

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

A. GENERAL INFORMATION

Permit No: 91-7803

Exam Date: 10/27/2015

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: Lois L Tuel
- Owner-of-Record Correct? ☒ Yes ☐ No
- Address-of-Record Correct? ☒ Yes ☐ No
- If No: <Address>

3. Beneficial Use Fees have been paid: ☒ Yes ☐ No Receipt No: C100970

4. SOURCE

St Joe River

Method of Determination: aerial photography.

Change in Source:

TRIBUTARY

Coeur D'Alene Lake

☐ 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

Comments: This property lies within the municipal service territory of the City of St Maries. In-house domestic use is provided by the city.

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	¼	¼	¼	Sec.	TWP	RGE		County
St Joe River	13		SE	SE	17	46N	02W	B.M	BENEWAH

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

Change in POD? ☐ Yes ☒ No

Amendment 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																D	
																		L13	

Method of Determination: aerial photography.

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

3.

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

The pipe size is unknown.

☒ 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.		1.5		Unknown	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

2. Measurements: In-office field exam. No measurements taken**E. FLOW CALCULATIONS**☒ Additional Computation Sheets Attached

Calculated standard = 0.02cfs

External use domestic 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

G. PURPOSE OF USEIrrigation ☐ Yes ☒ No # Stock _____ Domestic # of Homes 1 home external 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 91-7803 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 rates, 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 Lois L Tuel is owner of Lot 38 in the Shadowy St Joe Lagoon subdivision. The physical address of the property is 756 Shepherd Rd, St Maries ID. A map identifying the POU was submitted with the application and the shape outlined on that map matches the taxlot boundary for Lot 38.

I confirmed the POU and POD locations with Lois Tuel via phone. And I created the POU and POD shapes based on aerial photography. The lagoon is more visible in Google Earth imagery. The pump is positioned in the lagoon and within Lois Tuel's property, not in the channel of the St. Joe River.

Lois Tuel's son, Allen Tyner, owns Lot 39 the property directly east of Lot 38. At the time of this memo, there is no physical separation between the two lots and the applicant stated that she irrigated a portion of Lot 39 with water from this water right permit. The pump diverts water for use in a manual hose and sprinkler system. The entire POU is approximately 0.5 acre. The external domestic use (irrigation) is for less than ½ acre. The use qualifies as domestic under §42-111 (1)b.

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.

The permit authorized the standard rate for external domestic use and I am recommending that rate for the license.

The applicant stated that the pump intake has 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 October 27, 2015Reviewer Cynthia Shaggs Date 11-03-2015

THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 91-7803
 Reviewer: Michele Edl
 Date of Review: 10/27/2015

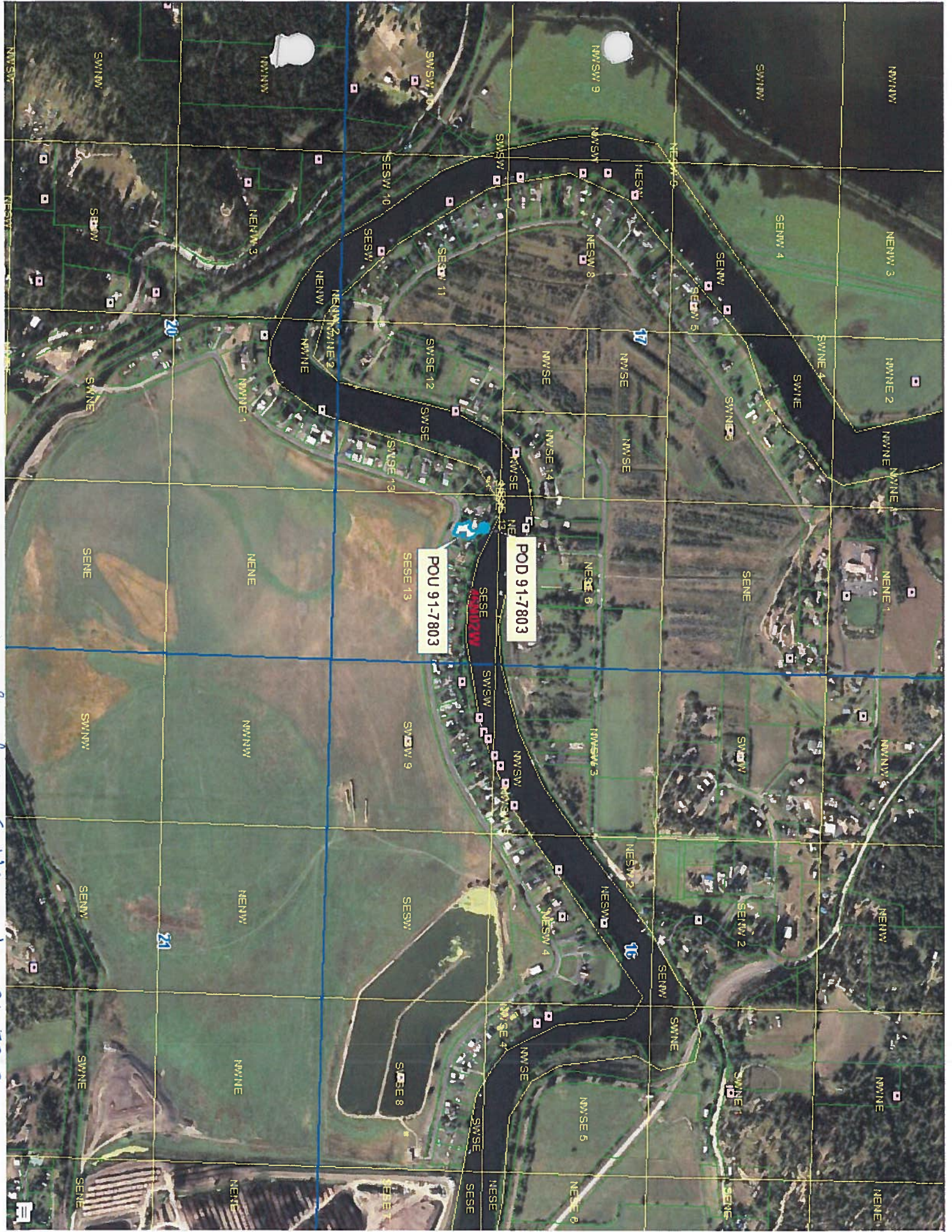
P/D No.:	Senerio 1	Senerio 2	Senerio 3
PUMP HORSEPOWER	1.5	1.5	1.5
BOOSTER HORSEPOWER	0	0	0
PUMPING LEVEL	25.0	25.0	25.0
DISCHARGE PRESSURE	35	45	55
RATE OF FLOW (cfs)	0.09	0.07	0.06 0.07

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
 No Friction

Examiners Notes:

Horsepower was given by the applicant. Lift was estimated by this reviewer and is from the pump location in the lagoon to the irrigation level of the property. Discharge pressure ranges from 35-55 psi to account for expected sprinkler system in use.





Google earth

feet
meters

200
60



image date 5/29/2014
Shadowy St Joe lagoon is visible for 91-7803