

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

A. GENERAL INFORMATION

Permit No: 96-9618

Exam Date: 2/24/2017

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. ☒ Any use other than irrigation or storage, if the combined diversion rate is 0.24 cfs or less
- d. ☐ Other < >
2. Current Owner: DR Property Holdings LLC
- Owner of Record Correct? ☒ Yes ☐ No
- Address of Record Correct? ☒ Yes ☐ No
- If No: No address information per Bonner County tax lot data – verified per application information
3. Beneficial Use Fees have been paid: ☒ Yes ☐ No Receipt No: N031833, C103001

4. SOURCE**TRIBUTARY**

Pend Oreille River

Columbia River

Method of Determination: Permit information & ArcMap data

Change in Source:

☐ Yes ☒ No**B. OVERLAP REVIEW**

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

Water Right No.	Source	Purpose of Use	Basis
None			

Comments:

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

Water Right No.	Source	Purpose of Use	Basis
None			

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

Source	Govt Lot	¼	¼	¼	Sec.	Twp.	Rge.		County
PEND OREILLE RIVER	3		SW	NE	29	56N	05W	B.M.	BONNER

Method of Determination: Permit information & ArcMap dataChange in POD? ☐ Yes ☒ No Amendment Required? ☐ Yes ☒ No

2. PLACE OF USE: Use: Domestic

TWP	RGE	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
56N	05W	29																	
		Lot #														D			
																L3			

Method of Determination: Permit information & ArcMap data

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

☐ Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable.

☒ Aerial Photo Attached (required for irrigation of 10+ acres).

☐ 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
Pump Unknown		3/4			

*Code to correspond with No. on map and aerial photo

D. FLOW MEASUREMENTS

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
None						

Measurements: in-house field exam – no measurements required

E. FLOW CALCULATIONSMeasurement Method: ☒ Per Calculations ☐ Per Memo ☒ Additional Computation Sheet(s) Attached0.02 cfs = 1 inch per acre (IDWR standard) $\leftrightarrow$ acres(0.02 cfs) = $\leftrightarrow$ cfs at 1 inch per acrePer App. Processing Memo #17, up to 0.03 cfs/acre for irrigation up to 5 acres acceptable. $\leftrightarrow$ acres(0.03 cfs) = $\leftrightarrow$ cfsPer $\leftrightarrow$ - pump to $\leftrightarrow$ pipe. $Q = 5(3.1416)((\leftrightarrow/12)/2)^2 = \leftrightarrow$ cfs

HP pump. Per IDWR standard: Assume pump efficiency = 0.7 (70%) and PSI = 30psi for small irrigation.
Lift estimated from Contour Elevations (GIS visual, 40 ft. min. unit) between pump and field = 40.

 $Q = (8.8 \times \text{HPXEFF}) / (\text{Lift} + (\text{PSI} \times 2.31)) = (8.8 \times 0.75 \times 0.7) / (30 + (50 \times 2.31)) = 0.03 \text{ cfs}$
Measurement = 0.03 cfs**Permit Allowance = 0.04 cfs****License Recommend = 0.03 cfs****F. VOLUME CALCULATIONS**Measurement Method: ☐ Per Calculations ☒ Per Memo ☐ Additional Computation Sheet(s) Attached**1. Volume Calculations for Irrigation:**
 $V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = \quad \times 3.5 =$
 $V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = \quad \times 214 \times 1.9835 =$
 $V = \text{Smaller of } V_{IR} \text{ and } V_{DR} =$

2. Volume Calculations for Other Uses: Per administration procedure memo #22 – permit used for domestic purposes is limited to 1.2 af per household and yard

G. PURPOSE OF USEIrrigation ☐Yes ☒No # Stock _____ Domestic # of Homes 1

Other: < >

Change in Purpose of Use? ☐Yes ☒NoMethod of Determination:

If Yes: From Use _____ To Use _____ Amount _____ CFS _____ AFA _____

H. NARRATIVE/REMARKS/COMMENTS

- This permit qualifies for an in-house exam.
- ¾ Hp centrifugal pump with pump house to foot valve in river.
- Owner stated on proof of beneficial use form that fish screening had been installed.
- Measuring device and lockable controlling device are not required.
- No noted overlapping water rights.
- Permit used for domestic purposes is limited to 0.04 cfs per administration procedure memo #22.
- Per a theoretical calculation, a diversion rate of 0.03 cfs is recommended.
- Conditions #3 (004), #4 (X60), #5 (X01), #6 (187) and #7 (X15) will be carried 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	0.03 CFS	1.2 AF

Totals: 0.03 CFS 1.2 AF

Additional Notes:**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**

Field Examiner: _____

Kyle Rayworth – Water Resource Agent

Date: 2/24/2017

Reviewer: _____

Date: 2-27-17

THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 96-9618
 Reviewer: Kyle Rayworth
 Date of Review: 2/24/2017

P/D No.:

PUMP HORSEPOWER
 BOOSTER HORSEPOWER

PUMPING LEVEL

DISCHARGE PRESSURE

RATE OF FLOW (cfs)

Well #1
0.75
0
20
50
0.03
15

Well #2
0.75
0
30
50
0.03
14

Well #3	
0.75	
0	
40	
50	
0.03	0.03
13	14.30

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 for this system is a 3/4 Hp pump. The elevation was marked at 2,080' per the topographical map contours, with the lot siting between 2,080' lines, near the river. A lift range of 20-40 was considered, allowing for approximately 13-15 gpm. Based on the information, a measurement of 0.03 cfs is recommended.

State of Idaho
Department of Water Resources
Field Exam Map
96-9618

05W

56N



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

0 0.035 0.07 0.14 Miles

