

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 1-10565

Exam Dates: 08/29/2024

Accompanied by: N/A

Examiner: Christian Stewart, IDWR Senior Water Resource Agent

1. Current Owner:

COUNTY OF JEFFERSON
210 COURTHOUSE WAY STE 100
RIGBY, ID 83442

2. **SOURCE: SNAKE RIVER**

TRIBUTARY: COLUMBIA RIVER

B. OVERLAP REVIEW

1. Place of Use: Water Right 25-13985 for recreation storage from groundwater seepage overlaps the place of use, Jefferson County Lake. This permit authorizes a non-consumptive use of water from the Dry Bed of the Snake River (Dry Bed) to refresh the lake.

2. Point of Diversion: No overlap.

C. DIVERSION AND DELIVERY SYSTEM

There is a culvert which can divert high flows from the Dry Bed. Water diverted through the culvert flows to a regulating headgate and into the lake. Water flows from the lake to an outlet channel capable of conveying 2 cfs when the lake has fully filled with groundwater.

1. **POINT OF DIVERSION:**

SNAKE RIVER SE $\frac{1}{4}$ SW $\frac{1}{4}$, Sec. 5, Twp 04N, Rng 39E, B.M. JEFFERSON County

Method of Determination: Field inspection, GPS

2. PLACE OF USE: RECREATION

within

JEFFERSON COUNTY

Twp	Rng	Sec	NE				NW				SW				SE				Total s
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
04N	39E	5											X						
04N	39E	5																X	
04N	39E	5	X																
04N	39E	5						X											

Method of Determination: Site inspection. Aerial imagery.

3. DELIVERY SYSTEM DIAGRAM**D. FLOW MEASUREMENTS**

Weir Type: Regular contracted weir

Depth from crest = 0.6 ft visible at the high-water mark

Width = 8 ft

$$Q = 3.33 (W - 0.2H) * H^{1.5}$$

$$Q = 3.33 (8 - 0.2 * 0.6) * 0.6^{1.5} = 12.20 \text{ cfs}$$

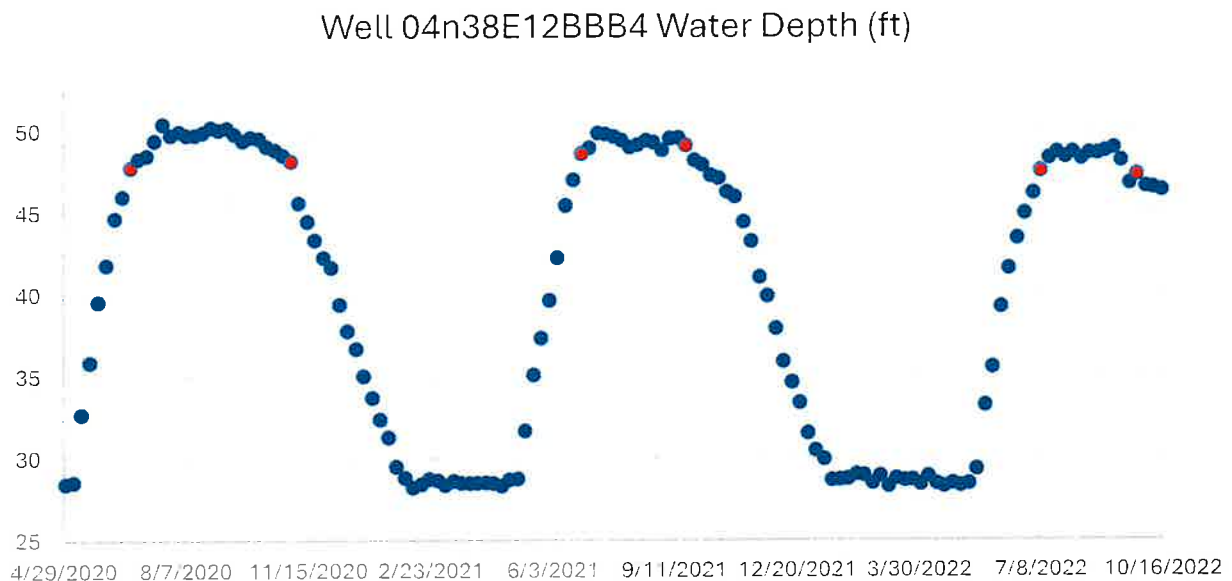
Permit limited to 12 cfs

Outlet channel measurement: 2 cfs Equipment: Sontek Flowtracker

Recreation flow is limited by outflow capacity of 2 cfs because storage of water is not permitted under this right.

F. VOLUME CALCULATIONS

Due to conditions on the permit, water use for recreation must be non-consumptive and storage of water is not authorized. Water diverted from the Dry Bed is only non-consumptive when the lake is full. Monitoring well 04n38E12BBB4, which is located 2 miles due west of the lake was used to estimate when the lake is full. This monitoring well was the most suitable for comparison to Jefferson County Lake because it is the closest geographically, it has continuous and recent transducer data, and because it is close to the Dry Bed, which is presumably the primary driver of groundwater level fluctuations at Rigby Lake.



The dates groundwater levels stabilized, and the dates groundwater levels begin to decline are shown in red. These dates provide an estimate of when the lake fills and then begins to decline.

Average Fill Date: 07/01

Average Decline Date 10/05

Days lake is full per year=96

$$V_{\max} = [\text{Diversion Rate (cfs)}] \times (\text{Days}) \times 1.9835 = 2 \times 96 \times 1.9835 = 380 \text{ AF}$$

G. NARRATIVE/REMARKS/COMMENTS

Permit Development Timeline:

Proof of beneficial use was due on 9/01/2017. The original priority date was 10/1/2009. The permitholder submitted proof on 11/2/2017, so the priority date was advanced to 12/2/2009. Measuring and lockable devices were suitable.

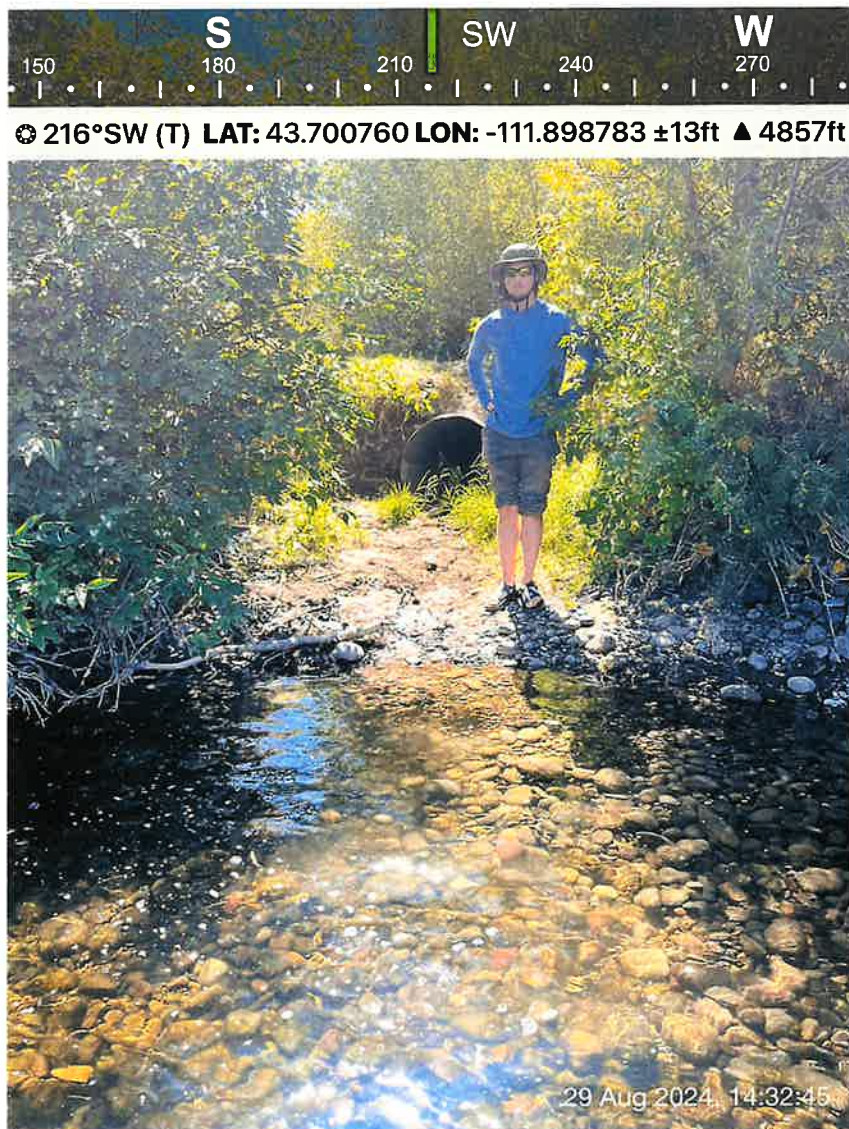
Martin Jones of Jefferson County Parks and Recreation stated that water was diverted in 2015 and 2016 under this permit, before proof was submitted.



Headgate to the culverts going under the bridge.



8ft wide weir with high water mark at 0.6 feet above lip of weir.

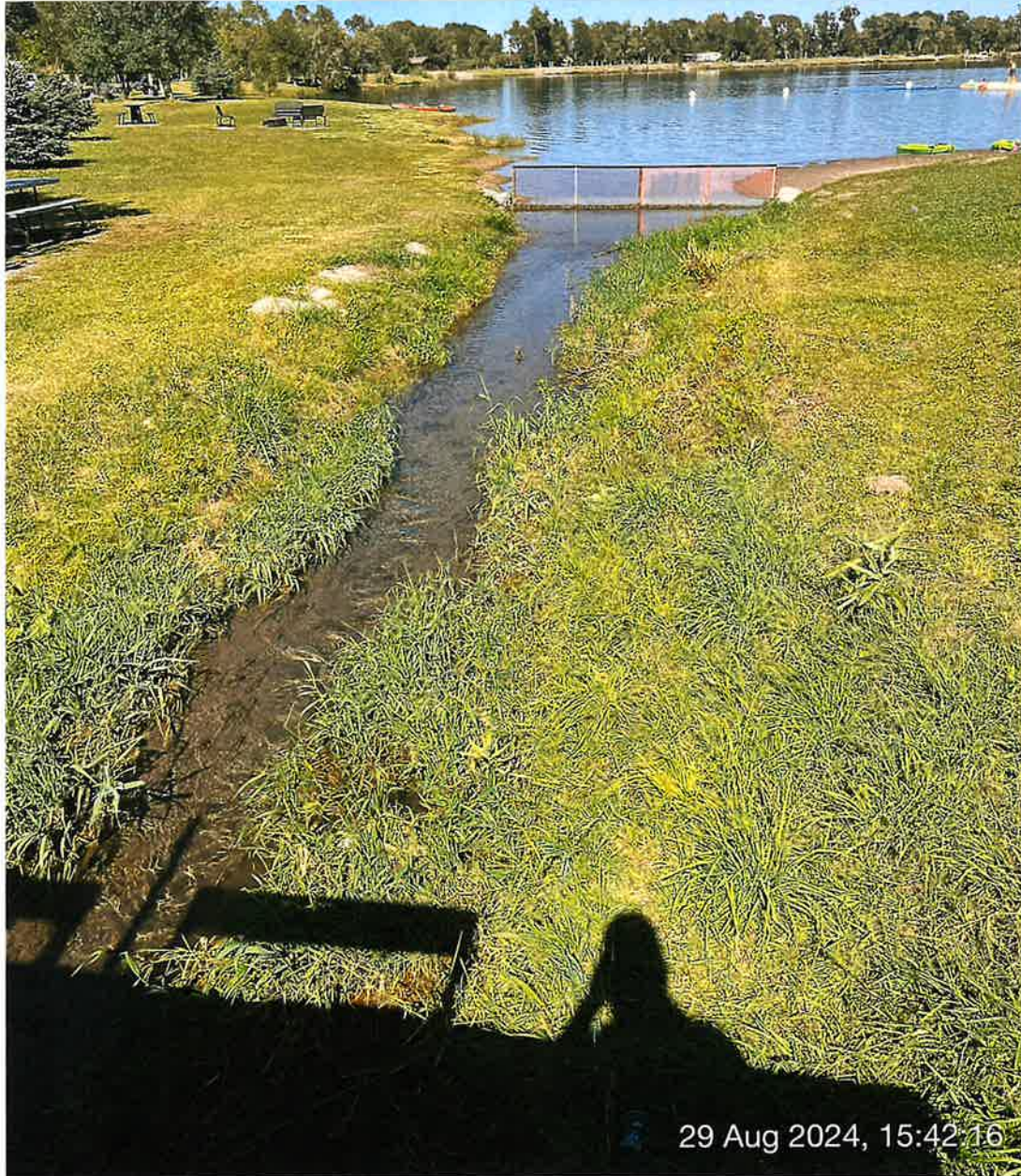


Water surface of the Dry Bed

Flow was measured at 12 cfs using a Sontek Flowmeter on 08/29. The water surface was not high enough to pass water into the regulating headgate at this flow. Because it is difficult to estimate flows in this reach of the Dry Bed, no estimate was made for how often the water surface is high enough to flow into the culvert.

South West Elevation

☉ 48°NE (T) LAT: 43.699397 LON: -111.905487 ±13ft ▲ 4860ft



29 Aug 2024, 15:42:16

Outlet from lake capable of returning 2 cfs back to the Dry Bed

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>
RECREATION	04/01 to 10/31	2 CFS	380 AF

Totals: 2 CFS 380 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 Christian Stewart, IDWR Water Resource Agent

Field Examiner's Signature Christian T Stewart

Reviewer James Cefalo

Date 2/25/24

State of Idaho
Department of Water Resources

Water Right

1-10565

County Of Jefferson

January 23, 2025

39E



0 0.05 0.1 0.2 Miles

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

