

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 81-12029
Exam Date: 07/23/2024

1. Current Owner:
ATHENS 2008 TRUST 2122 E 22ND PL TULSA OK 74114-2902
2. Accompanied by: Alex Athens
Phone No: 406-240-8361
Address: 4847 Scott Allen Dr, Missoula MT 59803
Relationship to permit Holder: Representative

3. **SOURCE:**
LOCHSA RIVER

Tributary
MIDDLE FORK CLEARWATER RIVER

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: NO Overlap

C. DIVERSION AND DELIVERY SYSTEM

1. **LOCATION OF POINT(S) OF DIVERSION:**
LOCHSA RIVER SW¼ NE¼, Sec. 33, Twp 37N, Rge 14E, B.M. IDAHO County

Method of Determination: GPS. POD is screened intake pipe, and 1 HP centrifugal pump located at -114°42.0390, 46°30.4110.

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	
37N	14E	33			1.4														1.4

Total Acres: 1.4

Method of Determination: beneficial use field examination 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 Model No.	Pump Make	Pump Serial No. or Discharge Size
RIVER PUMP	WILO	1	WNDC10/ 56J	WILO	3310380, 1 ½-INCH

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
FLOWMETER	VELOCITY	DLJ METER	UNKOWN	UNKNOWN	FLANGED 1- ½ INCH	UNKOWN

2. Measurements: I utilized a new within 1 year flange mounted velocity style DLJ brand flowmeter to observe multiple 1-minute measurements with the average flow rate with the 1 hp pump discharging to one irrigation zone; the resulting average flow rate equaled 20.0 gpm or 0.04 cfs considering department rounding standards

E. FLOW CALCULATIONS

Measured Method: system installed velocity style flowmeter with dial 10-gal per revolution instantaneous readings used to record an average flow rate of 20.0 gpm with the irrigation system active.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 1.4 \text{ ac} \times 3.0 \text{ afa} = 4.2 \text{ af}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.04 \text{ cfs} \times 200\text{-day} \times 1.9835 = 15.9 \text{ af}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 4.2 \text{ af, but no volumetric values are applied to the face of the license.}$$

2. Volume Calculations for Other Uses:

- The irrigation beneficial use from the Lochsa River water source is exempt from the volume reporting requirements in accordance with IDAPA 37.03.02, Section 035.

G. NARRATIVE/REMARKS/COMMENTS

I conducted a beneficial use field examination on 7/23/2024 with the Permit Holder's Representative, Alex Athens, which showed an irrigation system diverting water from the Lochsa River. At the POD, a 3/32nd screened flexible intake pipe routes to a 1 HP Wilo brand electric centrifugal pump. Prior to distribution a DLJ brand inline flanged velocity style flowmeter is installed on the 1.5-inch polyurethane pipeline just before a manual lockable ball valve. I captured flow measurements using the flowmeter which was installed new within 1 year. With one zone running I measured 20 gpm on average over a couple minutes of metering which equals 0.04 cfs considering department rounding standards. There were two PODs authorized for development with one being on the opposite side of the river; the system was developed with a single diverting point and I've removed one of the two PODs which had identical legal descriptions during licensing review.

The permit authorized development of up to 12 acres with a corresponding diversion rate of 0.02 cfs per acre = 0.24 cfs. During the exam I used field maps to sketch out the irrigation system and POU; during licensing review I used ArcMap software to accurately trace out the POU which equals 1.4 acres. I'm only able to recommend 0.02 cfs per acre in accordance with guidance from the Wild & Scenic Agreement Memorandum and Decreed Right 81-10513's conditions of

approval. $1.4 \text{ ac} \times 0.02 \text{ cfs} = 0.04 \text{ cfs}$ considering department rounding standards which is reflected in the pump capacity as developed on the water system. I've recommended **0.04 cfs** as the maximum diversion rate for licensing purposes.

The irrigation POU uses 1.5-inch polyurethane piping which routes from the shore inland and up-slope along the eastern side of the dirt driveway. The main irrigation trunk has splitters which break the irrigation into two zones each with 7 sprinklers on 1/2-inch riser pipes used to water trees and ground cover throughout the summer months. Photographs were taken which illustrate the irrigation use and active irrigation was observed during the exam.

There is a cased groundwater well located on the property that is used by the property owner as a deferrable domestic well. A portion of the property is watered from the well, but only the western part that isn't covered by this Permit's surface water system; there is no concern for overlaps between the deferred GW system and the Lochsa River system. The department standard diversion volume for 1.4 acres = 4.2 af, but as this system uses a surface water source there are no volume values added to the face of the license rather volume is accounted for in conditions of approval with the Permit limited to 3.0 acre-feet per acre (afa).

This Right is on property located within a designated Wild & Scenic (W&S) River which result in additional unique processing requirements and condition of approval requirements. I've completed the following actions during licensing review in regard to the Permit and conditions of approval:

- I've updated the W&S AdHoc accounting sheet to reflect the Lochsa River source, debited acres = 1.4 ac, debited rate = 0.04 cfs, and annotated this Right is "benefiting from subordination provisions" as a reason the Right is not subject to curtailment regarding prior Right 81-10513.
- Conditions of approval evaluation:
 - The system complies with condition 195 and I've replaced it with a text a text condition that read: "the right holder shall maintain a lockable device, subject to the approval of the Department, in a manner that will provide suitable control of the diversion."
 - Conditions 196, 197, & 198 are specific to W&S requirements, have been complied with by the Permit Holder, but shall remain on the license notifying current & future Right Holders of their respective ongoing requirements.
 - Condition R62, which normally is used for irrigation of acreage larger than 5.0 acres, satisfies the W&S irrigation allocation authorized of 0.02 cfs per acre and I've kept this condition on the license.
 - All other conditions on the Permit are being carried forward to the license.

This Right is subject to several prior water rights, including multiple minimum stream flow (MSF) senior Rights. Condition 227 was added to the Permit approval describing MSF requirements for the Lochsa River. As no additional MSF rights were called out by condition on the Permit, I'm unable to make the license more restrictive in condition but the Right Holder is subject to self-curtailment when in-river flows in the Middle Fork Clearwater River and three (3) reaches of the Clearwater River downstream from the Lochsa River are not satisfying the MSF Right(s) 81-7162, 85-7583, 86-7318, and 86-7345 respectively. The Right Holder may use the USGS current streamflow condition website <http://waterdata.usgs.gov> to monitor flows annually until a future date when a formal water district is formed for the watershed. There are no overlapping water right concerns toward licensing 81-12029.

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>
IRRIGATION	04/15 to 10/31	0.04 CFS

Totals: 0.04 CFS

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 *J. B. P.* Date *10/31/2024*

Reviewer *Chris Belf* Date *3/28/2025*

State of Idaho
Department of Water Resources
Attachment to Field Exam
81-12029

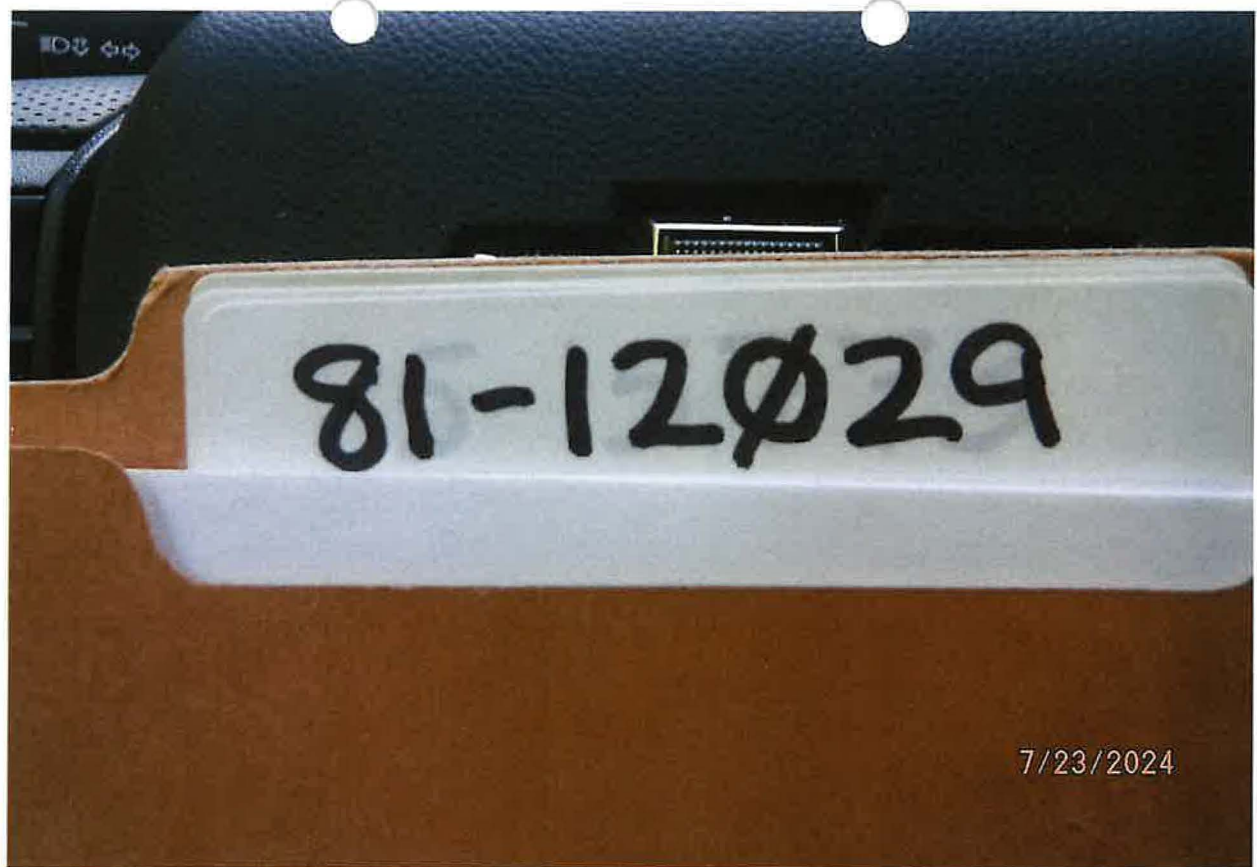
This map depicts the IRRIGATION system diagram.



0 0.035 0.07 0.14 Miles

-  Place Of Use Boundary
-  Point of Diversion
-  Townships
-  PLS Sections
-  Quarter Quarters





BENEFICIAL USE FIELD EXAM DATE 7/23/2024



POD – FLEXIBLE INTAKE PIPE WITH 3/32ND INCH SCREEN IN THE LOCHSA RIVER



POD – CENTRIFUGAL PUMP DIVERTING FROM RIVER



POD – WIL0 BRAND 1 HP ELECTRIC PUMP MOTOR MODEL WND10/56J



POD – PUMP MODEL WSP-10 S/N 3310384



DLJ METER, VELOCITY STYLE FLANGED FLOWMETER INSTALLED INLINE DIRECTLY FROM PUMP



1 1/2 INCH POLYPIPE MAIN IRRIGATION LINE WITH LOCKABLE BALL VALVE INSTALLED NEAR PUMP PRIOR TO DISTRIBUTION TO SPRINKLER SYSTEM





IRRIGATION CONVEYANCE SYSTEM USES 1 ½ INCH POLY PIPE TO ½ INCH RISER PIPES WITH IMPACT SPRINKLERS. 2 ZONES SERVED BY TWO IRRIGATION MAIN LINE RUNS WITH 7EA SPRINKLERS PER ZONE



EXAMPLE – ½ INCH RISER PIPE TO IMPACT SPRINKLERS FOR IRRIGATION

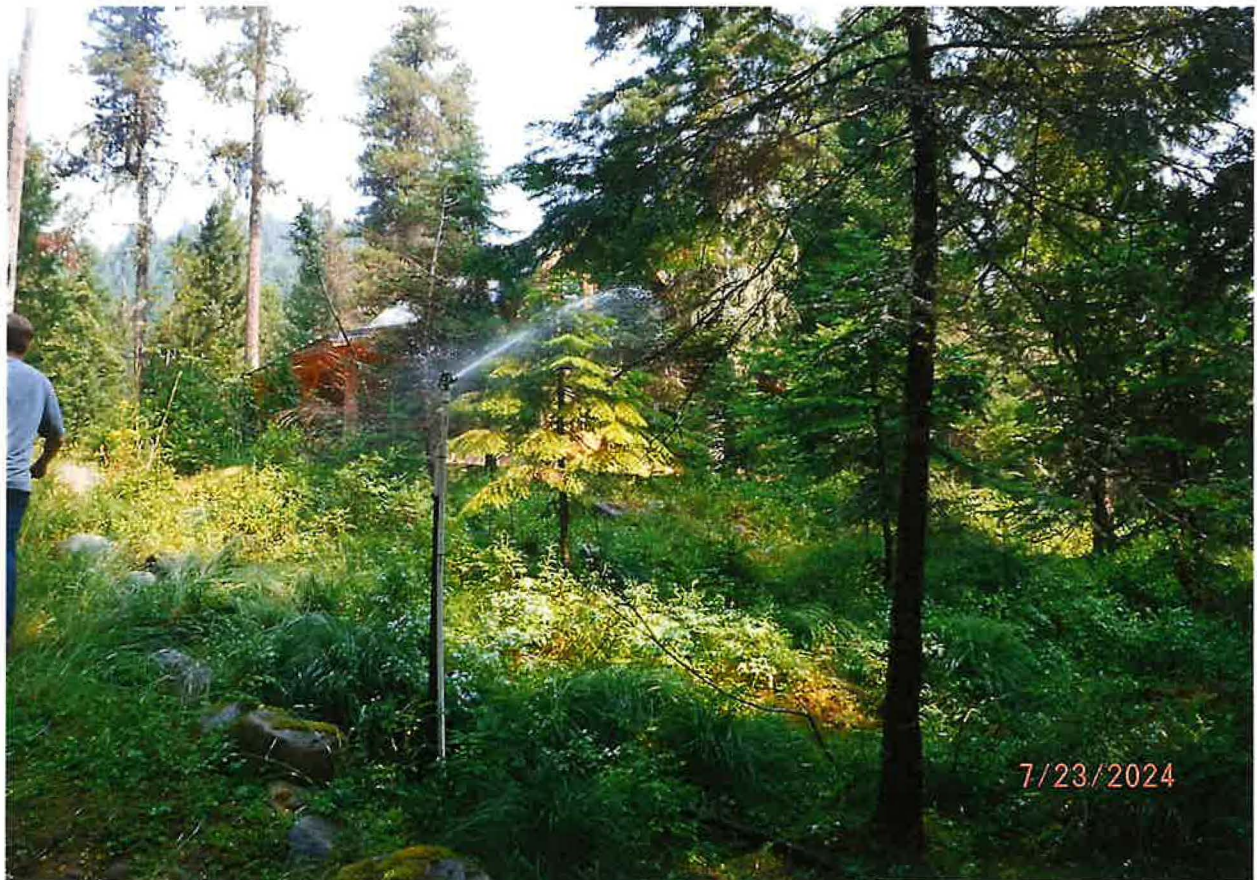


IRRIGATION POU





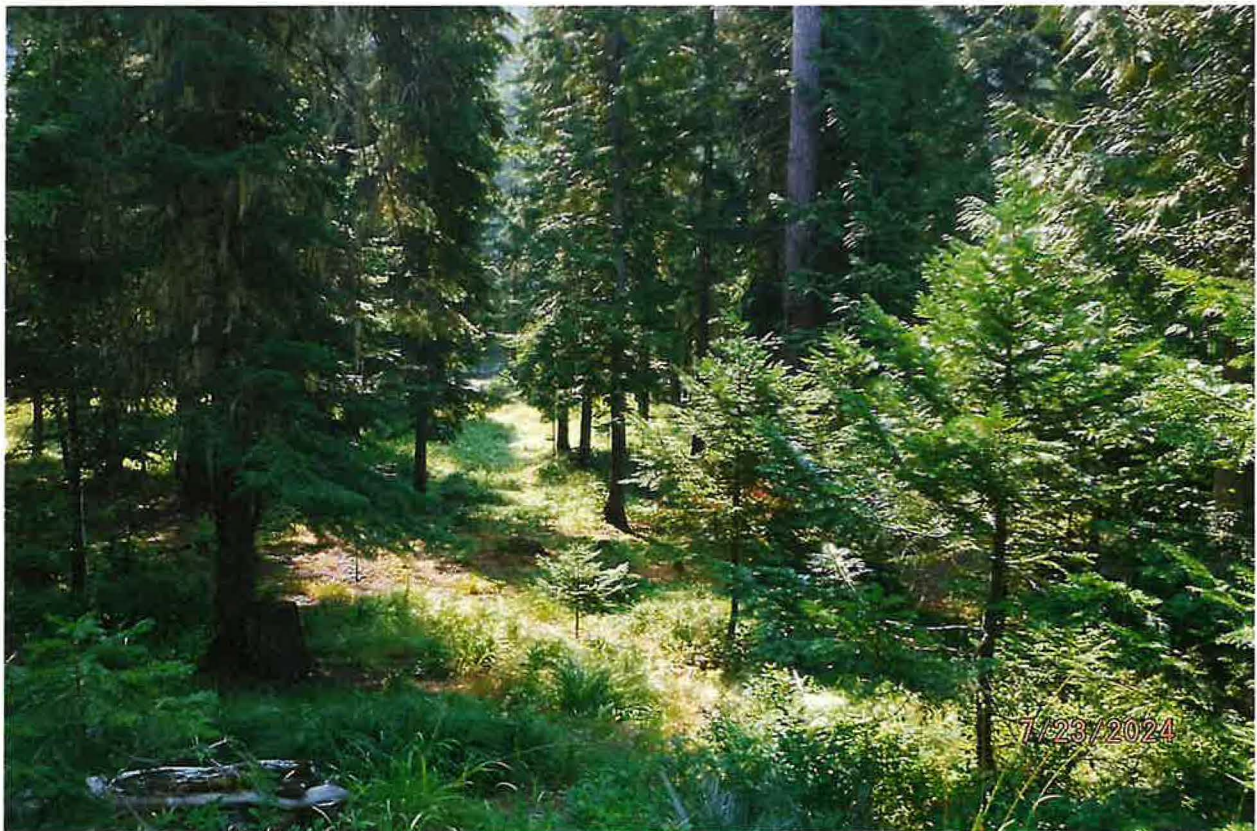
IRRIGATION POU



IRRIGATION POU – WATERS LOT TO MAINTAIN FOREST VEGETATION AND FOR SMALL LAWN SPACE



IRRIGATION POU – LAWN SPACE AROUND GUEST HOME



IRRIGATION POU



EXAMPLE – IRRIGATION RISER PIPE FROM MAIN SERVICE LINE





IRRIGATION POU – END OF SYSTEM SPRINKLER ALONG ROADWAY THROUGH PARCEL

