

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 63-12089

Exam Date: 7/23/2012

1. Current Owner: JUDI THACKER
4560 WILLOW CREEK RD
EAGLE ID 83616
(208)283-6525

AND

PAT THACKER
4560 WILLOW CREEK RD
EAGLE ID 83616
(208)283-6525

2. Accompanied by: Pat Thacker
Phone No:
Address:
Relationship to Permit Holder:

3. SOURCETRIBUTARY

GROUND WATER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: None
2. Other water rights with the same point of diversion: None

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

GROUND WATER

SE1/4SE1/4

Sec. 29, Twp 05N, Rge 01E, B.M.

ADA County

Method of Determination: Arc Map (Aerial Photo); GPS Latitude N.43°44.161', Longitude W.116°21.291'; Datum – NAD83.

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>	
05N	01E	29																4.0	4.0

Total Acres: 4

Method of Determination: Arc Map (Aerial Photo)

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>
D0009805		2			

*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>

2. Measurements: No field measurement. Pitot tube too small for pressure measurement on sprinkler head.

E. FLOW CALCULATIONS

____ Additional Computation Sheets Attached

Measured Method: (Theoretical)

$$HP = 2$$

$$Z = 250' \text{ (Assumed per static Water level)}$$

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

$$Q(\text{theoretical}) = 8.8 \times 0.7 \times 2/250 + (2.31 \times 40) = 12.32/342.4 = 0.04 \text{ cfs}$$

$$Q(\text{sprinkler}): 4 \text{ heads} \times 6 \text{ gpm} = 24 \text{ gpm (0.05 cfs)}; 4 \text{ heads} \times 8 \text{ gpm} = 32 \text{ gpm (0.07 cfs)} - 0.06 \text{ cfs (average)}$$

$$Q(\text{sprinkler}) = 0.06 \text{ cfs} < 0.15 \text{ cfs } Q(\text{permit})$$

Appears pumping system is inadequate to attain the permit diversion rate of 0.15 cfs.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 4.0 \times 4.5 = 18 \text{ AFA}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.06 \times 260 \times 1.9835 = 30.0 \text{ AFA}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 18 \text{ AFA}$$

2. Volume Calculations for Other Uses: N/A

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

A 2 hp pump diverts ground water for irrigation of approximately 4.0 acres of lawn, pasture, trees, shrubs, and garden areas.

IRRIGATION SYSTEM:

The pressurized irrigation system is operated by six (6) control stations, which are manually operated. There are four (4) sprinkler heads per line. The main lines to the pop-up sprinklers are 3/4-inch PVC, and the trees and shrubs are irrigated by 1/2-inch drip lines. According to the right holder, the pressurized sprinkler system operates between 40 and 70 psi, with a sprinkler application rate between 6 – 8 gpm.

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

CONDITION NO.3: Water bearing zone to be appropriated is from 200 to 300 feet. According to the well drillers report, the well was drilled to 338 feet, with the static water level at 203 feet. Water bearing zone exceeds the 300 feet limit by 38 feet.

RATE &/OR STORAGE RECOMMENDED FOR LICENSING

Description	Rate of Flow (cfs)		Storage (af)
Permit Amount	0.15	&/or	N/A
Beneficial Use Limit	0.12	&/or	N/A
System Measurement	0.06	&/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	03/01 to 11/15	0.060 CFS	18.0 AFA
<u>Totals:</u>		0.060 CFS	18.0 AFA

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 ___ Other

I. AUTHENTICATION

Field Examiner's Name Rick Collingwood Date 10-1-12

Reviewer _____ Date _____

63-12089



Form 219 07/11

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: 63-12089
PLS: SE1/4, SE1/4 Section 29, T.5N, R.01E.
Field Examiner: RC

Field Exam Date: 7-23-12



Point of Diversion: View southwesterly of ground water well.



Place of Use: View northeasterly of irrigated pasture/lawn.



Place of Use: View westerly of irrigated pasture/lawn and typical irrigation riser/hydrant (8 total), which provides manual operation of six (6) stations of the pressurized irrigation system. Forty-two (42) pop-up sprinklers irrigate the open areas, while approximately 400 trees and shrubs are irrigated by drip lines.