

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 96-11173
Exam Date: 08/14/2023

1. Current Owner:
THOMAS P SADOSKI 2003 RAPID LIGHTNING RD SANDPOINT ID 83864 AND/OR
DIANE M GREEN 2003 RAPID LIGHTNING RD SANDPOINT ID 83864
2. Accompanied by: Thomas Sadoski
Phone No: 208-263-8957
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
2. Other water rights with the same point-of-diversion: NO Overlap

Water Right No.	Source	Purpose of Use	Basis
96-11090	Groundwater	Domestic	Notice of Claim filed in CFPRBA

Comments: The applicants have filed a beneficial use Notice of Claim No. 96-11090 during the ongoing Clark Fork Pend Oreille River Basin Adjudication (CFPRBA) process. The claim is for domestic use for 1 home which uses the same groundwater source as this permit. There is no concern for overlap between rights if the claim is decreed as claimed, but I'm not recommending addition of condition F06 for licensing, which describes shared well use between water rights as claim 96-11090 has not been recommended at time licensing for 96-11173.

C. DIVERSION AND DELIVERY SYSTEM

1. **LOCATION OF POINT(S) OF DIVERSION:**
GROUND WATER NE¼ NE¼, Sec. 24, Twp 58N, Rge 01W, B.M. BONNER County

Method of Determination: GPS. POD is located at -116°24.053, 48°22.197; hand dug well no well log information on hand.

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	
58N	01W	24	1.5																1.5

Total Acres: 1.5

Method of Determination: Beneficial use exam, ArcMap aerial imagery, Bonner County GIS tax parcel map software, and department Deed Plotter software (for parcel boundary validation).

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 Model No. or Discharge Size
1970s Hand Dug Well		½		STA-RITE	Mod: 10DOM05121

D. FLOW MEASUREMENTS

1.

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

2. Measurements: Three 5-gallon bucket tests were completed from frost-free hydrant co-located with the small pump house, with an average diversion rate equaling 28.81 gpm = **0.05 cfs**, considering department rounding standards.

E. FLOW CALCULATIONS

Measured Method: 5-GAL Bucket Test = (5 gal / 10.53 sec) x 60 sec/min = 28.49 gpm
 = (5 gal / 10.57 sec) x 60 sec/min = 28.38 gpm
 = (5 gal / 10.35 sec) x 60 sec/min = 28.98 gpm

Average of 3ea 5-GAL Bucket Tests = (28.49 gpm + 28.38 gpm + 28.98) / 3 = 28.81 gpm = 0.05 cfs considering department rounding standards.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 1.5 \text{ ac} \times 3.0 \text{ afa} = 4.5 \text{ af}$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.05 \times 214 \text{ days} \times 1.9835 = 21.2 \text{ af}$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = \mathbf{4.5 \text{ af}}$$

2. Volume Calculations for Other Uses: None

G. NARRATIVE/REMARKS/COMMENTS

This permit qualified for an in-office exam and IDWR State Office staff had initiated licensing review, but the applicant requested a site visit to confirm irrigation acreage and diversion rates prior to licensing approval. A beneficial use exam was conducted on 8/14/2023 with the applicant, Thomas Sadoski, which showed a mid-1970's hand dug well being used for irrigation for a farm stand produce garden on the property. At the POD, the hand dug well which was constructed in the 1970s consists of stacked concrete rings with a small wooden pump house over the well. A ½ hp Sta-Rite submersible pump is used to divert water to frost-free hydrants and several hose splitters primarily using soaker hoses for row crop irrigation.

Three 5-gal bucket measurements were taken to obtain a diversion rate with the average resulting in a **0.05 cfs** diversion rate which is recommended for licensing purposes. The permit approved diversion rate of 0.15 cfs based on 5 acres of irrigation is limited by two factors: the 1.5 acres irrigation found at time of exam and the pump capacity to 0.05 cfs. The applicant's well serves a single domestic residence located up-hill from the large garden area and a Notice of Claim No. 96-11090 has been filed for domestic use in the ongoing CFPRBA process. This is a separate beneficial use sharing the same well, but doesn't constitute concern for overlap between filings.

The irrigation POU was walked with the applicant during the exam and sketched out on field maps. During licensing review, ArcMap aerial imagery was used to accurately trace out the irrigation acreage equaling 1.5 acres. The produce garden is used for numerous types of row crops, and two separate hoop style grow plots are located west of the main drive but normally operated within the standard season of use 4/1 to 10/31. The irrigation annual volume and maximum diversion volume for licensing purposes equals 1.5 ac x 3.0 afa = **4.5 af**. IDWR ArcMap imagery parcel layer illustrated potential property boundary issues with the eastern border of the parcel, with active irrigation occurring up to the tree line running north/south. Bonner County GIS tax parcel maps illustrate the same Arcmap parcel layer information and indicate the potential for encroachment based on irrigation practices.

I obtained a copy of the applicant's warranty deed from Bonner County, and IDWR staff completed a Deed Plotter assessment which demonstrates there is an evident shift in aerial imagery vice the warranty deeds legal description as illustrated on a Deed Plotter Program Map (included in B.U. report submission). Based on this information, the irrigation POU is being maintained which extends east of the applicant's parcel line in ArcMap, but there is no concern for encroachment for licensing approval. Condition 046 was removed from the permit during licensing review. All other conditions on the permit have been carried forward to licensing. There are not overlapping water right concerns for licensing 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	04/01 to 10/31	0.05 CFS	4.5 AF

Totals: 0.05 CFS 4.5 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 -

Field Examiner's Name *[Signature]* Date 12/11/2023

Reviewer *[Signature]* Date 5/28/24

This map depicts the IRRIGATION system diagram.

Hand Dug Well

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NENE

24

The USDA-FSA Aerial Photography Field Office does not warrant the accuracy of the information presented in this report and is not responsible for any errors or omissions. The user assumes all liability for any use of the information presented in this report.

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



96-11173

Bonner County Tax Parcel Aerial Imagery

Capture date 11/28/2023 from <https://cloudgisapps.bonnercountyid.gov/public/>



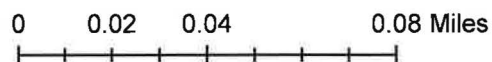
- Concern for property boundary vice irrigation development circled in RED above.

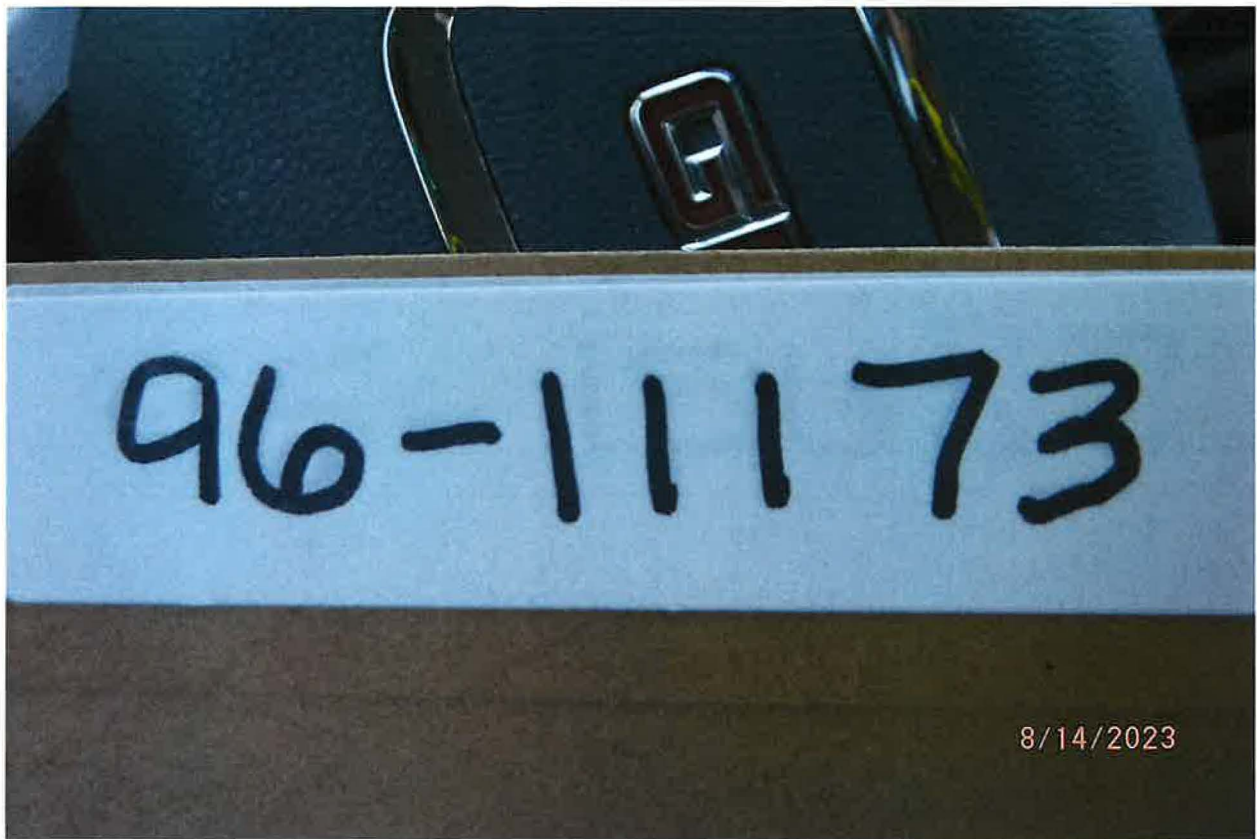
DEED PLOTTER PROGRAM MAP 96-11173



Legend

-  Water Right POD 96-11173
 Water Right POU 96-11173
 Parcels
 Township/Range
 Sections
 QQ





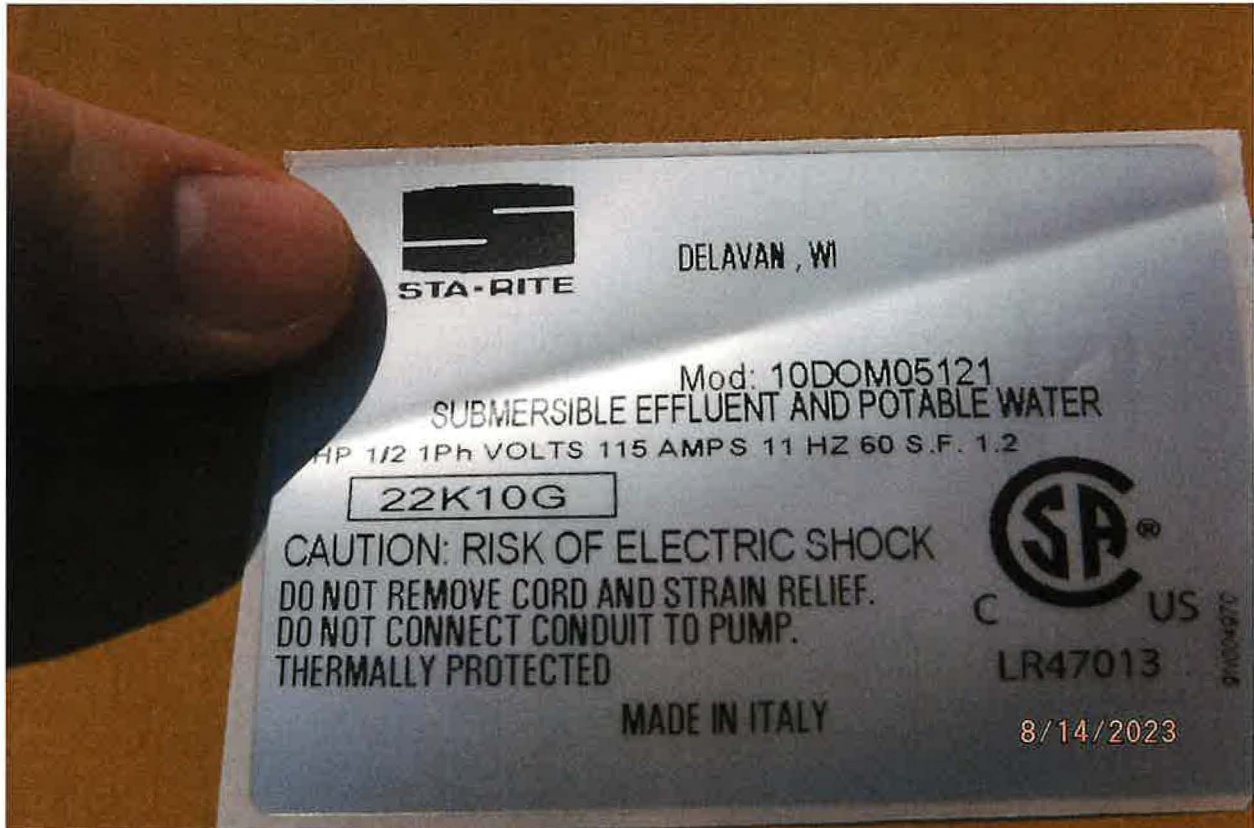
BENEFICIAL USE FIELD EXAMINATION DATE 8/14/2023



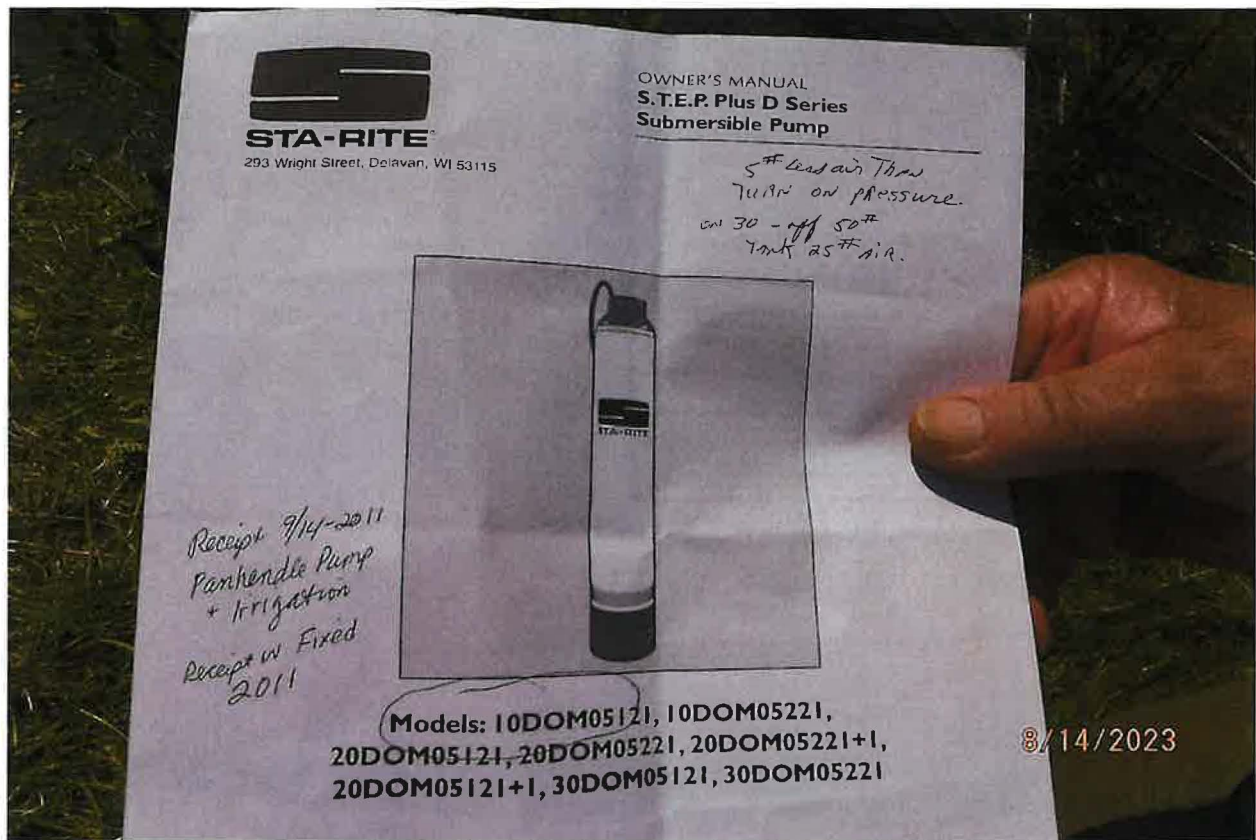
POD – HAND DUG WELL CONSTRUCTED OF CONCRETE RINGS



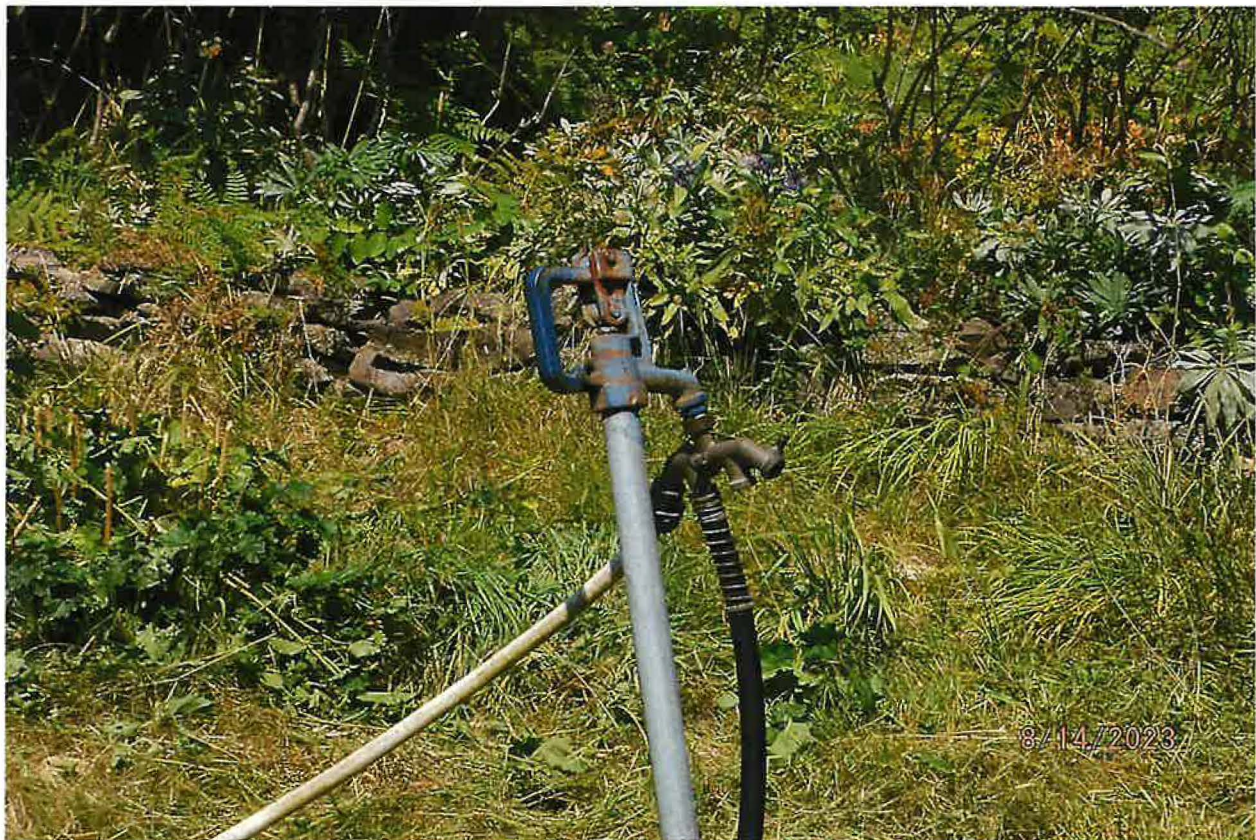
SMALL WOODEN ENCLOSURE HOUSES GW WELL



1/2 SINGLE PHASE STA-RITE PUMP INSTALLED IN WELL – MODEL 10DOM05121



WELL PUMP OWNERS' MANUAL ILLUSTRATES TYPE & MODEL



SINGLE FROST-FREE HYDRANT USED BY APPLICANT WITH 4-WAY HOSE SPLITTER FOR IRRIGATION AT POU



IRRIGATION POU – LARGE GARDEN AREA: SOAKER HOSES PRIMARY WATER SYSTEM, ALONG WITH A COUPLE IMPACT SPRINKLERS





IRRIGATION POU



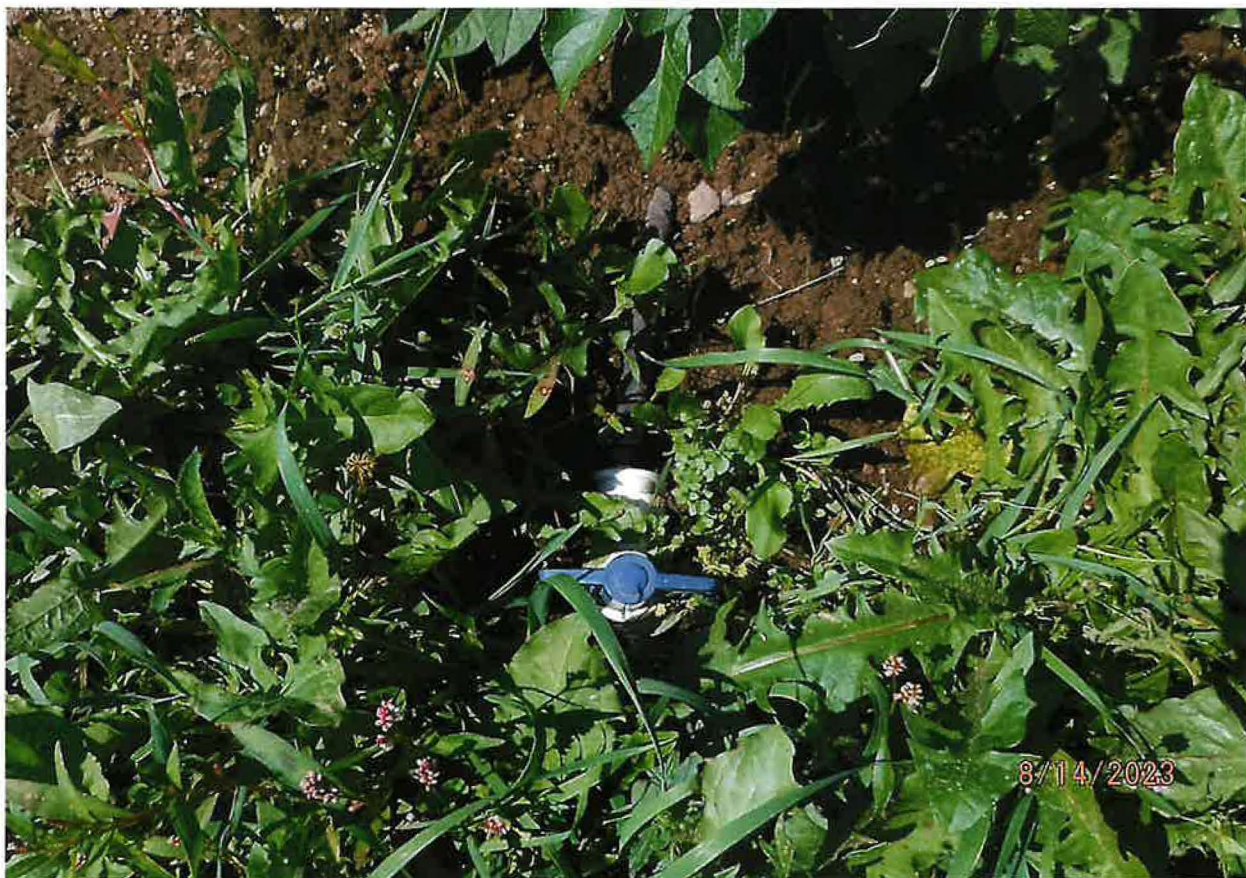


NORTHERN SLOPE OF FENCED IRRIGATION POU





IRRIGATION POU



EXAMPLE – SOAKER HOSE ATTACHMENT POINTS BY CROP ROW



IRRIGATION POU – 1 OF 2 LARGE HOOP COVERED GROW STRUCTURES: MAINTAINS IRRIGATION SEASON OF USE





IRRIGATION POU – SMALL HOOP STRUCTURE WITH HOSE TO SOAKER HOSE WATER SYSTEM



IRRIGATION POU



IRRIGATION POU – 2 OF 2 LARGE HOOP GROW STRUCTURES



IRRIGATION POU – IRRIGATION USED FOR A PRIVATE FARM STAND WHICH SELLS LOCAL PRODUCE