

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 45-14411

Exam Date: 5/18/2012

1. Current Owner: UNITED STATES OF AMERICA ACTING THROUGH
USDI BUREAU OF LAND MANAGEMENT
IDAHO STATE OFFICE
1387 S VINNELL WAY
BOISE ID 83709-1657
(208) 373-4000

2. SOURCE

TRAIL SPRING

TRIBUTARY

SINKS

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 45-12535 and 45-12800
2. Other water rights with the same point of diversion: 45-12535

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

TRAIL SPRING

NE1/4NW1/4SE1/4

Sec. 15, Twp 12S, Rge 24E, 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 2009 and 2011 aerial photography and verified the point of diversion to be in Twp 12S Rge 24E S 15, NENWSE¼. See attached map.

2.

PLACE OF USE: WILDLIFE

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
12S	24E	15														X			

PLACE OF USE: 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	
12S	24E	15														X			

Method of Determination: Waypoints were collected with a Garmin GPSmap 60CSx receiver and downloaded into an ArcMap shapefile that corresponds with 2009 and 2011 aerial photography and verified the place of use to be in Twp 12S Rge 24E S 15, NENWSE¼. See attached map.

3. ☒ 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

D. FLOW MEASUREMENTS

1.

Measurement

<u>Equipment</u>	<u>Type</u>	<u>Make</u>	<u>Model No.</u>	<u>Serial No.</u>	<u>Size</u>	<u>Calib. Date</u>
5 gallon bucket and stop watch						

2. Measurements:

1 gallon of water was collected in 59.92 seconds which is approximately 0.002 cfs.

E. FLOW CALCULATIONS☐ Additional Computation Sheets Attached

Measured Method: Hazen Williams Full Pipe Flow Calculation:

$$Q = 0.432 C_1 D^{2.63} S^{0.54}$$

Where:

C₁ = roughness coefficient

D = Diameter in feet

S = Slope

S = 6' elevation drop / 59.8' distance = 0.10

C₁ = 140 (coefficient for polyethylene)

D = 0.104' (1.25" polyethylene)

Q = 0.045 cfs

F. VOLUME CALCULATIONS None**G. NARRATIVE/REMARKS/COMMENTS**

Permit 45-14411 is for 0.02 cfs stockwater and wildlife. Source is a spring referred to as Trail Spring tributary to sinks.

Application for permit 45-14411 was submitted by the US Dept of Interior, Bureau of Land Management on March 01, 2012, and proof of beneficial use was received on April 18, 2012.

Trail Spring is located approximately 2.3 miles south and 2.8 miles west of Albion. Point of diversion and place of use are located in the NENWSE¼ of Sec. 15, Twp 12S, Rge 24E and are within Water District 45F boundaries. The trough system consists of a spring box, 1.25" polyethylene pipe, a trough and an overflow pipe. According to the application for permit, up to 86 range cattle and varying numbers of wildlife use the water source.

On the day of the field exam there was a small amount of flow through the delivery system, which was measured to be approximately 0.002 cfs. Because this application was filed on an existing system after the BLM replaced a rusted out trough, and there was ample spring flow present at the springs to provide the 0.02 cfs of water requested on the permit, and no control valve was present to restrict water flow, I'm making the assumption the system was poorly maintained and likely clogged with sediment. Therefore, I'm basing my recommendation on the systems potential water delivery which was estimated to be approximately 0.045 cfs using the Hazen Williams Full Pipe Flow Calculation.

Recommend licensing a total of 0.02 cfs for stockwater and wildlife use.

H. RECOMMENDATIONS

2. Recommended Amendments

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

Field Examiner's Name [Signature] Date 10/17/12
Reviewer [Signature] Date 10/17/12



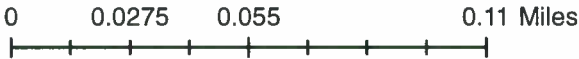
Figure 1: Trough



Figure 2: Trough and spring

State of Idaho
Department of Water Resources
Attachment To Water Right License
45-14411

This map depicts the WILDLIFE 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

