

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 96-9701
Exam Date: 07/09/2020

1. Current Owner:
JIM SCHAPER PO BOX 216 LACLEDE ID 83841 AND/OR
MARLANE SCHAPER PO BOX 216 LACLEDE ID 83841
2. Accompanied by: Jim Schaper
Phone No: 208-263-6800
Address: Same as above
Relationship to permit Holder: Permit Holder

3. **SOURCE:**
RILEY CREEK

Tributary
PEND OREILLE RIVER

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 SYSTEM

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

RILEY CREEK NE¼ SE¼, Sec. 1, Twp 56N, Rge 04W, B.M. BONNER County

Method of Determination: GPS. POD located at -116°45.973, 48°13.617.

PLACE OF USE: DOMESTIC and STOCKWATER

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	04W	1																X	

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
WATER TRANSFER PUMP	UNK	2			

D. FLOW MEASUREMENTS

1.

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

2. Measurements: Three 5 gallon bucket tests were completed from frost free hydrant, with average of three resulting in diversion flow rate of 5 gal / 14.33 sec x 60 sec/min = 20.94 gpm = **0.05 cfs**.

E. FLOW CALCULATIONS

Measured Method: 5 GAL Bucket Test = (5 gal / 14.47 sec) x 60 sec/min = 20.73 gpm
 = (5 gal / 14.31 sec) x 60 sec/min = 20.97 gpm
 = (5 gal / 14.20 sec) x 60 sec/min = 21.12 gpm

Average of 3ea 5 GAL Bucket Tests = (20.73 gpm + 20.97 gpm + 21.12 gpm) / 3 = 20.94 gpm = **0.05 cfs**

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation: N/A

$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) =$

$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 =$

$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} =$

2. Volume Calculations for Other Uses:

DOMESTIC ANNUAL VOLUME = **1.2 af** (1/2 acre irrigation included)

STOCKWATER ANNUAL VOLUME = 50 head mixed stock x 12 gpd x 365 days = 219,000 gal / 325/850 gal per af = **0.7 af** considering department rounding standards.

MAXIMUM DIVERSION VOLUME = 1.2 af (Domestic component) + 0.7 af (Stockwater component) = **1.9 af**.

G. NARRATIVE/REMARKS/COMMENTS

Field exam conducted on 7/9/2020 with applicant, Jim Shaper, showed water diverted from Riley Creek for Domestic and Stockwater uses. Mr. Shaper had a 2 hp water transfer pump that routed water by PVC pipe uphill approximately 40 feet to a frost free and then to home. With applicant's help the small pressure tank mounted above his transfer pump was isolated and shut off, and 3ea 5-gal bucket tests were completed from the systems frost free hydrant with the following results:

$$5 \text{ GAL Bucket Test} = (5 \text{ gal} / 14.47 \text{ sec}) \times 60 \text{ sec/min} = 20.73 \text{ gpm}$$

$$= (5 \text{ gal} / 14.31 \text{ sec}) \times 60 \text{ sec/min} = 20.97 \text{ gpm}$$

$$= (5 \text{ gal} / 14.20 \text{ sec}) \times 60 \text{ sec/min} = 21.12 \text{ gpm}$$

$$\text{Average of 3ea 5 GAL Bucket Tests} = (20.73 \text{ gpm} + 20.97 \text{ gpm} + 21.12 \text{ gpm}) / 3 = 20.94 \text{ gpm} = 0.05 \text{ cfs.}$$

The diversion rate of **0.05 cfs** is applied as the Maximum Diversion Rate for license, as applicant is limited by pumping performance. The Domestic beneficial use component rate of diversion is equal to 1 home with up to 1/2 acre irrigation equaling **0.04 cfs**. The Stockwater beneficial use component rate of diversion applied to license equals **0.02 cfs**, the department standard for 50 head of mixed stock.

At time of field exam, applicant irrigated multiple fenced in gardens situated around his home, as well as small lawn areas. Applicant used hoses and sprinklers from a frost free hydrant to irrigate. Aerial imagery made it difficult to trace out irrigated areas, but 2019 Bonner County aerial imagery best illustrated the development of the applicant's property, and was used to license this right. During licensing review, sketched irrigation acreage from field exam was traced out using 2019 aerial imagery, and equaled 0.2 acres. As a result, the irrigation component was removed from permit and domestic, with up to 1/2 acre irrigation, was applied at time of licensing. The annual volume for the domestic component equals **1.2 af**.

Applicant used water from Riley Creek to fill portable stockwater tanks for his range cattle, which he rotated around his parcel to eat down the ground cover growth to mitigate fire hazards. The 50 head of stock associated with this right is the same 50 head associated with rights 96-9701 & 96-9816, and thus not additive in annual volume from license to license; condition X35 was applied to rights 96-9700, 96-9701, and 96-9816 to account for the same 50 head of cattle applicant is allocating water for. At time of exam, stock tanks were present, and cattle usage was noted. The annual volume for the stockwater component equals 50 head mixed stock x 12 gpd x 365 days = 219,000 gal / 325/850 gal per af = **0.7 af** considering department rounding standards. This combined with the domestic component were used to derive the maximum diversion volume for license, which equals **1.9 af**.

Condition 26A was removed from license. Condition R66 was removed, and replaced with 187 to describe irrigation up to 1/2 acre as part of domestic use. Condition X02 was removed from permit at time of licensing. Condition X35 was added to limit the combined stockwater use for 50 head of mixed stock to a total annual volume of 0.7 af for rights 96-9700, 96-9701, and 96-9816. All other conditions remain on license. There are no overlap concerns for this 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>	<u>Annual Volume</u>
STOCKWATER	01/01 to 12/31	0.02 CFS	0.7 AF
DOMESTIC	01/01 to 12/31	0.04 CFS	1.2 AF

Totals: 0.05 CFS 1.9 AF

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

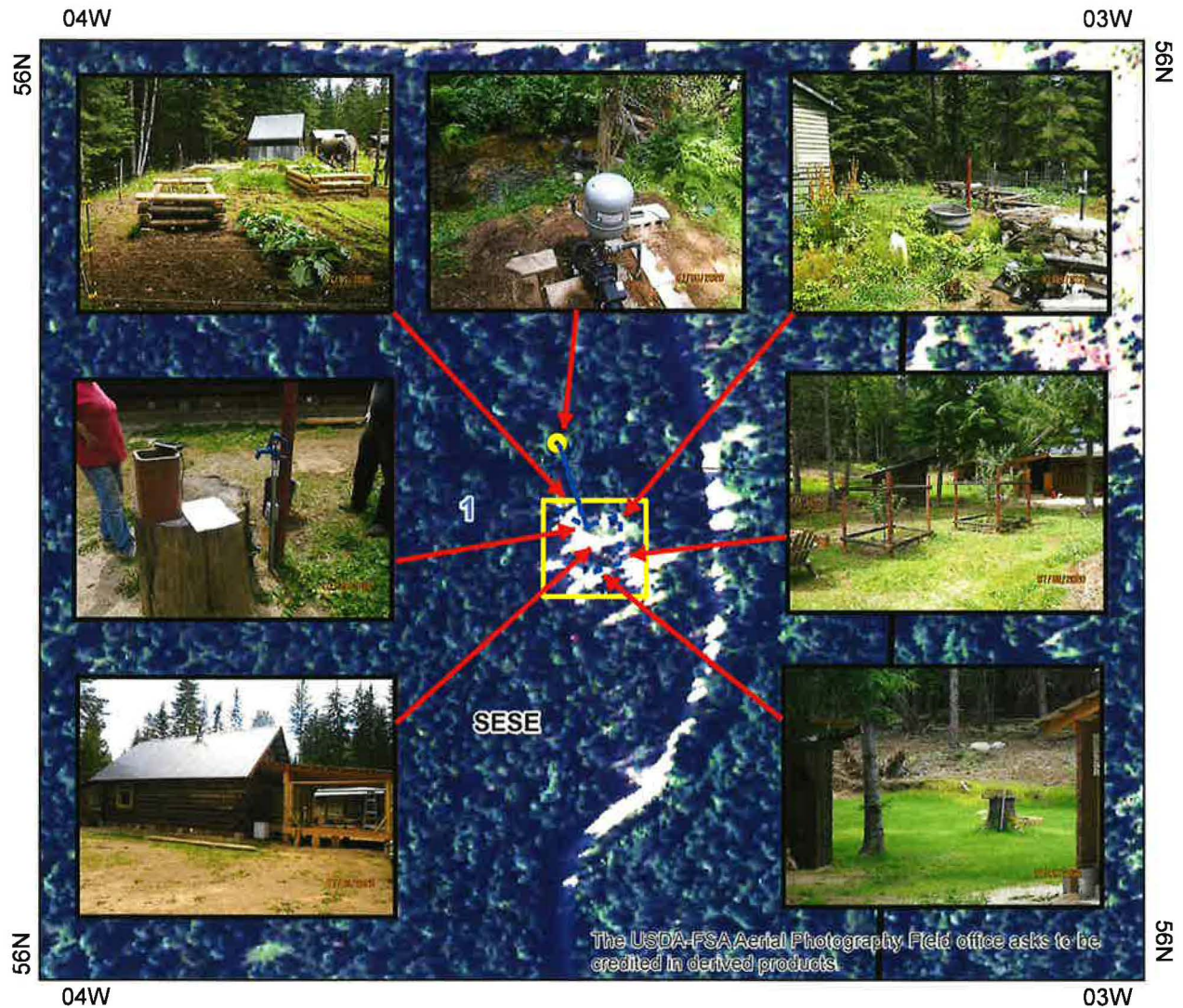
I. AUTHENTICATION Luke Bates - Water Resource Agent

Field Examiner's Name  Date 7/27/2020

Reviewer Adam Fink Date 7/30/2020

State of Idaho
Department of Water Resources
Attachment to Field Exam
96-9701

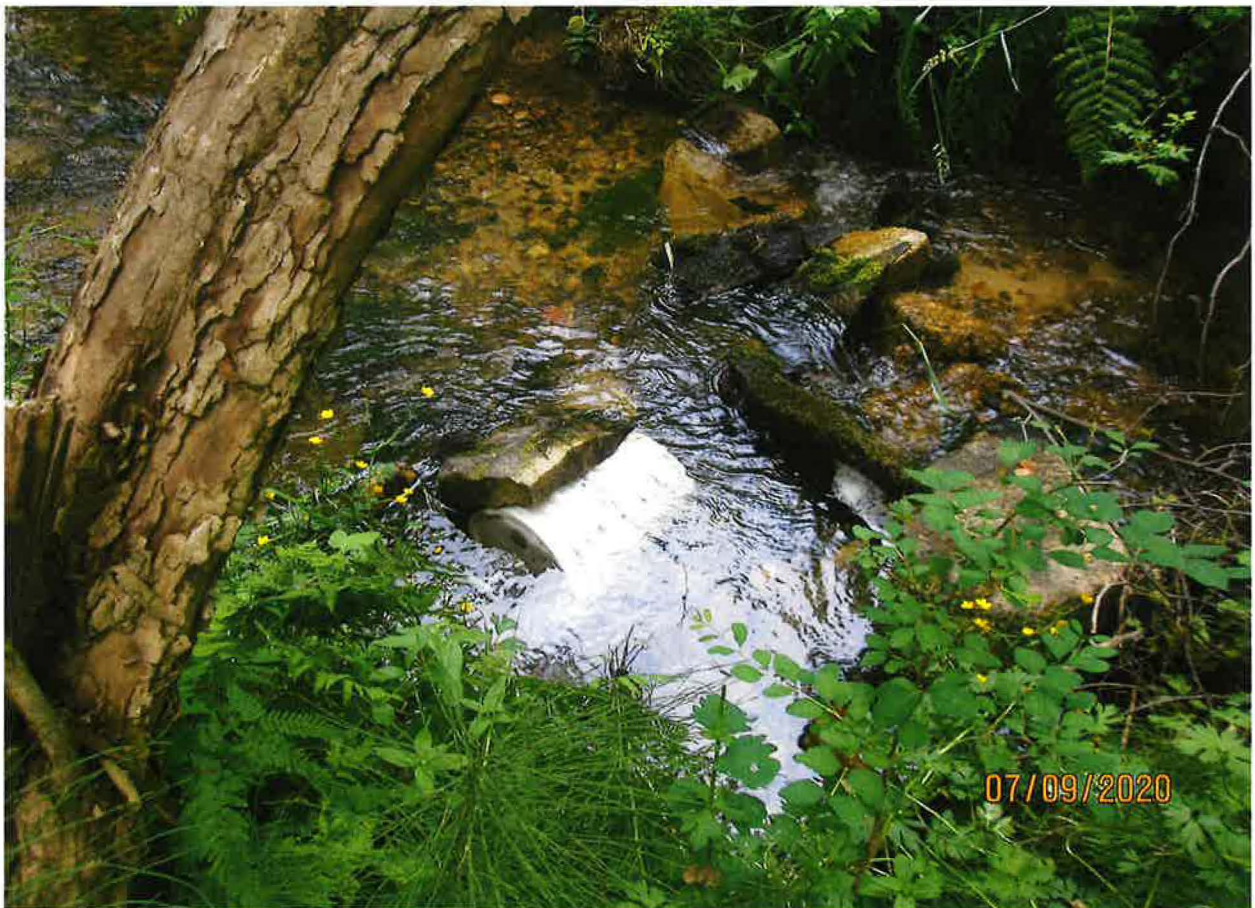
DOMESTIC and STOCKWATER system diagram.



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

0 0.035 0.07 0.14 Miles





POD – PIPE FROM BUCKET WITH SCREEN IN CREEK



POD – 2 HP WATER TRANSFER PUMP



FROST FREE HYDRANT



DOMESTIC POU



DOMESTIC POU WITH IRRIGATION UP TO ½ ACRE



DOMESTIC POU WITH IRRIGATION UP TO ½ ACRE



DOMESTIC AND STOCKWATER POU



DOMESTIC AND STOCKWATER POU





DOMESTIC AND STOCKWATER POU

