

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 63-33594

Exam Date: 09/20/2023

1. Current Owner:

JOHNNA BUCHERT 5446 N HIGHWAY 16 EAGLE ID 83616-1448 AND/OR
TRAE BUCHERT 5446 N HIGHWAY 16 EAGLE ID 83616-1448

2. Accompanied by:

Jim Bitzenburg (IDWR Water Right Supervisor) and Trae Buchert (owner)

3. SOURCE:

GROUND WATER

Method of Determination: Well driller's report, Aerial imagery, and on-site visit**B. OVERLAP REVIEW**

1. Other water rights with the same place of use: No Overlap

Water Right No.	Source	Purpose of Use	Basis

Comments: None

2. Other water rights with the same point-of-diversion: None

Water Right No.	Source	Purpose of Use	Basis

Comments: None

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

GROUND WATER NW¼ SE¼, Sec. 28, Twp 05N, Rge 01W, B.M. ADA County

Method of Determination: Aerial imagery and on-site visit.**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	
05N	01W	28														10			10.0

Total Acres: 10.0

PLACE OF USE: COMMERCIAL

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
05N	01W	28														X			

Method of Determination: Aerial imagery and on-site visit.

3.

X Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable.

X 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	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
Doo29012					

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
Panametrics flowmeter						

2. Measurements:

A flow rate measurement was required due to the irrigation being greater than 5 acres (Rule 35.01.r.i). A measurement was taken using a Panametrics ultrasonic strap on flow meter near the well head on a piece of PVC pipe leading to the irrigation system. The peak instantaneous diversion rate was recorded to be 81.6 GPM (0.182 CFS). See photo 1 for measurement setup and reading.

E. FLOW CALCULATIONS

____ Additional Computation Sheets Attached

Measured Method:

A measurement was taken using a Panametrics strap on flow meter near the well head on a piece of 2" PVC pipe leading to the irrigation system. Owner was able to turn on as many irrigation lines as possible to maximize flow from the well. Measurement is similar in range to what was reported during the well test at the time of drilling (2002). The peak instantaneous flow rate was recorded to be 81.6 GPM (0.182 CFS). The permit was issued with a combined flow rate of 0.2 CFS for irrigation and commercial use. However, since the well was only able to produce a maximum of 0.182 CFS I recommend that irrigation be licensed for 0.18 CFS and the commercial be licensed for 0.2 CFS with a combined flow rate of 0.18 CFS.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

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

$$10 \text{ acres} \times 4.5 \frac{\text{acre feet}}{\text{acre}} = 45 \text{ acre feet}$$

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

$$0.16 \text{ CFS} \times 260 \text{ days (March 1 – November 15)} \times 1.9835 = 82.5 \text{ acre feet}$$

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

$V_{I.R.} < V_{D.R.}$ Therefore, the recommended volume for irrigation is **45 acre feet**.

2. Volume Calculations for Other Uses:

Commercial: Owner provided calculations for water consumption based on operations at the facility including water used by visitors, winery cleaning, barrel cleaning, etc. The estimated volume of water used for commercial purposes is 70,000 gal/year (see figure #2) or approximately 0.21 Acre-feet. This value seemed reasonable based on industry standards for similar sized wineries. Therefore, I recommend the volume for commercial use be **0.2 Acre-feet**.

G. NARRATIVE/REMARKS/COMMENTS

The licensing field exam for 63-33594 was conducted on September 20, 2023, with Jim Bitzenburg (IDWR Water Right Supervisor) and accompanied by Trae Buchert (owner). The well (site tag #D0029012) is located west of the house in a section of grass central to the commercial facility. A flow rate measurement was taken due to the irrigation being greater than 5 acres (Rule 35.01.r.i).

Volume calculations for irrigation were based on the area's generic max volume per acre. Volume for commercial use was based on water use estimates provided by the owner. I recommend licensing 10.0 acres of irrigation with a total volume of 45.2 AF for all uses.

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>Volume</u>
IRRIGATION	03/01 to 11/15	0.18 CFS	45 AF
COMMERCIAL	01/01 to 12/31	0.02 CFS	0.2 AF
<u>Totals:</u>		0.18 CFS	45.2 AF

2. Recommended Amendments

<u> </u> Change P.D. as reflected above	<u> </u> Add P.D. as reflected above	<u> X </u> None
<u> </u> Change P.U. as reflected above	<u> </u> Add P.U. as reflected above	<u> X </u> None

I. AUTHENTICATION Tyler Wallace

Field Examiner's Name Tyler Wallace Date 9/25/2023

Reviewer Py Shinn Date 9/29/2023



Figure 1. Aerial imagery showing the point of diversion and irrigated area for water right 63-33594. The area being irrigated was calculated to be 10.0 acres.

Field Exam 63-33594

Winery Water-Fresh-disposed onto surrounding landscaping

Barrel Rinsing/Sanitizing	3600 gal/year	200 bbls 2 times per year @ 3 gpm for 3 minutes each
Wash Pad Rinsing	18000 gal/year	20 gpm 30 times per year for 30 minutes each
Other Rinsing	9000 gal/year	15 gpm 30 times per year for 20 minutes each
Total	30600 gal/year	
Total cfs	0.008 cfs	
Lawn-For comparison Purposes	14400 gal/day	Only 3 days per week

Cleaning/Sanitizing Water-disposed through septic

On Average 2 gallon per day for 200 days per year 400 gal/year

Other Water-Septic

Currently approx 50 visitors per day, 4 days per week

Toilets	50 gal/day	1 gal per flush per person
Lavatory Sink	25 gal/day	.5 gal per use per person
Kitchen Sink	50 gal/day	1 gal per flush per person
Dishwasher	62.5 gal/day	5 gal per cycle, 1 cycle per 4 persons
Total	187.5 gal/day	
	39000 gal/year	

TOTAL WINERY/TASTING ROOM WATER CONSUMPTION 70,000 gal/year Instantaneous CFS much more.

Industry water useages 2-6 gallons water for every gallon of wine made.

100 Tons @ 160 gallon per ton =16,000 gallons of wine future. = 64,000 gallons water per year.

Figure 2. Screenshot of the spreadsheet provided by the owner calculating their estimated water usage based on their production and number of visitors. The total combined commercial usage is approximately 70,000 gal/year (0.21). Owner indicated that the final value is in line with industry standards.



Photo 1: Image of the well head and irrigation system pipelines. Inset image is a picture taken during the measurement showing the maximum flow rate of 81.6 GPM (0.182 CFS).



Photo 2: Image showing a section of the vineyard as well as the visitor/tasting room.



Photo 3: Image of some of the stored wine barrels.

63-33594

Emmett Hwy



500 ft

Google Earth

SCANNED
OCT 02 2023