

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

A. GENERAL INFORMATIONPermit No: 96-9593Exam Date: 1/18/2019

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. **Combined diversion rate is less than 0.24 cfs**

2. Current Owner: Name: Ben and/or Rhonda Tate
- Owner of Record Correct? ☒ Yes ☐ No
- Address of Record Correct? ☒ Yes ☐ No

3. Beneficial Use Fees have been paid: ☒ Yes ☐ No Receipt No: C105793

4. SOURCE**TRIBUTARY**Pend Oreille LakePend Oreille RiverMethod of Determination: GIS and USGS quad mapsChange in Source: ☐ Yes ☒ No**B. OVERLAP REVIEW**

1. Other water rights with the same place of use: ☐ Yes ☒ No

Comments: There are other water rights in Lot 3 (SENW) of Section 12, but they are identifiable as appurtenant to other tax parcels. There are no concerns with overlap.

2. Other water rights with the same point of diversion: ☐ Yes ☒ No

Comments: There is no overlap with the point of diversion.

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
Pend Oreille Lake	3		SE	NW	12	57N	2W	B.M.	BONNER
								B.M.	
								B.M.	

Method of Determination: GIS and tax parcel information

Change in POD? ☐ Yes ☒ No Amendment Required? ☐ Yes ☒ No

2. **PLACE OF USE:** Use: Domestic, with no more than 1/2 acre of 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	
57N	2W	12								D									
		Lot #								3									
Total Acres =																			

Method of Determination: Satellite imagery and GIS

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

4. Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
Submersible Pump	Unknown	1.5 Hp	Unknown	Unknown	4 inches

D. FLOW MEASUREMENTS

1. Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
NA						

2. Measurements: This permit was reviewed as an in-house permit, so there were no measurements made. The application for permit included a diagram of the intended diversion and indicated that a 1.5 hp pump would be used. Theoretical calculations were made using variations of the information provided in the application for permit (attached). The theoretical calculations indicate that the diverting works are likely to have a capacity that is equal to or greater than the maximum diversion rate.

E. FLOW CALCULATIONSX Additional Computation Sheets Attached

Measured Method: Theoretical horsepower calculation worksheet

According to Administrative Memorandum – Application Processing #22, we can allow up to 0.04 cfs for in-house use and up to ½ acre of yard irrigation.

Theoretical calculations = 0.05 cfs

Permit allowed = 0.04 cfs

License recommend for 0.04 cfs.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation: None

According to Administrative Memorandum – Application Processing #22 we can allow up to 1.2 AFA per household for when irrigation is included with in-home domestic use.

2. Volume Calculations for Other Uses: None

G. PURPOSE OF USEIrrigation ☒ Yes ☐ No # Stock NA Domestic # of Homes 1Other: Domestic use includes up to ½ acre of irrigation.Change in Purpose of Use? ☐ Yes ☒ NoMethod of Determination: GIS, tax parcel data, and correspondence with the permit holder.**H. NARRATIVE/REMARKS/COMMENTS**

Ben and/or Rhonda Tate ("permit holders") filed an Application for Permit on September 2, 2015 for the irrigation of their yard through a domestic use. The application indicates that the diverting works would be located at the end of the pier extending from the applicants' property to divert from Pend Oreille Lake. Theoretical calculations (attached worksheet) based on the description of the diverting works from the Application for Permit indicate that the system would have a capacity equal to or greater than the authorized maximum diversion rate of 0.04 cfs. The permit holders submitted their Statement of Completion for Submitting Proof of Beneficial Use ("Statement of Completion") on October 3, 2018. The required fee was submitted on October 19, 2018 (Receipt ID: C105793).

There are other water rights within the same government lot, but they are appurtenant to other tax parcels and do not overlap with this permit. The shape file for the place of use will be the entire parcel owned by the permit holders in order to include the home which is also an authorized place of use.

In item 5 of the Statement of Completion, the permit holders list the extent of use as 1 household and ¼ acres of irrigation. The permit only authorizes up to ½ acre of irrigation, and the license should be limited to ½ acre.

Conditions #3 (26A regarding the commencement of construction) is removed. Conditions #1 and #2 were also removed. All other conditions will 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
<u>Totals:</u>		0.04 CFS	1.2 AF

2. Recommended Amendments

___ Change P.D. as reflected above ___ Add P.D. as reflected above X None

___ Change P.U. as reflected above ___ Add P.U. as reflected above X None

Other: None

J. AUTHENTICATION

Field Examiner's Name

David G. Bell

Date

1/18/2019

Reviewer

David D. Mule

Date

1-18-19

Permit 96-9593 – Field Exam Map

The aerial photo below shows the point of diversion (yellow dot) and place of use (yellow border). The water is diverted from Pend Oreille Lake. The authorized use is domestic use including $\frac{1}{2}$ acre of irrigation, therefore the entire tax parcel belonging to the permit holders was used to create the boundaries of the place of use.



THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 96-9004
 Reviewer: Dave Betts
 Date of Review: 1/18/2019

P/D No.:

PUMP HORSEPOWER
 BOOSTER HORSEPOWER

PUMPING LEVEL

DISCHARGE PRESSURE

RATE OF FLOW (cfs)

Scenario #1
1.5
0
35
50
0.06
28

Scenario #2
1.5
0
45
50
0.06
26

Scenario #3
1
0
45
50
0.04
17

0.05
23.54

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 holders indicated in their application for permit that the diverting works would be a 1.5 hp pump at a depth of 35 ft. All three scenarios, including Scenario #3 which uses a smaller (1 hp) pump and a greater depth, indicate that the diverting system is likely to have a capacity equal to or greater than the authorized maximum diversion rate of 0.04 cfs.