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[illegible][illegible]

Method of Determination:

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>
<u>Springs</u>	<u>Red Jacket (No Tag----</u>	<u>info. From 10/21/1986 field inspection)</u>			<u>1 inch</u>

*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>

2. Measurements:

Taken from the 10/21/1986 field inspection, for Waste Water: "Lower Diversion 0.48ft on 90 degree V-notch weir = **0.403 cfs**" (confirmed calculations with the Water Measurement, Bulletin No. 552, from University of Idaho).

A 5 gallon bucket measurement was conducted on the discharge pipe that crosses River Rd., and discharges to a ditch that discharges to the Snake River: $[(5 \text{ gal.} \times 60 \text{ seconds}) / 5 \text{ seconds}] \times 0.0023 = 0.138 \text{ cfs} = 0.14 \text{ cfs}$. The owner stated that this would be considered a "Low Flow."

No physical measurement from the pump, since the spring collection area was under construction for the Domestic System. The **maximum capacity of a 1" pipe = 0.03 cfs**

Capacity of System: Waste Water 0.403 cfs + Springs 0.03 cfs = 0.43 cfs

E. FLOW CALCULATIONS

____ Additional Computation Sheets Attached

Measured Method:

F. VOLUME CALCULATIONS**1. Volume Calculations for Irrigation:**

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 5 \text{ acres} \times 4.0 = 20.0 \text{ af}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.403 \times 246 \times 1.9835 = 196.6 \text{ af}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 20.0 \text{ af}$$

2. Volume Calculations for Other Uses:

Domestic D/I = 1.2 af (internal/external use)

Stockwater: (5 mixed head X 12 gpd X 365 days)/325,850 = 0.067 af = 0.1 af

G. NARRATIVE/REMARKS/COMMENTS

At the road above the house on the ledge, a buried pipe goes under the road and discharges waste water to an open ditch following the slope down the hillside. It then goes through a buried line under the driveway, and open discharges into dirt ditches that traverse back and forth to flood irrigate the property, then follow the north edge of the property, where it goes into a buried line under River Rd., and discharged to a dirt ditch going directly to the Snake River. There is a 4" steel pipe that runs to a stock tank. At the time of the field inspection, there were no stock on the property, but there was evidence of stock having been there. There are numerous springs located throughout the NWSENE that are diverted to a concrete culvert collection area, via a submersible Red Jacket pump, that discharges to a 1 inch buried line, flow was originally piped to the house, west garden, green house, lawn, and east garden. Due to health issues that involved the health department, there no longer is any Domestic internal use from the spring, since it was replaced with groundwater when a well was drilled 3/7/1991, when the property was sold to Philip Smith Jr. At the time of the field inspection, the spring collection area was being reconstructed, so no physical measurement was conducted. In a partially completed field exam conducted 10/21/1986, a v-notch weir was utilized to measure flow in the dirt ditch, with the flow at that time being measured at 0.403 cfs. Also the 1986 notes indicated a Red Jacket pump was used to pump water to the house. At the time of the 6/17/2009 field inspection, no pump was on site (a copy of the 1986 field report is in the file).

The owner indicated that the 5-gallon measurement taken at the time of the 6/17/09 field inspection, was a "low measurement." Recommendations are to go with the measurement taken during the 10/21/1986 field inspection for the "capacity of the water system." This is due to the 1986 exam being conducted shortly after the Examination Fees had been paid, pictures taken at that time document the live flow in the ditches, the v-notch weir, and this exam demonstrates the actual system as it was developed.

A well was drilled 3/7/1991 by Elsing Drilling #31. 17' static, 160' deep, 6" casing, domestic. No record of GPM.

Proof Submitted 9/30/1985, with \$50 fees paid, 0.20 cfs, and 20.0 af. (proof was due on or before 6/1/1986)

Have conditions of permit approval been met? XX Yes

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	0.030 CFS	1.20 AF
IRRIGATION	03/15 to 11/15	0.150 CFS	20.00 AF
STOCKWATER	01/01 to 12/31	0.020 CFS	0.10 AF
<u>Totals:</u>		0.200 CFS	20.00 AF

2. Recommended Amendments

X Change P.D. as reflected above Add P.D. as reflected above None

2. Recommended Amendments

☒_X_Change P.D. as reflected above ☐_Add P.D. as reflected above ☐_None

☒_X_Change P.U. as reflected above ☐_Add P.U. as reflected above ☒_X_Other (stockwater use 1/1 – 12/31)

I. AUTHENTICATION

Field Examiner's Name

Sandy Herremans

Date

8/3/2009

Reviewer

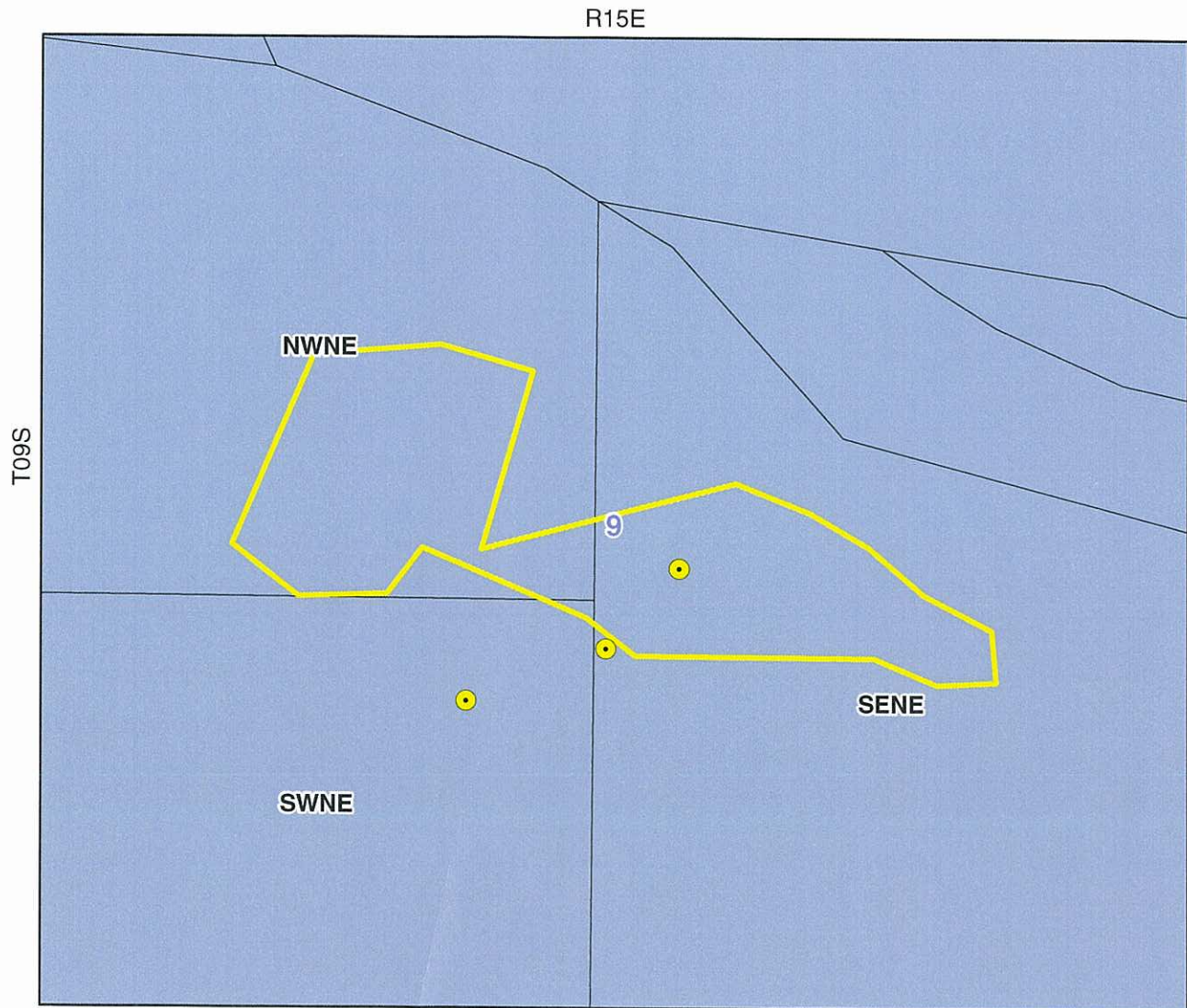
Date

Beneficial Use Field Report Conducted 6/17/2009

47-7723

Water Service Area Boundary for Margaret Smith

August 04, 2009



Legend

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

0 0.03 0.06 0.12 Miles

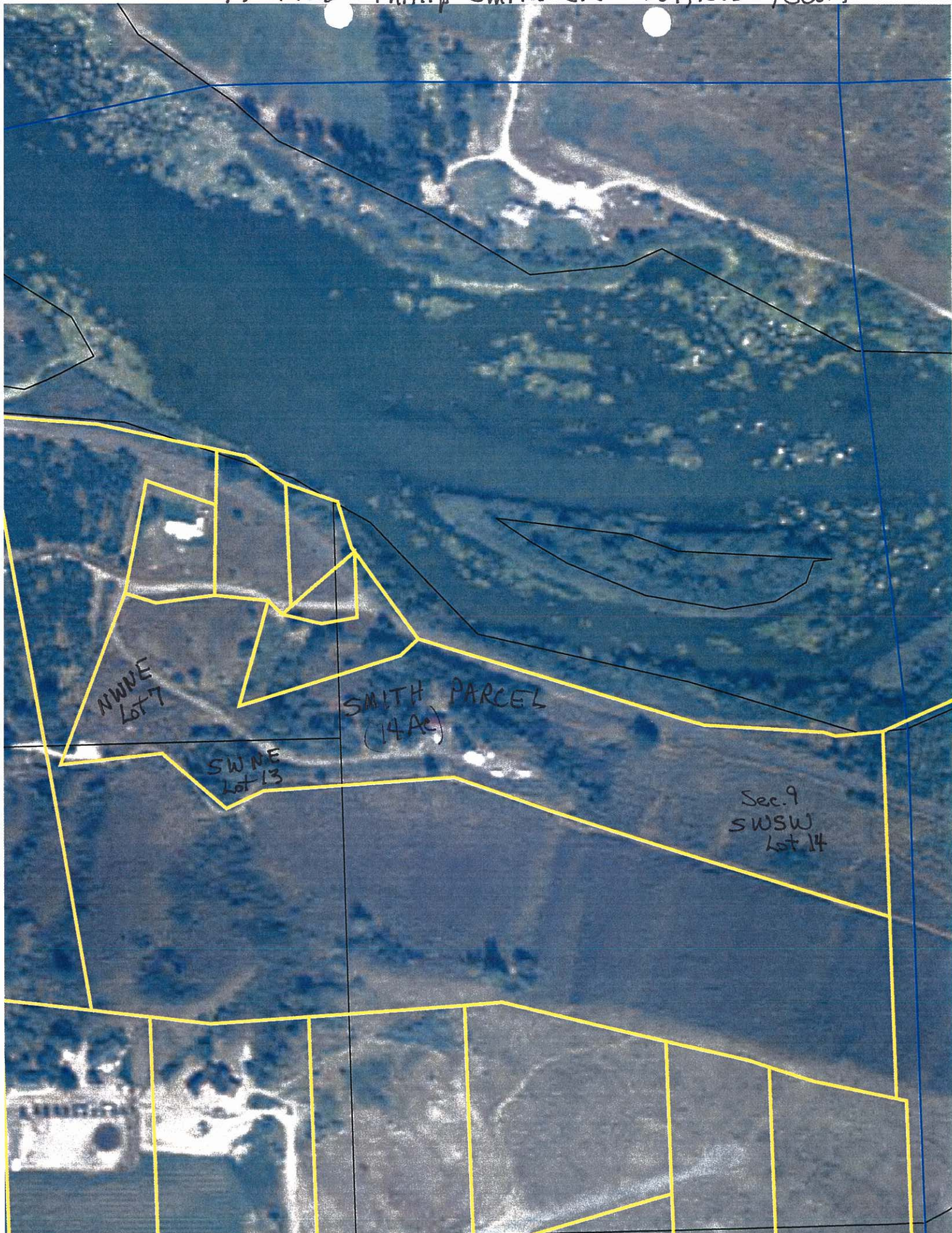




47-7723 Smith

6/17/2009 S. Hemmen

71-1125 Phillip Smith JR- 709, R15E, Sec. 9



NWNE
Lot 7

SWNE
Lot 13

SMITH PARCEL
(14Ac)

Sec. 9
SWSW
Lot 14

PIPE FLOWS -- PUMPING SYSTEMS

[properly designed @ 5 ft. / sec.]

$$Q = 5 \pi r^2 \text{ (r in ft.)}$$

$$R = (\text{diameter}/12) / 2$$

$$\pi = 3.1416$$

$$Q = 5 \pi R^2 \text{ (R in ft.)}$$

$$\left(\frac{\text{dia}}{12} \right) \div 2$$

PIPE DIAMETER(")	CFS (1/100)	^(1/10) MINER INCH	^(1/10) GALLONS/ MINUTE
1	.03	1.5	13.5
2	.11	5.5	49.4
3	.25	12.5	112.2
4	.44	22.0	197.5
6	.98	49.0	439.8
8	1.74	87.0	780.9
10	2.73	136.5	1225.2
12	3.93	196.5	1763.8
14	5.34	267.0	2396.6
16	6.98	349.0	3132.6
18	8.83	441.5	3962.9
20	10.90	545.0	4891.9
22	13.19	659.5	5919.7
24	15.70	785.0	7046.2

THEORETICAL PSI's

Internal domestic	- 20 psi
Internal/external domestic	- 30 psi
Domestic w/ 5-10 acres	- 40 psi
Medium systems (up to 50 acres)	- 40 psi
Large pivots	- 60 psi



house
with
flower
beds



house
+
yard



house

shop

green house

garden

06/17/2009



garden

06/17/2009



Spring
Concrete
culvert
collect
area



PDD
Spring



POI
waste
water

06/17/2009



POI
waste
water

06/17/2009

47-7723 Smith

S. Hemenway



waste
water
discharge
to the
Snake
River

06/17/2009



POU
w/ dirt
ditches

06/17/2009