

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 97-8188

Exam Date: 09/28/2022

1. Current Owner:
ERIK E PRUSCH PO BOX 229 COOLIN ID 83821-0229 AND
JERE PRUSCH PO BOX 229 COOLIN ID 83821-0229 AND
ISABELLA PRUSCH PO BOX 229 COOLIN ID 83821-0229
2. Accompanied by: Erik Prusch
Phone No: 858-232-0467
Address: 4545 134th Ave NE, Bellevue WA 98005
Relationship to permit Holder: Permit Holder

3. **SOURCE:**
PRIEST LAKE

Tributary
PRIEST RIVER

Method of Determination: ArcMap & DRG.

B. OVERLAP REVIEW

1. Other water rights with the same place of use: YES Overlap

Water Right No.	Source	Purpose of Use	Basis
97-7892	Groundwater	Domestic	B.U. Claim – CFPRBA
97-8350	Priest Lake	Domestic	B.U. Claim - CFPRBA

Comments: B.U. Claims 97-7892 & 97-8350 were filed by the same owner as this Permit, for domestic use from Groundwater & Priest Lake respectively. There is direct overlap between rights for domestic use; I'm recommending licensing of Permit 97-8188 with condition 928 added to mitigate overlap concerns between WRs. If the claim(s) are decreed as claimed Permit 97-8188 B.U.s shall be reduced as required to negate stacking of water rights on parcel RP059710020010A.

2. Other water rights with the same point-of-diversion: NO Overlap

C. DIVERSION AND DELIVERY SYSTEM

1. **LOCATION OF POINT(S) OF DIVERSION:**
PRIEST LAKE L1 (NE¼ NW¼), Sec. 33, Twp 61N, Rge 04W, B.M. BONNER County

Method of Determination: GPS. POD is located at -116°51.7200, 48°36.0973.

PLACE OF USE: IRRIGATION

[illegible]

Total Acres: 0.5

PLACE OF USE: DOMESTIC

[illegible]

Method of Determination: Beneficial use field examination 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 PART No. or Discharge Size
SUBMERSIBLE PUMP		3		GOULDS	BF20 (VFD)

D. FLOW MEASUREMENTS

1.

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

2. Three 5-gallon bucket tests were completed from frost-free hydrant first in series before main service line reaches the house, with average of three resulting in a diversion rate of 5 gal / 12.87 sec x 60 sec/min = 23.3 gpm = **0.05 cfs**, considering department rounding standards.

E. FLOW CALCULATIONS

Measured Method: 5-GAL Bucket Test = (5 gal / 12.9 sec) x 60 sec/min = 23.26 gpm
 = (5 gal / 12.6 sec) x 60 sec/min = 23.81 gpm
 = (5 gal / 13.1 sec) x 60 sec/min = 22.9 gpm

Average of 3ea 5-GAL Bucket Tests = (23.26 gpm + 23.81 gpm + 22.9 gpm) / 3 = 23.32 gpm = 0.05 cfs considering department rounding standards.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 0.5 \text{ acres} \times 3.0 \text{ afa} = 1.5 \text{ af}$$

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

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = \mathbf{1.5 \text{ af}}$$

2. Volume Calculations for Other Uses: Maximum diversion volume = **0.6 af** (domestic in-home use) + 1.5 af (irrigation) = **2.1 af**.

G. NARRATIVE/REMARKS/COMMENTS

Field exam performed on 9/28/2022 with the permit holder, Erik Prusch, showed water being diverted from Priest Lake for domestic & irrigation uses. At the POD, a Goulds 3 HP (VFD) BF20 pump operating at 50 PSI and screened intake pipe serve as the diverting works for the water system. The intake pipe has a control box located in the lake along the shoreline that splits the main line which routes to the home and to frost-free hydrant(s). Three 5-gallon bucket tests were completed from the first hydrant in-line from the intake pipe, with average of three measurements resulting in a diversion rate of 5 gal / 12.87 sec x 60 sec/min = 23.32 gpm = **0.05 cfs**, considering department rounding standards which is recommended as the maximum diversion rate for licensing purposes. Each beneficial use retains their Permit approved diversion rate, but 0.02 cfs (irrigation) and 0.04 cfs (domestic) are limited to 0.05 cfs when combined for the maximum diversion rate, being limited by pump performance found during the field exam.

The domestic POU is a lakefront house. Photographs were taken during the exam and illustrate the home and pump controls located inside the daylight basement of the residence. During licensing review, I assigned the POU using ArcMap aerial imagery. The annual volume for domestic in-home water use equals **0.6 af**. Irrigation is covered by a separate beneficial use component on the permit.

The irrigation POU includes beach front landscape grasses & landscape watering around the home, garage, and throughout the parcel. Most of the irrigation is pressurized soaker hose runs, but hose and sprinklers are used on the roadside portion of the parcel. The irrigation system had been installed in the spring of 2022, and irrigation practices began prior to submission of the Statement of Completion received by the Department on 6/21/2022. At the time of exam in September evidence of irrigation was observed allowing me to recommend the 0.5 acres irrigation as Permit approved. I used field maps during the exam to sketch out the POU, which occurs within the tree canopied parcel that doesn't allow aerial imagery alone to accurately depict the irrigation water usage on the property. During licensing review, I used ArcMap aerial imagery to trace out the POU using my field maps as a guide. The annual volume for irrigation equals 0.5 ac x 3.0 afa = **1.5 af**. The maximum diversion volume recommended for licensing this permit equals 0.6 af (domestic use) + 1.5 af (irrigation use) = **2.1 af**.

Condition 029 was removed from the permit during licensing review. All other conditions on the permit shall be carried forward to the license. I added condition 928 to account for two separate B.U. Claims filed by the applicants in the ongoing Clark Fork Pend Oreille River Basin Adjudication (CFPRBA) process. 928 describes that if either claim 97-7892 or 97-8350 are decreed as claimed, Right 97-8188 shall be reduced accordingly to negate any redundancy (stacking) of water uses associated with the applicant's parcel as of recommendation of license for 97-8188. 928 does not preclude the current or future property owner from filing for additional water uses on the property. Aside from the two claims filed by the applicant, there are no overlapping concerns for licensing this permit.

Have conditions of permit approval been met? X 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	1.5 AF
DOMESTIC	01/01 to 12/31	0.04 CFS	0.6 AF

Totals: 0.05 CFS 2.1 AF

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 X None

I. AUTHENTICATION

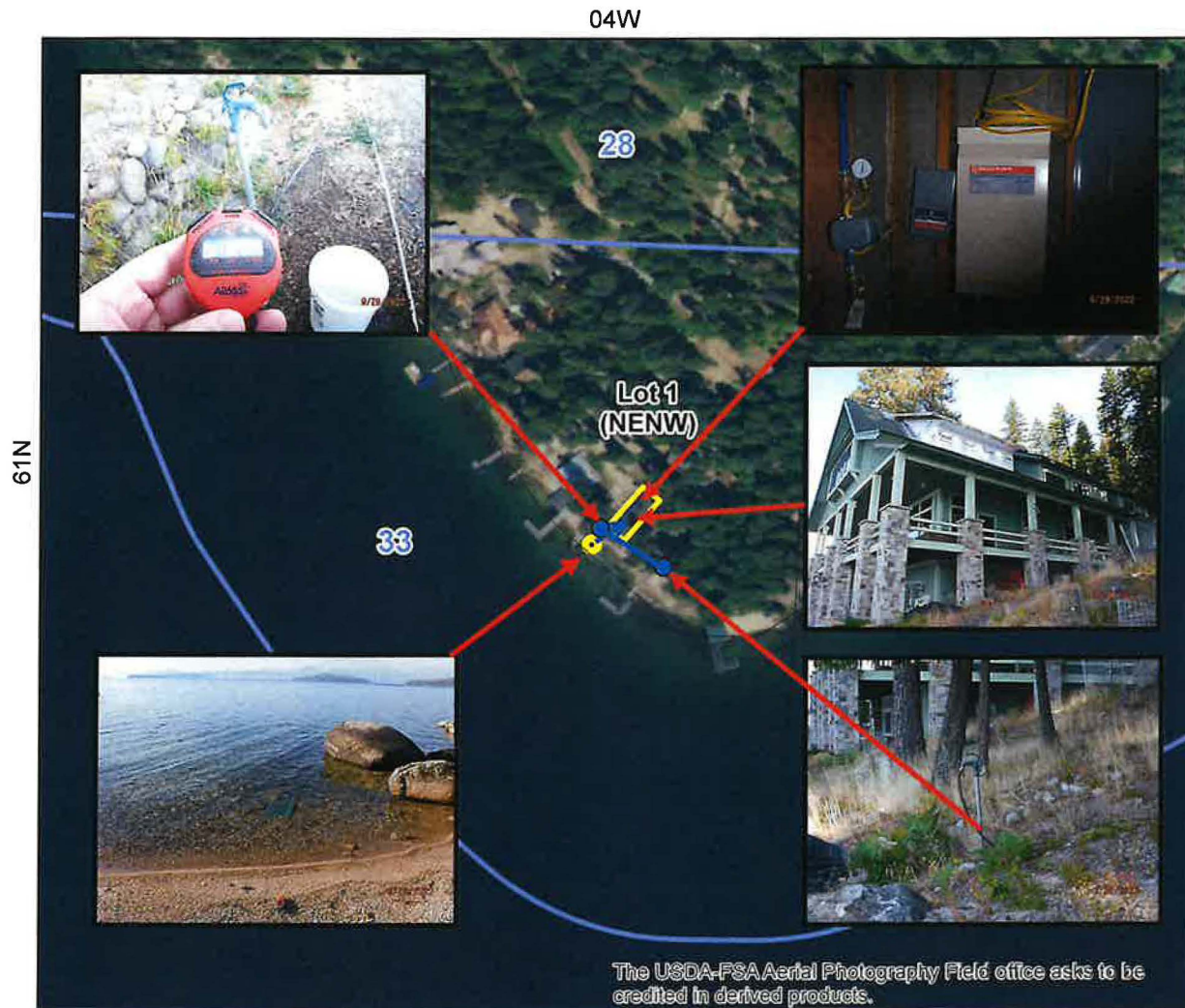
Luke Bates -

Field Examiner's Name  Date 11/24/23

Reviewer  Date 4/16/24

State of Idaho
Department of Water Resources
Attachment to Field Exam
97-8188

This map depicts the DOMESTIC system diagram.



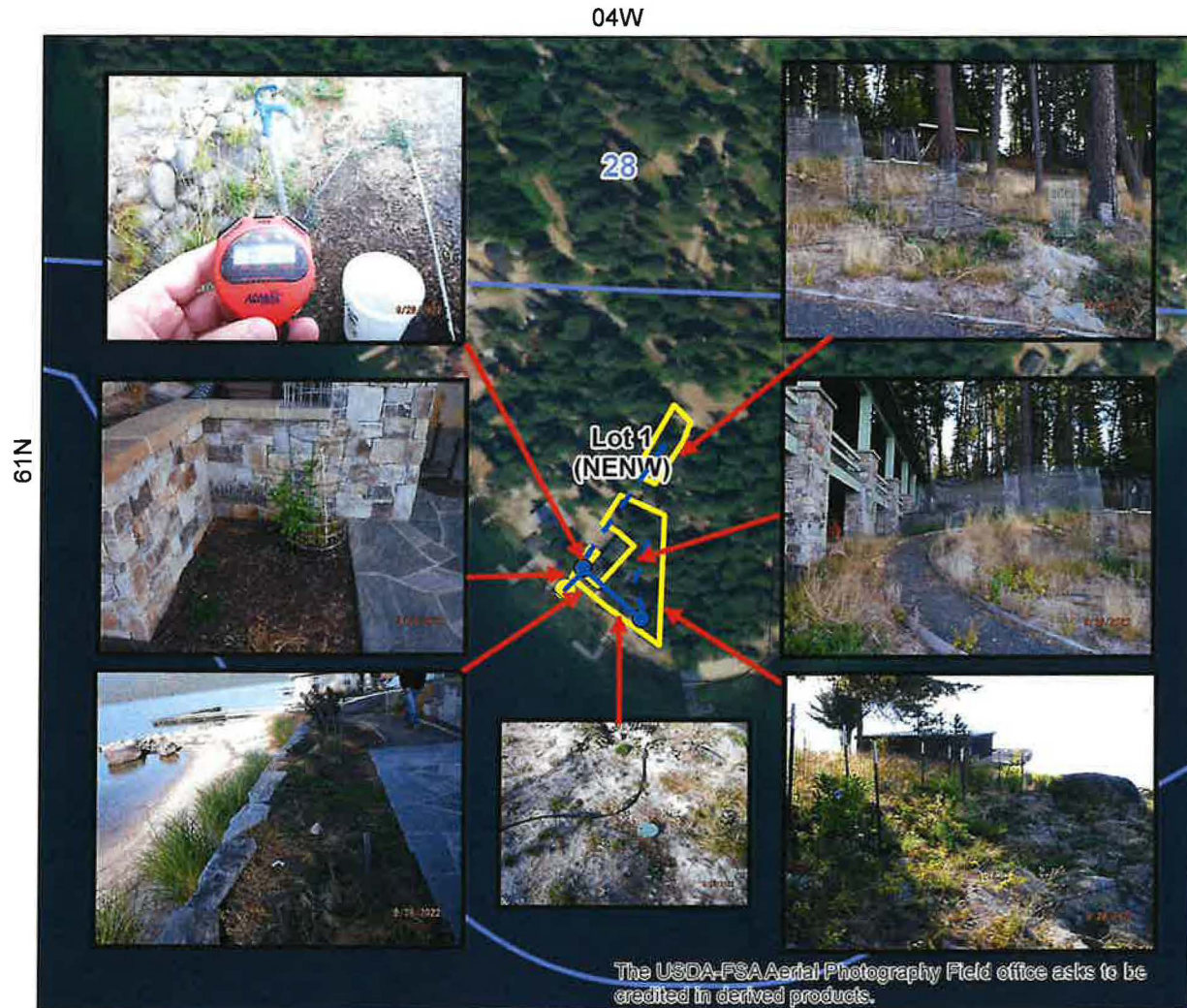
0 0.035 0.07 0.14 Miles

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



State of Idaho
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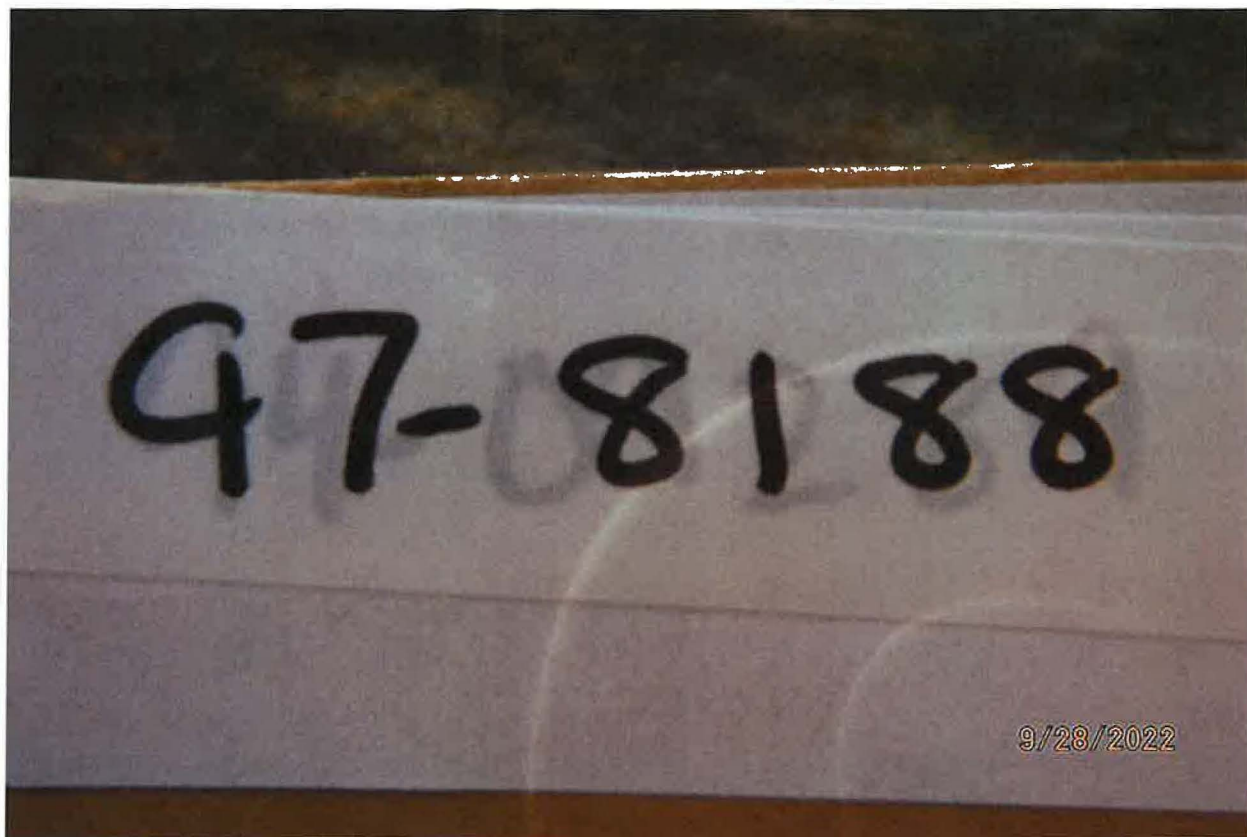
IRRIGATION system diagram.



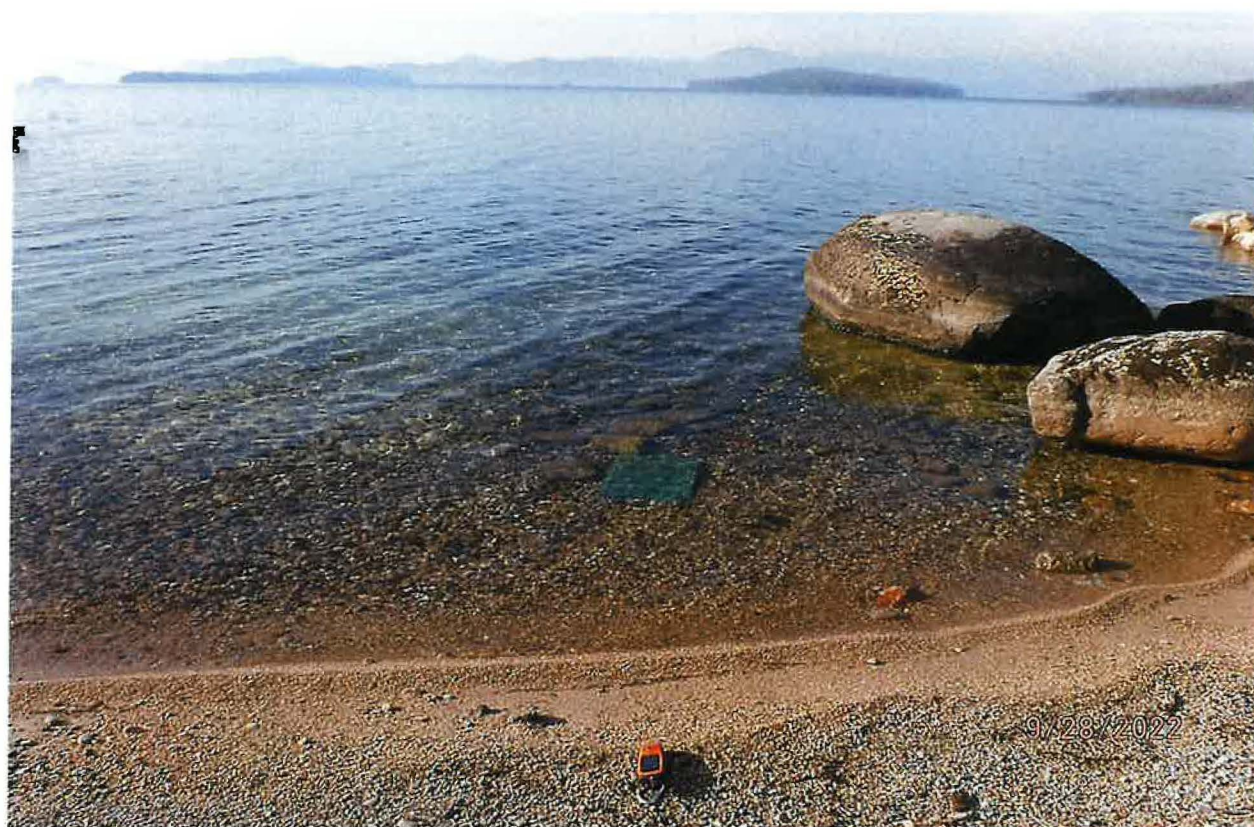
0 0.035 0.07 0.14 Miles

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





BENEFICIAL USE FIELD EXAM DATE 9/28/2022



POD – INTAKE PIPE WITH SUBMERSIBLE PUMP IN LAKE – BLOWOUT VALVE UNDER WATER UNTIL FALL
IN GREEN WATER BOX



GOULDS 3 HP VARIABLE FREQ DRIVE PUMP WITH BF20 PUMP CONTROLLER





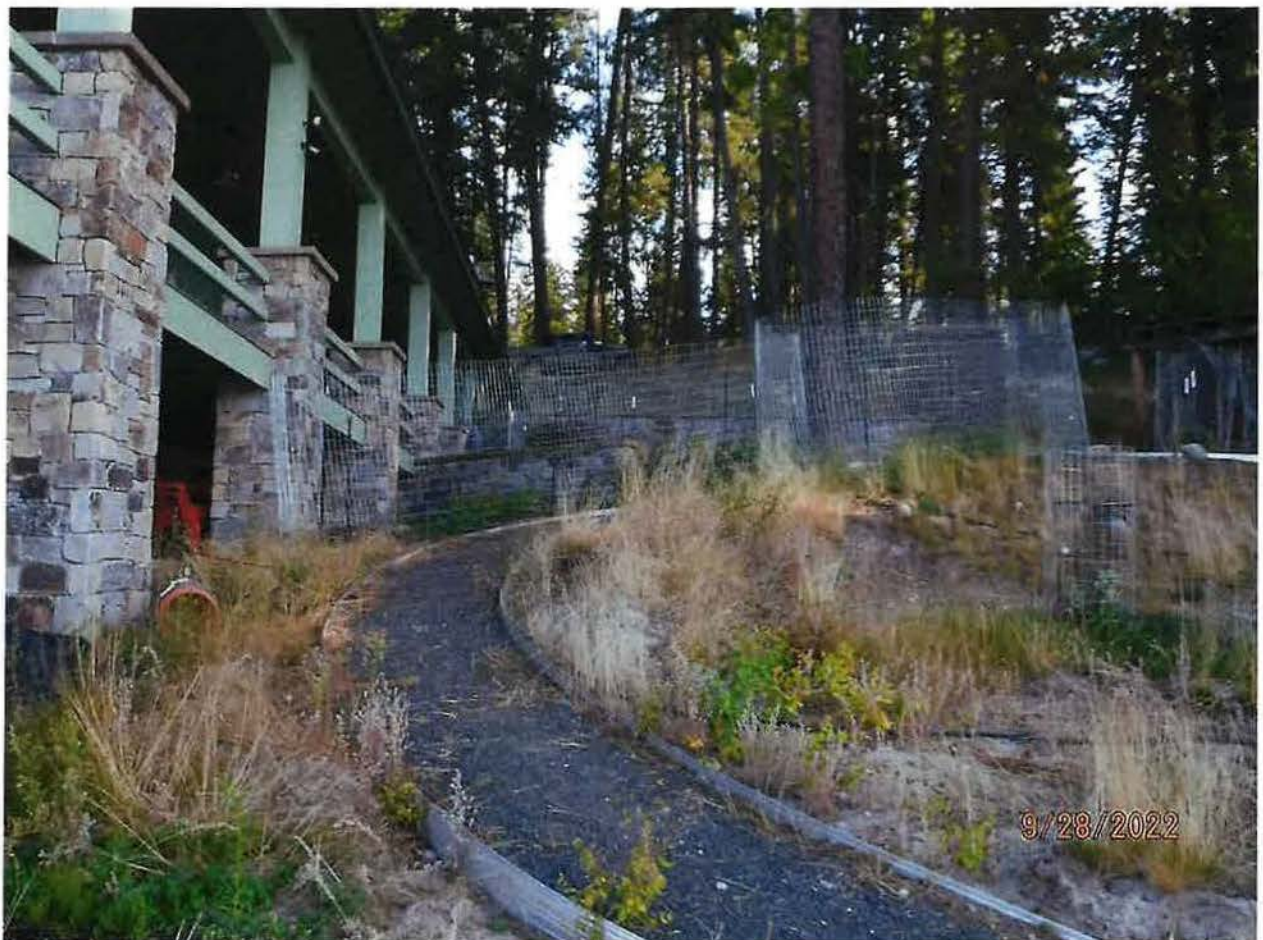
50 PSI WATER SYSTEM OPERATING PRESSURE



DOMESTIC POU – LAKE HOUSE



IRRIGATION POU – IRRIGATION BY HOSE & SPRINKLER AND SOAKER HOSES





IRRIGATION POU – ZONE CONTROL BOX



IRRIGATION POU – FENCED IN PLANTS & TREES WATERED BY SOAKER HOSE



IRRIGATION POU – FROST FREE HYDRANT TO HOSE & SPRINKLER



IRRIGATION POU – BEACH FRONT LANDSCAPE IRRIGATION



IRRIGATION POU

