

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 95-17291
Exam Date: 03/03/2021

1. Current Owner:
BRIGHT SKY WATER ASSOCIATION INC PO BOX 1262 ATHOL ID 83801-1262
2. Accompanied by: James Lent
Phone No: 208-227-8719
Address: Same as above
Relationship to permit Holder: Representative

3. **SOURCE:**
GROUND WATER

Method of Determination: Arcmap and DRG.

B. OVERLAP REVIEW

1. Other water rights with the same place of use: NO Overlap

Water Right No.	Source	Purpose of Use	Basis

Comments: _____

2. Other water rights with the same point-of-diversion: YES Overlap

Water Right No.	Source	Purpose of Use	Basis
95-17291	GROUNDWATER	DOMESTIC	PERMIT – in process licensing

Comments: Permit 95-17291 uses the same diversion system and water system infrastructure as this permit. Condition F06 was added to the permit at time of licensing to describe the shared well between rights 95-17291 and 95-17316.

C. DIVERSION AND DELIVERY SYSTEM

1. **LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER SE¼ SW¼, Sec. 33, Twp 54N, Rge 03W, B.M. BONNER County

Method of Determination: GPS. POD located at -116°42.845, 47°58.856. Well D-TAG D0079318.

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	
54N	03W	33									X			X					

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
D0079318		5			

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
NONE						

2. Measurements: Unable to perform flow measurement because system pumped directly into a community storage tank.

E. FLOW CALCULATIONS☒ Additional Computation Sheets Attached

Measured Method: Theoretical pumping equation estimates flow at 31.2 gpm or **0.07 cfs** considering department rounding standards, with pump depth of 380 ft and system operating pressure of 55 PSI.

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:

$$\text{Domestic annual volume} = 5 \text{ homes} \times 1.2 \text{ af per home} = \mathbf{6.0 \text{ af}}$$

G. NARRATIVE/REMARKS/COMMENTS

Field exam conducted on 3/3/2021 with the applicant's representative, James Lent, showed a well providing groundwater for homes service connections on 5 parcels. At the groundwater POD, the applicant's well D0079318 has a 5 hp pump that diverts water directly to a 9,000 gallon community storage reservoir prior to distribution, and as such flow measurements were not attainable. Theoretic Pump Equation derived a diversion rate of 0.07 cfs considering department rounding standards, with pump installed at a depth of 380 feet, and system operating pressure of 55 psi. The applicant had permitted for 0.11 cfs for domestic beneficial use, but is limited to pump performance at time of field exam which is **0.07 cfs**, that will be applied to the license. Permit 95-17291 uses the same diversion system and water system infrastructure as this permit. Condition F06 was added to the permit at time of licensing to describe the shared well between rights 95-17291 and 95-17316. A totalizing flow meter is installed on the system to track annual volume, but does not provide for instantaneous flow measurements.

The permit's POD was approved for development in the NE¼SW¼, Section 33, Twp 54 North, Rge 03 West. The subdivision's plans changed during the permit's development period, and the POD was GPS located at time of field exam and found to be in the SE¼SW¼ quarter-quarter. An amendment is required for this change in POD location to a different 40 acre tract than the permit was approved for, with amendment mailed to the applicant on 3/11/2021. The existing well that was associated with the initial application has been capped off, and is not connected to the water system.

The domestic POU consists of five parcels located in the Bright Sky 1st Addition Subdivision & one parcel in the Bright Sky Subdivision, which were walked during the field exam. I observed 5 homes (one per parcel) that are service connected. Water from the well flowed into the community storage tank, and from there is distributed by a water main to each of the five homes. At one point the water main line routes to a 4-way split, with stub lines routing to four of the homes (photograph taken to represent this). The home sites are fairly new, and while large lawns were not yet in place irrigation of small yards, gardens, and landscaping was evident at each homes; credit for ½ acre irrigation associated with domestic use is recommended. Photographs were taken of each home, and during licensing review Arcmap aerial imagery year 2019 was used to trace out the domestic POU for each house for five parcels. The annual volume recommended for licensing this permit equals 5 homes x 1.2 af per home = **6.0 af**.

Conditions 26A and 046 were removed from the permit during licensing review. Conditions X59 and X60 were added describing the POD and POU being located within their respective designated subdivision lots. Condition F06 was added describing shared well POD between 95-17291 and 95-17316. Condition X35 was added describing combined use limitations for diversion rate that shall not exceed 0.07 cfs between 95-17291 and 95-17316. All other conditions on the permit were carried forward to licensing. There are no 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>
DOMESTIC	01/01 to 12/31	0.07 CFS	6.0 AF

Totals: 0.07 CFS 6.0 AF

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

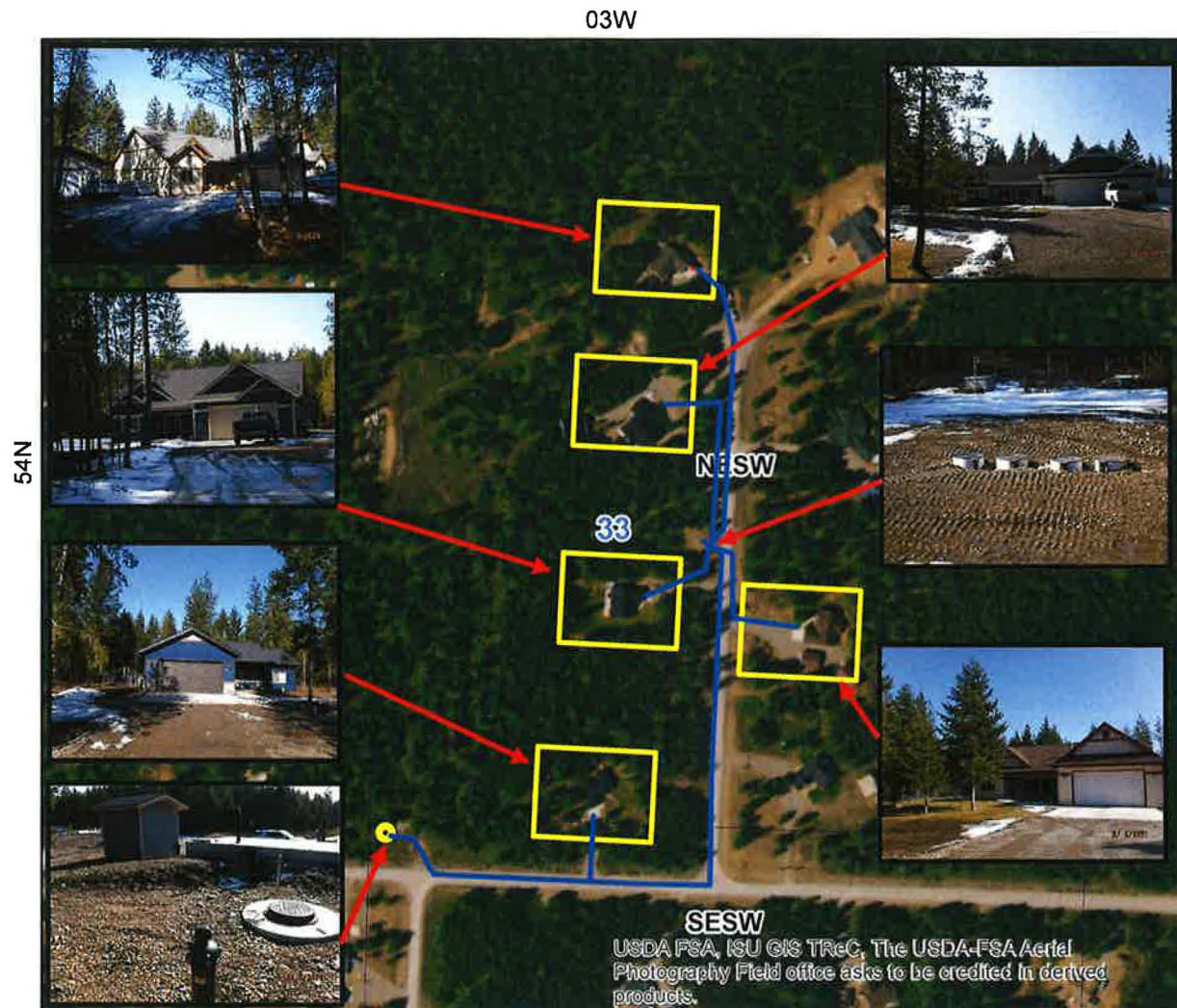
I. AUTHENTICATION Luke Bates - Water Resource Agent

Field Examiner's Name  Date March 18, 2021

Reviewer  Date 3/18/2021

State of Idaho
Department of Water Resources
Attachment to Field Exam
95-17291

DOMESTIC system diagram.



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

0 0.04 0.08 0.16 Miles



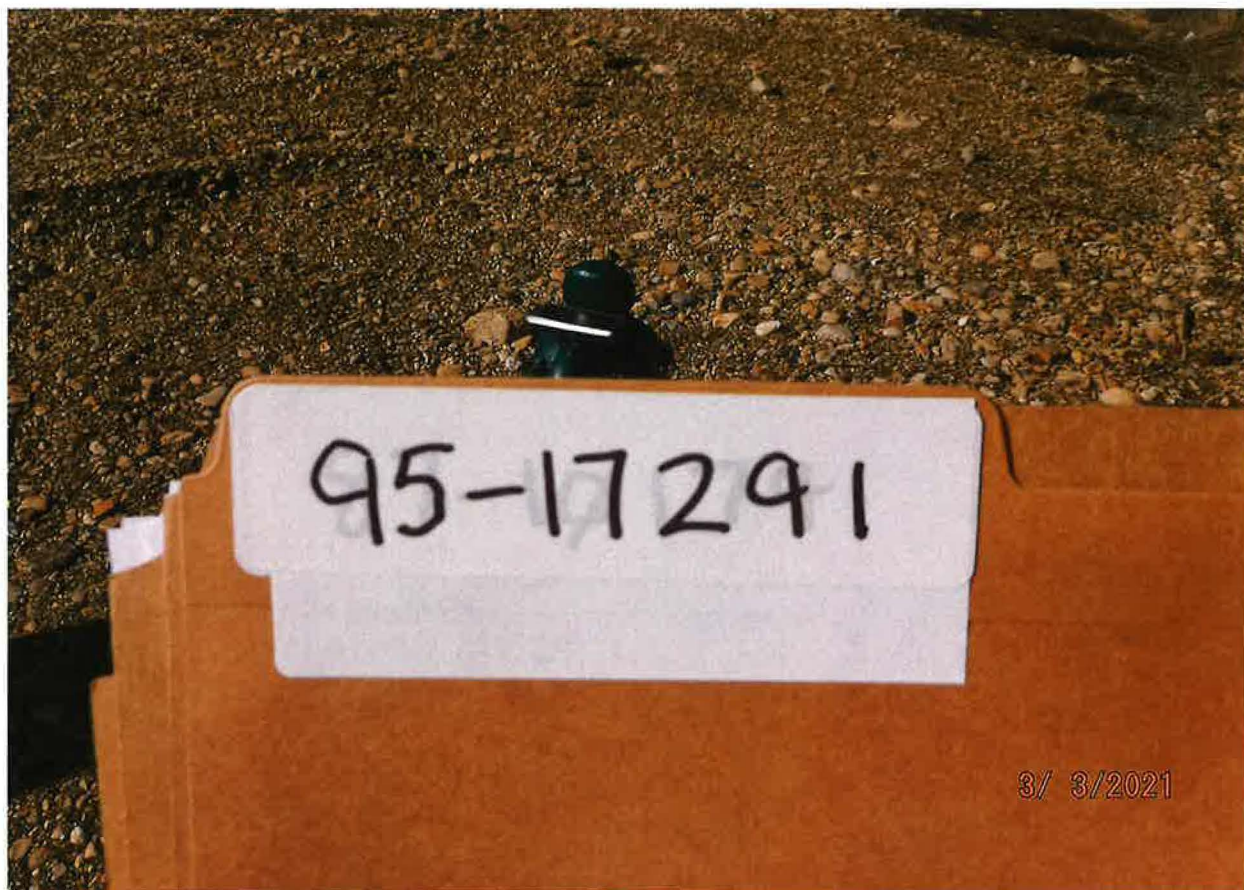
THEORETICAL PUMPING EQUATION FOR WR# 95-17291

Theoretical Pumping Equation is required because system did not allow for a proper measurement. Pump is estimated to be at 380 ft, and running at 55 psi.

PUMP EQUATIONS

WATER RIGHT No. 95-17291

D0079318	HP	H in feet	Efficiency as a decimal	Pumping lift in feet	System pressure in PSI
Q = $HP \cdot 8.8 \cdot \text{Eff} / H$	5	507.2109	0.8	380	55
Q = 0.070 cfs 31.2 gpm					



F.E. DATE – 3/3/2021



POD – WELL D0079318



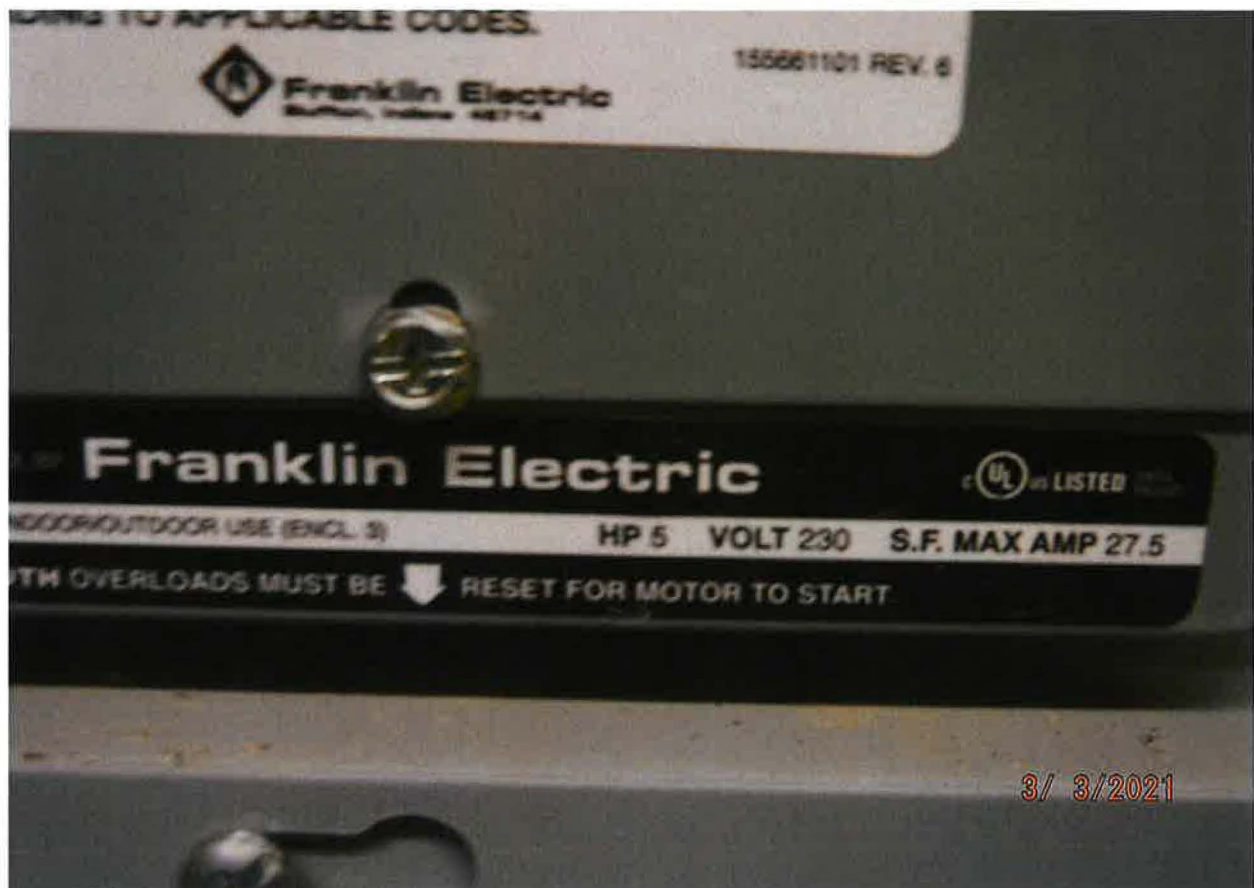
WELL D-TAG D0079318



9,000 GAL STORAGE RESERVOIR



PUMP STATION CO-LOCATED WITH WELL

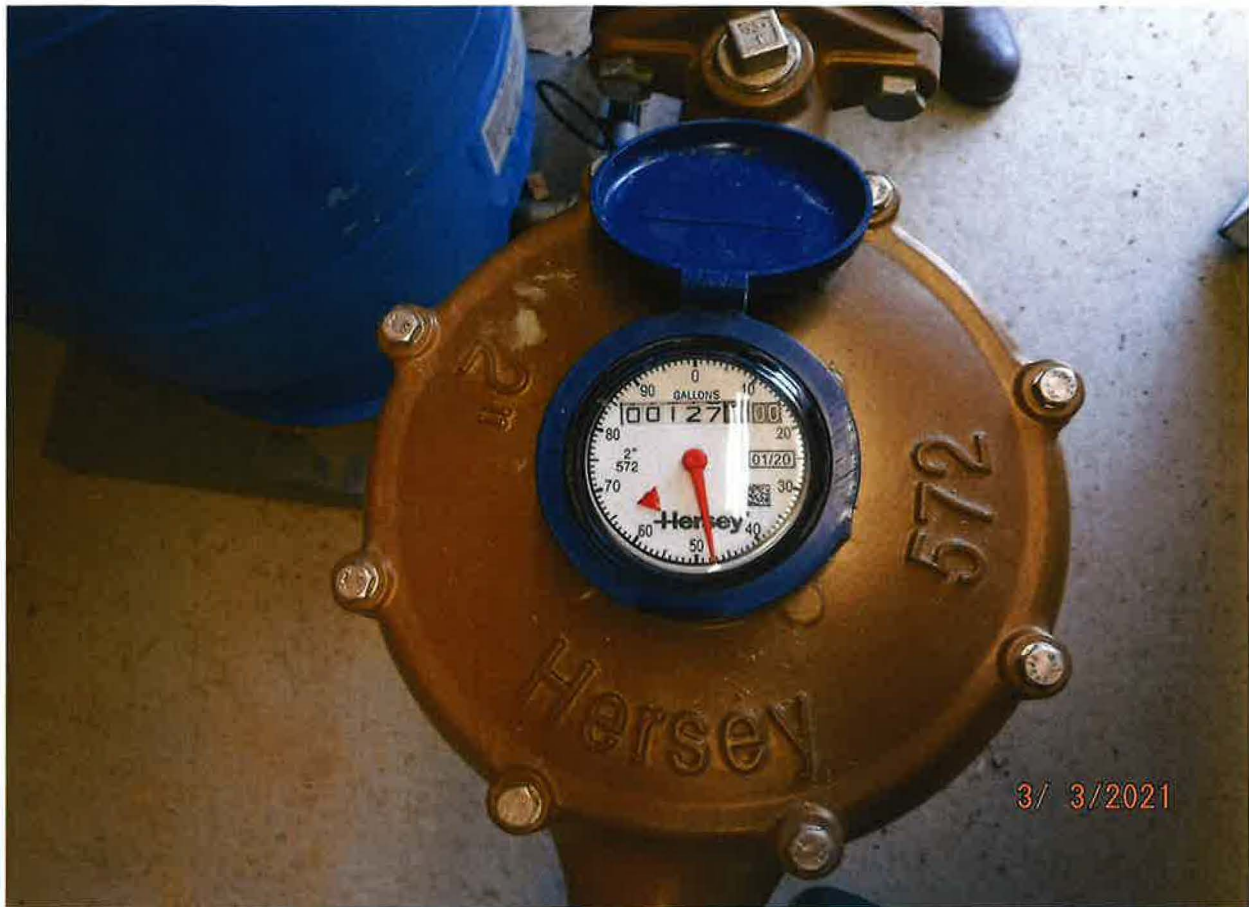


5 HP PUMP MOTOR INSTALLED IN WELL



WATER SYSTEM OPERATES AT 55 PSI





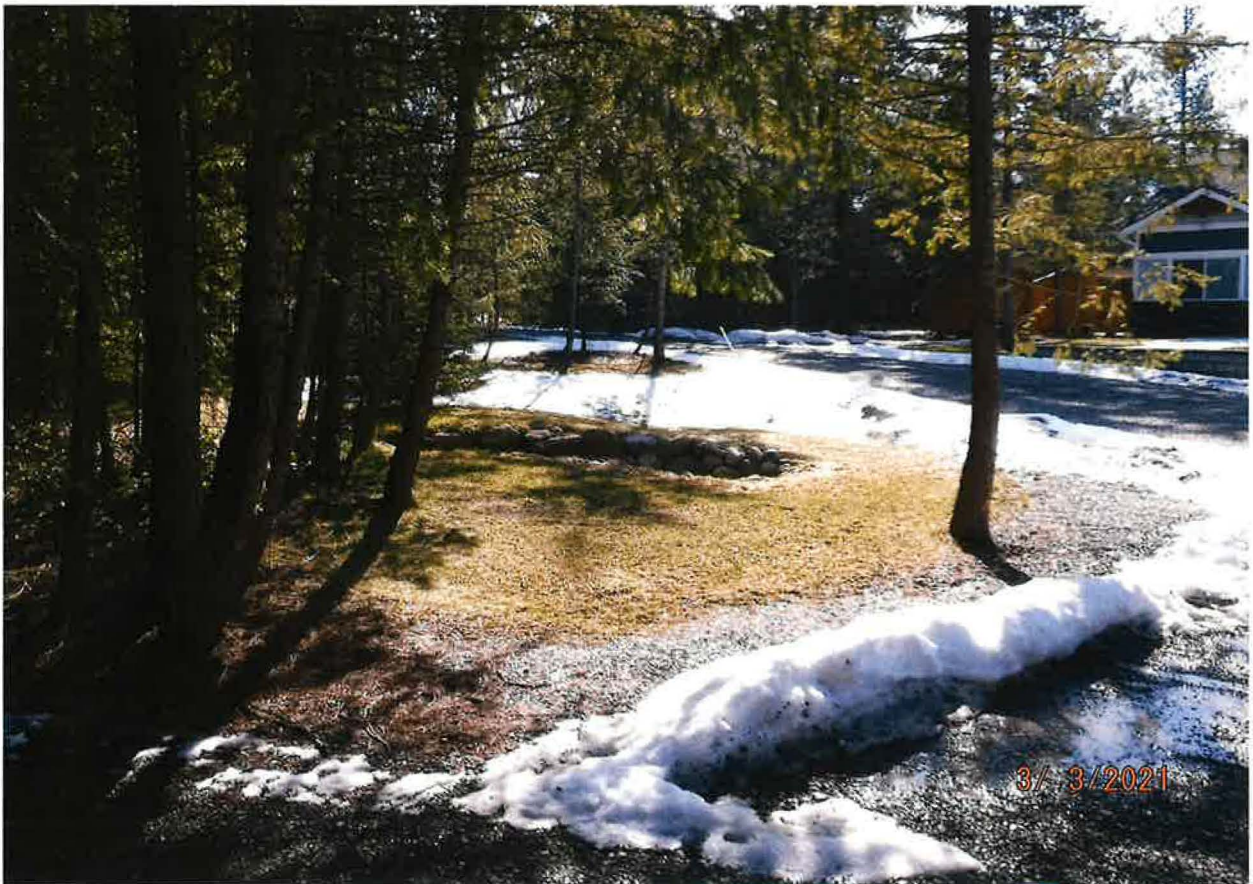
VOLUME TOTALIZING FLOWMETER INSTALLED ON SYTEM



DOMESTIC POU – 200 LN DANCING LIGHT – RP013670000010A, LOT 1 BRIGHT SKY 1ST ADD SUBDIVISION



DOMESTIC POU – 172 LN DANCING LIGHT – RP013670000020A, LOT 2 BRIGHT SKY 1ST ADD SUBDIVISION



UP TO ½ ACRE IRRIGATION OCCURING UNDER DOMESTIC BENEFICIAL USE



WATER MAIN BRANCHES INTO FOR STUBS TO SERVICE LOT(S) 1 - 3, AND 5 OF SUBDIVISION



DOMESTIC POU – 108 LN DANCING LIGHT – RP013670000030A, LOT 3 BRIGHT SKY 1ST ADD SUBDIVISION



DOMESTIC POU – 745 NORTHERN SKY RD – RP013670000040A, LOT 4 BRIGHT SKY 1ST ADD SUBDIVISION



DOMESTIC POU – 95 LN DANCING LIGHT – RP013590000030A, LOT 3 BRIGHT SKY SUBDIVISION