

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 63-33280
Exam Date: 5/12/2016

1. Current Owner:
TED CUPP 27515 CONWAY RD CALDWELL ID 83607 (208)989-6114

2. Accompanied by: Current Owner.
Phone No:
Address:
Relationship to Permit Holder:

3. SOURCE:
SAND HOLLOW CREEK

TRIBUTARY:
SNAKE RIVER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: Black Canyon Irrigation District.
2. Other water rights with the same point-of-diversion: None.

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

SAND HOLLOW CREEK SE¼NE¼ Sec. 15, Twp 05N, Rge 04W, B.M. CANYON County

Method of Determination: Garmin GPS collected: 43 46.306W 116 47.634N. Digital PLSS mapping used with point.

2.

PLACE OF USE: DOMESTIC and STOCKWATER

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
05N	04W	15				X													

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	
05N	04W	15				0.5													.5

Total Acres: 0.5

Method of Determination: Irrigation area measured using ArcMap tools and aerial imagery.

3.

Delivery System Diagram Attached (required). Indicate all major components and distances between components.

X Indicate weir size/pipe as applicable.

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.

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

X Photo of Diversion and System Attached

4.

Well or Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
	Unknown	2	Unknown	Typhoon	Unknown

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

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date

2. Measurements: No measurements taken.**E. FLOW CALCULATIONS**

Measured Method:

 X Additional Computation Sheets Attached

0.5 acres * 0.03 cfs/acre = 0.02 cfs.

$$Q = \frac{8.8 * (\text{Efficiency}) * \text{hp}}{\text{depth to water} + 2.31 * (\text{psi}) + \text{friction}}$$

Efficiency = 0.70

Depth to water = 15 ft.

psi = 40-60

hp = 2

See attached theoretical sheet.

Theoretical Calculation = 0.10 cfs

Permit	0.06 cfs
B.U. Standard Allowance	0.02 cfs Irrigation Use, 0.04 for Domestic and 0.02 for Stockwater
B. U. Proof Fee	\$50 → 0.01 to 0.20 cfs
Measurement or Theoretical Rate	0.10 cfs
License Recommendation	0.06 cfs

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 0.5 \text{ acres} \times 4.5 \text{ af/acre} = 2.3 \text{ af}$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.02 \text{ cfs} \times 260 \times 1.9835 = 10.3 \text{ af}$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = 2.3 \text{ af}$$

2. Volume Calculations for Other Uses:

Stockwater - Per administrative memo #3, 0.7 af for up to 50 head of stock.Domestic (dust control) - 2 garden hoses @ 10 g/min * 60 min/hr * 1 hr/d * 365 d = 219,000 g = 0.6 af**G. NARRATIVE/REMARKS/COMMENTS**

Field exam was completed on May 12, 2016 by agent Patrick Kelly and was accompanied by Phil Hummer of IDWR and current permit owner Ted Cupp. Current county taxlot information indicates that Mr. Cupp is current property owner to 27515 Conway Rd in Caldwell.

A 2 hp submersible pump is located in Sand Hollow Creek adjacent to the north boundary of the property. The pump is cased in a screened barrel in the middle of the creek that runs through a 1.25" PVC pipe to the outside yard hydrant. A GPS using a Garmin device was collected at the pump site (43 46.306W 116 47.634N). Information about the specific type of pump and motor used was not accessible during the visit. A Typhoon pump label was discovered, but did not provide any additional information. Mr. Cupp stated it was a 2 hp pump. No POD overlap exists at this location.

Stock were not present during the field exam. The permit owner stated that he has had as many as 50 mixed stock on the property at one time in the past. Admin memo #3 recommends a diversion rate of 0.02 cfs and 0.7 af for this use. Because stockwater gets an annual volume, the domestic and irrigation use will get a total annual volume as well.

The Domestic POU is used in the corral area behind the home for dust abatement. The use is limited to 2,500 gpd by domestic definition, however it is unreasonable to assume this volume is used every day of the year. If we considered dust abatement practices by two hoses for a total of an hour a day, the use would reflect an average of 600 gallons per day; 0.7 af annually. This may be a high recommendation since he does not dust control every day of the year, however it represents a safe average use.

Irrigation use is for 0.5 acre of yard and garden surrounding the home. A total of 4 sprinklers are installed utilizing a garden hose delivery. Overlapping irrigation rights pertinent to large irrigation districts are present. Mr. Cupp stated irrigation shares were not used on the property.

A theoretical was completed using a 2 hp pump. Lift is estimated to be about 15 feet from the pump location up to the high point on the property. A range of pressures were assumed of common sprinkler irrigation systems (40-60 psi). Theoretical equates to 0.10 cfs. The total diversion rate is based on the potential use divert all 3 uses at the same time; 0.06 cfs.

The permit was conditioned with a measuring device and lockable control required. A permanent measuring device was not installed on the system, but a lockout on the power source gave any watermaster control. A waiver was received to waive or modify this condition based on the cause that the department does not regularly require such an action on systems less than 0.20 cfs. A comment letter will be sent to the watermaster to provide comment or to object to such a request. If no response is received, the condition will be modified to reflect upon further notification from the watermaster, a measuring device shall be installed.

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	03/01 to 11/15	0.02 CFS	2.3 AF
STOCKWATER	01/01 to 12/31	0.02 CFS	0.7 AF
DOMESTIC	01/01 to 12/31	0.02 CFS	0.7 AF
<u>Totals:</u>		0.06 CFS	3.7 AF

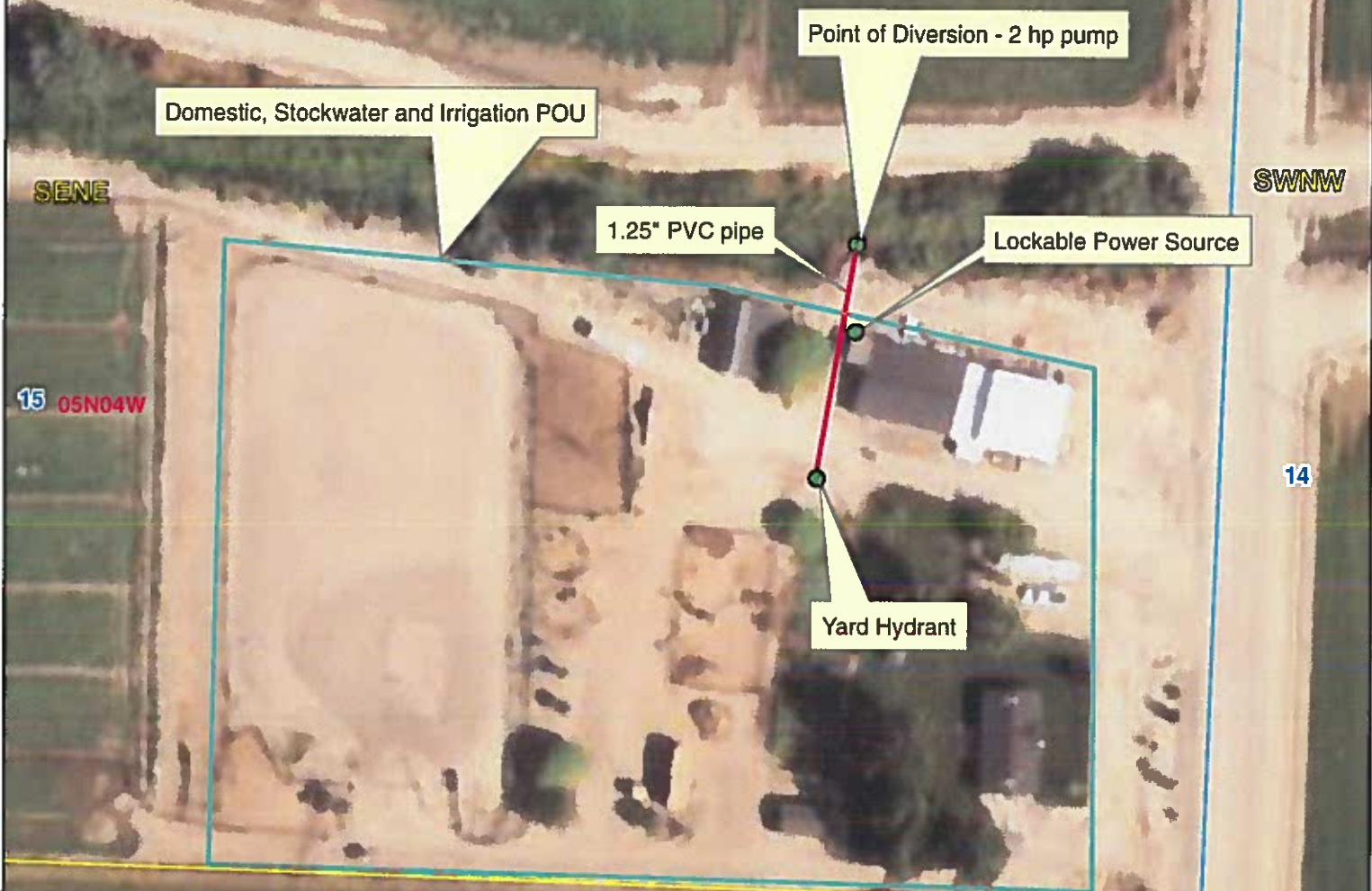
2. Recommended Amendments

☐ 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 Patrick Kelly Date 5-12-2016
 Reviewer _____ Date _____

63-33280 System Diagram



NESE

NWSW

THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 63-33280
 Reviewer: Patrick Kelly
 Date of Review: 5/12/2016

P/D No.:	Senerio 1	Senerio 2	Senerio 3
PUMP HORSEPOWER	2	2	2
BOOSTER HORSEPOWER	0	0	0
PUMPING LEVEL	15	15	15
DISCHARGE PRESSURE	40	50	60
RATE OF FLOW (cfs)	0.11	0.09	0.08 0.10

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

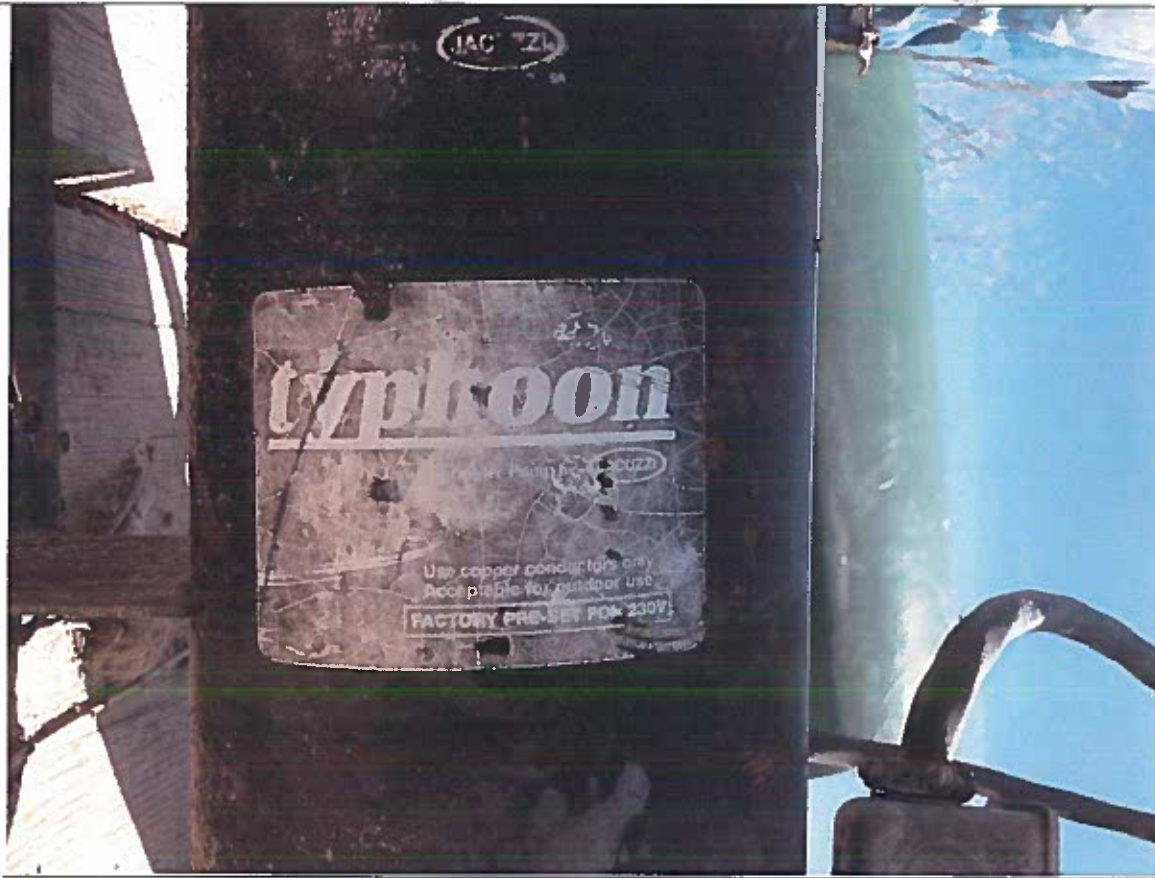
Examiners Notes:

A theoretical was completed using a 2 hp pump. Lift is estimated to be about 15 feet from the pump location up to the high point on the property. A range of pressures were assumed of common sprinkler irrigation systems (40-60 psi). Theoretical average flow rate is 0.10 cfs.



Diversion out of
Sand Hollow
Creek.





Typhoon Pump tag.



Power source with lockable control.