

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 65-13929

Exam Date: 10/19/2012

1. Current Owner: DONALD E WALKER
29 RIVER RANCH RD
GARDEN VALLEY ID 83622
(208)344-5757
2. Accompanied by: Richard McKenna
Phone No: (208) 462-1996
Address: 46 River Ranch Road, Garden Valley, ID 83622
Relationship to Permit Holder: Neighbor

3. **SOURCE** **TRIBUTARY**
MIDDLE FORK PAYETTE RIVER PAYETTE RIVER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 65-3222, 65-8290
2. Other water rights with the same point of diversion: 65-22351

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

MIDDLE FORK PAYETTE RIVER NE1/4SW1/4 Sec. 23, Twp 10N, Rge 04E, B.M.
BOISE County

Method of Determination: Arc Map (Aerial Photo)

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>	
10N	04E	23									2.0								2.0

Total Acres: 2.0

Method of Determination: Arc Map (Aerial Photo); Tax Lots.

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.

<u>Well or Diversion ID No.*</u>	<u>Motor Make</u>	<u>Hp</u>	<u>Motor Serial No.</u>	<u>Pump Make</u>	<u>Pump Serial No. or Discharge Size</u>
N/A	Baldor	5		Unknown	(4")

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

D. FLOW MEASUREMENTS

1.

<u>Measurement Equipment</u>	<u>Type</u>	<u>Make</u>	<u>Model No.</u>	<u>Serial No.</u>	<u>Size</u>	<u>Calib. Date</u>
N/A						

2. Measurements: No field measurement. Intake removed from river. Irrigation system winterized.

E. FLOW CALCULATIONS

Additional Computation Sheets Attached

Measured Method: (Theoretical Horsepower Equation)

$$Q = 8.8 \times 0.7 \times 5/15 + (2.31 \times 40) = 30.8/107.4 = 0.29 \text{ cfs}$$

$$Q(\text{sprinklers}) = 26 \text{ sprinklers} \times 3.74 \text{ gpm} = 97.2 \text{ gpm} (0.22 \text{ cfs})$$

$$Q(\text{theoretical}) = 0.29 \text{ cfs} > 0.22 \text{ cfs } Q(\text{sprinklers}) > 0.18 \text{ cfs } Q(\text{permit})$$

$$HP = 5$$

$$Z = 15' \text{ (Estimated)}$$

$$P = 40 \text{ psi (Assumed)}$$

$$\text{Sprinklers} = 26 \text{ with } 9/64" \text{ heads @ } 40 \text{ psi}$$

Appears that the current pumping and sprinkler application systems are capable of attaining the permit diversion rate of 0.18 cfs. However, since the total irrigable area is 2.0 acres, not 9.0 acres as stated on the permit, recommend a diversion rate of 0.06 cfs.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 2.0 \times 3.5 = 7.0 \text{ AFA}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.06 \times 246 \times 1.9835 = 29.3 \text{ AFA}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 7.0 \text{ AFA}$$

2. Volume Calculations for Other Uses: N/A

G. NARRATIVE/REMARKS/COMMENTS**WATER SUPPLY SYSTEM:**

A 5-hp pump diverts water from the Middle Fork of the Payette River through a 4" flexible hose. Water is discharged through 4" PVC pipe to the irrigation main lines adjacent to the home for irrigation of the lawn, landscaping, and gardens, and the 4" PVC irrigation main lines in the pasture area for irrigation of the pasture.

IRRIGATION SYSTEM:

The right holder's irrigable land is comprised of approximately 0.4 acres of lawn, landscaping, and gardens adjacent to the home, and approximately 1.6 acres of pasture. At the time when the permit was issued, the right holder owned two lots, Lot 2 and Lot 19, within the River Ranch Subdivision. Since the issuance of the permit, the right holder has sold Lot 19, therefore the total place of use acreage as stated on the permit has been reduced from 9.0 acres to 2.0 acres.

The lawn, landscaping, and gardens are irrigated by a mixture of pop-up and rotary sprinklers. The pasture areas are irrigated by five (5) 3" hand lines, three of which are located in the main/larger pasture area to the west, and two (2) 3" hand lines located in the small pasture area near the river. The hand lines are connected to 3" risers from the buried 4" PVC irrigation main lines. The 3" hand lines contain a total of 26 Rain Bird sprinklers with 9/64" sprinkler heads.

The primary source of irrigation water for the right holder is the Pine Tree Ranch Irrigation Company, which provides irrigation water to the River Ranch Subdivision. The water supply system from the Middle Fork of the Payette River is a supplemental or backup source of water when water from the Pine Tree Ranch Irrigation Company is not available or is inadequate in which to meet the right holder's irrigation demands.

OVERLAP ANALYSIS:**Point of Diversion:**

Water Right Permit No. 65-13929 and Water Right Permit No. 65-22351 share the same point of diversion. The pump, mechanical equipment, and controls are owned and operated by the right holder.

Place of Use:

Water Rights 65-3222 and 65-8290 are owned by PTR, Inc. The Pine Tree Ranch Irrigation Company, which diverts irrigation water from Scriver Creek, supplies irrigation water to the River Ranch Subdivision. A 6" supply line diverts water to the right holder's property two days a week.

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

CONDITION NO.5 (01H) – Prior to diversion of water under this right, the right holder shall install a lockable device. The main power and control panel has a latch on the panel door which will accommodate a lockable device. Right holder has complied with Condition No.5.

RATE &/OR STORAGE RECOMMENDED FOR LICENSING

Description	Rate of Flow (cfs)		Storage (af)
Permit Amount	0.18	&/or	N/A
Beneficial Use Limit	0.18	&/or	N/A
System Measurement	0.29 (theoretical)	&/or	N/A
Proof Fee Amount	0.20	&/or	N/A
Recommended Amount	0.06	&/or	N/A

H. RECOMMENDATIONS

1. Recommended Amounts

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
IRRIGATION	3/15 to 10/31	0.060 CFS	7.0 AFA
<u>Totals:</u>		0.060 CFS	7.0 AFA

2. Recommended Amendments

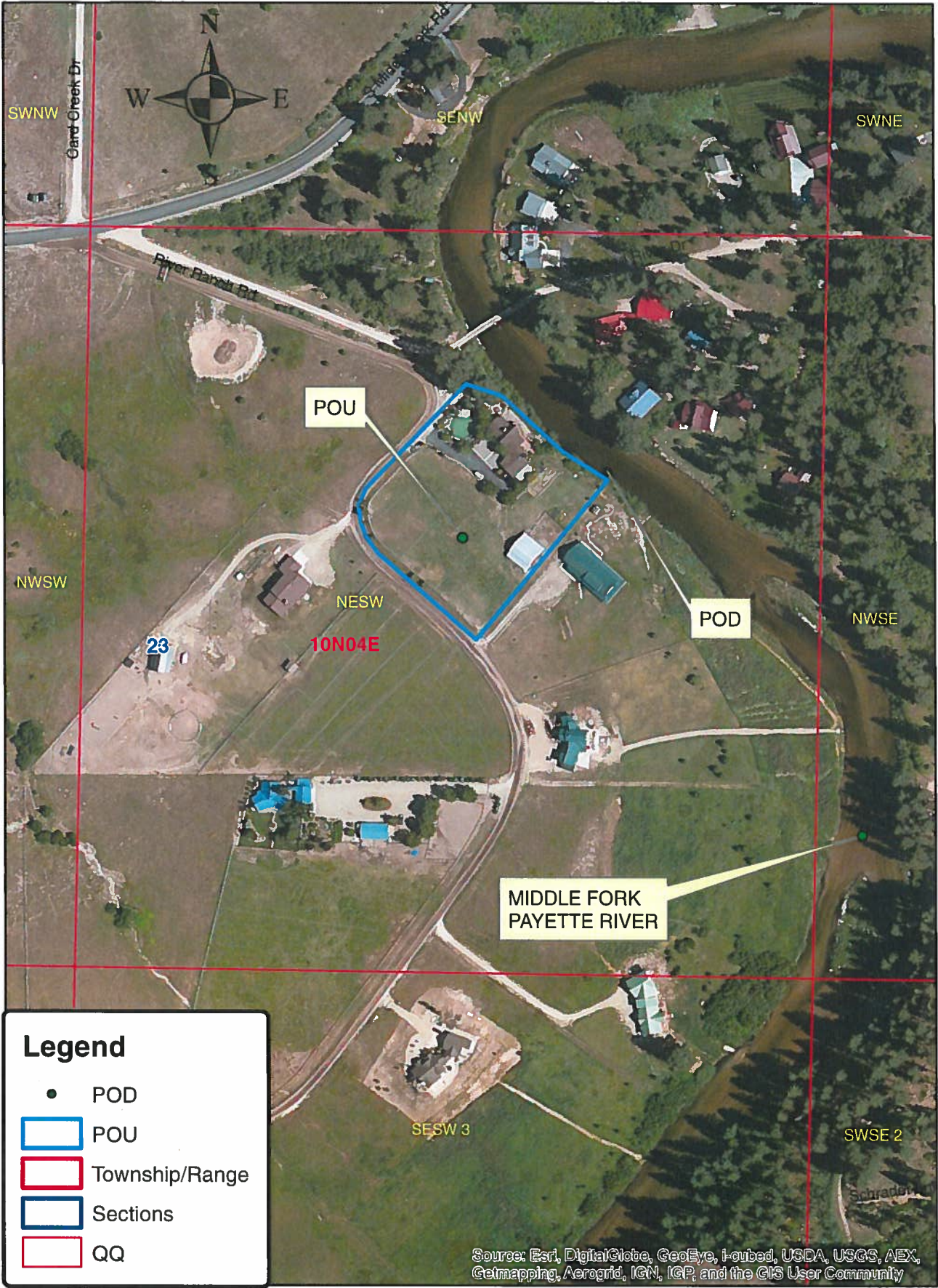
___ Change P.D. as reflected above ___ Add P.D. as reflected above ☒ None

☒ Change P.U. as reflected above ___ Add P.U. as reflected above ___ Other

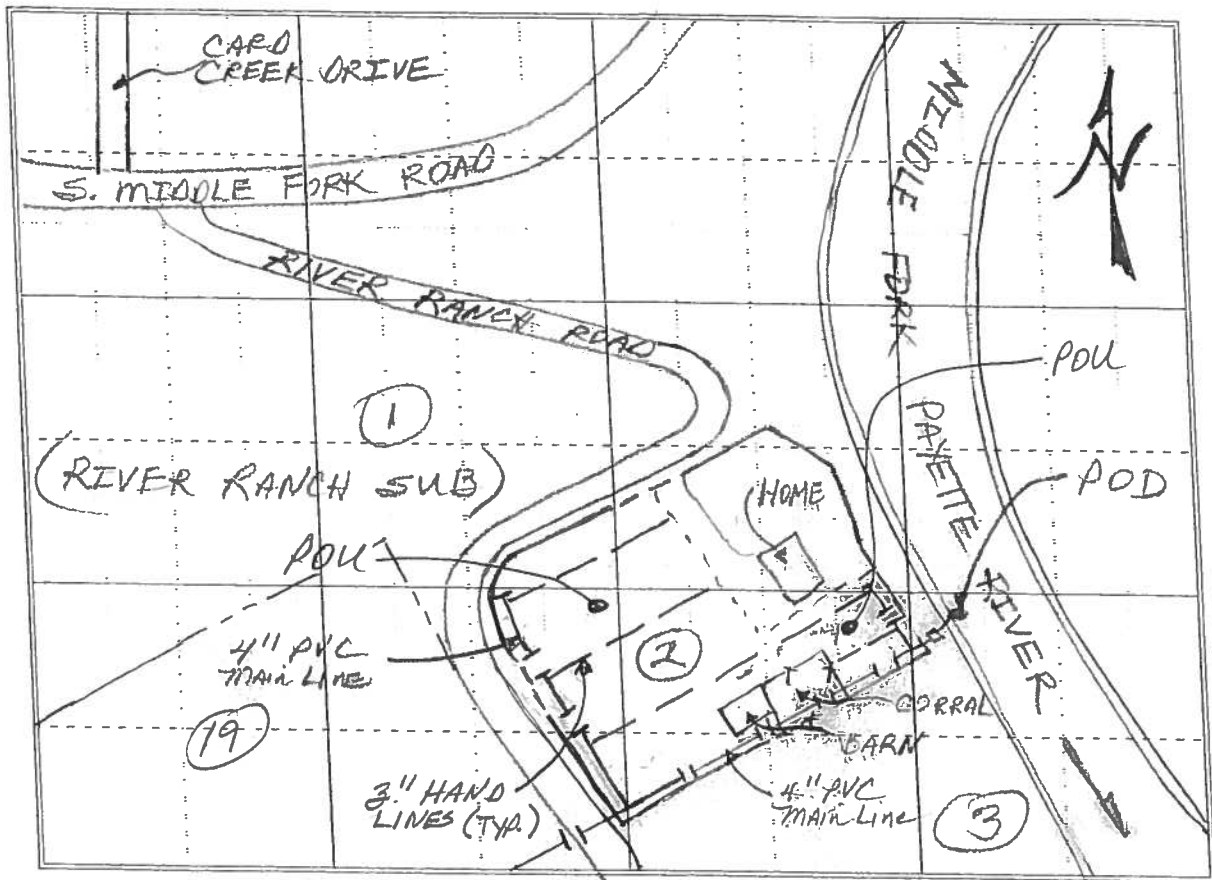
I. AUTHENTICATION

Field Examiner's Name Rick Collingwood Date 3/20/13

Reviewer _____ Date _____



3 **Delivery System Diagram:** Indicate all major components and distances between components. Indicate weir size/ditch size/pipe diameter (inside), as applicable. Use the space provided or ☐ see attached



Scale: 1" = NTS

- ☐ Copy of USGS Quadrangle attached showing location(s) of point(s) of diversion and place(s) of use (required)
- ☒ Aerial photo attached (required for irrigation of 10+ acres)
- ☒ Photo of diversion and system attached

FIELD EXAM PHOTOS

Water Right Permit: 65-13929

Field Exam Date: 10-19-12

PLS: NE1/4, SW1/4 Section 23, T.10N, R.04E

Field Examiner: RC



Point of Diversion: View of the 5-hp pump which diverts water from the Middle Fork of the Payette River for use by the right holder and neighbor Richard McKenna. The pump diverts water from the river through a short section of 4" flexible hose.



View westerly from the pump location on the river bank of the power and control panel and the 4" PVC discharge line.



Place of Use: View westerly of small pasture area located near the river southerly of the home. The pasture area is irrigated by two 3" hand lines and four (4) Rain Bird sprinklers.



Place of Use: View easterly of the north end of the large pasture area. The right holder irrigates the pasture area with 3" hand lines and twenty- two (22) Rain Bird sprinklers.



Place of Use: View southeasterly of the southern portion of the large pasture area and one of three 3" hand lines used for irrigation.