

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 36-8789

Exam Date: 07/24/2007

1. Current Owner: WILLIAM F GULLEY And JUDY L GULLEY
450 N 242 W
JEROME ID 83338
(208) 324-8001
2. Accompanied by: William F Gulley (Bill)
Phone No: (208) 324-8001
Address: 450 N 242 W, Jerome, ID 83338
Relationship to Permit Holder: Permit Holder

3. **SOURCE**

GROUND WATER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: Multiple surface water rights owned by North Side Canal Company. No actual use of surface water at place of use.
2. Other water rights with the same point of diversion:
36-7293 and 36-7425, combined limits = 2.60 cfs, 520 af, and 130 acres.

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

GROUND WATER SW¼SE¼SW¼ Sec. 28, Twp 07S, Rge 16E, B.M. JEROME 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	
07S 16E 33					5.9	5.7	7.0										18.6

Total Acres: 18.6

Method of Determination: GIS, satellite imagery

3. X Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable. Attachment 1.
- X 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 1.
- X Aerial Photo Attached (required for irrigation of 10+ acres). Attachment 1.
- X Photo of Diversion and System Attached. Attachments 2 and 3.

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>
A0003442	GE Induction K	150	AKJ109149	LB	45207

*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>
	Ultrasonic	Parametric	878		2 MHz	April 2007

2. Measurement: See attachment 4, discharge measurement record.

Description and Summary:

Ultrasonic flow meter attached to sprinkler pivot riser, steel pipe, 4.53" outer diameter, and 0.145" wall thickness. Measurement rated "good" based on location and flow meter diagnostics.

Measurement completed by Corbin Knowles on August 23, 2007.

Flow Rate = 173.8 gpm = 0.39 cfs, based on 9 minute average.

E. FLOW CALCULATIONS

____ Additional Computation Sheets Attached

Measured Method: None

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

Based on permit condition of approval no. 3, the licensed place of use should be limited to the irrigation of the lands listed below for a total of 12.7 acres even though the total acreage currently irrigated is 19.3 acres.

Tw	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
07S	16E	33					5.9		6.1										12.0

Total Acres: 12.0

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 12.0 \text{ acres} \times 4.0 \text{ afa} = 48.0 \text{ af}$$

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

$$0.39 \text{ cfs} \times 246 \text{ days} \times 1.9835 = 190.3 \text{ af}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 48.0 \text{ af}$$

G. NARRATIVE/REMARKS/COMMENTS

Water right no. 36-8789 provides for the irrigation of pivot corners not covered under water right nos. 36-7293 and 36-7425. All three water rights divert from the same well, ID no. A0003442.

The NE $\frac{1}{4}$ NW $\frac{1}{4}$ corner is irrigated with a small wiper pivot sprinkler. The NW $\frac{1}{4}$ NW $\frac{1}{4}$ (5.7 acres) and SW $\frac{1}{4}$ NW $\frac{1}{4}$ corners are irrigated with portable sprinkler hand lines. Water is delivered to all three corners from the well through 6"-diameter buried pipe. Bill Gulley was unable to turn on the well at the time of examination since all fields were in wheat and waiting to be harvested. I verified that sprinkler systems were in place and water was beneficially used to irrigate the three corners to the extent indicated on the attached map. Corbin Knowles measured the diversion rate at the small wiper pivot sprinkler after wheat had been harvested at a flow of 0.39 cfs. Even though the NW $\frac{1}{4}$ NW $\frac{1}{4}$ is being irrigated with water from the same well as water right nos. 36-7293, 36-7425, and 36-8789, it is not permitted and should not be licensed under right 36-8789 based on permit condition of approval no. 3.

Bill confirmed that no irrigation has occurred in the SE $\frac{1}{4}$ SW $\frac{1}{4}$ of section 28 as provided for under the permit. Permit condition of approval no. 3 states, "This right does not authorize the irrigation of land not previously irrigated." The 5.7 acres in the NW $\frac{1}{4}$ NW $\frac{1}{4}$ was not permitted and therefore, should not be licensed. In a 1999 memo, Allen Merritt recommended that 8.0 acres in the NW $\frac{1}{4}$ NW $\frac{1}{4}$ not be permitted since it did not appear use at that location for a long time. This condition of approval was not met and only land listed on the permit that was developed should be licensed. This also applies to land in the SW $\frac{1}{4}$ NW $\frac{1}{4}$ in which 7.0 acres is currently being irrigated although the permitted total in that tract is 6.1 acres.

The most recent well capacity measurement was 2.16 cfs, on August 2, 1995 by Scott King.

Water right nos. 36-7293 and 36-7425, when combined, are limited to a diversion rate of 2.60 cfs. Water right no. 36-8789, when combined with 36-7293 and 36-7425, should be limited to the same combined diversion rate, 2.60 cfs.

Permit condition of approval no. 7 requires that the right holder participate in a mitigation plan. I verified with the North Snake Ground Water District that Bill Gulley is on the tax assessment role for mitigation of water right nos. 36-7293, 36-7425, and 36-8789. This meets the requirements of condition no. 7.

Have conditions of permit approval been met? ____ Yes X No (condition no. 3)

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	0.39 CFS	48.0 AF
	<u>Totals:</u>	0.39 CFS	48.0 AF

2. Recommended Amendments

____ Change P.D. as reflected above ____ Add P.D. as reflected above X None

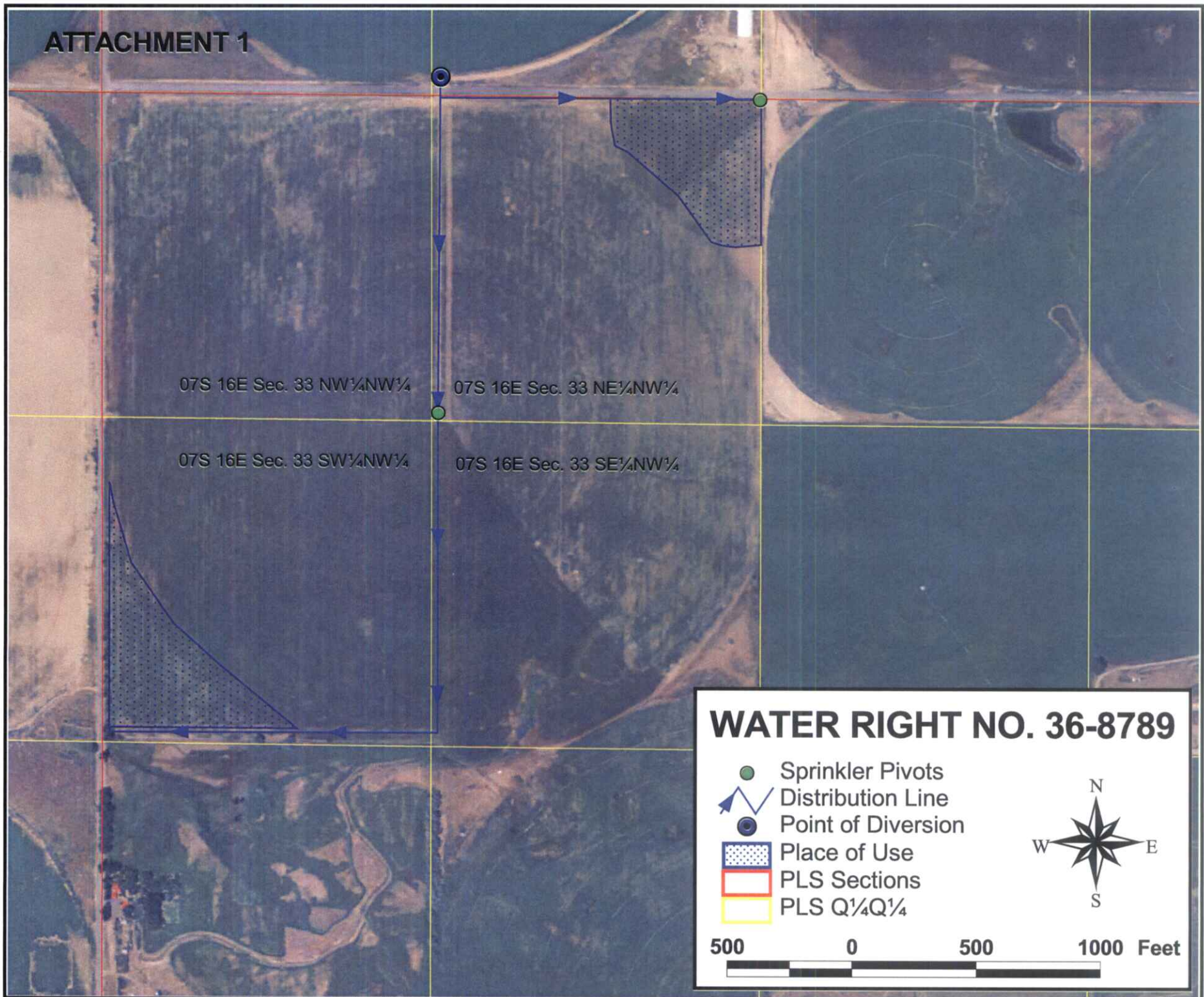
____ Change P.U. as reflected above ____ Add P.U. as reflected above ____ Other

I. AUTHENTICATION

Field Examiner's Name Aaron Marshall Date November 26, 2007

Reviewer _____ Date _____

ATTACHMENT 1



ATTACHMENT 2



Point of Diversion: Well, ID no. A0003442, view facing north.



Point of Diversion: View facing east.

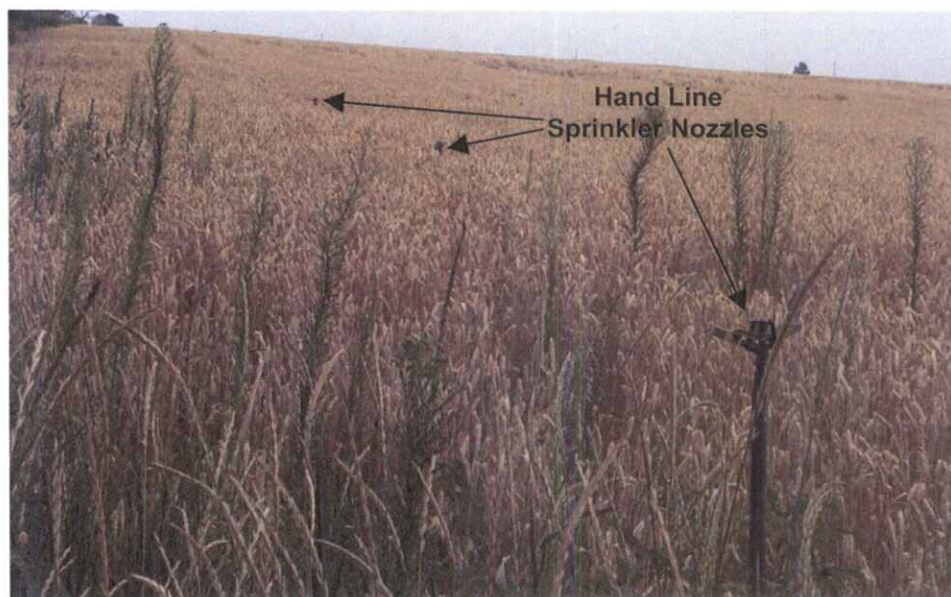
ATTACHMENT 3



Place of Use: NE $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 33, 07S, 16E. Small wiper-pivot sprinkler, view facing east.



Place of Use: NW $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 33, 07S, 16E. View facing south.



Place of Use: SW $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 33, 07S, 16E. View facing northeast.

ATTACHMENT 4

DISCHARGE MEASUREMENT SUMMARY

Water Right No. 36-8789

Measurement on small wiper pivot in NE $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 33, 07S, 16E

Measurement by Corbin Knowles

GULLY PIV. LOG

State: Finished
S: 07/08/23 15:00:16
E: 07/08/23 15:11:12
Interval: 60 Seconds
Records: 11

07S 16E Sec. 33
NE $\frac{1}{4}$ NW $\frac{1}{4}$, small
wiper pivot

07/08/23 Time	Volume gal/m	(+)Total gal
15:00:16	173.2	89.597
15:01:16	173.9	258.567
15:02:17	174.0	436.487
15:03:17	174.1	612.260
15:04:16	174.1	782.939
15:05:17	174.2	959.184
15:06:16	173.4	1128.917
15:07:16	174.4	1305.934
15:08:16	174.2	1477.030
15:09:16	173.7	1653.587

1653.587
- 89.597

1563.99
÷ 9

173.78 gpm
= 0.39 cfs