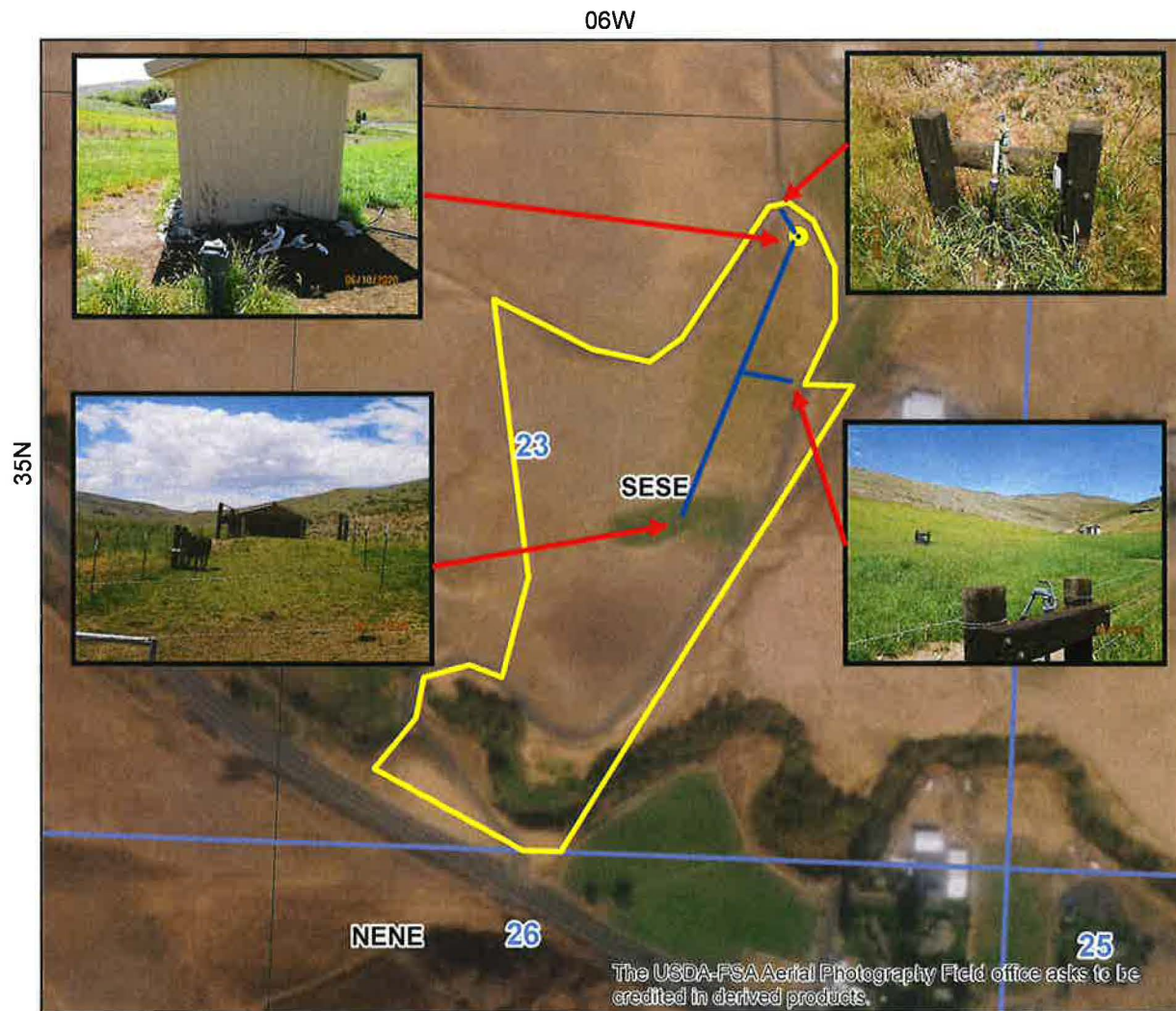
0 0.035 0.07 0.14 Miles





State of Idaho  
Department of Water Resources  
**Attachment to Field Exam**  
85-15767

STOCKWATER system diagram.



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

0 0.0375 0.075 0.15 Miles









POD - WELL D0067672





WELL TAG No. D0067672

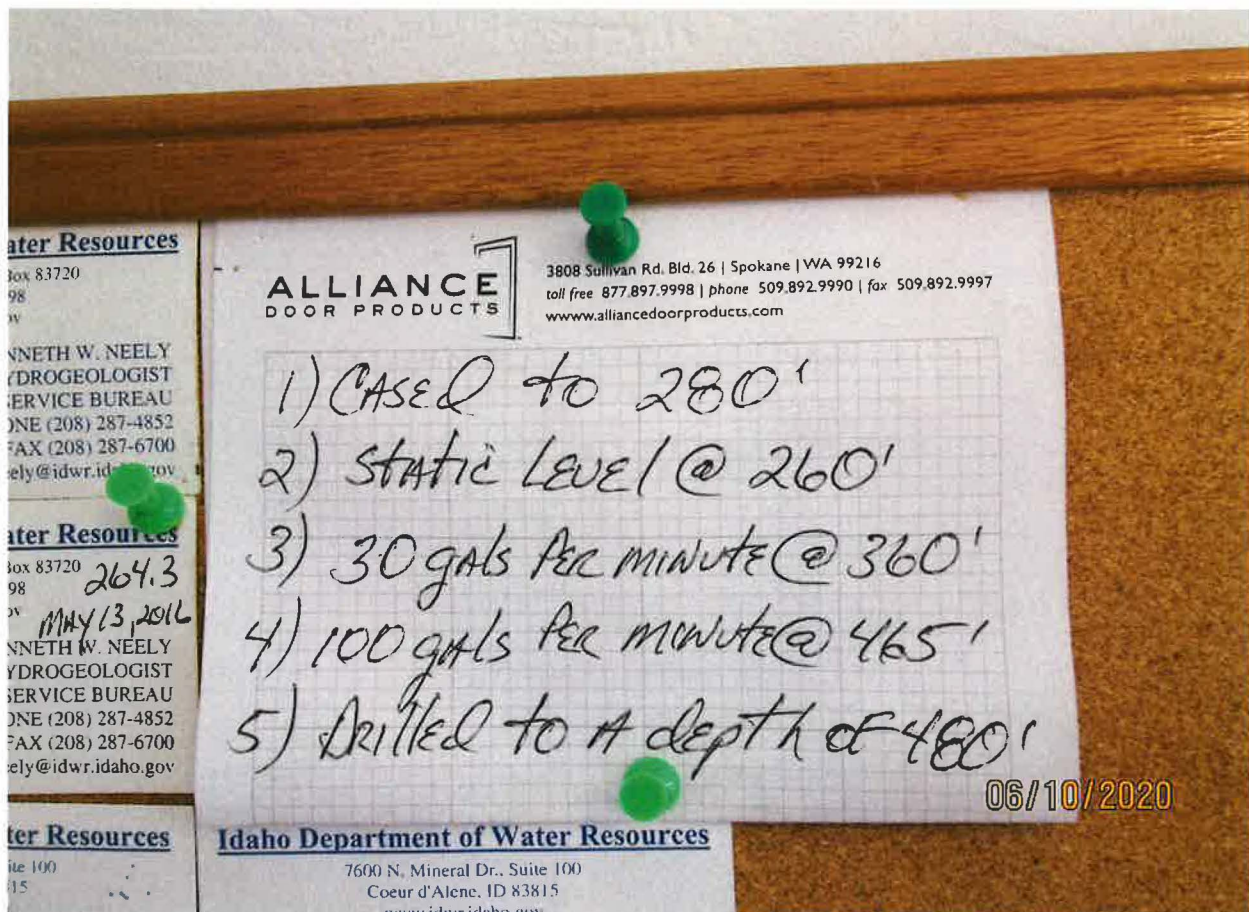


WELL HOUSE AND WATER CONVEYANCE SYSTEM





5HP PUMP



WELL PERFORMANCE DATA





IRRIGATION POU -FIELD IN UPPER L/H OF IMAGE







FROST FREE HYDRANT



IRRIGATION POU AND FROST FREE HYDRANT





IRRIGATION AND STOCKWATER POU







IRRIGATION AND STOCKWATER POU

