

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 47-17247

Exam Date: 8/25/2011

1. Current Owner: UNITED STATES OF AMERICA ACTING THROUGH
USDA FOREST SERVICE
550 W FORT ST MSC 033
BOISE ID 83724
(208)365-7055

And/Or

USDA FOREST SERVICE
SAWTOOTH NATIONAL FOREST
2647 KIMBERLY RD E
TWIN FALLS ID 83301
(208) 737-3200

2. Accompanied by: Steve Crandall

Relationship to Permit Holder: Employed as Campground Host at Porcupine Springs Campground.

3. SOURCE

PORCUPINE SPRING

TRIBUTARY

GOOSE CREEK

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 47-2562 (domestic); 47-2563 (domestic).
2. Other water rights with the same point of diversion: 47-17246; 47-17248; 47-4169; 47-17143.

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

PORCUPINE SPRING SW1/4NE1/4NE1/4
CASSIA County

Sec. 31, Twp 14S, Rge 19E, B.M.

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 14S Rge 19E S 31 SWNENE¼. See attached map.

2.

PLACE OF USE: DOMESTIC

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
14S	18E	24				X									X				

Method of Determination: 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 14S Rge 19E S 24 SENE1/4 and NESE1/4. See attached map.

3. ☒ Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable.
- ☒ 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

4.

<u>Well or Diversion</u> <u>ID No.*</u>	<u>Motor Make</u>	<u>Hp</u>	<u>Motor Serial No.</u>	<u>Pump Make</u>	<u>Pump Serial No. or Discharge</u> <u>Size</u>
N/A					

*Code to correspond with No. on map and aerial photo

D. FLOW MEASUREMENTS

1.

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

2. Measurements: Filled 5 gallon bucket 3 times to 5 gallon mark with the following times:
 15:12 s; 0.04 cfs; measurement error of 0.5 sec of 0.6
 15:34 s; 0.04 cfs; measurement error of 0.5 sec of 0.6
 14:32 s; 0.05 cfs; measurement error of 0.5 sec of 0.7
 Average time: 15:09 approximately 0.04 cfs.

E. FLOW CALCULATIONS: N/A

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) =$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 =$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} =$$

2. Volume Calculations for Other Uses: (Domestic):

$$(14 \text{ campsites} \times 5 \text{ people}) + (2 \text{ group sites} \times 50 \text{ people}) = 170 \text{ people} \times 10 \text{ gallons} \times 137 \text{ days} = 232,900 \text{ gallons}$$

$$232,900 \text{ gallons} / 325,850 = 0.71 \text{ AFA}$$

G. NARRATIVE/REMARKS/COMMENTS

Permit 47-17247 is for 0.04 cfs domestic use for 2 public campgrounds with 14 camping sites and 2 group areas.

Application for permit 47-17247 submitted by USDA Forest Service, was filed on October 19, 2005, and proof of Beneficial Use was submitted December 9, 2010.

System consists of a spring box that delivers water downhill to a 5000 gallon tank through a 3 inch galvanized steel pipe (GSP). From there the water descends through a 2 inch GSP to a 45 watt solar pump (see attached Spring Development Plan and Profile). The water is then pumped uphill approximately three hundred yards through a 2 inch GSP to a 15,000 gallon holding tank. From the holding tank the water is routed down slope approximately 2 miles through various sizes of HDPE pipe (from 4" graduated down to 1") to Upper and Lower Penstemon Campgrounds. The 2 campgrounds contain a total of 14 camping spurs and 2 large group areas, all of which are serviced by drinking fountain spigots and threadless spigots that are designed to prevent recreational vehicles from connecting to the water source

According to Roger Anderson, Recreation Manager for the Minidoka District of the Sawtooth National Forest, average water use is 10 gallons per camper, and that when all 4 campgrounds serviced by the Porcupine Springs system are at capacity (760 people) the maximum amount of water utilized is 7,500 gallons per day. This averages out to 9.8 gallons per camper. Therefore, 10 gallons per camper was used to calculate volume for each campground.

On the day of the exam the system was at capacity and no water was actively moving through the system allowing flow from the spring box and the 5000 gallon holding tank overflow to be diverted into overflow drains that discharged approximately 20 feet below the pump. I was able to measure the flow approximately 60 yards downstream where it was channeled under the service road through a corrugated metal pipe using a 5 gallon bucket and stop watch. Average flow rate was determined to be 0.04 cfs.

Water rights 47-17246; 47-17248; 47-17143 and 47-4169 all share the same point of diversion as permit 47-17247. Since the flow rate for the entire system was determined to be 0.04 cfs, a condition will be placed on the license limiting the combination of the aforementioned rights to a flow rate of 0.04 cfs. Overlap analysis for place of use indicates potential overlap with rights 47-2563 and 47-2562. A claim filed in the SRBA for right 47-2563, originally licensed for domestic use at The Magic Mountain Ski Lodge, was disallowed. The Forest Service filed a transfer for right 47-2562 (transfer #71978) in 2005 that proposed changing the water source for the right as it would "reduce cost and improve efficiency of the water development." The Department could not approve the transfer and it was subsequently withdrawn and the application for this permit was filed to accomplish the aim of providing a new water source for the campground. As the status of water right 47-2562 is currently active, a condition limiting both 47-2562 and 47-17247 to 13,000 gallons per day has been placed on the draft license.

Recommend permitting a rate of diversion of 0.04 cfs with annual volume of 0.71 afa for domestic.

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

H. RECOMMENDATIONS**1. Recommended Amounts**

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
DOMESTIC	01/01 to 12/31	0.040 CFS	0.71 AFA
<u>Totals:</u>		0.040 CFS	0.71 AFA

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 Mott Date 11-29-2011
 Reviewer Chris Mott Date 12/1/2011



Figure 1: Lower Penstemon Campground



Figure 2: Upper Penstemon Campground Entrance



Figure 3: Spring box



Figure 4: Hatch for 5000 gallon storage tank and housing for chlorinator



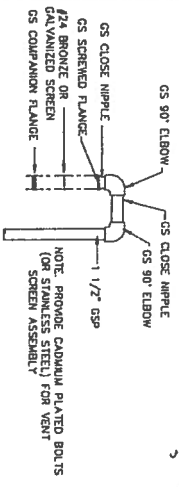
Figure 5: Solar pump system



Figure 6: Threadless spigot installed at campgrounds

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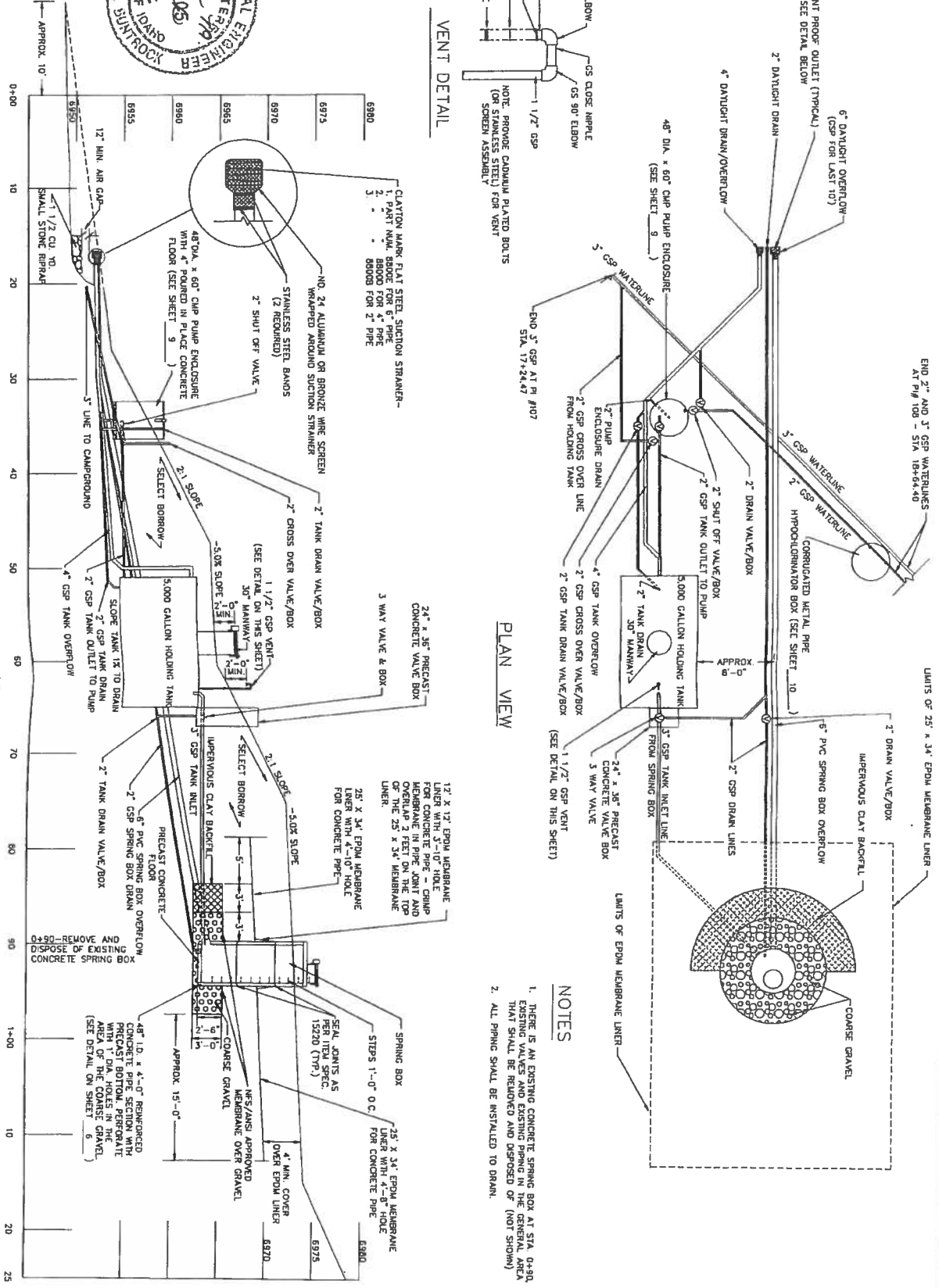




VENT DETAIL

PLAN VIEW

SIDE VIEW



NOTES

1. THERE IS AN EXISTING CONCRETE SPRING BOX AT STA. 0+80. EXISTING VALVES AND EXISTING PIPING IN THE GENERAL AREA THAT SHALL BE REMOVED AND DISPOSED OF (NOT SHOWN).
2. ALL PIPING SHALL BE INSTALLED TO DRAIN.

9/13/96
 B. Wildman
 B. Wildman

SURFACE DRAINAGE CUTOFF TRENCH

