

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 37-8922

Exam Date: 12/14/2011

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

3. **SOURCE**

THORN CREEK

TRIBUTARY

BIG WOOD RIVER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 37-18743 (in-stream stockwater right; BLM)
2. Other water rights with the same point of diversion: None

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

THORN CREEK	SE1/4NE1/4NW1/4	Sec. 29,	Twp 02S,	Rge 16E, B.M.
CAMAS County				
THORN CREEK	NW1/4NE1/4NE1/4	Sec. 29,	Twp 02S,	Rge 16E, 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 points of diversion to be in Twp 02S Rge 16E S 29 SENENW¼ and NWNENE¼. See attached map.

2.

PLACE OF USE: STOCKWATER STORAGE

Twp	Rge	Sec	NE				NW				SW				SE				
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	Totals
02S	16E	29	X				X												

PLACE OF USE: WILDLIFE STORAGE

Twp	Rge	Sec	NE				NW				SW				SE				
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	Totals
02S	16E	29	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 places of use to be in Twp 02S Rge 16E S NENW¼ and NENE¼. 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 N/A****1. Volume Calculations for Other Uses: Stockwater/Wildlife Storage:**

Surface area of reservoir in NENW = 1.0 acres
 Surface area of reservoir in NENE = 0.3 acres

Determined using 2009 aerial photography and 2010 satellite imagery in Arcmap, and GPS tracks collected during field exam and loaded into an ArcMap shapefile.

Reservoir Capacity NENW = 4.0 AF
 Reservoir Capacity NENE = 1.575 AF
 Total= 5.6 AF

Determined using flat bottom reservoir equation from IDWR Field Examiners Handbook and information provided in permit application.
 (Capacity = Surface area x Maximum Depth)
 NENW: 1.0 acres x 4.0 feet = 4.0 AF
 NENE: 0.3 acres x 5.25 feet = 1.575

Potential Stock and Wildlife Use:

$[(3,100 \text{ cattle} \times 12 \text{ gpd}) + (1,000 \text{ sheep} \times 2 \text{ gpd})] \times 185 \text{ days} / 325850 = 22.3 \text{ AF}$ (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: $4.7 \text{ AF} + 0.40 \text{ AF} = \underline{22.7 \text{ AF}}$

G. NARRATIVE/REMARKS/COMMENTS

Permit 37-8922 is for stockwater and wildlife storage of 5.6 AF. Source is Thorn Creek and the storage reservoirs are referred to as Upper Meadow Reservoirs.

Application for permit 37-8922 submitted by the US Dept of Interior, Bureau of Land Management was received on September 1, 2000. Proof of Beneficial Use submitted on the same date.

The Upper Meadow Reservoirs are located approximately 14.5 miles north and 6.4 miles east of Gooding. The NENW reservoir was originally constructed as a sediment trap on upper Thorn Creek following a destructive fire and has since become an important place of use for migratory waterfowl. The reservoir in the NENE was constructed in a low spot where water collected prior to entering culverts diverting water under a roadway. Waters that passed through the culverts would then follow the watercourse into the reservoir in the NENW. Both reservoirs capture mostly seasonal runoff and ephemeral spring flows at the head of the Thorn Creek drainage. The reservoirs have a combined surface area of approximately 1.3 acres.

The application for permit states that up to 3100 range cattle and 1000 sheep may be present on this range. Precipitation deficit data from the University of Idaho ET website calculates 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 1.3 acres, this indicates that approximately 3.0 AF could potentially evaporate from the reservoirs each year. Where the permit for this reservoir is for wildlife and stockwater storage with no measurable flow rate, it should suffice to suggest that beneficial use is established by livestock and wildlife use, regardless of numbers and potential consumption rates. Using livestock numbers provided by the BLM and an assumed average of 30 ungulates for wildlife use, consumption was estimated to be 22.7 AF, which far exceeds the reservoirs capacity. There was evidence of use by range cattle, deer, coyote, fox and hare at the reservoirs on the date of the field exam.

Recommend permitting an annual volume of 5.6 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	5.60 AF
WILDLIFE STORAGE	01/01 to 12/31	5.60 AF
<u>Totals:</u>		5.60 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

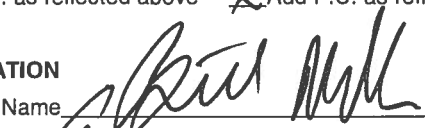
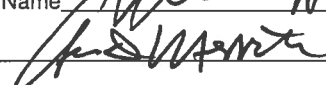
Field Examiner's Name  Date 2-6-2012
Reviewer  Date 2/7/2012



Figure 1: View from north side of NENW reservoir looking southeast.



Figure 2: View from South side of NENW reservoir looking northeast.

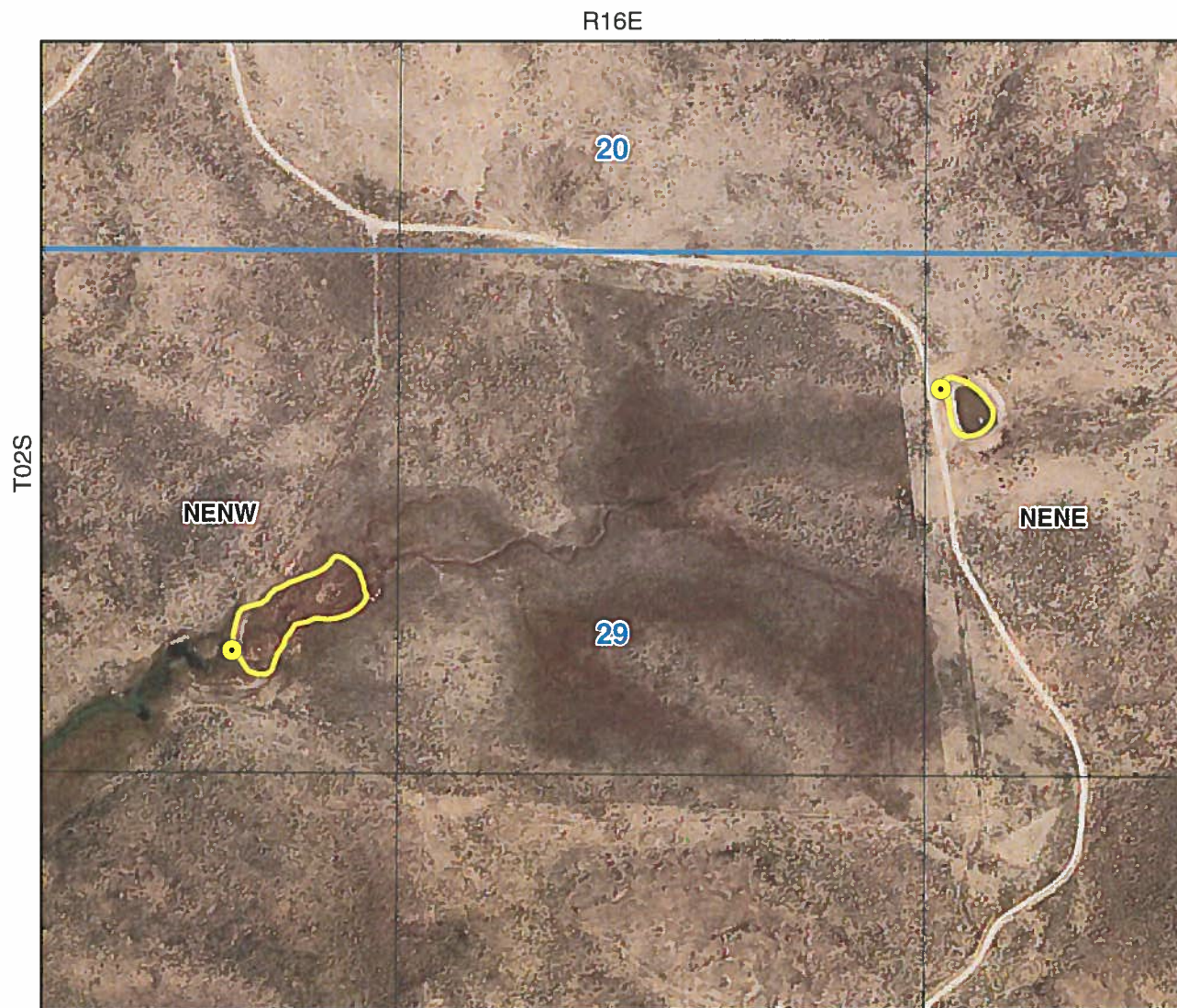


Figure 3: View from South side of NENE reservoir looking northwest.

State of Idaho
Department of Water Resources
Water Right License

37-8922

Water Service Area Boundary for Us Dept Of Interior



● Point of Diversion

□ Place Of Use Boundary

□ Townships

□ PLS Sections

□ Quarter Quarters

0 0.05 0.1 0.2 Miles

