

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 37-8928

Exam Date: 4/17/2012

1. Current Owner: US DEPT OF INTERIOR
BUREAU OF LAND MANAGEMENT
400 WEST F ST
SHOSHONE ID 83352
(208)732-7200

2. SOURCE

UNNAMED STREAM

TRIBUTARY

Calf Creek

B. OVERLAP REVIEW

1. Other water rights with the same place of use: None
2. Other water rights with the same point of diversion: None

C. DIVERSION AND DELIVERY SYSTEM

1. LOCATION OF POINT(S) OF DIVERSION:

UNNAMED STREAM

SE1/4NE1/4

Sec. 15, Twp 03S, Rge 12E, B.M.

GOODING County

Method of Determination: Waypoints were collected with a Garmin GPS map 76S receiver and downloaded into an ArcMap shapefile that corresponds with 2009 aerial photography and verified the point of diversion to be in Twp 03S Rge 12E S 15 SENE¼. See attached map.

2.

PLACE OF USE: STOCKWATER STORAGE

[illegible]

PLACE OF USE: WILDLIFE STORAGE

[illegible]

Method of Determination: Tracks were collected with a Garmin GPS map 76S receiver and downloaded into an ArcMap shapefile that corresponds with 2009 aerial photography and verified the point of diversion to be in Twp 03S Rge 12E S 15 SENE¼. 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 None

E. FLOW CALCULATIONS None

F. VOLUME CALCULATIONS

1. Volume Calculations for Other Uses: Stockwater Storage and Wildlife Storage:

Surface area of reservoir = **0.3 acres**

Determined using 2009 aerial photography and 2010 satellite imagery in Arcmap.

Reservoir Capacity = **1.4 AF**

Determined using flat bottom reservoir equation from IDWR Field Examiners Handbook and information provided in permit application.
(Capacity = Surface area x Maximum Depth)
0.3 acres x 4.5 feet = 1.4 AF

Potential Stock and Wildlife Use:

$[(1500 \text{ cattle} \times 12 \text{ gpd}) + (5300 \text{ sheep} \times 2 \text{ gpd})] \times 182 \text{ days} / 325850 = 16 \text{ AF}$ (Based on a potential 6 month grazing season)

$30 \text{ wild ungulates} \times 12 \text{ gpd} \times 365 \text{ days} / 325850 = 0.40 \text{ AF}$

Total: $21.9 \text{ AF} + 0.40 \text{ AF} = \underline{16.4 \text{ AF}}$

G. NARRATIVE/REMARKS/COMMENTS

Permit 37-8928 is for stockwater storage and wildlife storage. Source is an unnamed stream and storage reservoir is referred to as Sheet Cake Reservoir.

Application for permit 37-8928 submitted by US Department of the Interior, Bureau of Land Management was received on September 1, 2000 and Proof of Beneficial Use was submitted on the same day.

Sheet Cake Reservoir is located approximately 11.2 miles west and 12.4 miles south of Fairfield. Runoff flows from a seasonal unnamed stream and collects in an excavated on-stream pit type reservoir. Reservoir capacity is estimated to be 1.1 acre feet. This reservoir was apparently "discovered" by BLM personnel that were performing field verification of SRBA water right claims.

According to the application for permit up to 1500 range cattle and 5300 range sheep potentially utilize this water source. Potential stock and wildlife use was calculated at 16.4 AF, exceeding the 1.4 AF reservoir capacity. Calculations were based on stock numbers listed on the permit and a number of wild ungulates thought to represent the size of an average deer herd. Evidence of use by range cattle was present. Evidence of use by wildlife was abundant and approximately 17 head of deer were grazing adjacent to the reservoir on the day of the exam.

Precipitation deficit data from the University of Idaho ET website indicates a mean of 679 mm (2.23 AF) per acre for small stockwater ponds in the Hill City area. Based on the calculated surface area of 0.3 acres, this indicates that approximately 0.7 AF could potentially evaporate from the reservoir each year.

Legal description for the point of diversion lists the location in the SWSENE1/4, but the reservoir actually straddles the line between the SW and SE 10 acre tract and the point of diversion lies in the SESENE1/4. Legal description was changed to the 40 acre tract, SENE1/4, to correct this.

The application for permit requested 2.0 AF. As the reservoirs storage capacity is estimated at 1.4 acre feet, 0.6 AF of potential evaporative losses will be included in the recommended volume for a total of 2.0 AF.

Recommend permitting an annual volume of 2.0 AF.

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

H. RECOMMENDATIONS

1. Recommended Amounts

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>ANNUAL VOLUME</u>
STOCKWATER STORAGE	01/01 to 12/31	2.00 AF
WILDLIFE STORAGE	01/01 to 12/31	2.00 AF
<u>Totals:</u>		2.00 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

Date

Reviewer

Date

Bill McK
Chris Menzies

4-20-2012
4/24/2012



Figure 1: Sheet Cake Reservoir from the northeast with mule deer present in the background.



Figure 2

State of Idaho
Department of Water Resources
Water Right License

37-8928

Water Service Area Boundary for Us Dept Of Interior



0 0.03 0.06 0.12 Miles

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

