

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 63-33910
Exam Date: 02/20/2024

1. Current Owner:
DRAKE RANCH LLC 1133 W SHEARWATER LN EAGLE ID 83616-5586
2. Accompanied by: Josh Kling, Ranch Manager
Phone No: (208) 489-7488
Address: 1133 Shearwater Ln, Eagle ID 83616
Relationship to permit Holder: Ranch Manager

3. SOURCE:
BOISE RIVER

Tributary
SNAKE RIVER

Method of Determination: On-site inspection

B. OVERLAP REVIEW

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

Water Right No.	Source	Purpose of Use	Basis
63-178E	Boise River	Irrigation	Decreed
63-33499	Boise River	Irrigation	Decreed
63-32176	Unnamed Slough	Irrigation	License

Comments: While irrigation season overlaps with this license's season of use on paper, in actual use they do not.

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

Water Right No.	Source	Purpose of Use	Basis
63-11617	Boise River	Wildlife	License
63-174	Boise River	Irrigation	Decreed
63-175	Boise River	Irrigation	Decreed
63-5181	Boise River	Irrigation	Decreed
63-34414	Boise River	Wildlife; Wildlife Storage; Recreation & Recreation Storage	Permit
63-33905	Boise River	Irrigation	Permit

Comments: Water Right 63-11617 is not diverted from either POD for this right. It is diverted in its entirety from a POD located in Government Lot 2 (SWSE), Sec. 25, Twp 05N, Rge 05W into what is referred to as Andrew's ditch.

C. DIVERSION AND DELIVERY SYSTEM

1. LOCATION OF POINT(S) OF DIVERSION:

BOISE RIVER L3 (NE¼ NW¼), Sec. 36, Twp 05N, Rge 05W, B.M.	CANYON County
BOISE RIVER L4 (SW¼ NW¼), Sec. 26, Twp 05N, Rge 05W, B.M.	CANYON County

Method of Determination: On-site inspection

PLACE OF USE: WILDLIFE

[illegible]

PLACE OF USE: WILDLIFE STORAGE

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
05N	05W	26						X	X										
05N	05W	26						X	X										
								L4	L4										

PLACE OF USE: RECREATION

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
05N	05W	26						X	X										
05N	05W	26						X	X										
								L4	L4										

PLACE OF USE: RECREATION STORAGE

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
05N	05W	26						X	X										
05N	05W	26						X	X										
								L4	L4										

Method of Determination:

3.

Delivery System Diagram Attached (required). Indicate all major components and distances between components.

☒ X 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.

☒ X☒ X Aerial Photo Attached (required for irrigation of 10+ acres).☒ X☒ X Photo of Diversion and System Attached☒ X

4.

Well or Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
PODID 1068091					
PODID 1069897					

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
Staff Gauge						

2. Measurements: The staff gauge reading was approximately 1.43' on an 8' suppressed weir (see Figure 1).
The equation for a suppressed weir is: $Q = 3.33Lh_1^{1.5}$, where L is the length of the weir and h_1 is the the head in feet; $3.33 \times 8' \times 1.43^{1.5} = 45.55$ cfs

E. FLOW CALCULATIONS

Additional Computation Sheets Attached

Measured Method: Suppressed weir equation:

The equation for a suppressed weir is: $Q = 3.33Lh_1^{1.5}$, where L is the length of the weir and h_1 is the the head in feet; $3.33 \times 8' \times 1.43^{1.5} = 45.55$ 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: Wildlife & Recreation:

According to both Doug Bates and Josh Kling, the headgate is fully opened at the beginning of the season and left alone until the end of the season.

Therefore, $4.5 \text{ cfs} \times 1.9835 \text{ afd} \times 181 \text{ days} = 1615.6 \text{ af}$

G. NARRATIVE/REMARKS/COMMENTS

I originally met with Josh Kling and Terry Scanlon (HDR Consultant) on 1/23/2024 to conduct the field exams for this and two other potential licenses. However, after viewing the diversions, it was clear that there were multiple issues that would prevent obtaining flow rates at the diversions. The issue with the weir for this exam was the inlet at the headgate was clogged with debris (large logs) and it appeared a backhoe and/or tractor was needed to clear the obstructions. I agreed to give them additional time to correct those issues in order to obtain measurements at the weirs for the permits. So, They then drove me around the place of use for all three permits. This particular right does overlap with several irrigation rights. Irrigation rights 63-1783E, 63-33499, 63-32176 and 63-33905 (shared POD) are used on the same place of use and the season of use overlaps. However, this ground is managed for wildlife habitat and mostly duck hunting. The irrigation rights are used to grow corn that is left on the fields. Once they start to divert water for this right, all irrigation is ended. The corn fields are flooded and the waterfowl move in. Both ducks and other wildlife were abundant when I visited. Numerous hunters were also out hunting ducks.

This right allows 15.0 af or 30 acres flooded (0.5' deep) with a total diversion rate of 4.5 cfs. According to Josh, that is how this right is used, they flood 30 acres with approximately six inches of water. I wasn't able to view the entire storage place of use, but what I was able to view was flooded with at least 6" of water.

When I returned on 2/20/2024 and met with Doug Bates and Josh Kling, the debris had been removed from the headgate using both a backhoe and a bulldozer. I measured 45.55 cfs at the weir. There are three wildlife rights associated with this

POD: 63-11617 (3.00 cfs); 63-34414 (24.3 cfs) and this right for 4.5 cfs. That's a total of 31.8 cfs that would be required to satisfy all three water rights from this POD. As I mentioned before, 63-11617 isn't diverted from this POD, so the actual water balance required to satisfy the water requirements for the wildlife rights diverted from this POD is actually 28.8 cfs. There is a second POD (a pump from the river) for this right located in L4 (SW¼ NW¼), Sec. 26, Twp 05N, Rge 05W, that has been pulled for maintenance. Josh indicated the pump will be reinstalled soon as it will be needed to provide irrigation water under permit 63-33905 (0.4 cfs) and that they will also utilize it for this right during cold snaps that can lead to icing along the ditches associated with the other POD.

I recommend licensing 4.5 cfs and a volume of 1615.6 af for wildlife and recreation, the permitted volume of 15.0 af for wildlife and recreation storage, with a total diversion of 4.5 cfs and a total volume of 1615.6 af.

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>
WILDLIFE	09/01 to 02/28	4.50 CFS	1,615.6 AF
WILDLIFE STORAGE	09/01 to 02/28		15.0 AF
RECREATION	09/01 to 02/28	4.50 CFS	1,615.6 AF
RECREATION STORAGE	09/01 to 02/28		15.0 AF
DIVERSION TO STORAGE	09/01 to 02/28	4.50 CFS	

Totals: 4.50 CFS 1,615.6 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

Bill Mills -

Field Examiner's Name

Date

Reviewer

Date

Bill Mills *3-12-2024*
Angie Smith *3/13/2024*



Figure 1: Staff Gauge Measurement at weir of 1.43'



Figure 2: Weir on Mannon Ditch (has telemetry, but sensor had been removed by Watermaster)



Figure 3: Pump/relift station and flooded field in background

System Diagram

