

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 95-17177
Exam Date: 08/26/2021

1. Current Owner:
R & B PREMIER ENTERPRISE LLC 930 N BECK RD POST FALLS ID 83854
2. Accompanied by: Mary Legg & Renee DiFronzo
Phone No: 1-707-758-5142
Address: Same as above
Relationship to permit Holder: Permit holder's representative.

3. **SOURCE:**
GROUND WATER
GROUND WATER

Method of Determination: Arcmap and DRG

B. OVERLAP REVIEW

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

Water Right No.	Source	Purpose of Use	Basis
95-17294	GROUNDWATER	FIRE PROTECTION	PERMIT- Active, in development period

Comments: Active Permit 95-17294 is being developed by the same applicant as this permit for a fire protection system that overlaps this right's POU(s). As 95-17294 does not yet have a Statement of Completion filed by the applicant, condition X35 is not being recommended as the beneficial use covered by the permit has not been validated by field examination at time of licensing this right 95-17177.

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

Water Right No.	Source	Purpose of Use	Basis
95-17294	GROUNDWATER	FIRE PROTECTION	PERMIT – Active, in development period

Comments: Both active permit 95-17294 and this right have common infrastructure to include POD(s). Condition F06 is not recommended for inclusion when licensing this right due to 95-17294's Statement of Completion and subsequent field examination not being filed at time of licensing this right 95-17177.

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

GROUND WATER L4 (NW¼ NW¼), Sec. 6, Twp 50N, Rge 05W, B.M. KOOTENAI County
GROUND WATER L4 (NW¼ NW¼), Sec. 6, Twp 50N, Rge 05W, B.M. KOOTENAI County

Method of Determination: GPS; PODs are located at -117°01.286, 47°42.891 well D-Tag D0046336 and -117°01.372, 47°42.838 well D-Tag D0073545.

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	
50N	05W	6						1.0											1.0

Total Acres: 1.0

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	
50N	05W	6						X L4											

Method of Determination: 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 Serial No. or Discharge Size
D0046336		5			
D0073545		125			

D. FLOW MEASUREMENTS

1.

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

2. Measurements: Flowmeter measurements observed during follow-up exam on 9/15/2021 with Renee DiFronzo showed 33 gpm from well D0046336

E. FLOW CALCULATIONS

☒ Additional Computation Sheets Attached

Measured Method: Flowmeter observed pump capacity from well D0046336 equaling 35.0 gpm. Additional pump curve data provided by United Crown Pump & Drilling president, Richard Agueros, illustrate maximum pump capacity in overspeed condition (80 Hz) for the 3HP/5HP pump/motor installed in D0046336 & for the 125HP pump/motor installed in well D0073545.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 1.0 \text{ ac} \times 3.0 \text{ afa} = 3.0 \text{ af}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = .03 \text{ cfs} \times 246\text{-day} \times 1.9835 = 14.6 \text{ af}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 3.0 \text{ af}$$

2. Volume Calculations for Other Uses:

- Domestic annual volume =
 - Employee use: 3 employees x 25 gpd x 5 day per wk x 52 wk per year = 19,500 GPY
 - Public bathroom use: 10 people per day x 10 GPD x 365 day per year = 36,500 GPY
 - $(19,500\text{-gal} \times 36,500\text{ gal}) / 325,850\text{ gal per af} = 0.17\text{ af}$ or **0.2 af** considering department rounding standards.
- Maximum Diversion Volume = 3.0 af (irrigation) + 0.2 af (Domestic use) = **3.2 af**.

G. NARRATIVE/REMARKS/COMMENTS

Field exam performed on 8/26/2021 with the applicant's representative, Mary Legg, showed two groundwater wells serving a water system for a storage unit/RV & boat storage unit business. The permit approved development of a single groundwater POD; at time of field examination, it was determined that existing well D0046336 provides daily operation water use for domestic and irrigation beneficial uses. It was also determined that well D0073545 which is associated with active permit 95-17294 for fire protection use shares the same water system infrastructure as this water right and an amendment to permit was recommended to add a POD to this permit at time of licensing. The department received the Application for Amendment with \$100.00 fee back from the applicant on 9/20/2021.

After collaborating with the applicant's water system well pump installation company, United Crown Pump & Drilling Mr. Richard Agueros (president), the two wells are interconnected in the common water delivery system at the main pump house. The 3HP/5HP pump/motor system installed in well D0046336 serves as the primary pump/motor during day-to-day operations for domestic & irrigation uses by the applicant. Well D0046336 main line routes through the irrigation/fire protection main line via a RP double check valve and works as a jockey pump to keep the larger 125 HP pump installed in D0073545 from coming online unless pressure transducers identify the pressure demands exceed what well D0046336 can supply or if that well falls off-line. Due to well D0073545 solely providing fire protection water, the diversion rate associated with this well is not being considered for licensing this water right nor a concern for enlargement of the water right.

Flow measurements were taken on a follow-up exam on 9/15/2021 with the applicant's representative, Renee DiFronzo, in attendance equaling 33.0 gpm or 0.07 cfs. A Theoretic Pump Equation was computed with the Variable Frequency Drive (VFD) 3HP/5HP pump/motor installed in well D0046336 at a depth of 205 ft, with a 45 PSI operating pressure equaling 30.7 gpm or 0.07 cfs considering department rounding standards during normal system operation at 60 Hz or less. During normal operations the combination pump/motor pump capacity is monitored by pressure transducers and the VFD settings provide pumping at 60 Hz or less causing the combination pump capacity to align with the 3HP output producing 0.07 cfs as listed above.

IF required, the VFD 3HP/5HP pump/motor can be set to operate in an over speed condition at 80 Hz, producing flow rates up to approximately 50 gpm. A second theoretic pump equation was developed in this configuration and illustrates the pump/motors maximum capacity equal to 51.2 gpm or 0.11 cfs considering department rounding standards. 0.11 cfs is what was applied for, and permit approved for the applicants to develop water uses with. Due to the applicants not fully developing the irrigation acreage applied for, the maximum diversion rate being recommended to license this water right equals **0.07 cfs** as observed by flowmeter measurements that are consistent with department standard diversion rates for the domestic use and 1.0 acres of irrigation found at time of examination.

The domestic POU consists of the Eagle Rock RV & Boat Storage facility main office building. Included in the office are a hot tub, shower, full kitchen, and bathroom. An additional bathroom is set up for storage unit renters on a daily basis. The domestic annual volume was calculated by the number of full-time employee's water use, and an average daily renter bathroom usage as follows:

- Employee use: 3 employees x 25 gpd x 5 day per wk x 52 wk per year = 19,500 GPY
- Public bathroom use: 10 people per day x 10 GPD x 365 day per year = 36,500 GPY
 - $(19,500\text{-gal} \times 36,500\text{ gal}) / 325,850\text{ gal per af} = 0.17\text{ af}$ or **0.2 af** considering department rounding standards.

Arcmap aerial imagery was used to trace out the domestic POU during licensing review.

The irrigation POU was observed during the field exam as several segments of lawn space along the frontage road and entrance to the facility, in addition to fenced back yard lawn & a long swale of grass that is actively watered throughout the season. The POU was sketched out on field maps and during licensing review Arcmap aerial imagery was used to accurately trace out the POU equal to 1.0 acres irrigated by a pressurized sprinkler system. The irrigation beneficial use annual volume equals 1 ac x 3.0 afa = **3.0 af**. The maximum diversion volume for licensing purposes equals **3.2 af** which is the sum of the two beneficial use components.

Condition 046 & 26A were removed from the permit during licensing review. All other conditions shall be carried to licensing. There are no overlap concerns for this water right. Active Permit 95-17294 is being developed by the same applicant as this permit for the storage facilities fire protection system which overlaps this right's POU(s). As 95-17294 does not yet have a Statement of Completion filed by the applicant, conditions F06 and X35 are not being recommended as the beneficial use covered by the permit has not been validated by field examination at time of licensing this right 95-17177.

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	03/15 to 11/15	0.03 CFS	3.0 AF
DOMESTIC	01/01 to 12/31	0.04 CFS	0.2 AF

Totals: 0.07 CFS 3.2 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

[Signature]

Date

11/8/2021

Reviewer

[Signature]

Date

2/11/2022

State of Idaho
Department of Water Resources
Attachment to Field Exam
95-17177

IRRIGATION system diagram.



- 06W 05W
- Point of Diversion
 - Place Of Use Boundary
 - Townships
 - PLS Sections
 - Quarter Quarters

0 0.035 0.07 0.14 Miles



State of Idaho
Department of Water Resources

Attachment to Water Right License

95-17177

This map depicts the DOMESTIC place of use boundary for this water right at the time of this approval and is attached to the approval document solely for illustrative purposes.



06W

05W



Point of Diversion



Place Of Use Boundary



Townships



PLS Sections



Quarter Quarters

0 0.035 0.07 0.14 Miles



THEORETICAL PUMPING EQUATION(S) FOR WR# 95-17177

Theoretical Pumping Equation is required because system did not allow for a proper measurement. Pump is estimated to lift 205 ft, and running at 45 psi.

PUMP EQUATIONS

WATER RIGHT No. 95-17177

D0046336	HP	H in feet	Efficiency as a decimal	Pumping lift in feet	System pressure in PSI
$Q = \frac{HP * 8.8 * \text{Eff}}{H}$	3	309.0816	0.8	205	45
$Q =$ 0.068 cfs 30.7 gpm					

NOTE: Variable Frequency Drive pump/motor system when operated at 60 Hz or less

THEORETICAL PUMPING EQUATION(S) FOR WR# 95-17177

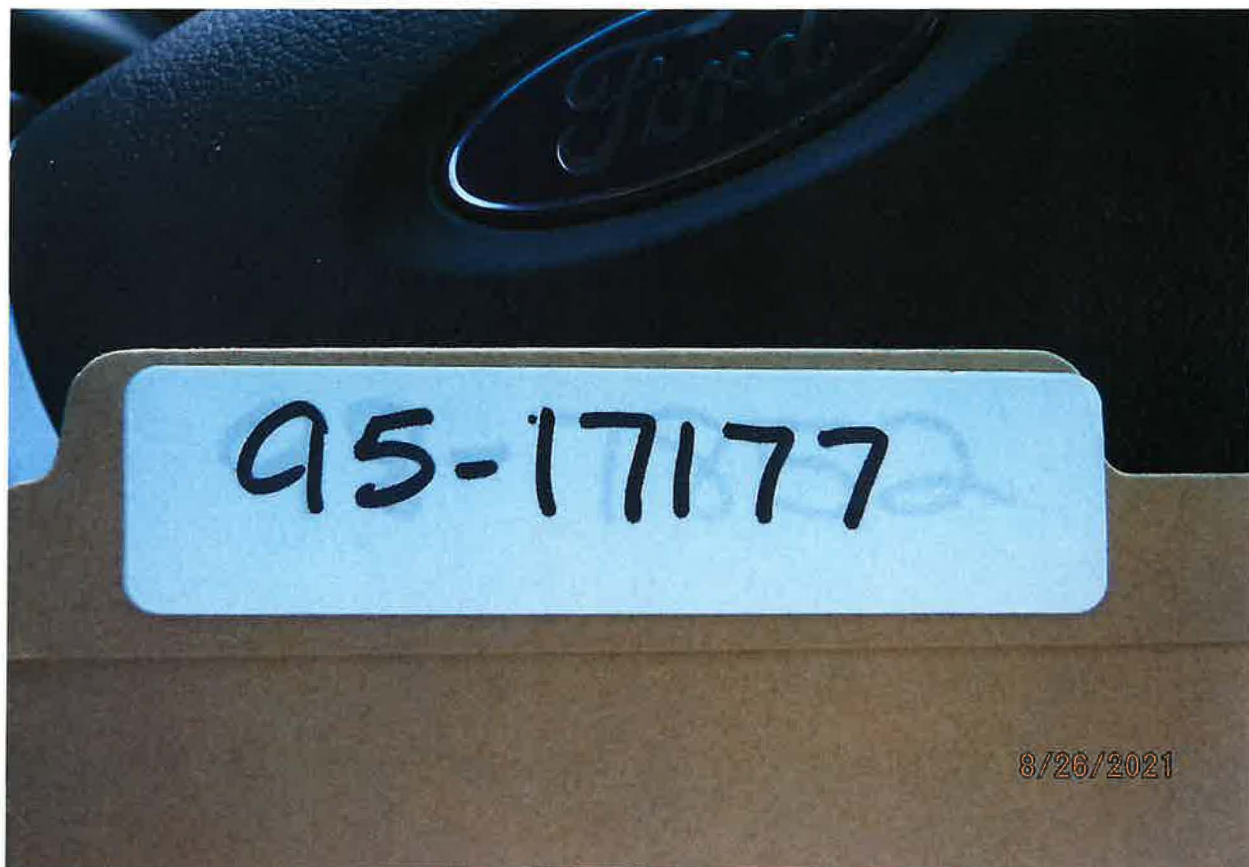
Theoretical Pumping Equation is required because system did not allow for a proper measurement. Pump is estimated to lift 205 ft, and running at 45 psi.

PUMP EQUATIONS

WATER RIGHT No. 95-17177

D0046336	HP	H in feet	Efficiency as a decimal	Pumping lift in feet	System pressure in PSI
Q = $\frac{HP * 8.8 * Eff}{H}$	5	309.0816	0.8	205	45
Q = 0.114 cfs 51.2 gpm					

NOTE: Variable Frequency Drive pump/motor system when operated in an overspeed condition at 80 Hz



FIELD EXAM DATE 8/26/2021



POD – GROUNDWATER WELL D0046336



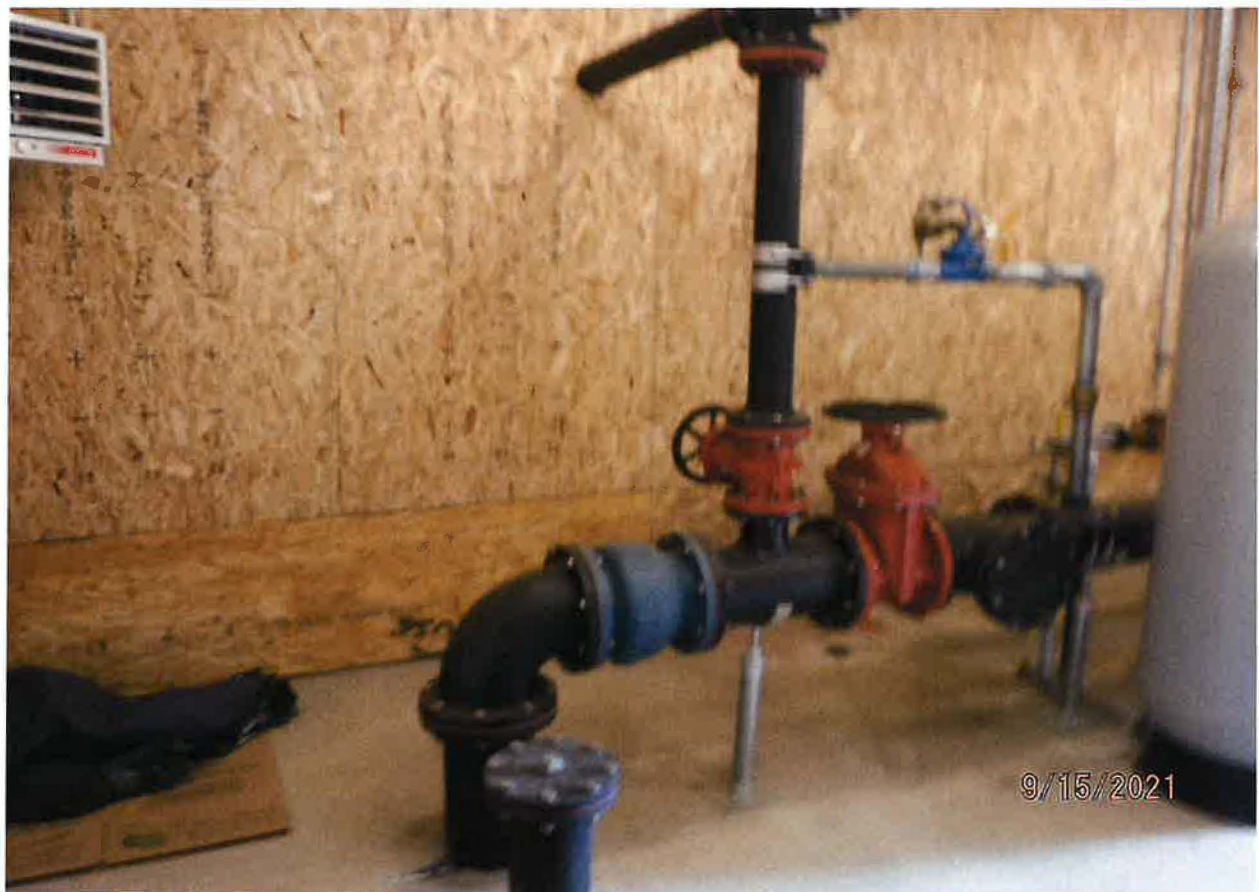
WELL D-TAG D0046336



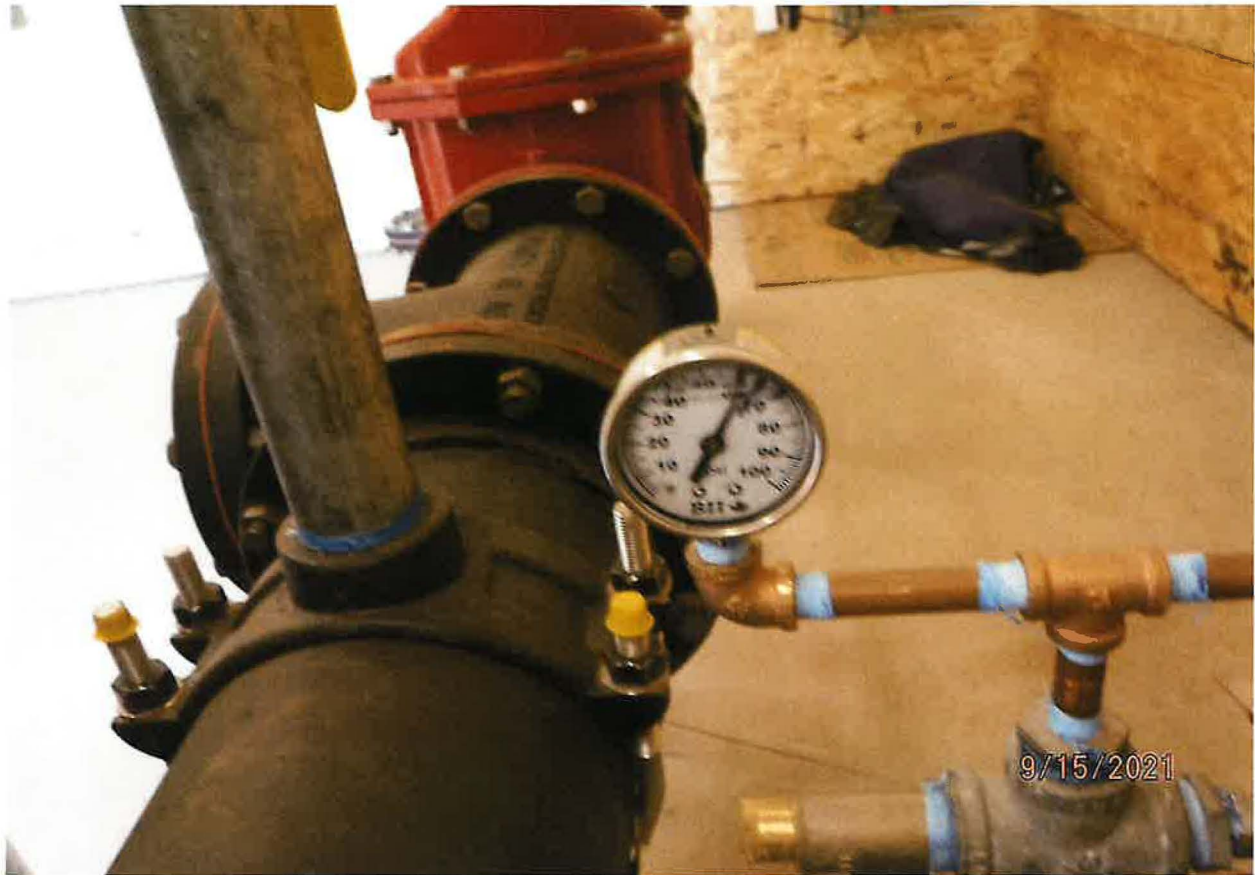
POD – WELL D0073545



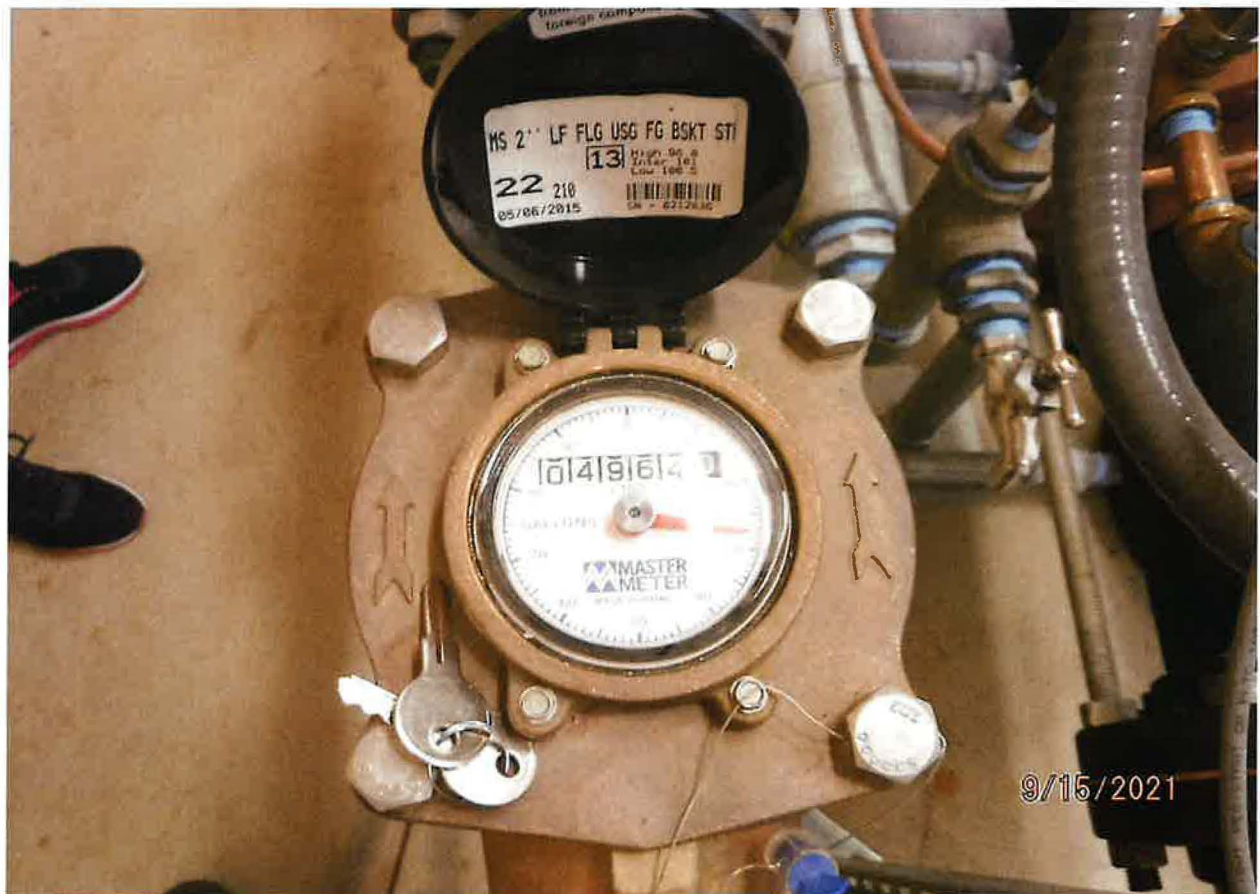
PUMP HOUSE



PUMP HOUSE INTERIOR, WATER SYSTEM DIVERTING WORKS



60 PSI OPERATING PRESSURE



MASTER METER FLOW METER INSTALLED ON SYSTEM



ELETRONIC CONTROL PANELS



DOMESTIC POU – OFFICE BUILDING WITH KITCHEN, SHOWER, BATHROOMS (PUBLIC BATHROOM & PRIVATE OFFICE BATHROOM)



IRRIGATION POU





IRRIGATION POU





IRRIGATION POU





IRRIGATION POU





IRRIGATION POV

