

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 75-14838
Exam Date: 4/4/2017

1. Current Owner:
STATE OF IDAHO DEPT OF FISH & GAME
PO BOX 25 BOISE ID 83707 (208) 334-3700

2. Accompanied by: No one

3. **SOURCE:**
IRON CREEK

TRIBUTARY:
SALMON RIVER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: None
2. Other water rights with the same point-of-diversion: Irrigation rights 75-97, 75-4406, 75-14197, 75-14814

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

IRON CREEK L1 (NW¼NW¼) Sec. 7, Twp 18N, Rge 21E, B.M. LEMHI County

Method of Determination: GPS and ArcMap

2.

PLACE OF USE: FISH PROPAGATION

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
18N	21E	7						X L 1											

Method of Determination: Aerial photography and ArcMap

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.

X

X Aerial Photo Attached (required for irrigation of 10+ acres).

X Photo of Diversion and System Attached

4. Diversion Information

Headgate for irrigation rights 75-97, 75-4406, 75-14197, and 75-14814, also known as SIC-7.

D. FLOW MEASUREMENTS

No direct measurement was possible. However, a depth of water above the discharge tube of 24.5" was observed on May 2, 2018.

E. FLOW CALCULATIONS

 X Additional Computation Sheets Attached

See attached "Field Exam Flow Rate Calculation Sheet for Fish Screen Orifices"

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation: N/A
2. Volume Calculations for Other Uses: $0.67 \text{ cfs} * 1.9835 \text{ AF/cfs/day} * 246 \text{ Days/season} = 326.9 \text{ AF/season}$

G. NARRATIVE/REMARKS/COMMENTS

Have conditions of permit approval been met? Yes X No

H. RECOMMENDATIONS**1. Recommended Amounts**

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
FISH PROPAGATION	03/15 to 10/31	0.67 CFS	327 AF
	<u>Totals:</u>	0.670 CFS	327 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

Field Examiner's Name Cooper Fritz Date 8/3/2018

Reviewer James Cefalo Date 8/13/18

Field Exam Flow Rate Calculation Sheet for Fish Screen Orifices

Water Right Number: 75-14838
Field Examiner: Cooper Fritz
Date of Exam: 5/2/2018

Discharge from a tank through an orifice (see attached memo from water right 72-16754 by Corey Skinner for a formula and orifice coefficient.

Formula = $C_d A_o (2gh)^{1/2}$

Where C_d = coefficient of discharge
 A_o = Area of orifice opening in Square feet
 $g=32.2$ feet per second²

h = Measured head above center of orifice opening in feet

Orifice Diameter in inches =	4
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$A_o = (\pi r^2) / 144 = \text{Square Feet}$

$A_o = 0.087$

Head above center of orifice in Inches =	24.5
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(Measured to High Water Mark)

$h = 2.042$

Coefficient of Discharge for Orifice* =	0.67
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Total Diversion Rate = 0.67

* Per Cory Skinner's memo for Basin 71 and 72 IDF&G Fish Bypass Permit Files dated August 24, 2011, the Coefficient for round edge orifice should be 0.67.

75-14838 Place of Use and Point of Diversion at Licensing



Site Exam April 4, 2017



Gate of road



Fish Bypass



Return flow