

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 37-8923

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. SOURCE TRIBUTARY
UNNAMED STREAM SINKS

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 37-18962 (in-stream stockwater; 0.02 cfs; BLM)
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 NW1/4SE1/4SE1/4 Sec. 20, Twp 02S, Rge 17E, B.M.
CAMAS 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 02S Rge 17E S 20 NWSESE¼. 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	
02S	17E	20													X				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	
02S	17E	20													X				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 02S Rge 17E S 20 NESE¼ and SESE¼. 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 = 0.08 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)
0.08 acres x 2.5 feet = 0.2 AF

Potential Stock and Wildlife Use:

$[(3100 \text{ cattle} \times 12 \text{ gpd}) + (1000 \text{ sheep} \times 2 \text{ gpd})] \times 182 \text{ days} / 325850 = 21.9 \text{ AF}$ (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: $21.9 \text{ AF} + 0.40 \text{ AF} = \underline{22.3 \text{ AF}}$

G. NARRATIVE/REMARKS/COMMENTS

Permit 37-8923 is for stockwater storage and wildlife storage. Source is an unnamed stream and storage reservoir is referred to as Curve Reservoir.

Application for permit 37-8923 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.

Curve Reservoir is located approximately 3.4 miles west and 6.9 miles south of the West Shore Subdivision at Magic Reservoir. Point of diversion is located in the NWSESE¼ of Sec. 20, Twp 02S, Rge 17E and place of use is located in the NESE¼ and SESE¼ of Sec. 20, Twp 02S, Rge 17E. 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 3100 range cattle, 1000 sheep and varying numbers of wildlife could potentially use the water source. The reservoir is situated in what appears to be an ephemeral drainage where water is likely to be present in the reservoir from spring into midsummer, but water was present (in the form of ice) on the day of the field exam on November 15, 2011. 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 0.5 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, beneficial use is established by livestock and wildlife use, regardless of numbers and potential consumption rates. Potential livestock and wildlife use was estimated

utilizing stock numbers 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 22.3 AF, which exceeds the reservoirs capacity. There was evidence of use by range cattle at the reservoir on the date of the field exam and 10 head of livestock are clearly visible at the reservoir in 2010 Bing satellite imagery.

The application for permit requested 0.3 AF. As the reservoirs storage capacity is estimated at 0.2 acre feet, 0.1 AF of potential evaporative losses 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	0.30 AF
WILDLIFE STORAGE	01/01 to 12/31	0.30 AF
<u>Totals:</u>		0.30 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 11/15/11
Reviewer Chris Mente Date 2/27/12



Figure 1: Aerial photo of Curve Reservoir

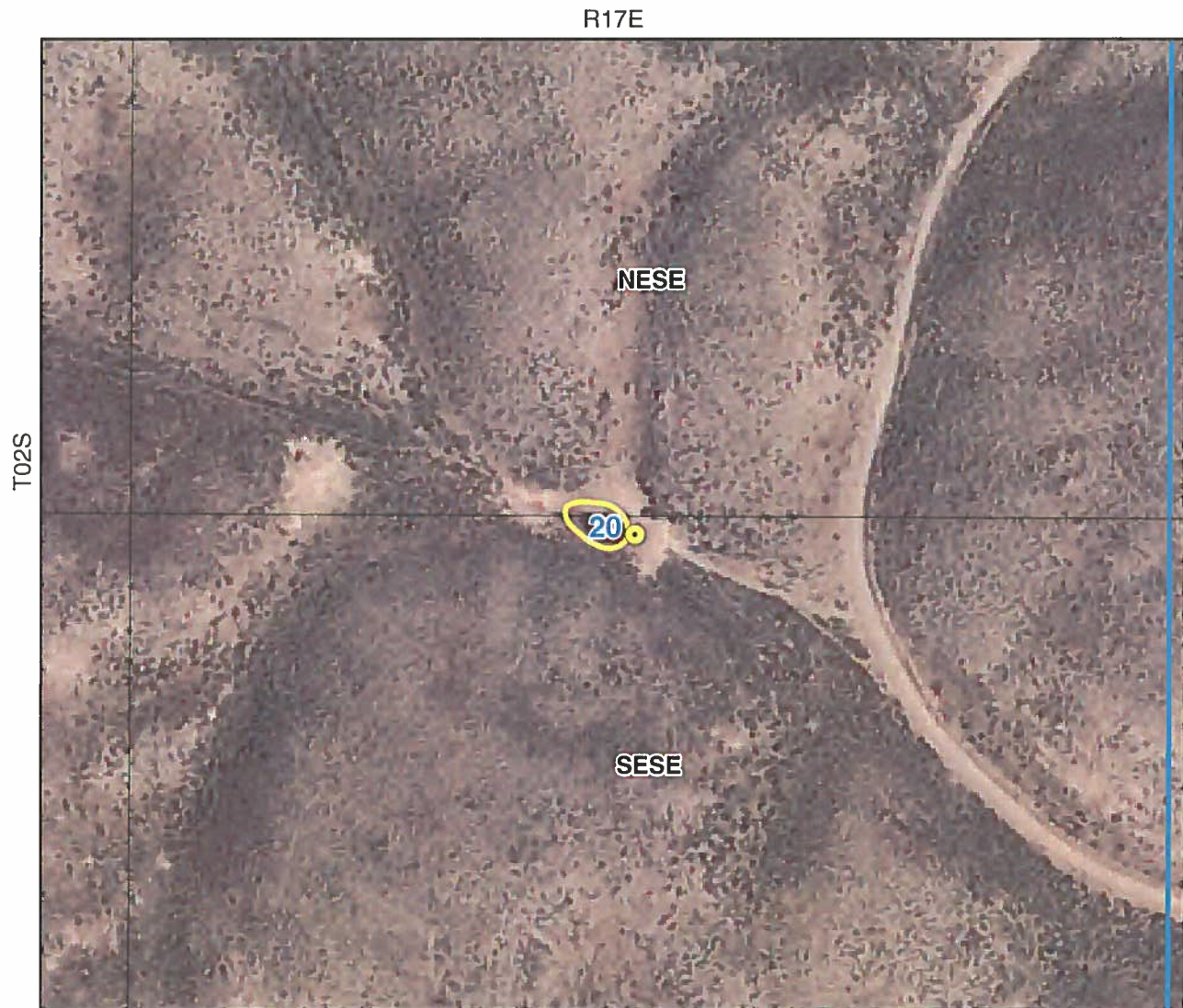


Figure 2: Curve Reservoir on 11/15/2011

State of Idaho
Department of Water Resources
Water Right License

37-8923

Water Service Area Boundary for Us Dept Of Interior



0 0.0275 0.055 0.11 Miles

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

