

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

A. GENERAL INFORMATIONPermit No: 95-13894

Exam Date: 3/1/2016

1. Does this qualify for an in-office field exam (IDAPA 035.02.r)? X Y N
- Irrigation of 5 acres or less
 - Storage of up to 14.6 AF for stockwater purposes only
 - Any use other than irrigation or storage, if the combined diversion rate is 0.24 cfs or less
 - Other < >

2. Current Owner: Name: Robert and Jane Schwartz
- Owner of Record Correct? X Y N
- Address of Record Correct? Y N
- If No: Address

Tax lot data shows the Robert Schwartz as the owners of the property.

3. Beneficial Use Fees have been paid: X Y N Receipt No: C0

4. SOURCE TRIBUTARY
- Couer D Alene Lake Spokane River

Method of Determination: GIS and Taxlot Data

Change in Source: Y X N

B. OVERLAP REVIEW

1. Other water rights with the same place of use: NO Overlap

Water Right No.	Source	Purpose of Use	Basis
95-12418	Ground Water	Domestic	CRSBA Claim

Comments: CRSBA recommendation 95-12418 is the only known direct overlap, but it is from ground water. There are two water rights – License 95-7947 and Statutory Claim 95-4421 that could overlap this place of use. License 95-7947 is a 1979 right for a shared well with 2 homes, but the homes are difficult to identify in the field exam. The permit holder's CRSBA claim states that their well was drilled in 2000, so I can't find any evidence that license 95-7947 was used on this property. Statutory claim 95-4421 was filed on a spring, but there were no claims filed on spring at this location. The tax lots for the properties in 95-7947 and 95-4421 were split, so it isn't possible to determine exactly which lots they were used on. 95-12885, 95-9178, and 95-9017 are water rights that were licensed for different lots in this tract. Permits 95-10889 and 95-12295 were filed on property west of the owner. CRSBA Claims 95-12658, 95-13724, and 95-16201 were ground water claims filed on by the permit holder's neighbors. CRSBA recommendations 95-13422, 95-13919, and 95-13920 were recommended on property west of the permit holders.

2. Other water rights with the same point of diversion: NO Overlap

Water Right No.	Source	Purpose of Use	Basis
NONE			

Comments: CRSBA recommendation 95-12418 is the only known direct overlap, but it is from ground water. None of the above water rights, statutory claims, CRSBA claims, or CRSBA recommendations show a point of diversion on the permit holder's property. It doesn't appear as though any other water rights are diverted out the permit holder's lake pump.

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

Source	Govt. Lot	1/4	1/4	1/4	Sec.	Twp.	Rge.		County
Lake Pump	2		NW	SW	20	48N	4W	B.M.	Kootenai
								B.M.	
								B.M.	

Method of Determination: GIS and Tax Lot data.Change in POD? X N Amendment Required? X N**2. PLACE OF USE:** 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	
48N	4W	20										D							
		Lot #										2							
Total Acres =																			

Method of Determination: GIS and Tax Lot DataChange in POU? X N Amendment Required? X N Delivery System Diagram Attached (required). Indicate all major components and distances between components.

Indicate weir size/pipe as applicable.

 X 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
River Pump	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
NONE						

2. Measurements: No measurement is required for an in-house exam, but a theoretical calculation was used to determine if the diversion rate is reasonable.

E. FLOW CALCULATIONS X Additional Computation Sheets Attached

Measured Method:

A theoretical analysis shows that a diversion rate of 0.04 cfs is possible with a 1 Hp pump. It is reasonable to assume that the owner did install a 1 Hp pump for this system, and that it can supply the 0.04 cfs allowed by the permit.

Theoretical Calculation = 0.04 cfs

Permit allowed = 0.04 cfs

I am recommending a diversion rate of 0.04 cfs, since it appears as though a 1 Hp pump can deliver the 0.04 cfs applied for in the permit.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = \underline{\quad X \ 3.5 \quad} = \underline{\hspace{2cm}}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = \underline{\quad X \ 214 \ X \ 1.9835 \quad} = \underline{\hspace{2cm}}$$

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

2. Volume Calculations for Other Uses:

This is a domestic use. According to processing memo #22, and Domestic use for in-house and yard irrigation can have up to 1.2 acre feet of annual water use. I am recommending 1.2 af for this permit. The application states that a well supplies domestic use for this home as well, but it doesn't specifically state that this water use will be used for lawn irrigation only. I am assuming this use will irrigate the ½ acre of lawn and only be used in the home when the well water is not available.

G. PURPOSE OF USEIrrigation X Y N # Stock Domestic # of Homes 1

Other: < >

Change in Purpose of Use? Y N Method of Determination: Taxlot data and conversations with owner.If Yes: From Use To Use Amount CFS AFA **H. NARRATIVE/REMARKS/COMMENTS**

This permit is qualifies for an in-house exam. The application for permit states that this domestic use is for a domestic use and then goes on to describe the irrigation of ½ acre of yard. The application does list one home, but doesn't specify if the lake water will be used in the home. The application does speak to a well that is also used on this property. I can only assume that they will use the well for the main in-house use and the lake water for the yard irrigation unless there is a problem with the other system. They want to insure that they have water for the home whether it is from the well or the lake.

The proof of beneficial use form states that the fish screening requirements have been met.

All of the conditions on the permit will be carried forward to licensing except for condition 2 (26A) as is standard. Condition 5 (X15) will be modified to state that the fish screen shall be maintained. I did not add a combined limitation condition for this license, since water right 95-12418 is still a claim and has not been recommended or decreed. It will be up to the CSRBA staff to include combined limitations on that water right if it is recommended.

Have conditions of permit approval been met? X 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 to 12/31	0.04 CFS	1.2 AF
<u>Totals:</u>		0.04 CFS	1.2 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

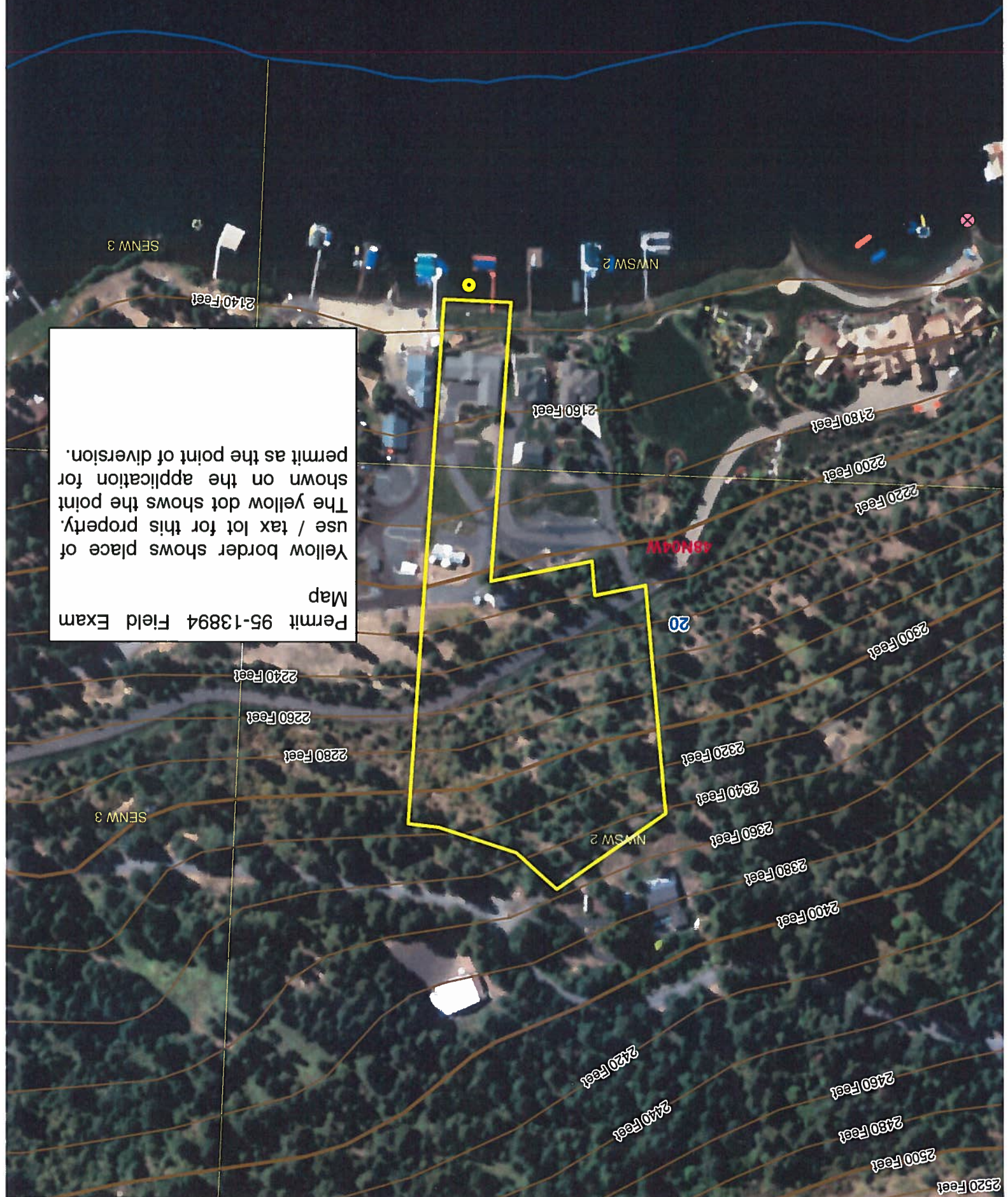
Other: < >

J. AUTHENTICATION – DANIEL A. NELSON – STAFF HYDROLOGIST

Field Examiner's Name Daniel A. Nelson Date 3-1-16

Reviewer _____ Date _____

Permit 95-13894 Field Exam
Map
Yellow border shows place of
use / tax lot for this property.
The yellow dot shows the point
shown on the application for
permit as the point of diversion.



THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 95-13894
 Reviewer: Dan Nelson
 Date of Review: 3/1/2016

P/D No.:

PUMP HORSEPOWER
 BOOSTER HORSEPOWER

PUMPING LEVEL

DISCHARGE PRESSURE

RATE OF FLOW (cfs)

Scenario 1
0.5
0
60
50
0.02
8

Scenario 2
0.75
0
60
50
0.03
12

Scenario 3
1
0
60
50
0.04
16

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:

The aerial photos show that the pump would need to lift the water approximately 60 feet to get it to the upper most portion of land being irrigated. Therefore, I used 60 feet as the lift. I used an average sprinkler pressure of 50 psi. Using the maximum amount of lift and pressure, I found that a 1 Hp pump could provide the flow rate allowed by the permit of 0.04 cfs. This seems reasonable.