

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 74-16258
Exam Date: 06/10/2024

1. Current Owner:
JENNIE SMITH 156 LEMHI RD SALMON ID 83467-5140
2. Accompanied by: Roger Smith
Phone No: (208)871-8259
Address: 178 Lemhi Rd, Salmon, ID 83467
Relationship to permit Holder: Son

3. **SOURCE:**
WASTE WATER

Tributary
LEMHI RIVER

Method of Determination: GIS, Garmin GPS, Lemhi County Tax Parcel Data

Payment Received: Yes

Receipt # C117159

B. OVERLAP REVIEW

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

Water Right No.	Source	Purpose of Use	Basis
74-435	Spring	Domestic	Decree (2000)
74-434	Ground Water	Irrigation/stockwater	Decree (2007)

Comments: Rights 74-435 and 74-434 are both owned by the permit holder. Domestic right (74-435) is delivered from a spring for use at the permit holder's home. Irrigation/stockwater right 74-434 is diverted from a well located on the permit holder's property. Our escort Roger Smith commented that the well was not very productive and most irrigation is conducted using wastewater. There are no concerns regarding the overlapping irrigation right, as it is from a different source, and they are not used simultaneously. Additionally, the combined use within the POU is conditioned to prevent enlargement.

2. Other water rights with the same point-of-diversion: NO Overlap

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

Comments: No rights share the irrigation point of diversion.

C. DIVERSION AND DELIVERY SYSTEM

1. **LOCATION OF POINT(S) OF DIVERSION:** Flume GIS Coordinates: N45.17170, W113.85169

WASTE WATER NE¼ NE¼, Sec. 9, Twp 21N, Rge 22E, B.M. LEMHI County

Method of Determination: Garmin GPS Data, and GIS.

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	
21N	22E	10						9.1											9.1

Total Acres: 9.1

Method of Determination: Field observations, GIS, and Lemhi County Tax Parcel Data

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	Motor Model No.
Headgate	SME-USA	10	00182312363	SME-USA	6SME 100T-2C

Comments: The permit holder did not have a pump curve but did provide the motor specifications.

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
2 CFS Broad Crested Weir	Flume	NA	NA	NA	12" wide	NA

2. Measurements: Record of weir head observed at 0.18ft (See figure 1a). According to the measurement table a rate of approximately 0.23cfs was observed (see figure 1b).

E. FLOW CALCULATIONS

Additional Computation Sheets Attached

Measured Method: The observed staff gauge reading was recorded, and a theoretical calculation was made using the pump specifications (see figures 2a & 2b) and a GIS head measurement (10ft dry well + 50ft elevation change based on the DRG) to determine a reasonable rate for the irrigation of the POU. However, the developed area is only approximately 9.1 acres and is subject to the standard rate of 0.02cfs/acre.

$$Q = (10 \text{ Hp})(8.8)(0.80 \text{ efficiency}) / (60 \text{ ft lift}) + (2.31) * (78 \text{ psi}) = 0.29 \text{ cfs}$$

Theoretical Calculation= 0.29cfs

Permit allowed = 0.25cfs

Weir measurement= 0.23cfs

BU limited Rate = 0.18cfs

Recommendation= 0.18cfs

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 9.1 \text{ acres} \times 3.5 \text{ AF/acre} = 31.9 \text{ AF annually}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.18 \text{ cfs} \times 246 \text{ Days} \times 1.9835 = 87.8 \text{ AF}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 31.9 \text{ AF}$$

Recommendation = 31.9 AF annually for the irrigation of 9.1 acres.

2. Volume Calculations for Other Uses: NA

G. NARRATIVE/REMARKS/COMMENTS

The Proof of Beneficial Use submitted for the irrigation use developed under permit 74-16258 was received by IDWR on October 11, 2023, stating in section #3 that beneficial use was developed for 12.6 acres of irrigation. During the field examination on June 10, 2024, GIS coordinates for the headgate POD were recorded and photos were taken documenting the irrigation use (photos 1-7). GIS measurement of the observed irrigation area was approximately 9.1 acres. The areas irrigated with wastewater include the lawn surrounding the home in the northeast corner of the POU, areas between the homes to the top of the slope nearest the roadside south of the POU, and a strip of land along the east side of the driveway. The pump was described on the Proof of Beneficial Use as a 5Hp pump with an 85 GPM output, but the motor tag specifications recorded during the field examination indicate the pump motor currently installed is 10 Hp.

A 10Hp submersible pump in a 10ft deep drywell located along the wastewater ditch is used to divert water about 50ft upslope through a 4" steel line, which is reduced to a 2" line that delivers water to 3 quick connect risers within the place of use. The 2" line is reduced to a 1 1/2" poly line in the northeast of the POU and continues under the driveway to a hand valve next to the pump house for the domestic well, which can be turned on for use through the lawn irrigation system (Diagram figures 1-3). The area is irrigated using 9 to 11 Irripods with nozzles rated at 5gpm each. The Irripods are moved throughout the place of use (POU) with an ATV and connected to the nearest quick connect.

The reading observed at the measuring weir and a theoretical calculation found that the system could provide the rate allowed on the permit. However, the beneficial use developed was measured to be 9.1 acres and the standard diversion rate for irrigation is 0.02cfs/acre. I recommend the license be issued with a rate of 0.18cfs and an annual volume of 31.9 AF based on the headgate calculation in section F of this report.

I recommend the license be issued with conditions R05, R43, 187, X35, R63, 176, 198, and 004. After discussions with James Cefalo, and correspondence with the Watermaster Lacey French condition 215 should be replaced with R43, as a data logger would not aid in administration of the right and condition 198 requires that the permit holder may be required to provide the same information upon request. Based on current guidance condition 01H is typically replaced with the R02 at licensing. However, the content of condition R02 is the same as the lockable device requirements contained in condition R43 making an additional replacement for condition 01H at licensing unnecessary.

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	3 /15 to 11/15	0.18 CFS	31.9AF

Totals: 0.18 CFS 31.9 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: Bob Howe -Water Resource Agent

Field Examiner's Name Bob Howe Date 10/2/24

Reviewer _____ Date _____



2 cfs Flume

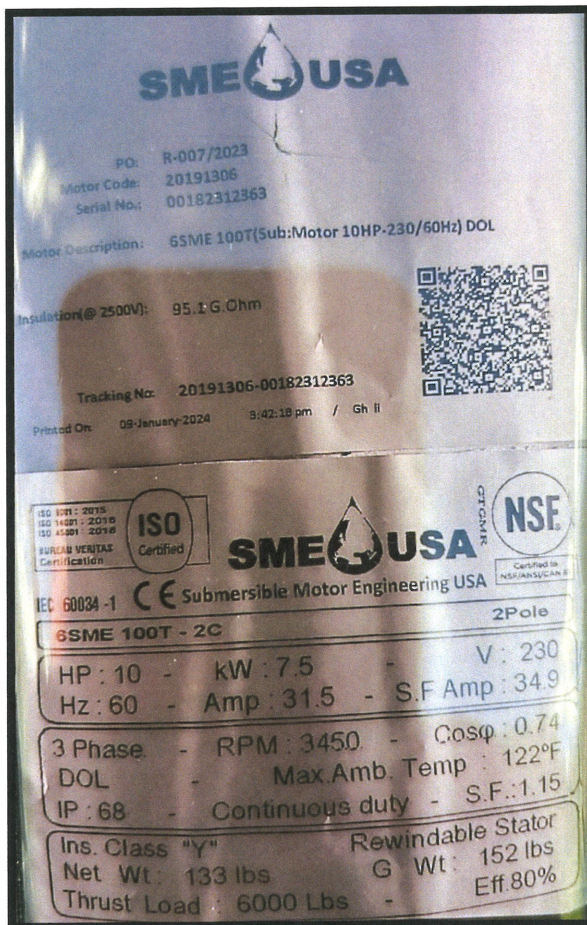
Water Measurement Table Broad-Crested Weir

4" Crest Height
1'-6" Crest Length
12" Crest Width
Vertical Side Walls (Steel)

50 Miners Inches = 1 CFS

Head (feet)	Flow Rate (cfs) (inches)	
0.15	0.18	9
0.16	0.20	10
0.17	0.21	11
0.18	0.23	12
0.19	0.26	13
0.20	0.28	14

Figures 1a & 1b- Left to right respectively. (1a) Photo of gauge reading at weir. (1b) Image of the Water Measurement Table provided by USBR.



Figures 2a & 2b-Left to right respectively. (2a) Pump and motor labels with specifications. (2b) Constant velocity control.

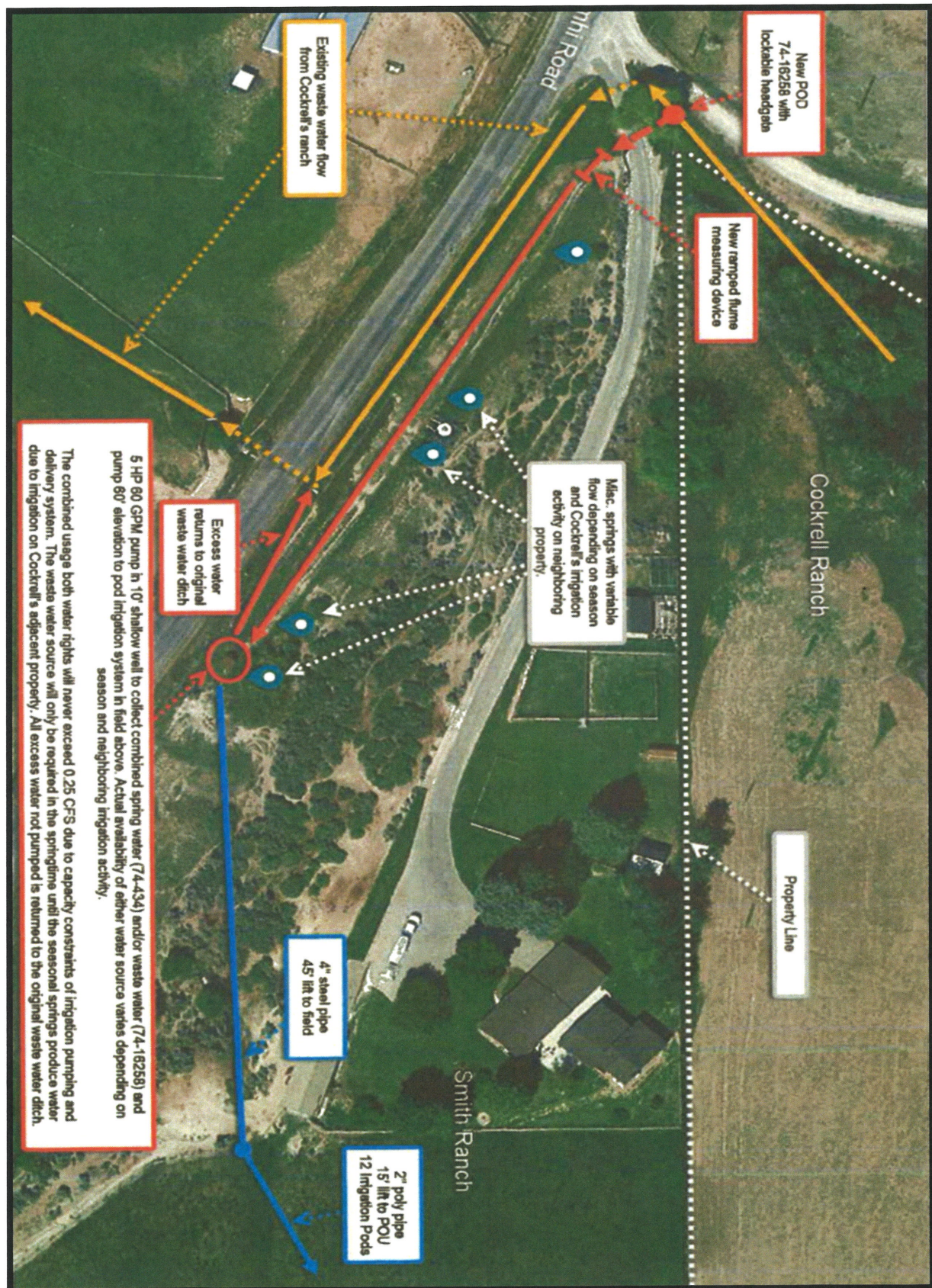


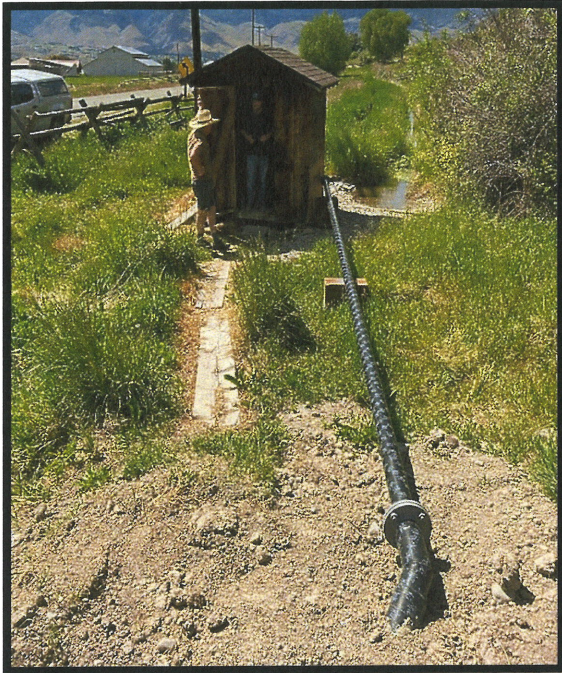
Diagram Figure 1- Red line indicates the wastewater diversion from the headgate to the pump house (drywell) returning to the wastewater ditch. The blue line indicates the pipe diverting from the pump house to the POU.



Diagram Figure 2- Red line indicates diversion to the pumphouse enabled when the headgate is closed. Yellow line indicates the wastewater diversion when the headgate is locked open.



Diagram 3- Black line is 4" pipe from pumphouse to irrigated areas (outlined light blue) with 2" poly line (blue line) connecting 3 quick connect hook ups (blue points) for Irripod lines. Orange line crossing the driveway represents a 1 1/2" poly line running to a hand valve next to the domestic pump house (green dot), which can be opened to use wastewater for running the lawn irrigation system.



Photos 1 & 2- Left to right respectively. (1) Pump house facing northeast. (2) Drywell with 4" steel line exiting through the pump house wall. Photo 3-(lower left) Pressure tank. Photo 4-(lower right) Irripod as used in irrigated areas.



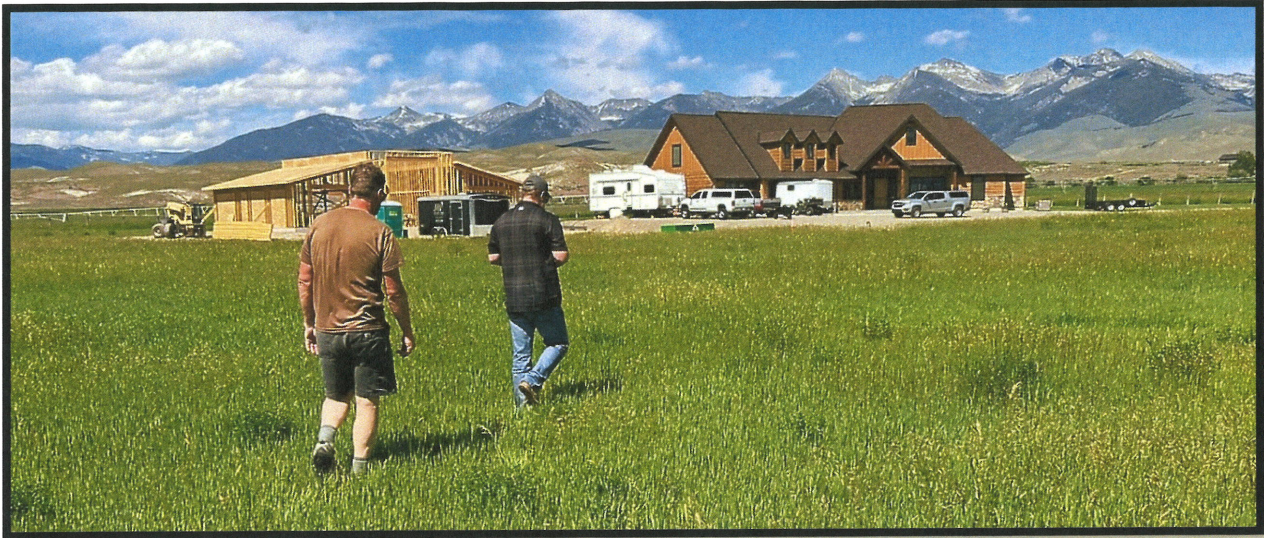


Photo 5- Standing in near the center of the POU facing north towards home and shop.



Photo 6- Standing in the driveway southwest of the house facing east. The orange frost free spigot from the domestic well and the black quick connect riser (circled) are visible on the inside of the curve in the background.



Photo 7- Standing at the southwest corner of the driveway looking west. Quick connect riser visible in the foreground and Irripod sprinklers can be seen running in the background. Jennie Smith's house is in the left of the image between two copses of trees.

Howe, Bob

From: Lacey French <charlield2015@gmail.com>
Sent: Monday, September 9, 2024 8:46 PM
To: Howe, Bob
Subject: Re: Condition 215- Requirement for data loggers

CAUTION: This email originated outside the State of Idaho network. Verify links and attachments BEFORE you click or open, even if you recognize and/or trust the sender. Contact your agency service desk with any concerns.

Hi Bob,

Yes per our conversation this morning - I do not feel it necessary to include the data logger requirement. I am comfortable moving forward using the R43 condition without the data logger verbage.

Thank you!

Lacey French
208-993-3655

Sent from my iPhone

On Sep 9, 2024, at 9:25 AM, Howe, Bob <Bob.Howe@idwr.idaho.gov> wrote:

Hi Lacey,

Thank you for taking the time to discuss the Wild and Scenic conditions with me this morning.

As we discussed, condition 215 states:

“Prior to the diversion and use of water under this right, the right holder shall install and maintain acceptable measuring device(s), **including data logger(s)**, at the authorized point(s) of diversion and in accordance with Department specifications, or shall obtain an approved variance from the Department to employ an alternative method to determine and record the amount of water diverted.”

Do you feel it necessary to include the data logger requirement within your water district for proper administration? If not, would you find it acceptable to use a condition such as R43 at licensing which states:

“The right holder shall maintain a measuring device and lockable controlling works of a type approved by the Department in a manner that will provide the watermaster suitable control of the diversion(s).”

Thank you for your time and consideration of this matter. Feel free to reach out with any questions or concerns.

<image003.jpg>

Howe, Bob

From: Roger Smith <roger@smithadventure.com>
Sent: Tuesday, July 9, 2024 11:54 AM
To: Howe, Bob
Subject: Re: Examination for Permit#74-16258
Attachments: Irrigation POU image edited.PNG

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Roger
m (208) 871-8259

----- Original Message -----

From "Howe, Bob" <Bob.Howe@idwr.idaho.gov>
To "roger@smithadventure.com" <roger@smithadventure.com>
Date 7/9/2024 8:54:51 AM
Subject Examination for Permit#74-16258

Good Morning Roger,

I have been working through the field examination for the licensing of permit 74-16258. I wanted to reach out to you regarding a couple of items. First, you had mentioned you could email me the pump specifications. Please email me the pump specifications (a pump curve if possible). Second, I attached an image of the areas identified as irrigated by Wastewater in the field exam (area outlined in blue). Please let me know if the image seems correct. If any areas were missed, please identify any additional area(s) of wastewater irrigation on the image. Thank you for your time and attention in this matter.

Best Regards,

Bob Howe

 IDAHO DEPARTMENT OF
WATER RESOURCES
Bob Howe | Water Resource Agent
322 E Front St, PO Box 83720, Boise, ID 83720
(208) 287-4800 | www.idwr.idaho.gov



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Governor Brad Little

Director Mathew Weaver

May 2, 2024

JENNIE SMITH
156 LEMHI RD
SALMON, ID 83467-5140

RE: Scheduling Field Exam for Water Right Permit No. 74-16258

Dear Permit Holder:

We are planning to conduct water right examinations in the vicinity of the above-referenced permit **on the week of June 10 to June 14, 2024**. An examination is needed to verify the water use in order to issue a water right license.

The above-referenced permit authorizes **0.25 CFS from Wastewater, tributary to the Lemhi River for Irrigation use. If you have developed a beneficial use and still own the place of use property, please contact me at your earliest convenience to schedule an examination.**

If you did not develop a beneficial use of water under the permit during the beneficial use period, a license cannot be issued and the permit should be relinquished. If that use was developed, but have ceased using the water and you currently carry no interest in it, please relinquish the permit by submitting the enclosed Relinquishment of Permit form (no fee required).

If you did develop a beneficial use of water under the permit, but you no longer own the place of use property identified in the permit, please submit the enclosed Ownership Change form with the applicable \$25 processing fee.

Please contact me within the next thirty (30) days at (208) 287-4847 to either schedule an examination or submit a relinquishment or assignment form. If you no longer own the place of use property and/or do not respond to this letter, the department will work with the current property owner to issue a license or void the permit.

Sincerely,



IDAHO DEPARTMENT OF
WATER RESOURCES

Bob Howe | Water Resource Agent
322 E Front St, PO Box 83720, Boise, ID 83720
(208) 287-4800 | www.idwr.idaho.gov

Enclosures: Relinquishment of Permit form
Change of Ownership form
Water Permit Report and Map