

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 74-16109
Exam Date: 06/11/2024

1. Current Owner:
SCOTT T NELSON 54 GEERTSON CREEK RD SALMON ID 83467 AND/OR
CARLA J NELSON 54 GEERTSON CREEK RD SALMON ID 83467
2. Accompanied by: Scott Nelson
Phone No: 208-303-0604
Address: same as above
Relationship to permit Holder: self

3. **SOURCE:**
SPRING

Tributary
LEMHI RIVER

Method of Determination: Garmin Trex GPS and GIS

B. OVERLAP REVIEW

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

Water Right No.	Source	Purpose of Use	Basis
NONE	NA	NA	NA

Comments: : No Domestic or Stockwater rights overlap the permit place of use (POU).

2. Other water rights with the same point-of-diversion: YES Overlap

Water Right No.	Source	Purpose of Use	Basis
74-606A & B	SPRING	IRRIGATION	DECREE
74-15055	SPRING	DOMESTIC	DECREE
74-16009	SPRING	DOMESTIC/STOCKWATER	LICENSE
74-16103	SPRING	DOMESTIC/IRRIGATION	DECREE

Comments: There was one other inlet in the spring box at point of diversion (POD), which is for Domestic and Stockwater uses (74-16009), the same as the permitted uses. The permit holder noted that there are other diversions for irrigation from the spring further downstream. Although the permitted POD is not located on land owned by the permit holder, the permit holder submitted a copy of the Warranty Deed citing a "perpetual right to use the existing spring on the adjacent property. Together with an easement for the pipeline." There are no concerns regarding the shared POD.

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

SPRING SW¼ SE¼ SW¼, Sec. 19, Twp 21N, Rge 23E, B.M. LEMHI County
Method of Determination: GARMIN GPS coordinates N45.12920,W113.78427

PLACE OF USE: STOCKWATER & DOMESTIC

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
21N	23E	19												X					

Method of Determination: GIS, and Tax Lot Data.

Change in POU? Y X N Amendment Required? Y X N

3.

- X Delivery System Diagram Description. Indicate all major components and distances between components.
X Indicate weir size/pipe as applicable.
- X Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.
- X Aerial Photo Attached (required for irrigation of 10+ acres).
- X 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 Box	Unknown	1 ½	Unknown	Unknown	1 ¼" Discharge line

D. FLOW MEASUREMENTS

1.

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

2. Measurements: The permit holder stated the system operates on a 1.5 Hp pump. A maximum head of approximately 25 ft was estimated for POU using the DRG map, Google Earth, and Garmin GPS.

E. FLOW CALCULATIONS

_____ Additional Computation Sheets Attached

Measured Method:

A theoretical calculation and Administrative Memos #22 & 3 were used to determine a reasonable rate of diversion.

$$Q = (1.5 \text{ Hp})(8.8)(0.80 \text{ efficiency}) / (25 \text{ ft lift}) + (2.31) * (45 \text{ psi}) = 0.08 \text{ cfs}$$

Theoretical Calculation= 0.08cfs

Permit allowed = 0.06cfs

Recommendation= 0.06cfs

Comments:

The pump used for the system is a 1.5 Hp submersible with a 1 ¼ " discharge.

Approximately 0.08cfs is possible with the 1.5 Hp pump. According to Administrative memo #03 a rate of up to 0.02 cfs is acceptable for the watering of up to 10 horses. Administrative Memo #22 states that a rate of 0.04cfs is standard for 1 home. I recommend the full permitted combined diversion rate of 0.06cfs for domestic and stockwater use on the license.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation: NA

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

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

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

2. Volume Calculations for Other Uses: for Domestic and Stockwater uses:

1 home with external use (irrigation of up to ½ acre)= 1.2 AF annually (as per Admin Memo #22)

0-10 Head of livestock (4 horses and 16 chickens observed at permitted POU) = 0.2 AF annually (as per Admin Memo #3)

Comments:

This permit was issued for domestic and stockwater uses from a natural stream/river source. Based on the standards stated in current administrative guidance, and the use observed I recommend the annually volumes of 1.2 AF (for Domestic) and 0.2 AF (for Stockwater) on the license. The combined volume is 13,000 gal per day, as stated in condition N14.

G. PURPOSE OF USEIrrigation ___Y___N # Stock 4 horses, 16 chickens Domestic # of Homes 1

Change in Purpose of Use? ___Y___X___N

Method of Determination: Custer County Maps, GIS, and Taxlot Data

H. NARRATIVE/REMARKS/COMMENTS

This permit for the domestic and stockwater use was scheduled for a field exam to collect GPS coordinates for the spring source. The permit holder submitted the Proof of Beneficial Use, received by IDWR on April 9, 2018, stating in section #5 that beneficial use was developed for 1 home and 4 horses. During the field examination on June 11, 2024, GIS coordinates for the spring box POD were recorded and photos were taken documenting the domestic and stockwater uses (photos 1-7). A quick GIS measurement of the irrigation observed, which included a lawn and garden, was less than ½ acre in total. Correspondence received from Idaho Fish and Game stated no fish screening conditions were necessary on the permit.

The system was described by the permit holder as a 1 ½ Hp pump diverting water through a 1 ¼ " intake in the spring box to a manifold under the house, which delivers water throughout the property for irrigation and filling stockwater troughs via multiple 1" poly lines to frost free spigots.

A theoretical calculation found that the pump output could provide the rate allowed on the permit. The use observed at the POU indicated that the permitted use was fully developed. I recommend the license be issued with a combined rate of 0.06cfs, and annual volumes of 1.2 AF (for Domestic) and 0.2 AF (for Stockwater), as per Administrative Memos #22 & 3.

I recommend the license be issued with conditions R05, 187, X01, N14, 01P, F06 and 004. I recommend condition 029 be removed at licensing as comments were received from IDFG stating no conditions necessary on the license. I recommend condition X02 be deleted at licensing, as per current guidance.

Have conditions of permit approval been met? ☒ Yes ☐ No

I. 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	0.2 AF
DOMESTIC	01/01 to 12/31	0.04 CFS	1.2 AF
<u>Totals:</u>		0.06 CFS	1.4 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

J. AUTHENTICATION Bob Howe - Water Resource Agent

Field Examiner's Name Bob Howe Date 10/21/2024

Reviewer Cody Date 12/23/2025

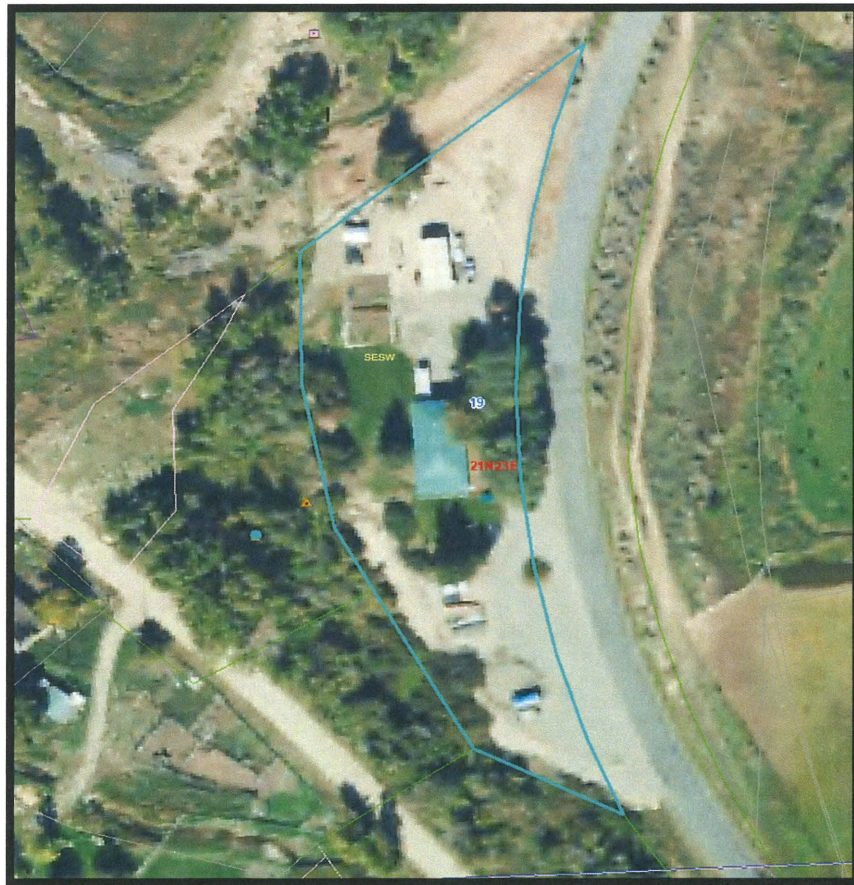


Figure 1- 2023-GIS- imagery of the permit POU (outlined in blue) and POD (blue point). The actual POD location observed is located west of the south end of the garden.



Photo 1- Facing North at the driveway south of the lawn.



Photo 2- Standing in the back driveway of the home facing North. Garden in foreground, chicken coop in background, with 2 frost free spigots in right of the photo.



Photo 3- Facing south from driveway behind home.

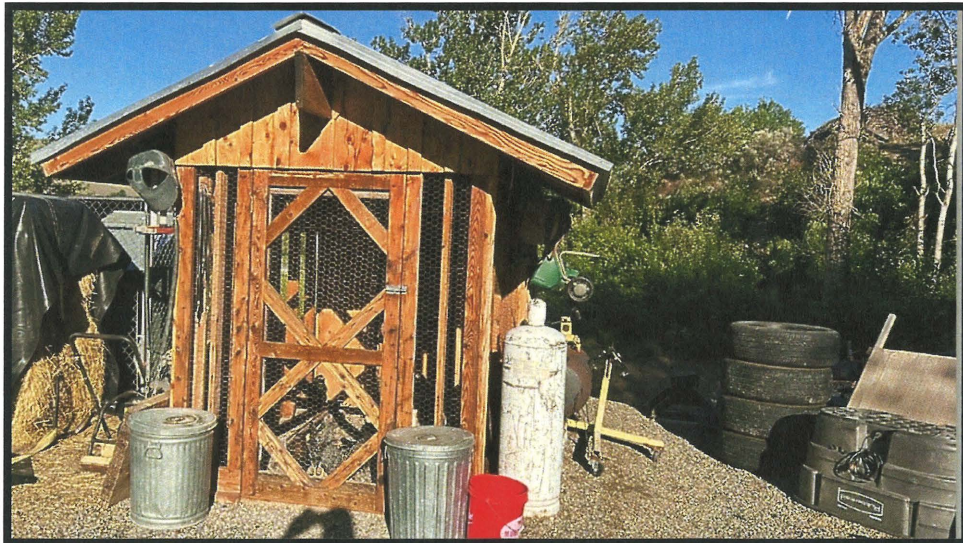


Photo 4- Chicken Coop located north of the home and garden (16 chickens).

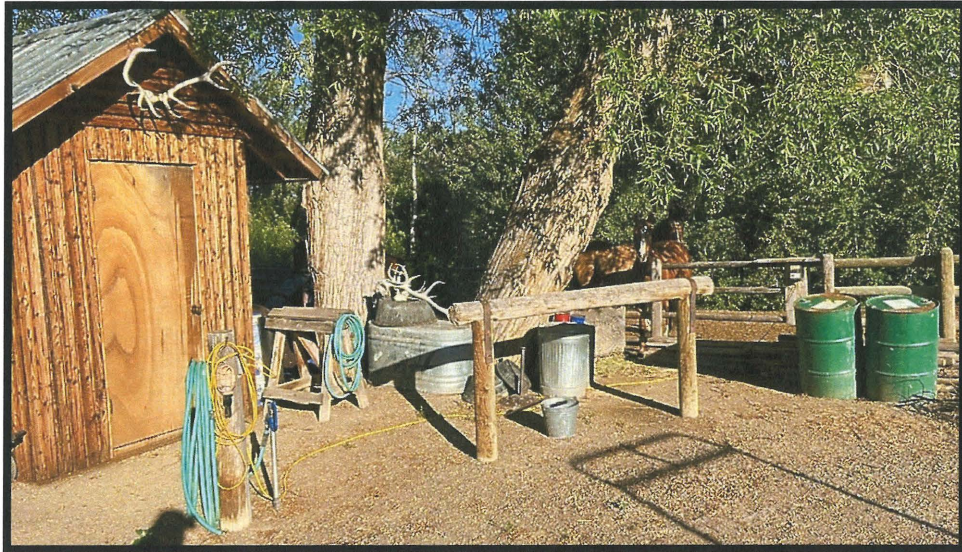


Photo 5- Horse enclosure in north end of the property, taken facing northwest. Frost free hydrant seen in foreground is for filling stockwater troughs and water for the chickens (coup out of frame on the left).



Photo 6- Springbox located to the west of the garden and northwest of the home. Black poly line entering the lower left corner is the diversion line for WR 74-16009 for domestic and stockwater use.



Photo 7- 6" PVC in lower left corner of the spring box, both diversion lines visible. Black line exiting to the upper left of the spring box is diversion to permit holder's home. The grey line exiting the lower left of the spring box surrounds the black poly and power cord associated with diverting water for WR 74-16009 (visible in photo 6).