

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 72-7450

Exam Date: 7/18/2012
Nathan Erickson

1. Current Owner: ROUND VALLEY ACRES WATER ASSN INC
PO BOX 941
CHALLIS ID 83226-0941
(208) 879- 2192
2. Accompanied by: Spoke by phone with Walt Getty (Bd. Member) and Wayne Butts (VP)
Phone No: (208) 879-5456 (Getty); (208) 879-4215 (Butts)
Address:
Relationship to Permit Holder: Board Member & V.P. of Round Valley Acres Water Association

3. **SOURCE** **TRIBUTARY**
GROUND WATER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 72-7558
2. Other water rights with the same point of diversion: 72-7558

C. DIVERSION AND DELIVERY SYSTEM**1. LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER	SE1/4SE1/4	Sec. 28,	Twp 14N,	Rge 19E, B.M.
CUSTER County				
GROUND WATER	NE1/4NE1/4	Sec. 33,	Twp 14N,	Rge 19E, B.M.
CUSTER County				
GROUND WATER	NE1/4NE1/4	Sec. 33,	Twp 14N,	Rge 19E, B.M.
CUSTER County				

Method of Determination: GPS/DEQ

2. PLACE OF USE: MUNICIPAL

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
14N	19E	28																X	
14N	19E	33	X																

Method of Determination: Plat maps of Subdivision, 2010 Aerial Photos - Bing Maps

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>
#1 _____	__??__	7.5	__??__	__??__	65 gpm (0.14 cfs)
#2 _____	__??__	20	__??__	__??__	200 gpm (0.45 cfs)

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

D. FLOW MEASUREMENTS N/A

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>
_____	_____	_____	_____	_____	_____	_____

2. Measurements:

DEQ information shows **Well # 1 pumps 65 gpm (0.14 cfs)** and **Well # 2 pumps 200 gpm (0.45 cfs)**.**Total = 0.59 cfs****E. FLOW CALCULATIONS**

_____ Additional Computation Sheets Attached

Measured Method: Theoretical equation

$$Q = \frac{(8.8) \times (HP) \times (Eff)}{TDH} = \frac{(8.8) \times (7.5 \text{ hp}) \times (70\% \text{ eff})}{(220 \text{ ft}) + (40 \text{ psi} \times 2.31)} = \frac{46.2}{312.4} = 0.1478 \text{ or } \mathbf{0.15 \text{ cfs (Well \#1)}}$$

$$= \frac{(8.8) \times (20 \text{ hp}) \times (70\% \text{ eff})}{(270 \text{ ft}) + (40 \text{ psi} \times 2.31)} = \frac{123.2}{362.4} = 0.339 \text{ or } \mathbf{0.34 \text{ cfs (Well \# 2)}}$$

Total = 0.49 CFS**F. VOLUME CALCULATIONS**

1. Volume Calculations for Domestic (Irrigation):

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 90 \text{ lots} \times 0.5 \text{ acre/lot} \times 3.5 \text{ AF/ac} = 157.5 \text{ AF}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.59 \times 214 \text{ days} \times 1.9835 = 250.4 \text{ AF}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = \mathbf{157.5 \text{ AF}}$$

2. Volume Calculations for Other Uses: Domestic

Plat map and aerial view of 0.6 AF (IDWR standard) per lot

$$90 \text{ lots} \times 0.6 \text{ AF/lot} = \mathbf{54.0 \text{ AF}}$$

Total = 211.5 AF

G. NARRATIVE/REMARKS/COMMENTS

Nathan Erickson visited the place of use and GPS'd and photographed the three wells used for the subdivision on July 18, 2012. There was another permit, 72-7558, for municipal use for this subdivision and included 98 lots. It now appears that there are 90 tax lots as some of the original lots have been combined. According to the Vice President of the Association, only about 42 or 43 lots have been developed at this time, but all of the lots have been stubbed in to the system. This permit was for wells 1 and 2 well for domestic use and 45 acres of irrigation. After talking with the State Office, it was decided that this right should also be licensed as Municipal and add the third well. However, this right will have the lower diversion rate of the first two wells only and will have a volume limitation. The two wells according to DEQ information have a diversion capacity of 0.59 cfs. Season of use will be changed to year round for municipal. The two rights should have combined limits of 1.12 cfs and 211.5 AF. A Licensing Amendment request has been sent.

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>
MUNICIPAL	01/01 to 12/31	0.590 CFS	211.5 AF
<u>Totals:</u>		0.590 CFS	211.5 AF

2. Recommended Amendments

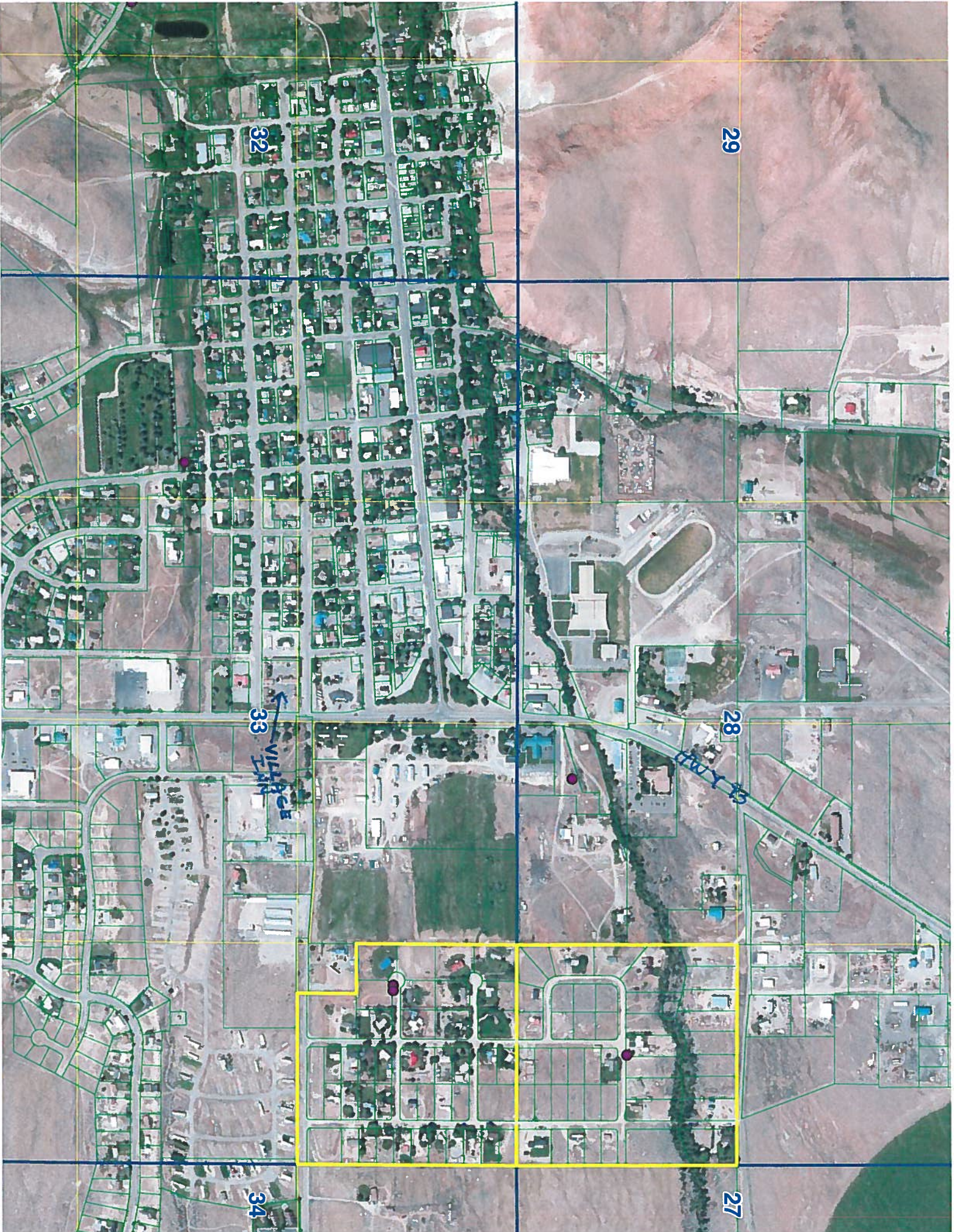
☐ Change P.D. as reflected above ☒ Add P.D. as reflected above ☐ None

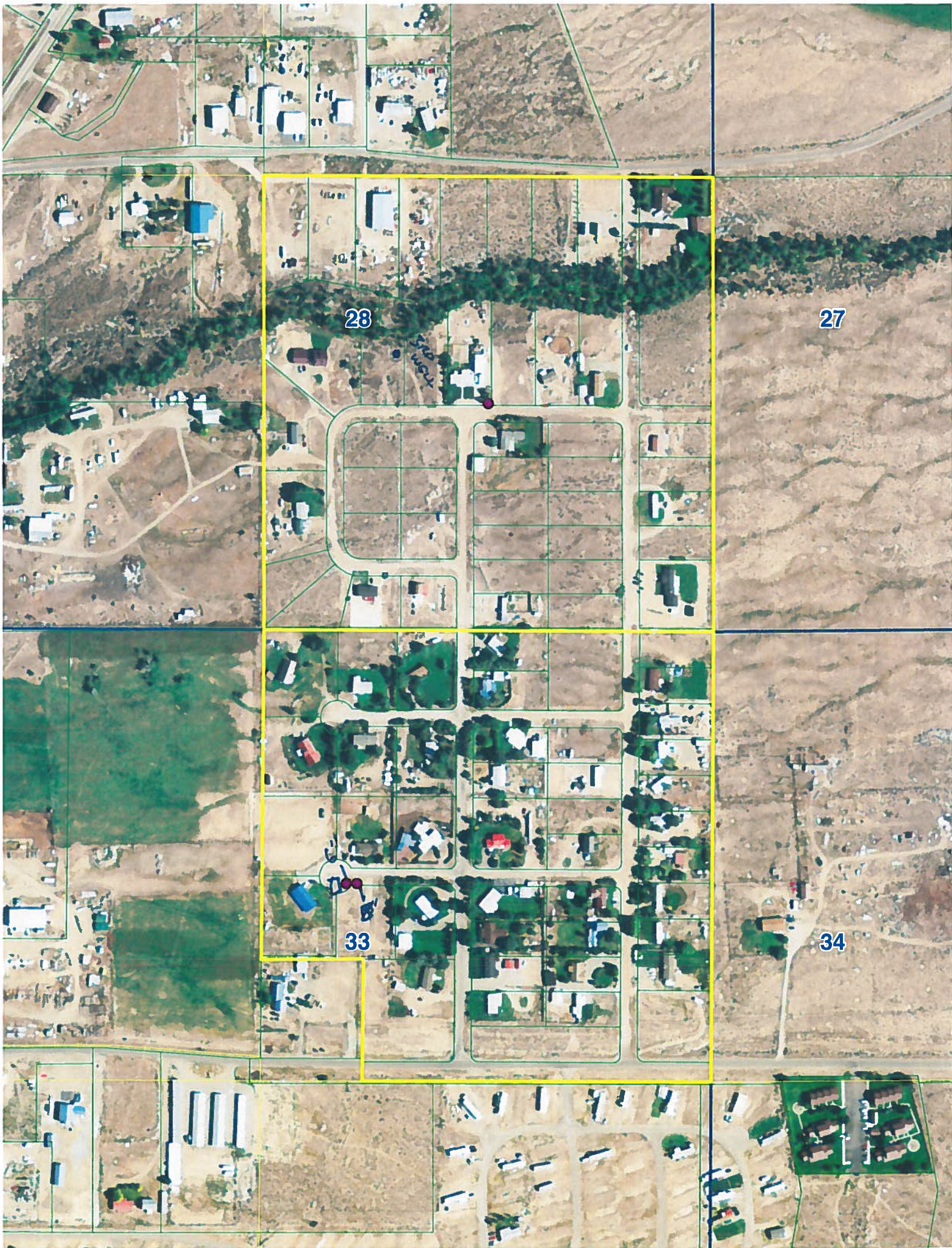
☐ Change P.U. as reflected above ☐ Add P.U. as reflected above ☒ Other (Nature of Use)

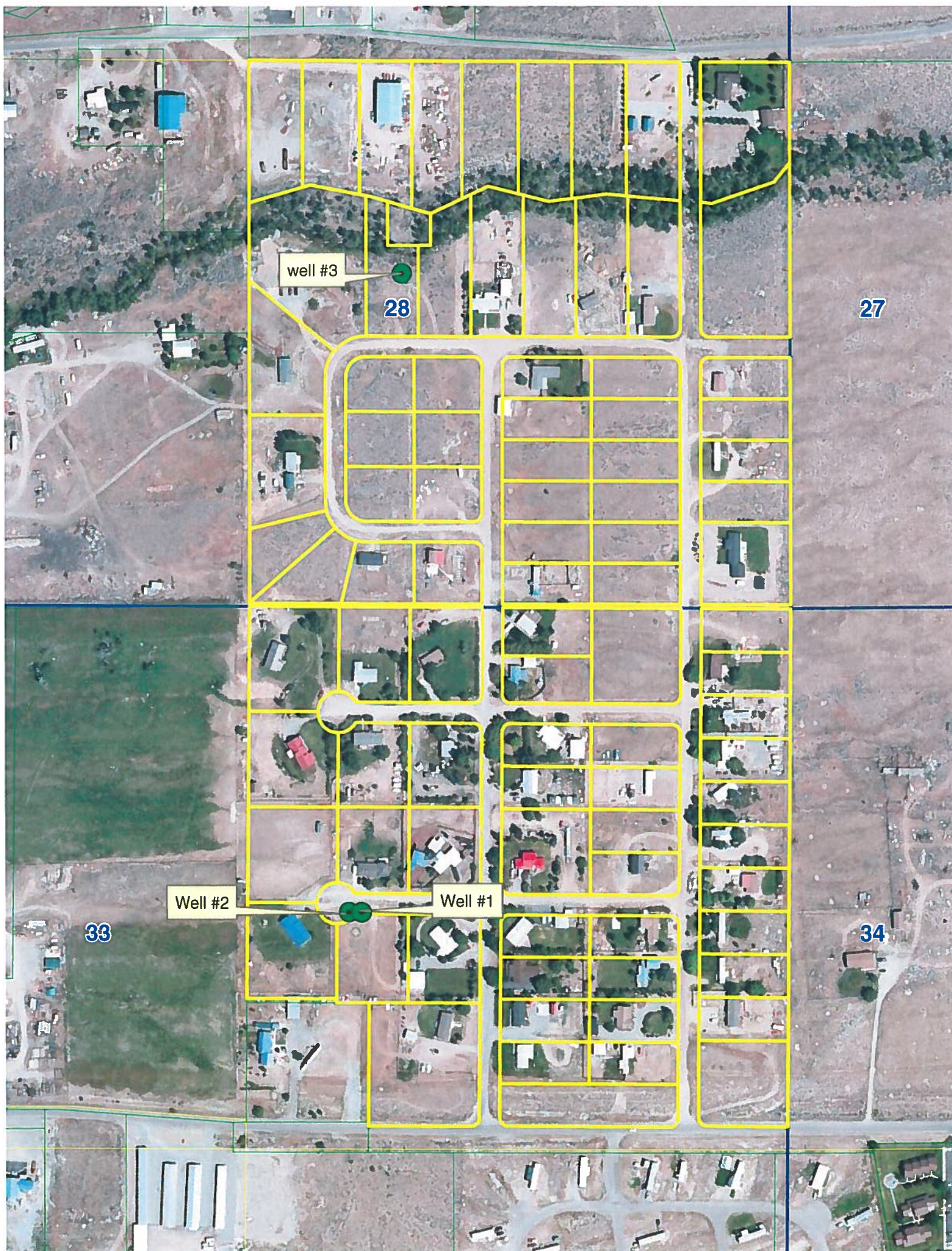
I. AUTHENTICATION

Field Examiner's Name  Date 8/14/2012

Reviewer  Date 9/27/2012







well #3

28

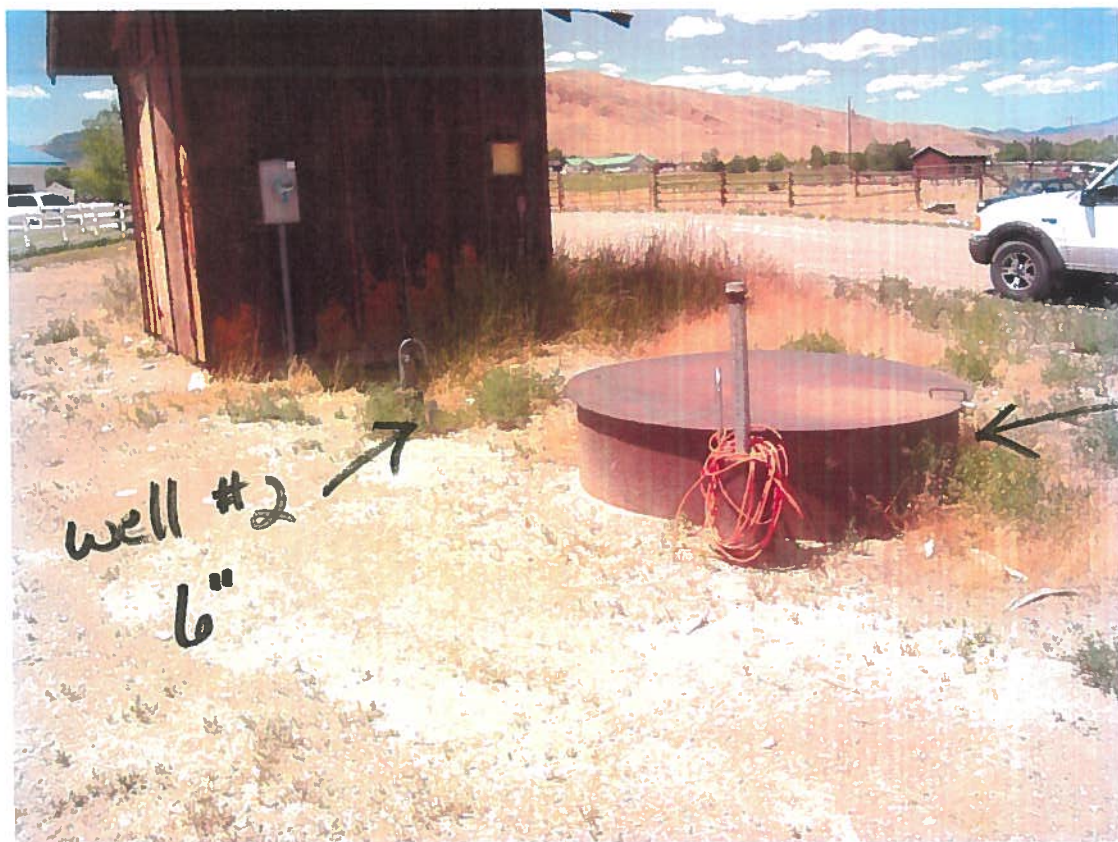
27

Well #2

Well #1

33

34



well #2
6"

well #1
8"

(looking south)

72-7450

Round Valley Acres Water Assoc.

Robertson, Jean

From: Carlin.Feisthamel@deq.idaho.gov
Sent: Tuesday, July 17, 2012 2:10 PM
To: Robertson, Jean
Subject: Round Valley Pumping Capabilities
Attachments: SIDF KONICA12071713020.pdf

Jean,

I found this yesterday and it slipped my mind to e-mail it to you. I hope this helps with what you need. The numbers in the attached letter seem to be consistent with the information that we have received from the operator in recent sanitary surveys.

Let me know if there is anything else that you may need.

Carlin Feisthamel, P.E.
Water Quality Engineer
IDEQ-Idaho Falls

HEDCO

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RECEIVED

OCT 09 1997

Office of the Attorney General
DEQ-IDHW

Wilson Lane

P.O. Box 1070

Challis, ID 83226-1070

(208) 879-5333

September 30, 1997

101
Mr. Elmer W. (Bill) Smith, P.E.
Senior Water Quality Engineer
IDHW-Division of Environmental Quality
224 South Arthur
Pocatello, ID 83204-3202

Re: Round Valley Acres Water System
Thomas Butts, PWS#7190042

Dear Mr. Smith:

In accordance with Items 1 and 2 of your letter of September 24, 1997, Mr. Thomas Butts has completed construction of all remaining items required in the CONSENT ORDER dated November 30, 1996 and subsequent DEQ correspondence for the Round Valley Acres Water System, Custer County, Idaho.

Additionally, I have attached "AS-CONSTRUCTED" Plans as follows:

- 1.) Well No. 3 Appurtenances (703 E1 & 703 E2)
- 2.) Well No. 1/No. 2 Appurtenances (703 E3 & 703 E4)
- 3.) Distribution System

Item 4 of your September 19, 1997 letter requires submittal of the estimated Q peak hour for the Round Valley Acres Water System. This has been accomplished as evidenced by the attached calculations which show an estimated system Q peak hour of 455 gpm for a metered system. The system production capacity is as follows:

- 1.) Well No. 1: 65 gpm (7.5 H.P. Submersible Pump set at approximately - 220 feet)
 - 2.) Well No. 2: 200 gpm (20 H.P. Submersible Pump set at approximately - 270 feet)
 - 3.) Well No. 3: 240 gpm (25 H.P. Submersible Pump set at approximately - 270 feet)
- TOTAL 505 gpm

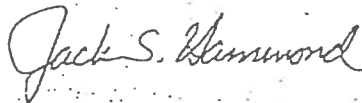
I have attached copies of Round Valley Acres RESTRICTIVE COVENANTS and the Round Valley Acres Water Association, Inc. WATER USERS AGREEMENT, both of which clearly require each lot owner to install and maintain water meters. Therefore, Mr. Thomas Butts has met (exceeded) the estimated system Q peak hour of 455 gpm with a system production capacity of 505 gpm since Well No. 3 was placed on line September 29, 1997.

Item 4 of the above referenced letter also raises a question of "difference in pressure between the highest and lowest house in the subdivision". The subdivision is 1323.8 feet wide from the west boundary to the east boundary with an average slope of 4%. Therefore, the elevation difference between the highest point and the lowest point in the subdivision is approximately 53 feet. This elevation difference would result in a water pressure difference of 23 psi. However, the houses will probably experience a pressure difference of approximately 20 psi as they are not sited at the back of the easterly and westerly most lots, but are closer to the streets that serve them.

The hydropneumatic tanks are located at approximately the $\frac{1}{4}$ point (from west to east) in the subdivision. Therefore, with the system operating at 40 psi (pumps on) and 60 psi (pumps off), the highest elevation house should experience a pressure range of 35 psi to 55 psi and the lowest elevation house should experience a pressure range of 55 psi to 75 psi, of which both conditions are acceptable.

In conclusion, this final submittal meets all of the requirements in the November 30, 1996 CONSENT ORDER and all subsequent DEQ correspondence for the Round Valley Acres Water System. Please schedule a final inspection of these facilities at your earliest convenience so that this matter can be closed.

Sincerely,

A handwritten signature in cursive script that reads "Jack S. Hammond".

Jack S. Hammond, P.E.

P.C.: Mr. Thomas Butts
P.O. Box 6
Challis, ID 83226