

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 96-9436

Exam Date: 5/23/2013

1. Current Owner: LIAM THOMAS FITZGERALD

And/Or

PAMELA HANSEN
PO BOX 920049
SNOWBIRD UT 84092
(801) 742-2248

2. Accompanied by:
- Tom Trulock

Phone No: (208) 290-2614Address: 131 Upper Glengary RD, Sagle, ID 83860Relationship to Permit Holder: Neighbor3. **SOURCE**

PEND OREILLE LAKE

TRIBUTARY

PEND OREILLE RIVER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: None
2. Other water rights with the same point of diversion: None

C. DIVERSION AND DELIVERY SYSTEM1. **LOCATION OF POINT(S) OF DIVERSION:**

PEND OREILLE LAKE L2 SW1/4NW1/4 Sec. 8, Twp 56N, Rge 01E, B.M. BONNER County

Method of Determination: Visual Inspection and GIS

2.

PLACE OF USE: DOMESTIC

Twp	Rge	Sec	NE				NW				SW				SE				
			<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>Totals</u>
56N	01E	8							X										
									L 2										

Method of Determination: Visual Inspection and GIS

3. YES Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable.
- YES Aerial Photo Attached (required for irrigation of 10+ acres).
- YES Photo of Diversion and System Attached

Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
Lake Pump	Goulds	1	WE1012H	Goulds	1.5 inch 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: The pump wasn't operating at the time of our field visit. This exam was done early in the year, so irrigation wasn't needed.

E. FLOW CALCULATIONS

 X Additional Computation Sheets Attached

Measured Method:

Theoretical Calculation = 0.04 cfs
Permit allowed = 0.02 cfs

I recommended 0.02 cfs for this permit. The permit amount is limits the rate of diversion even though the pump can operate at a higher rate.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) =$ _____

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

$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} =$ _____

2. Volume Calculations for Other Uses:

Standard Volume for Domestic Uses = 1.2 af for in-house and yard irrigation per processing memo.

G. NARRATIVE/REMARKS/COMMENTS

This is a basic system where the water is diverted from Pend Oreille Lake to a single family domestic home. The lake pump is a 1 Hp Goulds Submersible Pump. The entire lot is only 0.3 acres, so there no way more than 1/2 acre could be irrigated out of this system. Irrigation is very minimal.

Water right 96-4241 is owned by the next door neighbor south of this lot. Water right 96-4407 is on lots 6 and 7 of Glengary Beach Subdivision and is owned by a different owner. Water right 96-9490 is for lots 1 and 2 of Glengary Beach Subdivision. The lot associated with this permit is Tax Lot 57, so there is no overlapping water rights.

The conditions on the permit should all be carried over to the license. Condition 004 should be maintained on the license because the point of diversion is in the lake, and the lake is either owned by Idaho Department of Lands or the local Indian tribe.

Have conditions of permit approval been met? ☒ Yes ☐ No

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	0.020 CFS	1.20 AF
<u>Totals:</u>		0.020 CFS	1.20 AF

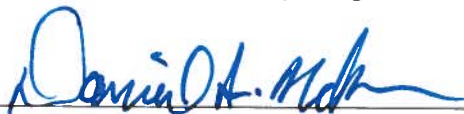
2. Recommended Amendments

☐ 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

I. AUTHENTICATION Daniel A. Nelson – Staff Hydrologist

Field Examiner's Name



Date

11-7-2013

Reviewer

Date

State of Idaho
Department of Water Resources
Field Exam Map
96-9436

This map depicts the DOMESTIC place of use boundary for this water right at the time of this approval and is attached to the approval document solely for illustrative purposes.

01E



-  Point of Diversion
-  Place Of Use Boundary
-  Townships
-  PLS Sections
-  Quarter Quarters

0 0.005 0.01 0.02 Miles





System Diagram -- 96-9436 -- By Dan Nelson

This is a basic system where the water is diverted from Pend Oreille Lake to a single family domestic home. The lake pump is a 1 Hp Goulds Submersible Pump. The entire lot is only 0.3 acres, so there no way more than 1/2 acre could be irrigated out of this system. Irrigation is very minimal.

THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 96-9436
 Reviewer: Dan Nelson
 Date of Review: 5/23/2013

P/D No.:	Senerio 1	Senerio 2	Senerio 3	
PUMP HORSEPOWER	1	1	1	
BOOSTER HORSEPOWER	0	0	0	
PUMPING LEVEL	40	40	40	
DISCHARGE PRESSURE	40	50	60	
RATE OF FLOW (cfs)	0.05	0.04	0.03	AVE
	21	18	15.4793281	18

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 pump lift was estimated at 40 feet per the topographical map. The pressure was estimated at the standard for in-house pressure tank settings. The pump information was found in the owner's power panel. The permit limits the domestic use to 0.02 cfs, so this calculation is well over the amount allowed by the permit.

FILE NUMBER 96-9436

