

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 95-17006
Exam Date: 10/02/2020

1. Current Owner:
JOHN DAVID JAMES 5954 S ARROW RD HARRISON ID 83833-8842 AND
MARY PATRICIA JAMES 5954 S ARROW RD HARRISON ID 83833-8842
2. Accompanied by: John James
Phone No: 208-952-6809
Address: Same as above
Relationship to permit Holder: Permit holder

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
95-15457	GROUNDWATER	DOMESTIC	BENEFICIAL USE RECOMMENDED CLAIM

Comments: Right 95-15457 is a beneficial use claim, recommended active status, which uses the same well (D0013418) for domestic purposes. The shared well serves two homes.

C. DIVERSION AND DELIVERY SYSTEM

1. **LOCATION OF POINT(S) OF DIVERSION:**
GROUND WATER SW¼ NE¼, Sec. 5, Twp 49N, Rge 03W, B.M. KOOTENAI County

Method of Determination: GPS. POD located at -116°45.074, 47°37.305. Well D-TAG D0013418.

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	
49N	03W	5			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
D0013418	UNKOWN	2			

D. FLOW MEASUREMENTS

1.

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

2. Measurements: Unable to perform flow measurement, as system pumped directly from well into storage reservoir and pressure tank by buried pipes.

E. FLOW CALCULATIONS

☒ Additional Computation Sheets Attached

Measured Method: Theoretical pumping equation estimates flow at 13.3 gpm or **0.03 cfs** considering department rounding standards, with pump depth of 385 ft and system operating pressure of 40 PSI.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation: N/A

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) =$$

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

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

2. Volume Calculations for Other Uses:

$$\text{Domestic Volume} = 1.2 \text{ af}$$

G. NARRATIVE/REMARKS/COMMENTS

Field exam conducted on 10/2/2020 with the applicant, John James, showed groundwater from a well serving domestic purposes. The well had a 2 HP pump that diverted water to 2ea 3,000 gallon reservoirs prior to distribution to two homes. The applicant installed an additional 15,000 gallon reservoir that is filled from one of the 3k tanks prior to distribution for his home. All water lines were buried from well to pressure tank in applicant's home, preventing a flow measurement.

Theoretic Pump Equation derived a diversion rate of 13.3 gpm or 0.03 cfs considering department rounding standards, with pump depth of 385 ft and system operating pressure of 40 PSI. The applicant had permitted for 0.04 cfs, but is limited to the pump performance found at time of field exam. The maximum diversion rate applied to license equals **0.03 cfs**.

The applicant used a small 1 HP distribution pump to draw water from his reservoir, pumping to a pressure tank prior to in home and domestic irrigating uses. Applicant has installed a flow measuring device to track his water use. One home was identified during the field exam, and small acreage irrigation was observed by hose bib and hose-to-sprinkler for landscaping around the home; credit for up to ½ acre of irrigation is given as irrigation has been applied during the permit development period. The domestic POU was sketched out during the field exam. During licensing review, Arcmap aerial imagery was used to trace out the POU, with domestic volume and maximum diversion volume equaling **1.2 af** that will be applied to license.

Condition 046 and 26A were removed from permit during licensing review. Condition F06 was added to describe the shared well (D0013418) POD for rights 95-15457 and 95-17006. Conditions X59 and X60 were added to describe the POD and POUs location within the Stafford Add Subdivision. There are no overlap concerns for this 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	0.03 CFS	1.2 AF

Totals: 0.03 CFS 1.2 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 - Water Resource Agent

Field Examiner's Name  Date 10/9/2020
 Reviewer  Date 10/30/2020

State of Idaho
Department of Water Resources
Attachment to Field Exam
95-17006

DOMESTIC system diagram.



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

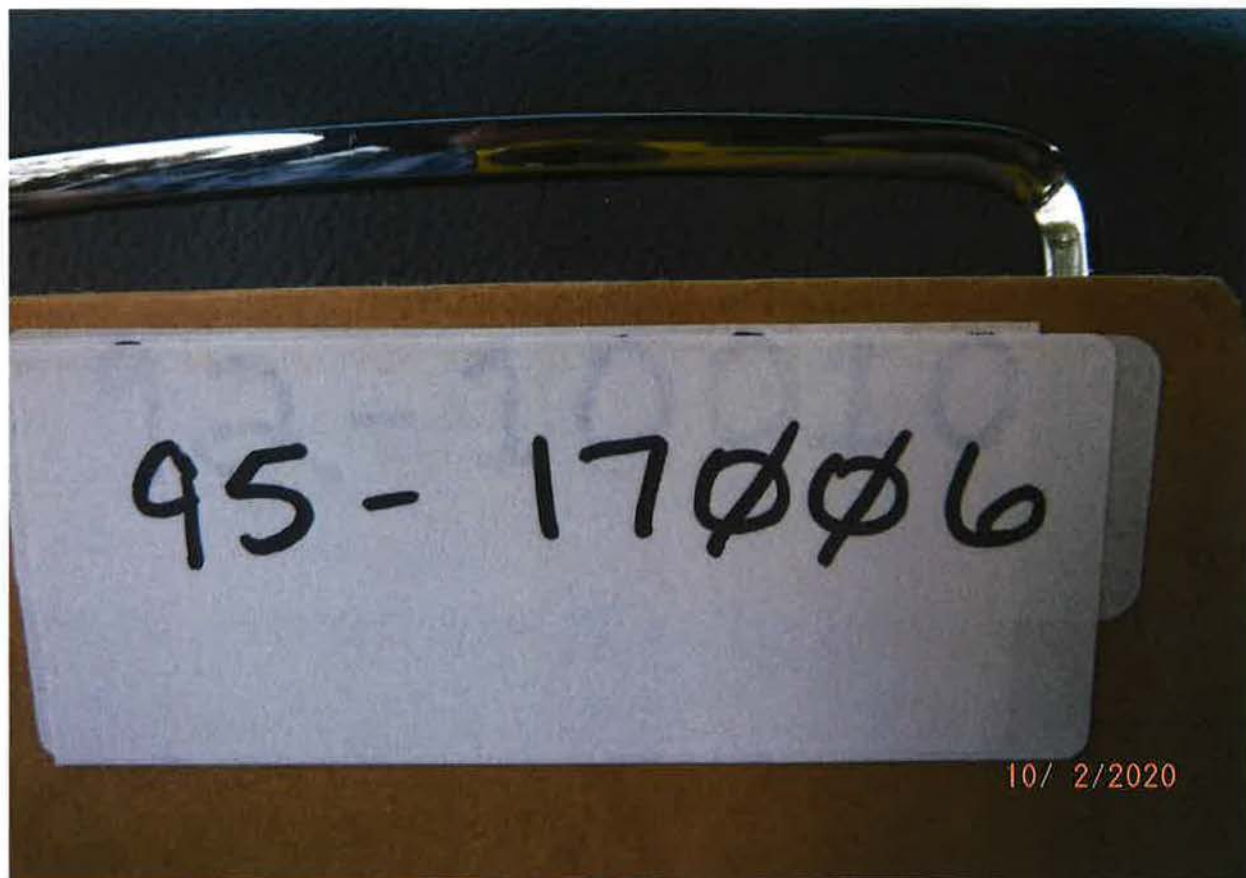
0 0.035 0.07 0.14 Miles



THEORETICAL PUMPING EQUATION FOR WR# 95-17006

Theoretical Pumping Equation is required because system did not allow for a proper measurement. Pump is estimated to be at 385 ft, and running at 40 psi.

<u>PUMP EQUATIONS</u>						
WATER RIGHT No. 95-17006						
D0051750		HP	H in feet	Efficiency as a decimal	Pumping lift in feet	System pressure in PSI
Q =	HP*8.8*Eff/H	2	477.517	0.8	385	40
Q =		0.030 cfs	13.3 gpm			



POD - WELL D0013418



POD – WELL D0013418



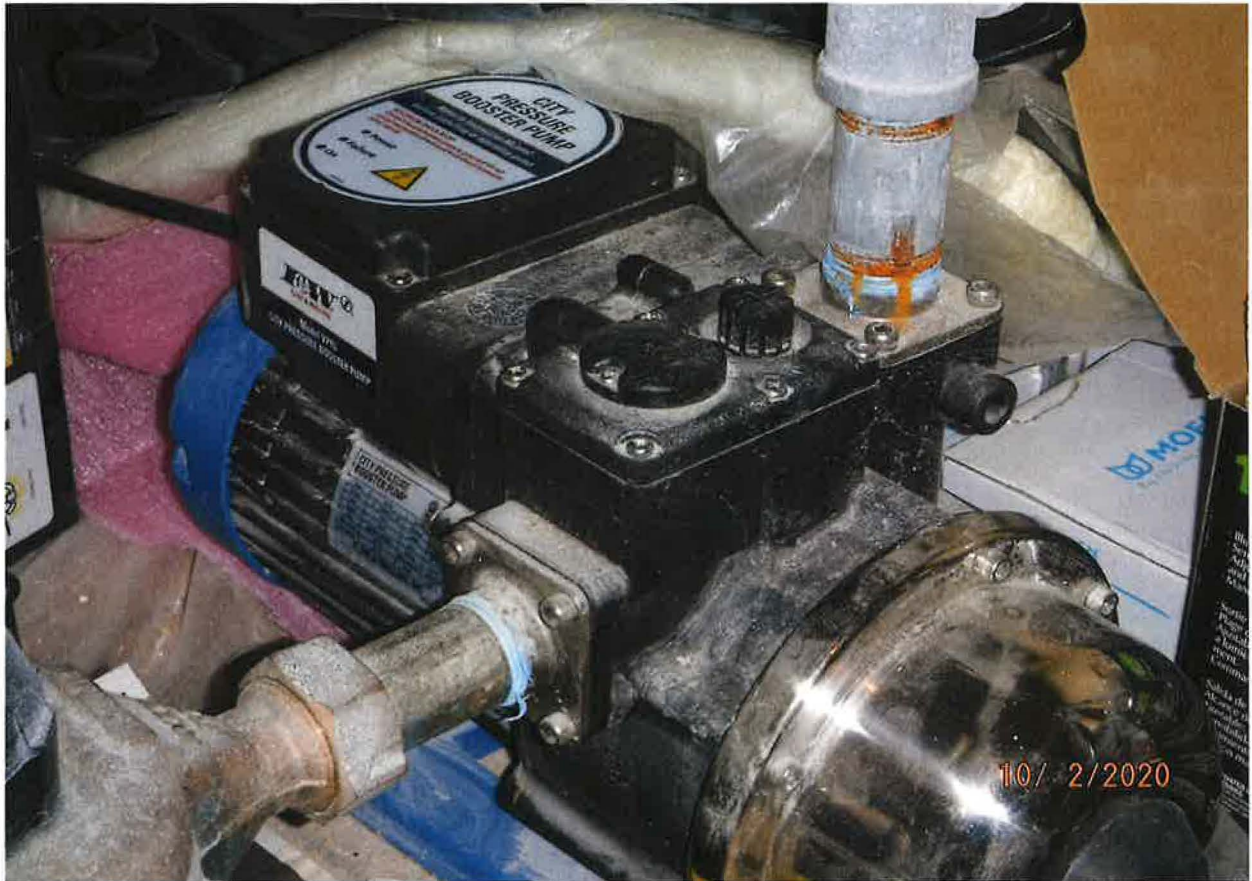
2 HP WELL PUMP



2EA 3,000 GALLON STORAGE TANKS TO SERVICE 2 HOMES OFF WELL



ADDITIONAL 15,000 GALLON RESERVOIR INSTALLED BY APPLICANT



1 HP PUMP FOR STORAGE RESERVOIR TO PRESSURE TANK OPERATION



FLOW METER INSTALLED BETWEEN RESERVOIR AND PRESSURE TANK



DOMESTIC POU





DOMESTIC POU

