

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 96-9539

Exam Date: 07/29/2020

1. Current Owner:
WILLIAM B WATERS 126 DIRT RD SAGLE ID 83860

2. Accompanied by: William Waters
Phone No: 208-263-8893
Address: Same as above
Relationship to permit Holder: Permit Holder

3. **SOURCE:**
MOORE CREEK

Tributary
COCOLALLA CREEK

Method of Determination: Arcmap and DRG

B. OVERLAP REVIEW

1. Other water rights with the same place of use: NO Overlap

Water Right No.	Source	Purpose of Use	Basis

Comments: _____

2. Other water rights with the same point-of-diversion: NO Overlap

Water Right No.	Source	Purpose of Use	Basis

Comments: _____

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

MOORE CREEK NE¼ SW¼, Sec. 23, Twp 56N, Rge 03W, B.M. BONNER County

Method of Determination: GPS. POD is located at -116°40.121, 48°11.111.

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	
56N	03W	23									0.2								0.2

Total Acres: 0.2

Method of Determination: Field examination and Arcmap.

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 Serial No.	Pump Make	Pump Serial No. or Discharge Size
NONE					

D. FLOW MEASUREMENTS

1.

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

2. Measurements: Three 5 gallon bucket tests were completed from PVC pipe fed from water transfer pump at POD, with average of three resulting in diversion flow rate of 5 gal / 18.36 sec x 60 sec/min = 16.34 gpm = **0.04 cfs**.

E. FLOW CALCULATIONS

Measured Method: 5 GAL Bucket Test = (5 gal / 18.43 sec) x 60 sec/min = 16.28 gpm
 = (5 gal / 18.57 sec) x 60 sec/min = 16.16 gpm
 = (5 gal / 18.08 sec) x 60 sec/min = 16.59 gpm

Average of 3ea 5 GAL Bucket Tests = (16.28 gpm + 16.16 gpm + 16.59 gpm) / 3 = 16.34 gpm = **0.04 cfs**

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

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

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.04 \text{ cfs} \times 214 \text{ days} \times 1.9835 = 17 \text{ af}$$

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

2. Volume Calculations for Other Uses:

This is a surface water right; there will be no annual or maximum diversion volumes applied to this water right license.

G. NARRATIVE/REMARKS/COMMENTS

Field exam conducted on 7/28/2020 with applicant, William Waters, showed water being diverted from Moore Creek for irrigation purposes. At the POD, applicant had installed a screened inlet PVC pipe into the creek, running into a ½ HP water transfer pump. From the transfer pump water was routed uphill approximately 60 feet to the applicant's POU using black PVC pipe to a garden hose connection. 5 gallon bucket flow measurements were performed to obtain a diversion rate equal to 5 gal / 18.36 sec x 60 sec/min = 16.34 gpm = 0.04 cfs. This diversion rate is slightly larger than the department standard for irrigation of small acreage, but the gallons per minute falls between 0.03 and 0.04 cfs, rounded up to 0.04 cfs considering department rounding standards. The higher diversion rate is necessitated as applicant waters on a compressed time frame of an hour a day during the irrigation system due to health issues that prevent added time in the garden. As such, a maximum diversion rate of **0.04 cfs** is recommended to be applied to this water right license.

At time of permit, applicant had applied for 2.0 acres of irrigation, but at time of field exam applicant stated he had not developed a lower field due to health problems, and only irrigated a fenced garden area and small patch of lawn grass in front of his home. Irrigation was completed using hose and sprinklers, and hose-to-drip line for some garden plants. During exam, irrigated acreage was sketched out to show the irrigation acreage. During licensing review, arcmap was used to trace out the applicant's irrigated area equaling 0.2 acres. Annual volume for irrigation equals 0.2 acres x 3.0 afa = 0.6 af, but as this water right's source is from surface water, no volume metrics are applied to right at time of licensing.

Condition 26A was removed from permit. Condition R66 was replaced with R58, describing no more than 3.0 afa per acre of irrigation at the field headgate for irrigation of the place of use. All other conditions remain on permit at time of licensing. There are no overlap conditions for this water right.

Have conditions of permit approval been met? ☒ 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	0.04 CFS

Totals: 0.04 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

I. AUTHENTICATION

Luke Bates - Water Resource Agent

Field Examiner's Name  Date 7/29/2020

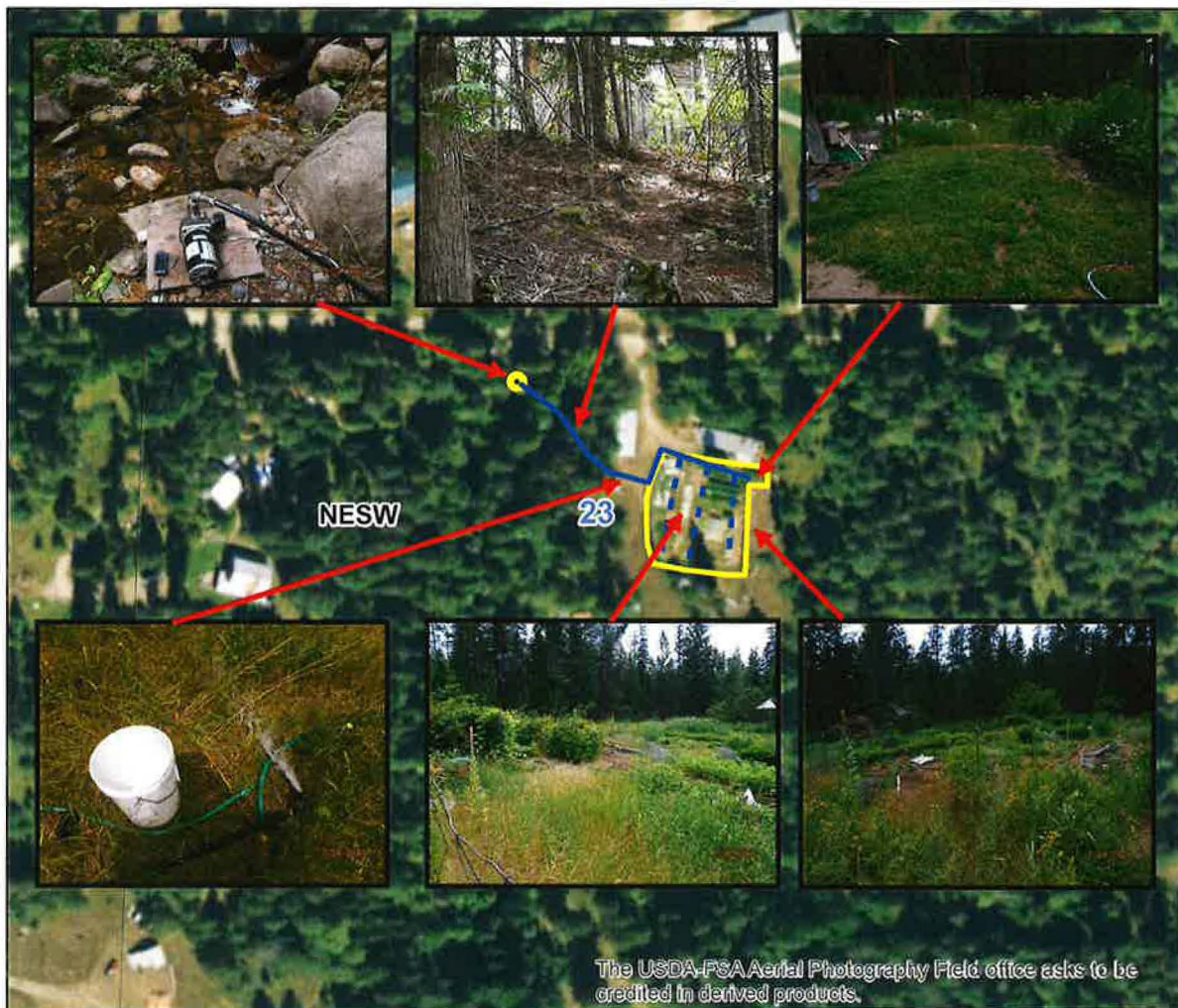
Reviewer  Date 7/30/2020

State of Idaho
Department of Water Resources
Attachment to Field Exam
96-9539

IRRIGATION system diagram.

03W

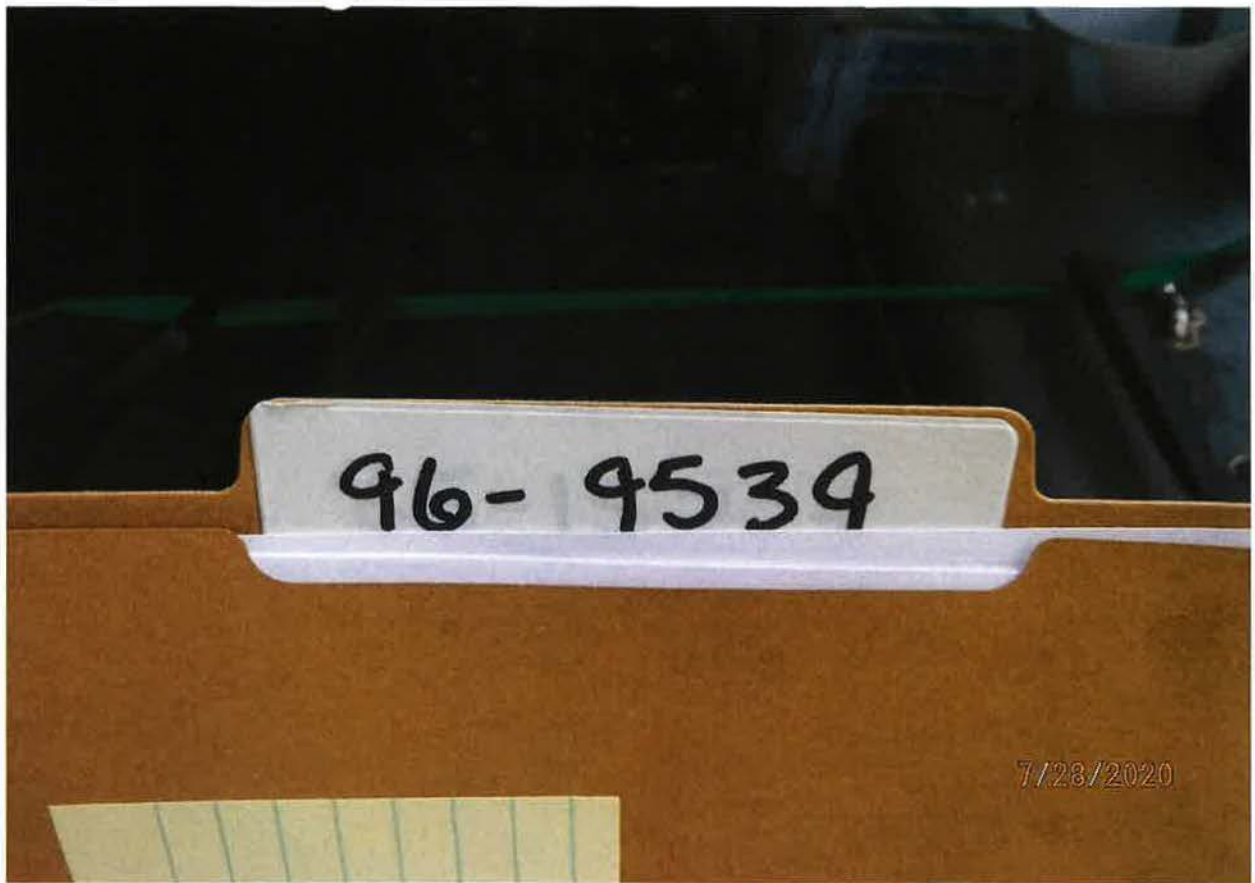
56N



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

0 0.02 0.04 0.08 Miles

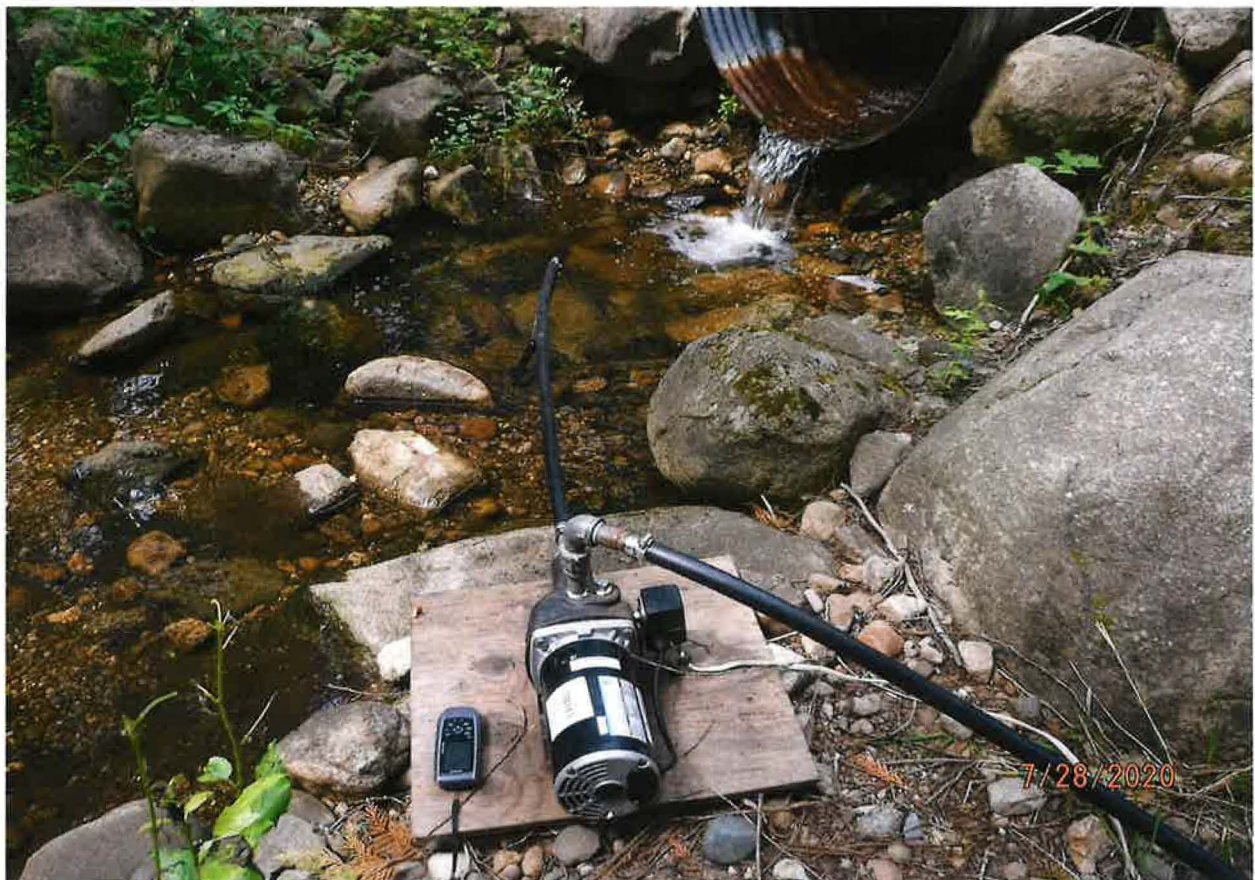




POD – SCREENED PVC PIPE IN CREEK



½ HP WATER TRANSFER PUMP AT POD



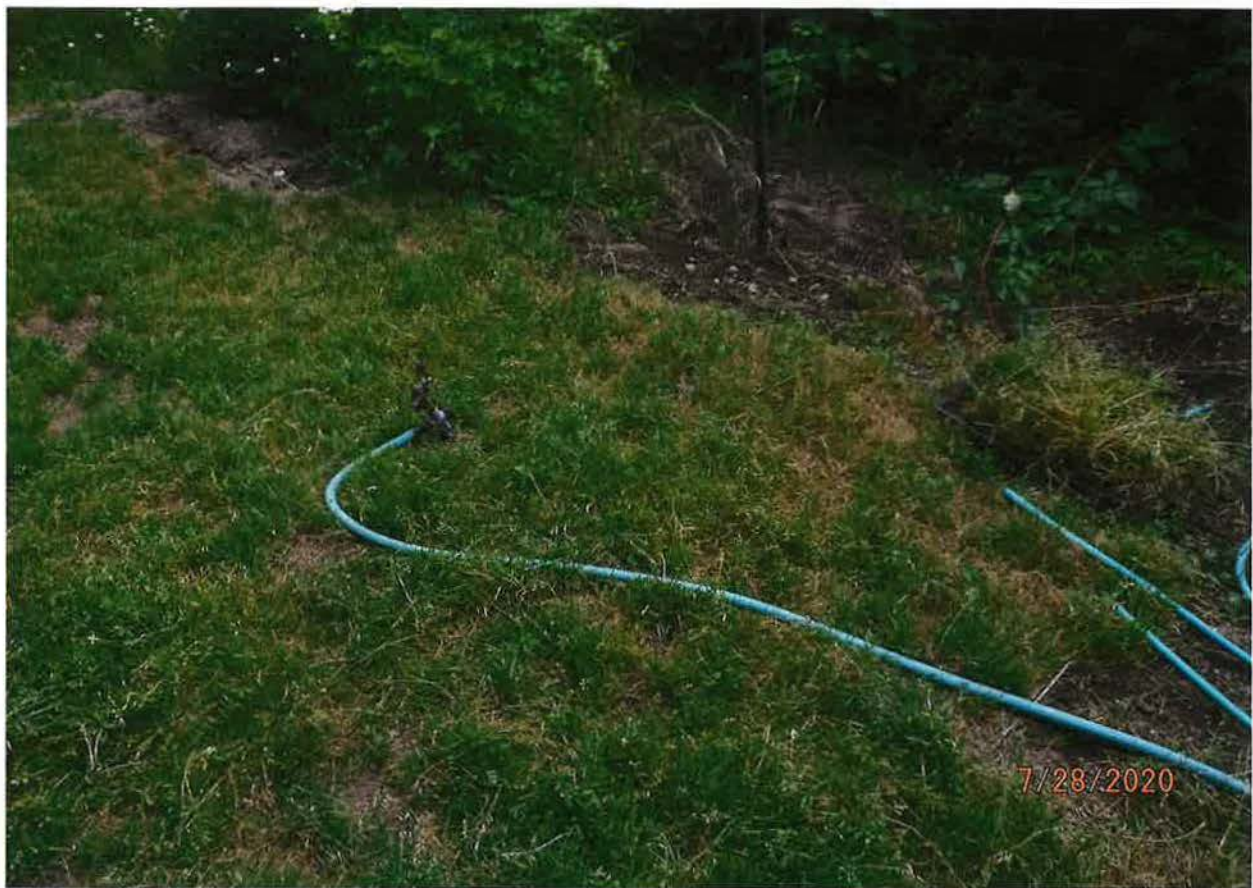
WATER CONVEYANCE SYSTEM



2" PVC PIPE UPHILL FROM POD TO POU



5 GAL BUCKET TEST



IRRIGATION POU – SPRINKLER AND HOSE FLOOD IRRIGATION





IRRIGATION POU





IRRIGATION POU

