

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

A. GENERAL INFORMATIONPermit No: 95-9558

Exam Date: 8/21/2017

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: Richard Holzer
 Owner of Record Correct? X Y ___ N
 Address of Record Correct? Y ___ N
 If No: Address

Tax lot data shows Richard Holzer as the owner of the property.

3. Beneficial Use Fees have been paid: X Y ___ N Receipt No: N0327167

4. **SOURCE** TRIBUTARY

Coeur D Alene Lake

Spokane River

Method of Determination: GIS and Tax Parcel 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

Comments: I found 7 water rights that are in the same 40 acre tract, but none of directly overlap this property. The only one that appears to overlap is the Echo Bay Terrace water right, but the adjudication recommendation clearly shows it only supplies water to those properties south of the road without access to the lake.

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

Water Right No.	Source	Purpose of Use	Basis

Comments: I found 7 water rights that are in the same 40 acre tract, but none of directly overlap this property. The only one that appears to overlap is the Echo Bay Terrace water right, but the adjudication recommendation clearly shows it only supplies water to those properties south of the road without access to the lake.

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

Source	Govt. Lot	¼	¼	¼	Sec.	Twp.	Rge.		County
Lake Diversion	2		NW	NE	7	49N	3W	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	
49N	3W	7		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
LAKE PUMP	Grundfos	1.5	Model 16S	Grundfos	16S14 (1 ½ Hp)

*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. However, the permit holder supplied a pump curve that shows the pump diverts 19 gpm or 0.04 cfs.

E. FLOW CALCULATIONSYES Additional Computation Sheets

Attached

Measured Method:

The permit allows 0.04 cfs for domestic use and 0.20 cfs for fire protection. However, the permit holder supplied a pump curve from their pump installer. The pump curve suggests that the pump has a total dynamic head (TDH) of approximately 215 ft. This seems a bit high for this area, but I am assuming the folks that installed the pump know the TDH. A lower TDH would actually give the permit holder a higher diversion rate. According to the pump curve, this pump has a maximum pump capacity of 20 gpm or 0.04 cfs. Using the pump curve and the marks put on it by the pump installer, it appears as though this pump produces 19 gpm of 0.04 cfs at the TDH given by the pump installer. (see additional information supplied in Proof of Beneficial Use Statement for pump curve.)

Pump Curve = 0.04 cfs**Permit allowed = 0.04 cfs for domestic and 0.20 cfs for fire protection**

I am recommending a diversion rate of 0.04 cfs for both the fire protection and the domestic use with a total of 0.04 cfs.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

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

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

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

2. Volume Calculations for Other Uses:

According to Processing Administrative Memorandum # 22, we can allow up to 1.2 af for domestic use for in-house use and up to ½ acre of yard irrigation. The aerial photos and the photos supplied by the permit holder with the proof of beneficial use don't show any irrigation use, but the area is very green and lush, so I am assuming they do some minimal irrigation around the RV site.

There is no volume recommendation for the fire protection, because there is no limit to the amount of water that can be diverted to fight an existing fire. When there is no existing fire the pump cannot be operated for any other use than domestic.

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

Other: < >

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

The permit holder supplied photos of the RV using water, and of the electrical box for the RV with the pump box right next to it. There is no doubt that the water has been used for domestic use. The only question is whether or not the system is used to do any irrigation. With the trees in this area, I cannot make that determination. However, the area is very green, so I believe that some irrigation may have taken place to ensure that everything stayed green.

The permit holder marked on the Proof of Beneficial Use Statement that a fish screen was installed. There are no conditions requiring a fish screen be installed, but it he marked the response anyway. Generally most pumps come with a fish/trash screen on the intake hose, so this is a common situation. I am pleased he completed the information for future reference if needed.

Conditions 1 (077), 2 (X01) and 3 (187) will be carried forward to licensing. Condition 4 (26A) will not be carried forward to licensing.

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 to 12/31	0.04 CFS	1.2 AF
Fire Protection	01/01 to 12/31	0.04 CFS	
	<u>Totals:</u>	0.04 CFS	1.2 AF

Please Note: Fire Protection does not have a volume, since unlimited amount of water can be pumped to fight an existing fire.

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 – WATER RIGHT ANALYST 3

Field Examiner's Name Daniel A. Nelson Date 8-21-17

Reviewer _____ Date _____

Permit 95-9558
Field Exam Map

The 2013 aerial image below shows the place of use and point of diversion in yellow. As you can see from the aerial photo it is very difficult to determine if there has been any yard irrigation. The brown lines are the contour lines that are 40 feet of elevation difference between lines. You can see from the contour lines that it appears as though the elevation difference between the water and the highest point of the tax parcel is between 40 and 80 feet elevation difference. The pump curve suggests that the Total Dynamic Head (TDH) is 220 feet. I doubt this pump diverts more than 60 psi ($60 \times 2.31 = 138.6$ ft), so the pump curve suggest a lift of over 81 feet ($220 \text{ TDH} - 139 \text{ ft of pressure} = 81 \text{ ft}$). It appears as though the pump installer was using the maximum possible TDH and the minimum amount of flow when he gave this information to the permit holder. However, it appears as though the pump is rated for a high of 20 gpm, so either way the maximum possible diversion rate would still be 0.04 cfs.

