

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 72-16753

Exam Date: 8/11/2011

1. Current Owner: STATE OF IDAHO
DEPT OF FISH & GAME
600 S WALNUT
BOISE ID 83707
(208)334-3700
2. Accompanied by: Benny Walker (IDWR)
Phone No:
Address:
Relationship to Permit Holder:

3. **SOURCE**

MORGAN 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: maybe 72-10412A, 72-10413A, 72-16107 from Morgan Creek &/or 75-2169 with source as Otter Creek rediverted from Morgan Creek (see narrative remarks)

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

MORGAN CREEK

SE1/4NW1/4SW1/4

Sec. 14, Twp 15N, Rge 19E, B.M.

CUSTER County

Method of Determination: Field observation and IDWR spatial datapoint (site tag # A008090)

2.

PLACE OF USE: FISH PROPAGATION

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	
15N	19E	14										X							

Method of Determination: Field observation, GPS, and IDWR GIS

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.

<u>Well or Diversion</u> <u>ID No.*</u>	<u>Motor Make</u>	<u>Hp</u>	<u>Motor Serial No.</u>	<u>Pump Make</u>	<u>Pump Serial No. or Discharge</u> <u>Size</u>
N/A					

*Code to correspond with No. on map and aerial photo

D. FLOW MEASUREMENTS

1.

<u>Measurement</u> <u>Equipment</u>	<u>Type</u>	<u>Make</u>	<u>Model No.</u>	<u>Serial No.</u>	<u>Size</u>	<u>Calib. Date</u>
None taken						

2. Measurements: Diameter of orifice was measured at 4 inches and the amount of head above the center of the orifice was measured at 22.5 inches. However, 25.0 inches of head above the center of the orifice to the high water mark on the fish screen structure was measured.

E. FLOW CALCULATIONS

_____Additional Computation Sheets Attached

Measured Method:

Discharge from a tank through an orifice (see attached 8/24/11 memo for formula and orifice coefficient)

$$Q = C_d A_o (2gh)^{1/2} \quad \text{where } C_d = 0.67 \text{ coefficient of discharge for round edged orifice}$$

$$A_o = \text{Area of orifice opening}$$

$$g = 32.2 \text{ ft per second}^2$$

$$h = \text{measured head above center of orifice opening (in feet)}$$

$$\text{Orifice is a 4 inch diameter hole so } A_o = \pi r^2 = \pi (2 \text{ inch})^2 = 12.566 \text{ inch}^2 = .087 \text{ ft}^2$$

h was measured at 25.0 inches (to high water mark) = 2.083 feet

$$Q = (0.67)(0.087)[2(32.2)(2.083)]^{1/2}$$

$$Q = 0.68 \text{ cfs}$$

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = \text{N/A}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = \text{N/A}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = \text{N/A}$$

2. Volume Calculations for Other Uses:

$$V = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = (0.68 \text{ cfs})(214 \text{ days})(1.9835) = 288.6 \text{ afa}$$

G. NARRATIVE/REMARKS/COMMENTS

Permit 72-16753 was permitted for the diversion of up to 0.80 cfs from Morgan Creek for use in a fish screen to flush fish back to the creek that would otherwise be trapped between the point of diversion and the fish screen. During the exam it was observed that water was being diverted through the fish screen and water was flowing back to Morgan Creek through a 4 inch diameter orifice, with 22.5 inches of head above the center of the orifice. However, 25.0 inches of head above the center of the orifice to the high water mark on the fish screen structure was measured indicating that additional water had been utilized by the fish screen bypass in the past. The application for permit identifies the point of diversion as SMC-06, but during the exam it was noted that water was flowing through the diversion identified as SMC7 (A0008090) according to IDWR and water district 170 records. These same records do not identify any other water rights as being associated with this particular diversion. Rights 72-10412A, 72-10413A, 72-16107 from Morgan Creek &/or 75-2169 with source as Otter Creek rediverted from Morgan Creek are associated with diversion SMC8 (A0011394) located in the same 10 acre tract. However, during our field visit, it was observed that no water was being diverted through the upper (SMC8) diversion and all the water was being diverted through the lower SMC7 diversion.

Have conditions of permit approval been met? ☒ Yes ☐ No

H. RECOMMENDATIONS**1. Recommended Amounts**

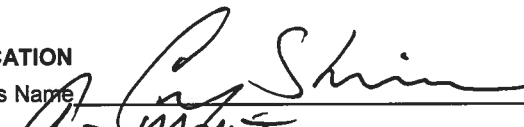
<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
FISH PROPAGATION	04/01 to 10/31	0.68 CFS	288.6 AF
<u>Totals:</u>		0.68 CFS	288.6 AF

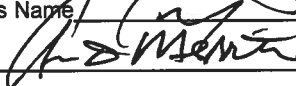
2. Recommended Amendments

☐ Change P.D. as reflected above ☐ Add P.D. as reflected above ☒ None

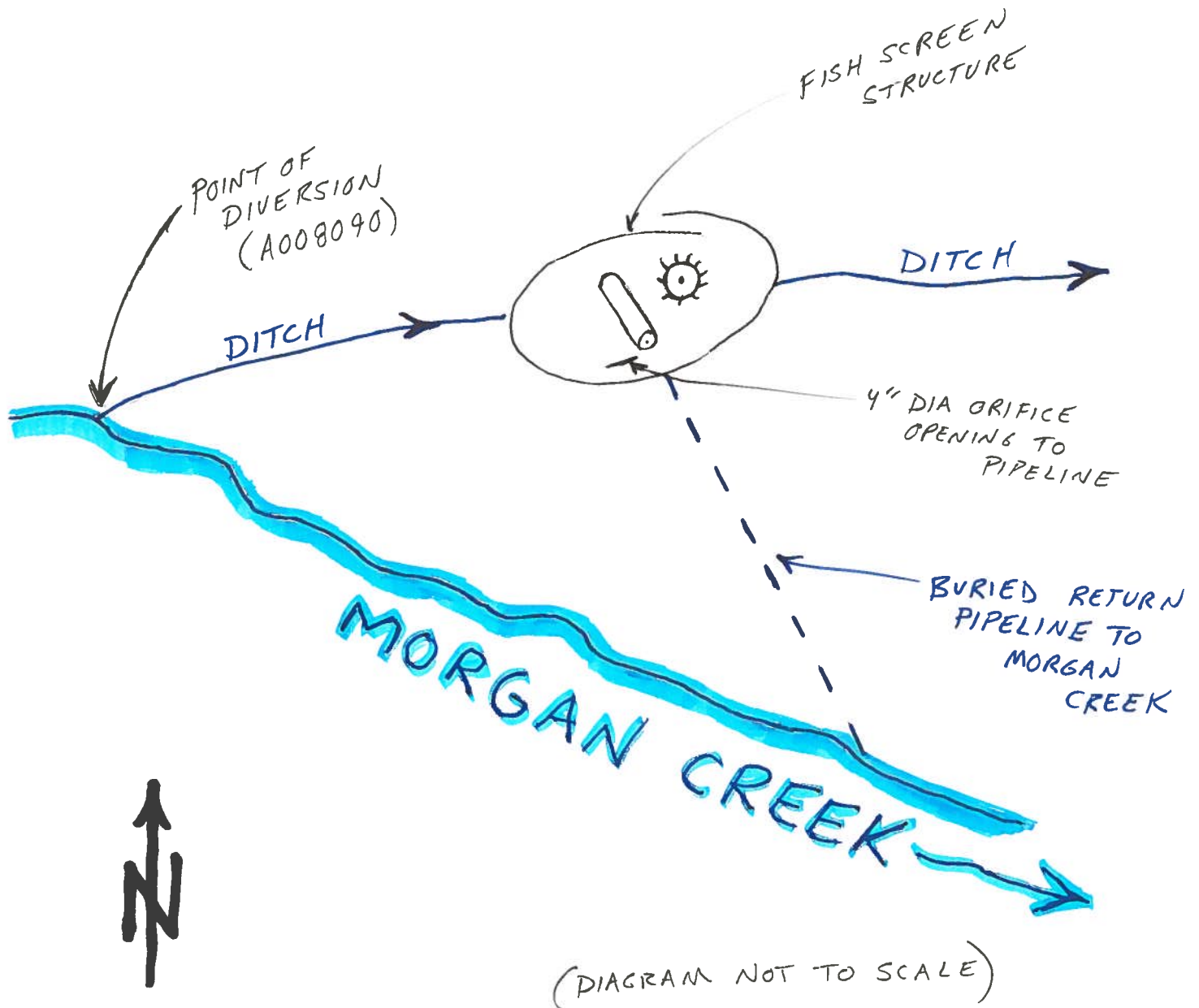
☐ Change P.U. as reflected above ☐ Add P.U. as reflected above ☐ Other

I. AUTHENTICATION

Field Examiner's Name  Date 8/25/2021

Reviewer  Date 10/20/11

System Diagram for 72-16753

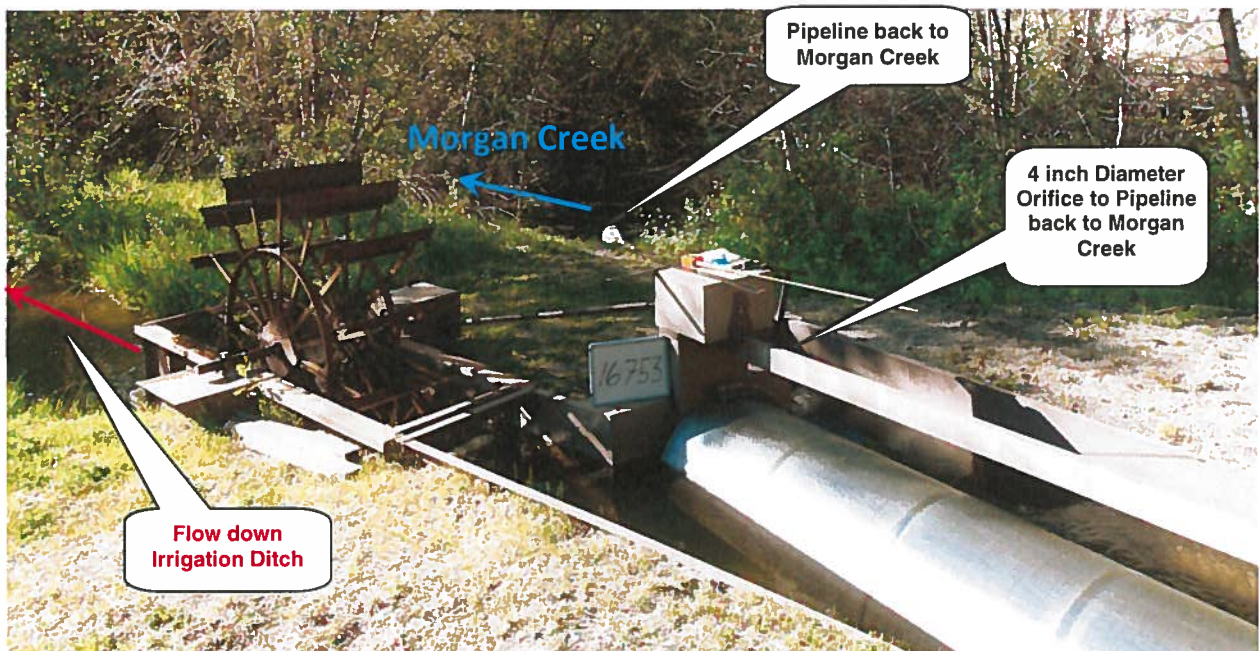


Photos for 72-16753 Field Exam

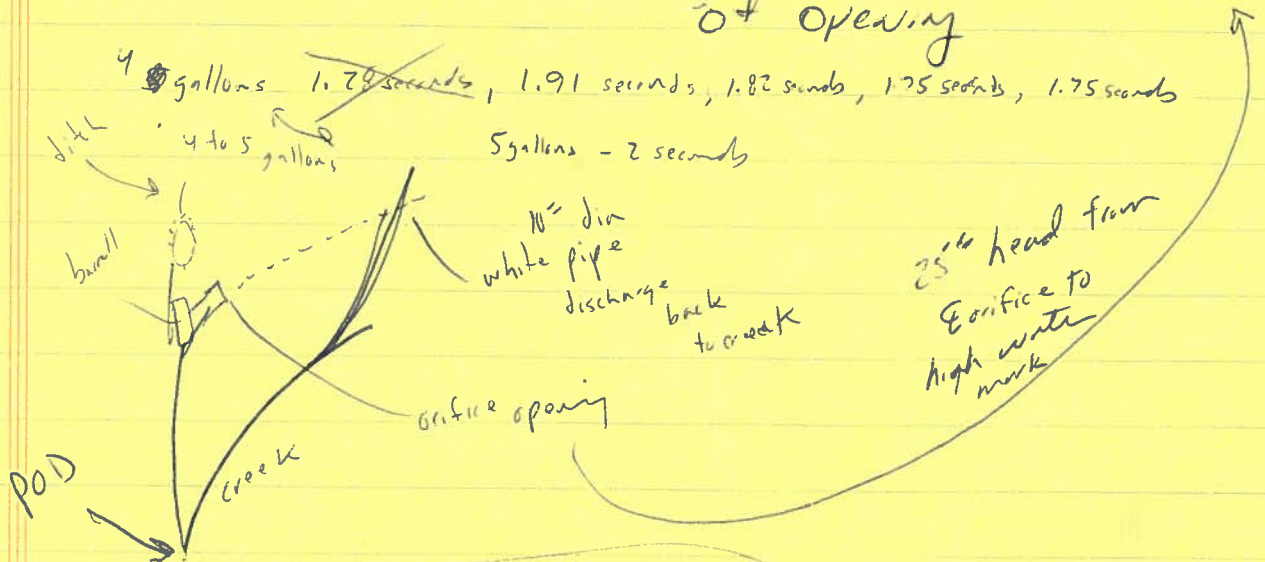


ABOVE: View of Point of diversion for 72-16753 (site tag # A008090). Note picture taken on different date and obtained from \\A006\Water Measurement\Water Districts by Basin\WD 170 Upper Salmon\Photos\DIVERSION INVENTORY\BASIN 72 TRIBS\Morgan Creek\SMC7

BELOW: View of place of use for 72-16753 on August 11, 2011 (date of licensing exam).



SMC-06
4" DIA Hole 22 1/2" head to center
of opening



#16753

POU EPE 25"

2485016

1491794

9:25 am

72-16753
FIELD
NOTES
8/11/2011

72-16753 Field Exam Map

