

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 96-16596
Exam Date: 08/02/2024

1. Does this qualify for an in-office field exam (IDAPA 37.03.02.035.01.r)? X Y ___ N

- a. X Irrigation of 5 acres or less
- b. ___ Storage of up to 14.6 AF for stockwater purposes only
- c. ___ Any use other than irrigation or storage, if the combined diversion rate is 0.24 cfs or less
- d. ___ Other

2. Current Owner: DALLAS ANDERSON AND KELLI ANDERSON 24990 E STONECREST CT LIBERTY LAKE WA

Owner of Record Correct? ___ N
Address of Record Correct? ___ N
If No Explain:

3. Beneficial Use Fees have been paid: X Y ___ N Receipt No: C118590

3. **SOURCE:**
LAKE PEND OREILLE

Tributary
PEND OREILLE RIVER

Method of Determination: Bonner County Maps and GIS

B. OVERLAP REVIEW

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

Water Right No.	Source	Purpose of Use	Basis
96-16018	LAKE PEND OREILLE	IRRIGATION	CLAIM
96-16010	GROUND WATER	DOMESTIC	CLAIM

Comments: Two claims were submitted by the permit holder for the parcels appurtenant to the permit, overlapping the place of use (POU). Claim 96-13018 is a total overlap of the permit. However, the claim application states that use began in 1977, as the diversion is surface water it is unlikely that the claim will be decreed. The license should have conditions 928 and X31, to address any future concerns. Claim 96-16010 has a different source and beneficial use than the permit.

2. Other water rights with the same point-of-diversion: NO Overlap

Water Right No.	Source	Purpose of Use	Basis
96-16018	LAKE PEND OREILLE	IRRIGATION	CLAIM

Comments: The irrigation claim is a total overlap, as previously stated and therefore shares the point of diversion (POD) with the permit.

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

LAKE PEND OREILLE L4 (NW¼ SW¼), Sec. 25, Twp 57N, Rge 02W, B.M. BONNER County

Method of Determination: Bonner County Maps, and GIS

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	
57N	02W	25										0.1							0.1

Total Acres: 0.1

Method of Determination: Bonner County Maps, Tax Parcel Data, and GIS.

3.

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
Screened Intake in lake	Unknown	¾	Unknown	Unknown	Unknown

D. FLOW MEASUREMENTS

1.

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

2. Measurements: No measurement is required for an in-house exam, but a theoretical calculation and Administrative Memos #17 and 6 were used to determine a reasonable diversion rate.

2. Measurements: NA

E. FLOW CALCULATIONS

☐ Additional Computation Sheets Attached

Measured Method:

$$Q = (3/4 \text{ Hp})(8.8)(0.80 \text{ efficiency})/(80 \text{ ft lift}) + (2.31)^*(40 \text{ psi}) = 0.03\text{cfs}$$

Theoretical Calculation= 0.03cfs

Permit allowed = 0.03cfs

B.U. Limit= 0.01cfs

Recommendation= 0.01cfs

Comments:

After clarification from the permit holder, approximately 0.1 acre of irrigation was measured using GIS aerial imagery (figure 3). The system was described by the permit holder as a ¾ Hp submersible pump, which conveys water through a 2" PVC line to 2 spigots and a pressure tank (see figure 2). Garden hoses and portable sprinklers are used for irrigation throughout the POU. The place of use was outlined by the permit holder (figure 1). The permit holder explained that irrigation was not developed in the eastern parcel, as this area is just used for outbuildings and septic. The intake to the submersible pump is screened to keep out debris.

The theoretical calculation determined approximately 0.03cfs is possible with a ¾ Hp pump. Administrative Memo #17 allows up to 0.03 cfs per acre for the irrigation of up to 5 acres. The confirmed irrigated POU is approximately 0.1 acres. The minimal reportable rate of 0.01cfs is reasonable for the beneficial use developed. I recommend a diversion rate of 0.01cfs for the license, as per Administrative Memos #17 & 6.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 0.1\text{-acre} \times 3 \text{ AF} = 0.3 \text{ AF annually}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.01 \times 214 \times 1.9835 = 4.3 \text{ AF}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 0.3 \text{ AF annually}$$

2. Volume Calculations for Other Uses: NA

Comments:

The field headgate calculation above was used to determine a reasonable annual volume for irrigation. I recommend the license be issued for an annual volume of 0.3 AF, as per the headgate standard.

G. PURPOSE OF USE

Irrigation X Y N # Stock NA Domestic # of Homes NA

Change in Purpose of Use? Y X N

Method of Determination: Bonner County Maps, GIS, and Tax lot Data

H. NARRATIVE/REMARKS/COMMENTS

This permit for the irrigation of 0.4 acres qualifies for an in-office examination for license. The permit holder submitted the Proof of Beneficial Use, received by IDWR on July 5, 2024, stating in section #3 that the beneficial use was developed for 0.4-acres of irrigation. After reviewing an outline of the irrigated areas (figure 1) and system diagram (figure 2) emailed by the permit holder I was able to confirm approximately 0.1 acres irrigation, measured with GIS aerial imagery (figure 3).

The system was described by the permit holder as a screened intake from the lake to the ¾ Hp submersible pump diverting water through a 2" PVC line to two spigots and a pressure tank. One spigot is in the area between the home and shore and the second spigot and pressure tank are located near the home. The permit holder stated that there is no irrigation in the eastern parcel of the permit POU. Timers and garden hoses are used to deliver water to portable sprinklers used throughout the POU.

I recommend the license be issued with a rate of 0.01cfs and an annual volume of 0.3 AF for the irrigation of 0.1-acre, as per the field headgate volume calculation in section F of this report and Administrative Memos 17 & 6.

I recommend conditions X60, X31, 928, and 004 on the license. Condition 029 was removed at licensing as the permit holder confirmed there is a screen installed at the intake and no comments were received from IDFG regarding the permit during advertisement. As the permit is overlapped by claim 96-16018, condition 928 should be on the license, pending the claim decision, as per current guidance.

Have conditions of permit approval been met? ☒ Yes ☐ No

I. RECOMMENDATIONS

1. Recommended Amounts

<u>Beneficial Use</u>	<u>Period of Use</u>	<u>Rate of Diversion</u>	<u>Annual Volume</u>
IRRIGATION	04/01 to 10/31	0.01 CFS	0.3 AF
Totals:		0.01 CFS	0.3 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 X None

J. AUTHENTICATION Bob Howe - Water Resource Agent

Field Examiner's Name Bob Lane Date 8/2/2024

Reviewer _____ Date _____

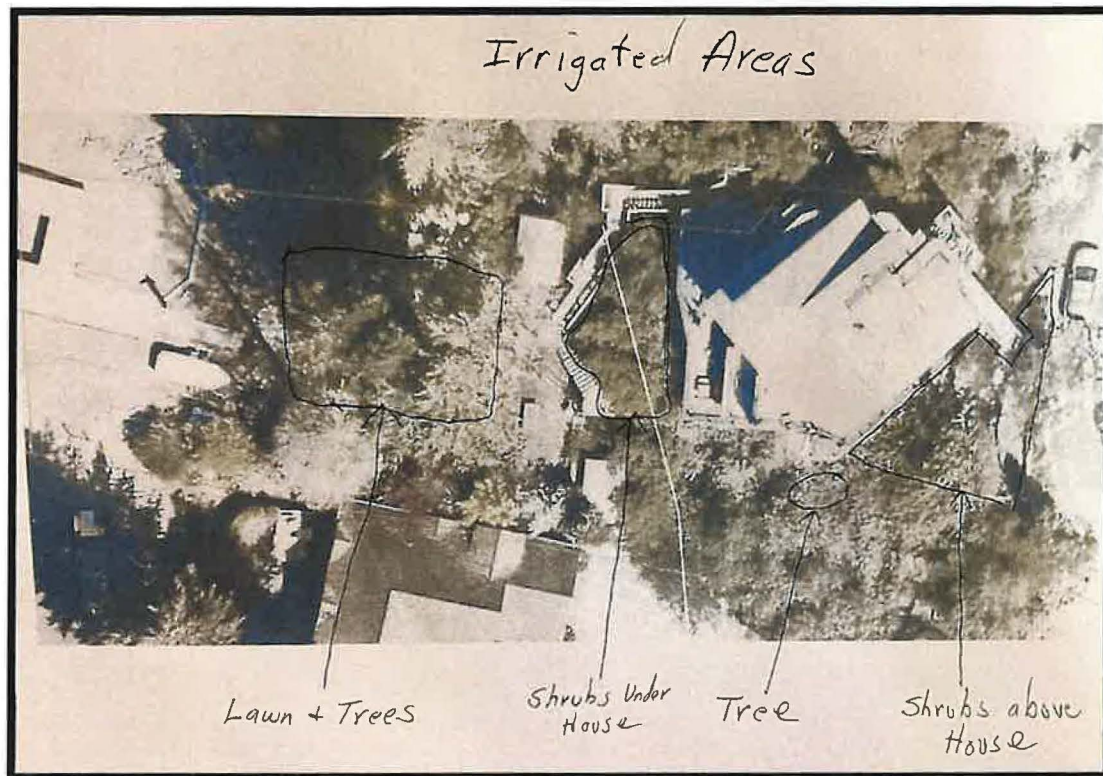


Figure 1- Map outlining the areas irrigated drawn on Bonner County Imagery (circa 2024), submitted via email by the permit holder.

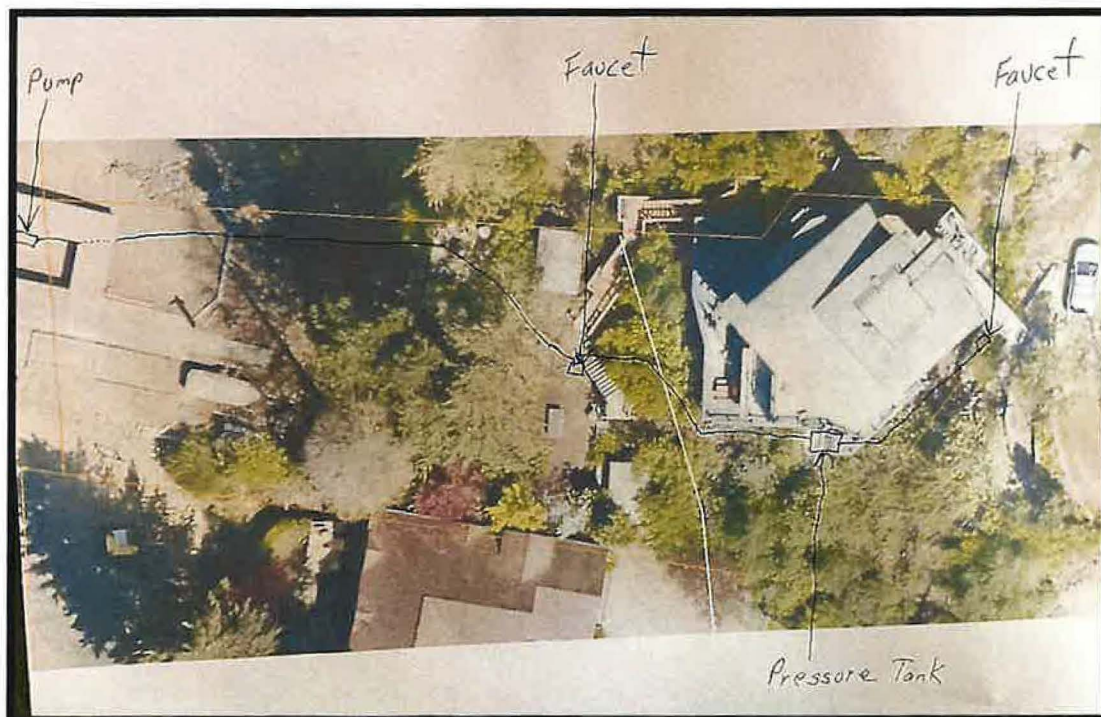


Figure 2- System Diagram drawn on Bonner County Imagery (circa 2024) emailed by the permit holder.



Figure 3- GIS NAIP 2023 Imagery of the irrigation POU (outlined in blue) and POD (blue point).