

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 74-16631

Exam Dates: 11/25/2024

Accompanied by: NA

Examiner: Christian Stewart, IWDR Water Resource Agent

1. Current Owner:

STATE OF IDAHO
DEPT OF FISH & GAME
PO BOX 25
BOISE ID 83707-0025

2. **SOURCE:** BOHANNON CREEK

TRIBUTARY: LEMHI RIVER

B. OVERLAP REVIEW

1. Place of Use: No overlap for the purpose of use
2. Point of Diversion: Diverted at same point of diversion as rights 74-15614, 176, 177, 184, 175, 182, 181, 183, 377.

C. DIVERSION AND DELIVERY SYSTEM

Small surface diversion ditch at POD. A rotating barrel screen allows water to pass through the structure for the irrigation rights. A 0.8 ft diameter circular pipe returns water and fish back into the stream at the place of use. A 4 inch diameter plate controls the bypass flow into the pipe.

1. POINT OF DIVERSION:

BOHANNON CREEK SE¼ NW¼, Sec. 2, Twp 21N, Rge 23E, B.M. LEMHI County

Bo-5 IDFG LBC09 diversion (LBC09)

Method of Determination: Field inspection

2. PLACE OF USE: FISH PROPAGATION

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	
21N	23E	2								X									

Method of Determination: Site inspection.

D. FLOW MEASUREMENTS

Submerged orifice theoretical calculation (inlet controlled):

H Head from center of orifice: 6.6 ft (measured at high water mark)

A Area: 0.087 ft² (.33ft diameter)

G Gravity: 32.2 ft/s

C Coefficient of Discharge: 0.67 (experimentally determined at similar bypass structures, see memo in 72-16752)

$$Q(\text{cfs}) = CA \cdot \sqrt{2GH} = \mathbf{1.21 \text{ CFS}}$$

The diversion capacity exceeds the permitted diversion rate and will be licensed for 0.8 CFS.

F. VOLUME CALCULATIONS

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.8 \times 246 \times 1.9835 = 390 \text{ AF.}$$

G. NARRATIVE/REMARKS/COMMENTS

The diversion meets department requirements for a lockable headgate. Use of water was confirmed to be non-consumptive; all water diverted was returned to the stream below the place of use. Proof of beneficial use was submitted within the permit development timeline.

There were multiple pipes that returned diverted water back to Bohannon Creek. The measured pipe was the bypass flow that flowed from the diversion into a concrete pit and returned to Bohannon Creek. The other pipes returned water to the creek that had already passed through the fish screen.

Have conditions of permit approval been met? X Yes No

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use	Rate of Diversion	Annual Volume
FISH PROPAGATION	03/15 to 11/15	0.8 CFS	390

Totals: 0.8 CFS 390 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 J Stewart

Date 12/5/2024

North Elevation

☉ 188°S (T) ☉ 45.179792°N, 113.703987°W ±13ft



25 Nov 2024 12:36:17

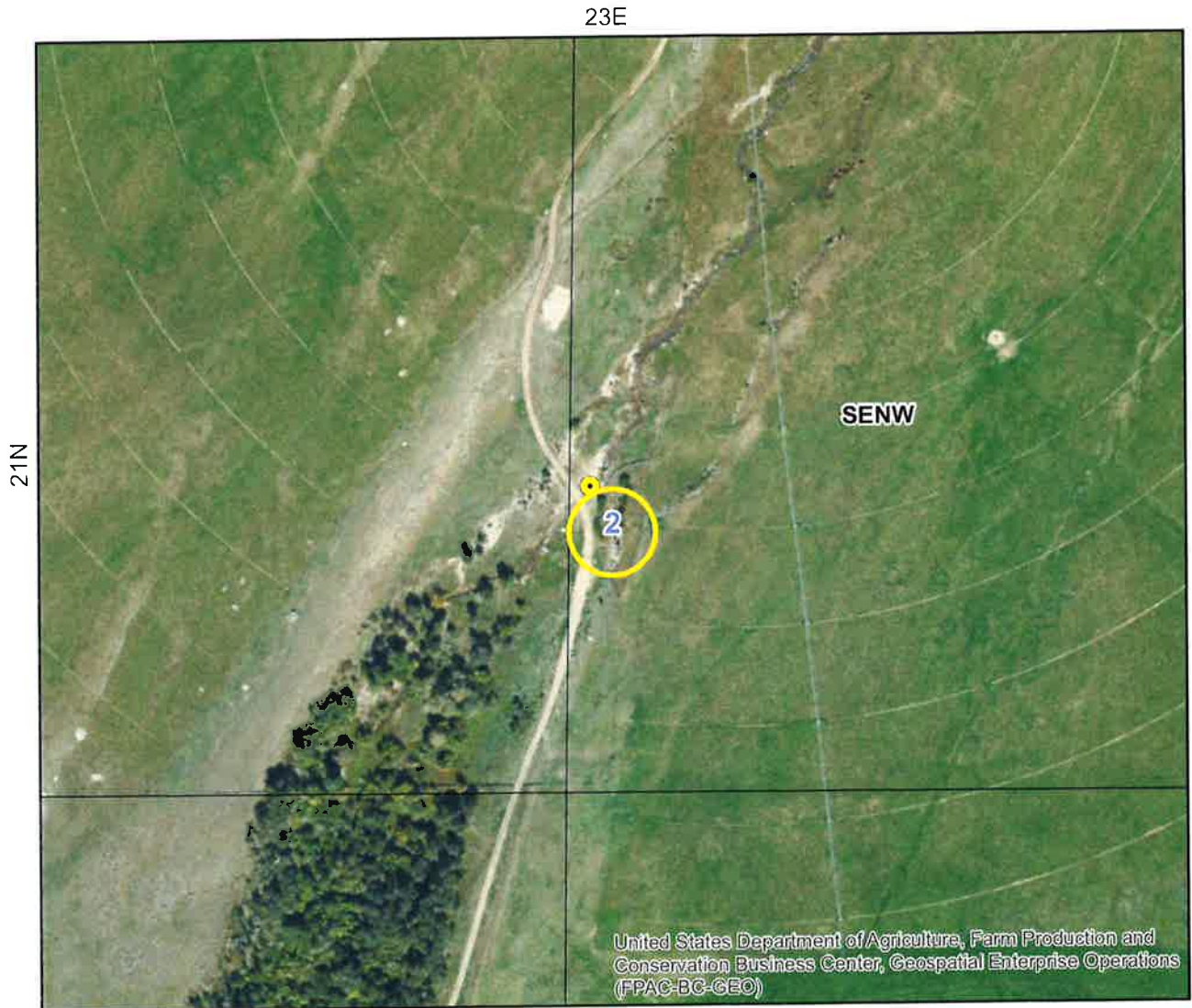
State of Idaho
Department of Water Resources

Water Right

74-16631

State Of Idaho

November 27, 2024



0 0.035 0.07 0.14 Miles

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

