### STATE OF IDAHO DEPARTMENT OF WATER RESOURCES BENEFICIAL USE FIELD REPORT

#### A. GENERAL INFORMATION

- 1. Current Owner: JOAN WITTMAN 6045 CACTUS LN LEWISTON ID 83501 AND MARK WITTMAN 6045 CACTUS LN LEWISTON ID 83501
- 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 w	vith the same place of use:	<u>NO</u> Overlap	
Water Right No.	Source	Purpose of Use	Basis

Comments:

2. Other water rights v	with the same point-of-diversion	: <u>YES</u> Overlap	
Water Right No.	Source	Purpose of Use	Basis
85-15767	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 -117º02.712, 46º21.483.

## PLACE OF USE: STOCKWATER

Tum Dag	See	NE		NW		SW			SE				Totals					
i wp Ring	Sec	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
35N 06W	23													X			Х	
35N 06W	24										Х	X						

Permit No: 85-15768 Exam Date: 06/10/2020

## Permit No 85-15768

### PLACE OF USE: IRRIGATION

	NE			NW			SW			SE				Totals				
Twp King	Sec	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
35N 06W	23													0.1	1		1.3	1.4

Total Acres: 1.4

Method of Determination: Arcmap and Field Exam.

## 3.

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

X Aerial Photo Attached (required for irrigation of 10+ acres).

X Photo of Diversion and System Attached

4.

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

# D. FLOW MEASUREMENTS

1.

Measurement Equipment	Туре	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

X 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

$$= (5 \text{ gal} / 12.77 \text{ sec}) \times 60 \text{ sec/min} = 23.49 \text{ gpm}$$

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<sub>LR</sub> = (Acres Irrigated) x (Irrigation Requirement) = 1.4 acres x 4.0 afa = 5.6 af

V DR = [Diversion Rate (cfs)] x (Days in Irrigation season) x 1.9835 = 0.06 cfs x 294 days x 1.9835 = 35.00

V = Smaller of  $V_{LR}$  and  $V_{DR}$  = 5.6 af

### Permit No 85-15768

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 = 5.6 af (irrigation component) + 0.1 af (stockwater component) = 5.7 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 1.4 acres, and the annual volume associated with irrigation component equals 1.4 acres x 4.0 afa = **5.6 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 5.6 af (irrigation component) + 0.1 af (stockwater component) = **5.7 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 X35 was added due to this water right and WR 85-15767 using the same well for diversion, and limiting the two water rights to a combined diversion rate of 0.06 cfs. Condition F06 was added due to WR 85-15767 and 85-15768 sharing same well. All other conditions remain on license. There are no overlap concerns for this water right.

Have conditions of permit approval been met? X Yes No

Reviewer Ad

# 1. Recommended Amounts

F

Beneficial Use	Period of Use	Rate of Diversion	Annual Volume
STOCKWATER	01/01 to 12/31	0.02 CFS	0.1 AF
IRRIGATION	02/15 to 11/30	0.06 CFS	5.6 AF
	<u>Totals:</u>	0.06 CFS	5.7 AF
2. Recommended Amendment	s		
Change P.D. as reflec	ted above Add P.D	). as reflected above X	None
Change P.U. as reflec	ted above Add P.L	J, as reflected above X	None
. AUTHENTICATION	Luke Bates - Water Resou	irce Agent	
Field Examiner's Name	FAD-	Date	6/22/2020

Date 6/30/2020



# State of Idaho Department of Water Resources Attachment to Field Exam 85-15768

IRRIGATION system diagram.

![](_page_5_Figure_2.jpeg)

# THEORETICAL PUMPING EQUATION FOR WR# 85-15768

Theoretical Pumping Equation is required because system did not allow for a proper measurement. Pump is estimated to be at 465 ft, and running at 40 psi.

PUMP EQUATIONS												
WATER RIGHT No. 85-15768												
	HP	H in feet	Efficiency as a decimal	Pumping lift in feet	System pressure in PSI							
Q = HP*8.8*Eff/H	5	557.517	0.8	465	40							
Q = <b>0.063</b>	cfs	28.4	gpm									

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![](_page_7_Picture_0.jpeg)

POD - WELL D0067672

![](_page_8_Picture_0.jpeg)

WELL TAG No. D0067672

![](_page_8_Picture_2.jpeg)

WELL HOUSE AND WATER CONVEYANCE SYSTEM

![](_page_9_Picture_0.jpeg)

**5HP PUMP** 

![](_page_9_Picture_2.jpeg)

WELL PERFORMANCE DATA

![](_page_10_Picture_0.jpeg)

IRRIGATION POU

![](_page_10_Picture_2.jpeg)

![](_page_11_Picture_1.jpeg)

FROST FREE HYDRANT

![](_page_11_Picture_3.jpeg)

![](_page_12_Picture_0.jpeg)

STOCKWATER POU

![](_page_12_Picture_2.jpeg)