

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 95-17621
Exam Date: 03/19/2024

1. Current Owner:
ESSENTIAL OIL RESEARCH FARM LLC 3125 W EXECUTIVE PKWY LEHI UT 84043-9572
2. Accompanied by: Cody Stromberg
Phone No: 208-245-2745
Address: 701 North Fork Coon Creek, St Maries ID 83861
Relationship to permit Holder: Farm Manager – Young Living Farm

3. SOURCE:
GROUND WATER

Method of Determination: ArcMap and DRG layer.

B. OVERLAP REVIEW

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

Water Right No.	Source	Purpose of Use	Basis
95-17566	Groundwater	Domestic	Decreed

Comments: Decreed Right 95-17566 uses a separate groundwater well source for domestic use with a POU that overlaps this permit's domestic POU. When decreed, an original homestead residence was located near the current lodge building associated with 95-17621; the homestead residence was replaced in recent years with a custom home located just east of the lodge. While the recommendation shape for 95-17566 and legal description of SW¼ NW¼, Sec. 28, Twp 46N, Rge 03W has not changed with replacement of the historic residence, the change of location within the same legally described 40-ac tract **results in no overlap between 95-17566 & Permit 95-17621**. Image of the current residence served under Decreed Right 95-17566 is shown below for illustration purposes:



Image capture date 3/19/2024. Domestic residence linked to 95-17566.

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

Comments: the POD for Permit 95-17621 as developed and the recommendation POD for 95-17566's well for each WR uses a separate groundwater well source and the PODs are not the same & infrastructure is separate between the two WRs. The groundwater well for 95-17566 is located NE (behind & right) of the residence in the image above whereas the well for 95-17621 is located SW (front & left) of the residence located near the lodge for the Permit. There are no POD overlap concerns between WRs.

C. DIVERSION AND DELIVERY SYSTEM**1. LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER SW¼ NW¼, Sec. 28, Twp 46N, Rge 03W, B.M. BENEWAH County

Method of Determination: GPS. POD is an old well, without backfile data present, located at -116°43.8439, 47° 18.3172.

PLACE OF USE: COMMERCIAL

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
46N	03W	28								X									

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	
46N	03W	28							X										

Method of Determination: beneficial use 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
No Tag - GW Well	PENTEK	1	176L8221316502H129 Model No. POD10-01		

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
5-Gal Bucket Measurement						

2. Measurements: Three 5-gallon bucket measurements were taken from a frost-free hydrant co-located with the well, with average of three resulting in a diversion rate of 5 gal / 12.94 sec x 60 sec/min = 23.2 gpm = 0.05 cfs, considering department rounding standards.

E. FLOW CALCULATIONS

Measured Method: 5-GAL Bucket Test = $(5 \text{ gal} / 12.91 \text{ sec}) \times 60 \text{ sec/min} = 23.24 \text{ gpm}$
 $= (5 \text{ gal} / 13.12 \text{ sec}) \times 60 \text{ sec/min} = 22.87 \text{ gpm}$
 $= (5 \text{ gal} / 12.80 \text{ sec}) \times 60 \text{ sec/min} = 23.44 \text{ gpm}$

Average of 3ea 5-GAL Bucket Tests = $(23.24 \text{ gpm} + 22.87 \text{ gpm} + 23.44 \text{ gpm}) / 3 = 23.2 \text{ gpm} = 0.05 \text{ cfs}$ considering department rounding standards.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation: N/A

2. Volume Calculations for Other Uses:

- Domestic annual volume = 35-person (migrant work crew) x 14 days (season of use) x 100 gpd (per worker) = 49,000 gal annually / 325,850 gal/af = 0.15 af = **0.2 af** considering department rounding standards.
- Commercial annual volume =
 - 0.04 cfs operating for 1 hour = 1,077.192 gph x 3 hr per day (watering time period) = 3,231.576 gal per day.
 - The applicant waters every other day during the season of use from 3/1-to-6/15 annually = 107 days / 2 = 53.5 days = 54 days.
 - 3,231.576 gal per day x 54 days = 174,505.104 gal annually / 325,850 gal per af = 0.53 af = **0.5 af** considering department rounding standards.
- Maximum diversion volume = 0.2 af (domestic volume) + 0.5 af (commercial volume) = **0.7 af**.

G. NARRATIVE/REMARKS/COMMENTS

Field exam performed on 3/19/2024 with Cody Stromberg, Farm Manager – Young Living Farm, showed a groundwater well source being used for domestic & commercial uses. At the POD, an old 6-inch cased groundwater well has a 1 HP pump and matched 1 HP Pentek variable frequency drive pump motor installed in the diverting works. There's a frost-free hydrant (system blow-out) co-located with the well, from which three 5-gal flow measurements were taken. The average of three measurements equals 0.05 cfs considering department rounding standards, but the applicant is limited by the maximum diversion rate designated on the permit approval or 0.04 cfs.

The permit authorized two (2) groundwater PODs, but only one well is service connected for the beneficial use of water associated with this Permit; I've removed one of the two PODs in AdHoc during licensing review. I've recommended each beneficial use retain their 0.04 cfs and the maximum diversion rate of **0.04 cfs** be applied to the license. Ground water is conveyed by buried pipeline to a nearby pump house prior to a pressure tank which regulates system pressure at 55 psi prior to distribution to a nearby lodge & greenhouse.

As I reviewed the Permit's backfile, I note two well driller reports were submitted with the Application for permit but neither represent the well that is service connected to this Permit's water system as developed.

- D0059435 – this well is linked to Decreed WR 95-17568 which serves the farm's office building and distillery operations located west of this Permit's POU.
- D0059576 – this well is linked to Decreed WR 95-17566 which serves one domestic residence. It's important to note that the historic groundwater well for 95-17566 was replaced with D0059576 when the historic homestead

residence was replaced with the current custom log home located just East of the lodge & domestic use covered by this permit. An Application for Transfer to Change a POD & POU has been recommended to the applicant via email correspondence with Cody Stromberg on 4/9/2024 as we discussed the numerous well(s) located on the farm's properties.

- In addition to the two wells discussed above, there is one well centroid observed in ArcMap located in the SW1/4NW1/4 of Section 28: Well ID 276409 was drilled for Cliff Bedwell n 1-30-1973 (95-73-N-62). I note the priority date for Decreed WR 95-17566 was issued as 1/30/1973. When the original well for 95-17566 was replaced for the current one, it becomes plausible that the old 1973 well was repurposed for use under this permit 95-17621; however, the 1973 well log designates an 8-inch cased well whereas the well I observed during the field exam was a 6-inch cased well. During POD designation in AdHoc using ArcMap I labeled the GW POD as 95-73-N-62 but after further review believe this to be a misrepresentation of the well in use. A comment was added in AdHoc describing this discrepancy.
- Upon finding no additional cased wells in the immediate proximity I have designated the GW POD as a GW well without backfile data documented in IDWR's database.

The domestic POU was observed as a lodge building which houses a full kitchen, full-service restrooms and showers for both male & female workers, and multiple laundry washers. Mr. Stromberg asserts that the 15 recreational vehicle sites were discontinued by the applicant during the development period and the remaining housing is solely dry cabins & shelters that don't include water uses. Mr. Stromberg further stated that the farming practices incorporated in the development period for the permit consist of 2 weeks' time with up to 35 migrant workers that utilize the lodge domestic facilities. There is a single large harvest event that sees up to 500 migrant workers but there is no water use from the system for this event; porta-potties are used, and water is brought in for this event by the workers.

I used ArcMap to designate the domestic POU shape during licensing review. I removed the SE1/4NW1/4 legal description from the POU as the lodge is constructed solely in the SW1/4NW1/4. During my evaluation I considered clarifying the beneficial use of water to reflect commercial use, but doing so would have necessitated an amendment to permit based on legal descriptions authorized for commercial use on the permit approval; I have recommended the water used for the lodge retain the domestic use for licensing purposes. I have assigned 100 gallons per day (gpd) for each of the 35 workers that stay on-site during the two-week work period annually. Department guidance documents illustrate that workers typically use 50 gpd and self-service laundry uses 50 gal per cycle = 100 gal per day. The domestic annual volume calculation is shown above on PG3 and equals **0.2 af** considering department rounding standards.

The commercial POU consists of a single green house structure used by the applicant for crop starts each spring and early summer. I'm recommending the same season of use as permit approved = 3/1 to 6/15. I used field maps and ArcMap aerial imagery to assign the POU shape during licensing review. From the well, ground water is conveyed by buried mainline to the nearby pump house prior to buried waterline with riser pipes located within the greenhouse. The applicant waters by hose and hand wand(s) to water flats of starter crops. I collaborated with Mr. Stromberg in evaluating the greenhouse water usage and gained the following information: water usage during the development period equates to 2 1/2 to 3 hours of wand(s) watering every other day during the development period. Based on this information and the commercial annual volume calculations (see PG3 above) I'm recommending the commercial annual volume of **0.5 af** for licensing purposes. The maximum diversion volume equals the sum of both beneficial uses which equals **0.7 af**.

I removed conditions 26A and 046 during licensing review; the applicant has fulfilled both condition requirements. I replaced condition X04 which described the domestic water use with a TEXT condition; this condition removed the recreational vehicle description and refined the description for domestic water use associated with the lodge facility. I removed a text condition that stated: "Lawn, garden, or landscape irrigation is not authorized under this right"; this condition isn't necessary based on the beneficial uses validated at time of field exam and not recommended for licensing purposes. I've added a TEXT condition which describes the commercial water use for greenhouse operations. I've carried all other conditions on the permit forward to licensing.

The applicant owns several water rights associated with their farm business, but only 95-17566 as potential for overlap between WRs. As discussed on PG1 of this report, the water used for domestic served by WR 95-17566 is a separate source, separate water system, and separate POU from Permit 95-17621's domestic & commercial uses. There are no remaining overlapping water right concerns toward licensing 95-17621.

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>
COMMERCIAL	03/01 to 06/15	0.04 CFS	0.5 AF
DOMESTIC	01/01 to 12/31	0.04 CFS	0.2 AF

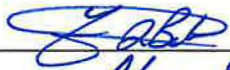
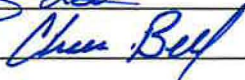
Totals: 0.04 CFS 0.7 AF

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 – Sr. Water Resource Agent

Field Examiner's Name  Date 4/9/2024
 Reviewer  Date 2/4/2025

State of Idaho
Department of Water Resources
Attachment to Field Exam
95-17621

This map depicts the DOMESTIC system diagram.



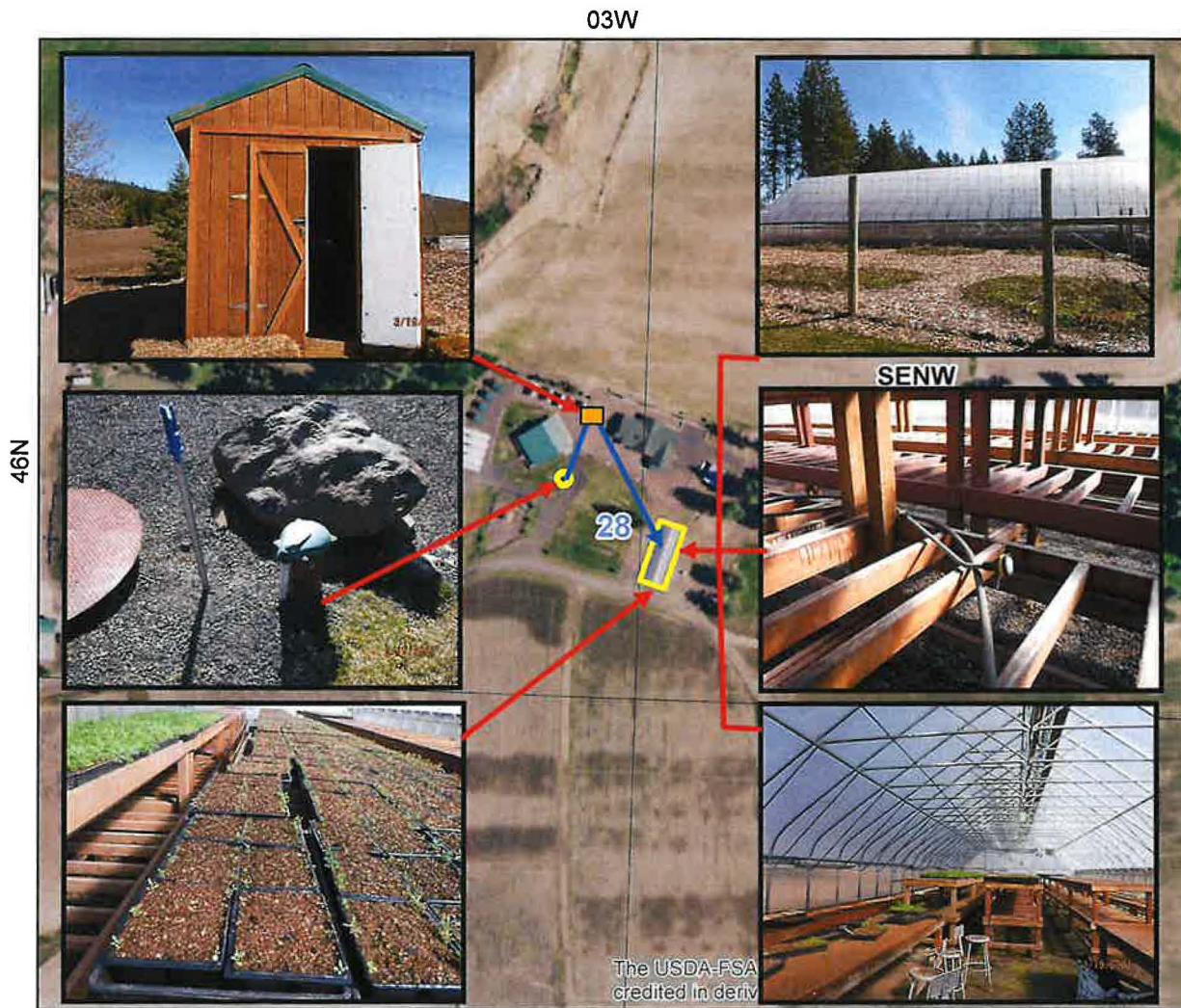
0 0.035 0.07 0.14 Miles

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



State of Idaho
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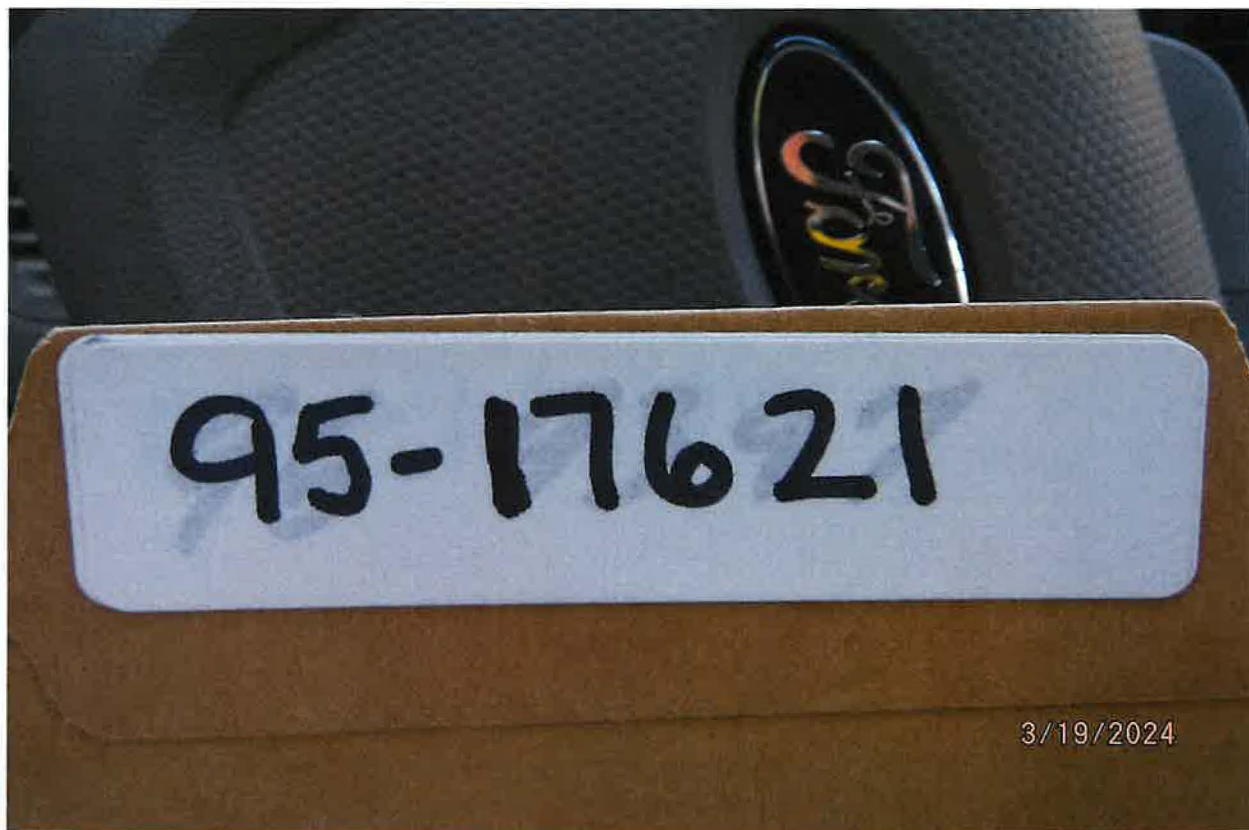
This map depicts the COMMERCIAL system diagram.



0 0.035 0.07 0.14 Miles

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





BENEFICIAL USE FIELD EXAM DATE 3/19/2024



POD – GROUNDWATER WELL – NO D-TAG ON CASING



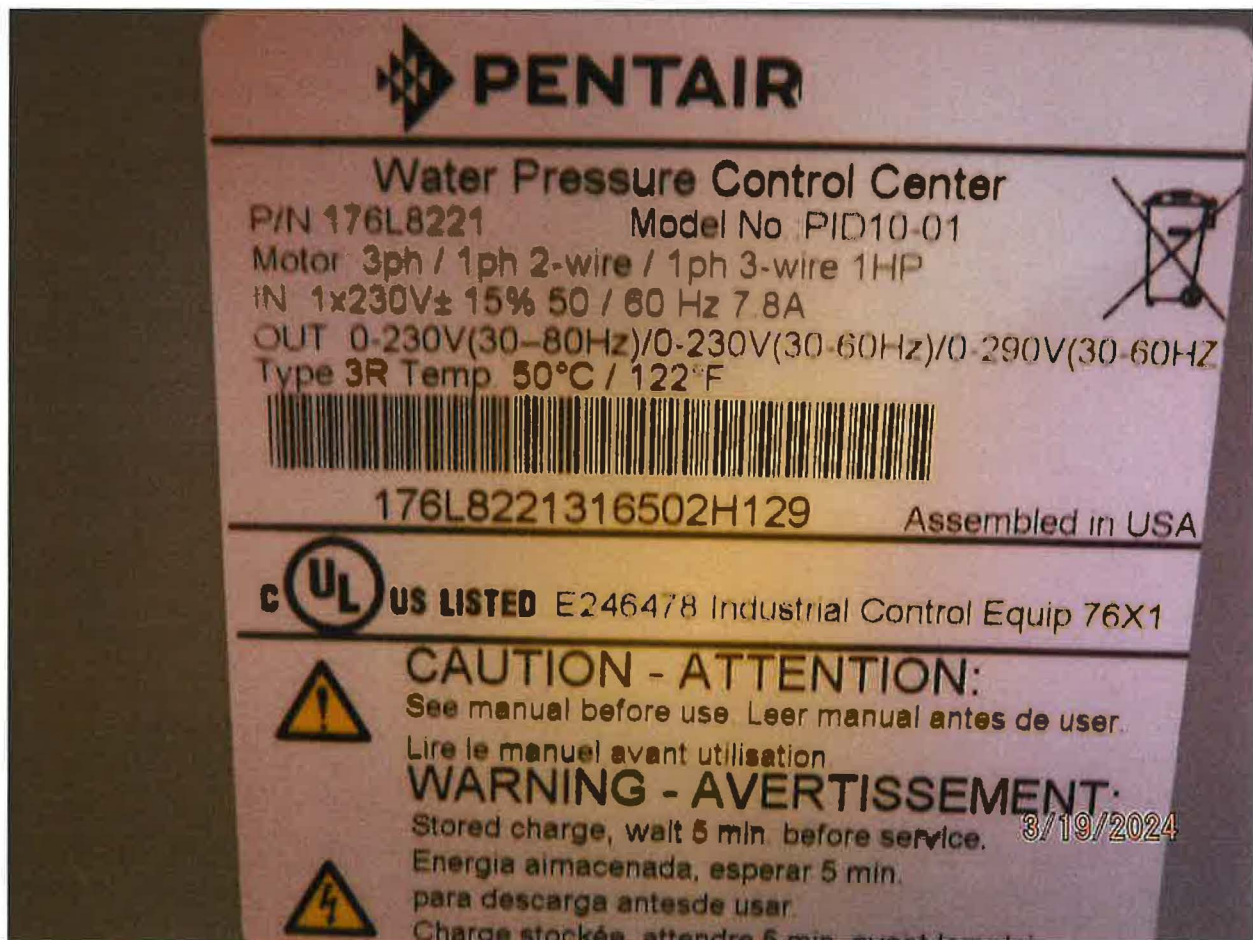
POD – LOCATED IN FRONT OF FACILITY ASSOCIATED WITH DOMESTIC POU



PUMP STATION – HOUSES CONTROLS FOR TWO SEPARATE WATER SYSTEMS (95-17566 & 95-17621)



1 HP VFD PENTEK PUMP MOTOR INSTALLED ON WELL PUMP





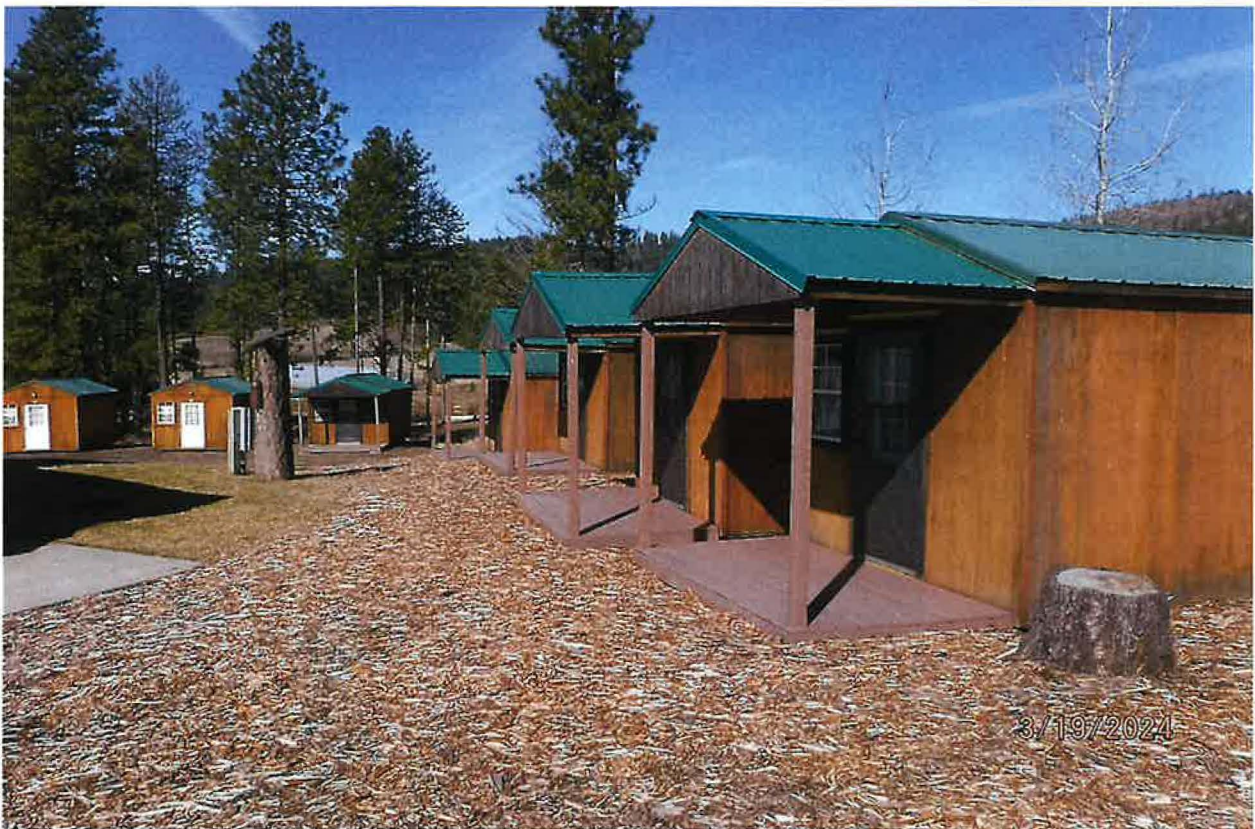
PRESSURE TANK INSTALLED ON SYSTEM HOLDS AT 55 PSI



ONE PRESSURE TANK FOR EACH OF 2 SEPARATE WATER SYSTEMS



DELIVERY SYSTEM FOR WATER USES



NUMEROUS SMALL DRY-USE CABINS USED BY MIGRANT WORKFORCE DURING HARVEST SEASON



DOMESTIC POU – RESTROOM/LAUNDRY/KITCHEN FACILITY



DOMESTIC POU – KITCHEN SPACE



DOMESTIC POU – MEN & WOMEN SEPARATE RESTROOM FACILITIES

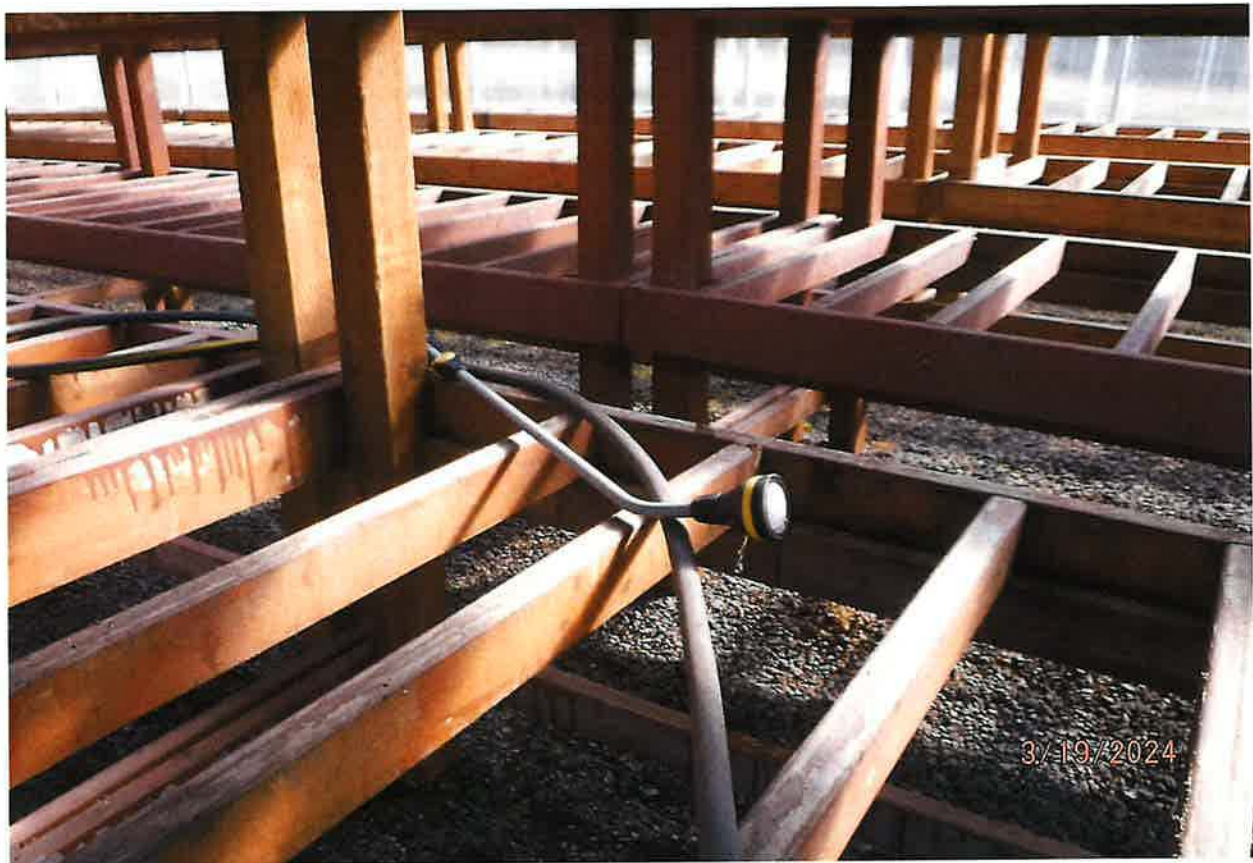


LAUNDRY UNITS IN EACH RESTROOM FACILITY



COMMERCIAL POU – GREEN HOUSE USED FOR STARTER PLANTS EACH SEASON





COMMERCIAL POU – MULTIPLE HOSE TO HAND WAND USED TO WATER STARTER PLANTS





HISTORICAL USE PHOTOGRAPHS LOCATED WITHIN LODGE





RESIDENCE LOCATED IN BETWEEN GREENHOUSE AND LODGE. THIS RESIDENCE IS ON THE 2ND (SEPARATE) GROUNDWATER WELL (D0059576) SYSTEM COVERED BY DECREE WR 95-17566. PUMP CONTROL AND PRESSURE TANK LOCATED IN SAME PUMP STATION AS WR 95-17621, BUT ON A SEPARATE DISTRIBUTION SYSTEM.



D-TAG D0059576 - The well is located just east of the NE (back of home) corner of the residence.