

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 75-14840
Exam Date: 5/2/2018

1. Current Owner:
STATE OF IDAHO DEPT OF FISH & GAME
C/O OFFICE OF THE ATTORNEY GENERAL
MICHAEL ORR
PO BOX 83720 BOISE ID 83720-0010 (208) 334-2400

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 right 75-100

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

IRON CREEK NE¼SW¼ Sec. 1, Twp 18N, Rge 20E, 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	20E	1									X								

Method of Determination: Site visit 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.
☒ Aerial Photo Attached (required for irrigation of 10+ acres).
☒ Photo of Diversion and System Attached

4. Diversion Information:

Headgate for irrigation right 75-100, also known as SIC-09

D. FLOW MEASUREMENTS

No direct measurement was possible. However, a depth of water above the discharge tube of 13.5 inches was observed on May 2, 2018.

E. FLOW

CALCULATIONS

☒ 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:

$$0.50 \text{ cfs} * 1.9835 \text{ AF/Day/cfs} * 214 \text{ days} = \mathbf{212.2 \text{ AF}}$$

G. NARRATIVE/REMARKS/COMMENTS

Observed 13.5" above the center of orifice.

Have conditions of permit approval been met? ☒ Yes ☐ 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	04/01 to 10/31	0.50 CFS	212 AF
	<u>Totals:</u>	0.500 CFS	212 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

Field Examiner's Name Cooper Fritz Date 8/2/2018

Reviewer James Cefalo Date 8/13/18

Field Exam Flow Rate Calculation Sheet for Fish Screen Orifices

Water Right Number: 75-14840
Field Examiner: Cooper Fritz
Date of Exam: 7/30/2018

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
------------------------------	---

$A_o = (\pi r^2) / 144 =$ Square Feet

$A_o =$ 0.087

Head above center of orifice in Inches =	13.5
--	------

(Measured to High Water Mark)

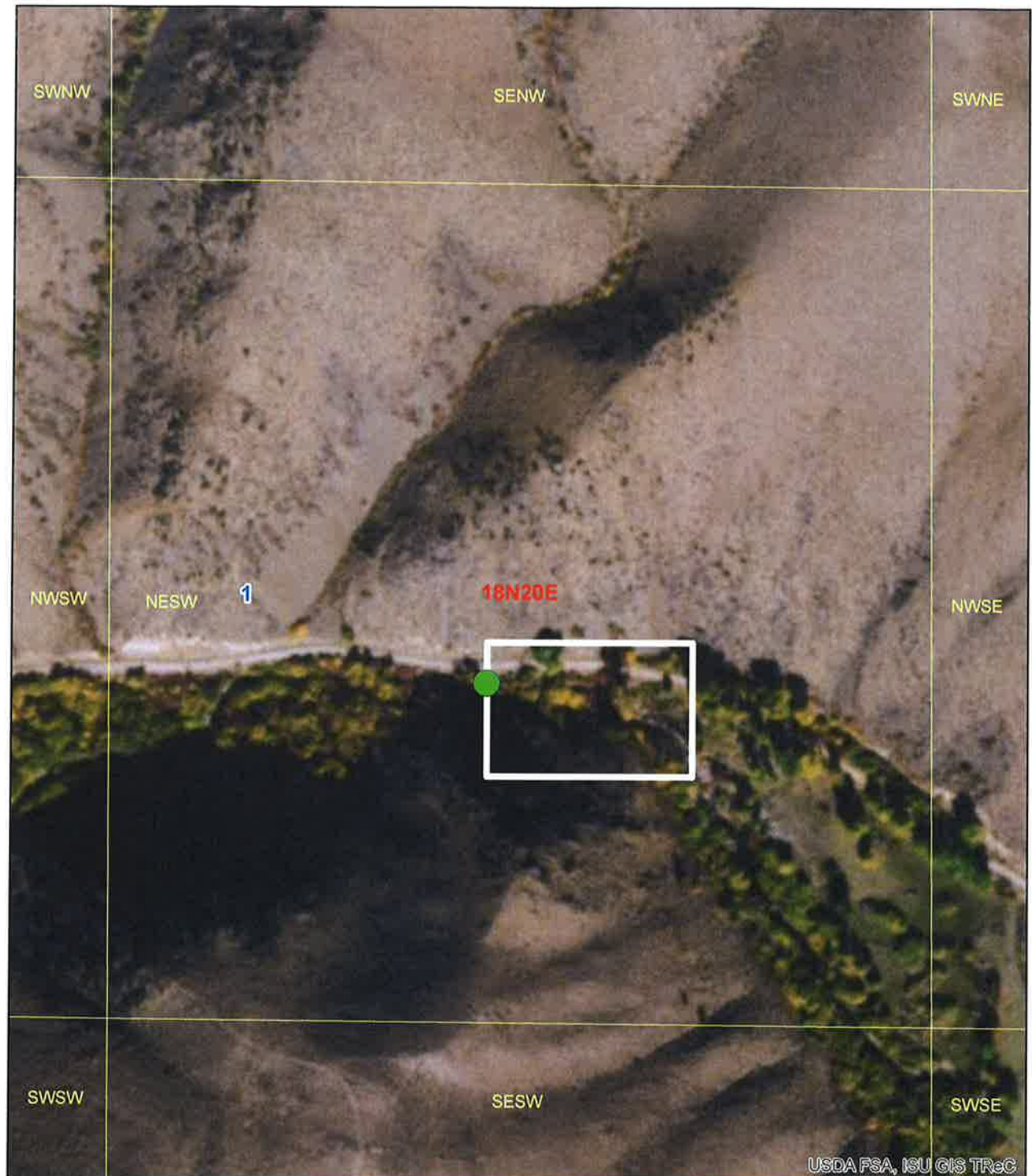
$h=$ 1.125

Coefficient of Discharge for Orifice* =	0.67
---	------

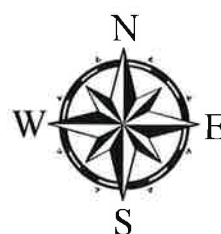
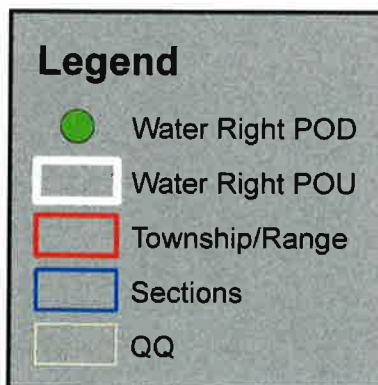
Total Diversion Rate = 0.50

* 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.

75-14840 Place of Use and Point of Diversion at Licensing

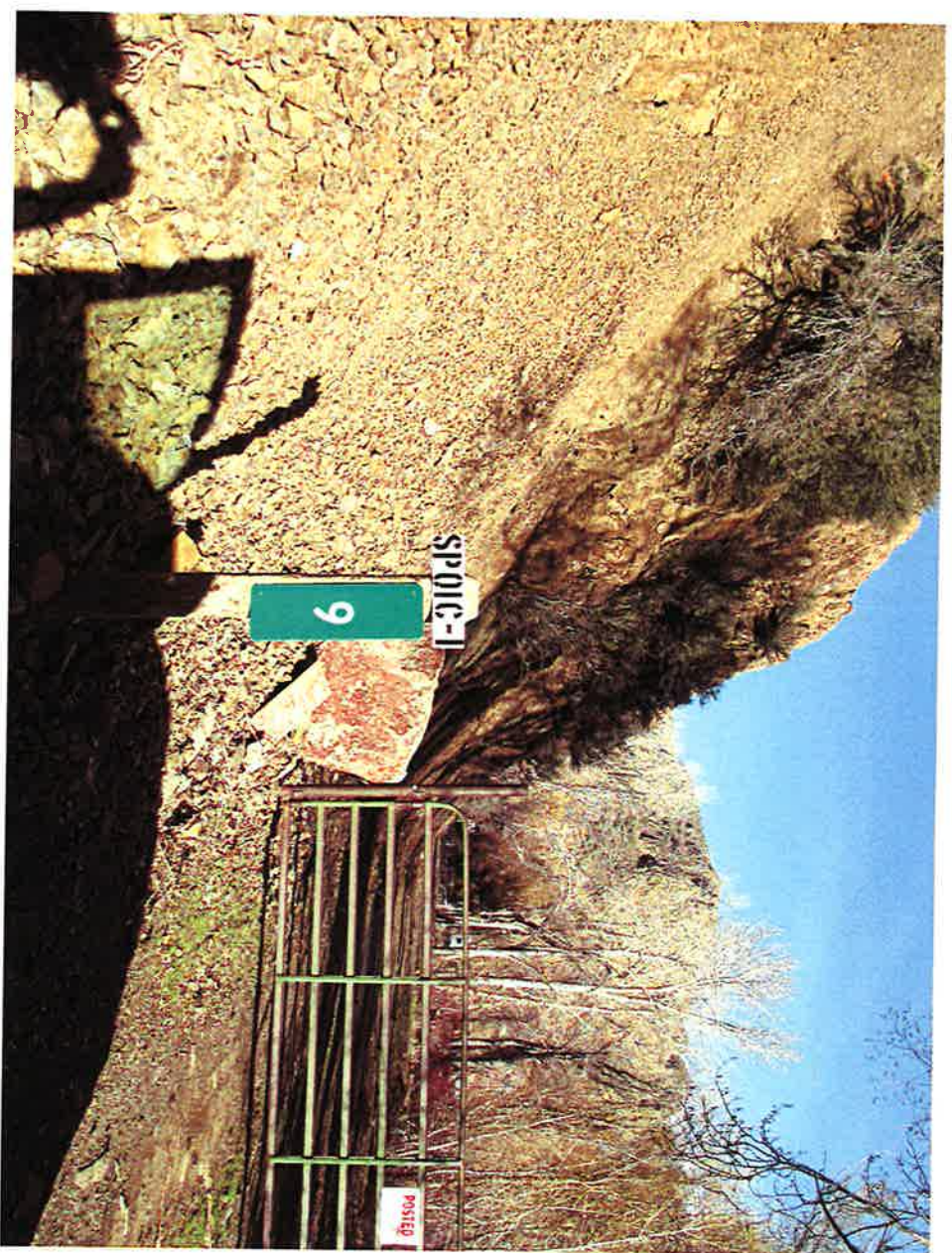


2017 Imagery



Field Exam – April 4, 2017





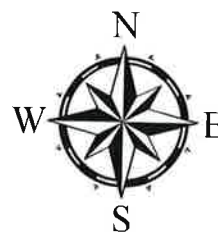
75-14840 Place of Use and Point of Diversion at Licensing



2017 Imagery

Legend

-  Water Right POD
-  Water Right POU
-  Township/Range
-  Sections
-  QQ



0 0.05 0.1 0.2 Miles