

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 95-18443
Exam Date: 10/02/2024

1. Current Owner:
RICHARD PRIVAT 13698 E PERIMETER ROAD ATHOL ID 83801 AND/OR
NICOLE PRIVAT 13689 E PERIMETER ROAD ATHOL ID 83801
2. Accompanied by: Richard Privat
Phone No: C: 208-683-1150
Address: Same as above
Relationship to permit Holder: Permit Holder

3. **SOURCE:**
GROUND WATER

Method of Determination: ArcMap and DRG layer.

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:**
GROUND WATER SE¼ NE¼, Sec. 7, Twp 53N, Rge 02W, B.M. KOOTENAI County

Method of Determination: GPS. POD is located at -116°36.8777, 47°57.3877; well 96-96-N023-000.

PLACE OF USE: STOCKWATER and 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	
53N	02W	7				X													

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	
53N	02W	7				5.0													5.0

Total Acres: 5.0

Method of Determination: beneficial use field examination and ArcMap aerial imagery.

3.
 - X Delivery System Diagram Attached (required). Indicate all major components and distances between components.
 - X Indicate weir size/pipe as applicable.
 - X Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 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
96-96-N023-000	FRANKLIN	5	19A14-14-15-00232C	GOULDS	S/N 1837854

D. FLOW MEASUREMENTS

1.

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

2. Measurements: I was unable to capture accurate flow measurements due to inadequate pipe requirements and pressure tank installation that directly influenced an attempted 5-gal bucket measurement from a frost-free hydrant. I'm making recommendations based on theoretical pumping equations derived flow rates that equals 0.06 cfs.

E. FLOW CALCULATIONS X Additional Computation Sheets Attached

Measured Method: I attempted to complete 5-gal bucket measurements which varied from 28.65 gpm to 36.1 gpm that are directly influenced by a pressure tank and resulted in an average flow rate = 0.07 cfs or 32.1 gpm. The applicant provided pump installation documentation that shows the pump is rated at 25 gpm, Goulds brand pump part No. 12GO25GS50.

I used the pump install company's invoice which illustrates that the 5 hp pump was hung at 430 ft along with the system operating pressure of 60 PSI results in a theoretical pump equation derived flow rate = 27.8 gpm or **0.06 cfs** considering department rounding standards.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 5.0 \text{ ac} \times 3.0 \text{ afa} = 15.0 \text{ af}$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.06 \text{ cfs} \times 214\text{-day} \times 1.9835 = 25.5 \text{ af}$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = \mathbf{15.0 \text{ af}}$$

2. Volume Calculations for Other Uses:

- Stockwater annual volume = 12 horses x 12 gpd x 365 days = 52,560 gal / 325,850 gal per af = **0.2 af** considering department rounding standards.
- Domestic annual volume = 2 RVs x (50 gpd x 2.5 occupancy factor) x 365 days = 91,250 gal annually / 325,850 gal per af = 0.3 af considering department rounding standards. 0.3 af (RVs volume) + 0.6 af (primary residence volume) = **0.9 af**
- Maximum diversion volume = 15.0 af (irrigation) + 0.2 af (stockwater) + 0.9 af (domestic) = **16.1 af**
 - The 0.06 cfs pump capacity is capable of producing 16.1 af annually.

G. NARRATIVE/REMARKS/COMMENTS

I conducted a beneficial use (BU) field examination on 10/2/2024 with the applicant, Richard Privat, which showed a ground water source being used for irrigation, domestic, & stockwater uses. At the POD, well 96-96-N023-000 diverts water using a pump and buried pipeline directly to a small pump house and pressure tank prior to distribution lines serving the BU(s) on the property. I performed 5-gallon bucket flow measurements at a co-located frost-free hydrant but found the measurements were directly influenced by the systems pressure tank and ranged from 28 gpm to 36 gpm. Mr. Privat provided pump install invoices that validate a Goulds 25 gpm pump paired with 5 hp Franklin Electric pump motor at a depth of 430 ft in the well.

I'm recommending a maximum diversion rate of 0.06 cfs = 27 gpm considering department rounding standards based on a theoretical pump equation calculated during licensing review. Considering the pump is rated at 25 gpm, IDWR rounding conventions would equate to the same **0.06 cfs** as 27 gpm does and is more reasonable than 36 gpm observed but influenced by a pressure tank. Limiting the maximum diversion rate requires the irrigation & domestic BU(s) have reduction from their Permit approved rates and each is limited to 0.06 cfs respectively. The stockwater BU retains its 0.02 cfs as permitted.

From the pump house a main service line routes east/west along the parcel in line with the well, with eight (8) frost-free hydrants on riser pipes installed at intervals for irrigation and stockwater uses. A buried service line routes to the main residence and to two dedicated recreation vehicle service stubs located west of the well and shop for domestic uses. During the exam I walked through the water system using field maps to sketch each BU(s) place of use (POU) and taking photographs to provide backfile support toward licensing this Permit.

Domestic water serves the main residence and two RVs, which during the field exam were not present. I reviewed aerial imagery using Kootenai County tax parcel maps, year 2024 imagery, which illustrates the two RVs present on the property at the time of image capture. The Applicant asserts on normal years the full-service water/sewer RV slips are rented out consistently and review of historic aerial imagery supports the house and 2 RVs well before the development period of this Permit. I'm recommending the domestic annual volume of **0.9 af**, in-home use only, for licensing purposes as computed above on PG 2 of this report. I used ArcMap year 2023 during licensing review to designate the domestic POU for licensing purposes.

ArcMap aerial imagery was used to designate the stockwater POU, which consists of the main service line and eight frost-free hydrants used to fill portable troughs with a hose. Several stock pens are located on the parcel and show signs of use, but there was no stock on the property at the time of exam. The permit was conditioned for 12 horses, and the Statement of Completion form was designated for 12 horses and "cattle". MR. Privat asserts horses are boarded annually but that their intent was to have a few heads of beef in the future. I'm able to recommend water usage from within the development period of the Permit which ended at time of statement of completion submission. Toward this end I'm recommending the annual diversion volume of **0.2 af** for the 12 horses historically served by the water system. In the future, if cattle replace horses the authorized 12 gpd per head is equivalent and the right holder is limited to the annual volume versus number & type of stock animals provided for.

The irrigation practices had been winterized by the time of the field exam in October, but Mr. Privat brought out all the sprinklers used throughout the property each year to water the lawn, garden, pastures, stock pens (for rotational feed), and landscape. Additionally, 1,500 feet of hoses (100 ft per hose) are used to distribute watering from each of the 8 frost-free hydrants. I noted garden hose runs along the entry way from the main road to an open pasture which is left year-round that allows watering of green space along both sides of the driveway. A fenced garden is located south of the main residence and the remaining lawn & stock feed plots get rotational watering throughout the season of use. On the western side of the largest riding grass arena a fence line running north/south is the furthest reach west of the irrigation system.

I used field maps to sketch the irrigation POU and during licensing review ArcMap aerial imagery & Kootenai County tax parcel maps were used to accurately trace the POU which equals 5.0 acres. I'm recommending the Department standard of 3.0 afa equaling **15.0 af** annually for licensing purposes. The maximum diversion volume equals the sum of the three BU(s) or **16.1 af**.

I removed condition 046 and X02 from the Permit during licensing review; the well has a Basin 96 sequence number but was drilled prior to the boundary re-alignment between Administrative Basin(s) 95 & 96. X02 is a descriptive condition that falls off the permit at time of licensing. I revised condition 132 to accurately describe the domestic use recommended for licensing. I replaced condition R62 with R66 to better describe the irrigation limits for small acreage of 5 acres or less. All other conditions on the Permit shall be carried forward to licensing.

POD and water use falls within the Rathdrum Prairie Groundwater Management Area (RPGWMA) which is normally conditions to limit domestic use to 13,000 gallons per day per home, but as the Permit didn't include the condition, I can't make the licensing conditions more restrictive. Regardless, the right holder is required to comply with GWMA requirements in the future once a water district is formed. There are no overlapping water right concerns toward licensing Right 95-18443.

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>
STOCKWATER	1 /1 to 12/31	0.02 CFS	0.2 AF
DOMESTIC	1 /1 to 12/31	0.06 CFS	0.9 AF
IRRIGATION	4 /1 to 10/31	0.06 CFS	15.0 AF

Totals: 0.06 CFS 16.1 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

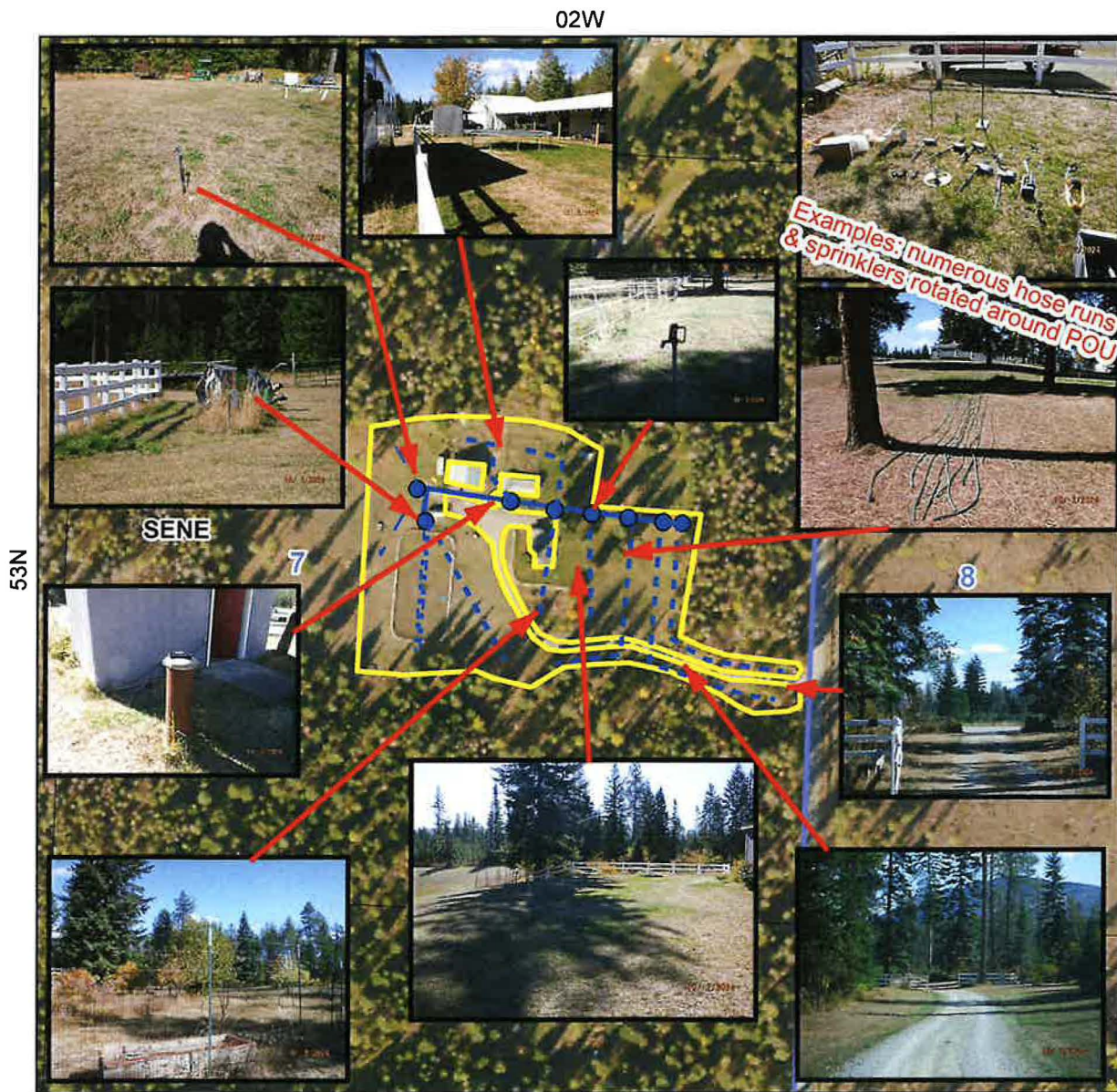
Luke Bates – Sr Water Resource Agent

Field Examiner's Name Date 12/4/2024

Reviewer Date 5/8/2025

State of Idaho
Department of Water Resources
Attachment to Field Exam
95-18443

This map depicts the IRRIGATION system diagram.



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

0 0.035 0.07 0.14 Miles



State of Idaho
Department of Water Resources
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This map depicts the DOMESTIC system diagram.

02W



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

0 0.035 0.07 0.14 Miles



This map depicts the STOCKWATER system diagram.

stock pens

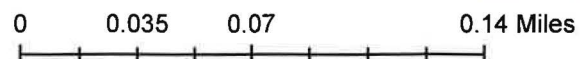
SENE 7

KC 2024 Imagery retrieved from gis.kcgov.us/app/kcearth/ on 12/4/2024.

10/ 2/2024

10/ 2/2024

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



THEORETICAL PUMPING EQUATION(S) FOR WR# 95-18443

Theoretical Pumping Equation is required because system did not allow for a proper measurement. Pump is estimated to lift 445 ft, and running at 60 psi.

PUMP EQUATION

WATER RIGHT No. 95-18443

96-96-N023-000	HP	H in feet	Efficiency as a decimal	Pumping lift in feet	System pressure in PSI
$Q = \frac{HP \cdot 8.8 \cdot \text{Eff}}{H}$	5	568.7755	0.8	430	60
$Q =$ 0.062 cfs 27.8 gpm					

* Well drilled prior to the Basin 95 / Basin 96 re-alignment and maintains the "96" Basin designation while residing in current Administrative Basin 95.



582 West Hayden Avenue * Hayden Lake, Idaho 83835
(208) 772-4004 Office * (800) 772-4901 Toll Free * (208) 772-4892 Fax * (509) 535-5554

Invoice

Sold To:
Privat, Richard

Invoice Number: 0029992-IN
Invoice Date: 4/26/2019
Customer Number: PRI1150
Salesperson: CR
Tax Schedule: ID KT
Phone Number: (208) 683-1150

Service / Replace Well Pump

Customer P.O.	F.O.B.	Ship VIA	Terms	DUE ON RECEIPT		
Item Number		Unit	Quantity	Price	Disc %	Amount
RE: 13689 E. Perimeter Rd., Athol, ID 4/24/2019 Service Request: Low / No Water. - Drove-to-site, Check Pump System. - Well Pump/Motor, pulling 40-50Amps (High Amps). "Ohms-to-ground" on All (3) legs down Well. 4/25/2019 Drove-to-site, Set-up at Well. - Pulled Existing Well Pump/Motor, Pipe, Wire. - Install New Well Pump/Motor, (105') Pipe, Wire as needed. Note: Found Pressure Tank Air Pre-Charge was at 24psi. Note: Pressure Switch was shutting-off at 48psi (short cycle time). - Install New 40/60 Pressure Switch / Adjust Pressure Tank Air-Precharge as needed. - Start-up Pump System.						
12GO25GS50	Goulds pump 25 gpm 5 hp w/e	EACH	1.00		0.00	
11GOS10940	Franklin sub mtr 5 hp	EACH	1.00		0.00	
Pump# 1837854 Motor# 19A14-15-00232C						
21G114	Galve pipe 1-1/4" (Main Service Pipeline)	FOOT	105.00		0.00	
41SW64	6-4 Submersible Pump Wire	FOOT	430.00		0.00	
51CV114C	11/4" Check Valves Cast Iron	EACH	3.00		0.00	
60SPK4	#14-12-10 4 Wire Splice Kit	EACH	1.00		0.00	
60SPK64	#6 4 Wire Splice Kit	EACH	1.00		0.00	
/100	2" Green Tape	EACH	2.00		0.00	
62SDFSG24060	40/60 2PL Pressure Switch	EACH	1.00		0.00	

Pump Depth in Well

Continued



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Privat, Richard
[REDACTED]
[REDACTED]

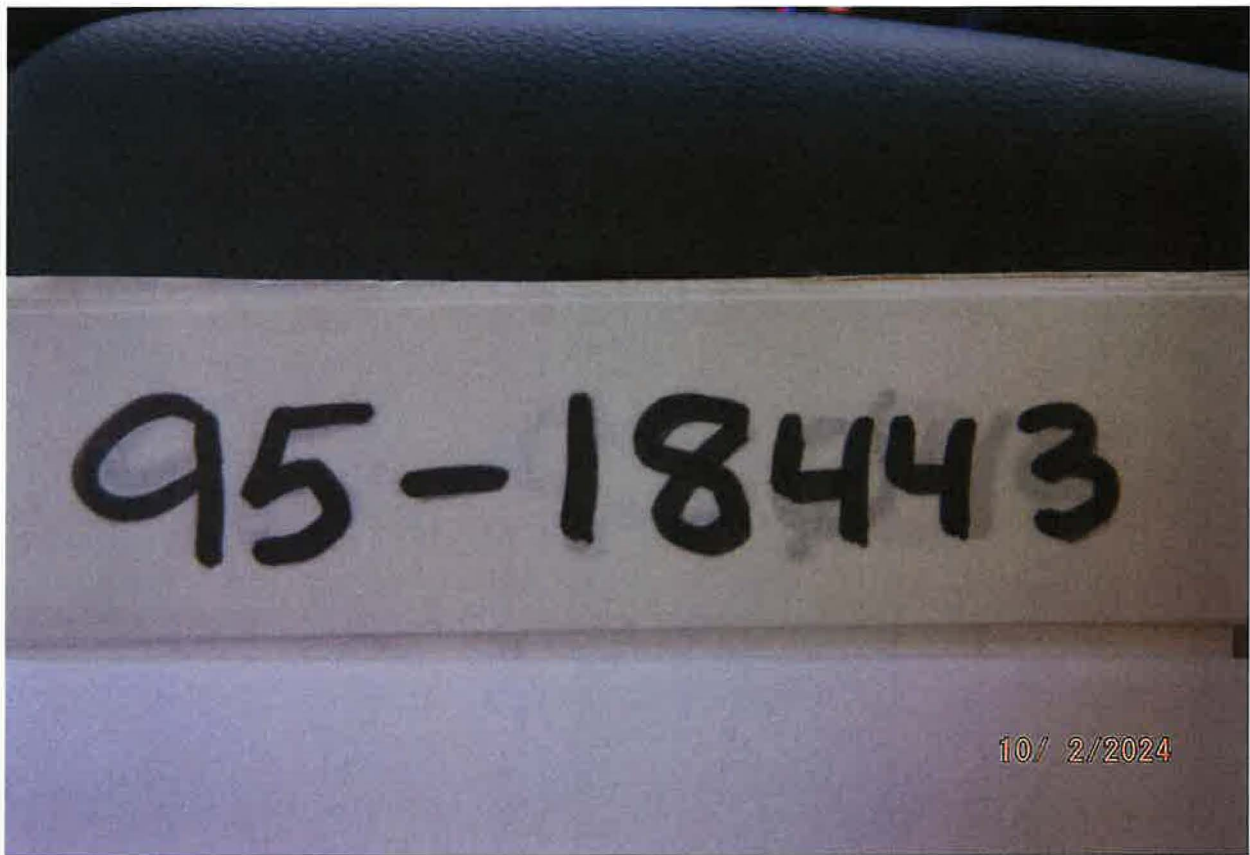
Invoice Number: 0029992-IN
Invoice Date: 4/26/2019
Customer Number: PRI1150
Salesperson: CR
Tax Schedule: ID KT
Phone Number: (208) 683-1150

Service / Replace Well Pump

Customer P.O.	F.O.B.	Ship VIA	Terms DUE ON RECEIPT			
Item Number		Unit	Quantity	Price	Disc %	Amount
/060	Service Call-Pump Dept- 4/24	HOUR	1.00	[REDACTED]	0.00	[REDACTED]
/001	Pump Tech/Truck- 4/25	HOUR	2.50	[REDACTED]	0.00	[REDACTED]
/002	Pump Hoist & Oper- 4/25	HOUR	3.00	[REDACTED]	0.00	[REDACTED]
/003	Assist Serv Tech- 4/25	HOUR	2.00	[REDACTED]	0.00	[REDACTED]
/003	Assist Serv Tech- 4/25 N/C	HOUR	1.50	0.00	0.00	0.00

PAID 5-2-19
ch # 1510

Net Invoice: [REDACTED]
Less Discount: 0.00
Freight: 0.00
Sales Tax: 0.00
Invoice Total: [REDACTED]



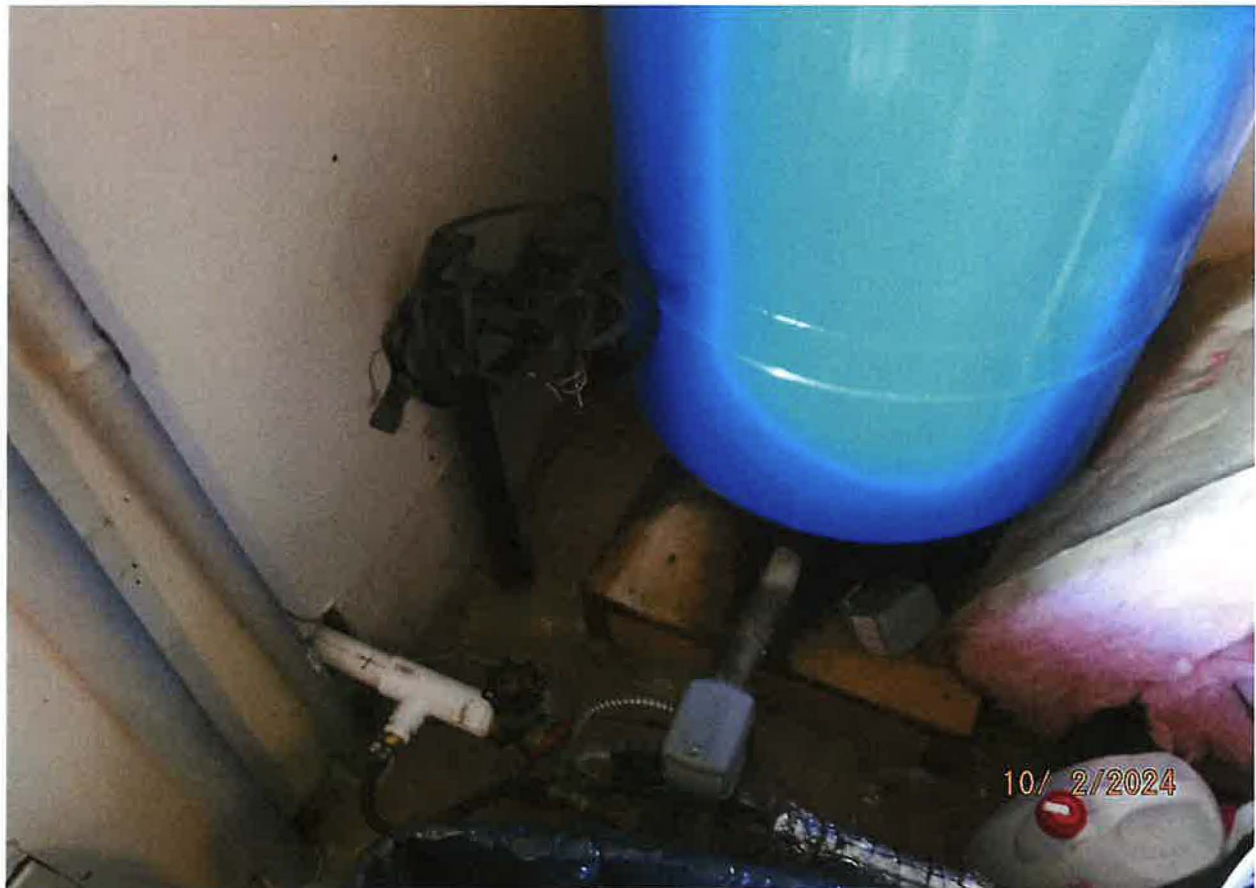
BENEFICIAL USE FIELD EXAM DATE 10/2/2024



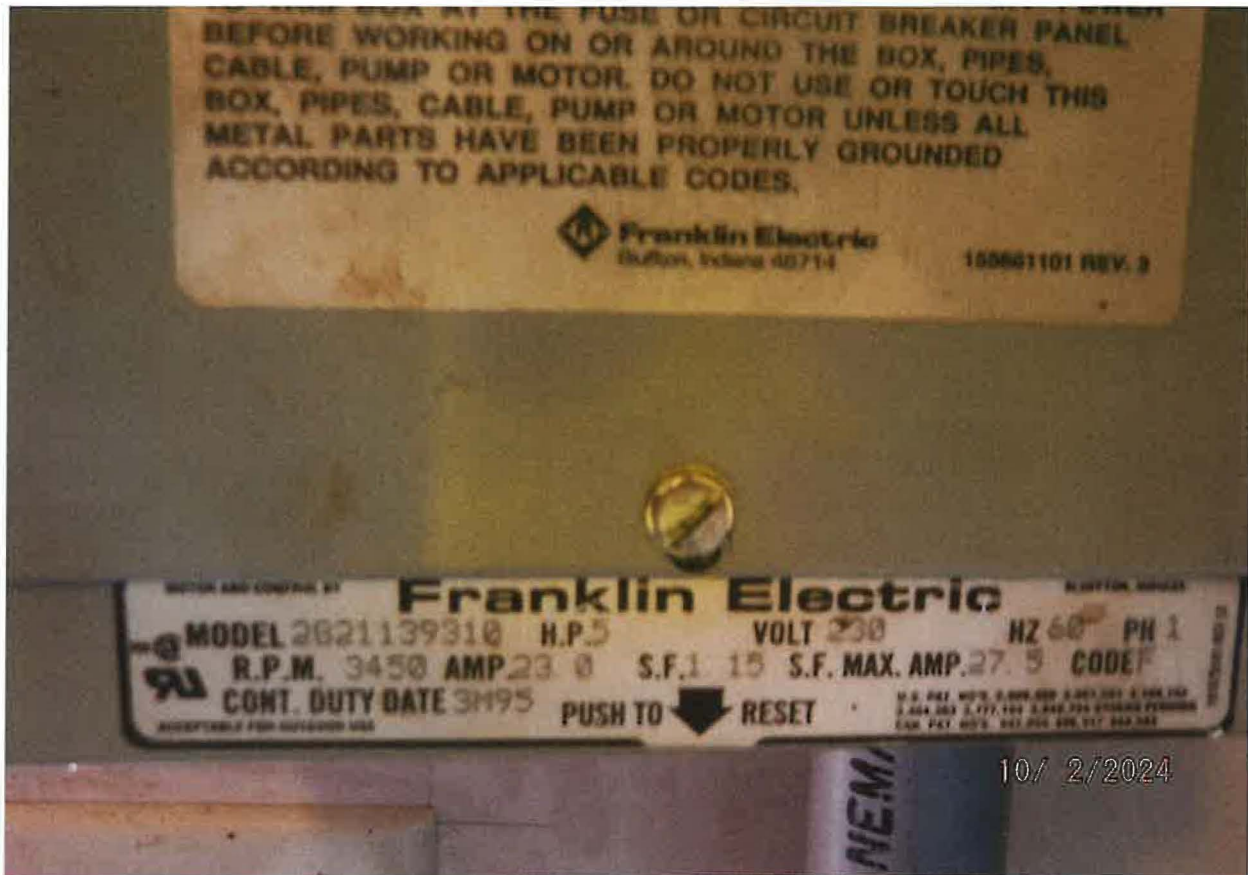
POD – GROUND WATER CASED WELL No. 96-96-N023-000



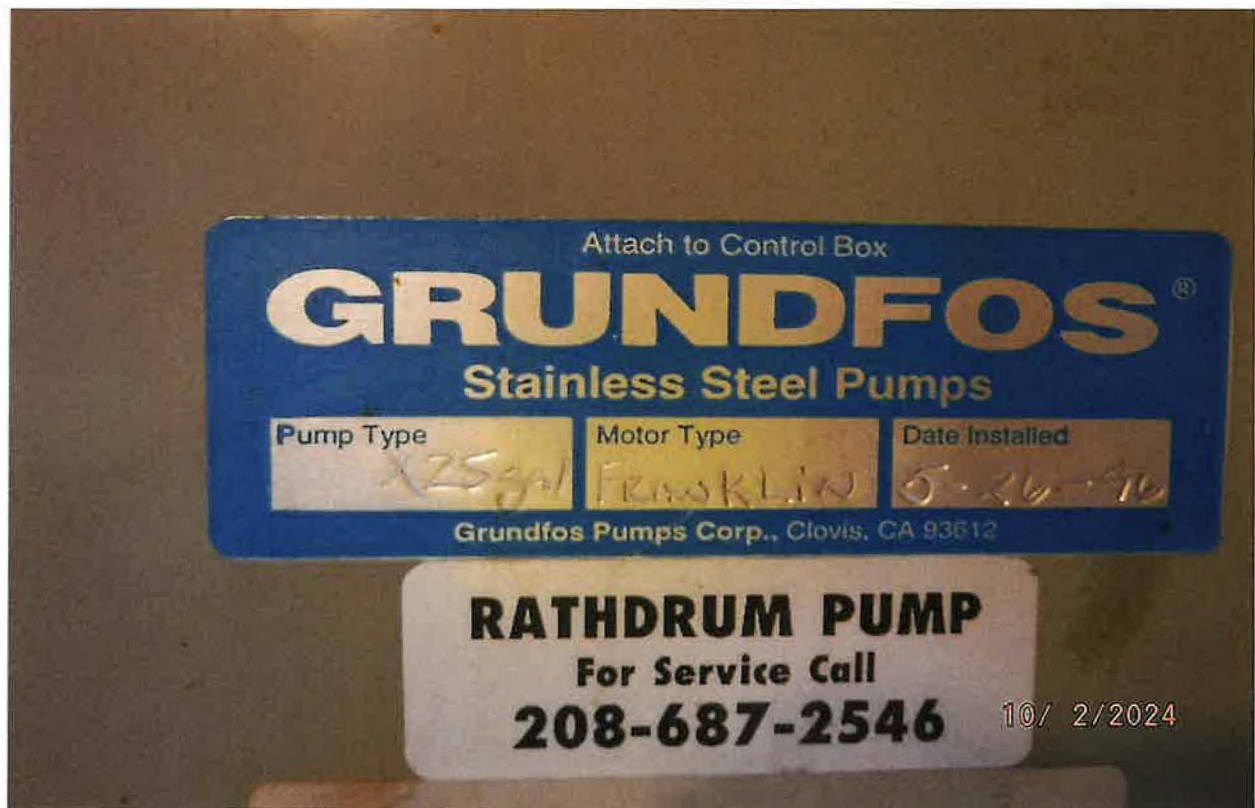
PUMP HOUSE CO-LOCATED WITH WELL



WATER CONVEYANCE SYSTEM INCLUDES MAIN WELL PIPELINE TO PRESSURE TANK PRIOR TO DISTRIBUTION TO WATER USE(S)



WATER DIVERTING WORKS – 5 HP FRANKLIN ELECTRIC PUMP MOTOR MODEL 2821139310



DIVERTING WORKS – GRUNDFOS PUMP 25 GPM 5 HP MODEL 12GO25GS50 PAIRED WITH PUMP MOTOR



DOMESTIC POU – PRIMARY RESIDENCE



DOMESTIC POU – 1 OF TWO RECREATION VEHICLES ACTIVELY USED ON THE
PROPERTY



DOMESTIC POU – 2 RECREATION VEHICLE SERVICES, FULL WATER & SEWER CONNECTIONS WITH RESIDENTS USING FACILITIES THROUGHOUT THE YEAR



STOCKWATER POU – HORSE STABLE



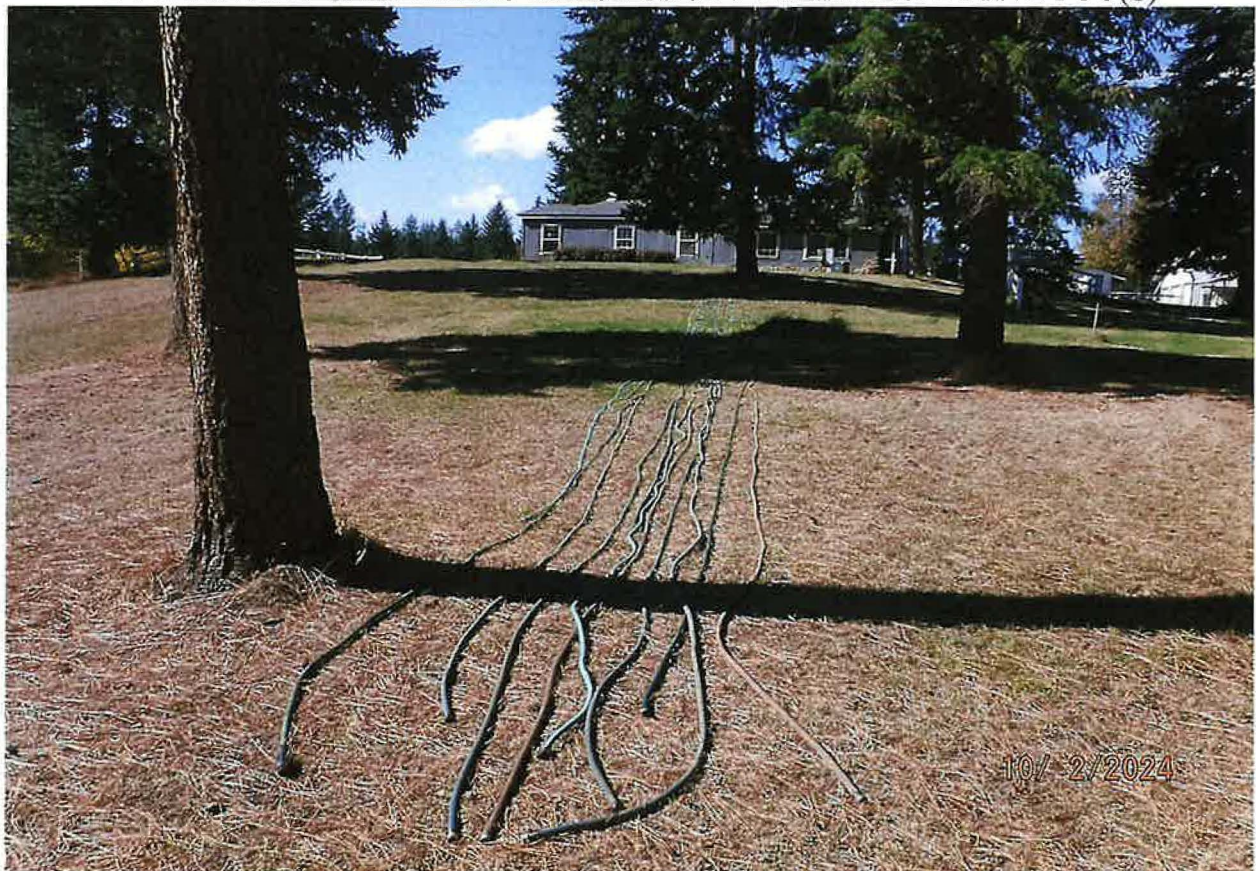
STOCKWATER POU & IRRIGATION POU – ROW OF 8EA FROST FREE HYDRANTS AT INTERVALS WITH HORSE PADDOCKS ON LEFT OF IMAGE & LAWN IRRIGATION ON RIGHT OF IMAGE



STOCKWATER POU – HORSE PADDOCKS



WATER CONVEYANCE SYSTEM – NUMEROUS FROST-FREE HYDRANTS AND MORE THAN 1,500 FEET OF HOSE USED TO PROVIDE STOCK WATERING AND IRRIGATION BY HOSE AND SPRINKLERS THROUGHOUT THEIR RESPECTIVE POU(S)



IRRIGATION POU – IRRIGATION USE BEING WINTERIZED AT TIME OF EXAM



IRRIGATION SYSTEM USES HOSE & SPRINKLER FOR LAWN SPACE, GARDEN, ORCHARD TREES, AND LANDSCAPE WATERING





ONE OF EIGHT HOSE BIBS IN A LATERAL ROW RUNNING EAST/WEST ON THE
PARCEL



IRRIGATION POU



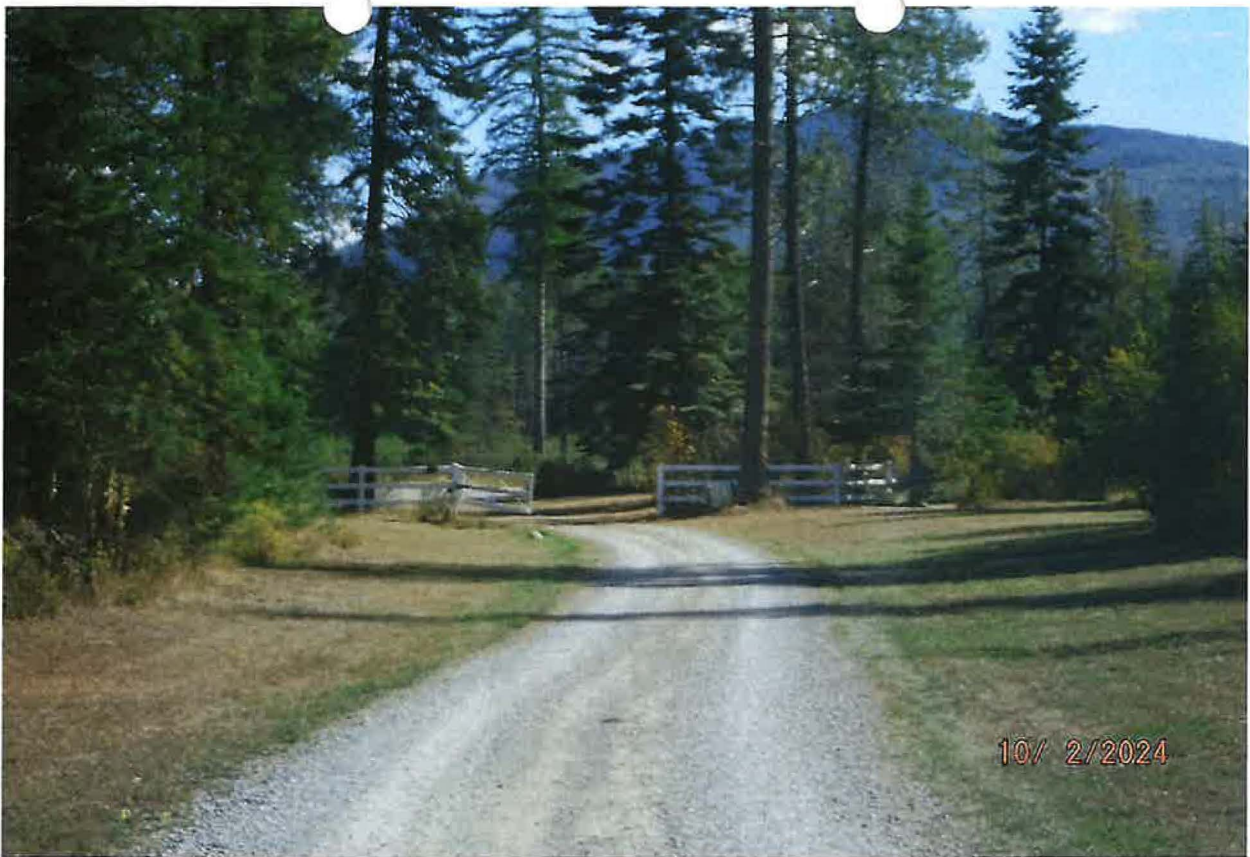
IRRIGATION POU





IRRIGATION POU





IRRIGATION POU – DRIVEWAY APRON AREA WATERED BY HOSE & SPRINKLER



HOSE RUN LOCATED NEAR ENTERANCE TO PROPERTY OF PAVED ROAD



IRRIGATION POU – DRIVEWAY APRON WATERED UP TO ROADWAY BOTH SIDES OF
IMAGE



IRRIGATION POU – ORCHARD TREES