

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 11-7374

Exam Date: 6/15/2012

1. Current Owner: GROVE PHELPS & SONS
36 BENNINGTON CEMETARY RD
MONTPELIER ID 83254
(208)847-2142
2. Accompanied by: Rhett Phelps
Phone No: 208-847-2142
Address: 36 Bennington Cemetery Rd. Montpelier, ID 83254
Relationship to Permit Holder: Owner

3. SOURCE TRIBUTARY
GROUND WATER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 11-4226
2. Other water rights with the same point of diversion: None

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

GROUND WATER SW1/4SE1/4 Sec. 8, Twp 12S, Rge 44E, B.M.
BEAR LAKE County

Method of Determination: GPS and aerial photography.

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>	
12S	44E	8				2.8								9.0	33.0	13.0	27.0	7.2	92.0

Total Acres: 92

Method of Determination: Site visit and aerial photography.

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</u>					<u>Pump Serial No. or Discharge</u>
<u>ID No.*</u>	<u>Motor Make</u>	<u>Hp</u>	<u>Motor Serial No.</u>	<u>Pump Make</u>	<u>Size</u>
A0010776	Hollow shaft	40.0	R2021496		

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

D. FLOW MEASUREMENTS

1. Measurements:
Irrigation system was sucking air. Flow measurement was attempted but unsuccessful. Use Theoretical calculation

E. FLOW CALCULATIONS☐ Additional Computation Sheets Attached

Measured Method:

Theoretical = 1.40 cfs. See attached theoretical horsepower equation worksheet.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = 92.0 \text{ Acres Irrigated} \times 3.5 \text{ Irrigation Requirement} = 322.0 \text{ acre-feet}$$

$$V_{D.R.} = 1.40 \text{ cfs} \times 200 \text{ Days in Irrigation season} \times 1.9835 = 555.4 \text{ acre-feet}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 322.0 \text{ acre-feet}$$

G. NARRATIVE/REMARKS/COMMENTS

Beneficial field exam was conducted on 6/15/2012. Irrigation system consists of a ground water well with a 40 hp pump to a sprinkler irrigation system. At the time of the field exam there were two quarter mile sprinkler lines. As a result of air in the irrigation system a flow measurement was not accomplished. The theoretical equation was used to determine pumping capacity. Various well logs surrounding the well location was used to determine the approximate ground water level. Well logs indicate that the pumping level is approximately 60 feet below land surface. Assuming 50 psi delivery the theoretical diversion rate = 1.40 cfs. The right holder uses Bennington Irrigation Shares as his primary water source.

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	04/15 to 10/31	1.400 CFS	322.00 AF
<u>Totals:</u>		1.400 CFS	322.00 AF

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

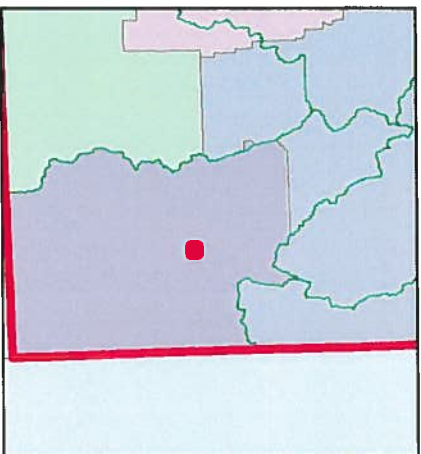
Field Examiner's Name Blake Jordan Date 5/15/2014
 Reviewer _____ Date _____



Idaho Department of Water Resources

Water Right
11-7374
(IRRIGATION)

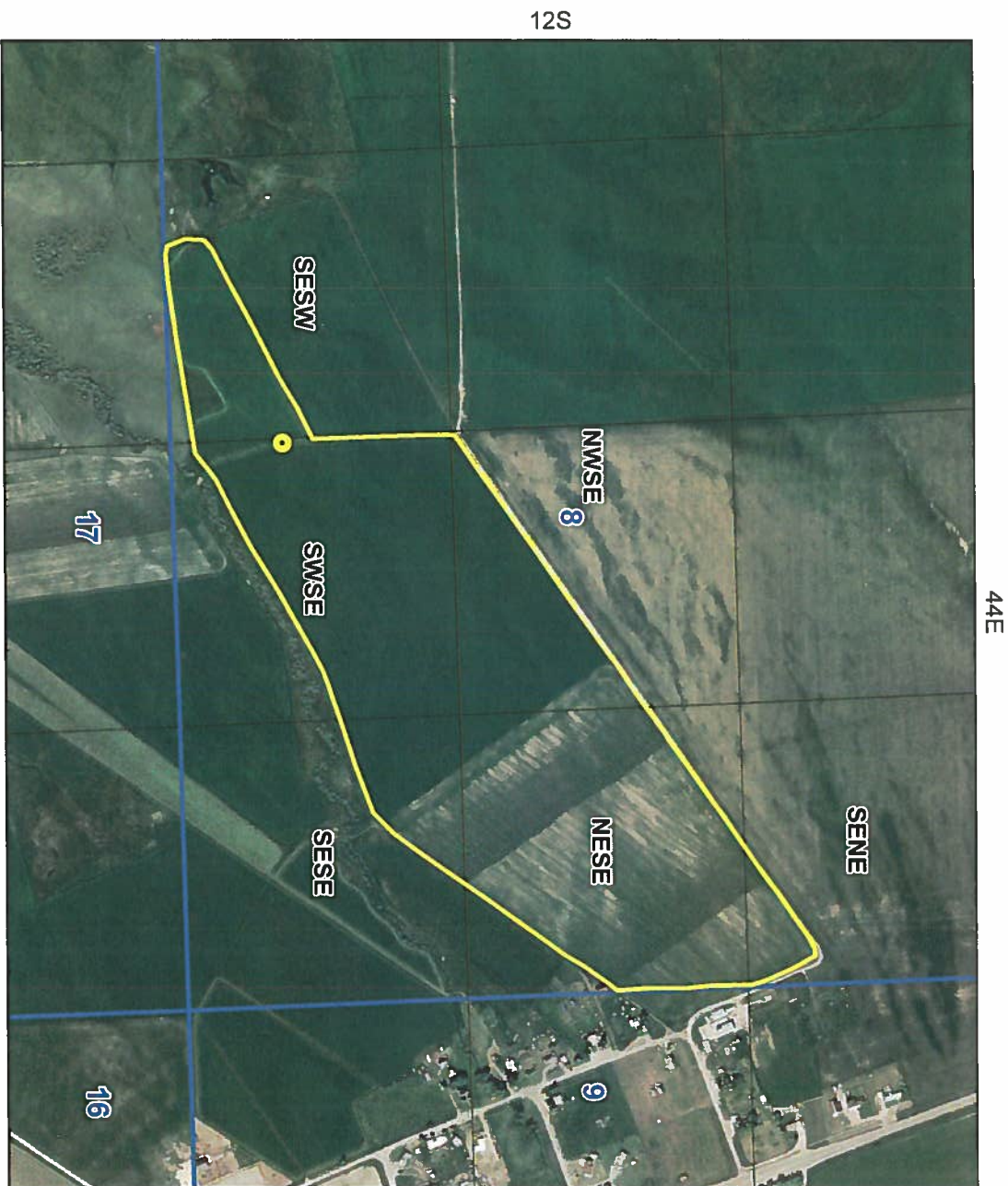
- Point of Diversion
- Place of Use
- State Outline
- Townships
- PLS Sections
- Quarter Quarters



Bear Lake County
IDWR Basin 11

Prepared by Jordan, Blake

2009 Aerial Photography



11-7374



THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Nov-74

Water Right No.:
Reviewer:
Date of Review:

P/D No.:	Senerio 1	Senerio 2	Senerio 3
PUMP HORSEPOWER	40	0	0
BOOSTER HORSEPOWER	0	0	0
PUMPING LEVEL	60	0	0
DISCHARGE PRESSURE	50	0	0
RATE OF FLOW (cfs)	1.40	#DIV/0! 	#DIV/0!

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: