

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 87-10888
Exam Date: 05/18/2021

1. Current Owner:
BRENNAN PROPERTIES NORTH COURT LLC PO BOX 9221 MOSCOW ID 83843-1721
2. Accompanied by: Brent Loney
Phone No: 208-596-1711
Address: P.O. BOX 9221 Moscow ID 83843
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
2. Other water rights with the same point-of-diversion: NO Overlap

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

GROUND WATER L4 (NW¼ NW¼), Sec. 5, Twp 39N, Rge 05W, B.M. LATAH County

Method of Determination: GPS; POD is an old existing well without tag identification located at -116°59.9966, 46°45.3735.

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	
39N	05W	5						1.2											1.2

Total Acres: 1.2

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	
39N	05W	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
GROUNDWATER WELL		1/2			

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
5-GAL BUCKET MEASUREMENTS						

2. Measurements: Three 5-gallon bucket tests were completed from the main service pipe inflow to storage reservoir, with average of three resulting in a diversion rate of 5 gal / 20.08 sec x 60 sec/min = 14.94 gpm = **0.03 cfs**, considering department rounding standards.

E. FLOW CALCULATIONS

Measured Method: 5-GAL Bucket Test = (5 gal / 20.01sec) x 60 sec/min = 14.99 gpm
 = (5 gal / 20.50 sec) x 60 sec/min = 14.63 gpm
 = (5 gal / 19.73 sec) x 60 sec/min = 15.21 gpm
 Average of 3ea 5-GAL Bucket Tests = (14.99 gpm + 14.63 gpm + 15.21) / 3 = 14.9 gpm = 0.03 cfs

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 1.2 \text{ ac} \times 3.0 \text{ afa} = 3.6 \text{ af}$
 $V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.03 \text{ cfs} \times 231 \text{ days} \times 1.9835 = 13.7$
 $V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = \mathbf{3.6 \text{ af}}$

2. Volume Calculations for Other Uses:

- Domestic annual volume = 15 trailer houses x 0.6 af per house = **9.0 af**
- Maximum diversion volume = 3.6 af (irrigation) + 9.0 af (domestic) = **12.6 af**

G. NARRATIVE/REMARKS/COMMENTS

Field exam performed on 5/18/2021 with the applicant's representative, Brett Loney, showed a groundwater well diverting water for domestic and irrigation uses associated with a trailer house park. At the POD, an old existing well presumed by the applicant to have been drilled in the 70's – 80's has an 8-inch casing and a 1/2 HP pump installed, which diverts water to a 1,500-gallon storage tank prior to distribution to the water uses. Three 5-gallon bucket tests were completed from the main service pipe inflow to storage reservoir, with average of three resulting in a diversion rate of 5 gal / 20.08 sec x 60 sec/min = 14.94 gpm = 0.03 cfs, considering department rounding standards. The observed diversion rate at time of exam is considerably smaller than the department standard diversion rate permit approved to develop, but the recommended diversion rate for licensing purposes is limited to pump performance found at time of field exam, equaling **0.03 cfs**.

The domestic POU was observed during the exam consisting of 15 mobile home slips, 14 of which had mobile homes on site & one with dedicated stub in service connections. Photographs were taken to illustrate the POU, and during licensing review the POU was traced out using Arcmap aerial imagery. The annual volume recommended for licensing the domestic beneficial use equals 15 homes x 0.6 af per home (in home use only) = **9.0 af**.

The irrigation POU consists of a frost-free hydrant placed at each mobile home site and hose-to-sprinkler irrigation occurring between the residences and behind the residences. Additional frost-free hydrants are used by the applicant to run sprinklers in a small band east of the mobile homes using hose-to-sprinklers. A soaker hose watering system is used along the entry way to the mobile home park, as well as to irrigate a boarder of trees on the west side of the mobile homes. The irrigation POU was sketched out on paper map products during the exam, and during licensing review Arcmap aerial imagery was used to accurately trace out the irrigation acreage equaling 1.2 acres total. The annual volume associated with 1.2 acres of irrigation = 1.2 ac x 3.0 afa = **3.6 af**, which is recommended for licensing purposes. The maximum diversion volume recommended for licensing this permit equals 9.0 af (domestic) + 3.6 af (irrigation) = **12.6 af**.

Conditions 046 and 106 were removed from the permit during licensing review. All other conditions on the permit shall be carried forward to the license. There are no overlap concerns for this water right.

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>
IRRIGATION	03/15 to 10/31	0.03 CFS	3.6 AF
DOMESTIC	01/01 to 12/31	0.03 CFS	9.0 AF
<u>Totals:</u>		0.03 CFS	12.6 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 - Water Resource Agent

Field Examiner's Name

[Signature]

Date

10/05/2021

Reviewer

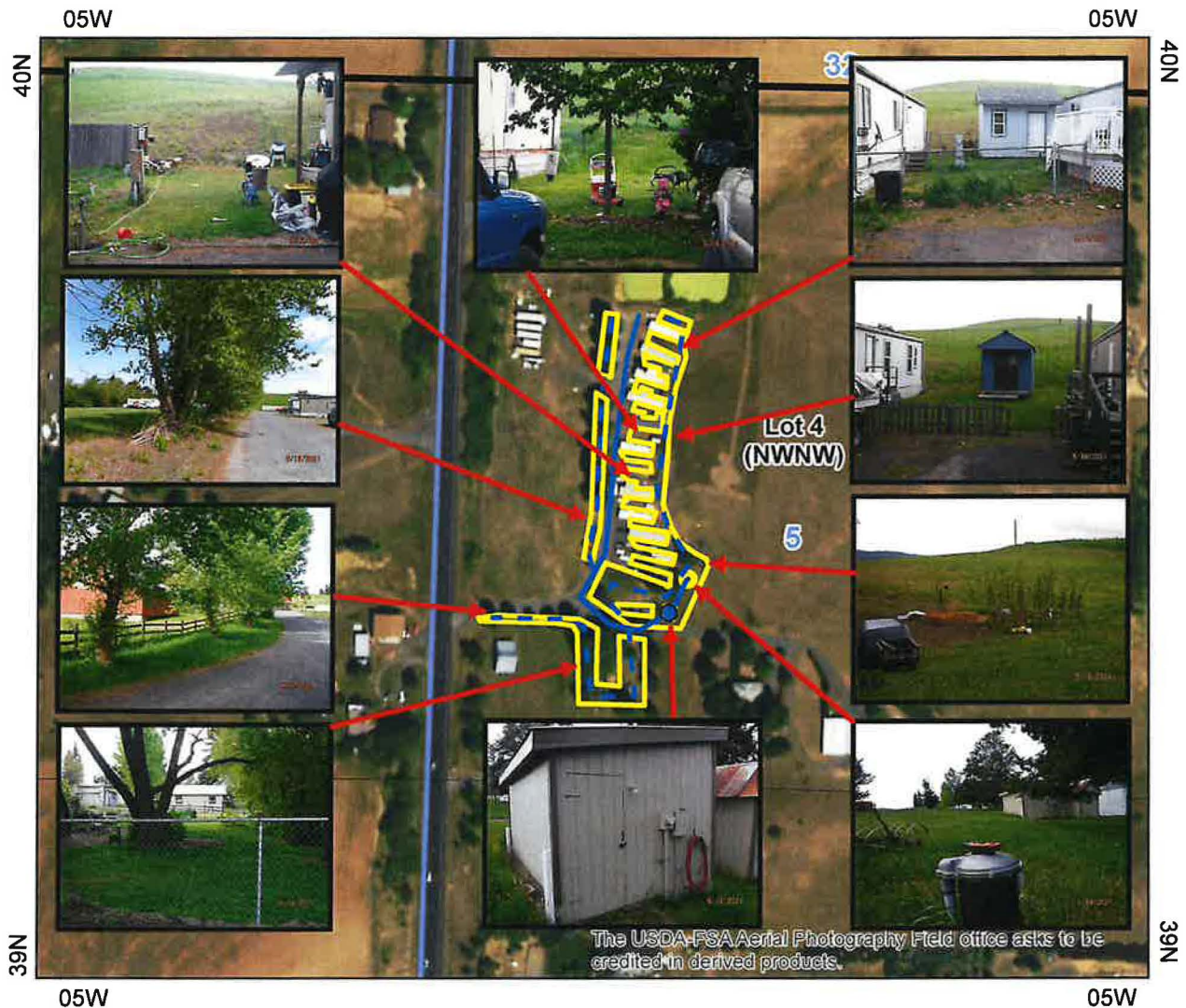
[Signature]

Date

10/15/2021

State of Idaho
Department of Water Resources
Attachment to Field Exam
87-10888

IRRIGATION system diagram.



05W

05W

39N

39N



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
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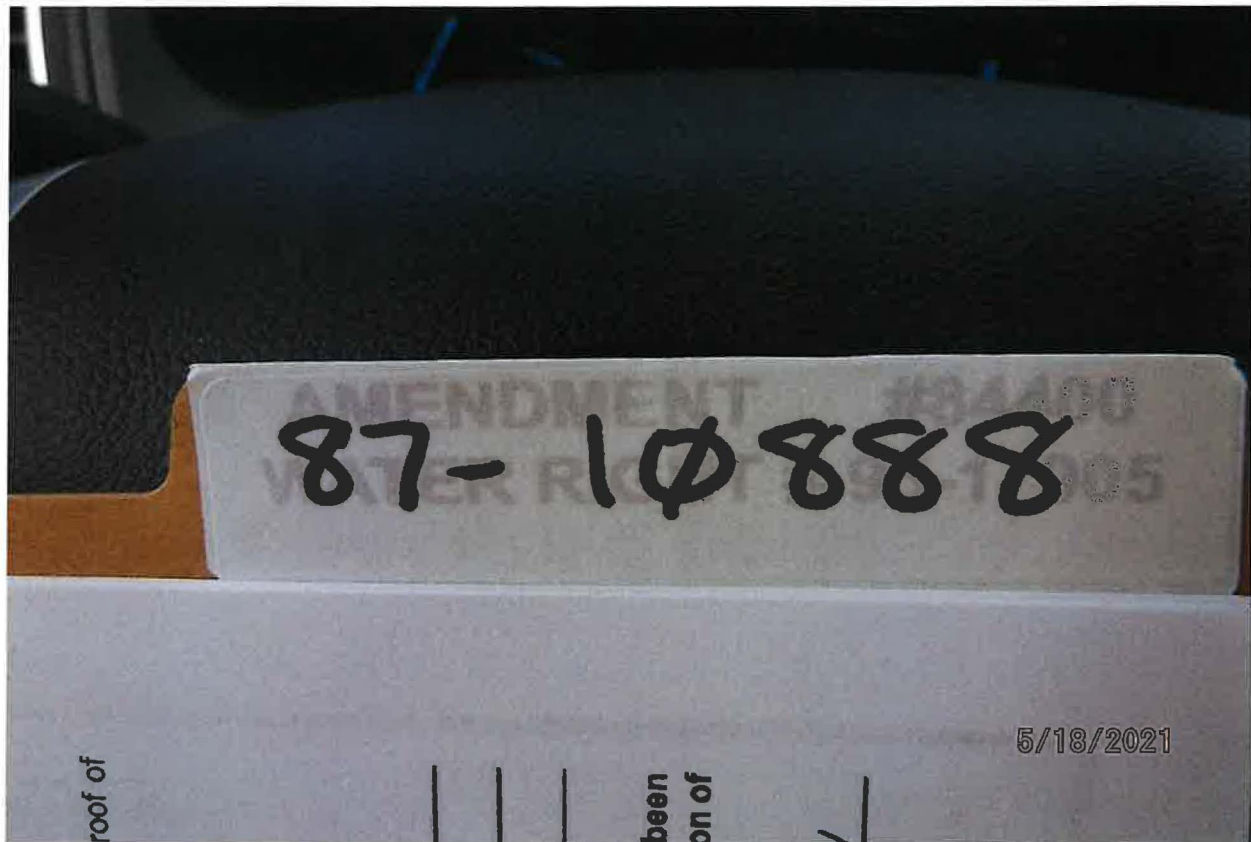
DOMESTIC system diagram.



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

0 0.035 0.07 0.14 Miles

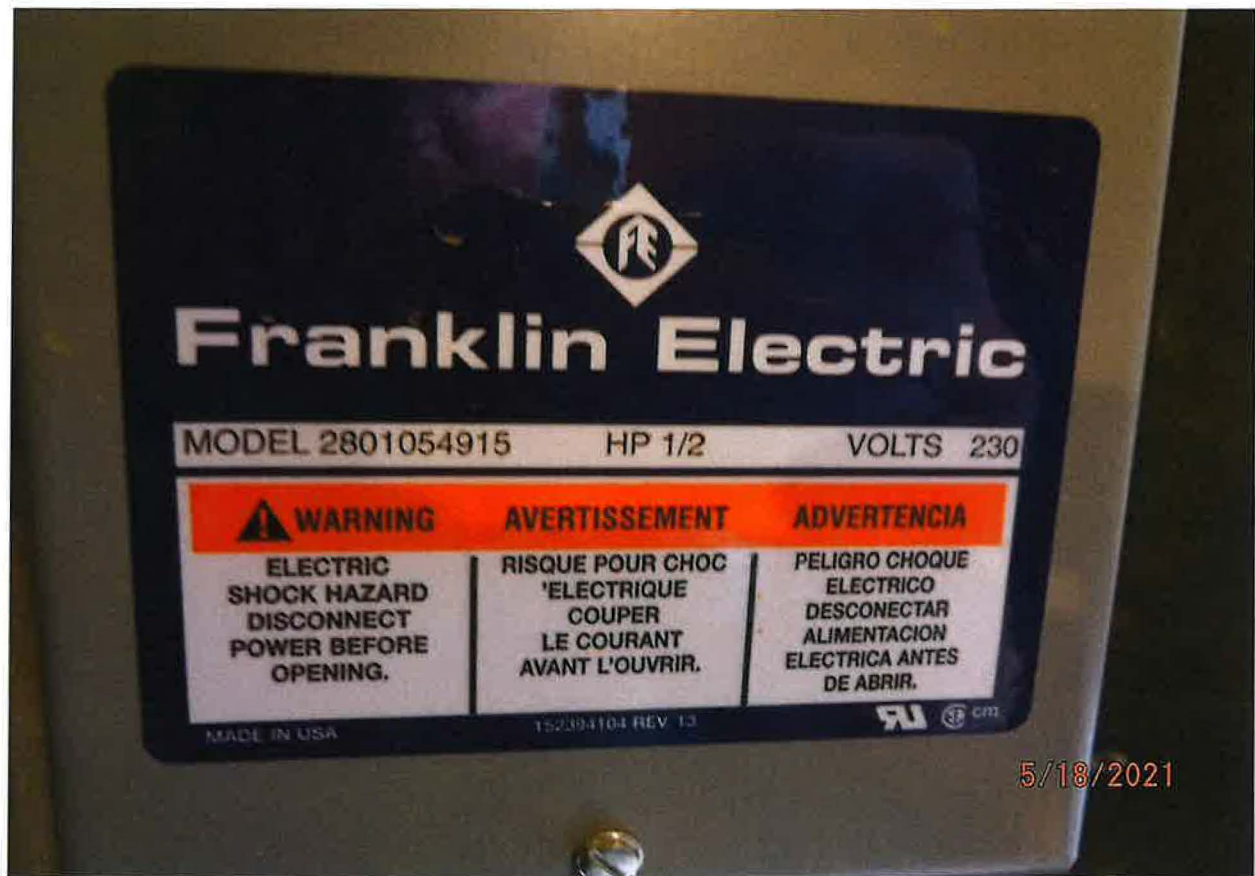




FIELD EXAM DATE 5/18/2021



POD – GROUNDWATER WELL (NO WELL DOCUMENTS ON FILE)



5/18/2021

½ HP PUMP INSTALLED IN WELL

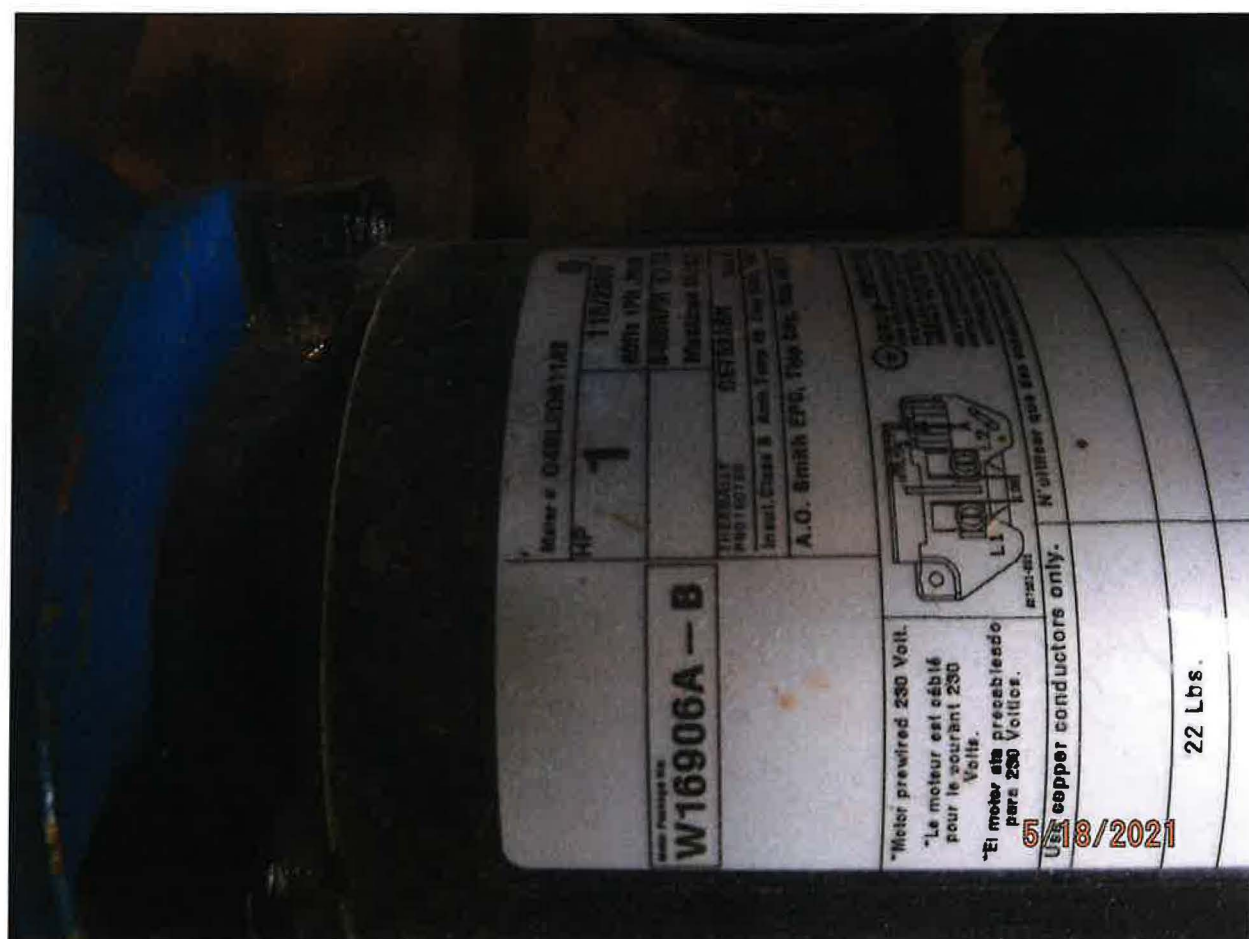


5/18/2021

1,500 GALLON STORAGE RESERVOIR

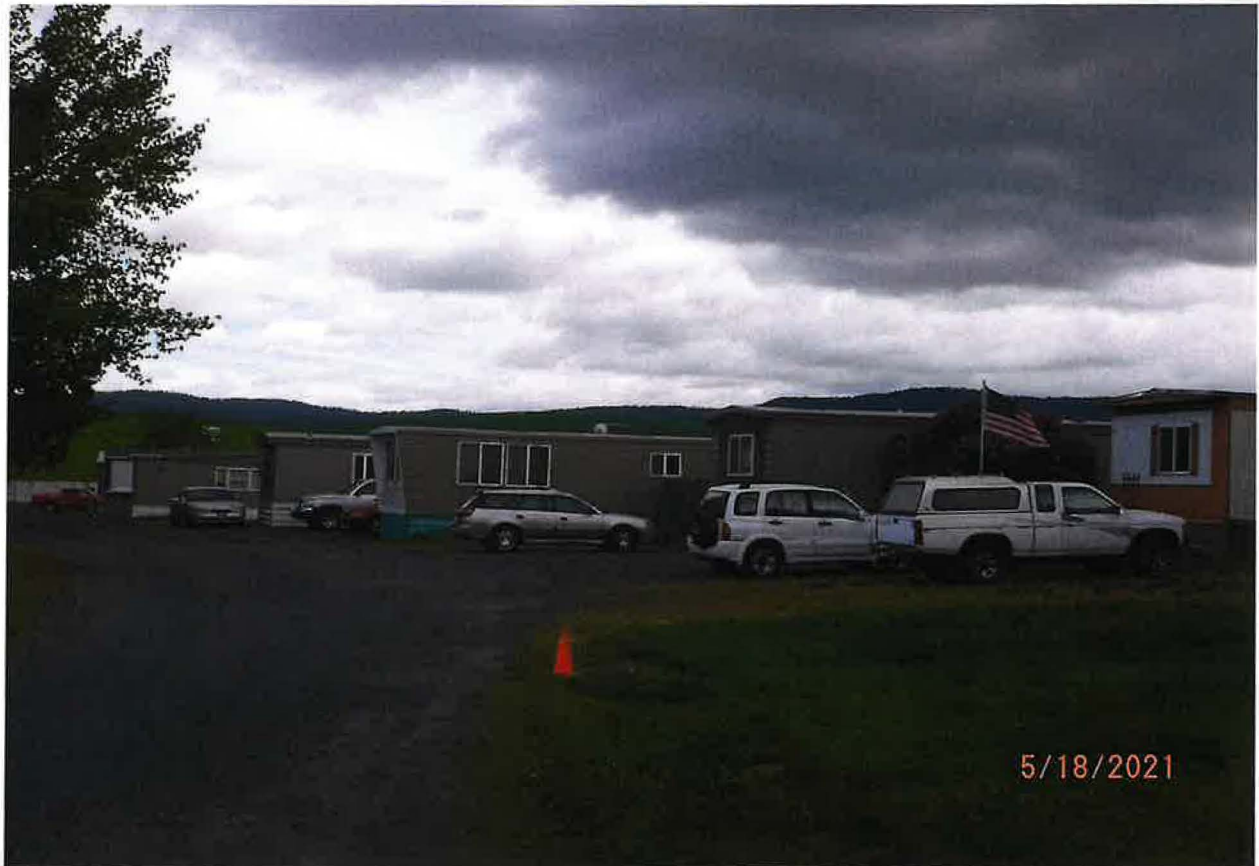


2EA ONE HP DISTRIIBUTION PUMPS FROM RESERVOIR SERVICES SYSTEM





PUMP HOUSE



DOMESTIC POU



DOMESTIC POU



DOMESTIC POU & IRRIGATION POU (SMALL LAWN SPACES BETWEEN EACH TRAILER)



IRRIGATION POU – BY FROST FREE, HOSE, AND PORTABLE SPRINKLERS





IRRIGATION POU – TRAILER SLIP #14



DOMESTIC POU & IRRIGATION POU



DOMESTIC POU & IRRIGATION POU





IRRIGATION POU – DRIP LINE RUNS ALONG ROWS OF TREES ON PROPERTY

