

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 86-12072
Exam Date: 05/18/2021

1. Current Owner:
DOUGLAS J BLEVINS 1380 WALLEN RD MOSCOW ID 83843-7446 AND/OR
EDNA M BUCHANAN 1380 WALLEN RD MOSCOW ID 83843-7446
2. Accompanied by: Douglas J Blevins
Phone No: 208-882-4035
Address: Same as above
Relationship to permit Holder: Permit Holder

3. **SOURCE:**
SPRING

Tributary
SINKS

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:**

SPRING NW¼ SW¼ NE¼, Sec. 4, Twp 39N, Rge 04W, B.M. LATAH County

Method of Determination: GPS. POD is spring flow to pipe to 24hr impoundment basin located at -116°50.497, 46°45.314.

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	
39N	04W	4			0.3														0.3

Total Acres: 0.3

Method of Determination: Field exam 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 Serial No.	Pump Make	Pump Serial No. or Discharge Size
SPRING					

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
NONE						

2. Measurements: Unable to perform flow measurement due to inadequate pipe requirements. Water flows from spring to 24 hr impoundment tank by 2 inch poly pipe, which was below ground to far to reach for measurement. Based on the low flow producing spring, the spring has a flow capacity of less than 2 gpm. The diversion rate of 0.01 cfs, Departments lowest diversion rate eligible for beneficial use, is recommended for licensing purposes.

E. FLOW CALCULATIONS

Measured Method: Observation based estimate – during field exam the low production spring bubbled up to the surface before entering a section of 2 inch poly pipe routed to a 24 hr impoundment tank. The flow was a trickle, making a flow measurement impractical. The applicant states the spring flows like this all year, which is why he elected to only apply for 0.01 cfs, which is reasonable based on exam findings.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 0.3 \text{ acres} \times 3.0 \text{ afa} = 0.9 \text{ af}$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.01 \text{ cfs} \times 214 \text{ days} \times 1.9835 = 4.2 \text{ af}$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = \mathbf{0.9 \text{ af}}$$

2. Volume Calculations for Other Uses: N/A

G. NARRATIVE/REMARKS/COMMENTS

Field exam performed on 15 May with the applicant, Douglas Blevins, showed spring water being used for irrigation purposes. At the POD, the spring source bubbled to the surface creating a small pool which flowed into a 2 inch section of poly pipe routed to a 24 hr impoundment tank prior to distribution. The intake pipe to tank was installed sub-surface, and to far down to collect a measurement. Based on the low flow producing spring, the flow rate is a trickle, making a flow measurement impractical. The Mr. Blevins states the spring maintains consistent flow all year, which is why he elected to only apply for 0.01 cfs, which is reasonable based on field exam findings. The diversion rate of **0.01 cfs**, the Department's lowest diversion rate eligible for beneficial use, is recommended for licensing purposes.

During the exam, the applicant's water system was observed in use, and field exam maps were used to trace out the irrigation POU. Mr. Blevins uses a 1.5 hp water transfer pump to deliver water uphill 40-50 feet and irrigates a small lawn space around the home by pressurized sprinklers. The irrigation system is limited to the spring source supplying volume daily to the 24hr impoundment, not the pump incorporated in delivering water to the pressurized irrigation system. There is

also a small patch of lawn below the driveway that is irrigated using a hose bib from the house and hose-to-sprinkler. During the exam the pressurized sprinkler system was active and photographs taken to illustrate the beneficial use of water. During licensing review, Arcmap aerial imagery was used to accurately trace out the irrigation POU, which consists of 0.3 acres. The annual volume associated equals 0.3 acres x 3.0 afa = **0.9 af**, which is recommended as the maximum diversion volume for licensing purposes.

Condition 082 was removed from the permit during licensing review. Condition R66 was replaced with condition X31, describing irrigation limitations for less than 1 acre of irrigation at the POU. All other conditions on the permit are 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>	<u>Annual Volume</u>
IRRIGATION	04/01 to 10/31	0.01 CFS	0.9 AF

Totals: 0.01 CFS 0.9 AF

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 F. J. B. Date 6/9/2021

Reviewer Ash K Date 6/11/2021

State of Idaho
Department of Water Resources
Attachment to Field Exam
86-12072

IRRIGATION system diagram.

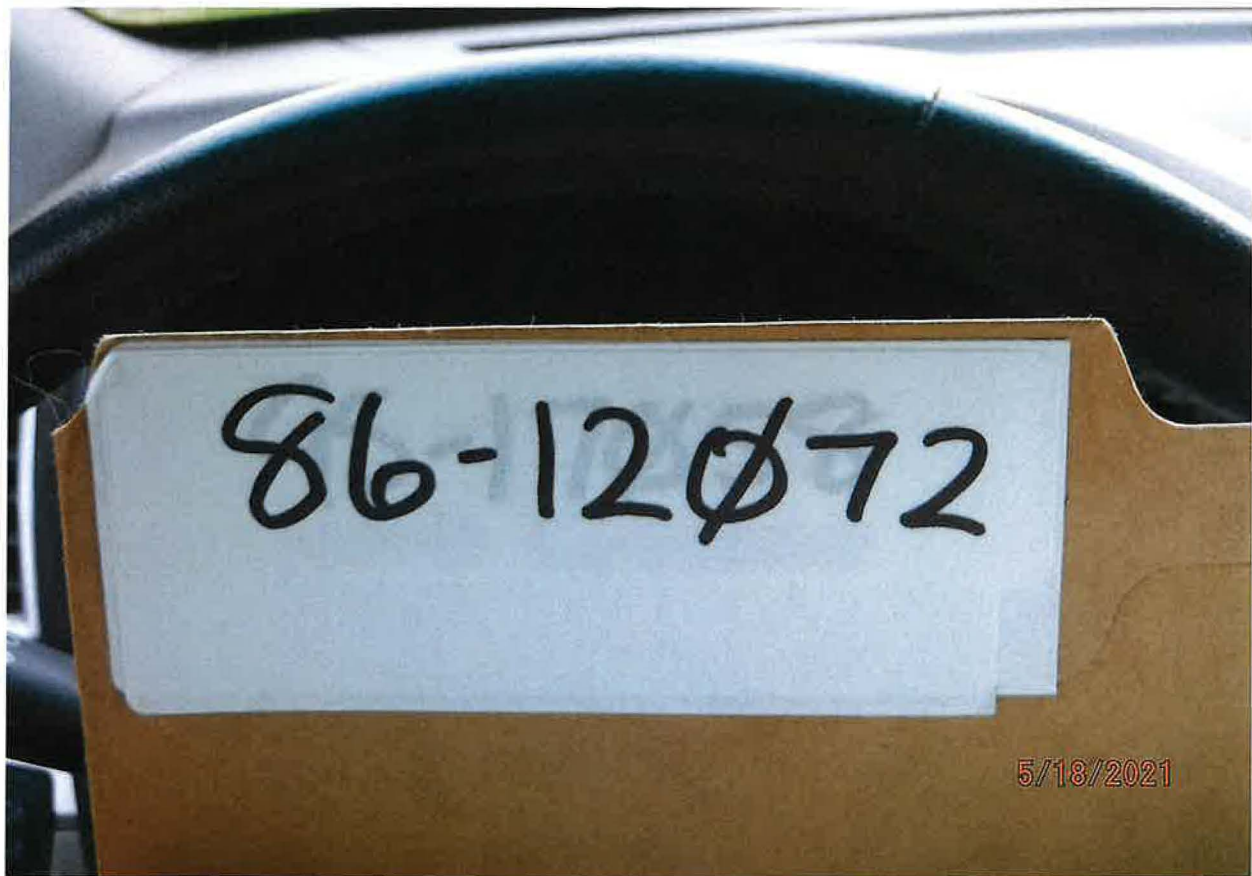
04W



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

0 0.035 0.07 0.14 Miles





FIELD EXAM DATE 5/18/2021



POD – SPRING SOURCE



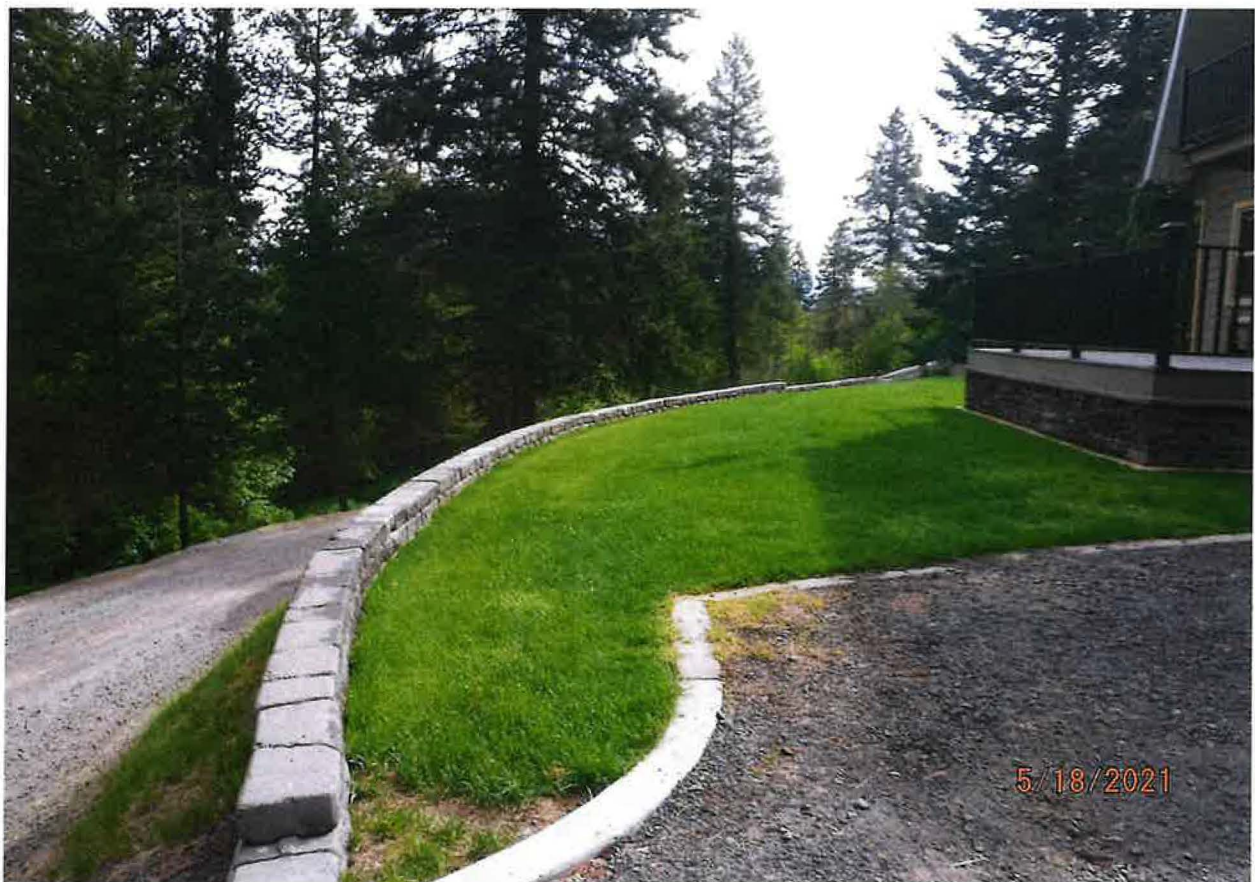
AT POD – SPRING WATER ENTERS PIPE TO 24 HR IMPOUNDMENT TANK



24 HR IMPOUNDMENT TANK – INFLOW PIPE; BLACK POLY IS RETURN LINE FROM SPRINKLER SYSTEM
ALLOWING SELF DRAIN AFTER EACH SYSTEM OPERATION



1.5 HP PUMP USED FROM 24 HR IMPOUNDMENT TO PRESSURIZED SPRINKLER SYSTEM



IRRIGATION POU – PRESSURIZED POP-UP SPRINKLER SYSTEM



IRRIGATION POU





IRRIGATION POU – BY HOSE AND PORTABLE SPRINKLERS