

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 85-15810
Exam Date: 07/22/2024

1. Current Owner:
BRENT SCHUMACHER 269 BARNABY CREEK RD INCHELIUM WA 99138-9565 AND
LINDA SCHUMACHER 269 BARNABY CREEK RD INCHELIUM WA 99138-9565
2. Accompanied by: Brent Schumacher
Phone No: 360-584-2638
Address: Same as above
Relationship to permit Holder: current Permit Holder.

3. SOURCE:
GROUND WATER

Method of Determination: ArcMap and DRG layer.

B. OVERLAP REVIEW

1. Other water rights with the same place of use: NO Overlap
2. Other water rights with the same point-of-diversion: YES Overlap

Water Right No.	Source	Purpose of Use	Basis
85-15801	GROUNDWATER	IRRIGATION, DOMESTIC	PERMIT, ACTIVE STATUS

Comments: Permit 85-15801 is owned by the same Permit Holders as this Right and 85-15801 & 85-15810 share the same groundwater well POD (D0082062). In speaking with Mr. Schumacher, he purchased property from the original Permit Holder in June of 2023 and is actively working to develop the other permit (85-15801); an extension request may be filed prior to October 1, 2024, to keep 85-15801 active as home construction continues. This Permit included condition F06 and I'm recommending it be carried forward to the license based on active pursuit of developing the active Permit 85-15801 by Mr. Schumacher.

C. DIVERSION AND DELIVERY SYSTEM

1. **LOCATION OF POINT(S) OF DIVERSION:**
GROUND WATER NE¼ SE¼, Sec. 25, Twp 35N, Rge 06W, B.M. NEZ PERCE County

Method of Determination: GPS. POD is a groundwater well D0082062 located at -117°1.4636, 46°20.6581 (+/- 10 ft).

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	25													5.7				5.7

Total Acres: 5.7

Method of Determination: beneficial use field exam and ArcMap aerial imagery.

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 Model No. or Discharge Size
D0082062	Unknown	10	Unknown - VFD	GRUNDFOS	35S100-38; 1-1/2-inch

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
NONE						

2. Measurements: Unable to perform flow measurements due to inadequate pipe requirements. Main water line from well doesn't meet pipe size requirements for a flowmeter test; distribution is an automated vineyard buried main-to-lateral line with soaker hoses per row.

E. FLOW CALCULATIONS
☒ Additional Computation Sheets Attached

Measured Method: Theoretic pump equation estimates flow as follows:

- D0082062 – 10 hp pump at 882 ft with 50 PSI operating pressure equals 33.7 gpm or **0.08 cfs** considering department rounding standards. Pump manufacturer specifications designate the pump as 35 gpm pump which supports the theoretic pump equation values.
- Permit authorized diversion rate = 0.12 cfs for 14 acres irrigation.
- Irrigation validated during field exam = 5.7 acres, which is authorized 0.02 cfs per acre or 0.11 cfs.
- Permit Holder is limited by pump performance as installed at time of submission of Statement of Completion form or 0.08 cfs for licensing purposes.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 5.7 \text{ ac} \times 4.0 \text{ afa} = 22.8 \text{ af}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.08 \text{ cfs} \times 294\text{-day} \times 1.9835 = 46.7 \text{ af}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = \mathbf{22.8 \text{ af}}$$

2. Volume Calculations for Other Uses: N/A

G. NARRATIVE/REMARKS/COMMENTS

Beneficial use field exam performed on 7/22/2024 with the Permit Holder, Brent Schumacher, showed a groundwater well being used for irrigation purposes. At the POD, well D0082062 casing is co-located with a small pump station shed that houses pump motor controller and other water conveyance components. The water system is being developed to support irrigation of a vineyard plot and additionally domestic & irrigation water use under active Permit 85-15801. At time of exam

construction was underway to service connect new home development to the water system. I calculated the maximum diversion rate using a theoretic pump equation and pump manufacturer specifications that demonstrate 0.08 cfs is the maximum pump capacity as recommended for licensing purposes.

From the pump house a buried main irrigation trunk line routes north across a driveway to the irrigation POU. The vineyard plot is fenced to keep deer and other ungulates out and immediately within the fenced area the main trunk line tees to route east & west with a lateral line. Standard to vineyard row crop irrigation a soaker hose riser connects to each lateral pipeline at intervals to provide BMP watering to each vine planting using drip style irrigation or micro emitters. During the exam I used field maps to sketch the POU, which is reduced from the Permit approved acreage to cover 5.7 acres of a central field. During licensing review, I used ArcMap aerial imagery to accurately trace out the irrigation POU, with annual volume recommended using Department volumetric standard rates of 4.0 afa headgate equating to **22.8 af** as recommended for licensing purposes.

I removed conditions 26A and 046 from the permit during licensing review based on the Permit Holder's compliance with each condition. I revised a text coding associated with the Lewiston Plateau Groundwater Management Area plan (LPGWMA) that required the Right Holder to install monitoring conduit in the well to allow access for water level monitoring; the conduit is in place as observed during the exam and annual water level monitoring by the Department and I changed the verbiage of the text to reflect that the Right Holder shall maintain the conduit & I removed the sentence pertaining to development waivers as the system is completely developed as conditioned. All other conditions on the Permit have been carried forward to licensing. There are no overlapping water right concerns toward licensing this Permit. The Permit Holder's other Permit 85-15810 if fully developed with included additional irrigation on the property but in a different location than this Right's irrigation 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	0.08 CFS	22.8 AF

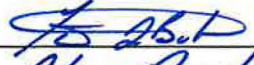
Totals: 0.08 CFS 22.8 AF

2. Recommended Amendments

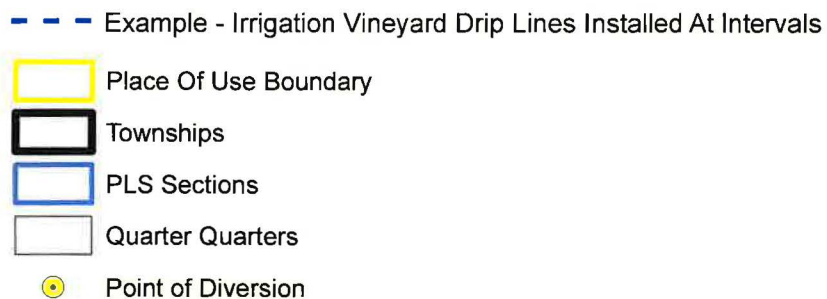
 Change P.D. as reflected above Add P.D. as reflected above X None

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

I. AUTHENTICATION Luke Bates – Sr Water Resource Agent

Field Examiner's Name  Date 10/4/2024
 Reviewer  Date 3/24/2025

This map depicts the IRRIGATION system diagram.



THEORETICAL PUMPING EQUATION FOR WR# 85-15810

Theoretical Pumping Equation is required because system did not allow for a proper measurement. Pump is estimated to lift 882 ft, and running at 50 psi.

PUMP EQUATION

WATER RIGHT No. 85-15810

D0082062		HP	H in feet	Efficiency as a decimal	Pumping lift in feet	System pressure in PSI
Q =	HP*8.8*Eff/H	10	997.6463	0.85	882	50
Q = 0.075 cfs 33.7 gpm						

85-15810 LICENSE REVIEW

WELL PUMP SPECIFICATION – retrieved from <https://product-selection.grundfos.com/> on 8/5/2024



Submersible groundwater pumps

35S100-38

ITEM 98924427

Suitable for

- [Water Treatment Fertigation, Chemigation & Dosing](#)
- [Controls & Digital Groundwater Management](#)
- [Drip, Micro Spray & Soaker Hose Irrigation](#)

[View more](#)

Submersible pumps in stainless steel. EN 1.4301 (AISI 304). EN 1.4401 (AISI 316). EN 1.4539 (AISI 904L). Typical application: Ground water, Irrigation, Mining, Fountain, Off-shore etc.



35S100-38 Model number 98924427

Variants

Quotation

Specifications

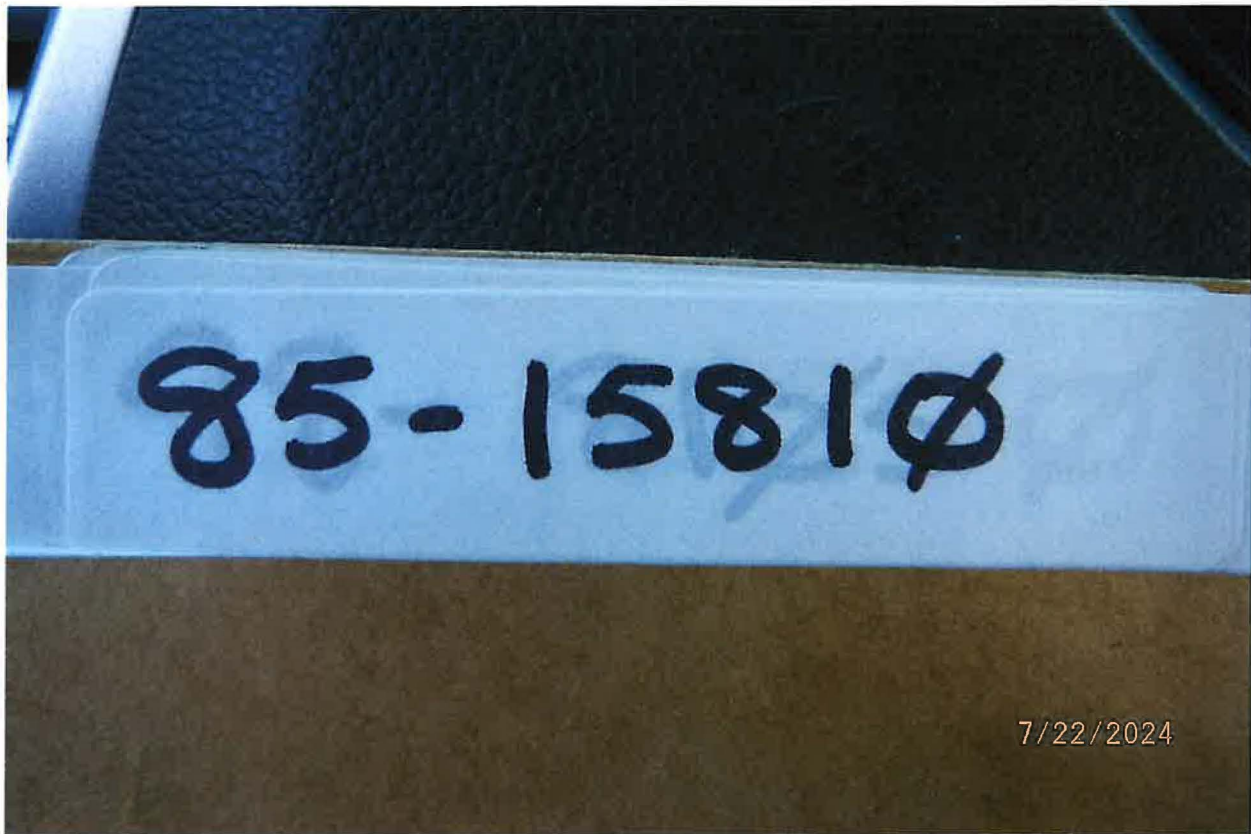
Curves

Spare parts

Product name	35S100-38
Product No.	98924427
EAN	5712603663005
Price	

Technical

Pump speed on which pump data are based	3450 rpm
Rated flow	36.5 US gpm
Rated head	813.7 ft
Stages	38
Number of reduced-diameter impellers	NONE
Shaft seal for motor	SIC/SICNBR
Approvals	CULDWUS,CCSAUS
Approvals for drinking water	PROP65
Curve tolerance	ISO9906:2012 3B
Model	A
Motor version	T40
Return valve	YES



BENEFICIAL USE FIELD EXAM DATE 7/22/2024



POD – GROUNDWATER WELL D0082062



WELL D-TAG D0082062



WELL AND PUMP HOUSE



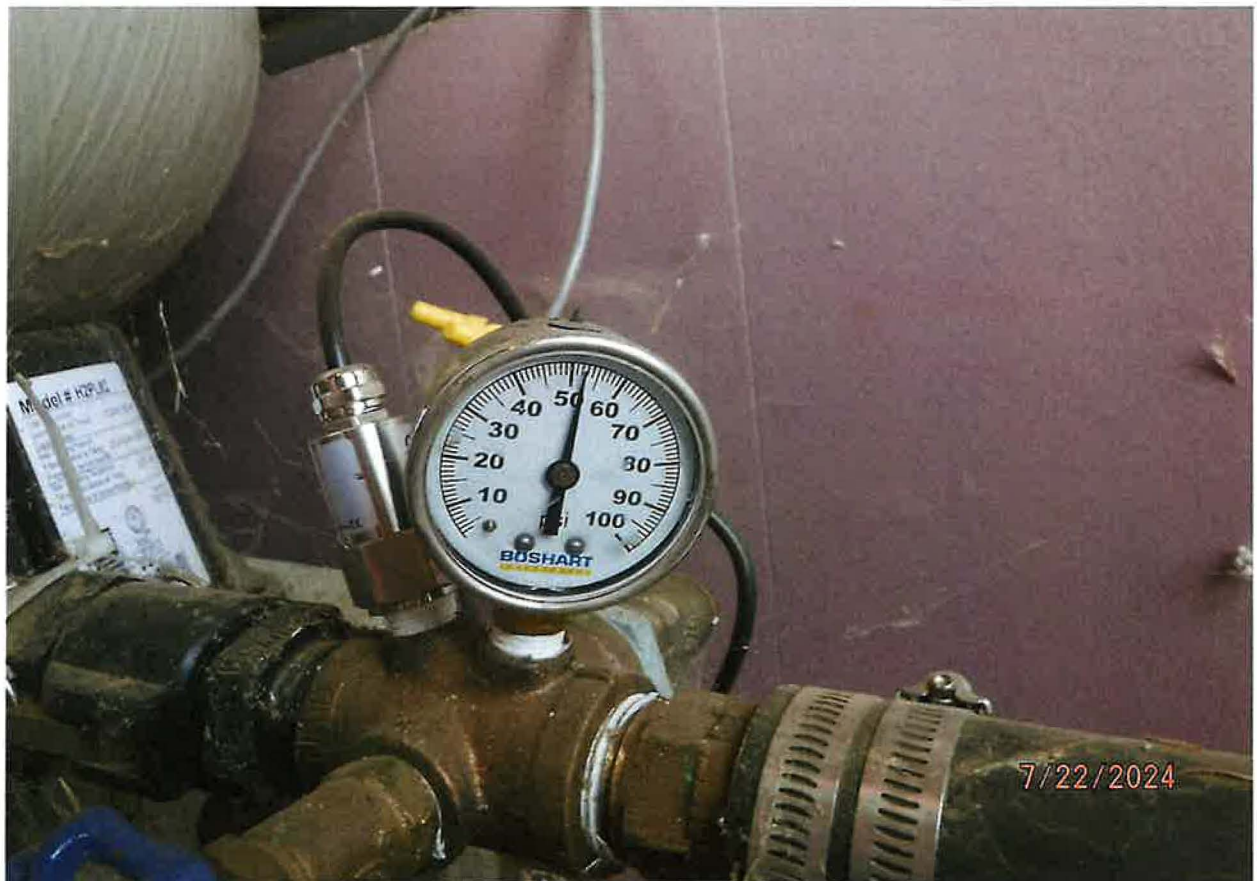
WATER SYSTEM CONVEYANCE SYSTEM



WELL PUMP CONTROLLER – PHASE TECHNOLOGIES MODEL 2XD210R-OFS. CONVERTS SINGLE PHASE TO THREE PHASE POWER



WELL PUMP ROUTES DIRECTLY TO PRESSURE TANK BEFORE DISTRIBUTION TO IRRIGATION SYSTEM



WATER SYSTEM HOLDS AT 50-55 PSI OPERATING PRESSURE



IRRITROL RAIN DIAL IRRIGATION SYSTEM CONTROLLER





CONVEYANCE FROM PUMP HOUSE TO IRRIGATION POU – MAIN WATER LINE SHUTOFF BOX





IRRIGATION POU – WATER MAIN LINE TO VINEYARD DRIP IRRIGATION ROW CROPS





IRRIGATION POU





IRRIGATION POU

