

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 96-9791

Exam Date: 08/16/2022

1. Current Owner:
ON THE WATERFRONT HOMEOWNERS ASSN INC 83 WATERFRONT DR SAGLE ID 83860-8121
2. Accompanied by: Richard Palmer
Phone No: 425-293-6755
Address: 115 Waterfront Dr. Sagle, ID 83860
Relationship to permit Holder: Permit holder's representative.

3. SOURCE:

GROUND WATER

Method of Determination: ArcMap and DRG layer.

B. OVERLAP REVIEW

1. Other water rights with the same place of use: NO Overlap
2. Other water rights with the same point-of-diversion: YES Overlap

Water Right No.	Source	Purpose of Use	Basis
96-9081	Groundwater	Domestic	License w/Notice of Claim filed in CFPRBA.

Comments: Licensed Right 96-9081 uses the same GW well as this Permit along with common water system infrastructure. Condition F06 was recommended for licensing 96-9791 designating the shared well POD. Condition X35 was recommended to be added when licensing this Permit, which describes that 96-9081 & 96-9791 when combined are limited to maximum diversion rate of 0.20 cfs. 96-9081 is authorized 0.20 cfs and while 96-9791 adds WRs for 2 homes to the HOA water system, the two WRs diversion rates are not additive. For reference, the 11 homes total served water under the two WRs should have a standard diversion rate of 0.16 cfs designated based on department standards. However, when licensed 96-9081 was authorized a higher diversion rate for nine homes domestic use than guidance document Administrator's Memorandum - Application Processing No.22 illustrates, which is 0.14 cfs diversion rate for 9 homes.

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

GROUND WATER SE¼ SW¼, Sec. 31, Twp 56N, Rge 03W, B.M. BONNER County

Method of Determination: GPS. POD is located at -116°45.284, 48°9.112; well D-TAG D0017062.

- Well D0059298 was removed from the permit, but is GPS located at -116°45.2605, 48°9.1114.

PLACE OF USE: DOMESTIC

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
56N	03W	31									X L6								

Method of Determination: Beneficial use field examination and ArcMap aerial imagery.

3. ☒ Delivery System Diagram Attached (required). Indicate all major components and distances between components.
☒ Indicate weir size/pipe as applicable.
☒ Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.
☒ Aerial Photo Attached (required for irrigation of 10+ acres).
☒ Photo of Diversion and System Attached

4.

Well or Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
D0017062	FRANKLIN	5		JACUZZI	2"

- The second well POD associated with well D0059298 was removed from the permit during licensing review due to the well not being service connected to the applicant's system at time of exam. The well is being maintained in reserve for use in the event the current well fails. At that time, a one-for-one well exchange would be authorized without filing a transfer application due to both wells residing in the same legally described QQ.

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
FLOWMETER	VELOCITY	MASTER METER				

2. Measurements: Flow measurements were taken using the Master Meter flange style flowmeter installed on the main 2-inch service line from the well. I observed 30 gpm flowrate during the 10 minutes monitoring the meter. A Cycle Stop Valve is installed on the main service line prior to the pressure tank, which reduces the pump capacity to match the water uses turned on at time of exam. I'm recommending **0.06 cfs** for licensing purposes, which is slightly lower than the observed flow rate in a matter of rounding standards: 30 gpm lies between 0.06 cfs (26.9298 gpm) & 0.07 cfs (31.4181 gpm).

E. FLOW CALCULATIONS

☒ Additional Computation Sheets Attached

Measured Method: Flowmeter measurement observed = 30 gpm which normally will round to 0.07 cfs based on department rounding standards. Permit licensing recommended at **0.06 cfs** based on permit approved diversion rate & department standard rate authorized for domestic use 2 homes.

A theoretic pump equation was calculated during licensing review that demonstrates the 5 hp pump installed at a depth of 87 feet with 45 PSI operating pressure equals 0.19 cfs or 82.8 gpm. The HOA's diverting works incorporates a red cycle stop valve that serves to reduce pump operations to match what utilities are turned "on" for delivery call from the well. Applicant's existing WR 96-9081 authorizes a diversion rate of 0.20 cfs, which covers the theoretic pump equation evaluated.

F. VOLUME CALCULATIONS

- Volume Calculations for irrigation: N/A
- Volume Calculations for Other Uses: maximum diversion volume for domestic use = 2 homes x 1.2 af = **2.4 af**.

G. NARRATIVE/REMARKS/COMMENTS

Field exam performed on 8/16/2022 with the applicant's representative, Richard Palmer, showed a groundwater well being used for domestic use. At the POD, GW well D0017062 wellhead is concreted into the pump house floor. The conveyance works incorporate a 2" discharge main line with red cycle stop valve installed prior to the pressure tank tee fitting and flanged velocity style Master Meter flowmeter. I performed flow measurements over the course of 10 minutes resulting in an average of 30 gpm. I'm recommending a diversion rate of **0.06 cfs** based on the Permit authorized diversion rate for licensing purposes.

The applicants own prior Licensed WR 96-9081 which uses the same groundwater well for 9 homes domestic use. The current permit was filed to add two homes served by the community system not included when the prior right was licensed. As discussed above, the second GW POD was removed from the permit during licensing review. Mr. Palmer asserts the 2nd well D0059298 is not service connected to the community system as observed at time of exam. In the future if the current well D0017062 becomes inoperable the applicant will pursue a one-for-one exchange to switch GW well sources. The well removed is approximately 20 feet to the east of the pump station.

From the pump station the main service line runs north in an open field across through parcels 8-11 of the subdivision before making a system loop with each parcels service stub routing to respective home uses. I used field maps during the exam to draw the domestic POU, which includes homes with up to ½ acre located in lots 1 & 2 of the subdivision. During licensing review, I used ArcMap aerial imagery to assign approximately 0.8-acre polygon shapes per parcel which account for residence and driveway carve out plus ½ acre irrigation per parcel. The annual volume & maximum diversion volume recommended for licensing equals 2 homes x 1.2 af per home = **2.4 af**. Both lots 1 & 2 have dry ag pastures on the inland portion of the parcels that are not irrigated. These areas of each were not credited toward the ½ acre irrigation. Neither pasture receives irrigation water based on historic water uses associated with the water system.

The following conditions were removed, altered, or added during licensing review to the permit:

- Removed 26A & 046.
- Replaced 070 with a text version of condition 187 that authorize ½ acre irrigation under domestic use per parcel for 2 homes.
- Revised X59 accurately describing the legal description of the POD.
- Added F06 as discussed on PG1 of report.
- Added X35 as discussed on PG1 of report to describe combined use limits between 96-8091 & 96-9791 related to the maximum diversion rate between WRs.

All other conditions on the permit shall be carried forward to licensing. The applicant's prior WR 96-8091 poses the only concern for overlap based on POD diversion rate between rights. Although Notice of Claim for 96-8091 has yet to be recommended and/or subsequently decreed, indications from department staff are that the right will be recommended as filed. Condition X35 mitigates any overlap concerns between 96-8091 & 96-9791. There are no other overlapping WR concerns toward licensing this right.

Have conditions of permit approval been met? X Yes No

H. RECOMMENDATIONS**1. Recommended Amounts**

<u>Beneficial Use</u>	<u>Period of Use</u>	<u>Rate of Diversion</u>	<u>Annual Volume</u>
DOMESTIC	01/01 to 12/31	0.06 CFS	2.4 AF

Totals: 0.06 CFS 2.4 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

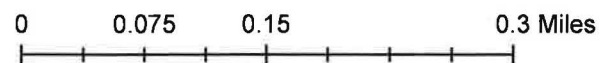
I. AUTHENTICATION

Luke Bates -

Field Examiner's Name *E. B. P.* Date *12/14/2023*

Reviewer *Cham B. P.* Date *5/28/24*

This map depicts the DOMESTIC system diagram.



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



THEORETICAL PUMPING EQUATION(S) FOR WR# 96-9791

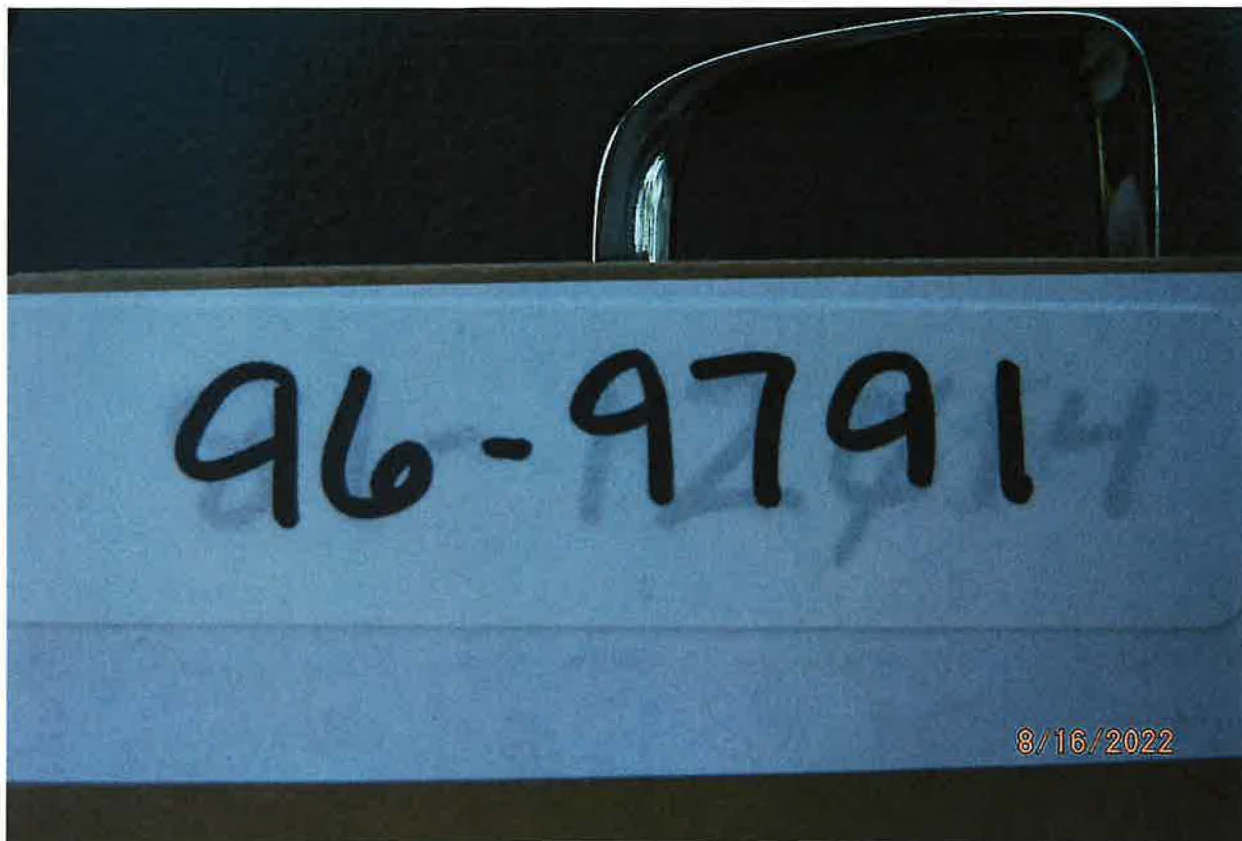
Theoretical Pumping Equation is required because system did not allow for a proper measurement. Pump is estimated to lift 87 ft, and running at 45 psi.

PUMP EQUATION

WATER RIGHT No. 96-9791

D0017062	HP	H in feet	Efficiency as a decimal	Pumping lift in feet	System pressure in PSI
$Q = \frac{HP \cdot 8.8 \cdot \text{Eff}}{H}$	5	191.0816	0.8	87	45
$Q =$ 0.185 cfs 82.8 gpm					

- For reference only, not used to recommend Diversion rate due to Cycle Stop Valve installed on system that reduces normal operating flow rates as observed by Flow meter measurement = 30 gpm. (y Bat)



BENEFICIAL USE FIELD EXAMINATION DATE 8/16/2022



GROUNDWATER WELL D0059298 (NOT SERVICE CONNECTED TO WATER SYSTEM AT TIME OF EXAM)



GROUNDWATER WELL D0059298 (NOT SERVICE CONNECTED TO WATER SYSTEM AT TIME OF EXAM)



PUMP STATION



POD – GROUNDWATER WELL D0017062 – LOCATED WITHIN PUMP STATION





DIVERTING WORKS





MASTER METER FLOWMETER INSTALLED



5 HP PUMP MOTOR INSTALLED IN WELL



LOT 2 LARGE DRY AG FIELD; IS NOT IRRIGATED



RED CYCLE STOP VALVE INSTALLED ON WATER MAIN LINE FROM WELL PRIOR TO FLOWMETER – LIMITS FLOW RATE ON SYSTEM TO APPROXIMATELY 30 GPM



DOMESTIC POU – LOT 1, ON THE WATERFRONT SUB; RP027080000010A



DOMESTIC POU – LOT 2, ON THE WATERFRONT SUB; RP027080000020A



LOT 2 LARGE DRY AG FIELD; IS NOT IRRIGATED



MAIN SERVICE LINE PATHWAY – PUMP STATION IN BACKGROUND, STANDING AT DRIVE INTO HOUSE
LOTS