

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
IN-OFFICE REVIEW/BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATIONExam Date: 01/26/2024

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: **TERRENCE L & SUSAN W LAMB**

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: C117637

4. Source: Tributary:

PEND OREILLE RIVER**COLUMBIA RIVER**Method of Determination: GIS, Aerial Imagery, and Taxlot data.Change in Source: ___ Y X N**B. OVERLAP REVIEW**

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

Water Right No.	Source	Purpose of Use	Basis
NONE	NA	NA	NA

Comments: There are no rights overlapping the permit place of use (POU).

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

Water Right No.	Source	Purpose of Use	Basis
NONE	NA	NA	NA

Comments: There are no rights sharing the permit point of diversion (POD).**C. DIVERSION AND DELIVERY SYSTEM**

1. Location of Point(s) of Diversion:

Source	Govt. Lot	¼	¼	¼	Sec.	Twp.	Rge.		County
Pend Oreille River	2		NW	NE	34	57N	03W	B.M.	BONNER

Method of Determination: GIS and Taxlot data.Change in POD? ___ Y X N Amendment Required? ___ Y X N

2. Place of Use: IRRIGATION

TWP	RGE	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
57N	03W	34		0.2															0.2
		Lot #		2															
Total Acres =																			0.2

Method of Determination: Bonner County Maps, GIS, and Taxlot data.Change in POU? ___ Y X N Amendment Required? ___ Y X N

- ☒ Delivery System Diagram Description Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable.(information included with application was confirmed)
- ☒ 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

3. Diversion Id No.*	Motor Make	HP	Pump Model	Pump Make	Pump Serial No. or Discharge Size
Screened inlet in River	Unknown	1/2	Unknown	Unknown.	Unknown

*Code to correspond with No. on map and aerial photo

D. FLOW MEASUREMENTS

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

2. Measurement Comments: The permit holder stated the system operates on a 1/2 Hp pump. A maximum head of about 15ft was estimated to the licensed POU using the DRG map.

E. FLOW CALCULATIONS

☐ Additional Computation Sheets Attached

Measured Method:

A theoretical calculation and Administrative Memo #17 were used to determine a reasonable rate of diversion.

$$Q = (1/2 \text{ Hp})(8.8)(0.80 \text{ efficiency})/(15 \text{ ft lift}) + (2.31)*(45 \text{ psi}) = 0.03\text{cfs}$$

Theoretical Calculation= 0.03cfs

Permit allowed = 0.03cfs

Recommendation= 0.01cfs

Comments:

Approximately 0.2 acre of irrigation was measured via GIS aerial imagery. The system was described by and permit holder as a 1/2 Hp electric pump with an 1 " inlet, which conveys water to a portable sprinkler used throughout the POU..

Approximately 0.03 cfs is possible with the 1/2 Hp pump. According to Administrative memo #17 up to 0.03cfs per acre is standard for the irrigation of up to 5 acres. According to Administrative memo #6 the reported rate of diversion should be rounded to the hundredth place. I am recommending a diversion rate of 0.01cfs for the license.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = \underline{0.2\text{-acre} \times 3.0 \text{ AF} = 0.6 \text{ AF}}$$

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

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = \underline{0.6 \text{ AF}}$$

Comments:

This permit was issued for irrigation use from a natural stream/river source. According to the IDAPA Beneficial Use Examination Rules 37.03.02.35. 01j.viii a diversion volume is not required for irrigation if water is diverted from a natural flowing stream/river or spring. However, as the POU is less than 1 acre condition X31 will be carried on the license stating the annual volume as 0.6 AF.

G. PURPOSE OF USE

Irrigation ☒ Y ☐ N # Stock ☐ NA Domestic # of Homes ☐

Change in Purpose of Use? ☐ Y ☒ X ☐ N

Method of Determination: Bonner County Maps, GIS, and Taxlot 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 January 11, 2024, stating in section #3 that the beneficial use was developed for 0.4-acre of irrigation. I was able to confirm approximately 0.2 acres irrigation was developed using aerial imagery (see figures 1 & 2). The permit holder indicated in section #6 of the proof of beneficial use that no fish screen was installed at the intake, so I called the permit holder on January 26, 2024, to discuss the documentation submitted. I followed up the call with an email requesting additional information including a map outlining the irrigated area and POD.

I received an email January 27, 2024, with photos of the system components, confirmation that a intake screen was installed, and a system diagram (figure 3) identifying the POD and pumphouse location. The system description in the email stated that the screened 1" intake (photos 1 & 2) delivers water to the pumphouse (photo 3), where 5/8" garden hoses are hooked up to irrigate using portable rotary sprinklers and a hand nozzle to water landscaping (photos 4-6).

After reviewing the permit holder's response to the information request an area of approximately 0.2 acres is confirmed for irrigation. A theoretical calculation confirmed that the pump can provide the 0.03cfs rate on the permit. However, as the permit measured irrigated area is approximately 0.2-acres I am recommending the license be issued with a diversion rate of 0.01cfs (as per Administrative Memos #17 and 6). As the diversion is from streamflow the volume was not reported on the license (IDAPA Rules 37.03.02.35. 01j.viii). However, as the irrigated area is less than 1 acre the license will carry condition X31, stating the annual volume as 0.6 AF.

I am recommending the license be issued with a rate of 0.01cfs and conditions X60, 004, ~~227~~ and X31. 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. As the permit POD is within the reach of MSF right 96-8730 for the Pend Oreille River, ~~at~~ condition 227 was added at licensing, as per current guidance. Although currently no water district is established for the regulating of this minimum stream flow, the Department tries to make right holders aware of any potential issues.

Have conditions of permit approval been met? X Yes No

I. RECOMMENDATIONS

1. Recommended Amounts:

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
IRRIGATION	04/01 TO 10/31	0.01CFS	
	<u>Totals:</u>	0.01CFS	

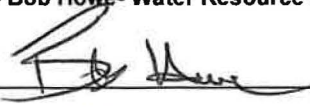
2. Recommended Amendments:

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

Other: < >

J. AUTHENTICATION- Bob Howe- Water Resource Agent

Field Examiner's  Date 3/27/24

Reviewer  Date 3/28/24

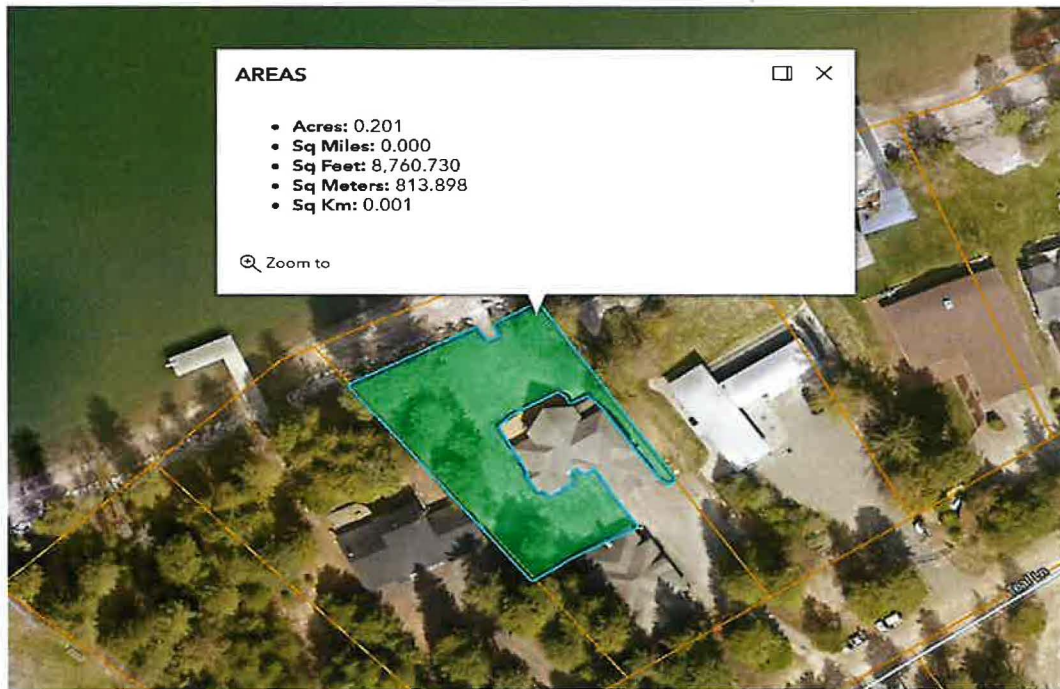


Figure 1- Bonner County GIS- imagery of the measured irrigated POU.



Figure 2- Bonner County GIS- image of the permit parcel (center), boundaries indicated by yellow lines.



Figure 3- Aerial image emailed from permit holder-system diagram providing intake and pumphouse locations.



Figure 4 GIS 2021- Image of POU. Outline in light blue. Light blue point is the point of diversion.



Photos 1 & 2- Intake screen (left) installed on 1" intake line on dock pier (right).



Photos 3 & 4 Pumphouse (left) and 5/8" garden hose with sprinkler attached (right).



Photos 5 & 6- Portable rotary sprinkler (left) is used throughout the POU. Handheld nozzle used for hand watering landscaping.