

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 65-22659

Exam Date: 7/30/2012

1. Current Owner: GENE W GORBET
22 RIVER BLUFF LN
HORSESHOE BEND ID 83629
(208)793-2674

2. Accompanied by: Gene (Jake) Gorbet
Phone No: Same
Address: Same
Relationship to Permit Holder: Same

3. SOURCE
PAYETTE RIVER

TRIBUTARY
SNAKE RIVER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 65-13380 – spring source for irrigation same acres
2. Other water rights with the same point of diversion: None

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

PAYETTE RIVER L8 (SE1/4NE1/4) Sec. 31, Twp 07N, Rge 02E, B.M.
BOISE County

Method of Determination: GPS Location N43.904093° W116.257275° Garmin model GPSmap 76 Datum NAD 83

2. PLACE OF USE: IRRIGATION

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			<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>	
07N	02E	31				2.0													2.0
						L 8													

Total Acres: 2.0

Method of Determination: Bing (2011) Aerial Photography w/ field verification.

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
N/A	Franklin Electric	5	Unknown	Jacuzzi	Unknown - 2" Discharge

D. FLOW MEASUREMENTS1. **Measurement**

<u>Equipment</u>	<u>Type</u>	<u>MakeModel No.</u>	<u>Serial No.</u>	<u>Size</u>	<u>Calib. Date</u>
No physical measurement @ exam	N/A	N/A	N/A	N/A	N/A

See Flow Calculations Section below for Theoretical HP Equation, Sprinkler System, & Pipe Dia Flow Estimations.

2. Measurements: Pressure gauge-pitot tube measurement pressure handline sprinkler = 62 PSI
Piping from river not suitable (insufficient straight/solid pipe length) for polysonic measurement.

E. FLOW CALCULATIONS

_____Additional Computation Sheets Attached

Measured Method: Theoretical HP Equation:

$$HP = 5$$

$$PSI = 62 \text{ (pressure measurement of handline sprinkler)}$$

$$Z = 70 \text{ ft (Elevation change from river up to pump house/pasture \& lawn irrigated)}$$

$$Q = (8.8 \times 0.7 \times HP) / [Z + (2.31 \times PSI)] = (8.8 \times 0.7 \times 5) / [70 + (2.31 \times 62)] = \mathbf{0.14 \text{ cfs}}$$
 est. capacity of pumping system

Measured Method: Sprinkler (Pasture Handline) System Estimation:

$$\# \text{ of lines @ one time} = 3$$

$$\# \text{ of sprinkler heads @ one time} = 24 \text{ heads}$$

$$\text{Type of sprinklers} = \text{Rainbird}$$

$$\text{Nozzle size} = 1/8" \text{ rated for } 3.62 \text{ gpm @ } 60 \text{ psi (Per Appendix A Exhibit 9 Field Exam handbook)}$$

$$Q = \# \text{ heads} \times \text{gpm} = 24 \times 3.62 \text{ gpm} = 86.88 \text{ gpm} = \mathbf{0.19 \text{ cfs}}$$
 est. discharge from handline sprinklers

Measured Method: Pipe Diameter Flow Estimation:

$$\text{Discharge Pipe Dia} = 2 \text{ in}$$

$$A = \pi r^2 = 3.14 \times (1/2 \text{ Dia})^2 = \pi \times 1 \text{ in}^2 = \pi \text{ in}^2 \approx 0.022 \text{ ft}^2$$

$$V = 5 \text{ ft/sec (est. for well designed closed pipe system)}$$

$$Q = AV = 0.022 \text{ ft}^2 \times 5 \text{ ft/sec} = \mathbf{0.11 \text{ cfs}}$$
 est. flow through discharge pipe

$$\text{Theoretical HP Equation est. capacity of pumping system} = \mathbf{0.14 \text{ cfs}}$$

$$\text{Diversion rate based on sprinkler type @ } 60 \text{ psi} = \mathbf{0.19 \text{ cfs}}$$

$$\text{Pipe diameter flow estimation} = \mathbf{0.11 \text{ cfs}}$$
 0.11 cfs

$$\text{Permitted Rate} = \mathbf{0.15 \text{ cfs}}$$

$$\text{Beneficial Use Limit} = 2.0 \text{ ac} \times 0.03 \text{ cfs/ac} = \mathbf{0.06 \text{ cfs}}$$

$$\text{Proof of Beneficial Use fee paid} = \$50.00 = \text{up to } \mathbf{0.20 \text{ cfs}}$$

$$\text{Recommend Beneficial Use Limit Rate} = \mathbf{0.06 \text{ cfs}}$$

Highest rate allowable based on beneficial use limit 0.06 cfs recommended. Estimations of system capacity all indicate system capable of more than recommended beneficial use limit.

F. VOLUME CALCULATIONS

- Volume Calculations for Irrigation: **N/A per IDAPA 37.03.02.035.01.j.viii.**
- Volume Calculations for Other Uses: **N/A no other uses permitted**

G. NARRATIVE/REMARKS/COMMENTS**SYSTEM DESCRIPTION:**

System consists of a 5 hp pump with a 2" discharge line piped underground to a pump house with a pressure tank discharges to sprinkler irrigation system. Pasture is irrigated with 3 handlines with a total of 24 Rainbird 1/8" nozzle sprinkler heads. The lawn is irrigated with Hunter pop-up lawn sprinklers.

IRRIGATION PRACTICES:

Pasture irrigated with handline sprinkler system for approximately 8-9 hours per day (during the evening/night). After pasture irrigated, typically irrigate lawn and landscaping with pop-up lawn sprinkler system for approximately 2 hours. System will run both pasture and lawn sprinkler systems simultaneously, but typically irrigate pasture than lawn.

OVERLAP:

There are no other water rights that use the same P/D from the Payette River. Water right 65-13308 provides minimal water for irrigation from a spring uphill (south) of lawn and pasture. Spring typically dries up in early summer so is not typically used for irrigation. No combined combo limit condition necessary since different sources of irrigation water. However, general condition stating irrigation shall not exceed rate of 0.03 cfs/ac and/or 4.5 af/ac per season is applicable. There are no other applicable overlapping rights.

COMPLIANCE WITH PERMIT CONDITIONS:

Mr. Gorbet has written access agreement with neighbor for access to the P/D on the river. Permit conditioned that a lockable controlling works is to be installed prior to diversion. No lockable device is currently in place on the diversion itself. However, the pump has a dedicated power meter (Idaho Power Meter # 358143525 Pole # 7N2E3101)/source at which point the diversion could be regulated should it become necessary. Additionally, Mr. Gorbet has discussed the rental pool with the watermaster and is aware of the procedures to rent water for his diversion should a shortage of water occur. To the best of my knowledge, owner has complied with all other permit conditions.

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

H. RECOMMENDATIONS**1. Recommended Amounts**

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
IRRIGATION	03/15 to 10/31	0.06 CFS	N/A
<u>Totals:</u>		0.06 CFS	N/A

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

Field Examiner's Name Angela M. Quinn Date 8/9/2012
 Reviewer _____ Date _____

State of Idaho
Department of Water Resources

Beneficial Use Field Report Map & System Diagram

65-22659

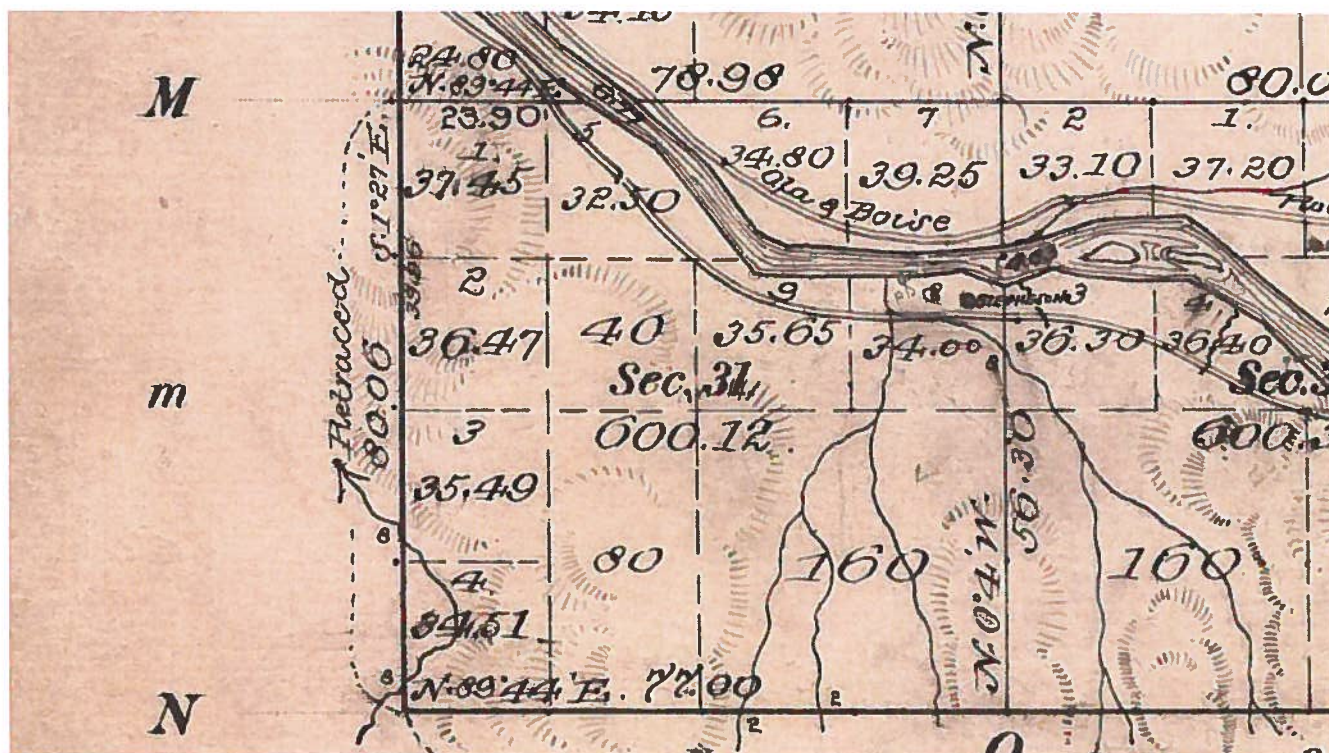
R02E



0 0.02 0.04 0.08 Miles

2011 Aerial Photo

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



T7N R2E Sec. 31

65-22659 Beneficial Use Field Report Photos



65-22659 Exam 7/30/2012: P/D facing north. Pump inside corrugated pipe in river. 2 in diameter black hose/line leads to buried 4" PVC line to pump house and property to the south.



65-22659 Exam 7/30/2012: P/U facing east/northeast. Pasture with handline sprinklers irrigating. Home and majority of lawn area to south just outside of picture (to right of photo).