

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 96-9614
Exam Date: 04/01/2022

1. Current Owner:
CAROL A BAUER 236 SKYVIEW RD SAGLE ID 83860-5069
2. Accompanied by: Brett Bauer
Phone No: 360-285-3488
Address: 236 Skyview Rd
Relationship to permit Holder: Representative

3. **SOURCE:**
SPRING

Tributary
SINKS

Method of Determination: Arcmap and DRG.

B. OVERLAP REVIEW

1. Other water rights with the same place of use: NO Overlap
2. Other water rights with the same point-of-diversion: YES Overlap

Water Right No.	Source	Purpose of Use	Basis
96-9615	SPRING	IRRIGATION	LICENSE

Comments: Licensed right 96-9615 uses the same spring source and diverting works infrastructure as this permit, but do not have overlapping POUs. Condition F06 was added to describe the shared POD between the two rights. Condition X35 was added which describes combined use limitations between the two rights with regard to the diversion rate only.

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

SPRING NW¼ SW¼ SE¼, Sec. 27, Twp 57N, Rge 01W, B.M. BONNER County

Method of Determination: GPS. POD is a concrete cistern located at -116°25.463, 48°15.214.

PLACE OF USE: IRRIGATION

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
57N	01W	27														1.5 L2			1.5

Total Acres: 1.5

PLACE OF USE: DOMESTIC

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
57N	01W	27														X L2			

Method of Determination: Field exam and Arcmap aerial imagery.

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.

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

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
5-GAL BUCKET TEST						

2. Measurements: A 5-gallon bucket test was completed from the first accessible point in the water system, a 2,500-gallon storage cistern receiving gravity flow from an initial concrete cistern at POD - resulting in a diversion rate of 5 gal / 37.5 sec x 60 sec/min = 8.0 gpm = **0.02 cfs**, considering department rounding standards.

E. FLOW CALCULATIONS

Measured Method: 5-GAL Bucket Test = (5 gal / 37.50 sec) x 60 sec/min = 8.0 gpm, or 0.02 cfs considering department rounding standards.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 1.5 \text{ ac} \times 3.0 \text{ afa} = 4.5 \text{ af}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.02 \text{ cfs} \times 214\text{-day} \times 1.9835 = 8.5 \text{ af}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 4.5 \text{ af}$$

2. Volume Calculations for Other Uses:

- This right uses a surface water source and does not receive an annual volume for the irrigation beneficial use nor maximum diversion volume.
- Domestic annual volume = 1 home (in-home use only) = **0.6 af**

G. NARRATIVE/REMARKS/COMMENTS

Field exam performed on 4/1/2022 with the applicant's representative, Brett Bauer, showed spring water being used for irrigation purposes. At the POD, a concrete cistern was placed on the uphill side of a roadway, capturing spring water along the hill slope from installed French drains running each way from the cistern. From the POD, water gravity flows downgrade to a 2,500-gal storage tank situated off the side of the same road. The lid was removed from the 2,500-gal tank and the tank was found to be completely full. As a result a flow measurement was not attainable during the exam, but one was completed in August of 2021 from the same source associated with WR 96-9615.

As both rights use the same diverting works and water system infrastructure, the flow rate from August is being applied to this right for licensing purposes as follows: a 5-gallon bucket test was completed from inside the tank by holding the bucket as it received water at the intake pipe, resulting in a diversion rate of $5 \text{ gal} / 37.5 \text{ sec} \times 60 \text{ sec/min} = 8.0 \text{ gpm} = 0.02 \text{ cfs}$, considering department rounding standards. **0.02 cfs** is recommended as the maximum diversion rate for licensing purposes. For both the irrigation & domestic beneficial uses the department standard diversion rates are higher than the recommended value of 0.02 cfs; the applicant is limited to the spring flow capacity found at time of field exam which limits both uses to 0.02 cfs respectively.

From the first 2,500-gal storage tank, water again flows downgrade to a second 2,500-gal storage tank located on lot 2 before being used for domestic & irrigation uses at each POU. A frost-free hydrant is co-located with the second storage tank, which incorporates a small pump in the water delivery system. Irrigation of the POU is accomplished using runs of hose length and sprinklers in addition to soaker hose/micro emitters for landscaping around the house. During the exam, the irrigation POU was walked with the applicant and consists of 1.5 ac located around the primary residence. The irrigation POU was sketched out on field maps, and during licensing review Arcmap aerial imagery was used to trace out the POU. The annual volume associated with irrigation equals $1.5 \text{ ac} \times 3.0 \text{ afa} = 4.5 \text{ af}$, but as this permit uses a spring source no annual irrigation volume is applied & there will be no maximum diversion volume on the face of the license.

The applicant uses the spring source for in home domestic use, and photographs were taken to illustrate to domestic POU – 1 home on the property. The annual volume for in-home use for 1 home = **0.6 af** which is recommended for licensing. A water transfer pump is set up in the lower of two storage tanks to serve both the irrigation system and domestic water use connection(s).

Conditions 26A was removed from the permit during licensing review. Condition X59 was added to describe the POD being in Lot 4, Eureka Heights Subdivision. Condition X60 was updated to reflect irrigation occurring in lots 1-3 not just lot 1 of Eureka Heights Sub. Condition R62 was replaced with R58 to describe irrigation diversion volume associated with 1.5 acres of irrigation. Condition F06 was added describing the shared spring source POD between 96-9614 & 96-9615. All other conditions on the Permit shall be carried forward to the license. Condition X35 was added to address the common water system infrastructure and resulting combined use diversion rate between rights 96-9614 & 96-9615; X35 limits both rights to a combined use diversion rate of 0.02 cfs. There are no additional overlap concerns for this water right.

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

H. RECOMMENDATIONS**1. Recommended Amounts**

<u>Beneficial Use</u>	<u>Period of Use</u>	<u>Rate of Diversion</u>	<u>Annual Volume</u>
IRRIGATION	04/01 to 10/31	0.02 CFS	
DOMESTIC	01/01 to 12/31	0.02 CFS	0.6 AF

Totals: 0.02 CFS

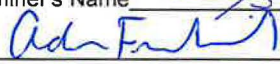
2. Recommended Amendments

☐ 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 ☒ None

I. AUTHENTICATION Luke Bates -

Field Examiner's Name  Date 4/1/2022

Reviewer  Date 4/1/2022

State of Idaho
Department of Water Resources
Attachment to Field Exam
96-9614

IRRIGATION system diagram.

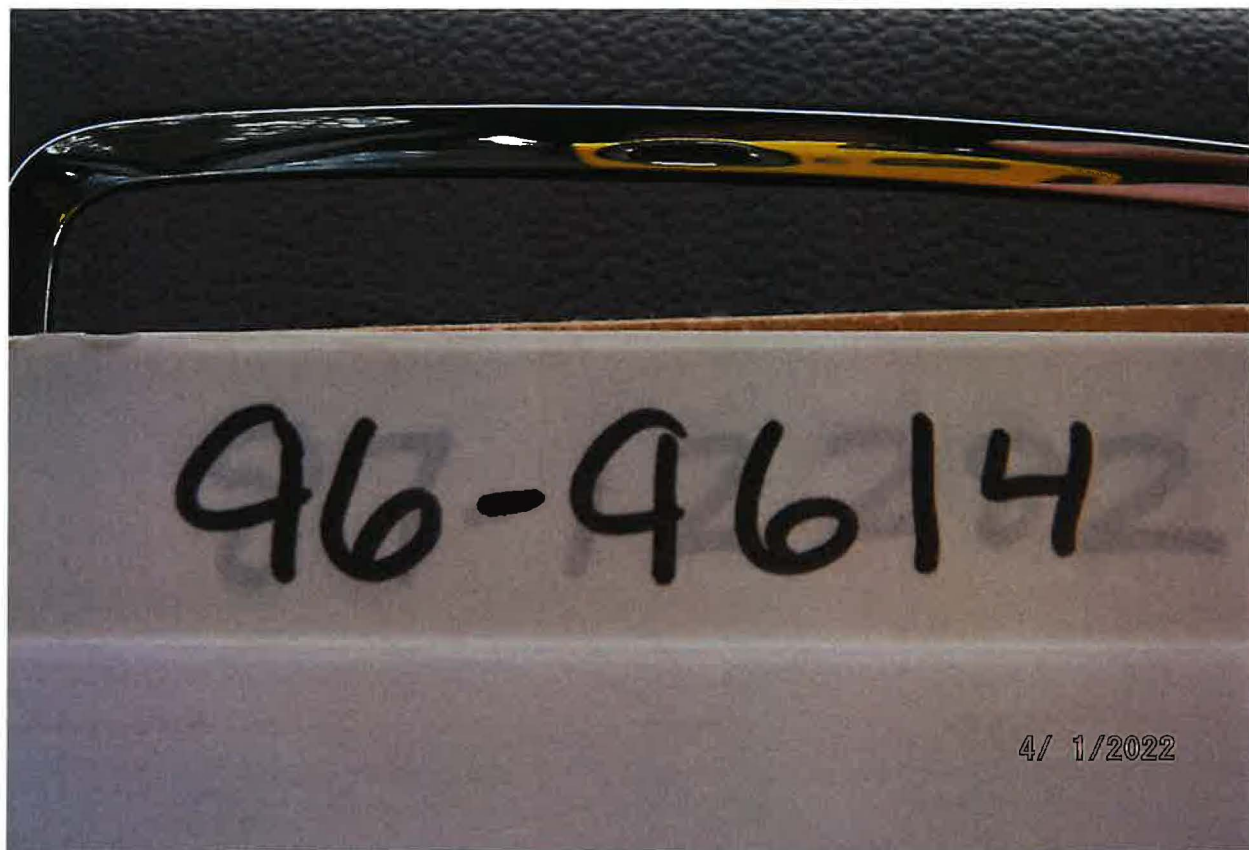
01W



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

0 0.035 0.07 0.14 Miles





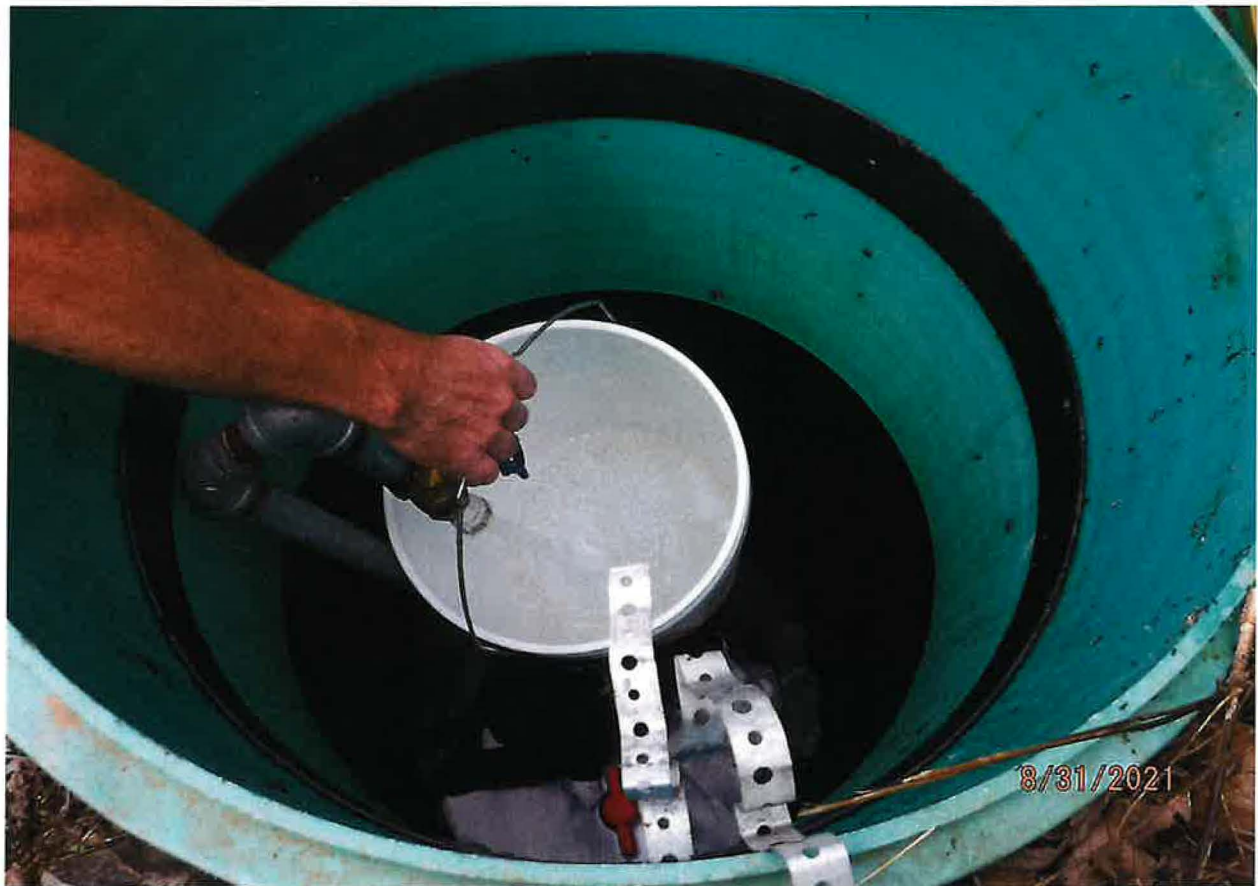
FIELD EXAM DATE 4/1/2022



POD – SPRING FLOW TO CONCRETE CISTERN (SAME POD AS WR 96-9615)



SPRING WATER ROUTED FROM POD TO 1ST 2500 GAL STORAGE TANK (SAME DIVERTING WORKS & WATER SYSTEM INFRASTRUCTURE AS WR 96-9615)



FLOW MEASUREMENT FROM 1ST STORAGE TANK INFLOW PIPE FROM POD



2ND (LOWER ELEVATION) 2,500 GAL STORAGE TANK LOCATED IN LOT 2, EUEREKA HEIGHTS SUBDIVISION



FROST FREE HYDRANT AND HOSE FROM LOWER STORAGE TANK – PROVIDES WATER TO IRRIGATION POU



DOMESTIC POU



IRRIGATION POU



IRRIGATION POU



FROST FREE HYDRANT WITH HOSE & SPRINKLERS USED TO IRRIGATE POU



IRRIGATION POU – SOAKER HOSE & MICRO EMITTERS USED TO IRRIGATE LANDSCAPING AND TREES
NEAR RESIDENCE





IRRIGATION POU – LANDSCAPE BEDS ALONG HOME





IRRIGATION POU

