

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
IN-OFFICE REVIEW/BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 91-7852

Exam Date: 11/3/2015

1. Does this qualify for an in-office field exam (IDAPA 035.02.r)? ☒ Yes ☐ No
- a. Irrigation of 5 acres or less
- b. Storage of up to 14.6 AF for stockwater purposes only
- c. Any use other than irrigation or storage, if the combined diversion rate is 0.24 cfs or less
- d. Other < >

2. Current Owner: Name: Dan Sherfey
- Owner-of-Record Correct? ☒ Yes ☐ No
- Address-of-Record Correct? ☒ Yes ☐ No
- If No: <Address>

Available Benewah County taxlot information shows the owner of the property as Dan H Sherfey.

3. Beneficial Use Fees have been paid: ☒ Yes ☐ No Receipt No: C101112

4. SOURCE**TRIBUTARY**

St Joe River

Coeur D'Alene Lake

Method of Determination: An aerial photo showing the POU was submitted with application.

Change in Source: ☐ Yes ☒ No**B. OVERLAP REVIEW**

1. Other water rights with the same place of use: Overlap? ☒ Yes ☐ No

Water Right No.	Source	Purpose of Use	Basis
91-7080	GW	Municipal	Recommendation
91-7080	GW	Domestic & Irrigation	License

Comments: Water for in-house domestic use would be accessible through right 91-7080.

2. Other water rights with the same point of diversion: Overlap? ☐ Yes ☒ No

Water Right No.	Source	Purpose of Use	Basis

Comments:

C. DIVERSION AND DELIVERY SYSTEM**1. LOCATION OF POINT(S) OF DIVERSION:**

Source	Govt. Lot	%	%	%	Sec.	TWP	RGE		County
St Joe River			SE	NW	17	46N	02W	B.M.	BENEWAH

Method of Determination: The legal description in the permit is validated by PLS data and aerial photography. The POD is located within the river channel, not in a government lot.

Change in POD? ☐ Yes ☒ NoAmendment Required? ☐ Yes ☒ No

2. **LOCATION OF PLACE(S) OF USE:** Use: Domestic

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	02W	17								X									
										LS									

Method of Determination: The legal description in the permit is validated by PLS data and aerial photography.

Change in POU? ☐ Yes ☒ No

Amendment Required? ☐ Yes ☒ No

3.

☐ Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable.

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

☐ Photo of Diversion and System Attached

4. Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
Unknown.		1/2		Unknown submersible	

*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

2. Measurements: In-office field exam. No measurements taken

E. **FLOW CALCULATIONS**

☒ Additional Computation Sheets Attached

Calculated = 0.04 cfs

Standard = 0.04 cfs

Permit allowed = 0.04 cfs

License recommended for 0.04 cfs.

F. **VOLUME CALCULATIONS**

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = \underline{\hspace{2cm}}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = \underline{\hspace{2cm}}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = \underline{\hspace{2cm}}$$

Volume Calculations for Other Uses: Domestic external use = 0.6 af

License recommended for 0.6 af.

G. PURPOSE OF USEIrrigation ☐ Yes ☒ No # Stock _____ Domestic # of Homes 1 external irrigation use

Other: < >

Change in Purpose of Use? ☐ Yes ☒ No

Method of Determination: Information in the water right file is consistent with aerial photography of the property.

If Yes: From Use _____ To Use _____ Amount _____ CFS _____ AFA _____

H. NARRATIVE/REMARKS/COMMENTS

Permit 91-7852 authorized a diversion from the St Joe River of 0.04 cfs for domestic purposes in the form of irrigation of a ½ acre. Based on the small permitted diversion rate, this permit qualifies for an in-office field exam.

The legal description of the POU was used to locate the property. Available taxlot information shows that Dan H Sherfey is owner of Lot 36 B of Cottonwood Point 1st Addition. The physical address of the property is 2000 Cottonwood Dr, St Maries ID. The external domestic use (irrigation) is for less than ½ acre. The use qualifies as domestic under §42-111 (1)b.

A map identifying the POU was submitted with the application and the shape outlined on that map matches the taxlot boundary. However, that map identified the entirety of Lot 36B as the POU, which is approximately 1 acre. I created the acre POU shape based on aerial photography.

The POD shape is based on the Permit POD shape. The POD appears to be located in the river channel rather than in any government lot. It is located at the dock nearest to Lot 36B.

Available elevation contours were insufficient for determining the lift that was required from the pump system. In a brief phone call with the right holder, I confirmed the pump size, lift, and the nature of irrigation. The irrigation is pressurized system divided among seven stations.

Overlap review showed that license 91-7080 in the name of Cottonwood Point Water & Sewer Assn for domestic and irrigation use from groundwater exists and overlaps the POU. That license has been recommended in the CdA adjudication with the same number, but for Municipal use instead of domestic and irrigation.

The permit authorized the standard rate for a small external irrigation (domestic) use. I am recommending that rate for the license.

I assumed that pump intake had appropriate fish screening.

Have conditions of permit approval been met? ☒ Yes ☐ No**I. RECOMMENDATIONS****1. Recommended Amounts**

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
Domestic	01/01-12/31	0.04 cfs	0.6 af
	<u>Totals</u>	0.04 cfs	0.6 af

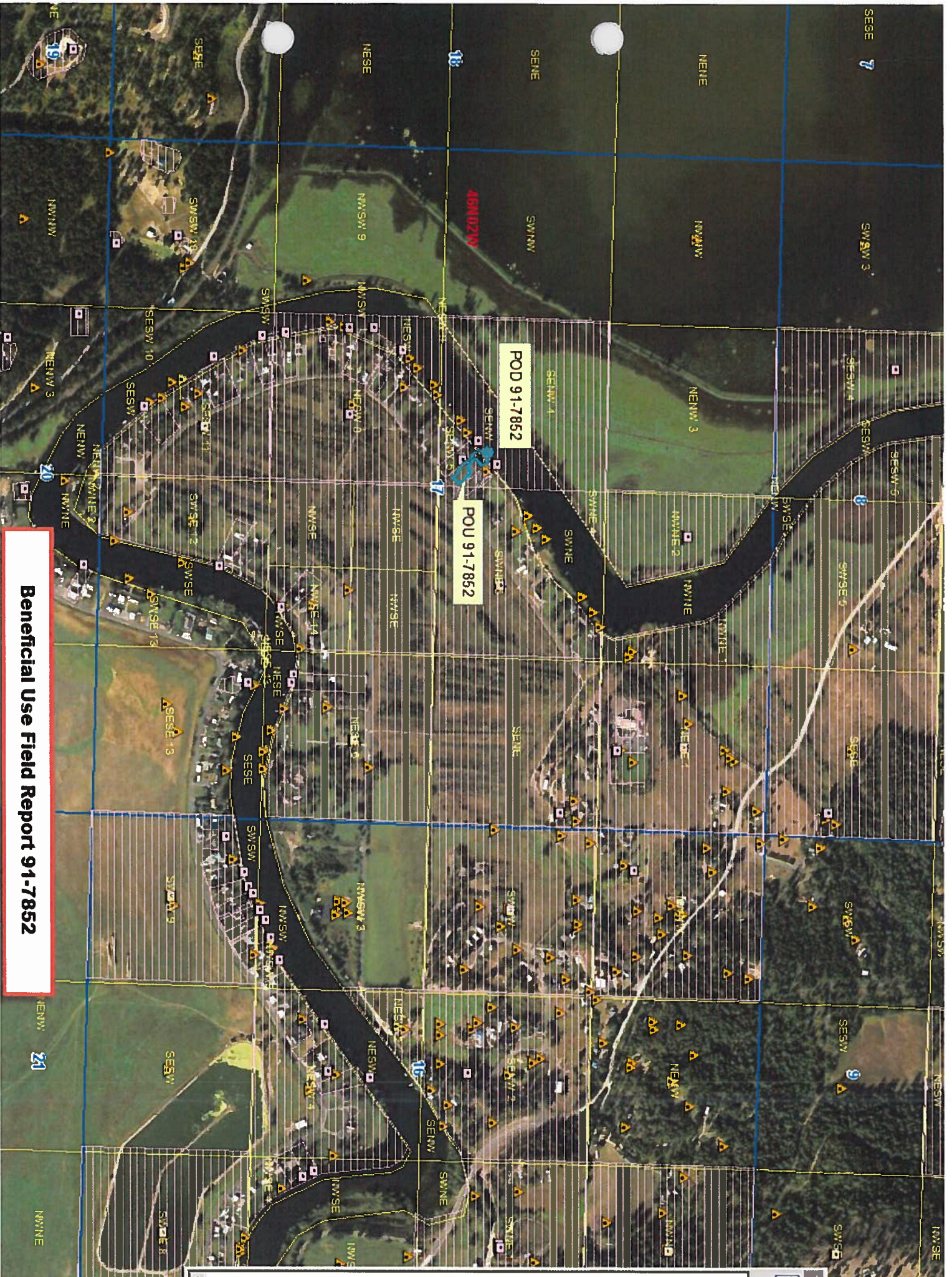
2. Recommended Amendments

☐ 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

Other: < >

I. AUTHENTICATIONField Examiner's Name Michele Edl Date November 3, 2015Reviewer *Camille Skaggs* Date 11-03-2015



Beneficial Use Field Report 91-7852

THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 91-7852
 Reviewer: Michele Edl
 Date of Review: 11/2/2015

P/D No.:	Senerio 1	Senerio 2	Senerio 3
PUMP HORSEPOWER	0.5	0.5	0.5
BOOSTER HORSEPOWER	0	0	0
PUMPING LEVEL	6.0	6.0	6.0
DISCHARGE PRESSURE	30	35	40
RATE OF FLOW (cfs)	0.04	0.04	0.03 0.04

The above calculates the formula = $Q = \frac{8.8 * (\text{Efficiency}) * \text{hp}}{\text{depth to water} + 2.31 * (\text{psi}) + \text{friction}}$

Assumptions: % 70 efficiency for electric pump
 No Friction

Examiners Notes:

Horsepower was given by the applicant. Lift was estimated by the applicant and is from the location of the submerged pump to the irrigation level of the property. Discharge pressure ranges from 30-40 psi to account for expected sprinkler system in use.



Google earth

feet
meters

300
100



Beneficial Use Field Report
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