

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

A. GENERAL INFORMATIONExam Date: 04/15/20241. 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: **THE WATT FAMILY 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: C118073

4. Source: Tributary:

SPOKANE RIVER**COLUMBIA RIVER**Method of Determination: Kootenai County Maps, GIS, and Tax Lot Data.

Change in Source: ___ Y ___ X N

B. OVERLAP REVIEW1. Other water rights with the same place of use: X No Overlap

Water Right No.	Source	Purpose of Use	Basis
95-14579	GROUNDWATER	DOMESTIC	DECREE

Comments: Right 95-14579 is a groundwater right for domestic use overlapping the permit place of use (POU). IDWR records list the permit holder as the current owner of the domestic right. The permit is limited to the total combined use allowed by conditions X31 & X35 which should remain on the license. The right and permit have different sources and different beneficial uses so there are no overlap concerns. 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	1/4	1/4	1/4	Sec.	Twp.	Rge.		County
Screened Inlet in river	9		SE	SE	5	50N	05W	B.M.	KOOTENAI

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	
50N	05W	5																0.5	0.5
		Lot #																9	
Total Acres =																		0.5	

Method of Determination: Kootenai County Maps, GIS, and Tax Lot Data.

Change in POU? ___ Y ___ X N Amendment Required? ___ Y ___ X N

☐ 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

3. Diversion Id No.*	Motor Make	HP	Pump Model	Pump Make	Pump Serial No. or Discharge Size
Screened inlet in river	Unknown	Unknown	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 on the statement of completion that the system operates on a "pump". A maximum head of about 90 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.

$$Q = (1 \text{ Hp})(8.8)(0.80 \text{ efficiency})/(90 \text{ ft lift}) + (2.31)(45 \text{ psi}) = 0.04\text{cfs}$$

Theoretical Calculation= 0.04cfs

Permit allowed = 0.02cfs

Recommendation= 0.02cfs

Comments:

Approximately 0.5-acre of irrigation was measured via GIS aerial imagery. I called the permit holder Janet Watt on April 8, 2024, they confirmed the irrigated areas verbally. The system was described by the permit holder as a 1 Hp pump, which conveys water via a sprinkler system utilizing 5 zones, each of which has sprinklers or driplines.

The theoretical calculation determined approximately 0.04cfs is possible with a 1 Hp pump. According to Administrative memo #17 up to 0.03cfs per acre is standard for the irrigation of up to 5.0 acres. The confirmed irrigated POU is approximately 0.5 acres. I recommend a diversion rate of 0.02cfs for the license, as per Administrative Memos 17 & 6.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = \underline{0.5\text{-acre} \times 3.0 \text{ AF} = 1.5 \text{ AF}}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = \underline{0.02\text{cfs} \times 246 \text{ days} \times 1.9835 = 9.8 \text{ AF}}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = \underline{1.5 \text{ AF}}$$

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 X31 limits the annual volume to 0.6 AF and according to current guidance should remain on the license stating an annual volume no greater than 0.6 AF for the irrigation of 0.5-acre.

G. PURPOSE OF USE

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

Change in Purpose of Use? ☐ Y ☒ X ☐ N

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

H. NARRATIVE/REMARKS/COMMENTS

This permit for the irrigation of 0.5-acre qualifies for an in-office examination for license. The permit holder submitted the Proof of Beneficial Use, received by IDWR on April 1, 2024, stating in section #3 that the beneficial use was developed for 0.5 acre of irrigation. I was able to confirm approximately 0.5-acre of irrigation was developed using aerial imagery (see figures 1 & 2). The permit holder did not provide a map of the POU and POD or a system diagram, so I called the permit holder on April 8, 2024, to discuss the documentation submitted. An email was sent to the permit holder, Janet Watt, with imagery and a measurement of the areas that appear to be irrigated within the POU. Janet reviewed the imagery and confirmed that 0.5-acre of irrigation and the irrigated areas outlined were a reasonable assessment for the POU (figure 3). A system diagram and pump details were received April 12, 2024 (Figures 4 & 5).

A theoretical calculation confirmed that the 1 Hp pump can deliver the full permitted rate. The irrigation area confirmed for licensing is approximately 0.5-acre. I recommend an irrigation diversion rate of 0.02cfs, in accordance with Administrative Memos #17 and #6.

I recommend conditions X31, 227, X15, X35 & 004 remain on the license. Condition 26A should be removed from the licensing 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>DIVERSION RATE</u>
IRRIGATION	03/15 TO 11/15	0.02 CFS
<u>Totals:</u>		0.02 CFS

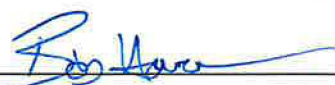
2. Recommended Amendments:

☐ 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 4/23/24

Reviewer  Date 4/23/24



Figure 1- Kootenai County GIS- imagery of the parcel appurtenant to the permit POU.



Figure 2-Bonner County GIS-imagery of the confirmed irrigation area.



Figure 3- GIS 2023- imagery- The irrigation POU is outlined in blue. The POD is indicated by a blue point. The permit holder confirmed the boundary for the irrigated areas within the POU.



Figure 4.- System Diagram- provided by permit holder.

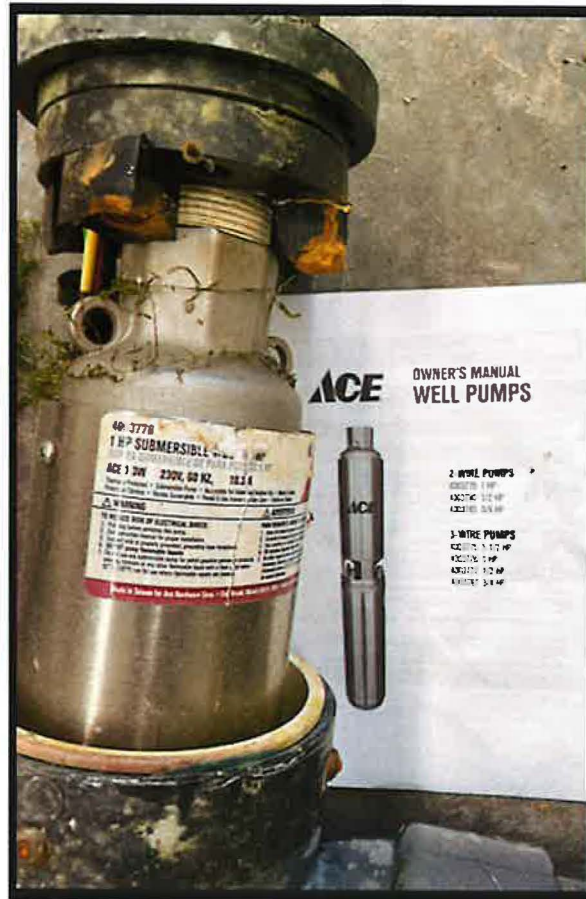


Figure 5- Photo of pump.