

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 91-07885

Exam Date: 6/20/2018

1. Current Owner:
BENEWAH COUNTY 701 W COLLEGE AVE ST MARIES ID 83861 (208) 245-2234
2. Accompanied by: Al Townsend
Phone No: 208-568-1132
Relationship to Permit Holder: Volunteer

3. **SOURCE:**
ST JOE RIVER

TRIBUTARY:
COEUR D ALENE LAKE

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 91-7801 & 91-7887
2. Other water rights with the same point-of-diversion: None

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

ST JOE RIVER L4 (NW¼SW¼) Sec. 21, Twp 46N, Rge 01E, B.M. BENEWAH County

Method of Determination: Maps and GPS. POD located at -116° 21.028, 47° 19.159.

2.

PLACE OF USE: IRRIGATION

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
46N	01E	21										0.8 L 4							.8

Total Acres: 0.8

Method of Determination: Google Earth 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.

Well or Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
UNKNOWN					

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

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
5 GALLON BUCKET						

2. Measurements: 5 gallon bucket test performed in 9 sec, 8.9 sec, and 9.2 sec. Average equal to 9 seconds.

5 gal / 9 sec x 60 sec = 33.3 gpm or 0.07 cfs

E. FLOW CALCULATIONS

Measured Method: N/A

Additional Computation Sheets Attached

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 0.8 \text{ AC} \times 3.0 \text{ AF} = 2.4 \text{ AF}$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.05 \text{ CFS} \times 231 \times 1.9835 = 22.9 \text{ AF}$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = 2.4 \text{ AF}$$

2. Volume Calculations for Other Uses: N/A

G. NARRATIVE/REMARKS/COMMENTS

Field exam with park volunteers showed a pump used for flood irrigation. This park was run by volunteers and there was no permanent system in place only a portable gas pump and a fire hose for flood irrigation. The pump was very old with no markings showing type or horsepower. A 5 gallon bucket test was performed and filled in an average of 9 seconds. The diversion rate is equal to 0.07 cfs or 33 gpm with nozzle open all the way on the fire hose. The volunteers said they would just water when needed and move the hose around to the dry spots. I believe this location receives most of the water from sub-irrigation from the river and they probably don't irrigate that much during the summer.

The applicant had applied for a diversion rate of 0.27 cfs stating there was a system in place with 12 sprinklers each running at 10 gpm. That was not the case upon exam and the portable pump produced 0.07 cfs or 33 gpm. The applicant had applied for the irrigation of 3.5 acres of land and the field exam showed the actual irrigated acreage was equal to 0.8 acres. The permit was issued for an increased rate based upon an existing system that wasn't actually there. The Northern Region had to make a decision about how to issue the license with a proper diversion rate. A normal diversion rate for 0.8 acres would be equal to 0.02 cfs ($0.8 \text{ AC} \times 0.03 \text{ cfs} = 0.024 \text{ cfs}$). This diversion rate is far less than what the pump produces and a compromise was found that gets the licensed diversion rate close to what it actually produces. Because this is a park, a higher diversion rate can be given for a compressed time of use in a day. Instead of a 24 hour period of use, a 12 hour period of use will be given for this license ($0.8 \text{ AC} \times 0.06 \text{ cfs} = 0.048 \text{ cfs}$). A future watermaster would be left to regulate the diversion rate of the license vs what is actually occurring.

The license will be issued with a diversion rate of 0.05 cfs with no annual volume. Condition R58 will limit the right to 3.0 afa. All conditions will remain on license except 26A. Overlap review shows two existing rights in same general area. Right 91-7801 is for stockwater along the shore of the river. There was no sign of stock during the review. Right 91-7887 is for industrial use by the Benewah County for a water truck(s) for dust abatement and other road uses. There are no overlap concerns.

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>
IRRIGATION	03/15 to 10/31	0.05 CFS	
<u>Totals:</u>		0.050 CFS	

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

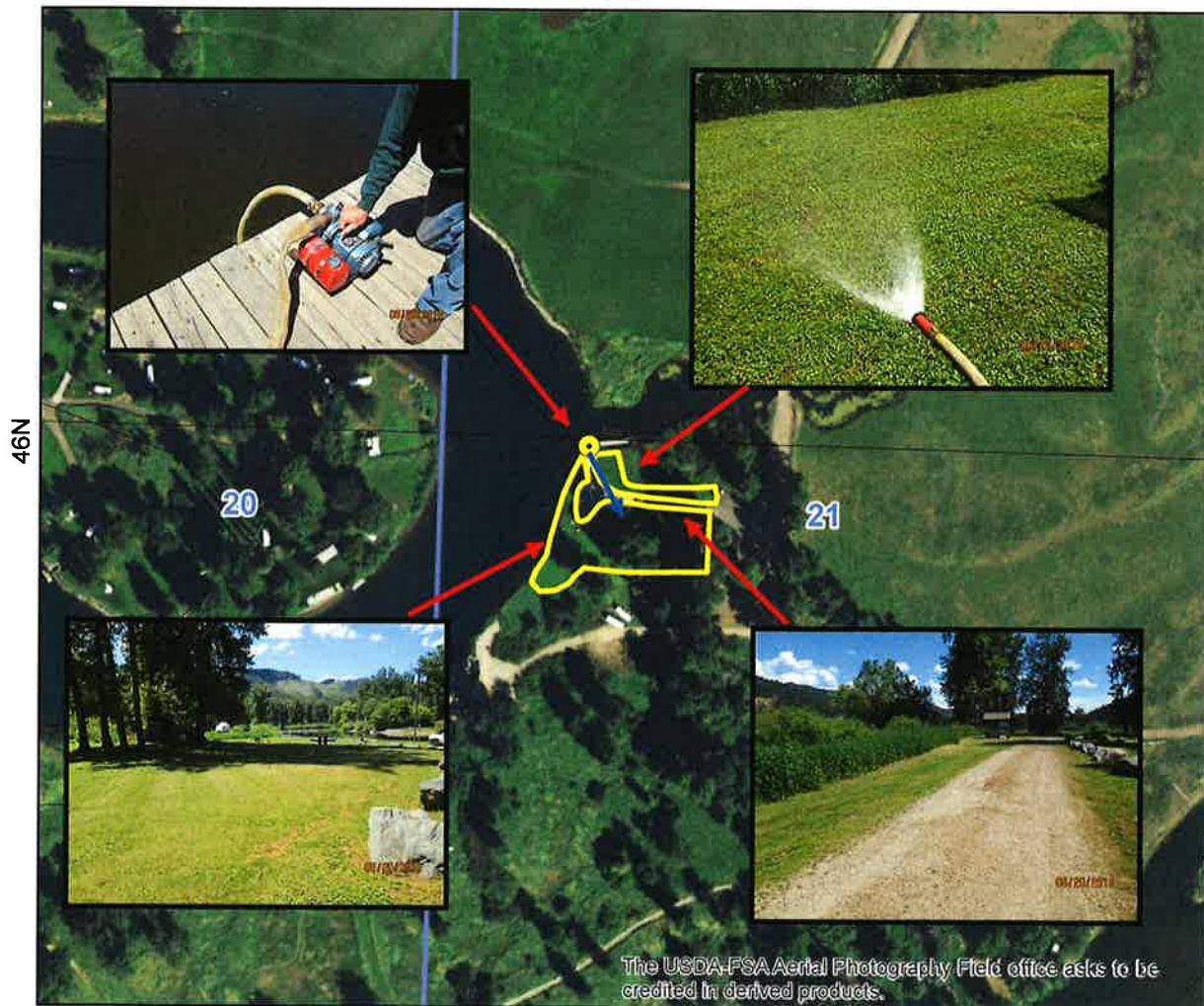
I. AUTHENTICATION

Field Examiner's Name Adam Fink Date 1/14/2019
 Reviewer Douglas Jones PE Date 1/28/2019

State of Idaho
Department of Water Resources
Attachment to Field Exam
91-7885

IRRIGATION / SYSTEM DIAGRAM

01E



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

0 0.035 0.07 0.14 Miles





Applicant had very old pump with unknown horsepower.



5 gallon bucket test performed in 9 seconds which is equal to 33 gpm or 0.07 cfs.



Volunteers would flood irrigate park area when needed.



Irrigation.



Irrigation POU.



Irrigation POU.

