

STATE OF IDAHO  
DEPARTMENT OF WATER RESOURCES  
**BENEFICIAL USE FIELD REPORT**

**A. GENERAL INFORMATION**

**Permit No:** 95-17725  
**Exam Date:** 07/30/2020

1. Current Owner:  
MICHAEL DARRAR 15508 W MEAD RD POST FALLS ID 83854 AND/OR  
KATHRYN DARRAR 15508 W MEAD RD POST FALLS ID 83854
2. Accompanied by: Kathryn Darrar  
Phone No: 208-819-3375  
Address: Same as above  
Relationship to permit Holder: Permit Holder

3. **SOURCE:**  
SPRING

**Tributary**  
SKALAN CREEK

**Method of Determination: Arcmap and DRG**

**B. OVERLAP REVIEW**

1. Other water rights with the same place of use: YES Overlap

Water Right No.	Source	Purpose of Use	Basis
95-11810	SPRING	STOCKWATER	LICENSE

Comments: licensed Right 95-11810 uses spring water from different POD for stockwater use, by same applicant, and is not a concern for overlap.

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 SYSTEM**1. **LOCATION OF POINT(S) OF DIVERSION:**

SPRING NE¼ NW¼ SE¼, Sec. 20, Twp 50N, Rge 05W, B.M. KOOTENAI County

Method of Determination: GPS. POD is located at -116°59.315, 47°39.932 (+/- 31 ft accuracy on GPS at time of capture).

**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	
50N	05W	20								0.1	0.1								0.2

Total Acres: 0.2

Method of Determination: Field exam 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
N/A					

**D. FLOW MEASUREMENTS**

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
4-CUP MEASURING TEST						

2. Measurements: A 4 CUP measurement test was completed from storage cistern overflow (top of tank without back-pressure), with the resulting diversion flow rate of 4 cups in 34.51 seconds.

**E. FLOW CALCULATIONS**

Measured Method: 4 CUP measurement = 4 cups per 34.51 seconds = 16 cups per 138.04 seconds = 1 gal per 2.18 minutes = less than 0.5 gal per minute, which is less than the minimum value for 0.01 cfs, resulting **0.01 cfs** defaults to the diversion rate.

**F. VOLUME CALCULATIONS**

1. Volume Calculations for irrigation:

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

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.01 \text{ cfs} \times 246 \text{ days} \times 1.9835 = 4.9 \text{ af}$$

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

2. Volume Calculations for Other Uses: N/A

**G. NARRATIVE/REMARKS/COMMENTS**

Field exam conducted on 7/30/2020 with applicant, Kathryn Darrar, showed spring water being diverted for irrigation use. At POD, applicant had a buried spring box diverting water to a vaulted 300 gal storage cistern. Water gravity flowed downhill to the applicants POU, with an overflow 1 inch pvc pipe allowing overflow spring water from top of cistern to flow back to Skalan Creek. At time of field exam, applicants had dug out space where the overflow pipe exited, and a 4 cup measuring

test was completed to determine a flow rate equal to 4 cups per 34.51 seconds = 16 cups per 138.04 seconds = 1 gal per 2.18 minutes = less than 0.5 gal per minute, which is less than the minimum value for 0.01 cfs, resulting **0.01 cfs** defaults to the diversion rate. 0.01 cfs was permitted for and will be applied as the Maximum diversion volume for license.

At time of field exam, gravity flow from the spring was used by hose to irrigate a small hillside garden and greenhouse situated along-side the applicant's home. Applicant stated they received good pressure from gravity flow, and no pressure tanks were used; additionally, applicant stated there was enough water captured each day to water, until the storage tank depleted. Irrigation acreage was sketched out during exam, and at time of licensing review arcmap aerial imagery was used to trace out irrigation acreage. Actual irrigated acreage equaled less than 0.1 acres per  $\frac{1}{4}$ , and using department rounding conventions for significant figures 0.1 acres was assigned to the SE $\frac{1}{4}$ NW $\frac{1}{4}$ , and NE $\frac{1}{4}$ SW $\frac{1}{4}$ . The annual volume and maximum diversion volume equals 0.2 ac x 3.0 afa = **0.6 af**, which is applied at time of licensing.

All conditions on permit will remain on license. Licensed Right 95-11810 uses spring water from different POD for stockwater use, by same applicant, which overlaps this Right's POU, but is not a concern for overlap. There are no other overlap concerns for this 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	03/15 to 11/15	0.01 CFS	0.6 AF
<u>Totals:</u>		0.01 CFS	0.6 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

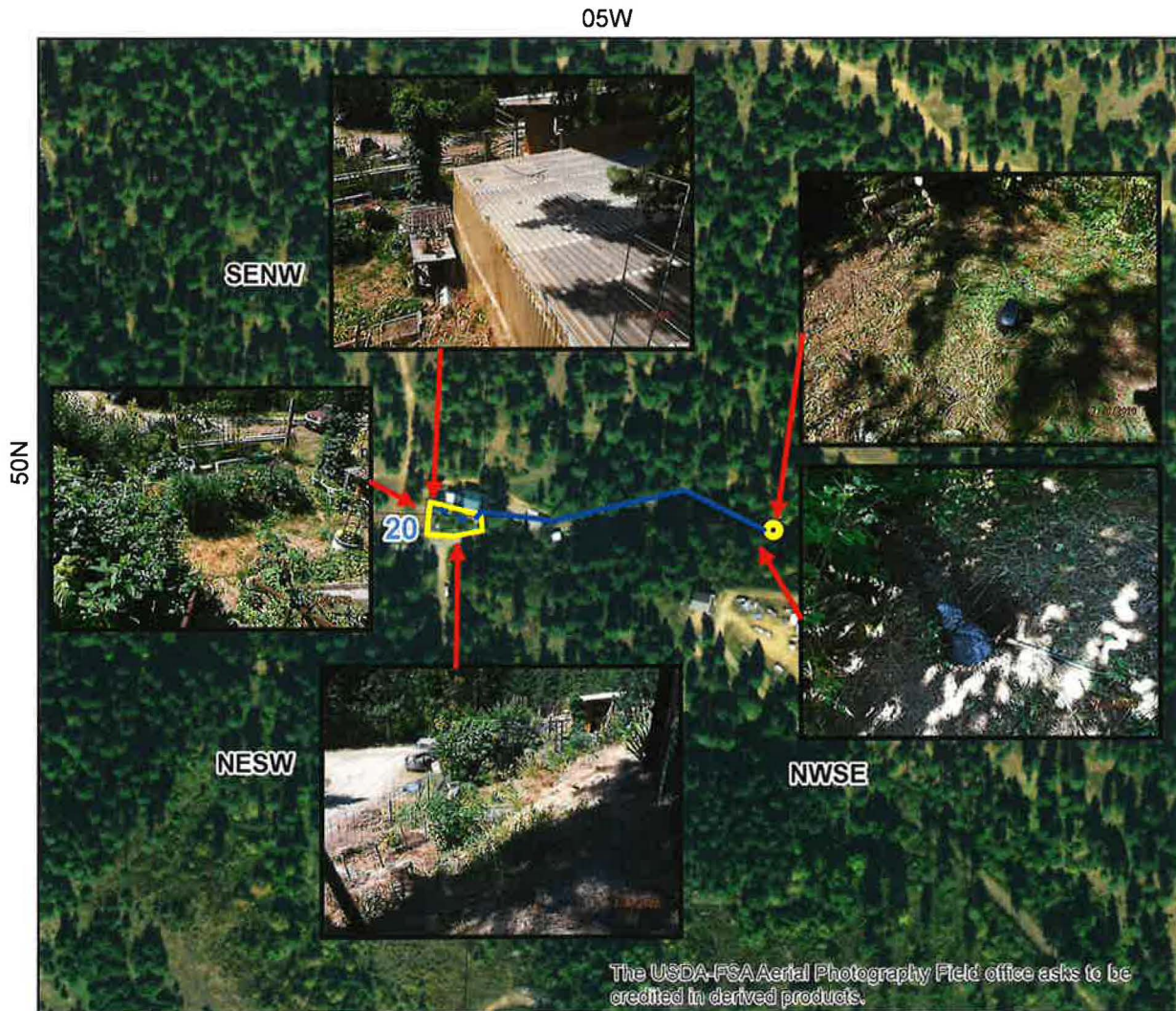
Luke Bates - Water Resource Agent

Field Examiner's Name                     J. Q. Bates                     Date           8/14/2020          

Reviewer           Adam Fink                     Date           8/20/2020

State of Idaho  
Department of Water Resources  
**Attachment to Field Exam**  
95-17725

IRRIGATION system diagram.



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

0 0.035 0.07 0.14 Miles





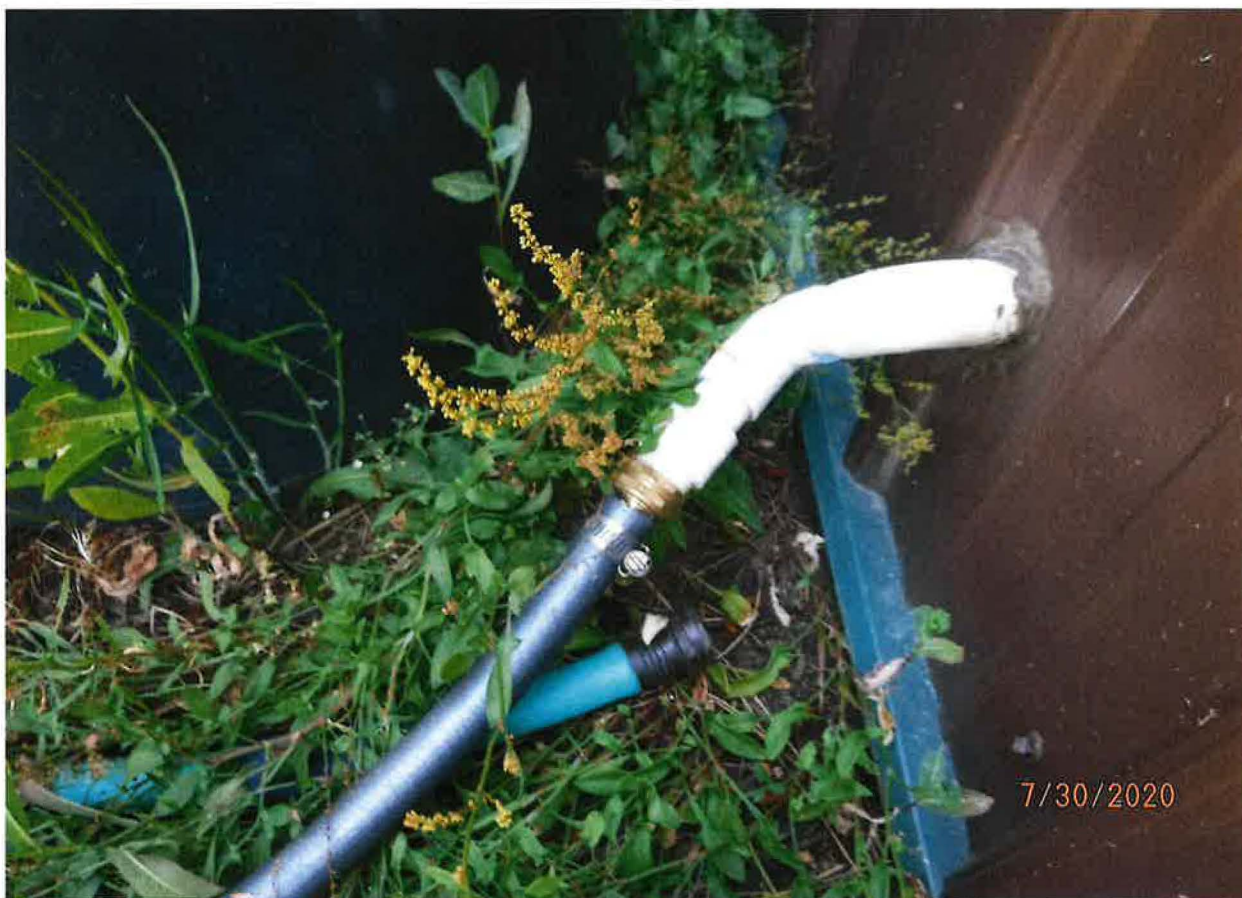


POD – BURIED SPRING BOX AND 300 GAL VAULTED CISTERN





OVER FLOW FROM TOP OF STORAGE CISTERN



HOSE BIB FOR HOSE TO IRRIGATION





IRRIGATION POU







IRRIGATION POU







IRRIGATION POU – GREEN HOUSE