

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 81-11982

Exam Date: 07/28/2008

1. Current Owner: KENNETH L BOWEN
PO BOX 545
KOOSKIA ID 83539
(208) 926-0050
2. Accompanied by: Kenneth Bowen
Phone No: (208) 926-0050
Address: mailing address same as above, physical address: 521 Ping St. in Kooskia
Relationship to Permit Holder: same

3. **SOURCE** **TRIBUTARY**
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 SYSTEM**1. LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER L4 NW 1/4NW 1/4 Sec. 4, Twp 32N, Rge 04E, B.M. IDAHO County

Method of Determination: GPS, GIS, Satellite Imagery

2.

PLACE OF USE: IRRIGATION

Twp Rge Sec	NE				NW				SW				SE				Totals
	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
32N 04E 4						0.3											0.3
						L 4											

Total Acres: 0.3

Method of Determination: GIS, Satellite Imagery

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

4.

<u>Well or Diversion</u> <u>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</u> <u>Size</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

*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: none

E. FLOW CALCULATIONS

_____ Additional Computation Sheets Attached

Measured Method: **Rated sprinkler heads**

3 stations, 1 station at a time, max per station is 4 sprinklers

Toro D06 impact sprinklers rated at 3.0 gpm each

3.0 gpm x 4 sprinklers = 12.0 gpm

12.0 gpm / 448.83 gpm/cfs = 0.027 cfs = **~0.03 cfs****F. VOLUME CALCULATIONS**

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 0.3 \text{ ac} \times 3.0 \text{ afa} = 0.9 \text{ AF}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.03 \text{ cfs} \times 246 \text{ days} \times 1.9835 = 14.6 \text{ AF}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = \mathbf{0.9 \text{ AF}}$$

2. Volume Calculations for Other Uses: none

G. NARRATIVE/REMARKS/COMMENTS

Ground water is pumped from a well into buried sprinkler system to irrigate approximately 0.3 acres of lawn. Sprinkler system is controlled with a programmable timer that operates 3 stations. All stations use Toro D06 impact sprinklers rated at 3.0 gpm each. Stations 1 and 2 use 4 sprinklers each and station 3 uses 3 sprinklers. The maximum diversion rate is 12.0 gpm (4 sprinklers x 3.0 gpm each) or approximately 0.03 cfs. A 3/4 inch garden hose with various sprinkler attachments is used to irrigate the areas not covered by impact sprinklers. Ground water is not used for in-home domestic purposes.

This right should be licensed for irrigation of 0.3 acres, at a rate of 0.03 cfs, and an annual diversion volume of 0.9 acre-feet based on the standard 3.0 afa field headgate requirement for the area..

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>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
IRRIGATION	03/15 to 11/15	0.03 CFS	0.9 AF
Totals:		0.03 CFS	0.9 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 Other

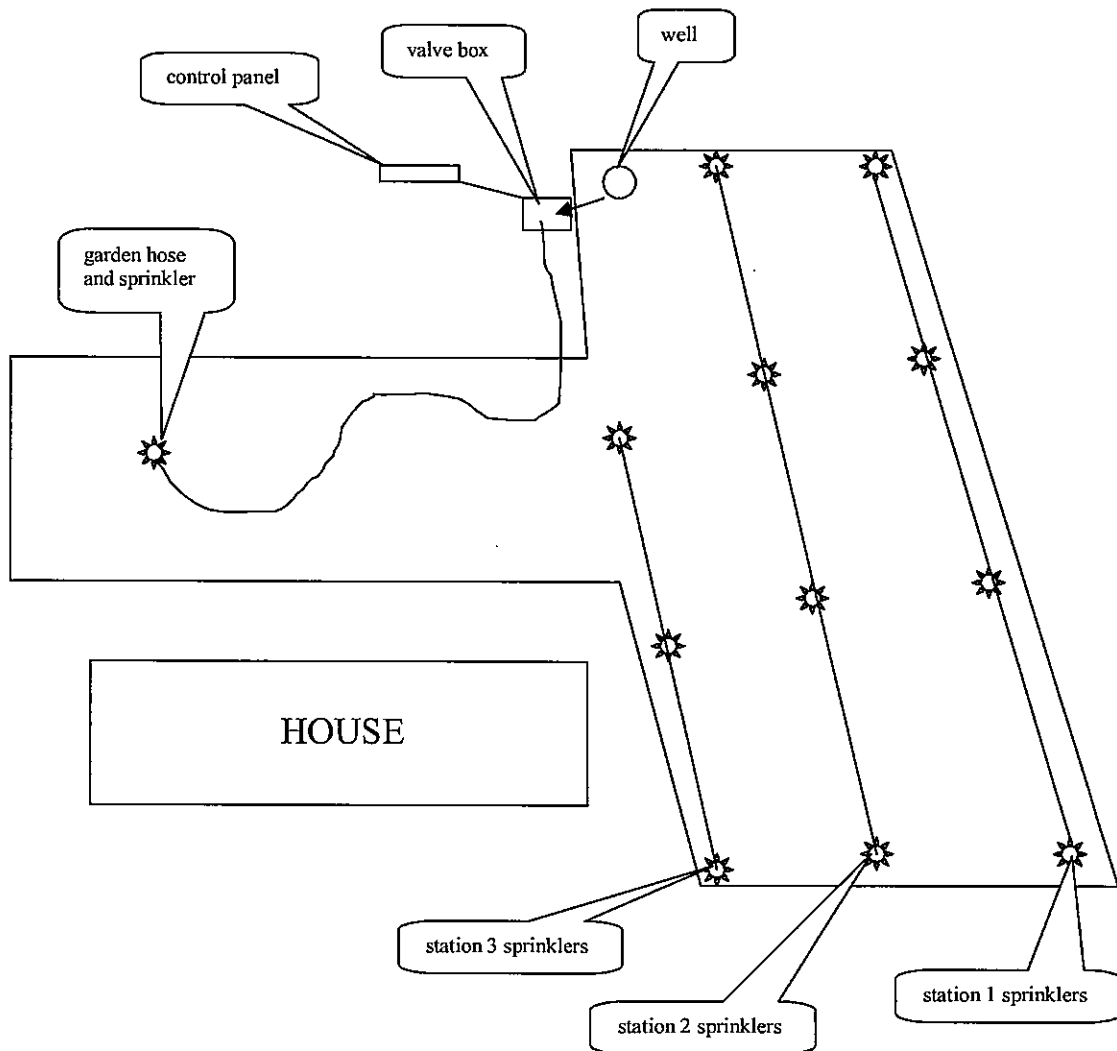
I. AUTHENTICATION

Field Examiner's Name AARON MARSHALL Date 09/10/2008

Reviewer _____ Date _____

Attachment A

Delivery System Diagram



Attachment B

Map of Place of Use for Permit No. 81-11982



Legend

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

0 50 100 200 Feet



Attachment C

Photographs of Diversion, Delivery System, and Irrigation



FIGURE 1: Well head (at left) and irrigated lawn with station 2 in operation. View facing east.



FIGURE 2: Sprinkler box label indicating sprinkler specifications.