

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 37-8940

Exam Date: 11/15/2011

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

- | | |
|------------------|------------------|
| 2. <u>SOURCE</u> | <u>TRIBUTARY</u> |
| UNNAMED STREAM | SINKS |

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 SYSTEM1. LOCATION OF POINT(S) OF DIVERSION:

UNNAMED STREAM NE1/4NE1/4SW1/4 Sec. 25, Twp 01S, Rge 18E, B.M.
BLAINE 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 01S Rge 18E S 25 NENESW¼. See attached map.

2.

PLACE OF USE: STOCKWATER STORAGE

Twp Rge Sec	NE				NW				SW				SE				Totals
	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
01S 18E 25									X								

PLACE OF USE: WILDLIFE STORAGE

Twp Rge Sec	NE				NW				SW				SE				Totals
	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
01S 18E 25									X								

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 place of use to be in Twp 01S Rge 18E S 25 NESW¼. 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 N/A

E. FLOW CALCULATIONS N/A

F. VOLUME CALCULATIONS

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

Surface area of reservoir = 0.04 acres

Determined using 2009 aerial photography and 2010 satellite imagery in Arcmap, and loading collected GPS tracks into ArcMap.

Reservoir Capacity = 0.2 AF

Determined using flat bottom reservoir equation from IDWR Field Examiners Handbook and information provided in permit application.
(Capacity = Surface area x Maximum Depth)
0.04 acres x 4 feet = 0.16 AF

Potential Stock and Wildlife Use:

(174 cattle x 12 gpd) x 275 days/ 325850 = 1.8 AF (Based on a potential 9 month grazing season)

30 wild ungulates x 12 gpd x 365 days/ 325850 = 0.40 AF

Total: 1.8 AF + 0.40 AF = 2.2 AF

G. NARRATIVE/REMARKS/COMMENTS

Permit 37-8940 is for stockwater storage and wildlife storage. Source is an unnamed stream and storage reservoir is referred to as Hash Brown Reservoir #2.

Application for permit 37-8940 submitted by the US Dept of Interior, Bureau of Land Management was received on September 01, 2000 and proof of Beneficial Use was submitted the same day.

Hash Brown Reservoir #2 is located approximately 10.5 miles south and 0.3 miles west of Bellevue. Point of diversion and place of use are located in the NENESW¼ of Sec. 25, Twp 01S, Rge 18E. Ephemeral runoff flows/seeps from an unnamed stream and collects in a small basin with a manmade embankment to capture the run off. Reservoir capacity is estimated to be 0.2 acre feet.

According to the application for permit, up to 174 range cattle and varying numbers of wildlife use the water source. As this is a small desert reservoir that captures ephemeral flows from spring snow melt and runoff from storms, water is likely to be present in reservoir from spring into midsummer and after major rain events. Precipitation deficit data from the University of Idaho ET website indicates a mean of 695 mm (2.28 AF) per acre for small stockwater ponds in the Magic Dam area. Based on the calculated surface area of 0.2 acres, this indicates that approximately 0.1 AF could potentially evaporate from the reservoir each year. Where the permit for this reservoir is for wildlife and stockwater storage with no measurable flow rate, it should suffice to indicate that beneficial use is established by livestock and wildlife use, regardless of numbers and potential consumption rates. However, I did calculate numbers using those provided by the BLM and an assumed average of 30 ungulates for wildlife. Based on those numbers, the potential for

water consumption by livestock and wildlife was estimated to be 2.2 AF, which exceeds the reservoirs capacity. There was evidence of use by range cattle and elk at the reservoir on the date of the field exam.

The application for permit requested 1.0 AF which was based on a much larger reservoir design with a surface area of 0.08 acres rather than the actual constructed reservoir with a surface area of 0.2 acres at maximum capacity. Evaporative losses of 0.1 AF will be included in the recommended volume for a total of 0.3 AF.

Recommend permitting an annual volume of 0.3 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	0.3 AF
WILDLIFE STORAGE	01/01 to 12/31	0.3 AF
<u>Totals:</u>		0.3 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 Bill Miller Date 1-13-2012

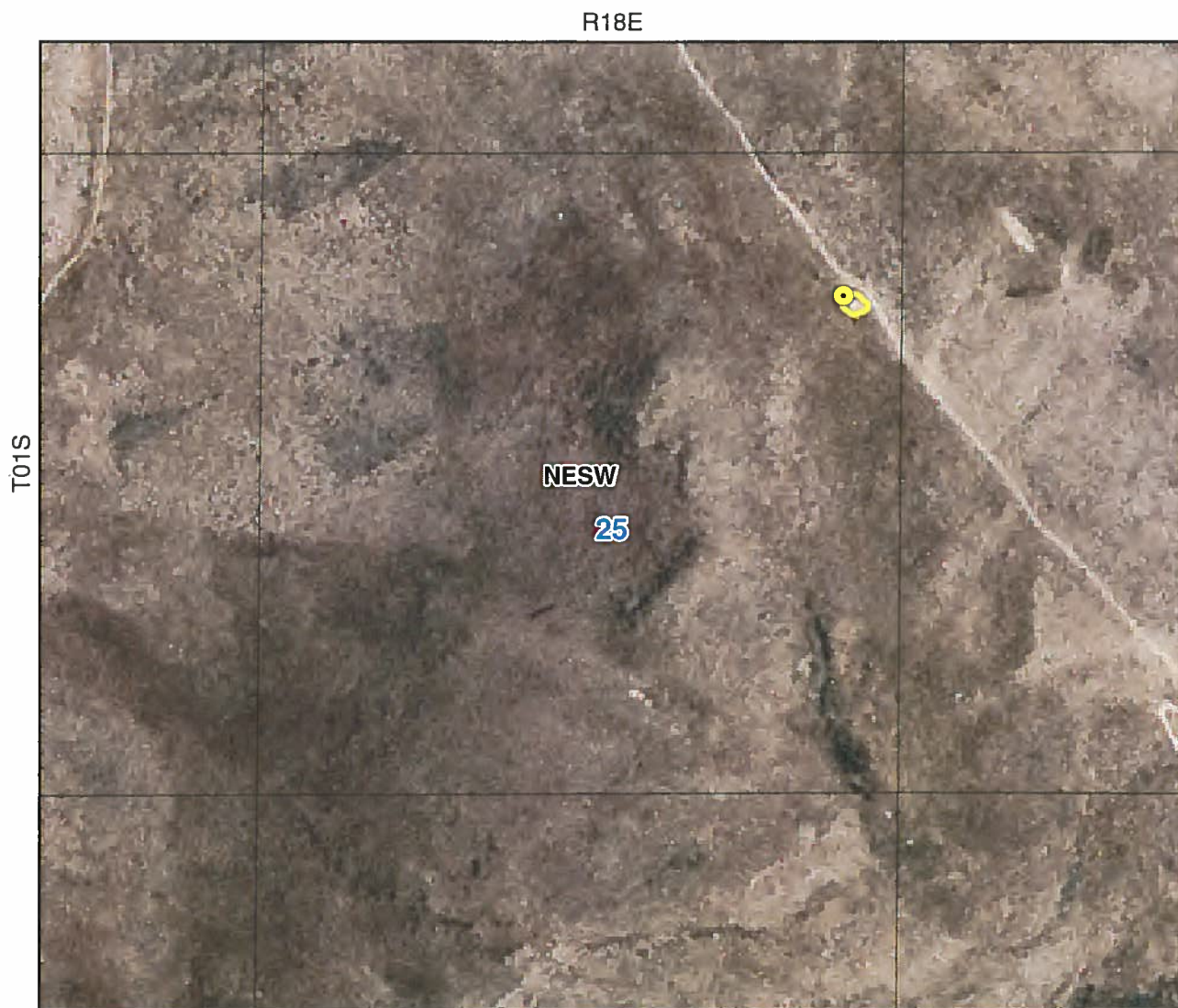
Reviewer [Signature] Date 1/17/2012



Figure 1: Hash Brown Reservoir # 2.

State of Idaho
Department of Water Resources
Water Right License
37-8940

Water Service Area Boundary for Us Dept Of Interior



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

0 0.045 0.09 0.18 Miles

