

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

A. GENERAL INFORMATIONExam Date: 04/24/20241. 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: **JAY & LINDA JONES LIVING TRUST**

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: C118119

4. Source: Tributary:

SAGLE SLOUGH**LAKE PEND OREILLE**Method of Determination: Bonner County Maps, GIS, and Tax Lot 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
96-8812	GROUNDWATER	MUNICIPAL	LICENSE

Comments: Right 96-8812 is a groundwater municipal use right with a service area overlapping the permitted place of use (POU). There are no concerns regarding overlap of the municipal right as the source and beneficial use are different from those permitted. There are no irrigation rights overlapping the permit 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
Sagle Slough	3		NE	NW	2	56N	02W	B.M.	BONNER

Method of Determination: GIS and Tax lot 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	02W	2					1.0											1.0	
		Lot #					3												
Total Acres =																	1.0		

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

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

Indicate weir size/pipe as applicable:

X 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 slough	Unknown	1.5	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 is delivered water using a 1 ½ Hp submersible pump. A maximum head of about 20 ft 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.

$$Q = (1.5 \text{ Hp})(8.8)(0.80 \text{ efficiency}) / (20 \text{ ft lift}) + (2.31) * (45 \text{ psi}) = 0.09 \text{ cfs}$$

Theoretical Calculation= 0.09cfs

Permit allowed = 0.03cfs

B.U. Limit= 0.03cfs

Recommendation= 0.03cfs

Comments:

Initially only approximately 0.7-acre of irrigation could be identified as the POU was partially obscured by tree cover in the west. I requested a system diagram and map of the irrigation POU from the permit holder on April 16, 2024. The permit holder emailed a map outlining an irrigated area of approximately 1.0-acre (measured using GIS aerial imagery) on April 24, 2024. The information received in the email included photos of the irrigated area on the west side of the property near the street. The system was described by and permit holder as a 1 ½ Hp submersible pump, which conveys water to in-ground sprinkler system with 11 zones ran one at a time throughout the POU. The permit holder also noted that the parcel lines are not correct on the map and all irrigated areas identified were within his property boundary with the exception the areas closest to the street in the west, which the permit holder irrigates and maintains.

The theoretical calculation determined approximately 0.09cfs is possible with the 1 ½ Hp pump. According to Administrative Memo #17 up to 0.03cfs per acre is standard for the irrigation of up to 5 acres. The confirmed irrigated POU is approximately 1.0-acre. Based on current guidance, a rate of 0.03cfs is reasonable for the beneficial use developed. I am recommending a diversion rate of 0.03cfs for the license, as per Administrative Memos #17 & 6.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 1.0\text{-acre} \times 3.0 \text{ AF} = 3.0 \text{ AF}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.03\text{cfs} \times 214 \text{ days} \times 1.9835 = 12.7 \text{ AF}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 3.0 \text{ AF}$$

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, condition R66 should be on the license stating the annual volume as 3.0 AF, as per current guidance.

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 1.0-acre qualifies for an in-office examination for license. The permit holder submitted the Proof of Beneficial Use, received by IDWR on April 9, 2024, stating in section #3 that the beneficial use was developed for 1.0-acre of irrigation. A GIS measurement using aerial imagery, the POU map, and photos submitted by the permit holder approximately 1.0 acres of irrigation was developed using aerial imagery (see figures 1 & 2). A review of the area surrounding the permit POU indicates that the imagery and parcel boundary layers are offset in the GIS for the vicinity. I called the permit holder to discuss the documentation submitted. I followed up the call with an email requesting additional information including a system diagram and confirmation of the irrigated areas or a map of the irrigated area and POD. On April 24, 2024, the permit holder submitted the POU map and diagram of the irrigation zones with photos of irrigated areas under the tree cover near the street on the west side of the property. The permit holder confirmed that the irrigated areas are within his property boundaries, with a couple small areas in the easement for the street, which he irrigates and maintains.

After reviewing the permit holder's response to the information request an area of approximately 1.0-acre is confirmed for irrigation (figure 3). A theoretical calculation confirmed that the pump can provide the rate issued on the permit. I recommend the license be issued with a reported rate of 0.03cfs, as per Administrative Memos 17 & 6.

I recommend the license be issued with conditions X60, 004, and R66. Condition 029 should be 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.

Have conditions of permit approval been met? ☒ 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	0.03 CFS	
	<u>Totals:</u>	0.03 CFS	

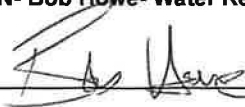
2. Recommended Amendments:

☐ 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 ☒ None

Other: < >

J. AUTHENTICATION- Bob Howe- Water Resource Agent

Field Examiner's  Date 5/9/2024

Reviewer  Date 5/14/24



Figure 1- Bonner County GIS- imagery of the parcels appurtenant to the permit POU (2 parcels centered).



Figure 2- Bonner County GIS imagery- Measurement of the irrigated areas sent to permit holder via email (light green areas) the full irrigated area was outlined in black and shaded in by the permit holder to include the areas under tree cover and in the street easement area.



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



Photo 1 (left)-Facing south on the street with the street side of the southern parcel visible.
Photo 2 (right)-Facing north in the driveway in the northwest corner of the property.



Photo 3- From the street facing northeast at the driveway to the house in the north parcel. The dog pictured is standing in the irrigated area alongside the driveway that ends at the street.