

Method of Determination: Arcmap and GPS

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
5-GALLON BUCKET TEST						

2. Measurements: A 5 gallon bucket test was completed at point that piping from spring fed into stock tank, resulting in 5 gal / 30 sec x 60 sec/min = 10 gpm = **0.02 cfs**.

E. FLOW CALCULATIONS

Measured Method: 5-gal bucket test = 5 gal / 30 sec x 60 sec/min = 10 gpm = **0.02 cfs**.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 1.0 \text{ AC} \times 4.0 \text{ afa} = 4.0 \text{ af}$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.02 \text{ cfs} \times 246 \text{ days} \times 1.9835 = 9.8 \text{ af}$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = 4.0 \text{ af}$$

2. Volume Calculations for Other Uses:

$$\text{STOCKWATER} = 50 \text{ head cattle} \times 12 \text{ gpd} \times 365 \text{ days} = 219,000 \text{ gal}$$

$$50 \text{ horses} \times 12 \text{ gpd} \times 365 \text{ days} = 219,000 \text{ gal}$$

$$50 \text{ goats/sheep} \times 2 \text{ gpd} \times 365 \text{ days} = 36,500 \text{ gal}$$

$$(219,000 \text{ gal} + 219,000 \text{ gal} + 36,500 \text{ gal}) / 325,850 \text{ gal/af} = 1.5 \text{ af}$$

As this is a surface water source, no there will be no volume applied to irrigation. The annual volume applied to stockwater is associated with diversion rate from irrigation, resulting in no Maximum Diversion Volume applied to license.

G. NARRATIVE/REMARKS/COMMENTS

Admin note: WR 86-12084 was split from WR 86-11924.

Field exam on 6/10/2018 with applicant, John Gravelle, showed a spring with spring box diverting water by pipes to a nearby field for irrigation and stockwater use. Applicant used the same POD as WR 86-11916, which is for stockwater use in a different POU. A 5-gallon bucket test was completed, with diversion rate equaling $5 \text{ gal} / 30 \text{ sec} \times 60 \text{ sec}/\text{min} = 10 \text{ gpm} = \mathbf{0.02 \text{ cfs}}$, which will be carried forward to licensing.

During the field exam, the irrigated area related to this POD was sketched out. During licensing review, irrigated acreage was traced out using arcmap aerial imagery equaling 1.0 acres. The annual volume for the irrigation component equals $1.0 \text{ ac} \times 4.0 \text{ afa} = 4.0 \text{ af}$, but as this is a surface water source, no volume is applied to the license.

Applicant was permitted for stockwater use for 50 head of cattle, 50 horses, and 50 goats/sheep. The annual volume for these stock animals equals 1.5 af as computed below:

50 head cattle x 12 gpd x 365 days = 219,000 gal

50 horses x 12 gpd x 365 days = 219,000 gal

50 goats/sheep x 2 gpd x 365 days = 36,500 ga

$(219,000 \text{ gal} + 219,000 \text{ gal} + 36,500 \text{ gal}) / 325,850 \text{ gal}/\text{af} = \mathbf{1.5 \text{ af}}$

The stockwater annual volume is diverted from same POD and water system as the irrigation component, which does not have an annual volume applied to license, and as such there will not be a Maximum Diversion Volume applied to license.

Condition X02 was added to describe stockwater use and type of stock. Condition X35 was added to describe overlap requirements for Stockwater diversion rate and annual volume. F06 was added to describe multiple water rights diverting through the same POD. Condition R64 was added to describe the irrigation of no more than 4.0 afa per acre for this WR. Condition 01M was added to notify the applicant of potential for measuring device (if required in future). Condition 004 was added to describe restrictions of right-of-way or easement for this WR. WR 86-11916 is for stockwater use by the same applicant overlapping this water rights POD, but condition X35 listed above was applied to license mitigating overlap concerns.

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>
IRRIGATION	03/15 to 11/15	0.02 CFS	
STOCKWATER	01/01 to 12/31	0.02 CFS	1.5 AF

Totals: 0.02 CFS

2. Recommended Amendments

___ Change P.D. as reflected above ___ Add P.D. as reflected above X None

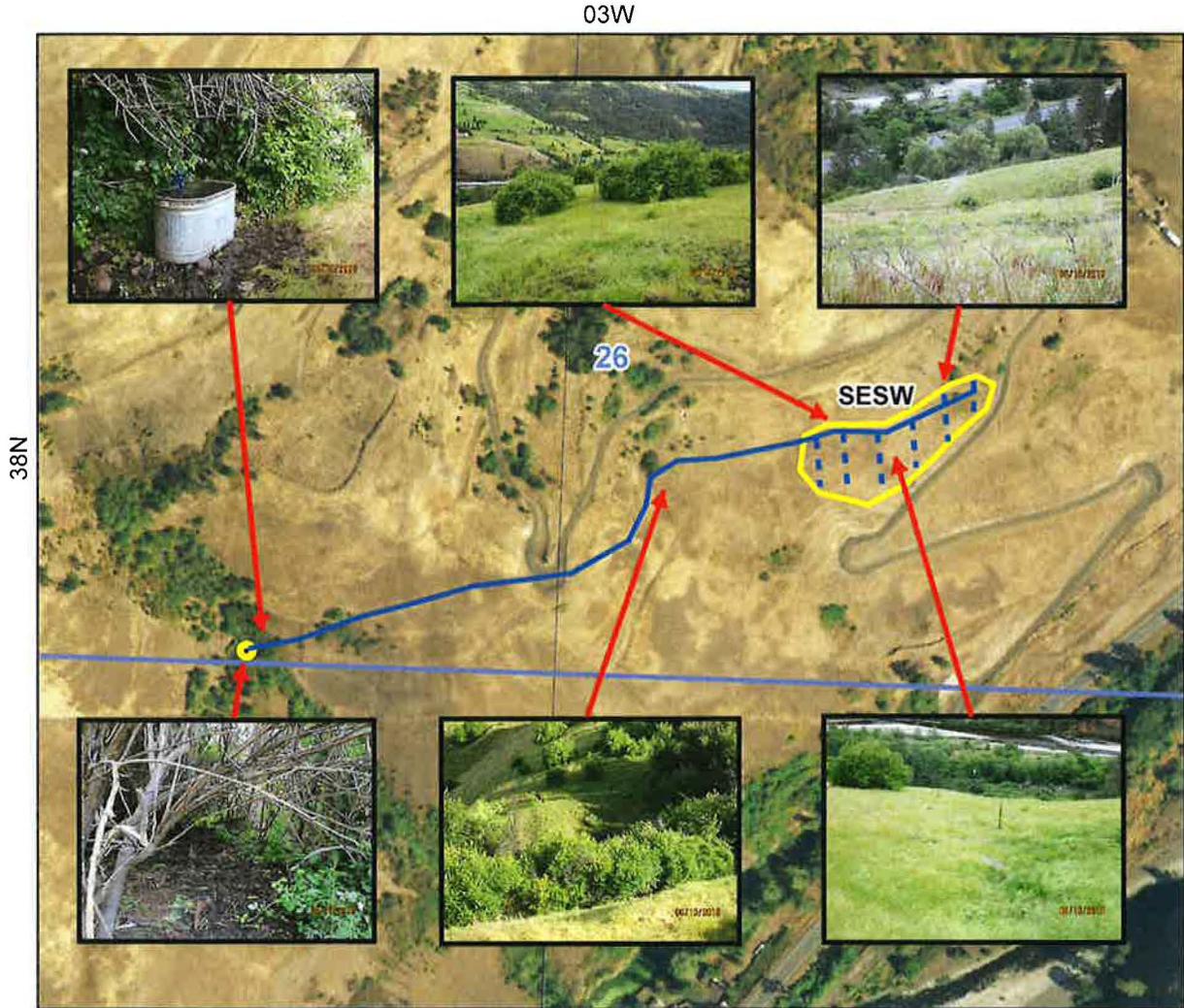
___ Change P.U. as reflected above ___ Add P.U. as reflected above X None

I. AUTHENTICATION Luke Bates - Water Resource Agent

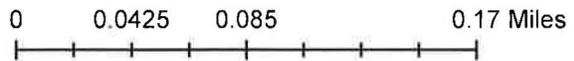
Field Examiner's Name Adam Franklin Date 5/27/2020
 Reviewer L. Bates Date 5/21/2020

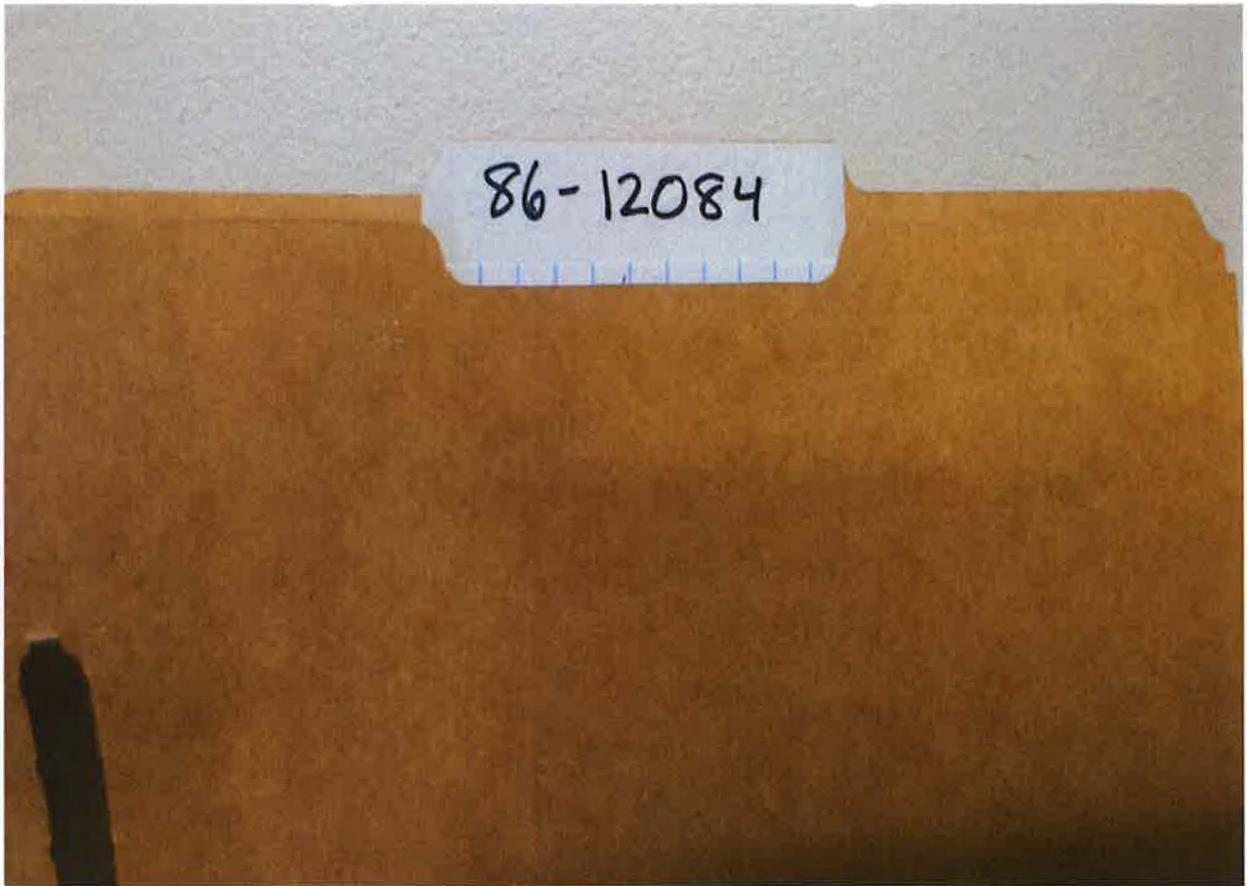
State of Idaho
Department of Water Resources
Attachment to Field Exam
86-12084

IRRIGATION and STOCKWATER system diagram.



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





POD - SPRING



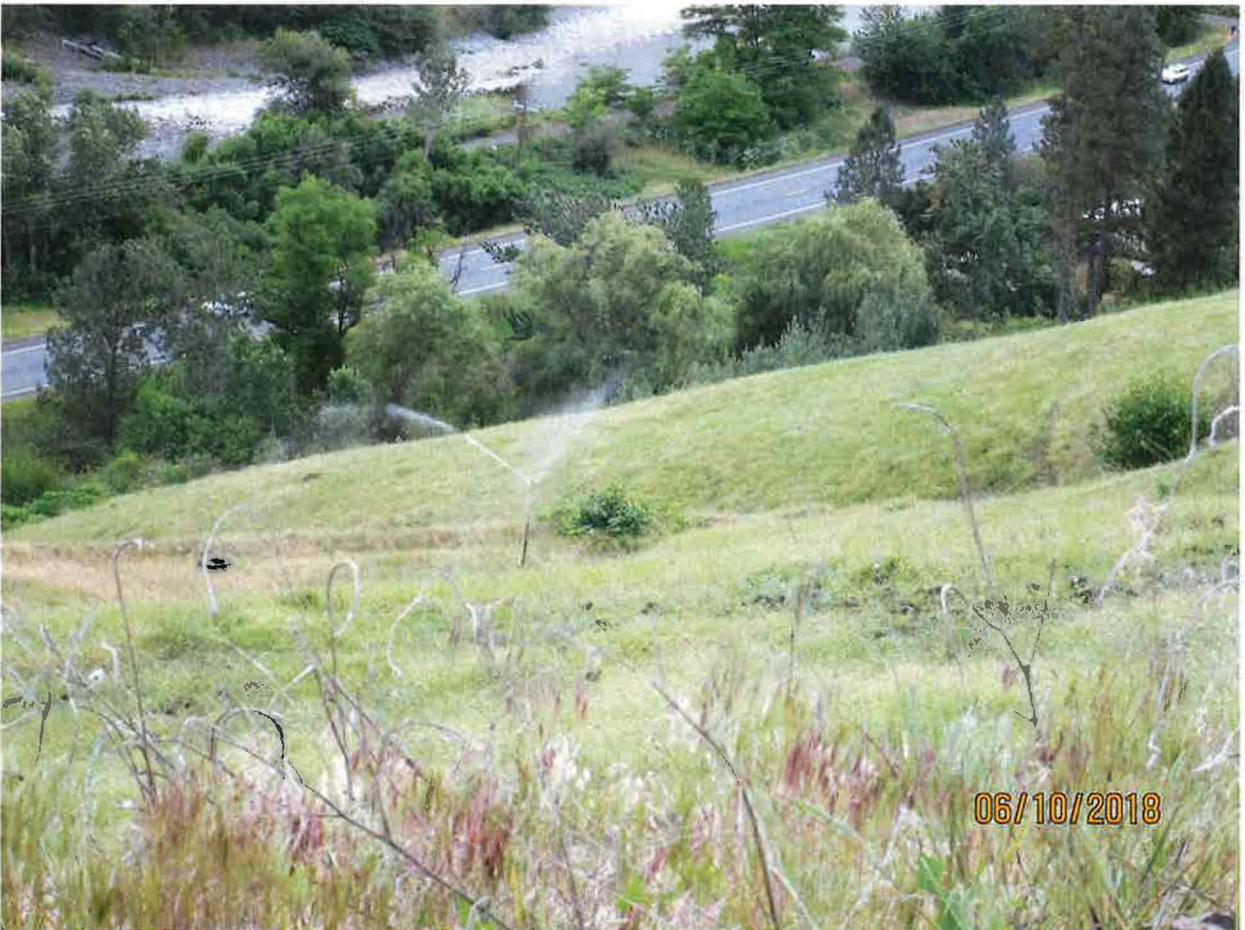
WATER STORAGE TANK LOCATED AT POU



IRRIGATION POU



IRRIGATION POU





IRRIGATION POU

