

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 63-11756

Exam Date: 9/28/2012

1. Current Owner: J R SIMPLOT CO
C/O TERRY UHLING
999 MAIN ST STE 1300
BOISE ID 83707
(208)336-2110
2. Accompanied by: Danny Stimpson
Phone No: 208-459-0777 (business number)
Address: 223 Rodeo Ave
Relationship to Permit Holder: Farm Supervisor

3. SOURCE TRIBUTARY
GROUND WATER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 63-2678, 63-3282, 63-3559 and canal water
2. Other water rights with the same point of diversion: 63-2678, 63-3282, and 63-3559

C. DIVERSION AND DELIVERY SYSTEM**1. LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER SW1/4NE1/4 Sec. 7, Twp 04N, Rge 05W, B.M. CANYON County

Method of Determination: Field visit and GPS

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	
04N	05W	6																38.0	38.0
04N	05W	7	40.0	33.5	35.5	39.0	37.8												185.8
Total Acres:			223.8																

Method of Determination: Field visit and Department records for overlapping rights.

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>
	GE	75 hp	5K6258XH1A		8"

D. FLOW MEASUREMENTS

1. Measurement
Equipment Type Make Model No. Serial No. Size Calib. Date
Theoretical calculation

2. Measurements:

See Oct 22, 2012 attachment "OVERLAP ANALYSIS FOR PERMIT 63-11756"

E. FLOW CALCULATIONS

☒ Additional Computation Sheets Attached

Measured Method:

Permit Rate (irr) = 3.07 cfs
 Proof Pd (\$ \$175.00) (max cfs) = 4.00 cfs
 Found POU acres ~~143.8~~ * 0.02 cfs/ac = 1.74 cfs
 Measured rate (theoretical) = 5.43 cfs
 Recommendation in Red see also attachment

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

V= (Acres Irrigated) x (Irrigation Requirement) = 143.8 ac 4.5 af = 647.1 afa
 I.R.
 V= [Div Rate (cfs)] x (Days in Irr season) x 1.9835 = 1.74 cfs * 260 days * 1.9835 = 897.3 afa
 D.R.

2. Volume Calculations for Other Uses: n/a

G. NARRATIVE/REMARKS/COMMENTS

The system is a well and buried pipelines. A six inch line goes west to mainly irrigate the corners around the center pivot. A second eight inch line goes north approximately 100 ft where it can be discharged into a pond near the well or is tied into a mainline going to the three center pivots. The corners around the Sec 7 NE quarter pivot are irrigated via handlines. The pivot in Sec 16 SESE is designed to square out the corners thus irrigating nearly all of that quarter. The corners around the pivot in Sec 7 NENW are not irrigated. Groundwater has to be comingled in the pond to be able to reach that pivot. There is no change to the PPU as recognized in transfer 4444. The found POD is the same well recognized through that transfer.

See the October 12, 2012 Overlap Analysis for Permit 63-11756 for a detailed analysis of the relationship between the 3 rights involved in T-4444 and this permit.

The permit conditions have been met as they reference future control possible be the department. No water bearing zone condition is necessary as this is an existing well with no change to the construction.

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

H. RECOMMENDATIONS

1. Recommended Amounts

BENEFICIAL USE	PERIOD OF USE	DIVERSION RATE	ANNUAL VOLUME
IRRIGATION	03/01 to 11/15	1.740 CFS	647.10 AF
Totals:		1.740 CFS	647.10 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 Kelly K Christensen Date Oct 23, 2012

Reviewer _____ Date _____

OVERLAP ANALYSIS FOR PERMIT 63-11756

Recommendation summary

63-11756 is recommended for 1.74 cfs and 647.1 af for 143.8 acres within a 223.8 ac PPU

System Overview

The system consists of 3 decreed rights, this permit, and canal shares. The decreed rights listed below were tied together through a 1995 transfer (T-4444). That transfer recognized 160 acres within a 223.8 acre PPU and one point of diversion. The transfer did not address the current pumping system capacity. This permit was filed for the same PPU with the intent of bringing the balance of the PPU up to one inch per acre. Those rights are summarized as follows;

Right	Ac Limit	Rate
63-2678	120 ac	1.14 cfs

Right	Ac Limit	Rate	Rate per acre	Combined limits
63-3282	52 ac	1.04 cfs	0.02 cfs/ac	When combined 63-3282 and 63-3559 are for a total of 80 acres at 1 inch per acre.
63-3559	28 ac	0.56 cfs	0.02 cfs/ac	

Totals	200 ac*	2.74 cfs
	160 ac*	

*When all three are combined limit to 160 acres (No rate limits)

POU analysis;

63-2678 has a 120 acre limit. However when combined with the other two rights, all three are limited to 160 acres. As 63-3282 and 63-3559 are combined for a total of 80 acres at one inch per acre that effectively creates an 80 acre limit for 63-2678. 160 acre PPU less the 80 acres for 63-3282 and 63-3559 gives 80 acres.

Rate analysis;

At 1.14 cfs for the 80 acres the rate per acre would be 0.0143 cfs/ac for 63-2678. To determine the rate for this permit the 223.8 acre PPU is split into three segments for analysis purposes.

80 ac @ 0.02 cfs/ac through 63-3282 and 63-3559. No additional water needed.	= 1.60 cfs
80 ac @ 0.0143 cfs/ac (as calculated above for 63-2678)	= 1.14 cfs
80 ac @ 0.006 cfs/ac (0.02 cfs/ac less 0.014 cfs/ac as calculated above) for 63-11756	= 0.48 cfs
<u>63.8 ac @ 0.02 cfs/ac (223.8 PPU – 160 ac = 63.8 ac)</u> for 63-11756	<u>= 1.27 cfs</u>
Totals	223.8 ac
	4.49 cfs

Check: 223.8 ac * 0.02 cfs = 4.476 cfs ≈ 4.48 cfs (multiple rounding errors creates difference)

The recommendation for this permit is for

223.8 ac – 80 ac = **143.8 acres** within the 223.8 acre PPU and

4.48 cfs – 2.74 cfs = **1.74 cfs**

The permit was for 3.70 cfs. The 1992 well log indicates a static water level of 18 ft and a 105 ft pumping level for the pump test. The dynamic level was not identified. Estimating a dynamic level of 50% of the difference gives, (105 ft – 18 ft) / 2 = 43.5 ft. Therefore I am using 18 ft + 44 = 62 ft.

$$\frac{(.75) \text{Hp} * 8.8 * 0.7}{(.10) \text{PSI} * 2.31) + 62 \text{ft}} = 5.43 \text{ cfs}$$

The theoretical capacity exceeds the maximum required to supply the PPU with one inch per acre.

The system is designed for either open discharge into a pond or into the mainline distribution system. Therefore the system pressure is estimated to be 10 psi based upon the open discharge aspect of the delivery system.

Volume limit analysis;

The transfer did not establish a specific combined volume limit, rather imposed a combined limit of 0.02 cfs/acre and 4.5 af.

Right	ac limit	Irrigation volume
63-2678	120 ac	540 af (does not include the 14.6 af associated with the domestic use)
63-3282	52 ac	234 af
63-3559	28 ac	126 af
Total	*	900 af

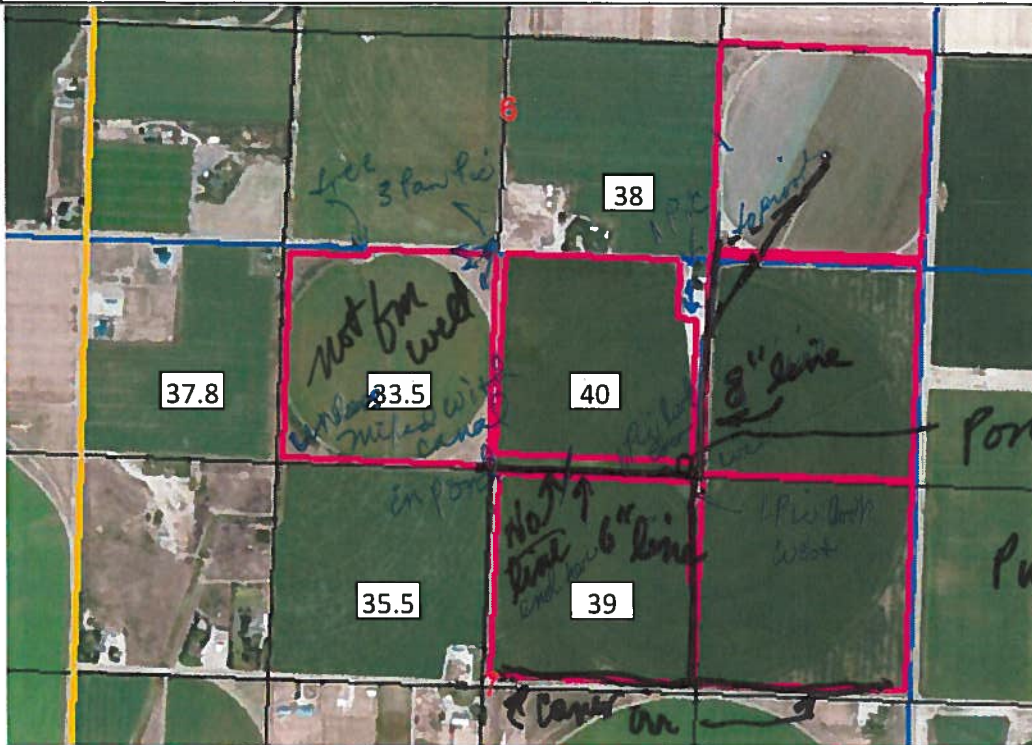
* The transfer limits the three rights to 160 acres when combined. At 4.5 af/ac for the 160 acres the volume limit would be 720 af.
The PPU limit would be 223.8 ac * 4.5 af = 1007.1 af

I am recognizing this permit for

143.8 acres and 1.74 cfs. Although the 143.8 acres includes an 80 acre overlap with 63-2678 I am recommending this permit for **647.1 af**. When the four rights are combined they are limited to **1007.1 af** for irrigation purposes.

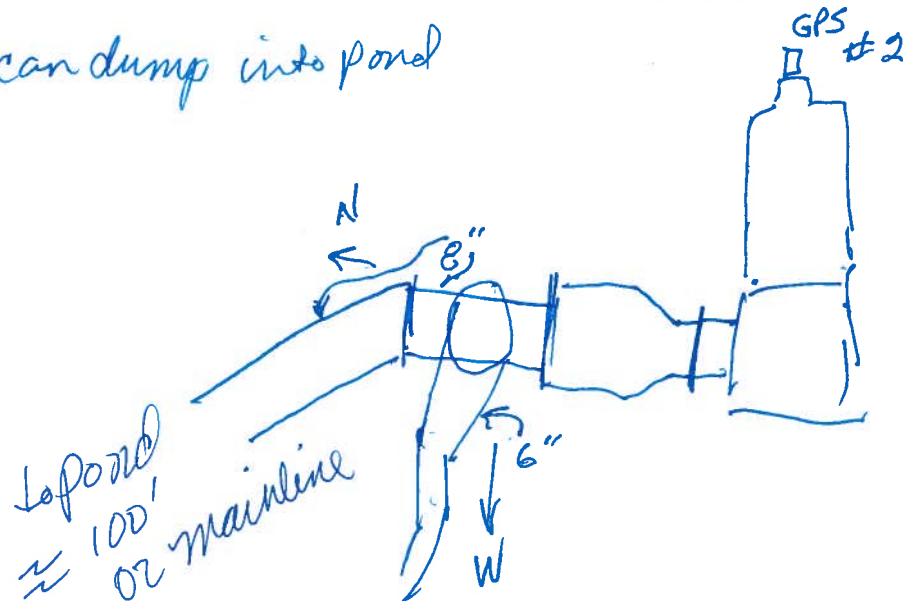
V= (Acres Irrigated) x (Irrigation Requirement) =	143.8 ac	4.5 af	= 647.1 afa
I.R.			
V= [Div Rate (cfs)] x (Days in Irr season) x 1.9835 =	1.74 cfs	* 260 days	* 1.9835 = 897.3 afa
D.R.			

2011 aerial photo



Pond for canal
 water
 Pumped into p.d.

Well water can dump into pond



63-11756 LICENSING PLACE OF USE



★ LOCATION IN BASIN

PLACE OF USE
TWP 04N, RNG 5W Sec 6 & 7
Data Entry on October 23, 2012



- Found point of diversion
- Found place of use
- Township lines
- Section lines
- Quarter/quarter lines

GIS PLACE OF USE PRESENTATION
2011 AERIAL PHOTOGRAPHY
BY KELLY K CHRISTENSEN

Basin 63



63-11756

Exam date 9-28-2012

By Kelly K Christensen

Photo 1

You are looking north in this photo across the POD. The pipeline to the right carries water west to irrigate corners around the Sec 7 NE center pivot.

Pond berm (pond to the left)

West pipeline



Photo 2

This photo is looking west and shows the pipeline running north to either dump into a pond to be combined with canal water and then delivered to the POU. North line



Photo 3

You are looking south in this photo toward the POD. This shows the farmstead not irrigated by the Sec 7 NE center pivot.

Transformer associated with POD



Photo Set 4

You are looking west on the right to south southwest on the left. This shows the NE corner of Sec 7 NENW that is not irrigated.

