

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 96-11095
Exam Date: 06/22/2023

1. Current Owner:
DENNIS FLOREA 485 PIPSISSEWA PL SAGLE ID 83860-8858 AND/OR
LYNN FLOREA 485 PIPSISSEWA PL SAGLE ID 83860-8858 AND/OR
CHUCK MEYER 485 PIPSISSEWA PL SAGLE ID 83860-8858
2. Accompanied by: Dennis Florea
Phone No: 208-290-8330
Address: Same as above
Relationship to permit Holder: Permit Holder.

3. **SOURCE:**
UNNAMED STREAM

Tributary
FRY CREEK

Method of Determination: ArcMap and DRG.

B. OVERLAP REVIEW

1. Other water rights with the same place of use: NO Overlap

Comments: Applicants have filed a beneficial use claim for domestic in-home use from a groundwater source located on the same parcel as this Permit's Irrigation from Storage POU. There is no concern for overlap, and I'm not considering this Notice of Claim as an overlap in POU based on in-home water usage.

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

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

UNNAMED STREAM NW¼ NW¼, Sec. 20, Twp 56N, Rge 01W, B.M. BONNER County

Method of Determination: GPS. POD is an earthen dam located at -116° 28.74, 48° 11.466.

PLACE OF USE: IRRIGATION STORAGE & FIRE PROTECTION STORAGE

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
56N	01W	20						X											

PLACE OF USE: IRRIGATION FROM STORAGE

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
56N	01W	20						0.4											0.4

Total Acres: 0.4

Method of Determination: Beneficial use examination, Bonner County GIS mapping software, & 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
N/A					

D. FLOW MEASUREMENTS

1.

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

2. Measurements: N/A

E. FLOW CALCULATIONS

Measured Method: N/A

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 0.4 \text{ ac} \times 3.0 \text{ afa} = 1.2 \text{ af}$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = \text{In-stream pond, no diversion rate applied to license.}$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = 1.2 \text{ af}$$

2. Volume Calculations for Other Uses: see attached pond analysis worksheet.

G. NARRATIVE/REMARKS/COMMENTS

A field examination was performed on 6/22/2023 with one of the Permit Holders, Dennis Florea, which showed an in-stream pond impounding unnamed stream water for irrigation storage/from storage use and fire protection storage use. At the POD, an earthen dam has been constructed in a narrow & shallow micro basin. It is likely a spring headwater(s) the unnamed stream on the neighboring parcel to the immediate East of the applicant's pond, as water flows in the stream year-round. The pond has a grated culvert installed vertically within the pond that serves as the overflow device, routing discharged water downstream below the pond dam in the natural stream channel prior to the confluence with Fry Creek. The exam validated the pond is built in-stream and there is no diversion rate(s) associated with licensing this permit.

The storage pond serves as the POU for fire protection storage and irrigation storage. The parcel had a dense tree canopy which makes determining the exact pond surface area difficult. I used field maps to sketch out the POU and Bonner County GIS interactive map software during licensing review to accurately trace out the pond in ArcMap. The pond's surface area equals 0.1 acres considering department rounding standards. The pond has a maximum depth of 5 ft, average depth of 2 ft, pond capacity of 0.2 af, seepage and evaporation loss rates of 0.8 af, 1.2 af associated with irrigation multiple fill volume, and a total volume of **2.2 af** which is recommended as the maximum diversion volume to license this permit. The fire protection annual volume equals pond's capacity + seepage + evaporation volume values which equals **1.0 af** annually. The applicant asserted the pond had silted heavily this year causing the pond to become shallower, but he didn't intend to manipulate the pond depth rather let it remain natural.

The applicants use a ½ to ¾ Hp Century pump to irrigation from storage for fenced garden & flower plots, lawn & landscaping within the irrigation from storage POU. I used field maps to sketch out the POU during the exam, and ArcMap aerial imagery to assign the irrigation from storage POU during licensing review. Photographs were taken which clearly illustrate the irrigation from storage system that is difficult to observe using only aerial imagery. Irrigation is by poly pipe to irrigation riser hose bibs, and hose to portable sprinklers used in fenced areas, between structures, and along driveway aprons. The annual volume recommended for licensing equals 0.4 acres as observed at time of exam x 3.0 afa = **1.2 af** annually.

Conditions 029 & 220 were removed from the permit during licensing review. 220 was removed based on licensing guidance from Shelley Keen – IDWR Deputy Director. Condition 259 was revised to reflect accurate pond volume data derived during licensing review. All other conditions on the permit shall be carried to licensing. 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>Annual Volume</u>
IRRIGATION STORAGE	01/01 to 12/31	1.2 AF
IRRIGATION FROM STORAGE	04/01 to 10/31	1.2 AF
FIRE PROTECTION STORAGE	01/01 to 12/31	1.0 AF

Totals: 2.2 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

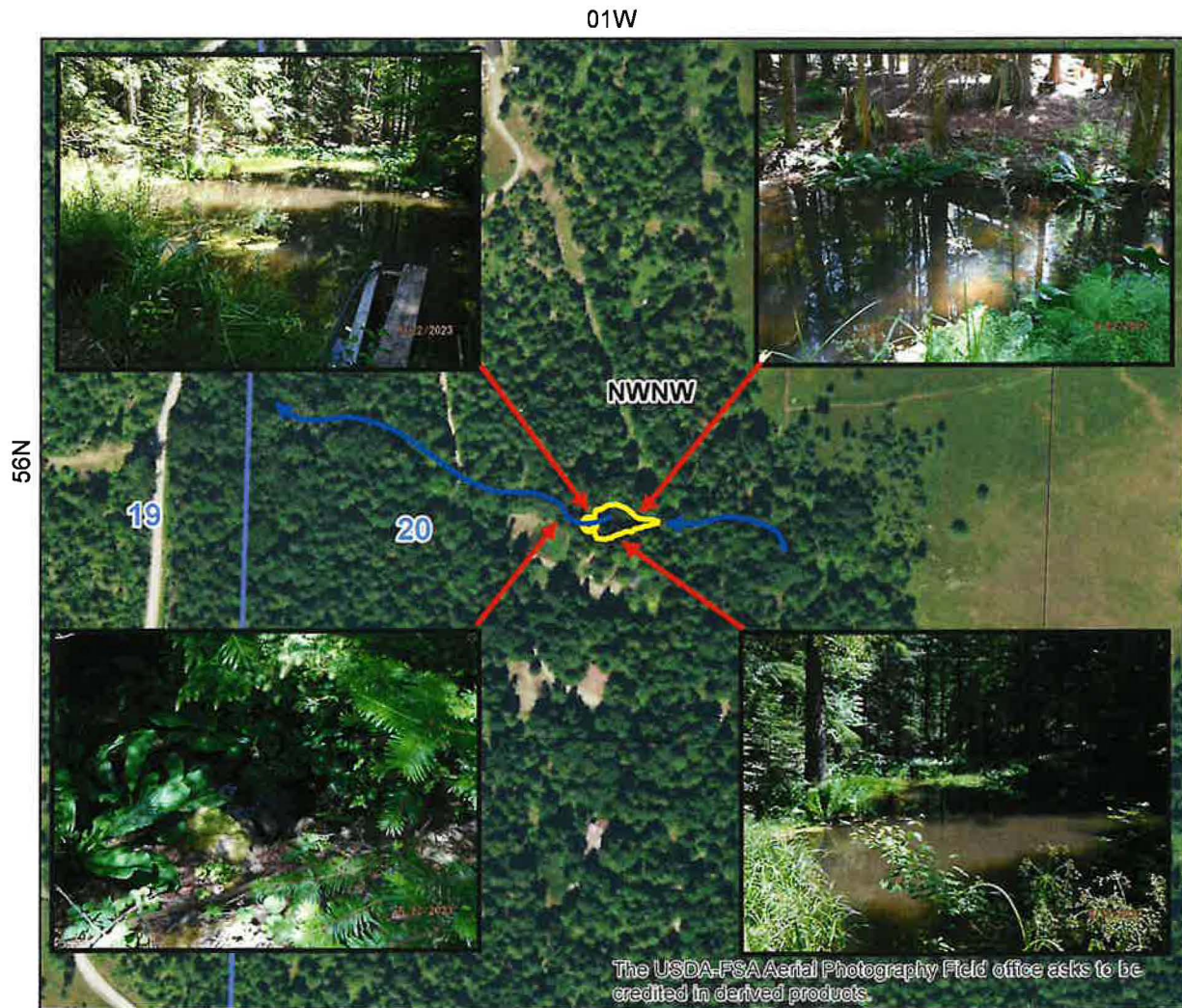
Luke Bates -

Field Examiner's Name F. Bates Date 12/18/2023

Reviewer Chris Bates Date 5/30/24

State of Idaho
Department of Water Resources
Attachment to Field Exam
96-11095

This map depicts the IRRIGATION STORAGE & FIRE PROTECTION STORAGE system diagram.



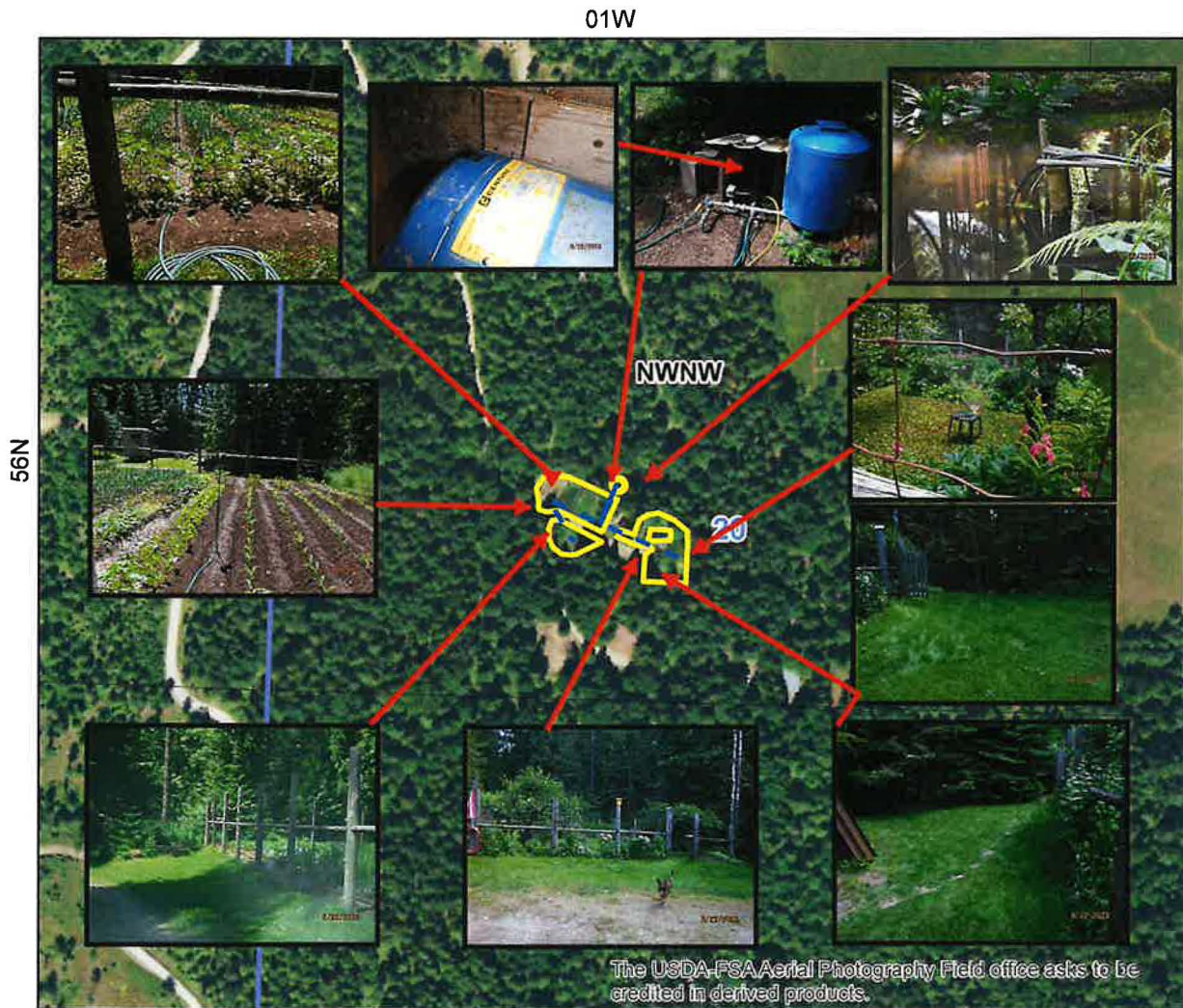
0 0.035 0.07 0.14 Miles

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



State of Idaho
Department of Water Resources
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This map depicts the IRRIGATION FROM STORAGE system diagram.



0 0.035 0.07 0.14 Miles

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



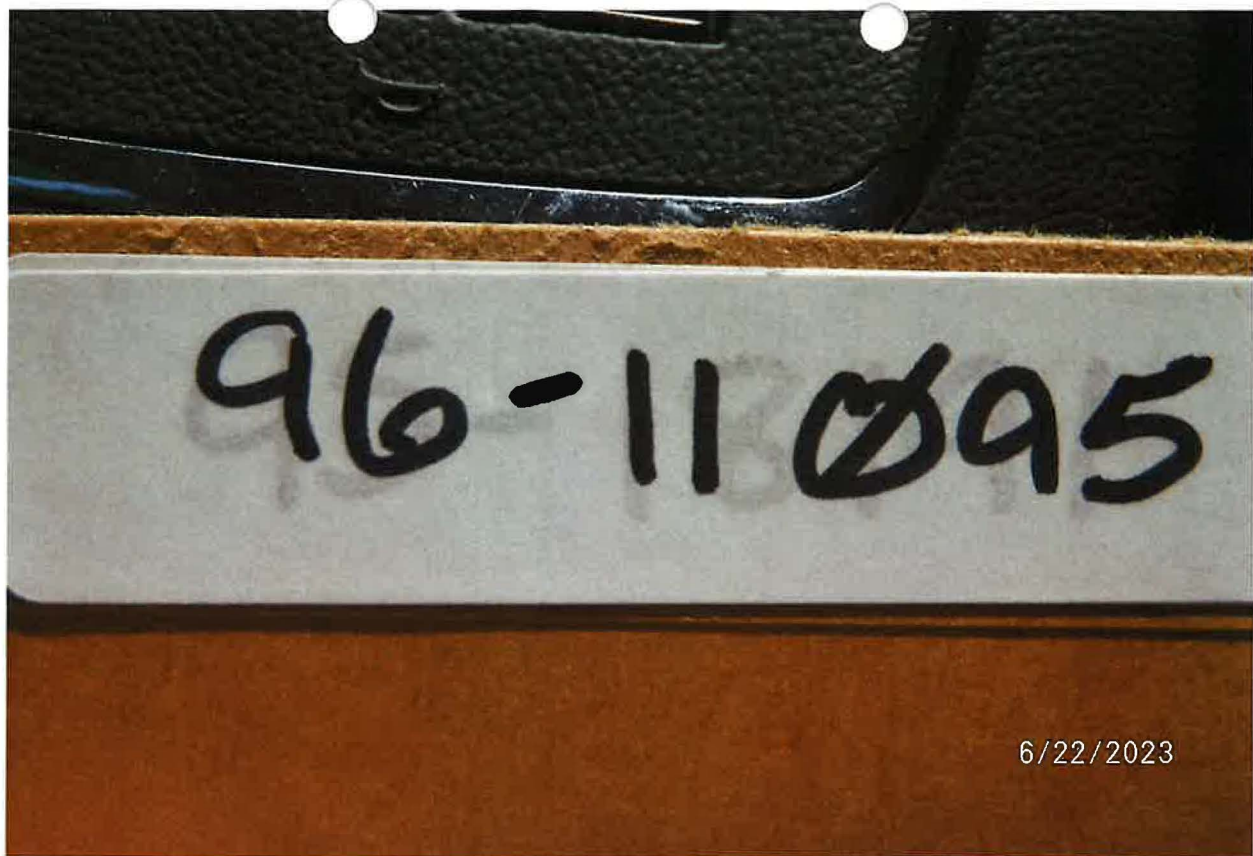
Total Storage Calculations

FILE NUMBER	96-11095
REVIEWER	Luke Bates
DATE	12/18/2023

This spreadsheet has been designed by Idaho Department of Water Resources to estimate the total seepage, evaporation and fill capacity required for a pond.

User Input
Calculated value
Formula Explanations

Surface Area (AC.)	0.1	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	2	"Average Pond Depth" depicts the actual depth of the pond either measured or estimated. Note: If you know the maximum depth and not the average depth, the Field Examiner's Handbook suggests multiplying the maximum depth by 0.4 to get the average depth, or you can use any method that seems reasonable to attain average depth.
Pond Capacity (AF)	0.2	Pond Capacity is calculated by multiplying the Pond Surface Area by the Average Pond Depth. If you know the capacity, divide the capacity by surface area and enter the average pond depth in the space above. Note: If pond capacity is determined using a method shown on the "Pond Capacity" sheet, the user may need to modify the value of "Pond Capacity" (cell B9) manually. Note that if the value is modified manually, the formula will be altered for future use.
Multiple Fill Volume Above Initial Fill to Fulfill From Storage Needs- "Multiple Fills" (AF)	1.2	The "Multiple Fill Volume Above Initial Fill" is the acre-feet of water required to meet a <i>from storage</i> component if the <i>from storage</i> component exceeds a one time fill. This section should not include the amount of water needed to fill the pond initially or the amount of water needed to maintain the pond level due to evaporation or seepage. For example: if a pond has a capacity of 5 acre feet and 2.5 acre feet of seepage and evaporation, but the pond is used for irrigation that requires 10 acre feet of from storage for the irrigation use, then you would insert 5 acre feet into this location (10 acre feet needed - 5 acre feet from the initial fill = 5 acre feet of additional storage needed). Note: You must have a "From Storage" component exceeding the initial fill on the permit to include a volume in this space.
Estimated Seepage Loss (AF)	0.7	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	0.1	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	2.2	The "Total Volume Required" is calculated by adding the Pond Capacity, Multiple Fills, Seepage Loss, and Evaporation Loss amounts to determine the total amount of storage required.



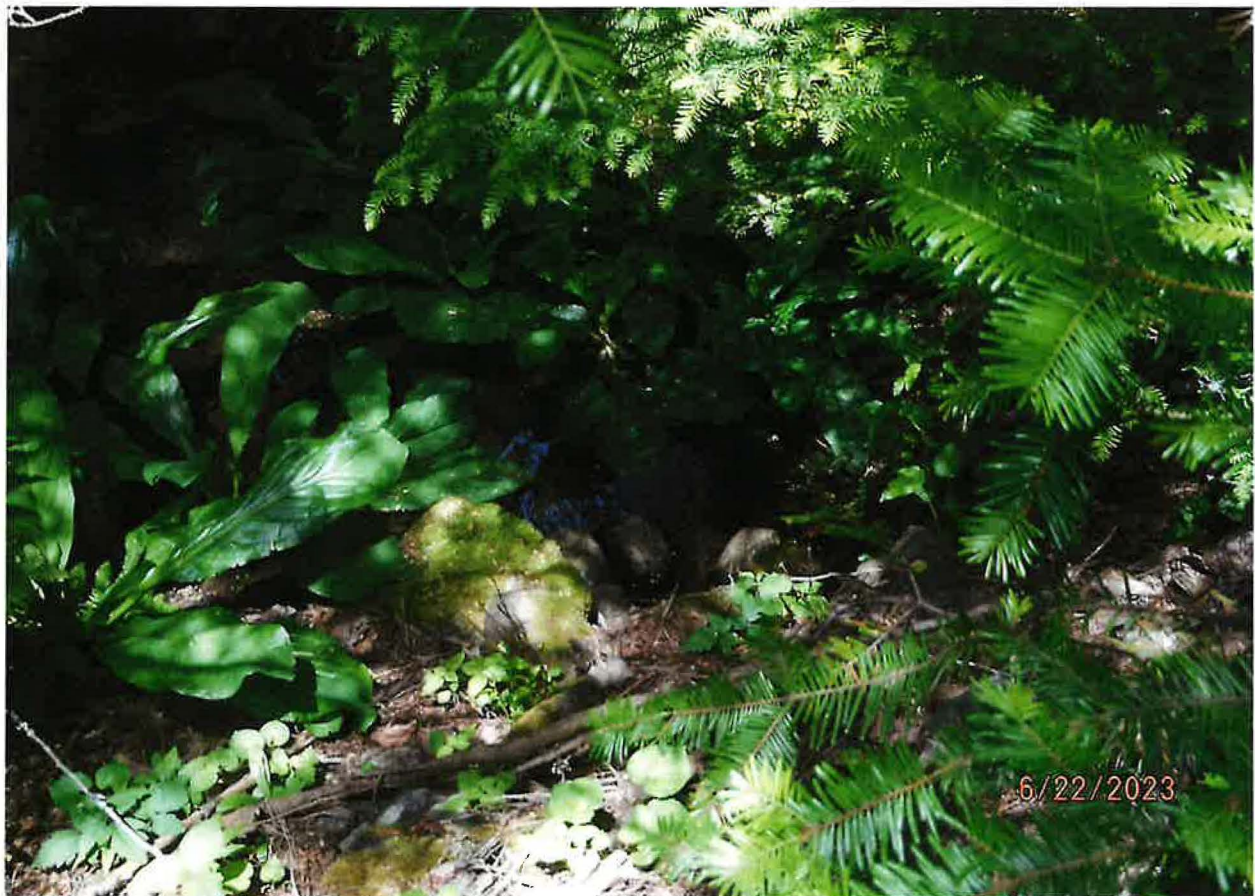
BENEFICIAL USE FIELD EXAMINATION DATE 6/22/2023



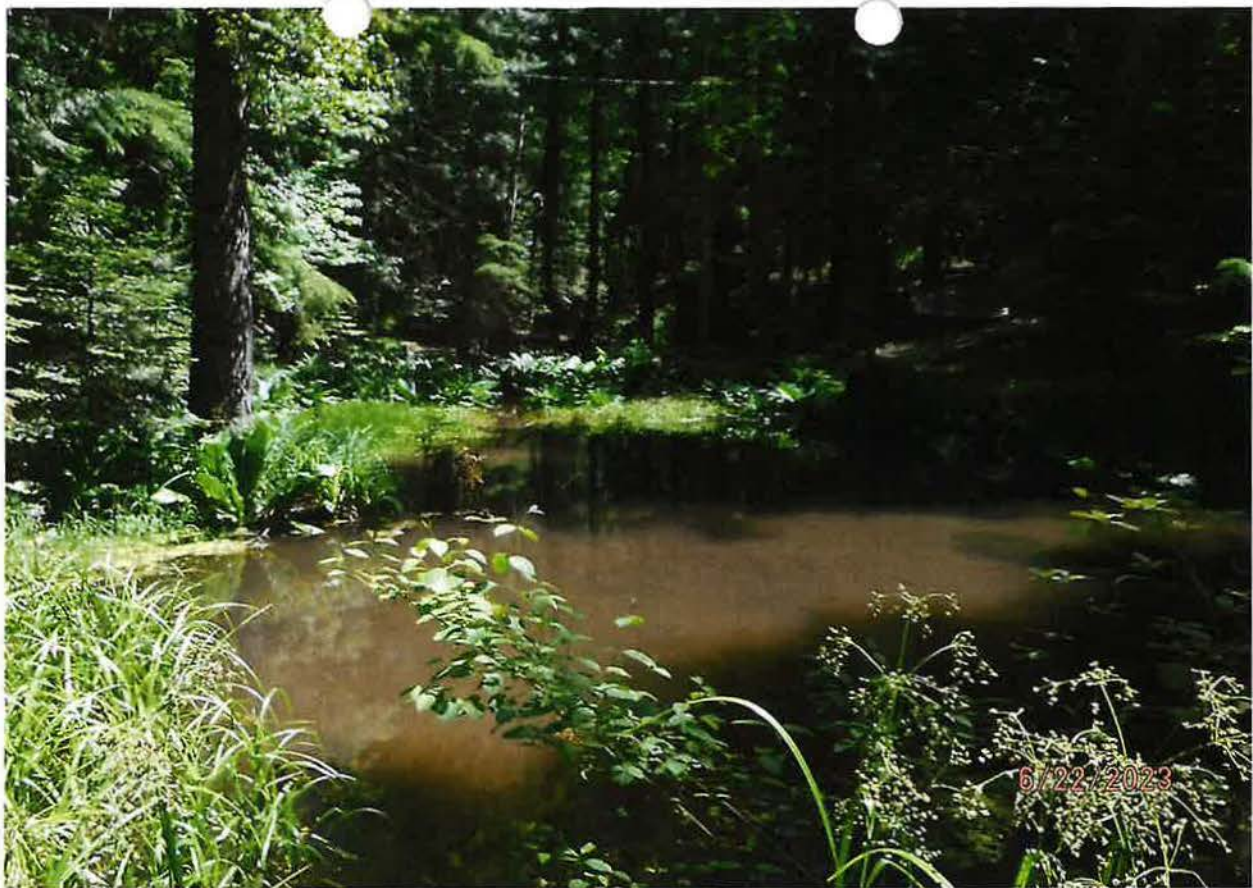
POD – POND WITH EARTHEN DAM AND CUVLVERT OVERFLOW DISCHARGE PIPE



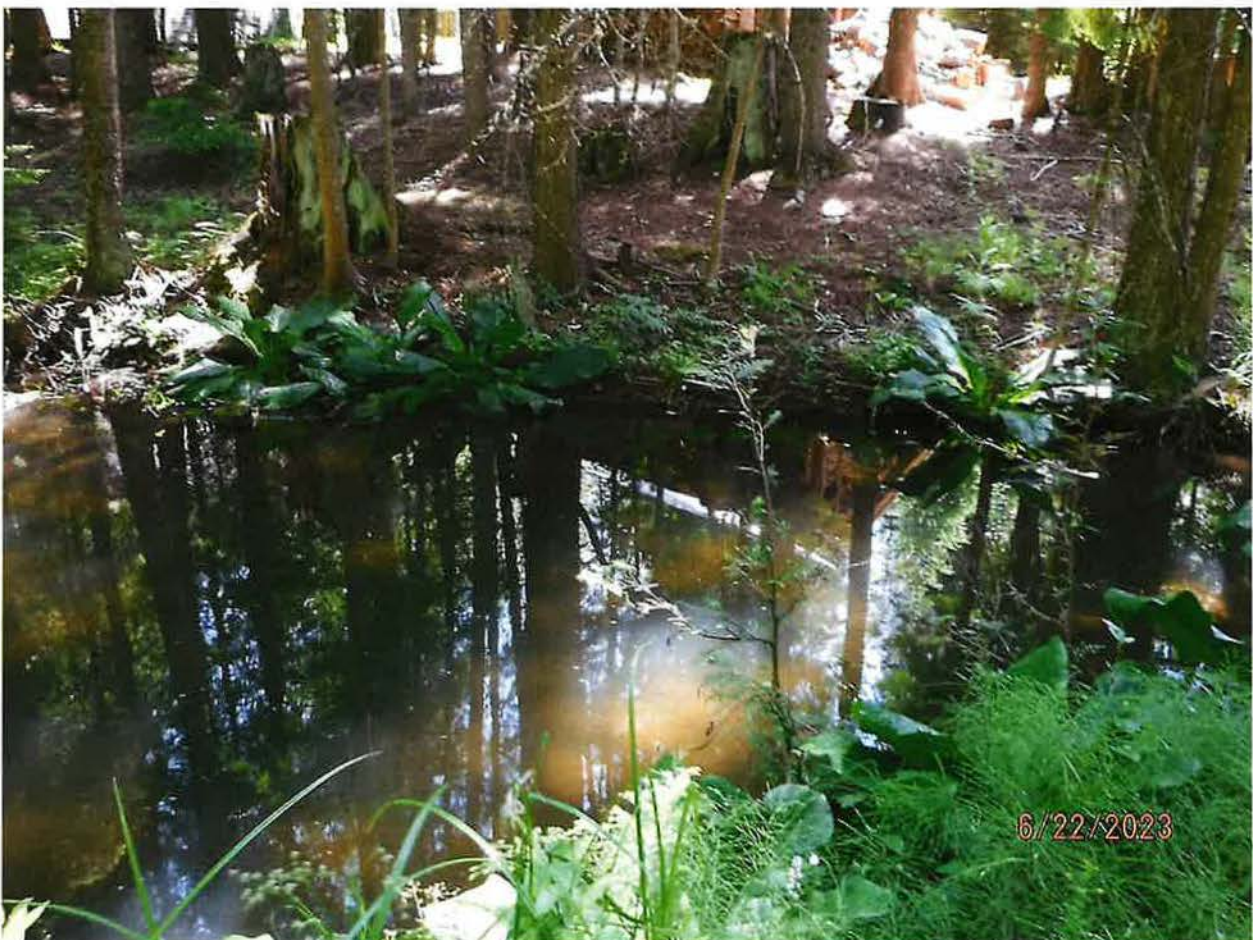
POU – IRRIGATION STORAGE & FIRE PROTECTION STORAGE POND WITH OVERFLOW DEVICE



DOWNSTREAM SIDE OF EARTHEN DAM, WATER FLOWING IN NATURAL STREAM CHANNEL



STORAGE POND POU





IRRIGATION FROM STORAGE DIVERTING WORKS $\frac{1}{2}$ - $\frac{3}{4}$ HP CENTURY PUMP TO HOSE AND SPRINKLERS





35-40 PSI IRRIGATION OPERATING PRESSURE

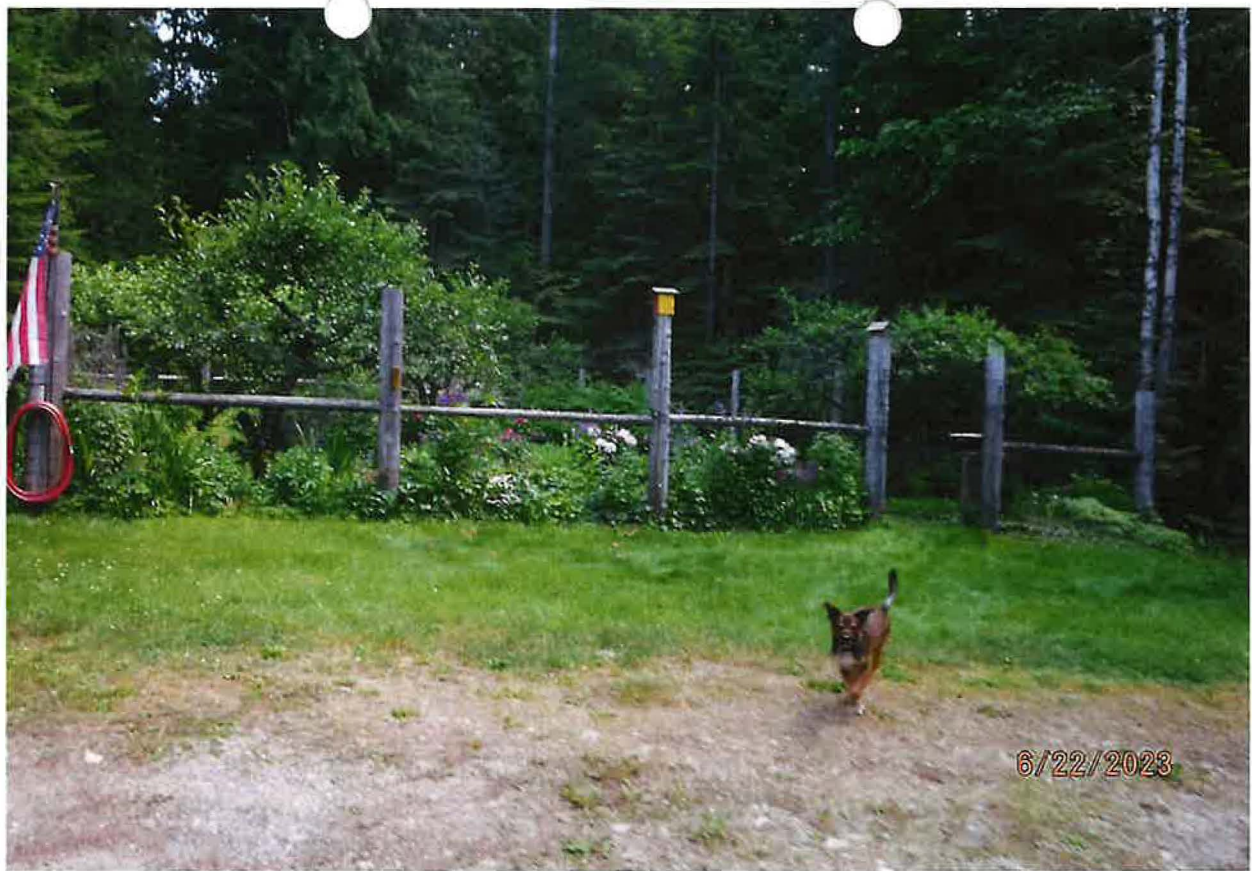


IRRIGATION FROM STORAGE POU – 1 OF 2 FENCED GARDENS

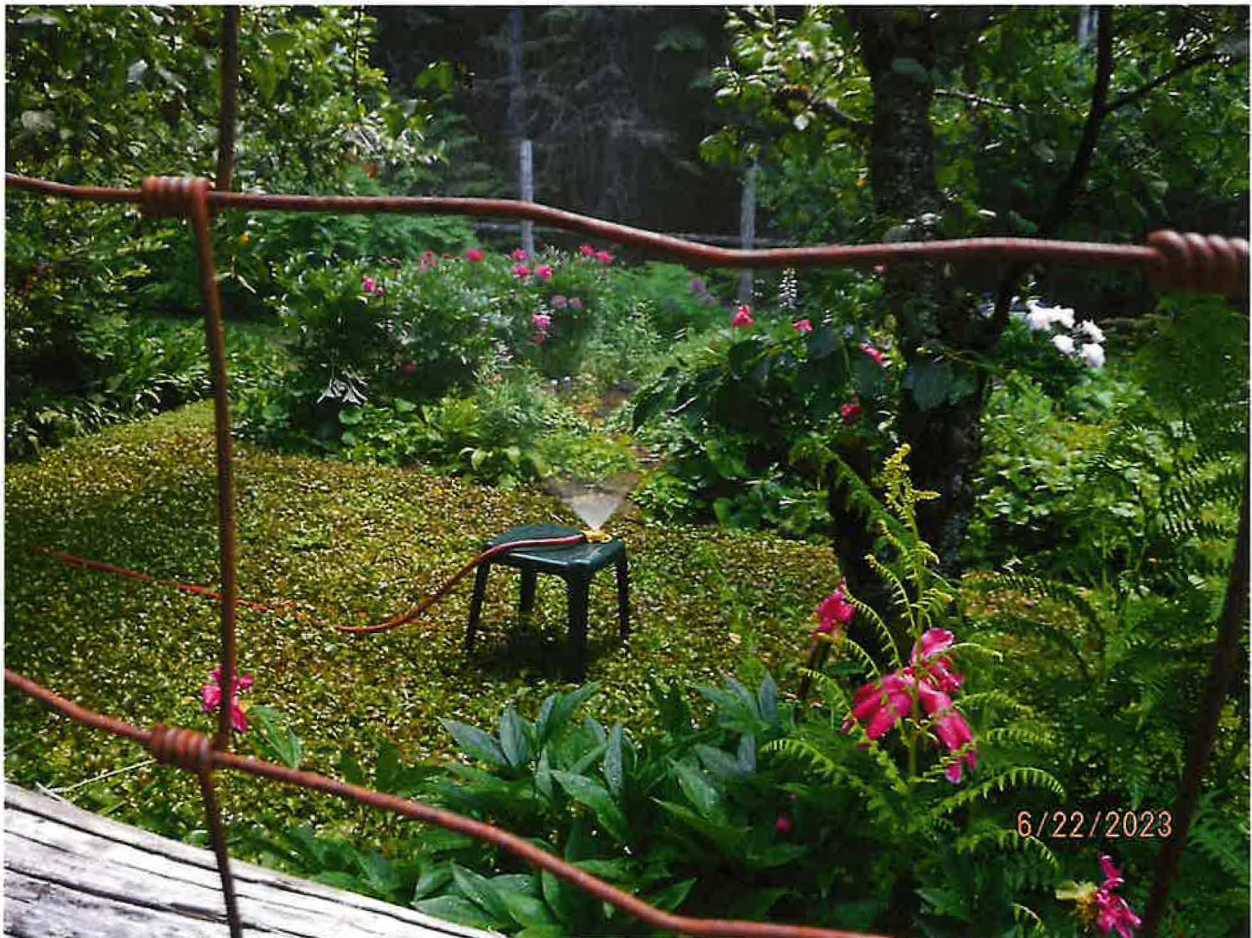


IRRIGATION FROM STORAGE POU





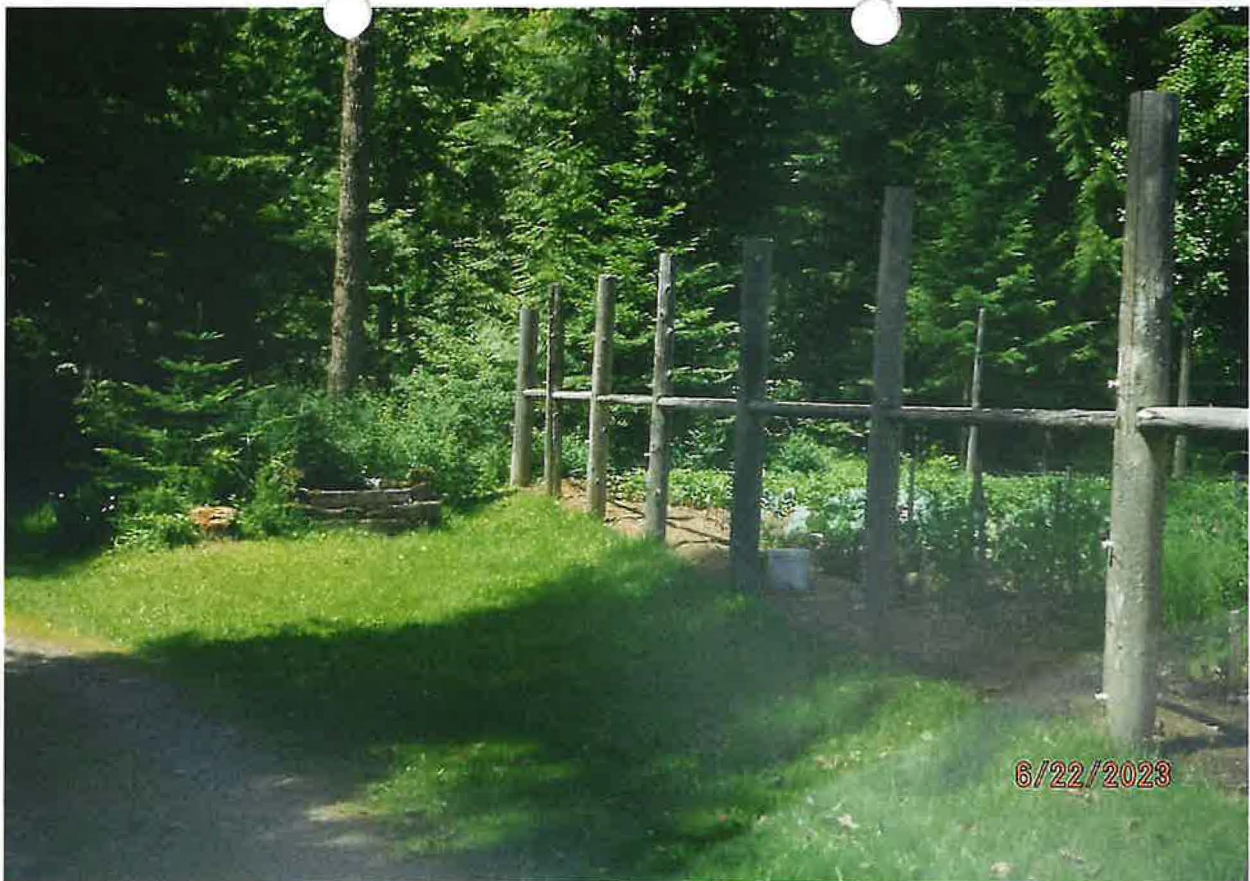
IRRIGATION FROM STORAGE POU – 1 OF 2 FENCED PLOTS



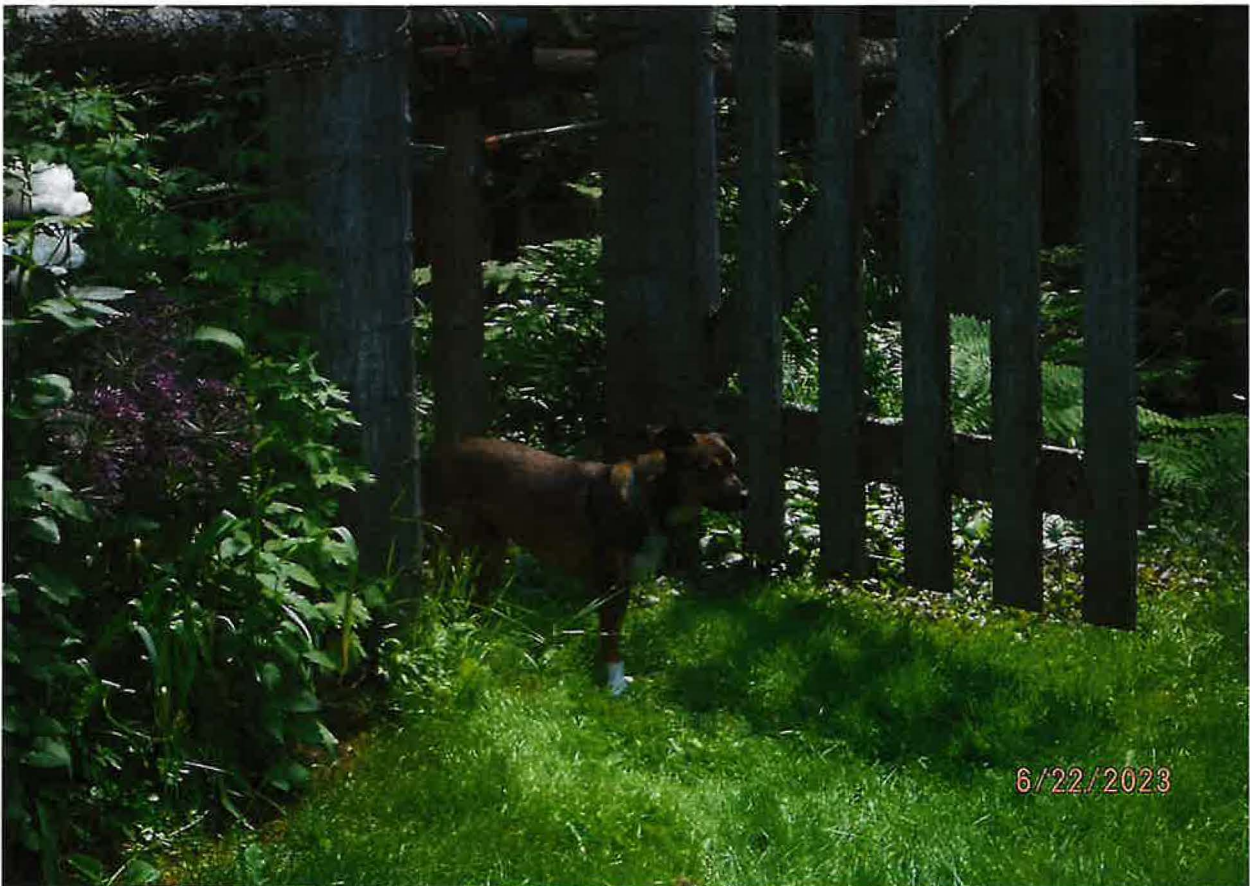


IRRIGATION FROM STORAGE POU – SMALL LAWN SPACE AROUND RESIDENCE





IRRIGATION FROM STORAGE POU – DRIVEWAY BORDER GRASS AREA NEAR GARDEN PLOT 1 BY POND



GUARD DOG