

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

A. GENERAL INFORMATIONPermit No: 97-753964

Exam Date: 11/2/2017

1. Does this qualify for an in-office field exam (IDAPA 035.02.r)? X Y N
- 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: Garry and Bonnie Mohr and Idaho Department of lands
Owner of Record Correct? X Y N
Address of Record Correct? Y N
If No: Address

Tax parcel data shows that Garry and Bonnie Mohr own the home for this tax parcel and that the Idaho Department of Lands own the land associated with this tax parcel. I was able to find that the Lease R100069 is still active on the Idaho Department of Lands website.

3. Beneficial Use Fees have been paid: X Y N Receipt No: C104161
4. SOURCE TRIBUTARY
Priest Lake Priest 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: Water right 97-7321 is in the same area, but it is for Lease Lot 261. This permit is for lease lot 262. The lease lots are designated by the Idaho Department of Lands. There are no other rights in the Government Lot.

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

Water Right No.	Source	Purpose of Use	Basis

Comments: Water right 97-7321 is in the same area, but it is for Lease Lot 261. This permit is for lease lot 262. The lease lots are designated by the Idaho Department of Lands. There are no other rights in the Government Lot.

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

Source	Govt. Lot	¼	¼	¼	Sec.	Twp.	Rge.		County
Priest Lake			NW	NW	28	61N	4W	B.M.	BONNER COUNTY
								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	
61N	4W	28						D									2.5		2.5
		Lot #						2											
Total Acres =																			2.5

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	Unknown	¾			¼ inch poly line

*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.

E. FLOW CALCULATIONSYES Additional Computation Sheets

Attached

Measured Method:

The application for permit stated that the pump being used was a ¾ Hp pump. I ran this horse power through the theoretical calculations and found that 0.04 cfs was possible with a 15 foot lift. This seems reasonable for this area. Application Processing Memorandum #22 allows up to 0.04 cfs, therefore, it seems reasonable to allow the permitted diversion rate of 0.04 cfs.

Theoretical Calculation at 15 ft. lift = 0.04 cfs
Administrative Processing Memo #22 = 0.04 cfs
Permit allowed = 0.04 cfs

A diversion rate of 0.04 cfs seems reasonable for this permit. Therefore, I am recommending 0.04 cfs.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

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

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

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

Please Note: This is a surface water right, so no volume will be included on the water right license.

2. Volume Calculations for Other Uses:

Application Processing Administrative Memorandum allows up to 1.2 af for domestic use for in-house use and up to ½ acre of yard irrigation. I cannot see through the trees to determine if any ground is being irrigated, but I would assume that some yard irrigation is taking place. Therefore, I am recommending a volume of 1.2 af for the domestic use.

G. PURPOSE OF USE

Irrigation 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 qualifies for in-house licensing. The property is actually owned by the Idaho Department of Lands, but the home is owned by the Mohrs. The Mohrs have a lease with the State of Idaho to live on the property, so there should be no issue with ownership. The point of diversion on the permit was described as being approximately 200 feet from the shore of the lake. Generally, I place the point of diversion where the line leaves the water source, or at the edge of the lake. The permit describes the point of diversion as being in the NWNW, and by moving the point of diversion to the shore, it would place the point of diversion in the Government Lot 2 (NWNW). To change the point of diversion would require an amendment, and it is not reasonable to request an amendment for properly described point of diversion. Therefore, I am leaving the point of diversion at the location shown on the permit.

The permit required a fish screen, and the permit holder stated on the proof of beneficial use form that they had installed the fish screen.

All of the conditions shown on the permit proof report should be carried forward to licensing.

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 – WATER RIGHT ANALYST 3

Field Examiner's Name



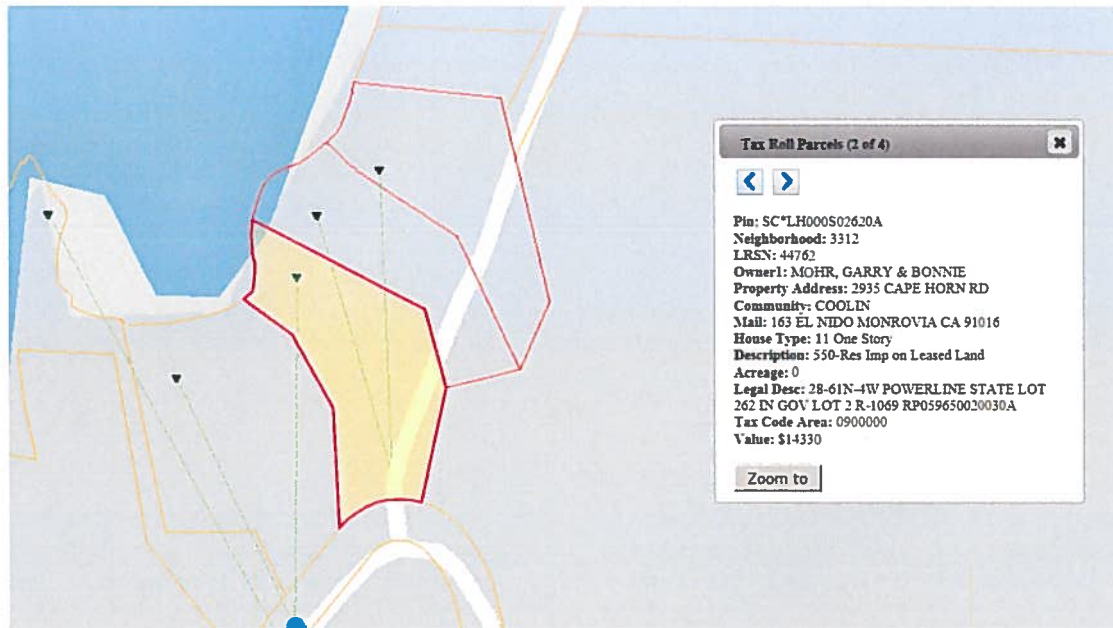
Date

11-2-17

Reviewer

Date

Permit 97-7539 – Field Exam Maps



The above image is from the county showing that the property has a one story home. The aerial image below is from Google Earth that actually shows the home.



Permit 97-7539 – Field Exam Maps Continued:



The above is the Department's 2013 aerial photo that shows the tax parcel. The home and point of diversion are both clearly in the Government Lot 2 (NWNW) Section 28, Township 61 North, Range 4 West. The permit places the point of diversion out in the lake. Generally we put the point of diversion where the water line leaves the water, but that would place the point of diversion in the wrong legal description. Therefore, I left the point of diversion where it was placed in the permit.



THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 97-7539
 Reviewer: Dan Nelson
 Date of Review: 11/2/2017

P/D No.:

PUMP HORSEPOWER
 BOOSTER HORSEPOWER

PUMPING LEVEL

DISCHARGE PRESSURE

RATE OF FLOW (cfs)

Scenario 1
0.75
0
15
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 permit holder stated that they used a 3/4 Hp pump in this system. Standard household pressure averages approximately 50 psi with a 40 to 60 psi regulation switch. The contour lines show the water level is at 2440 feet of elevation and the next contour line is near the road, and has an elevation of 2480 feet. The home sits closer to the lake than to the road, so I feel a 15 ft lift is reasonable.