

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 95-17852
Exam Date: 05/09/2023

1. Current Owner:
ZAKEN ACRES WELL GROUP 14685 N FORESTDALE DR RATHDRUM ID 83858-7068
2. Accompanied by: Ken Zaken
Phone No: 208-818-1667
Address: Same as above
Relationship to permit Holder: Representative

3. SOURCE:
GROUND WATER

Method of Determination: ArcMap & DRG.

B. OVERLAP REVIEW

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

Water Right No.	Source	Purpose of Use	Basis
95-7041	GROUNDWATER	IRRIGATION	LICENSE

Comments: Licensed Right 95-7041 uses a separate groundwater source for irrigation with a POU that overlaps this Permit's domestic POU. 95-7041 has priority date of 1/3/1969; it is shown as a parent Right in the adjudication process for the CSRBA, but no claim nor recommended POU shapes overlap this Permit's POU. There is no concern for overlap between 95-7041 and 95-17852.

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

C. DIVERSION AND DELIVERY SYSTEM

1. **LOCATION OF POINT(S) OF DIVERSION:**
GROUND WATER NE¼ SE¼, Sec. 32, Twp 52N, Rge 04W, B.M. KOOTENAI County

Method of Determination: GPS; POD located at -116°51.2476, 47°48.318 well D-Tag D0003457.

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	
52N	04W	32													X				X

Method of Determination: Beneficial use field examination & ArcMap aerial imagery; Kootenai County tax parcel map 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
D0003457	FRANKLIN ELECTRIC	5	UNKOWN	GOULDS	UNKOWN

D. FLOW MEASUREMENTS

1.

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

2. Measurements: Unable to perform flow measurements due to inadequate pipe requirements. Main service line from well fills buried storage reservoirs and is pumped from tanks to used by 2ea booster pumps. A Theoretic Pump Equation derived a flow rate of 40.7 gpm, for a 5 HP pump motor, or 0.09 cfs considering department rounding standards.

E. FLOW CALCULATIONS

X Additional Computation Sheets Attached

Measured Method: Theoretic Pump Equation = 5 hp pump installed at depth of 285 with operating pressure of 45 PSI derives a flow rate of 40.7 gpm or **0.09 cfs** considering department rounding standards.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation: N/A
2. Volume Calculations for Other Uses: Domestic annual volume & maximum diversion volume for 4ea homes with ½ acre per home = 4 x 1.2 af = **4.8 af**.

G. NARRATIVE/REMARKS/COMMENTS

Field exam performed on 5/9/2023 with the applicant, Ken Zaken, showed a groundwater well providing water for domestic uses. At the POD, well D0003457 has a 5 hp pump motor installed and buried water main line routing direct to two community 2,500-gal storage tank before distribution for uses. Each storage tank uses a 1 hp booster pump to distribute water through pressure tanks to four residence's domestic use.

I was unable to perform a flow measurement due to inadequate pipe requirement; water flows directly to a storage tank and subsequent pressure tank prior to the first available frost-free hydrant. A Theoretic Pump equation derives a flow rate of **0.09 cfs** considering department rounding standards which is recommended for licensing. The permit approved diversion rate for 4ea homes domestic use equals 0.10 cfs but the applicant is limited at time of licensing to the installed pump performance found at time of exam. Applicant's statement of completion illustrates a 2 hp pump is installed, but the pump motor relay control is configured for a 5 hp pump motor. Absent any supporting documents which were not available, I am recommending the theoretic pump equation derived rate for licensing purposes.

The domestic POU was observed consisting of 4ea homes on separate parcels with up to ½ acre irrigation included in their respective water use. Photographs were taken during the exam and domestic use sketched out on field exam maps. During licensing review Arcmap aerial imagery was used to designate equitable POU shapes per home which include the ½ acre authorized irrigation covered under domestic use. The domestic annual volume for 4ea homes with ½ acre irrigation equals 4 x 1.2 afa = **4.8 af**, which is recommended for licensing purposes. The domestic POU is developed in lots 1-4 Zaken Acres Subdivision.

Conditions 26A and 046 were removed from the Permit during licensing review. Conditions X59 and X60 were added during licensing review to accurately describe the POD located on lot 2. Blk 1 & POU in lots 1-4, Blk 1 of the subdivision.

Conditions 26A and 046 were removed from the permit during licensing review. All other conditions on the permit shall be carried 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	0.09 CFS	4.8 AF
<u>Totals:</u>		0.09 CFS	4.8 AF

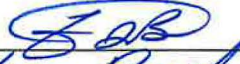
2. Recommended Amendments

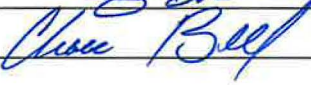
☐ Change P.D. as reflected above ☐ Add P.D. as reflected above ☒ None

☐ Change P.U. as reflected above ☐ Add P.U. as reflected above ☒ None

I. AUTHENTICATION

Luke Bates -

Field Examiner's Name  Date 7/21/2023

Reviewer  Date 5/21/2024

State of Idaho
Department of Water Resources
Attachment to Field Exam
95-17852

DOMESTIC system diagram.

04W



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

0 0.04 0.08 0.16 Miles



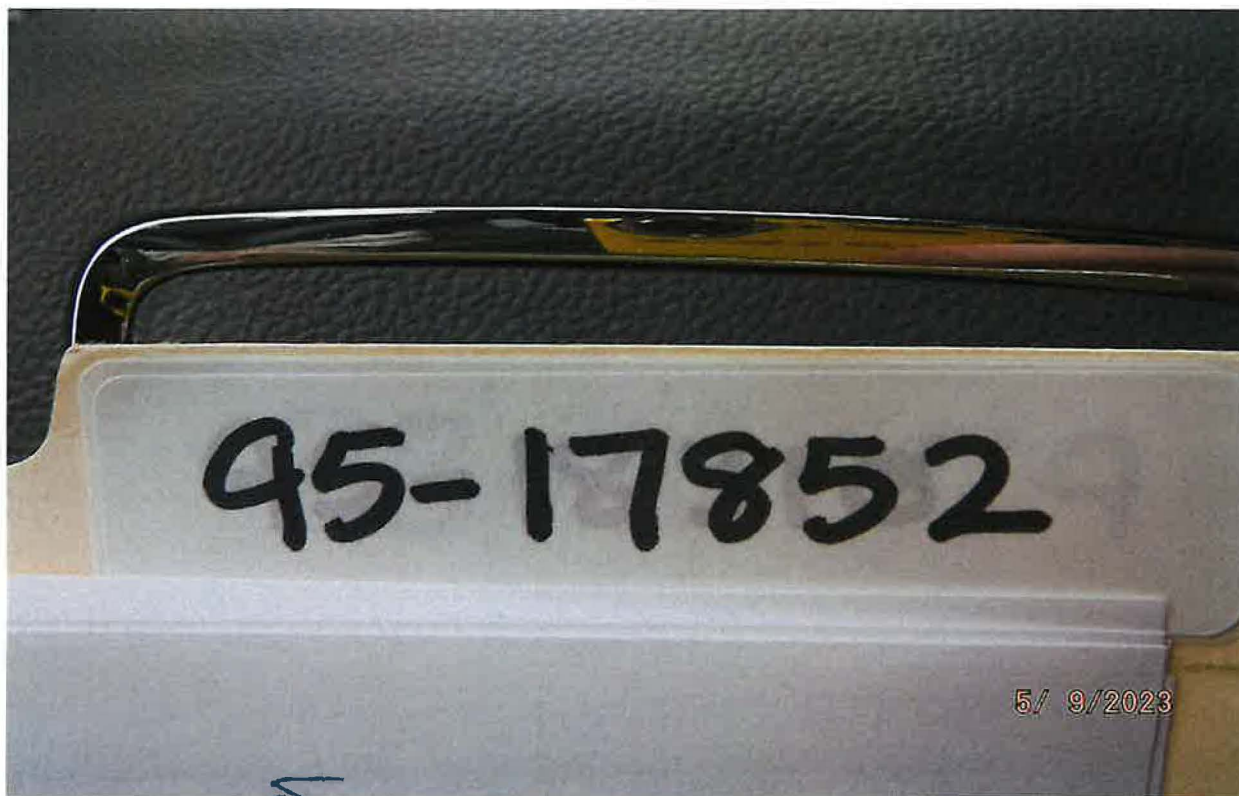
THEORETICAL PUMPING EQUATION(S) FOR WR# 95-17852

Theoretical Pumping Equation is required because system did not allow for a proper measurement. Pump is estimated to lift 285 ft, and running at 45 psi.

PUMP EQUATION

WATER RIGHT No. 95-17852

D0003457	HP	H in feet	Efficiency as a decimal	Pumping lift in feet	System pressure in PSI
Q = $HP * 8.8 * Eff / H$	5	389.0816	0.8	285	45
Q = 0.091 cfs 40.7 gpm					



BENEFICIAL USE FIELD EXAM DATE 5/9/2023



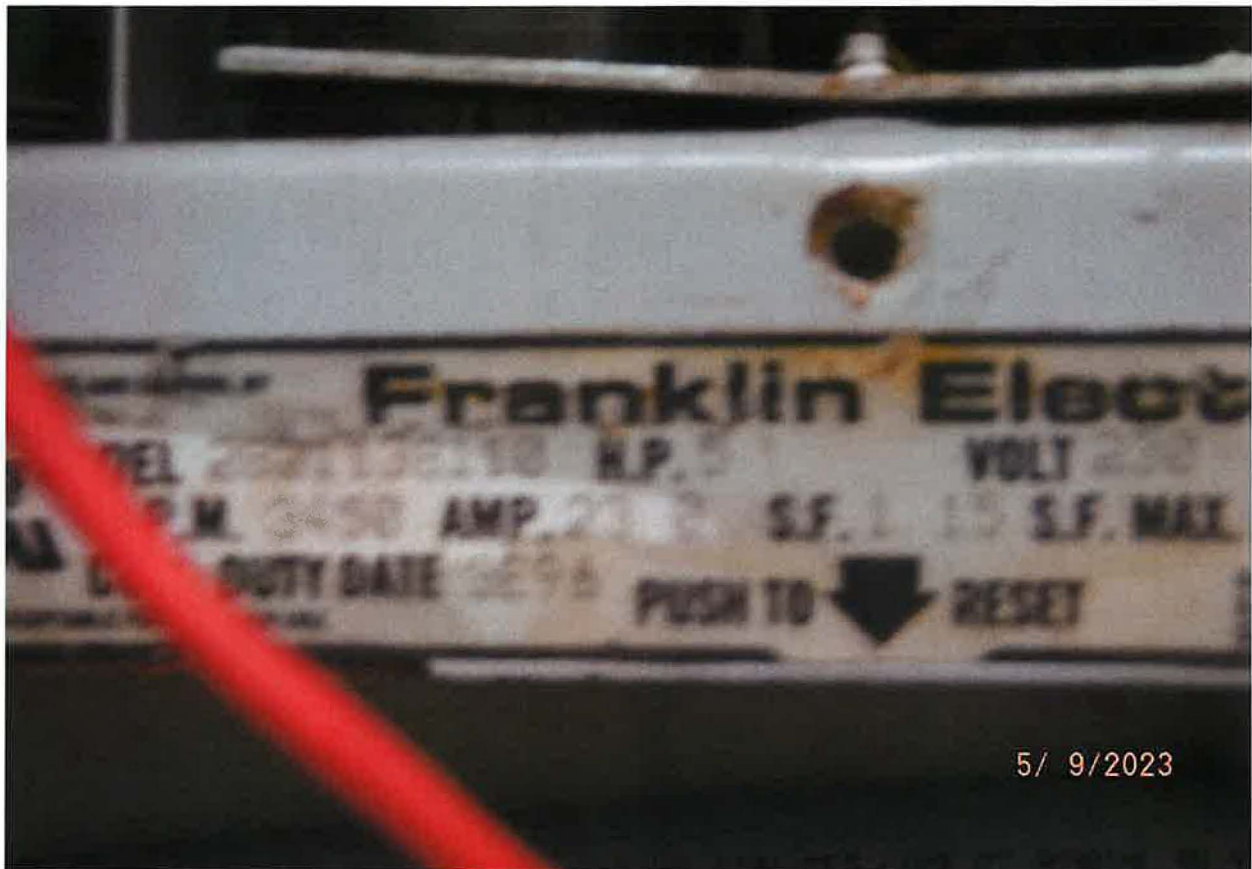
POD – GROUNDWATER WELL D0003457



WELL D-TAG D0003457



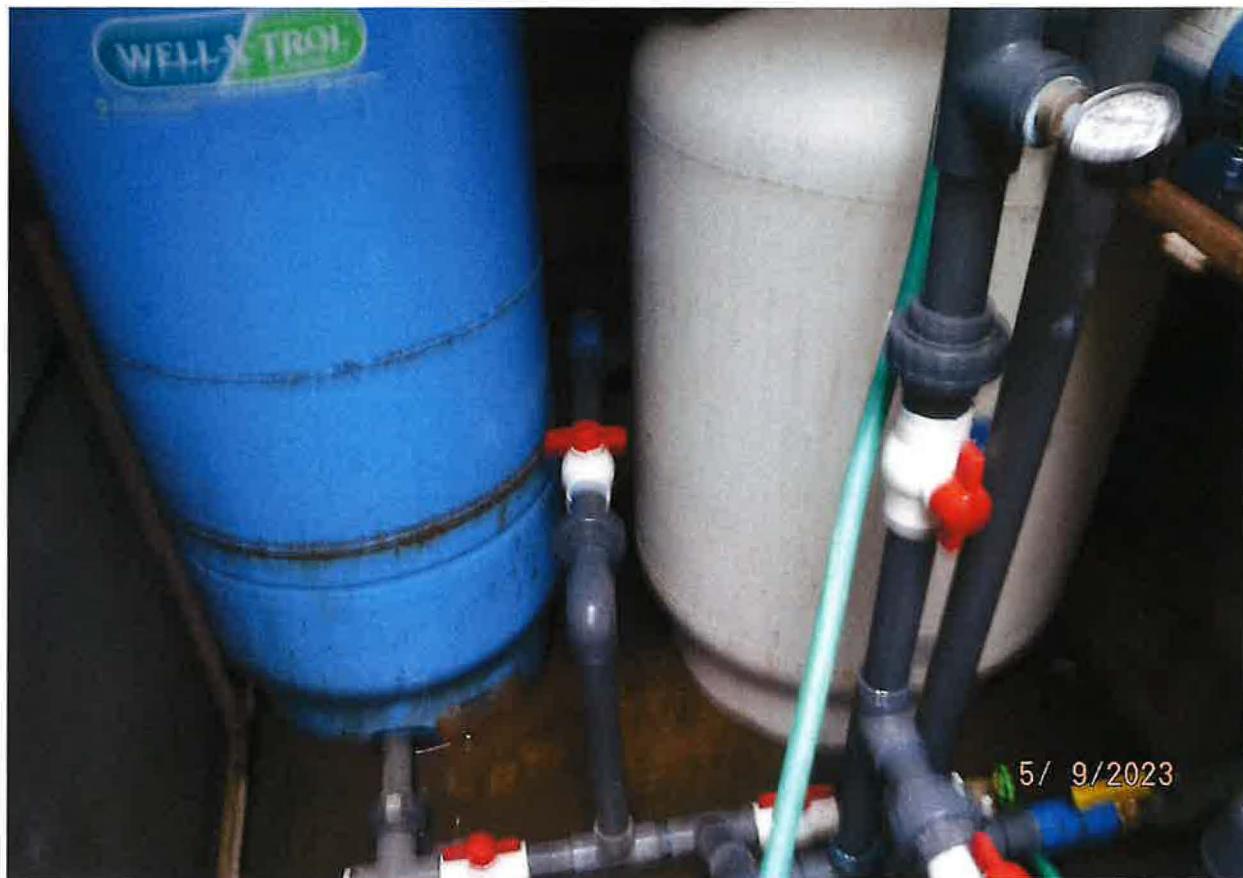
WATER SYSTEM DIVERTING WORKS LOCATED IN VAULT CO-LOCATED WITH WELL



FRANKLIN ELECTRIC 5 HP PUMP MOTOR INSTALLED IN WELL



45 PSI WATER SYSTEM OPERATING PRESSURE



WATER SYSTEM COMPONENTS INCORPORATE PRESSURE TANK(S) PRIOR TO DISTRIBUTION TO USES.



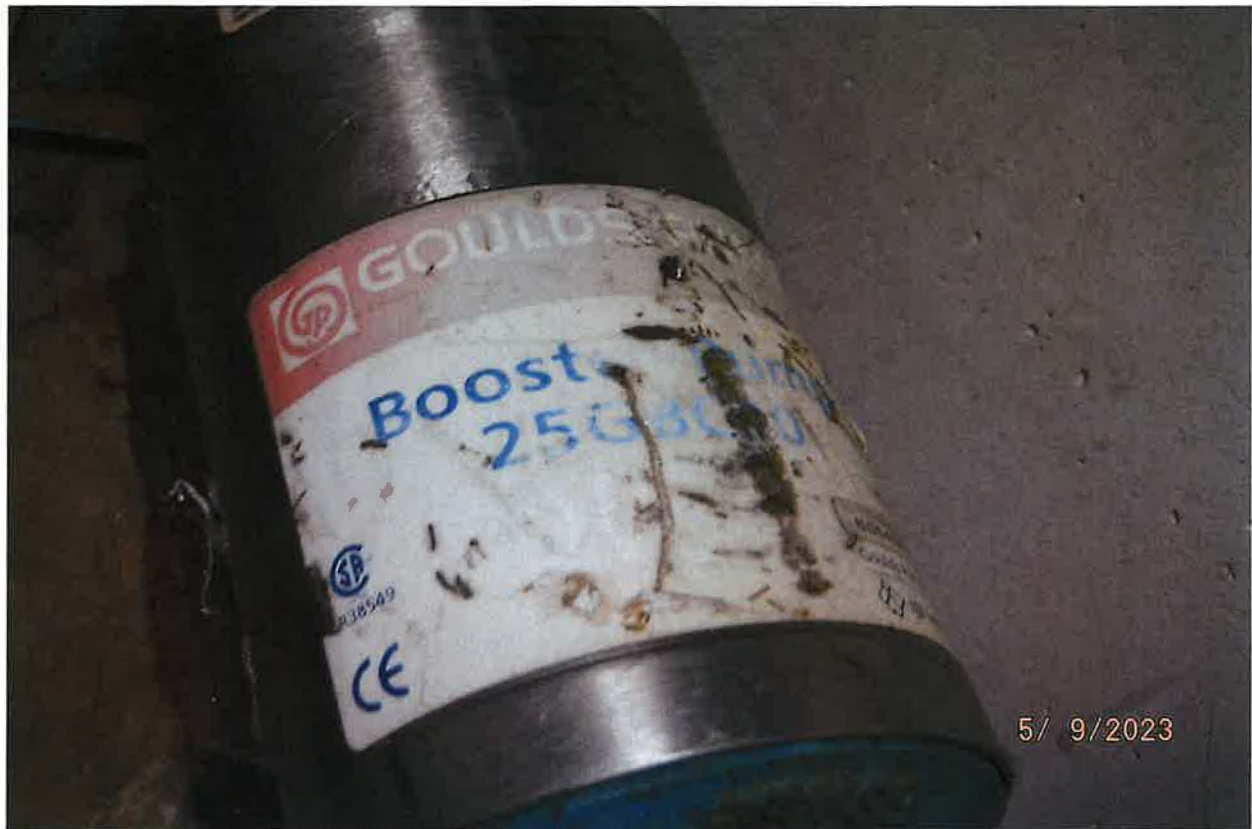
4EA FLOWMETERS INSTALLED ON DISTRIBUTION SERVICE LINE TO 4 HOMES (INLINE AFTER PRESSURE TANK)



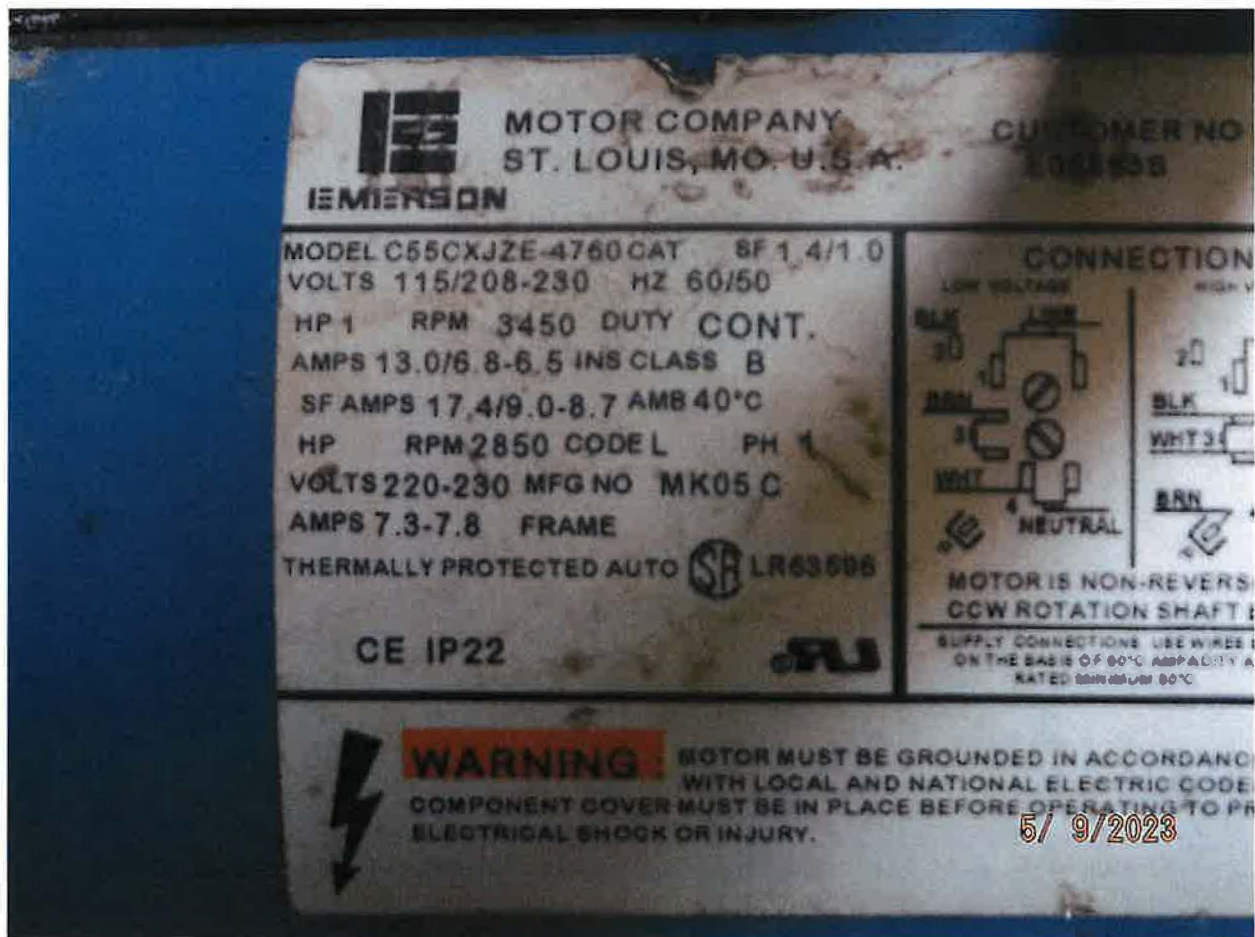
EXAMPLE – 1 OF 4 FLOWMETERS INSTALLED IN SYSTEM – MASTER METER



2,500 GAL COMMUNITY STORAGE RESERVOIR (LOCATED OPPOSITE SIDE OF FENCE FROM WELL



GOULDS PUMP WITH 1 HP EMERSON PUMP MOTOR (BOOSTER PUMP) FROM STORAGE RESERVOIR TO USES





DOMESTIC POU – LT 1, BLK 1; Zaken Acres Subdivision; RPOL4730010010

14989 N FORESTDALE DR, COEUR D'ALENE





DOMESTIC POU – LT 2, BLK 1; Zaken Acres Subdivision; RPOL4730010020

14807 N FORESTDALE DR, COEUR D'ALENE



DOMESTIC POU – LT 3, BLK 1; Zaken Acres Subdivision; RPOL4730010030

14685 N FORESTDALE DR, COEUR D'ALENE



DOMESTIC POU – LT 4, BLK 1; Zaken Acres Subdivision; RPOL4730010040

14617 N FORESTDALE DR, COEUR D'ALENE

