

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Claim No: 15-07263
Exam Date: 10/26/2016

1. Current Owner:
CAROL STEVENS 321 N 5400 W MALAD CITY ID 83252
2. Accompanied by: Carol Stevens
Phone No: 520 9430
Relationship to Claim Holder: Same

3. SOURCE:
GROUND WATER

TRIBUTARY:

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 15-2032, 15-2030A (post approval of Transfer 81272, only 15-2030A's child right, 15-7431, will overlap; the remainder of 15-2030A will not).
2. Other water rights with the same point-of-diversion: 15-7421, 15-7262, 15-2030A & 15-2030B (see Memo in Transfer 81272), Post Transfer 81272: 15-2032, 15-7263, and 15-7431 (split from 15-2030A).

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

GROUND WATER SE¼SE¼ Sec. 22, Twp 14S, Rge 35E, B.M. ONEIDA County

Post Approval of Transfer 81272: GROUND WATER NE¼SE¼ Sec 22, Twp14S, Rge 35E, B.M. ONEIDA County.

Method of Determination: GPS and ArcMap

2.

PLACE OF USE: IRRIGATION, after approval of Transfer 81272

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
14S	35E	22													32.0				32.0
14S	35E	23													40.0	40.0	40.0		120.0
14S	35E	26						40.0											40.0

Total Acres: 192

Acre Limit: 80

Method of Determination: Aerial Photography and ArcMap

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.

 X Aerial Photo Attached (required for irrigation of 10+ acres).

 X Photo of Diversion and System Attached

4. Well and System Information

100 HP pump to four ¼ mile wheel lines

D. FLOW MEASUREMENTS

Direct measurements were unable to be taken, so a theoretical calculation is enumerated upon below.

E. FLOW CALCULATIONS

 Additional Computation Sheets Attached

Evidence indicates that in 1949, the system could produce 8.90 cfs.

As discussed in a Memo included in Transfer 81272, the point of diversion for license 15-2030A is the well in the SESE of Section 22, T14S, R35E. The field exam for the licensing of 15-2030 did not contain a direct measurement, but it did state that the "lift from pump to ditch approximately 30 feet." Affidavits submitted with Transfer 81272 indicated that the well had a 60 horse power pump. An attached theoretical measurement demonstrates that a 60 HP pump lifting from 30 feet and discharging into an open ditch can produce 8.90 cfs.

The claim is for 1.11 cfs. As such, the claim will be limited to 1.11 cfs.

On 10/26/2016, the system consisted of one 100 HP pump serving four ¼ mile wheel lines. Each wheel line has 32 sprinklers with 5/32" nozzles. When the system was operating, it maintained a consistent PSI of 55. According to the standard document used by the Department, known as "Sprinkler System Discharge," a 5/32" nozzle at 55 PSI yields 5.39 gpm.

$5.39 \text{ gpm/sprinkler} \times 32 \text{ sprinklers/wheel line} \times 4 \text{ wheel lines/system} = 689.92 \text{ gpm/system.}$

$689.92 \text{ gpm/system} / 448.84 \text{ gpm/cfs} = 1.54 \text{ cfs/system on 10/26/2016.}$

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 80 \text{ acres} \times 3.5 \text{ AFA/acre} = 280 \text{ AFA}$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 1.11 \text{ cfs} \times 1.9835 \times 198 \text{ days/season} = 435.9 \text{ AFA}$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = 280 \text{ AFA}$$

2. Volume Calculations for Other Uses:

G. NARRATIVE/REMARKS/COMMENTS

Have conditions of Claim 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	04/01 to 10/15	1.11 CFS	280.0 AFA
	<u>Totals:</u>	1.110 CFS	280.0 AFA

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 ☒ None

I. AUTHENTICATION

Field Examiner's Name Cooper Fritz Date 12/2/2016

Reviewer _____ Date _____

THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 15-2030 & 15-4006
 Examiner: Cooper
 Date of Field Exam: 7/10/1945

Option 1

P/D No.:

PUMP HORSEPOWER	60
BOOSTER HORSEPOWER	0
PUMPING LEVEL	30
DISCHARGE PRESSURE	5
FRICTION	0
RATE OF FLOW (cfs)	8.90
(gpm)	3992.5

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.

Examiners Notes:

Lift was taken from 1945 field examination. Pump horsepower was ascertained from affidavits submitted with Transfer 81272. Standard PSI of 5 for open discharge.



