

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 92-11123
Exam Date: 6/22/2021

1. Current Owner:
ALVIN BALDWIN 590 LOST CABIN TRL SAINT MARIES ID 83861-5007 AND
NORMA BALDWIN 590 LOST CABIN TRL SAINT MARIES ID 83861-5007
2. Accompanied by: Alvin Baldwin
Phone No: 208-245-1789
Address: Same as above
Relationship to permit Holder: Permit holder

3. **SOURCE:**
ALDER CREEK

Tributary
ST MARIES 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: NO Overlap

C. DIVERSION AND DELIVERY SYSTEM1. **LOCATION OF POINT(S) OF DIVERSION:**

ALDER CREEK SE¼ SW¼, Sec. 25, Twp 45N, Rge 03W, B.M. BENEWAH County

Method of Determination: GPS; POD located at -116°39.7254, 47°12.6178

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	
45N	03W	25												0.2					0.2

Total Acres: 0.2

Method of Determination: Field examination and Arcmap aerial imagery.

3.

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

X 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

X 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
PUMP FROM CREEK		2 1/4		BRIGGS & STRATTON	

D. FLOW MEASUREMENTS

1.

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

2. Measurements: Three 5-gallon bucket tests were completed from a hose connected to the transfer pump, with average of three resulting in a diversion rate of 5 gal / 30.50 sec x 60 sec/min = 9.84 gpm = **0.02 cfs**, considering department rounding standards.

E. FLOW CALCULATIONS

Measured Method: 5-GAL Bucket Test = (5 gal / 27.31 sec) x 60 sec/min = 10.98 gpm
 = (5 gal / 32.45 sec) x 60 sec/min = 9.24 gpm
 = (5 gal / 14.52 sec) x 60 sec/min = 9.45 gpm

Average of 3ea 5-GAL Bucket Tests = (10.98 gpm + 9.24 gpm + 31.75 gpm) / 3 = 9.45 gpm = 0.02cfs considering department rounding standards.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 0.2 \text{ ac} \times 3.0 \text{ afa} = 0.6 \text{ af}$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.02 \text{ cfs} \times 214\text{-day} \times 1.9835 = 8.5 \text{ af}$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = 0.6 \text{ af}$$

2. Volume Calculations for Other Uses:

This right uses a surface water source and does not receive an annual volume nor maximum diversion volume.

G. NARRATIVE/REMARKS/COMMENTS

Right 92-11123 has been split from original permitted Right 92-10166 due to the Alder Creek water source & irrigation system portion of the developed water uses being separate from the applicant's spring source irrigation system.

Field exam performed on 6/22/2021 with the applicant, Alvin Baldwin, showed Alder Creek water being diverted for irrigation use. At the POD, the applicant has an old 2.25 HP Briggs & Stratton water transfer pump with screened intake pipe drafting water to a 5/8" hose attachment. Three 5-gallon bucket tests were completed from a hose connected to the transfer pump, with average of three resulting in a diversion rate of 5 gal / 30.50 sec x 60 sec/min = 9.84 gpm = **0.02 cfs**, considering department rounding standards which is recommended for licensing purposes. While typically a 2+ hp pump has a larger pumping capacity, but due to the age of the pump which has been rebuilt multiple times by the applicant, coupled with flow restriction down to a 5/8-inch hose, the pump capacity is greatly reduced. If a replacement pump is added to the system, the applicant will need to downgrade in HP to stay within the diversion rate recommended for licensing this right.

The irrigation POU was sketched out on field maps during the field exam and consists of a small fenced in area that runs along side the creek. Arcmap aerial imagery was used during licensing review to trace out the POU which equals 0.2 acres. The annual volume associated with irrigation equals $0.2 \text{ ac} \times 3.0 \text{ afa} = 0.6 \text{ af}$. Due to this right's surface source, there are no volume metrics applied to the face of the license, rather irrigation volume is accounted for in conditions of approval. The applicant stated that due to health issue during the past year, the small garden/orchard tree area had not been kept up as it had during the development period. As the fenced in area is present with irrigation system in place with hose to sprinklers, credit is recommended for licensing this irrigation right. There is an evident shift in aerial imagery layers that result in the applicant's property boundary being shifted west from Alder Creek. The irrigation POU extends beyond the applicant's parcel when viewing in Arcmap due to this shift. Alder Creek is the applicant's property boundary on the eastern extent of their property, mitigating any concern for irrigation occurring on land not owned by the applicant.

Condition 26A and 132 were removed from this permit, with 132 being accounted for under permit 92-10166. Condition 227 was removed, as the minimum stream flow Right 92-7200's end reach is located above the confluence where Alder Creek flows into the St. Maries River. Condition X31 was added to describe irrigation of less than 1 acre occurring. All other conditions shall be carried forward to the license. There are no overlap concerns for this water right.

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	04/01 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 -

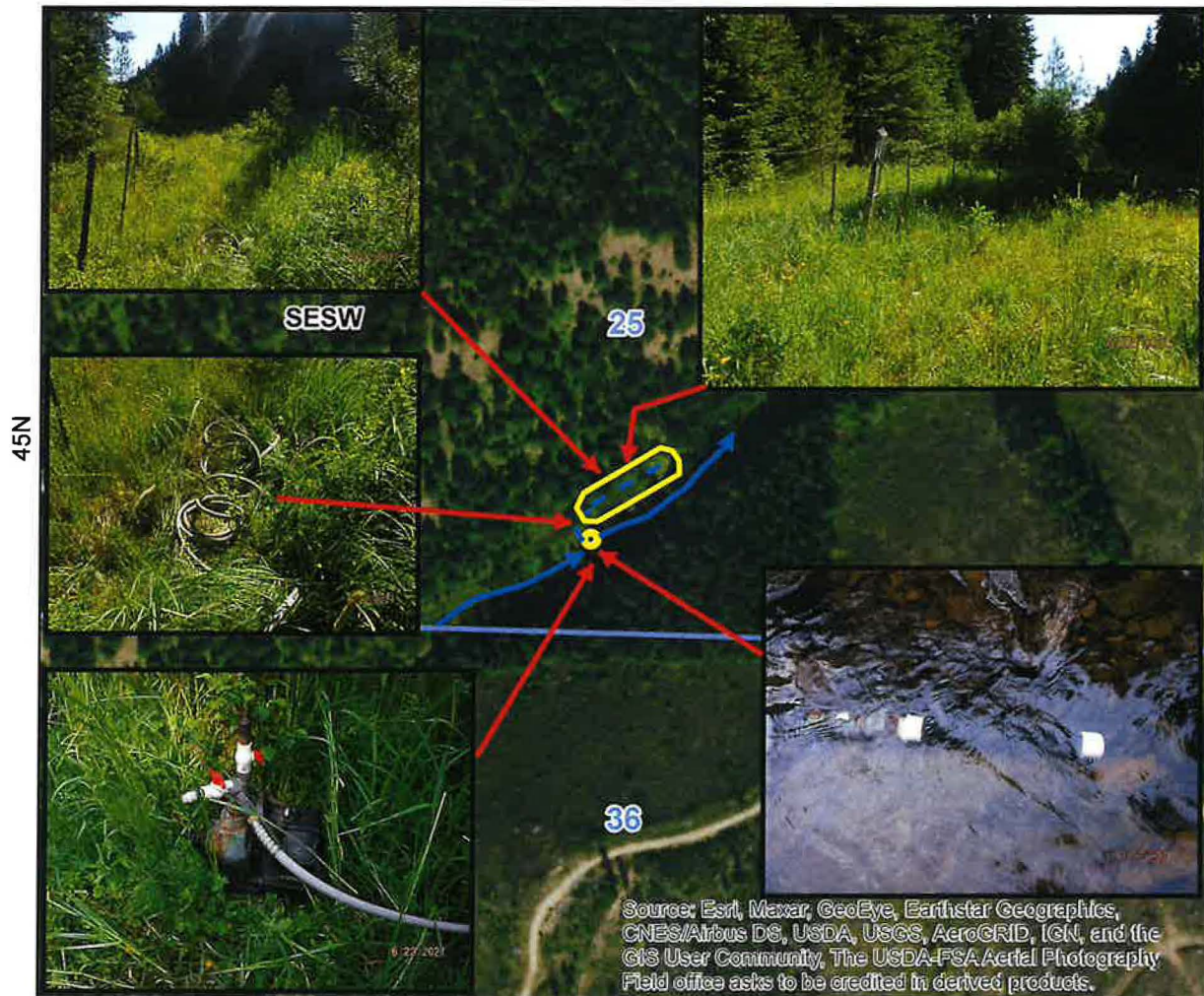
Field Examiner's Name Ed Bet Date 11/30/2021

Reviewer Ad Fink Date 12/30/2021

State of Idaho
Department of Water Resources
Attachment to Field Exam
92-11123

IRRIGATION system diagram.

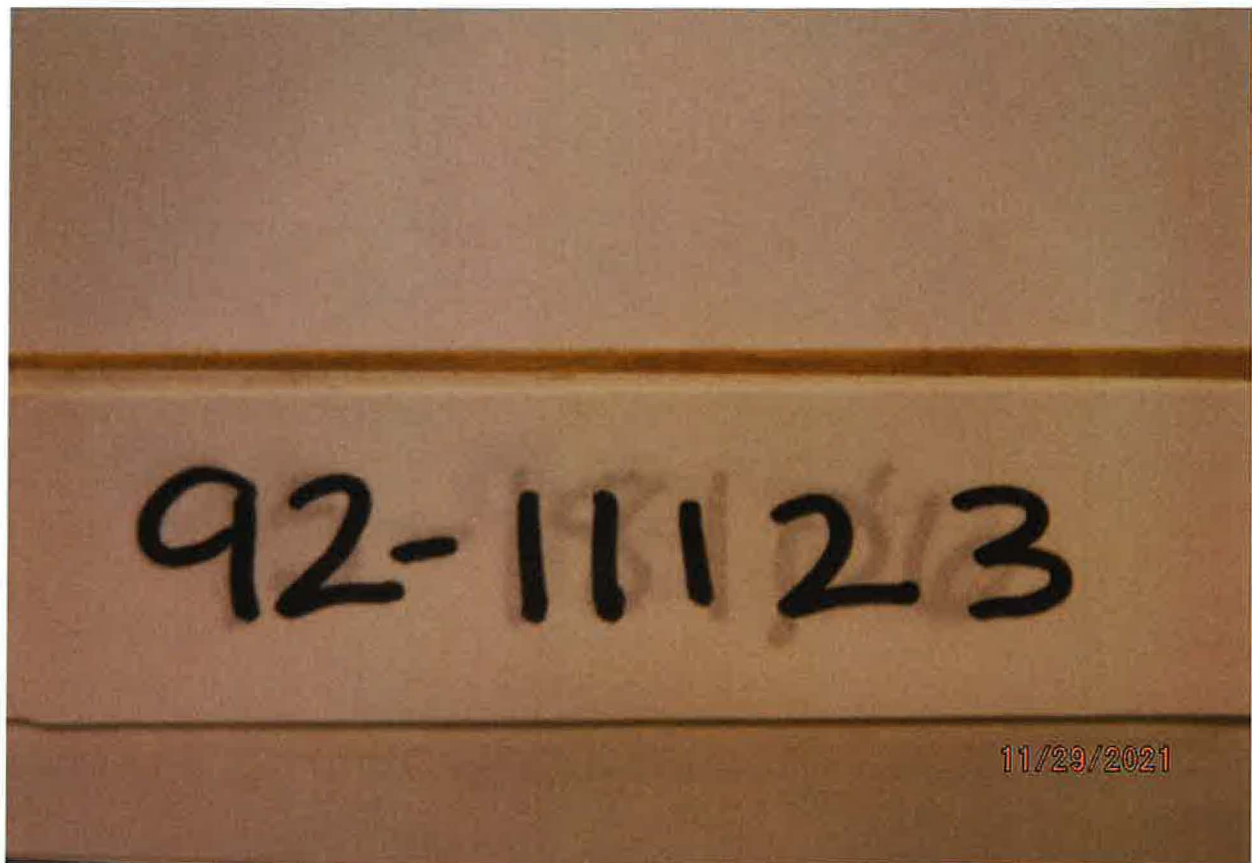
03W



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

0 0.035 0.07 0.14 Miles

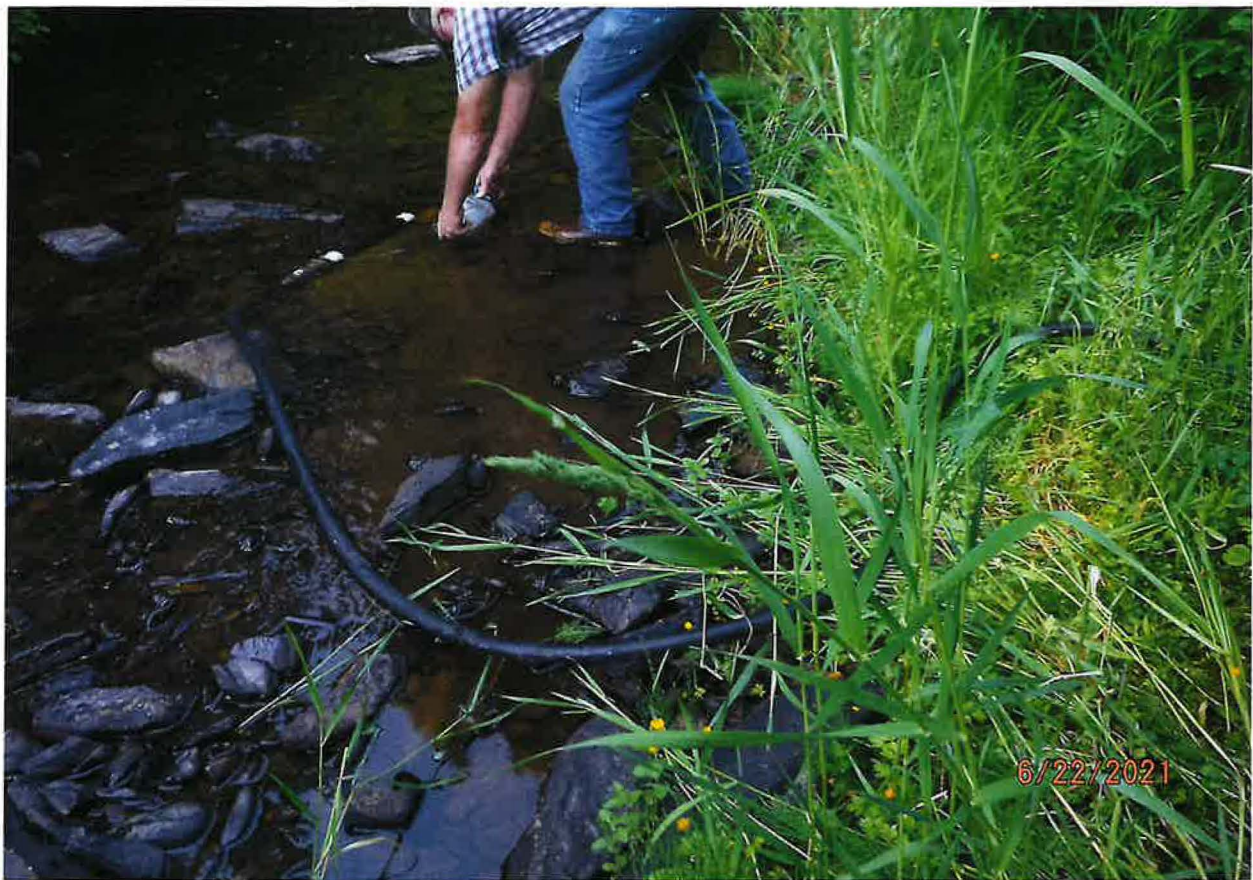




SPLIT FROM WR 92-10166 – FIELD EXAM DATE 6/22/2021



POD – CREEK DIVERSION WITH SCREENED INTAKE PIPE TO PUMP



INTAKE PIPE TO PUMP AT POD



POD – 2.25 HP BRIGGS & STRATTON WATER TRANSFER PUMP



WATER TRANSFER PUMP



IRRIGATION POU – INCORPORATES HOSE AND SPRINKLER



IRRIGATION POU

