

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 65-22955

Exam Date: 9/14/2012

1. Current Owner: KENNETH W RENFRO
130 3RD ST CIR
HORSESHOE BEND ID 83629
(208)793-2278
2. Accompanied by: Ken, Todd, Ryan, and Mike Renfro & Kay Walker (IDWR)
Phone No: Ken Renfro (208)793-2278 - Todd Renfro (208)870-8301
Address: Ken Renfro - same as above
Relationship to Permit Holder: Ken is permit holder. Todd and Ryan Renfro are water users. Mike Renfro is the brother of Todd and Ryan.

3. SOURCE

SPRING

TRIBUTARY

SHAHER CREEK

B. OVERLAP REVIEW

1. Other water rights with the same place of use: None.
2. Other water rights with the same point of diversion: None.

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

SPRING

SE1/4NE1/4SW1/4

Sec. 11, Twp 06N, Rge 02E, B.M.

BOISE County

Method of Determination: GPS Location N43° 52.1616' W116° 11.1636' Garmin model GPSmap 76 Datum NAD 83.

2. PLACE OF USE: DOMESTIC

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	
06N	02E	2									X								

PLACE OF USE: IRRIGATION

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	
06N	02E	2									.2				.2				.4

Total Acres: 0.4

Method of Determination: Bing (2011) Aerial Photography w/ field verification.

3. X Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable.
- X Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.
- X Aerial Photo Attached (required for irrigation of 10+ acres).
- X Photo of Diversion and System Attached.

4. <u>Well or Diversion</u>	<u>Pump Serial No. or Discharge</u>
<u>ID No.*</u>	<u>Size</u>
N/A	spring diverted through 1.5 in pvc pipe

D. FLOW MEASUREMENTS

1. <u>Measurement</u>	<u>Type</u>	<u>Make/Model No.</u>	<u>Serial No.</u>	<u>Size</u>	<u>Calib. Date</u>
<u>Equipment</u>					
No physical measurement @ exam	N/A	N/A	N/A	N/A	N/A

See Flow Calculations Section below for Owner Flow Estimation and Manning Flow Rate Estimation.

=> Manning Flow Rate Estimation of system diversion capacity (based on pipe diameter, material, and slope estimation from topographic map).

- Measurements: No place to measure discharge from spring directly (up stream of storage tanks).
Owner estimated flow directly from spring to be 11 gpm (in spring) when developed/installed diversion works.
Manning's Equation Calculator tool used to estimate capacity of system based on the following parameters:
Pipe Diameter = 1.5 in
Pipe Material = PVC
Pipe Length (spring to first storage tank along draw-pipe line) = 3480 ft
Elevation Change (spring to first storage tank) = 680 ft.

E. FLOW CALCULATIONS

X Additional Computation Sheets Attached

Measured Method: Owner Flow Estimation of flow directly from spring:

Q (Owner Flow Estimation) $\approx$ 11 gpm $\approx$ 0.03 cfs

Measured Method: Manning Flow Rate Estimation of diversion works capacity:

Q = 0.09 cfs (see attached "Manning's Equation Calculator for Flow Rate in a Circular Conduit Flowing Full" for details)

Diversion rate based on owner flow estimation(s) = 0.03 cfs

Manning Flow Rate Estimation = 0.09 cfs

Permitted Rate = 0.07 cfs

Beneficial Use Limit = 0.02 cfs (internal domestic 1 home) + 0.01 cfs (irrigation 2 lawns total 0.4 ac @ 0.03 cfs/ac) = 0.03 cfs

Proof of Beneficial Use fee paid = \$50.00 = up to 0.20 cfs

Recommend Beneficial Use Limit = 0.03 cfs

Recommend beneficial use limit based on owner estimation of spring discharge/diversion and system capable of diverting that quantity per Manning's flow rate estimation.

F. VOLUME CALCULATIONS

- Volume Calculations for Irrigation: **N/A for surface water irrigation use.**
- Volume Calculations for Other Uses: **N/A for I.C. \$42-111 type use (domestic water for single home) from any source.**

G. NARRATIVE/REMARKS/COMMENTS**SYSTEM DESCRIPTION:**

Gravity system consists of a single improved spring piped via a 1.5 in pvc line with two 3,000 gallon storage tanks (one buried). The line splits into two 1.5 in pvc lines one for each of two homes. Traditional lawn sprinklers are used for irrigation of yards at each home. The second spring (NW NW NW Sec 11 6N 2E) permitted was not developed as part of this system. The spring water is only used for domestic (internal) use at one home (Todd Renfro's), the other home (Ryan Renfro's) has a well for domestic (internal) use. The P/U shape for domestic is Todd Renfro's home. The P/U for irrigation is the lawn areas of Todd Renfro's home and Ryan Renfro's home.

OVERLAP:

Ryan Renfro has a well used for internal domestic uses (unrecorded use). There are no overlapping POD or POU rights.

G. NARRATIVE/REMARKS/COMMENTS CONTINUED**P/U IRRIGATION:**

A very small portion of Todd's lawn appears to cross the QQ line between the NESW and NWSW of Section 2. The portion of lawn within the NWSW (outside the permitted POU) is less than 0.1 of an acre, minimum acreage typically recognized on an irrigation water right. Considering the size of the lawn within the NWSW, the possibility that the GCDB (QQ lines) are subject to alignment error with aerial imagery, and the fact that including acreage in the NWSW would require the permit holder to file a Licensing Amendment, I am not including the NWSW of Section 2 as part of the recommended P/U for this right as to do so would be excessive.

P/D and P/U PROPERTY OWNERSHIP:

The P/D property is owned by the permit holder Kenneth Renfro. The P/U properties are owned by the water users Todd Renfro and Ryan Renfro. All parties agreed it's best to keep the water right in the name of Kenneth Renfro (Todd's & Ryan's father). Considering the Department only has authority to record conveyance of a water right, I recommend complying with their request and not pursuing ownership change documentation prior to licensing considering the parties involved don't desire ownership of the right to change.

COMPLIANCE WITH PERMIT CONDITIONS:

Permit conditioned that domestic use is for two homes. Currently, only one home uses the spring water for domestic (internal) use. Permit conditioned that a measuring device and lockable controlling works is to be installed and maintained on the diverting works. No measuring or lockable device(s) currently in place. Spring discharge, if left undiverted, may ultimately reach Shafer Creek, but contribution would be too small to quantify let alone regulate in the grand scheme of Water District 65. Spoke with Watermaster WD65 Ron Shurtleff 1/28/13. He recommended measuring and lockable device(s) condition(s) be modified to require installation upon future notification. Permit conditioned that water shall not be diverted after June 15 of each year without prior approval from the watermaster. Also, when water is not available to fill the right, the right holder shall rent water from the Payette River Rental Pool. These conditions in place to allow for watermaster regulation within the water district, should it be necessary.

Have conditions of permit approval been met? Yes X No – Modifications of measurement and lockable device(s) condition(s) as discussed above approvable per watermaster. All other conditions met.

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	0.02 CFS	N/A
IRRIGATION	03/15 to 10/31	0.01 CFS	N/A
<u>Totals:</u>		0.03 CFS	N/A

2. Recommended Amendments

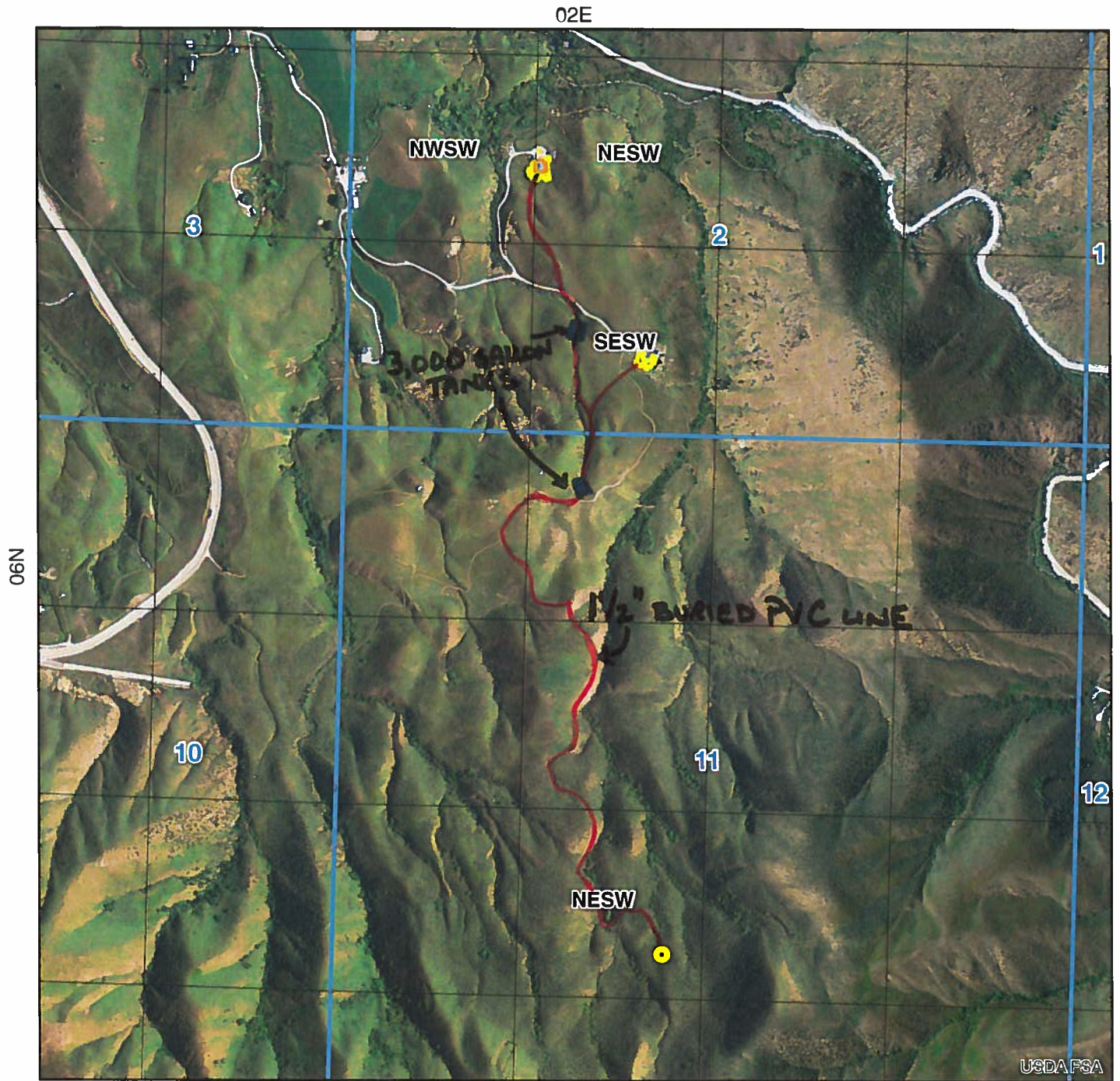
Change P.D. as reflected above Add P.D. as reflected above X None

Change P.U. as reflected above Add P.U. as reflected above Other

I. AUTHENTICATION

Field Examiner's Name Angela M. Quinn Date 1/28/2013
 Reviewer _____ Date _____

65-22955 Beneficial Use Field Report System Diagram & Map



0 0.25 0.5 1 Miles

2011 Aerial Photo

● Point of Diversion

Domestic Place of Use

Irrigation Place of Use

Townships

PLS Sections

Quarter Quarters



Manning's Equation Calculator for Flow Rate in a Circular Conduit Flowing Full

S = 0.1954 ft/ft
n = 0.009 manning's coefficient
d = 1.5 pipe diameter (inches)
D = 0.13 pipe diameter (feet)
r = 0.06 pipe radius (feet)
A = 0.01 area (ft²)
WP = 0.39 wetted perimeter (ft)
R = 0.03 hydraulic radius (ft)

Q = 0.09 flow rate (CFS)

Channel Slope

Slope Options

☐ Manual Entry ☒ Slope Calculator

Slope Calculator

Rise = 680 feet

Run = 3480 feet

Slope, S = 0.1954 ft/ft

Pipe Material, (n):



plastic (pvc, abs)

Pipe Diameter (inches)



1.5 inches

65-22955 Beneficial Use Field Report Photos



65-22955 Exam 9/14/2012: Domestic (internal) and portion of irrigation P/U (lawn) at Todd Renfro's home.



65-22955 Exam 9/14/2012: Portion of irrigation P/U (lawn) at Ryan Renfro's home.



State of Idaho

DEPARTMENT OF WATER RESOURCES

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

Phone: (208) 334-2190 • Fax: (208) 334-2348 • Web Site: www.idwr.idaho.gov

C. L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Interim Director

July 12, 2012

Kenneth W. Renfro
130 3rd St Circle
Horseshoe Bend, ID 83629

RECEIVED

JUL 31 2012

WATER RESOURCES
WESTERN REGION

RE: Scheduling Field Exams for Water Right Permit No. 65-22955 and 65-22956

Dear Mr. Renfro:

We are planning to **conduct water right examinations** in the vicinity of the above-referenced permit **during the weeks of July 16 and July 23, 2012**. An examination is needed to verify your water use in order to issue a water right license.

Please be advised that the systems will need to be operating under normal conditions during the examination(s). Permit No. 65-22955 authorizes domestic and irrigation use of water from two springs for 2 homes and 1 acre of irrigation. Permit No. 65-22956 authorizes stockwater use of spring water for up to 50 range cattle.

Boise County tax lot information indicates you may no longer own the place of use property associated with Permit No. 65-22956. A water right permit is personal property of the permit owner. It remains personal property unless it is assigned to a new owner. **If you no longer own the place of use property associated with Permit No. 65-22956, I respectfully request you complete and submit the enclosed Assignment of Permit form with the applicable \$25 processing fee within the next 10 days.** If an assignment is not received, we will work with the new land owner(s) to complete licensing process.

In order to conduct the exam(s) 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 July 19, 2012.** If there is a problem with scheduling or conducting the exam(s) at this time, please call and other arrangements can be made. I appreciate your attention in this matter and I look forward to hearing from you.

Sincerely,

Angela M. Grimm, P.G.
Water Resource Agent, Sr.

Enclosure(s): Assignment of Permit form

*Angela,
I have not sold any property associated with these water
rights (ever.)
Boise county tax information is wrong
+ + + + +
D. D. D.*



State of Idaho

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