

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 96-9835
Exam Date: 07/16/2024

1. Current Owner:
RONALD VAN WINGERDEN 6864 SPIRIT LAKE CUTOFF PRIEST RIVER ID 83856-6712 AND/OR
JOYCE VAN WINGERDEN 6864 SPIRIT LAKE CUTOFF PRIEST RIVER ID 83856-6712
2. Accompanied by: Ronald Van Wingerden
Phone No: 208-660-5505
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 SW $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 33, Twp 55N, Rge 04W, B.M. BONNER County

Method of Determination: GPS. POD is located at -116°50.3377, 48°3.8812; old undocumented well in IDWR's database.

PLACE OF USE: COMMERCIAL 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	
55N	04W	33												X					

Method of Determination: beneficial use 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
GW WELL – NO DATA AVAILABLE	GE	5	UNKOWN	UNKOWN	UNKOWN

D. FLOW MEASUREMENTS

1.

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

2. Measurements: I was unable to complete a flow measurement due to inadequate pipe requirements. I've relied on historic flow rates determined at the time of well pump installation and pump performance tests to make license recommendations with a maximum diversion rate of 60 gpm or 0.13 cfs considering department rounding standards.

E. FLOW CALCULATIONS

Measured Method: a direct measurement of the diversion rate isn't required in accordance with Rule 035, IDAPA 37.03.02 Beneficial Use Examination Rules 035.01.r.iii, as the total combined diversion rate for the domestic & commercial use doesn't exceed 0.24 cfs.

- reference Memo to file DTD 12/22/2020 (application for permit backfile); the applicant asserted his 5 hp pump was performance tested at time of installation resulting in a flow measurement of 60 gpm.
- For reference, a pump operating 24/7 for 150 days at 0.13 cfs = $0.13 \text{ cfs} \times 150\text{-day} \times 1.9835 = 38.5 \text{ af}$ which demonstrates that 0.13 cfs is capable of producing the recommended maximum diversion rate of 6.5 af annually.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation: N/A

2. Volume Calculations for Other Uses:

- Domestic annual volume = **1.2 af** for 1 home with ½ acre irrigation included.
- Commercial annual volume =
 - 20,000 drip nozzles x 1 gph x 0.5 hr. per day x 150-day season of use = 1,500,000-gal in season of use.
 - Numerous garden hoses mix fertilizer with 1 gal fertilizer to 100-gal water. 100-gal fertilizer used per week equates to 10,000-gal water per week. $10,000\text{-gal} \times (150 \text{ days} / 7 \text{ day per week}) = 215,000\text{-gal}$ water used by hoses in the season of use.
 - $(1,500,000\text{-gal} + 215,000\text{-gal}) / 325,850\text{-gal per acre-foot} = \mathbf{5.3 \text{ af}}$ considering department rounding standards.
- Maximum diversion volume = 1.2 af (domestic) + 5.3 af (commercial) = **6.5 af**.

G. NARRATIVE/REMARKS/COMMENTS

I performed a beneficial use field exam on 7/16/2024 with the Permit Holder, Mr. Ronald Van Wingerden, which showed groundwater from an old cased well being used for commercial and domestic purposes. At the POD, a vaulted old well casing is located in a field within a concrete vault with wooden roof (similar to a root cellar). Review of Department Well Construction database information doesn't identify any wells associated with the corresponding POD legal description, but Mr. Van Wingerden identified historically the well had been drilled over 26 years ago when he purchased the property; also, the well was originally drilled to provide irrigation use for the open pasturelands on the property(s). I captured photographs to illustrate the vaulted well which have been added to the back file.

The Permit doesn't require a flow measurement based on Beneficial Use Field Exam Rule 035, referenced above, and I'm recommended the maximum diversion rate based on a memo to file dated 12/22/2020 wherein the applicant asserted a performance test was performed by the pump install company years back when a new 5 HP pump and 5 HP General Electric pump motor was installed with resulting pumping capacity of 60 gpm observed. 60 gpm correlates with **0.13 cfs**, which aligns with the commercial beneficial use component of the Permit. While the domestic beneficial use remains the **0.04 cfs** diversion rate this rate is not additive to the recommended maximum diversion rate for licensing purposes.

From the 5 hp pump diverting works water is piped directly to 4ea large pressure tanks prior to distribution across the field to the greenhouse facility; a separate ¾ inch poly-pipeline exits the vaulted pump station routing across the field the primary residence for domestic water usage. I noted 45 psi holding pressure at the diverting works, but water was not actively pumping for commercial use at time of exam.

I captured photographs of the domestic POU during the exam and field maps were used to sketch the approximate pipeline route to the home during the exam. During licensing review, I used ArcMap aerial imagery to trace out the domestic POU, which is clearly visible with home and lawn space up to ½ acre included under domestic use. I've recommended the diversion volume of **1.2 af** for licensing purposes. While the POU shape is 1.0 acres in total, once the residence, driveway, and rocked landscaping is removed the lawn space falls within the ½ acre allowable watering acreage covered by the domestic beneficial use on the Permit.

Mr. Van Wingerden provided a tour of the production flower green house facility during the examination. Entering the warehouse portion of the facility on the southwest side a 3-inch water main line daylights and routes up to the rafters where it has been designed to run to the back of the warehouse before reaching the fertilizer mixing station and distribution for greenhouse operations. The commercial water use starts in early February and shuts down by July each season; I've recommended reducing the commercial season of use from year-round limiting licensing recommendations to 2/1 – 6/30 annually. I used ArcMap aerial imagery to trace out the commercial POU consisting of the warehouse, main greenhouse plant and multiple smaller greenhouse buildings.

Determining commercial use annual volume included breaking down the operation into two types of water use: a) fertilizer mixing and watering use and b) irrigation by micro-emitters installed throughout the facility. The water lines run suspended from overhead throughout the greenhouse with banjo fittings to hose bibs at intervals and 20,000 drip nozzles used to water products; the 20,000 micro emitters operate 30 minutes per day with each using ½ gal per ½ hr time period. The annual volume as calculated above results in the annual volume of **5.3 af** considering department rounding standards, which I've recommended for licensing purposes. The maximum diversion volume recommended for licensing equals the sum of the two beneficial uses or **6.5 af** annually.

During the licensing review I've removed condition 046 from the Permit. Additionally, I've removed the text condition describing commercial use for production greenhouse operations as future commercial use may change in venue and is allowed so long as the Right Holder doesn't exceed the diversion rate(s) and diversion volume(s) applied to the license. All other conditions on the Permit are being carried forward to licensing. There are no overlapping water right concerns toward licensing 96-9835. Informational note – I found a 6 inch well casing located along the driveway just south of the greenhouse facility which was found to be a dry hole and has been capped and not used by the Permit Holder.

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>
COMMERCIAL	01/01 to 12/31	0.13 CFS	5.3 AF
DOMESTIC	01/01 to 12/31	0.04 CFS	1.2 AF

Totals: 0.13 CFS 6.5 AF

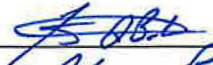
2. Recommended Amendments

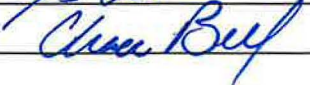
____ Change P.D. as reflected above ____ Add P.D. as reflected above X None

____ Change P.U. as reflected above ____ Add P.U. as reflected above X None

I. AUTHENTICATION

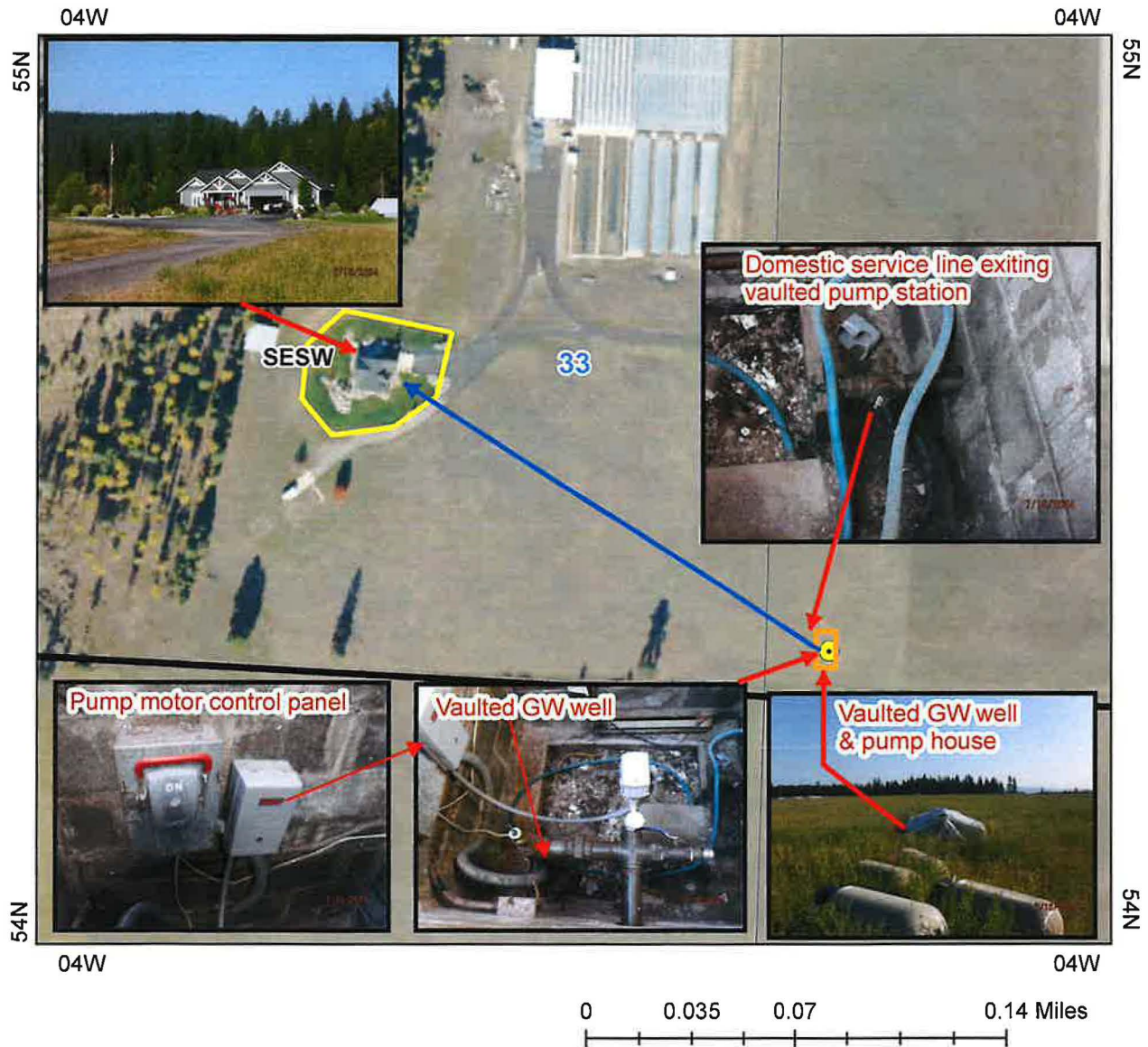
Luke Bates – Sr Water Resource Agent

Field Examiner's Name  Date 10/29/2024

Reviewer  Date 3/28/2025

State of Idaho
Department of Water Resources
Attachment to Field Exam
96-9835

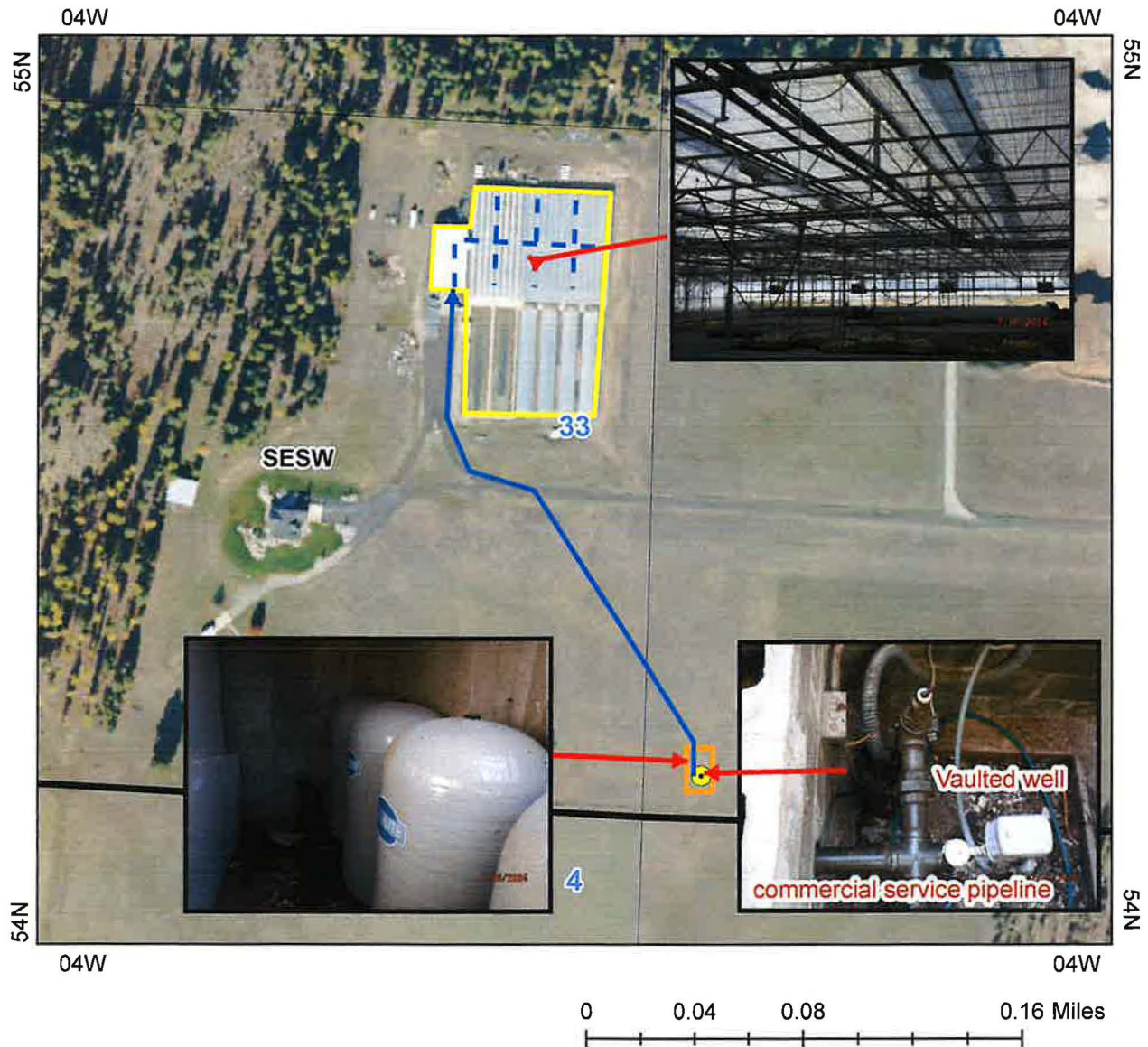
This map depicts the DOMESTIC system diagram.



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

State of Idaho
Department of Water Resources
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96-9835

This map depicts the COMMERCIAL system diagram.



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



BENEFICIAL USE FIELD EXAM CONDUCTED ON 7/16/2024



POD – OLD GW WELL IN VAULTED PUMP STATION; STRUCTURE COVERED BY PLASTIC IN PHOTOGRAPH



GROUNDWATER WELL – NOT DOCUMENTED IN DEPARTMENT WELL CONSTRUCTION DATABASE



2-INCH METAL PIPE FROM WELL TO PRESSURE TANKS PRIOR TO DISTRIBUTION TO COMMERCIAL USE
VIA A BURIED PIPELINE



1 1/4-INCH TO 3/4-INCH DOMESTIC SERVICE LINE ROUTES TO HOME USE



5-HP GENERAL ELECTRIC PUMP MOTOR INSTALLED ON PUMP IN WELL



4EA PRESSURE TANKS INSTALLED IN COMMERCIAL CONVEYANCE SYSTEM

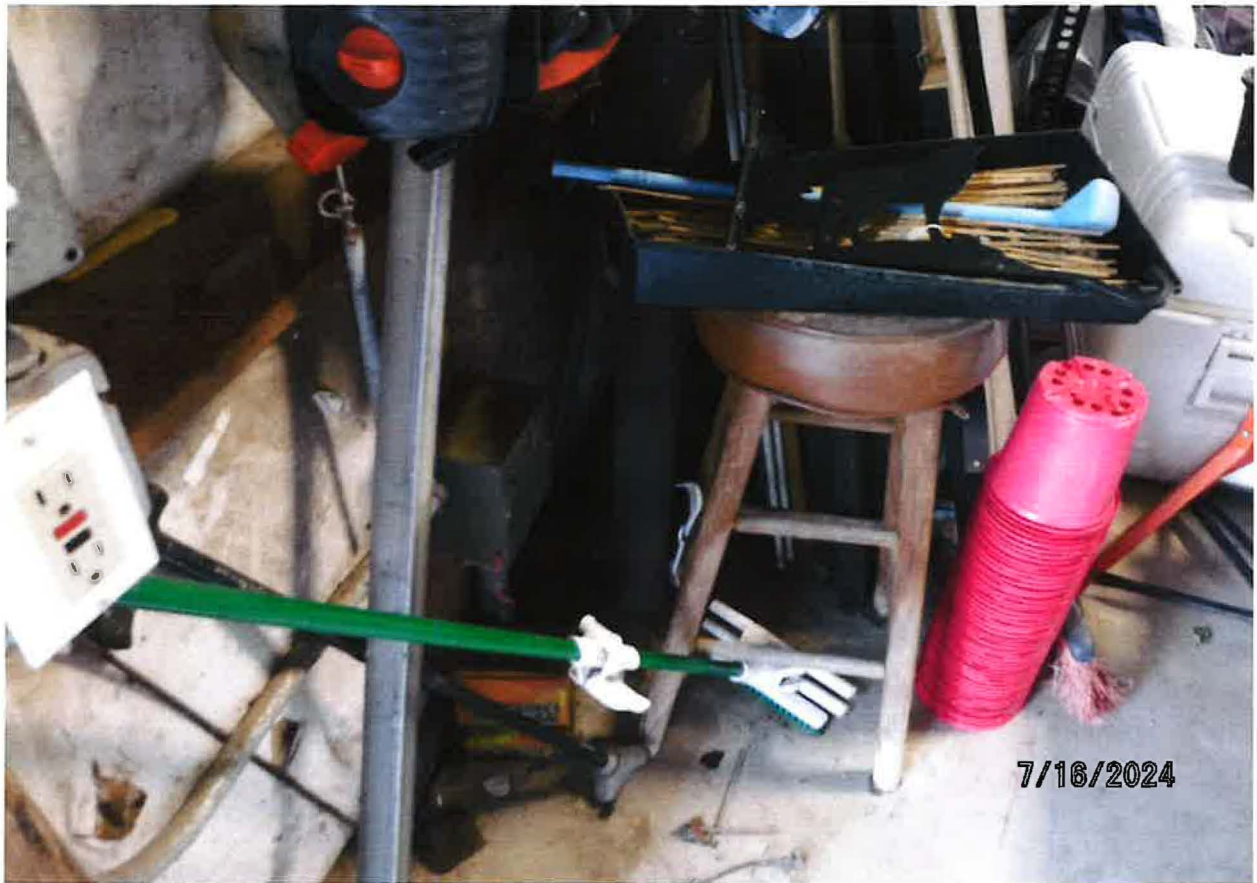


DOMESTIC POU – 1 HOME WITH ½ ACRE IRRIGATION INCLUDED

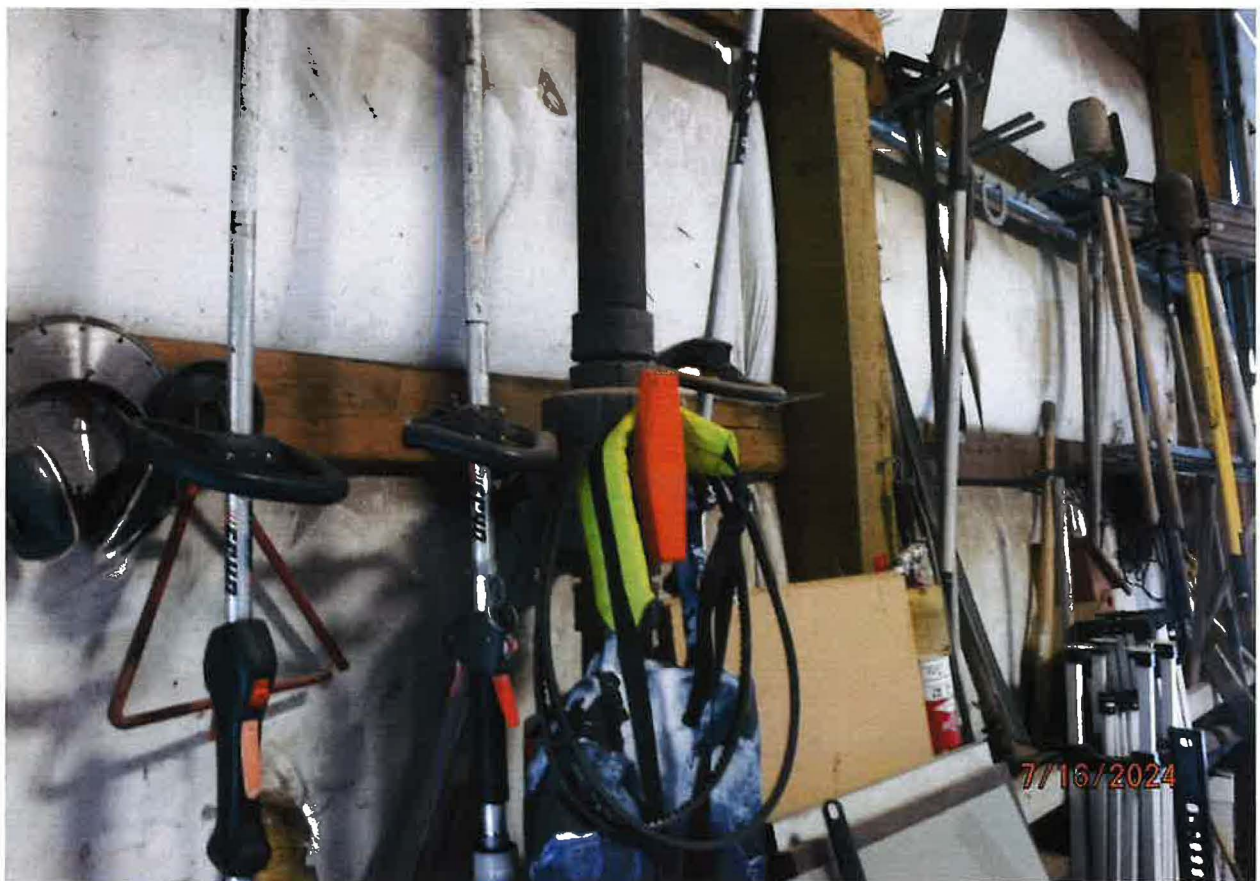


COMMERCIAL POU – GREENHOUSE BUSINESS





3-INCH POLY-PIPE MAIN SERVICE LINE ENTERES WAREHOUSE FROM FLOW AND RUNS UP ALONG TRUSSES TO COMMERCIAL WATER DISTRIBUTION SYSTEM



COMMERCIAL MAIN SERVICE LINE SHUTOFF VALVE (ORANGE HANDLED VALVE)



COMMERICAL WATER CONVEYANCE SYSTEM PIPING & FERTILIZER MIXING STATION





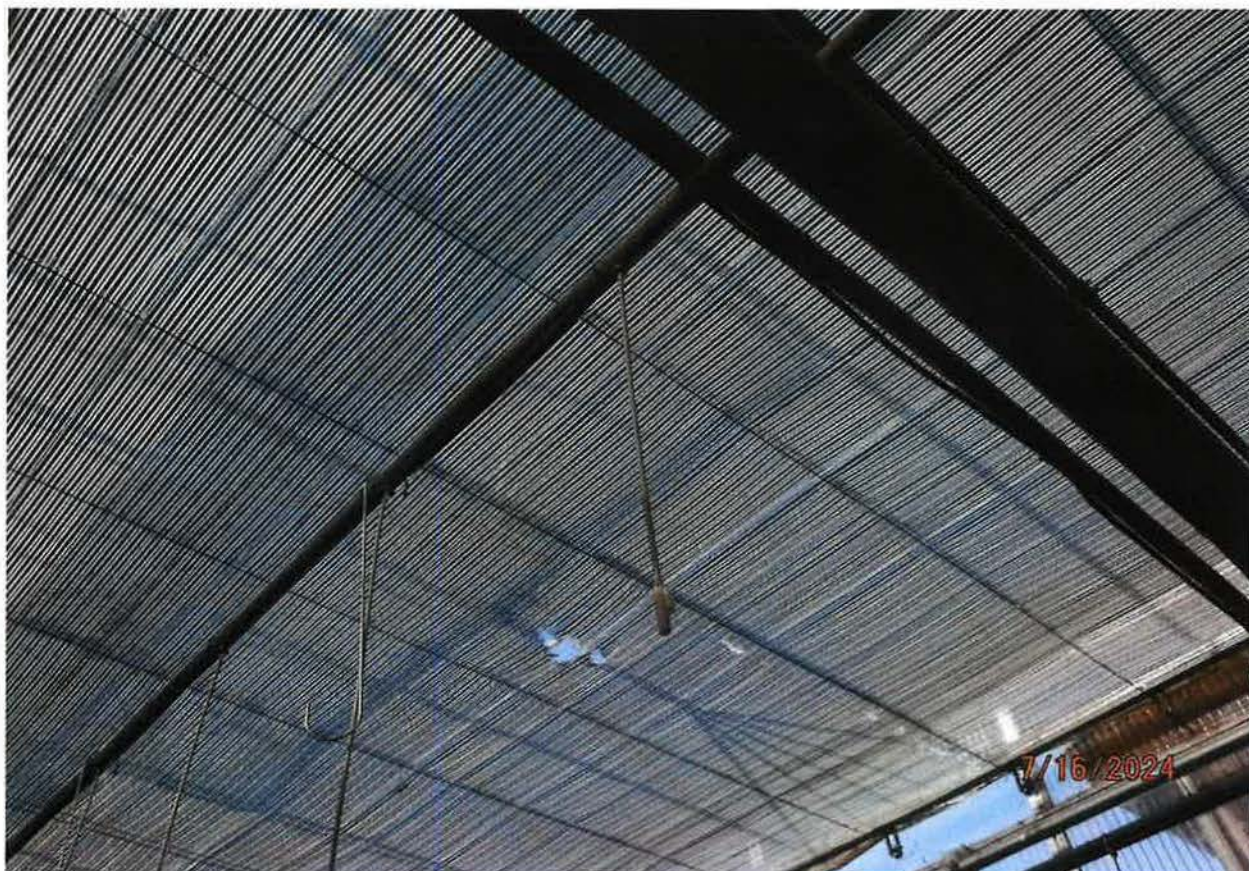
COMMERICAL POU – WATER LINES ROUTE ALONG RAFTERS AND DROP DOWN WITH BANJOY CONNECTIONS TO HOSES AT INTERVALS





COMMERCIAL POU – PRODUCTION GREENHOUSE BUSINESS (IMAGE TAKEN OFF SEASON, MOSTLY EMPTY)





COMMERCIAL POU – 20,000 DRIP EMITTERS INSTALLED IN GREENHOUSE OPERATION

