

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 79-14238

Exam Date: 8/29/2012

1. Current Owner: REGINALD D RICE
2240 DIAS DR
PLACERVILLE CA 95667
(530)626-3881

SHIRLEY RICE
2240 DIAS DR
PLACERVILLE CA 95667
(530)626-3881
2. Accompanied by: Reggie Rice
Phone No: Same
Address: Same
Relationship to Permit Holder:
3. SOURCE
ELFERS CREEK
SPRING

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 79-14237
2. Other water rights with the same point of diversion: 79-14237

C. DIVERSION AND DELIVERY SYSTEM

1. LOCATION OF POINT(S) OF DIVERSION:

SPRING	SE1/4NW1/4NE1/4	Sec. 10,	Twp 25N,	Rge 01E, B.M.
IDAHO County				
ELFERS CREEK	SE1/4NW1/4NE1/4	Sec. 10,	Twp 25N,	Rge 01E, B.M.
IDAHO County				

Method of Determination: Arc Map (Aerial Photo); GPS Latitude N.45°31.552', Longitude W.116°19.097'; Datum - NAD83.

2.

PLACE OF USE: DOMESTIC

[illegible]

Method of Determination: Arc Map (Aerial Photo)

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	N/A			N/A	(1 1/2")

*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>
Pitot Tube						

2. Measurements: Pitot Tube. Measured sprinkler irrigation operating pressure of 16 psi. Nine (9) 5/32" Rainbird sprinkler heads @ 16 psi ~ 3 gpm per head. $Q = 9 \text{ sprinkler heads} \times 3 \text{ gpm} = 27 \text{ gpm}$ (0.06 cfs).

E. FLOW CALCULATIONS Additional Computation Sheets AttachedMeasured Method: (Continuity Equation – Pipe ($Q = VA$))

Elfer's Creek:

$$V = 1.49/nR^{2/3}S^{1/2} = (1.49/0.013)(0.031)^{2/3}(0.17)^{1/2}$$

$$V = (114.62)(0.098)(0.41) = 4.6 \text{ ft/sec}$$

$$Q = VA = 4.6 \text{ ft/sec} \times 0.012 \text{ ft}^2 = 0.06 \text{ cfs}$$

Spring:

$$V = 1.49/nR^{2/3}S^{1/2} = (1.49/n)(0.031)^{2/3}(0.18)^{1/2}$$

$$V = (114.62)(0.098)(0.42) = 4.7 \text{ ft/sec}$$

$$Q = VA = 4.7 \text{ ft/sec} \times 0.012 \text{ ft}^2 = 0.06 \text{ cfs}$$

$$D(\text{Pipe Diameter}) = 1 \frac{1}{2}"$$

$$n = 0.013$$

$$R = D/4 = 0.125/4 = 0.031$$

$$A = 0.012 \text{ ft}^2$$

 ΔE = Elevation Change

$$\Delta E(1,000 \text{ Gallon Tank}) = 40' \text{ (Estimated)}$$

$$\Delta E(1,400 \text{ Gallon Tank}) = 80' \text{ (Estimated)}$$

$$S = 80'/460' = 0.17 \text{ ft/ft (Elfer's Creek)}$$

$$S = 40'/220' = 0.18 \text{ ft/ft (Spring)}$$

Appears that both water supply systems can attain the permit diversion rate of 0.04 cfs. Recommend the permit diversion rate of 0.04 cfs.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation: N/A

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

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

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

2. Volume Calculations for Other Uses: Domestic Internal (1 Home).

1.2 AC
 $V = 0.6 \text{ AFA}$

G. NARRATIVE/REMARKS/COMMENTS**WATER SUPPLY SYSTEMS:**

Two water sources provide water to the right holder for domestic use.

Spring:

Spring water is diverted by a section of 2" perforated PVC pipe extend into a bank/hillside. The 2" PVC pipe reduces to 1 1/2" polypipe. Based on the right holder's described pipe alignment, approximately 220 lineal feet of 2" PVC and 1 1/2" polypipe convey the spring water to a buried 1,000 gallon water storage tank located on the east side of the home.

Elfer's Creek:

The right holder, along with his neighbor, constructed a dam in Elfer's Creek to divert water for domestic use. Based on the right holder's described pipe alignment, approximately 460 lineal feet of 1 1/2" polypipe is used to convey water from Elfer's Creek to a buried 1,400 gallon water storage tank. The primary use of the water is for irrigation of a shared garden area located on the right holder's parcel and the neighbor's parcel. However, if for some reason the spring is not producing adequate water for domestic internal use for the home, the water from the 1,400 gallon water storage tank can be used as a backup source for the home. The garden area is less than 1/2 acre in size and is the only area currently being irrigated, and is therefore in compliance with the permit domestic beneficial use. A 1-hp pump diverts water from the 1,400 gallon water storage tank and conveys the water through 1" PVC pipe to nine (9) irrigation risers. The garden area is sprinkled by Rainbird 5/32" sprinkler heads operating at a measured pressured of 16 psi.

OVERLAP ANALYSIS:

Point of Diversion: Water Right Permit No. 79-14237 and Water Right Permit No. 79-14238 use the same point of diversions for the spring and Elfer's Creek. The only difference between the two permits is that Water Right Permit No. 79-14237 diverts water from a spring box, and Water Right Permit No. 79-14238 diverts water directly from the spring.

Place of Use: Water Right Permit No. 79-14237 and Water Right Permit No. 79-14238 use the same place of use for water diverted from Elfer's Creek for irrigation of the garden area, which is located within both parcels.

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

CONDITION NO.5 (029) – Prior to the diversion and use of water under this approval, the right holder shall comply with all fish screening and/or fish passage for the Elfer's Creek diversion. Right holder has installed an approved 1/4" mesh fish screen over the 1 1/2" intake in Elfer's Creek.

RATE &/OR STORAGE RECOMMENDED FOR LICENSING

Description	Rate of Flow (cfs)		Storage (af)
Permit Amount	0.04	&/or	N/A
Beneficial Use Limit	0.04	&/or	N/A
System Measurement	0.06	&/or	N/A
Proof Fee Amount	0.20	&/or	N/A
Recommended Amount	0.04	&/or	N/A

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	1.2 ~~0.8~~ AFA RC
<u>Totals:</u>		0.040 CFS	~~0.8~~ AFA RC 1.2

2. Recommended Amendments

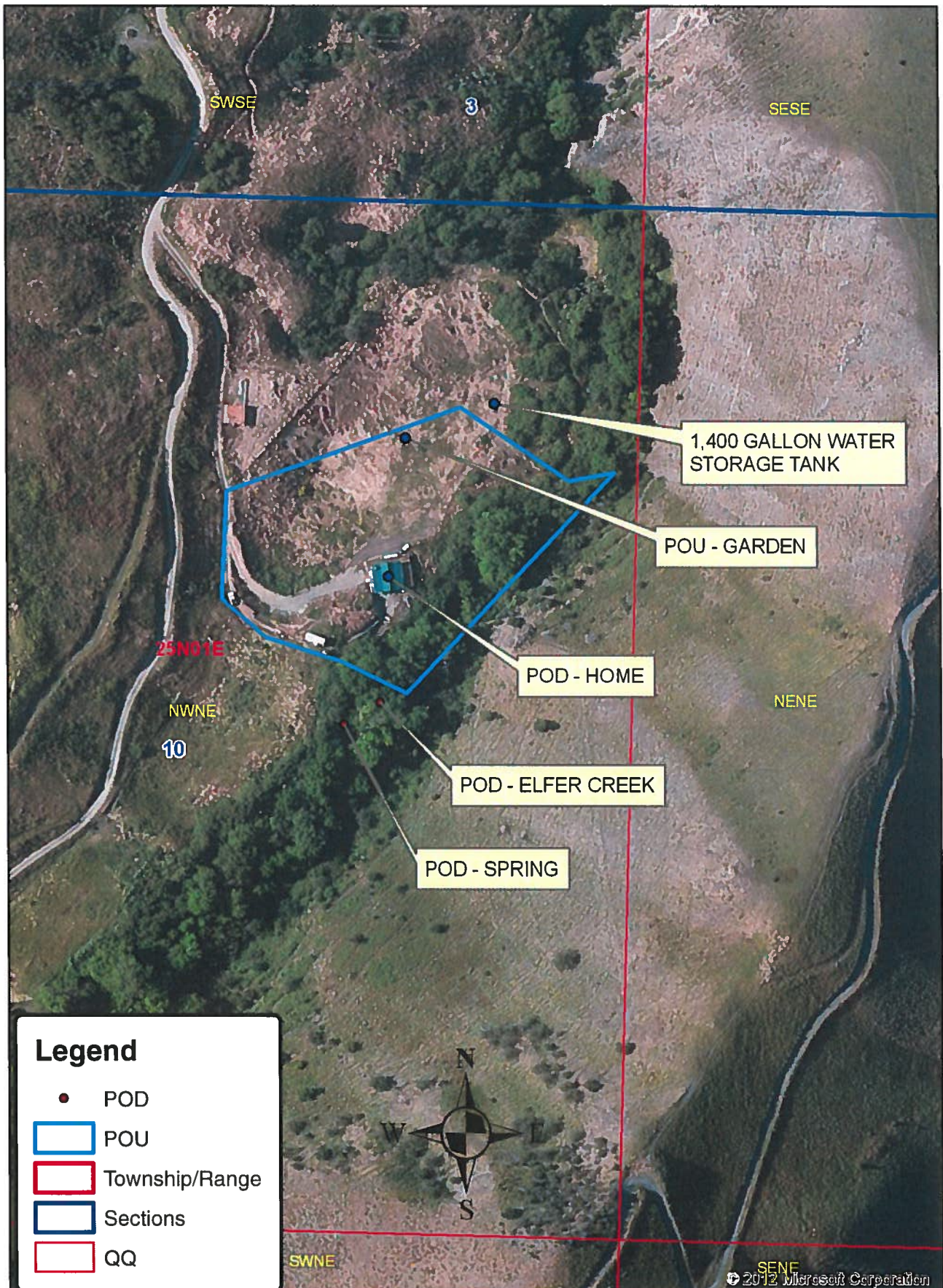
☐ Change P.D. as reflected above
 ☐ Add P.D. as reflected above
 ☒ None
☐ Change P.U. as reflected above
 ☐ Add P.U. as reflected above
 ☐ Other

I. AUTHENTICATION

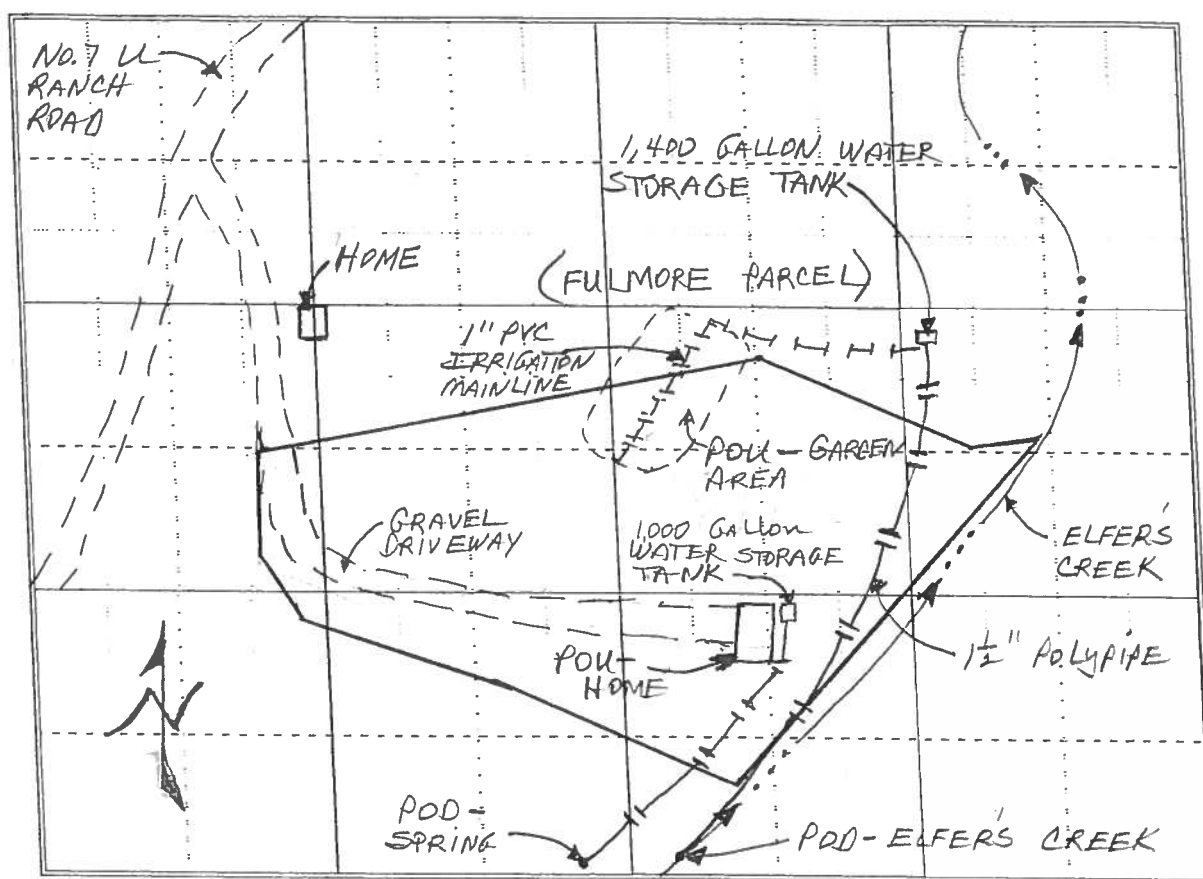
Field Examiner's Name Rick Collingwood Date 1/9/13
 Reviewer _____ Date _____

79-14238

BING AERIAL PHOTO - 2011



- 3 Delivery System Diagram: Indicate all major components and distances between components. Indicate weir size/ditch size/pipe diameter (inside), as applicable. Use the space provided or ☐ see attached.



Scale: 1" = NTS

- ☐ Copy of USGS Quadrangle attached showing location(s) of point(s) of diversion and place(s) of use (required)
☒ Aerial photo attached (required for irrigation of 10+ acres)
☒ Photo of diversion and system attached

FIELD EXAM PHOTOS

Water Right Permit: 79-14238

Field Exam Date: 8-29-12

PLS: NW1/4, NE1/4 Section 10, T.25N, R.01E.

Field Examiner: RC



Point of Diversion: View northerly of the 1 ½" PVC domestic supply line from a spring. The supply line to the home is reduced to 1" polypipe, and discharges into a water storage tank beneath the deck.



Place of Use: View southeasterly of the location of the buried water storage tank. The domestic water storage tank overflow pipe discharges to the neighbor's 1,000 gallon domestic water storage tank. The overflow from the neighbor's domestic water tank discharges to the 1,400 gallon irrigation storage tank.



Point of Diversion: View southerly of 2 foot high dam constructed of concrete, rocks, and landscape blocks. The two 4 inch diameter PVC pipe sections are used to convey/flush water downstream of dam and to prevent overtopping of dam. The black pipe is 1 1/2" polypipe used to convey water to the 1,400 gallon irrigation water storage tank.



Point of Diversion: View of the intake screening for the 1 1/2" polypipe.



View easterly of the pumping platform over the buried 1,400 gallon irrigation water storage tank filled by the 1 1/2" polypipe in Elfers Creek. A 1 hp pump diverts water through the 1" PVC mainline to the garden area irrigation sprinkler system.



Place of Use: View northerly of the irrigated garden area located westerly of the 1,400 gallon irrigation water storage tank. Currently, the irrigation system is comprised of a 1" PVC mainline and nine (9) 5/32" Rainbird sprinkler heads.



State of Idaho

DEPARTMENT OF WATER RESOURCES

Western Region, 2735 Airport Way • Boise, Idaho 83705-5082

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C. L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Interim Director

August 6, 2012

Reginald & Shirley Rice
2240 Dias Drive
Placerville, CA 95667

RE: Scheduling Field Exam for Water Right Permit No. 79-14238

Dear Mr. & Mrs. Rice:

We are planning to **conduct water right field examinations** in the vicinity of the above-referenced permit **on August 29, 30, & 31, 2012**. An examination is needed to verify your water use in order to issue a water right license.

Please be advised that you will need to operate your system under normal operating conditions during the examination. The permit authorizes the diversion of 0.04 cfs of surface water from Elfers Creek and a spring for domestic use for one home.

In order to conduct your exam as efficiently as possible, we ask that you call this office to schedule a day and time convenient for you. **Please call me at 208-334-2190 by August 14, 2012, to conduct the exam on August 29, 30, or 31, 2012.** If there is a problem with scheduling or conducting the examination at this time, please let me know so we can reschedule or make other arrangements.

I appreciate your attention to this matter and I look forward to hearing from you.

Sincerely,

A handwritten signature in black ink that reads "Rick Collingwood". The signature is written in a cursive, flowing style.

Rick Collingwood, P.E.
Water Resource Agent, Sr.