STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 81-12013
Exam Date: 07/26/2021

1. Current Owner:
   LOCHSA HOLDINGS LLC 11 OLD ELK SUMMIT RD LOLO MT 59847

2. Accompanied by: Scott Bledsoe
   Phone No: 208-942-0283
   Address: Same as above
   Relationship to permit Holder: Representative

3. **SOURCE:**
LOCHSA RIVER

Tributary
MIDDLE FORK CLEARWATER RIVER

Method of Determination: Arcmap and DRG.

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: YES Overlap

Water Right No.	Source	Purpose of Use	Basis
81-12014	LOCHSA RIVER	IRRIGATION	PERMIT – in process for licensing with this Permit.

Comments: Permit 81-12014 uses the same POD as this permit and has a common irrigation system. While the POUs are separate, the diverting works are common between the two rights; condition F06 was added to describe shared POD between rights.

C. DIVERSION AND DELIVERY SYSTEM

1. **LOCATION OF POINT(S) OF DIVERSION:**
LOCHSA RIVER SE¼ 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°41.688, 46°30.562.

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				0.7													0.7

Total Acres: 0.7

Method of Determination: field exam and Arcmap aerial imagery.

3.

X Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable.

X Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.

X Aerial Photo Attached (required for irrigation of 10+ acres).

X 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
RIVER DIVERSION	PENTEK	1	C48AB64A03	SAWYERS	

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
5 GAL BUCKET MEASUREMENT						

2. Measurements: two 5-gallon bucket tests were completed from two separate hoses attached to the irrigation system that were running at the same time, with combined flow of two resulting in a diversion rate of 19.8 gpm = 0.05 cfs, considering department rounding standards.

E. FLOW CALCULATIONS

Measured Method: 5-GAL Bucket Test = hose 1 (5 gal / 30.34 sec) x 60 sec/min = 9.9 gpm
= hose 2 (5 gal / 30.21 sec) x 60 sec/min = 9.9 gpm
Total of 2ea 5-GAL Bucket Tests = 9.9 gpm + 9.9 gpm = 19.8 gpm = 0.05 cfs considering department rounding standards.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

$V_{I.R}$ = (Acres Irrigated) x (Irrigation Requirement) = 0.7 acres x 3.0 afa = 2.1 af

$V_{D.R}$ = [Diversion Rate (cfs)] x (Days in Irrigation season) x 1.9835 = 0.02 cfs x 214-day x 1.9835 = 8.49

V = Smaller of $V_{I.R}$ and $V_{D.R}$ = 2.1 af

2. Volume Calculations for Other Uses:

This is a surface water source irrigation water right, and no volume metrics will be applied on the face of the license, rather captured in conditions of approval.

G. NARRATIVE/REMARKS/COMMENTS

Administrative note: during licensing review, a noticeable shift in Arcmap aerial imagery versus the DRG layer was observed; the applicant's map appears to be a tax parcel map, which does not account for the shift in DRG layer. Map products have been added to the backfile during licensing review showing the evident shift in the imagery layer. The result – the applicant's irrigation system once shifted has irrigation occurring in different legally described PLSS locations than permit approved for. During licensing review, the irrigation POU was developed using the DRG layer, and irrigation acreage applied to the shifted legal description. Email correspondence between IDWR staff and USFS staff was completed to determine if there were known issues with boundary lines in that area or development of land by the applicants. An Idaho Water Use Specialist for the Forest Service replied to the Department via email on 11/22/2021 and identified the entirety of

the applicant's diversion and use was on private land. No amendment to permit at time of licensing is recommended for this shift in acreage to account for shift in the irrigation POU & POD. The irrigation acreage and POD are designated in entirely in the SE¼NE¼, but the mapping products illustrate POD/POU with the shift in imagery applied but are for illustrative purposes only rather than a plat map.

Field exam performed on 7/26/2021 with the applicant's representative, Scott Bledsoe, showed water being diverted from the Lochsa River for irrigation use. At the POD, the applicant has installed a portable centrifugal pump with 1HP pump motor that has a screened intake pipe and routes water to a 1.5-inch poly pipe main irrigation trunk line. Due to severe icing conditions during winter, the POD remains portable so that it can be stored during winter; each spring, depending on what debris remains on the applicant's river frontage, the pump may be moved up or downstream slightly depending on accessibility to the water. The general location of the POD remains fixated to the same legal descriptive quarter-quarter and on the applicant's property and is not a concern for licensing this right. This water right qualifies for an in-office exam, but a field exam was performed to determine how the applicant's 3ea water rights (81-12013, 81-12014, & 81-12015) on the same parcel interact with each other prior to licensing.

I took a flow measurement from a fire hose connection which serves as the sprinkler blow out point for the water system, resulting in 5 gal / 9.93 sec x 60 sec/min = 30.2 gpm or 0.07 cfs. This flow rate identifies the maximum capacity of the pump, but the applicant's irrigation system restricts that flow down to a lower rate. Two 5-gallon bucket tests were completed from two separate hoses attached to the irrigation system that were running at the same time, with combined flow resulting in a diversion rate of 19.8 gpm = 0.05 cfs, considering department rounding standards. This permit and a 2nd permit 81-12014 share the same irrigation water system infrastructure, with this permit authorizing 0.02 cfs and 81-12014 authorizing 0.03 cfs. Considering the sum of the two permit's authorized diversion rate(s) equal 0.05 cfs, the observed flow rate of 0.05 cfs using 5-gal bucket measurements is reasonable. This permit is recommended to be licensed for the department standard for 0.7 acres of irrigation found in the POU or **0.02 cfs**. The remaining 0.03 cfs is accounted for under permit 81-12014.

The minor over diversion observed from the fire hose connection (0.07 cfs versus 0.05 cfs for 2 permits) is mitigated as water is restricted down from 1.5-inch poly to ¾ inch irrigation pipe risers and/or garden hose attachments for use; the exceedance in pump capacity is needed to maintain adequate water pressure at the furthest zones in the irrigation system but is not realized as the restriction of flow to smaller pipes reduces the sprinkler output capabilities.

During the exam, the irrigation POU was walked with Mr. Bledsoe and the irrigation system main trunk like sketched out on field maps. During licensing review, Arcmap aerial imagery was used to accurately trace out the irrigation acreage equaling 0.7 acres. The annual volume associated with the irrigation occurring under this permit equals 0.7 ac x 3.0 afa = 2.1 af, but as this is a surface source water right no volume metrics shall be applied to the face of the license; volume shall be accounted for in the approval conditions of the license. The applicant uses multiple zones with 3/4-inch riser pipe to sprinklers and hose to tripod sprinklers to irrigation a moderately dense forested area and sub-irrigating driveways for dust control. The sprinkler arcs do cover the roadway and driveway portions of the POU and were included in acreage size for licensing purposes. The applicant did not apply for fire protection as a beneficial use but had fire hoses prepared for use due to the active fire that was burning in the local area during the field exam. I notified Mr. Bledsoe of IDWR's regulations pertaining to fire protection but as fire suppression for an active fire is an exempt use, there is no issue with the water system as it has been developed.

Condition 029 was removed during licensing review. Condition R62 was replaced with X31 due to 0.7 acres of observed irrigation occurring at the POU during the exam. Condition F06 was included to describe the shared POD between this permit and 81-12014. While there is no overlap in POU between rights, the water system infrastructure is the same for both 81-12013 & 81-12014. Condition U45 was added stating the applicant's water usage is not on federal land. All other conditions on the permit shall remain on the license. The diversion rate (0.02 cfs) and debited acres (0.7 ac) have been entered into the Wild & Scenic accounting system as benefiting from subordination.

Have conditions of permit approval been met? _X_ Yes ____ No

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use	Rate of Diversion
IRRIGATION	04/15 to 10/31	0.02 CFS
	Totals:	0.02 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 - Water Resource Agent

Field Examiner's Name [signature] Date 11/22/2021

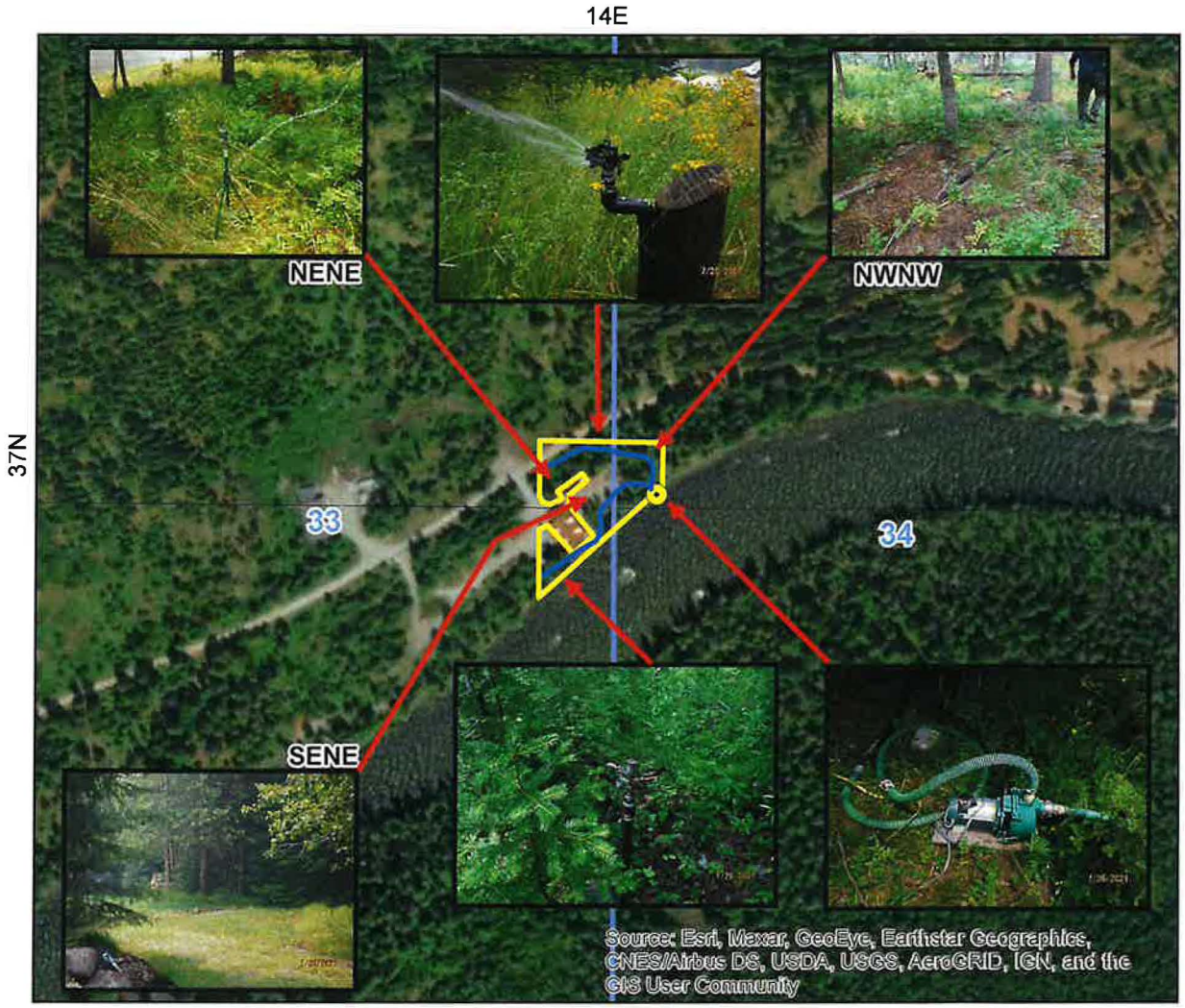
Reviewer [signature] Date 1/31/2022

State of Idaho
Department of Water Resources

Attachment to Field Exam

81-12013

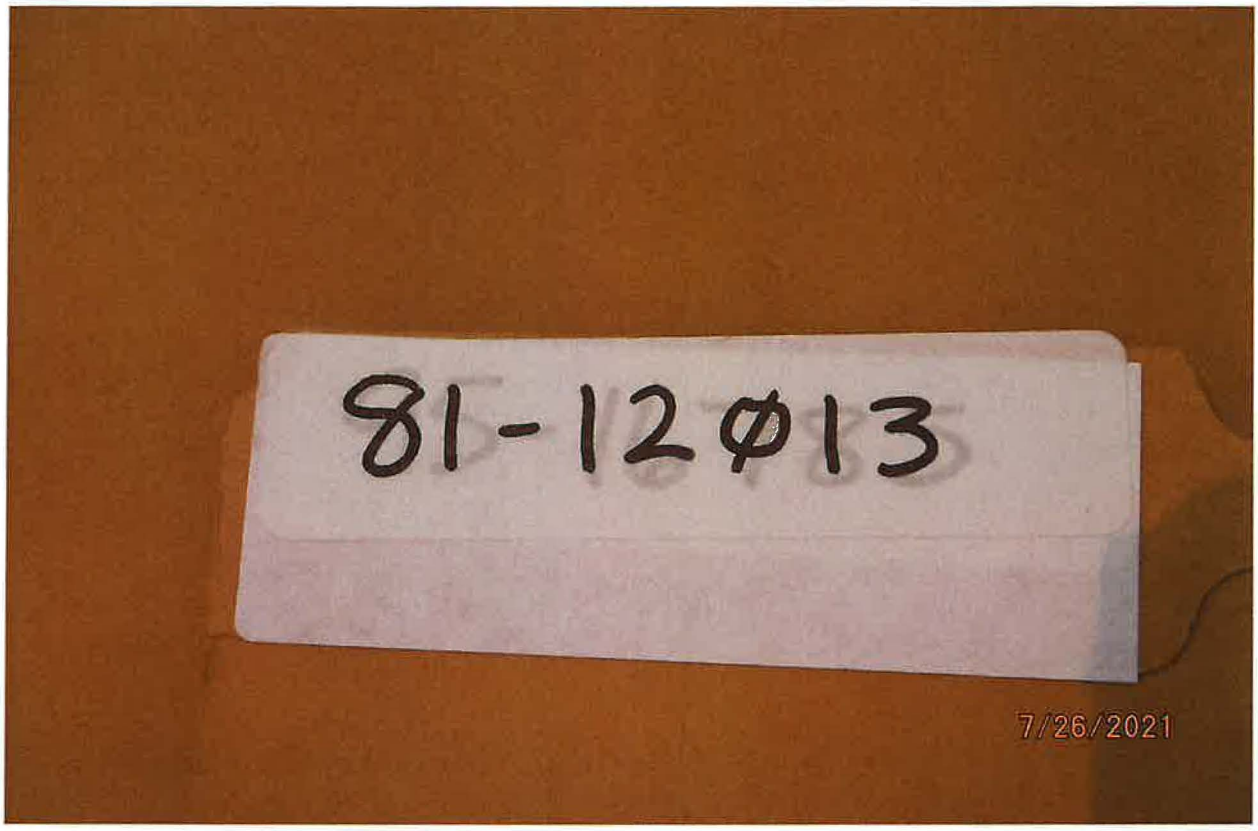
IRRIGATION system diagram.



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

0 0.035 0.07 0.14 Miles

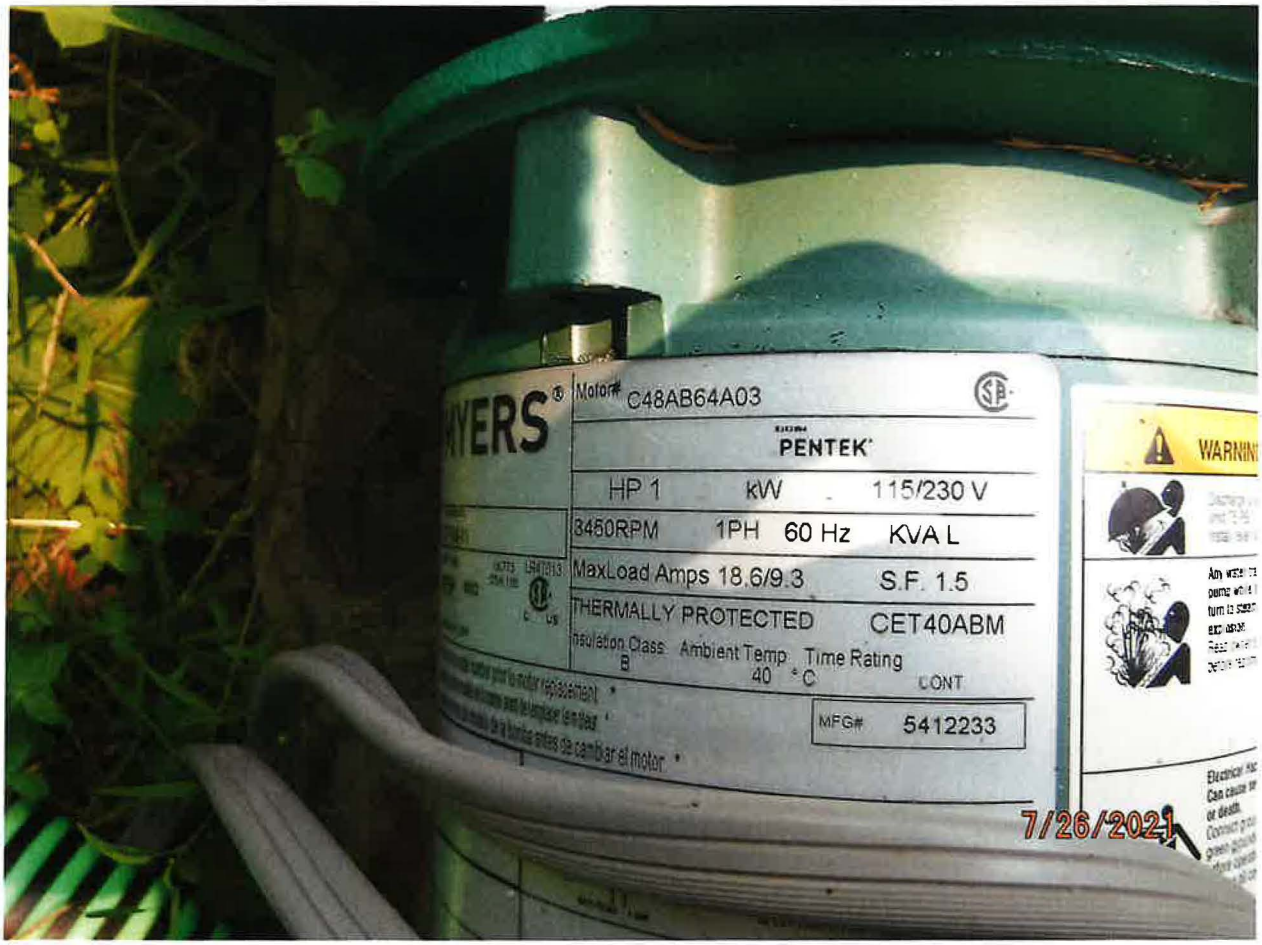
N



FIELD EXAM DATE 7/26/2021

POD – SCREENED INTAKE PIPE IN RIVER TO PUMP

DIVERTING WORKS – SAWYERS PUMP WITH 1 HP PENTEK PUMP MOTOR



COUPLED FLEX HOSE TO POLY PIPE IRRIGTATION MAIN LINE

MAIN IRRIGATION POLY PIPE ROUTES THROUGH FORESTED LOT AT IRRIGATION POU

IRRIGATION SYSTEM BLOWOUT PORT

IRRIGATION POU – RISER PIPE TO SPRINKLER SET AT INTERVAL TO WATER LAWN & TREED LOT

IRRIGATION POU – FROST FREE HYDRANT TO HOSE AND SPRINKLER

IRRIGATION POU