

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 96-9615
Exam Date: 08/31/2021

1. Current Owner:
THOMPSON LAND TRUST 617 CREEKSIDE LN SANDPOINT ID 83864-2325
2. Accompanied by: Brett Bauer
Phone No: 360-285-3488
Address: 617 Creekside Lane, Sandpoint ID 83864
Relationship to permit Holder: Brother to Permit holder's 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: NO Overlap

C. DIVERSION AND DELIVERY SYSTEM

1. **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															0.4		0.4

Total Acres: 0.4

Method of Determination: Field exam and Arcmap aerial imagery.

3. Delivery System Diagram Attached (required). Indicate all major components and distances between components.
X 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
X 1:24,000 or greater.
X Aerial Photo Attached (required for irrigation of 10+ acres).
X 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:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 0.4 \text{ ac} \times 3.0 \text{ afa} = 1.2 \text{ af}$$

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

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = 1.2 \text{ af}$$

2. Volume Calculations for Other Uses:

This right uses a surface water source and does not receive an annual volume nor maximum diversion volume.

G. NARRATIVE/REMARKS/COMMENTS

Field exam performed on 8/31/2021 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 gravity flow observed; 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 gal / 37.5 sec x 60 sec/min = 8.0 gpm = 0.02 cfs, considering department rounding standards. **0.02 cfs** is recommended as the maximum diversion rate for licensing purposes.

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 irrigation use at the POU. A frost-free hydrant is co-located with the second storage tank, which incorporates a small pump in the water delivery system. A long run of hose is routed back uphill to Lot 4, where the applicant used hose and buckets to water transplanted trees during the irrigation season. During the exam, the irrigation POU was walked with the applicant and consists of 0.4 acres of small open area with numerous transplant trees. Mr. Bauer stated when the parcel was purchased a few years back, the first thing that was completed was planting small trees, and irrigation is used regularly to ensure the new trees maintain peak growth throughout the season.

The irrigation POU was sketched out on field maps, and during licensing review Arcmap aerial imagery was used to trace out the POU which equals 0.4 acres. The annual volume associated with irrigation equals $0.4 \text{ ac} \times 3.0 \text{ afa} = 1.2 \text{ af}$, but as this Permit uses a spring source no volume is applied to the annual or maximum diversion volume when licensing. During the exam, the domestic use permit approved for on lot 4 was not developed and was removed during licensing review.

Conditions 26A and 132 were removed from the permit during licensing review. Condition X59 was added to describe the POD being in Lot 4, Eureka Heights Subdivision. Condition X31 was added to describe irrigation diversion and volume limitations associated with 0.4 acres of irrigation. All other conditions on the Permit shall be carried forward to the license. There are no overlap concerns for this water right. At time of exam, a second Permit (96-9614) which uses the same water system infrastructure but for Lot 2 Eureka Heights Subdivision had lapsed, with no action being taken up to 8/31/2021. I spoke directly with the applicants to ensure they were reaching out to correct this deficiency within the 60 day window to re-instate the Permit.

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>
IRRIGATION	04/01 to 10/31	0.02 CFS

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

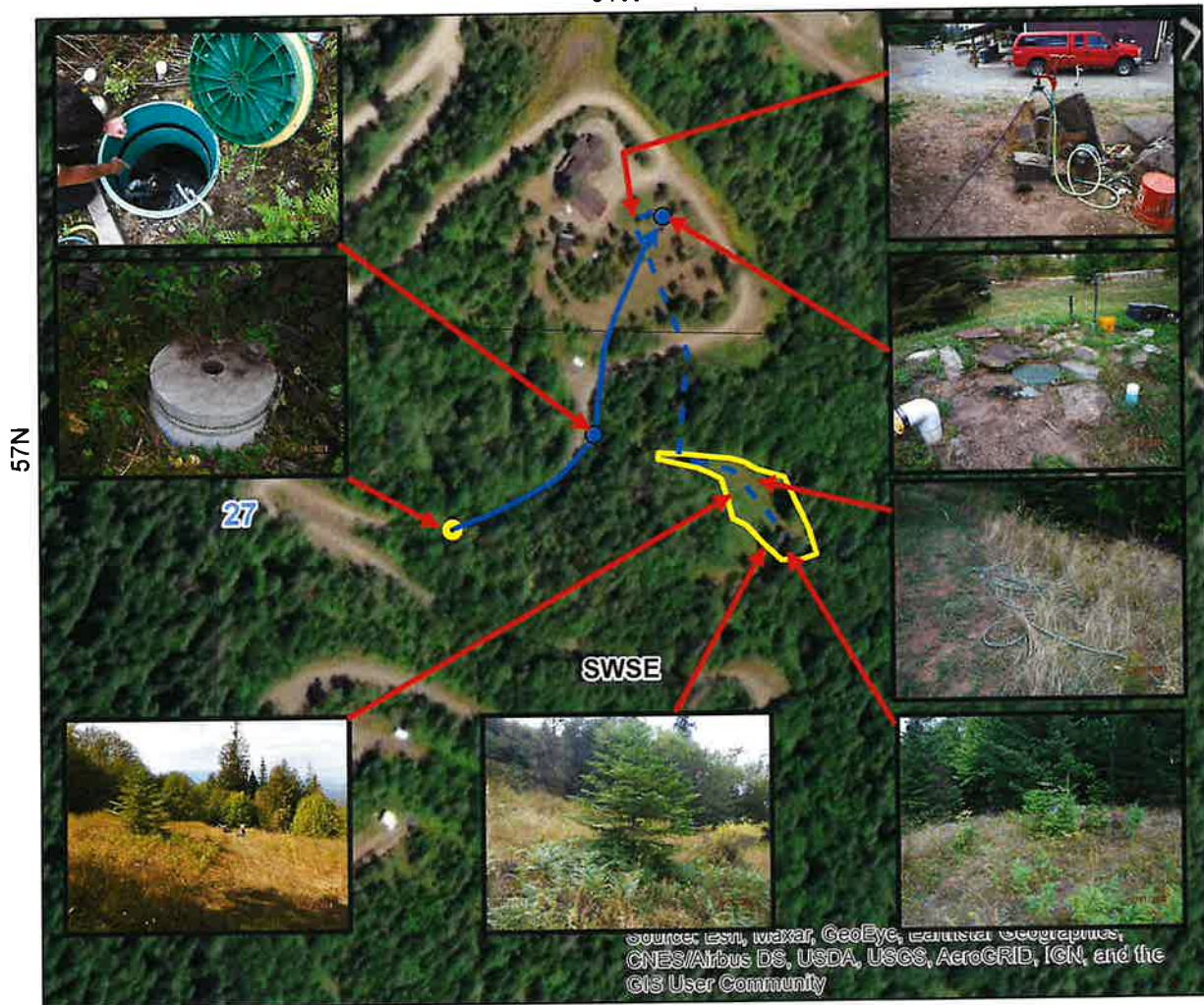
Luke Bates - Water Resource Agent

Field Examiner's Name  Date 9/14/2021
 Reviewer  Date 10/21/2021

State of Idaho
Department of Water Resources
Attachment to Field Exam
96-9615

IRRIGATION system diagram.

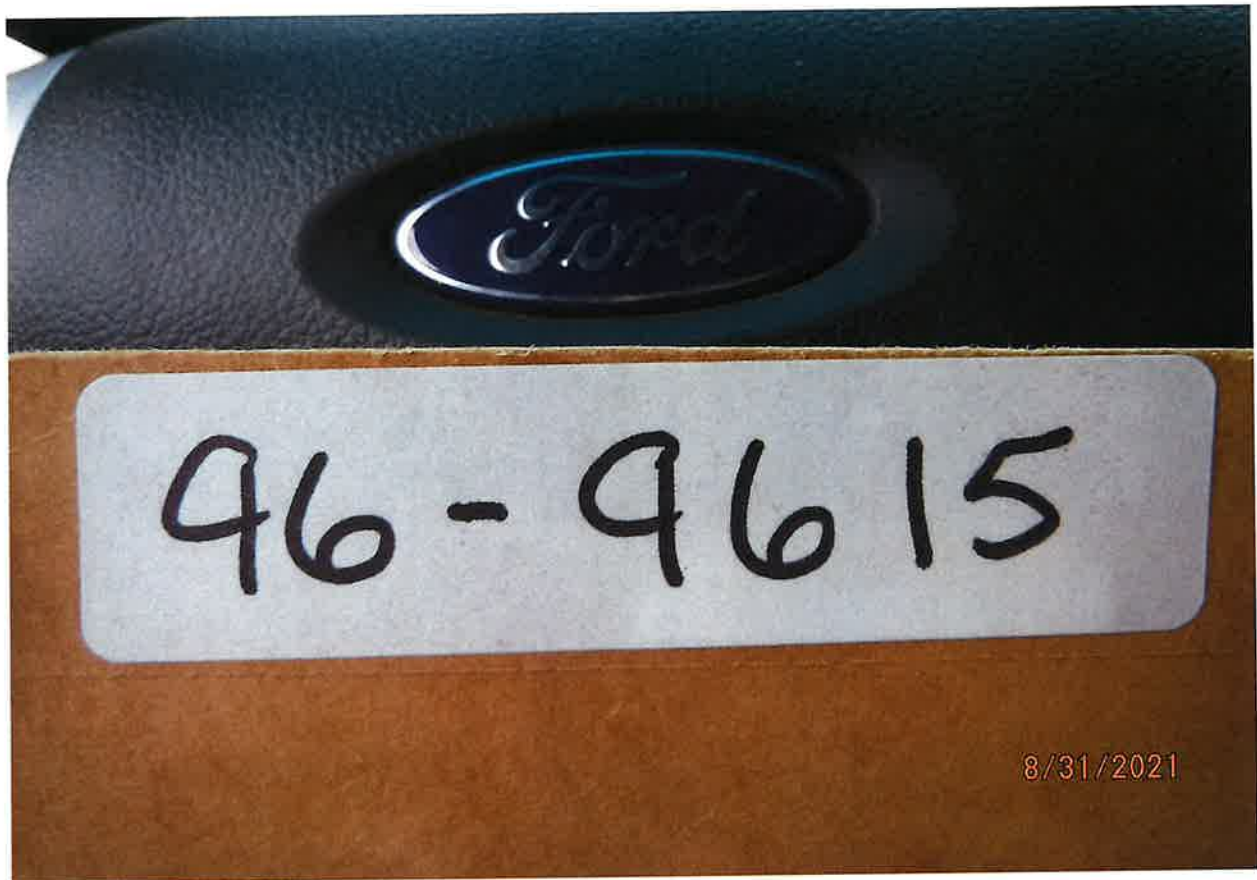
01W



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

0 0.035 0.07 0.14 Miles





FIELD EXAM DATE 8/31/2021



POD – SPRING FLOW TO CONCRETE CISTERN



SPRING WATER ROUTED FROM POD TO 1ST 2500 GAL STORAGE TANK



5 GAL BUCKET TEST MEASURED FLOW FROM 1ST STORAGE 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



IRRIGATION POU – LOT 4 EUEREKA HEIGHTS SUBDIVISION



SMALL SCALE IRRIGATION OF SMALL MEADOW TO WATER TRANSPLANT TREES AND FOLIAGE



IRRIGATION POU





IRRIGATION POU

