

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 43-13680

Exam Date: 3/14/2014

1. Current Owner: WILLIAM K WICKEL
1726 SOUTH ELBA ALMO RD
ELBA ID 83342
(208) 638-5576
2. Accompanied by: William (Bill) K. Wickel

3. **SOURCE**

UNNAMED SPRING

TRIBUTARY

CASSIA CREEK

B. OVERLAP REVIEW

1. Other water rights with the same place of use: Irrigation rights: 43-362; 43-363; 43-364; 43-365; 43-366; 43-367; 43-75; 43-76; 43-77; 43-81 and 43-7103.
2. Other water rights with the same point of diversion: N/A

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

UNNAMED SPRING

NW1/4SW1/4NW1/4

Sec. 23, Twp 13S, Rge 25E, B.M.

CASSIA County

Method of Determination: Waypoints were collected with a Garmin GPSmap 60CSx receiver and downloaded into an ArcMap shapefile that corresponds with 2011 and 2013 aerial photography and verified the points of diversion are located as recorded. See attached map.

2.

PLACE OF USE: STOCKWATER

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	
13S	25E	23							X										

Method of Determination: Place of use determined using 2013 aerial photography and verified the place of use is located as recorded. See attached map.

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 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>
	Grundfos	1/2			

D. FLOW MEASUREMENTS

1. Measurements: No measurement required per current beneficial use examination rules.

E. FLOW CALCULATIONS:

Measured Method:

Theoretical Yield:

$$Q = \frac{8.8 \times (\text{Hp}) \times (\text{Eff})}{H}$$

Where: Hp = 0.5 Hp

Eff = efficiency = 70% assumed

H = total head = pumping level = (2.31 x system pressure)

Assume pumping level of 1 foot (spring box approximately 1' below water surface in spring with system sealed to above ground pump)

Assume system pressure = 30psi

$$H = 1 + (30 \times 2.31) = 70.3$$

$$Q = \frac{8.8 \times 0.5 \times .70}{70.3} = 0.44 \text{ cfs}$$

F. VOLUME CALCULATIONS

1. Volume Calculations for Stockwater use equal to or less than 13,000 gpd are not required per current beneficial use examination rules.

G. NARRATIVE/REMARKS/COMMENTS

Permit 43-13680 is for 0.04 cfs stockwater in a trough system supplied water from a spring source.

Application for permit 43-13680 submitted by William K. Wickel was filed on 6/7/2010 and proof of beneficial use was submitted 12/3/2013. The permit had lapsed on 10/1/2013 as the applicant failed to file proof of beneficial use by the due date. An order was issued reinstating the permit and the priority date was advanced to the date proof of beneficial use was submitted (12/3/2013).

An on-site visit was required to verify the actual location of the point of diversion as review of satellite imagery in Google Earth indicated the permitted point of diversion was recorded in the wrong 10 acre tract and also to verify there was a lockable device present on the system.

With assistance from the NRCS, Mr. Wickel developed a stockwater trough system to divert water from a spring out to eight 200 gallon troughs using a springbox; an 0.5 Hp pump and 1.25" polyethylene pipeline that is approximately a quarter mile in length. The first two troughs on the system are currently not in use and aren't equipped with automatic shut off valves as required by a condition on the permit. The other six troughs have float valves and are operational. I was not able to obtain a flow measurement as the limited depth of the troughs and float valves made it difficult to use a bucket to capture flow using a timed measurement. An included theoretical yield equation indicates the potential to pump 0.44 cfs from the spring.

There is a watertight electrical box with an electrical breaker circuit on a post near the pump that supplies power to the system pump. On the bottom of the electrical box there are holes present to allow a hasp lock to be placed on the box and prevent access to the breaker if needed (see figure 4), meeting the requirements of a lockable device as stated in condition 01H on the permit and condition R02 on the license.

The point of diversion is located in the NWSWNW1/4 of Twp 13S, Rge 25E, S13, and not in the SWSWNW1/4 as permitted. An application for amendment was processed to correct the legal description for the point of diversion.

There is no place of use overlap with any other stockwater rights and the point of diversion only supplies water for this stockwater use. Place of use does overlap with irrigation water rights: 43-362; 43-363; 43-364; 43-365; 43-366; 43-367; 43-75; 43-76; 43-77; 43-81 and 43-7103.

Recommend licensing 0.04 cfs, limited to 13,000 gpd for stockwater use.

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

H. RECOMMENDATIONS

1. Recommended Amounts

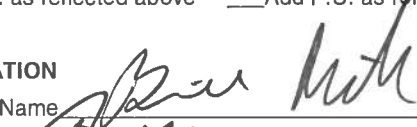
<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>
STOCKWATER	01/01 to 12/31	0.040 CFS
<u>Totals:</u>		0.040 CFS

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  Date 4-10-14

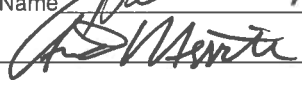
Reviewer  Date 6/3/14



Figure 1: Outlet from springbox and 1.25" polyethylene pipe out to pump.

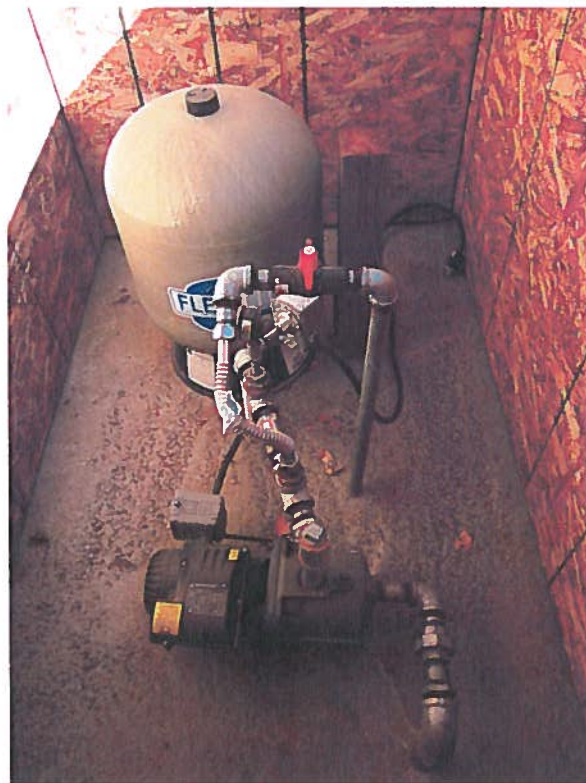


Figure 2: Pump and pressure tank.



Figure 3: Trough.

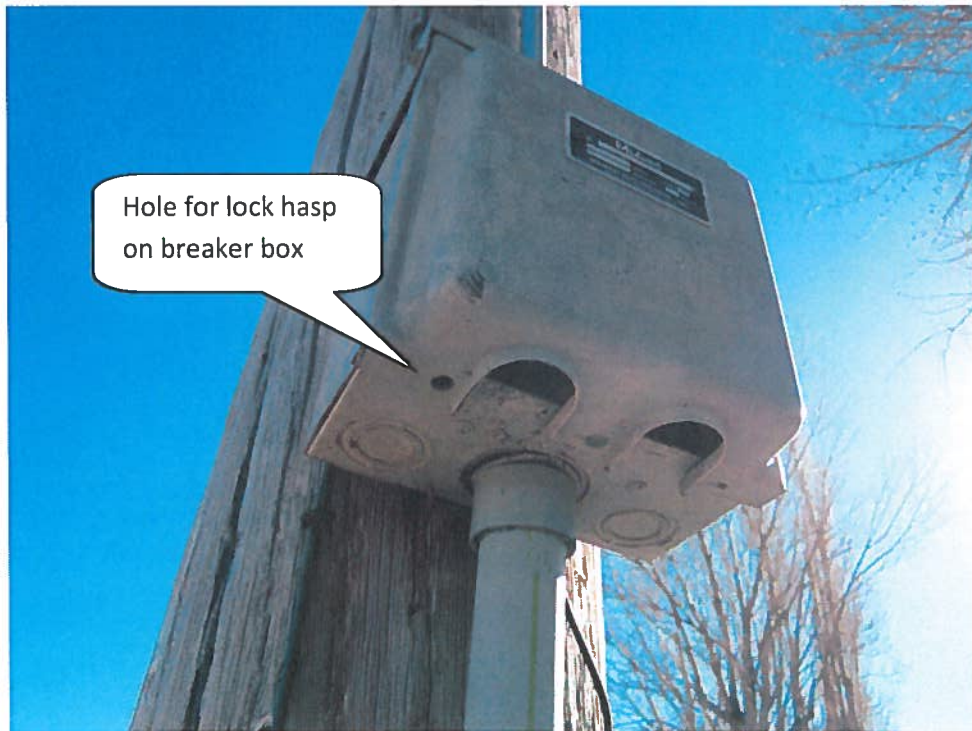


Figure 4: Electrical box and holes on bottom left side for locking.

System Diagram



State of Idaho
Department of Water Resources

Attachment To Water Right License

43-13680

This map depicts the STOCKWATER place of use boundary for this water right at the time of this approval and is attached to the approval document solely for illustrative purposes.



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

0 0.0375 0.075 0.15 Miles

