

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 86-12040
Exam Date: 07/08/2021

1. Current Owner:
RANDY CHARLTON 234 E VISTA CT SARATOGA SPGS UT 84045-8114
2. Accompanied by: Randy Charlton
Phone No: 801-592-7058
Address: Same as above
Relationship to permit Holder: Permit Holder

3. **SOURCE:**
UNAMED STREAM

Tributary
BEDBUG CREEK

Method of Determination: Arcmap and DRG.

B. OVERLAP REVIEW

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

Water Right No.	Source	Purpose of Use	Basis
86-10661	GROUNDWATER	DOMESTIC	DECREED

Comments: Right 86-10661 has been decreed in the SRBA, and uses groundwater for domestic purposes that are not associated with the applicant's parcel. There is no concern for overlap.

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

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

UNAMED STREAM NE¼ SE¼, Sec. 1, Twp 38N, Rge 01W, B.M. LATAH County

Method of Determination: GPS. POD is a pond earthen dam located at -116° 23.755, 46° 39.901.

PLACE OF USE: FIRE PROTECTION STORAGE and WILDLIFE 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	
38N	01W	1													X				

Method of Determination: Field exam and Arcmap aerial imagery.

3.
 - X Delivery System Diagram Attached (required). Indicate all major components and distances between components.
 - X Indicate weir size/pipe as applicable.
 - X Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.
 - X Aerial Photo Attached (required for irrigation of 10+ acres).
 - X 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: N/A
2. Volume Calculations for Other Uses: See attached pond analysis worksheet.

G. NARRATIVE/REMARKS/COMMENTS

Field exam performed on 7/8/2021 with the applicant, Randy Charlton, showed a pond that impounds water from an unnamed stream used by the applicant for wildlife storage and fire protection storage purposes. The pond was developed in-stream, and there is no diversion rate applied to this water right. An earthen dam was excavated and serves as the POD. The pond has a corrugated overflow poly-pipe built into the northwestern side of the pond to allow seasonal overflow to discharge down grade to the historic stream channel. The downstream side of the dam was rocked with basalt to reduce erosion from the discharge pipe during peak seasonal flow.

The pond has a surface area of 0.2 acres, a maximum depth of 12 feet, average depth of 4.8 feet, pond capacity of 1.0 af, estimated seepage rate of 0.2 af, and an estimated evaporation rate of 0.3 af. The total annual volume required to keep the pond full year round equals 1.5 af, which is assigned to both the wildlife storage and fire protection storage beneficial uses, but is not additive in volume calculations. The annual volume of **1.5 af** is recommended for licensing, and is applied to the maximum diversion volume at time of licensing.

The maximum diversion volume approved for permit 86-12040 included irrigation storage and irrigation from storage beneficial uses, and equaled 4.3 af. At time of field exam, the applicant had not developed irrigation from storage usage from the pond. As a result, the irrigation beneficial use(s) were removed from the permit during licensing review which reduced the permit approved volume. Additionally, the application was developed using an outdated pond analysis worksheet; current pond analysis worksheet used during licensing review, coupled with Arcmap aerial imagery resulted in a lower annual volume requirement considering capacity, seepage and evaporation rates. These factors explain the lower maximum diversion volume derived following the field exam.

Conditions 26A, 082, and R58 were removed from the permit during licensing review. Conditions 219 and 220 were updated to reflect current pond analysis worksheet volume metrics. All other conditions on the permit shall be carried forward to the license. Right 86-10661 has been decreed in the SRBA, and uses groundwater for domestic purposes that are not associated with the applicant's parcel. There is no concern for overlap from this right, and there are no additional overlap concerns for this water right.

Have conditions of permit approval been met? ☒ Yes ☐ No

H. RECOMMENDATIONS

1. Recommended Amounts

<u>Beneficial Use</u>	<u>Period of Use</u>	<u>Annual Volume</u>
FIRE PROTECTION STORAGE	01/01 to 12/31	1.5 AF
WILDLIFE STORAGE	01/01 to 12/31	1.5 AF

Totals: 1.5 AF

2. Recommended Amendments

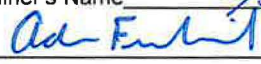
☐ Change P.D. as reflected above ☐ Add P.D. as reflected above ☒ None

☐ Change P.U. as reflected above ☐ Add P.U. as reflected above ☒ None

I. AUTHENTICATION

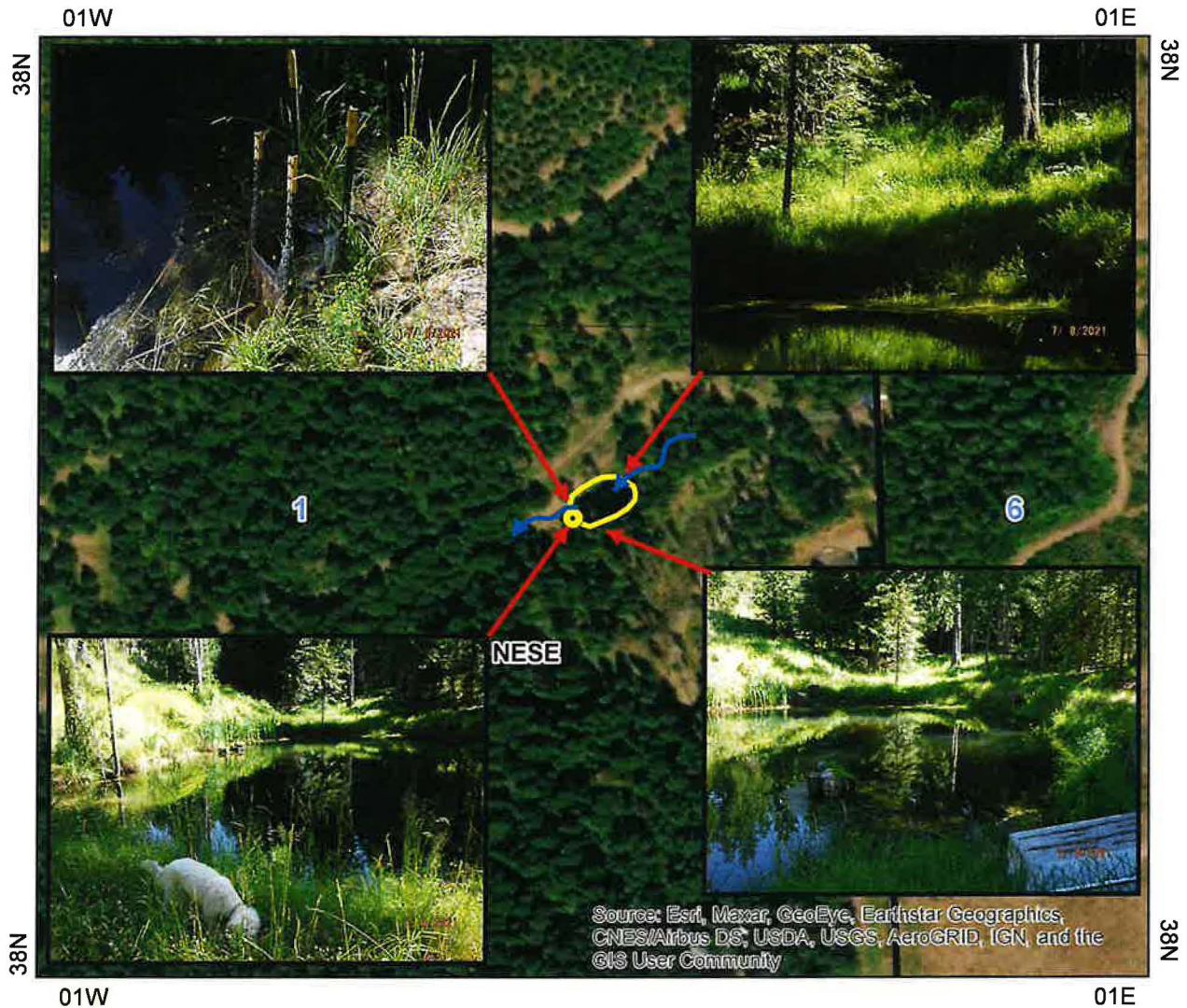
Luke Bates - Water Resource Agent

Field Examiner's Name  Date 8/13/2021

Reviewer  Date 10/29/2021

State of Idaho
Department of Water Resources
Attachment to Field Exam
86-12040

FIRE PROTECTION STORAGE and WILDLIFE STORAGE system diagram.



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

0 0.035 0.07 0.14 Miles



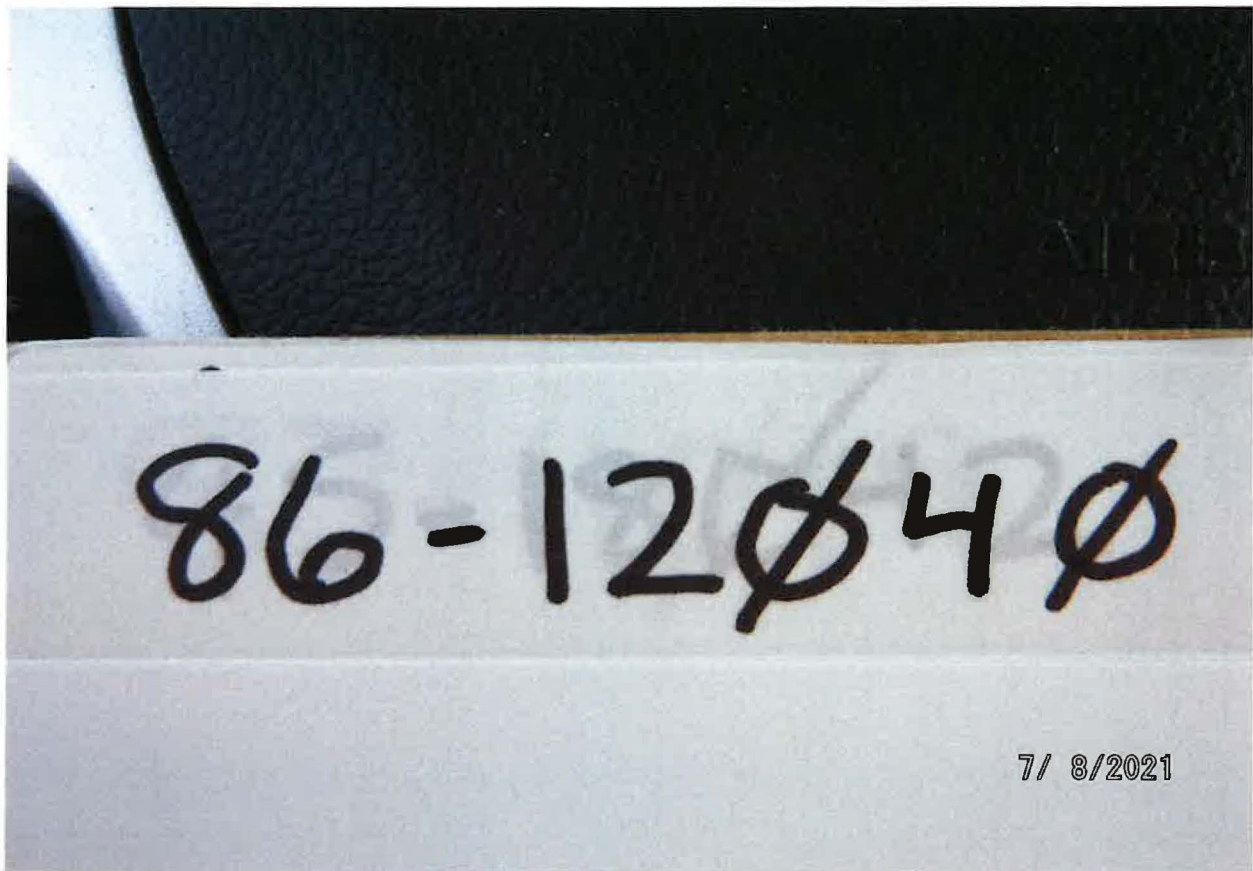
Total Storage Calculations

FILE NUMBER	86-12040
REVIEWER	LUKE BATES
DATE	7/9/2021

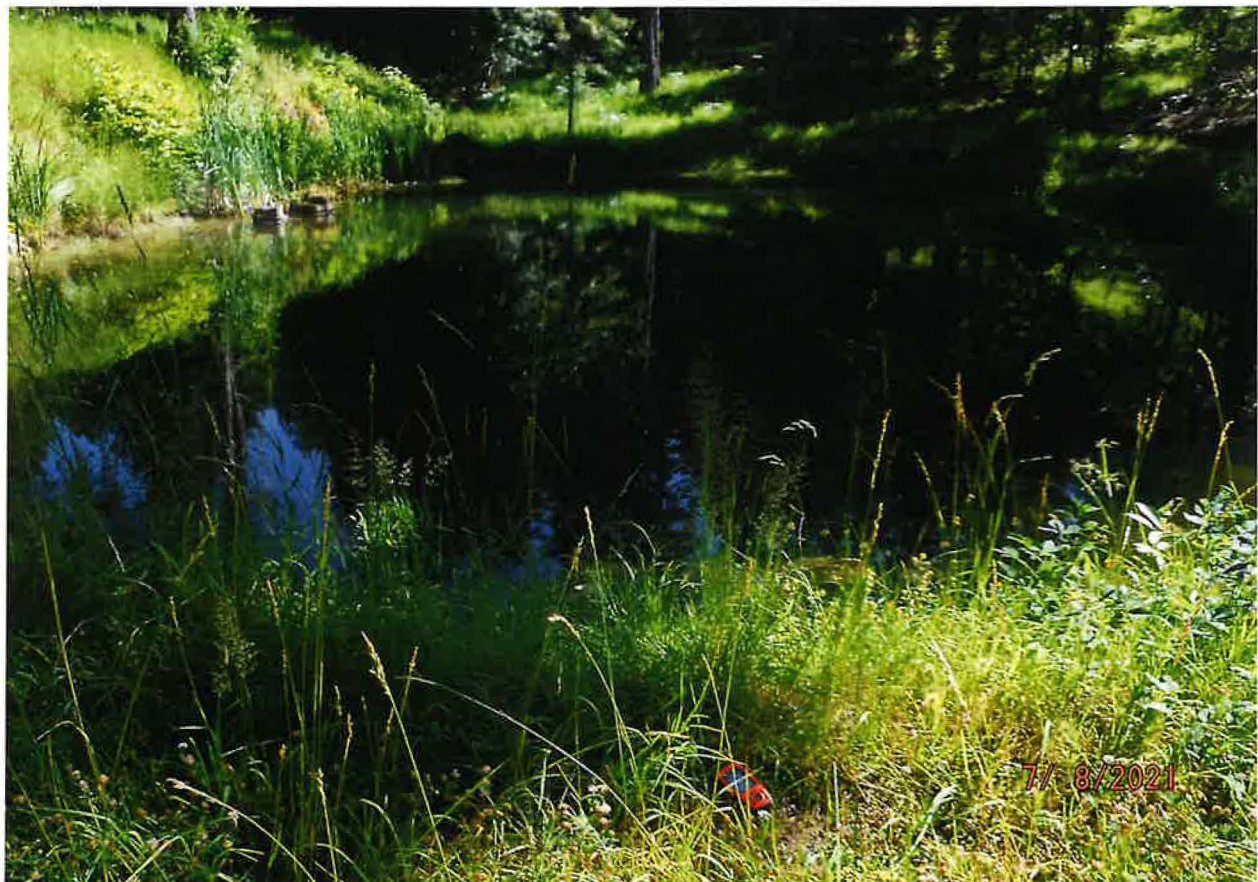
This spreadsheet has been designed by Idaho Department of Water Resources to estimate the total seepage, evaporation and fill capacity required for a pond.

User Input
Calculated value
Formula Explanations

Surface Area (AC.)	0.2	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	4.8	"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)	1.0	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)	0	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 " <u>From Storage</u> " component exceeding the initial fill on the permit to include a volume in this space.
Estimated Seepage Loss (AF)	0.2	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	0.3	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	1.5	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.



FIELD EXAM DATE 7/8/2021



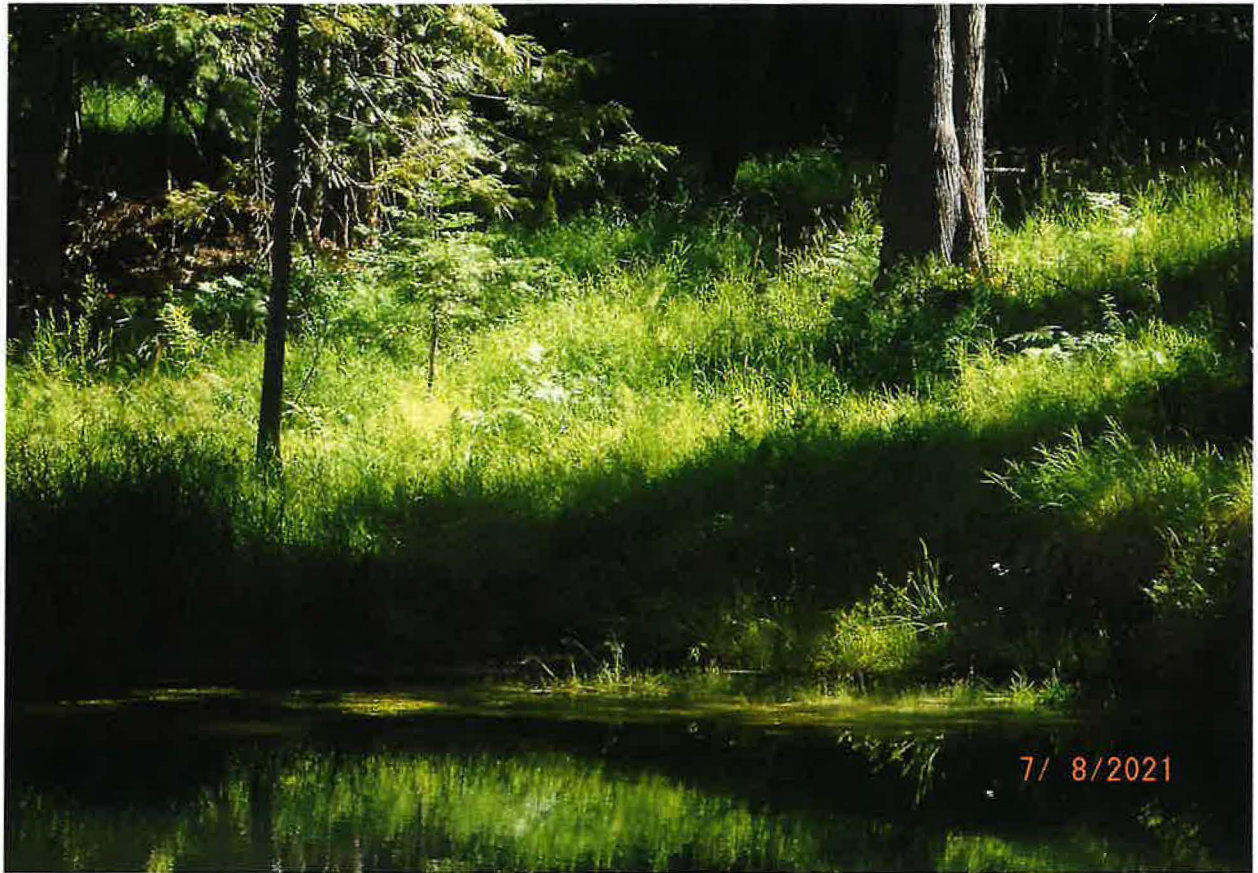
POD – POND EARTHEN DAM



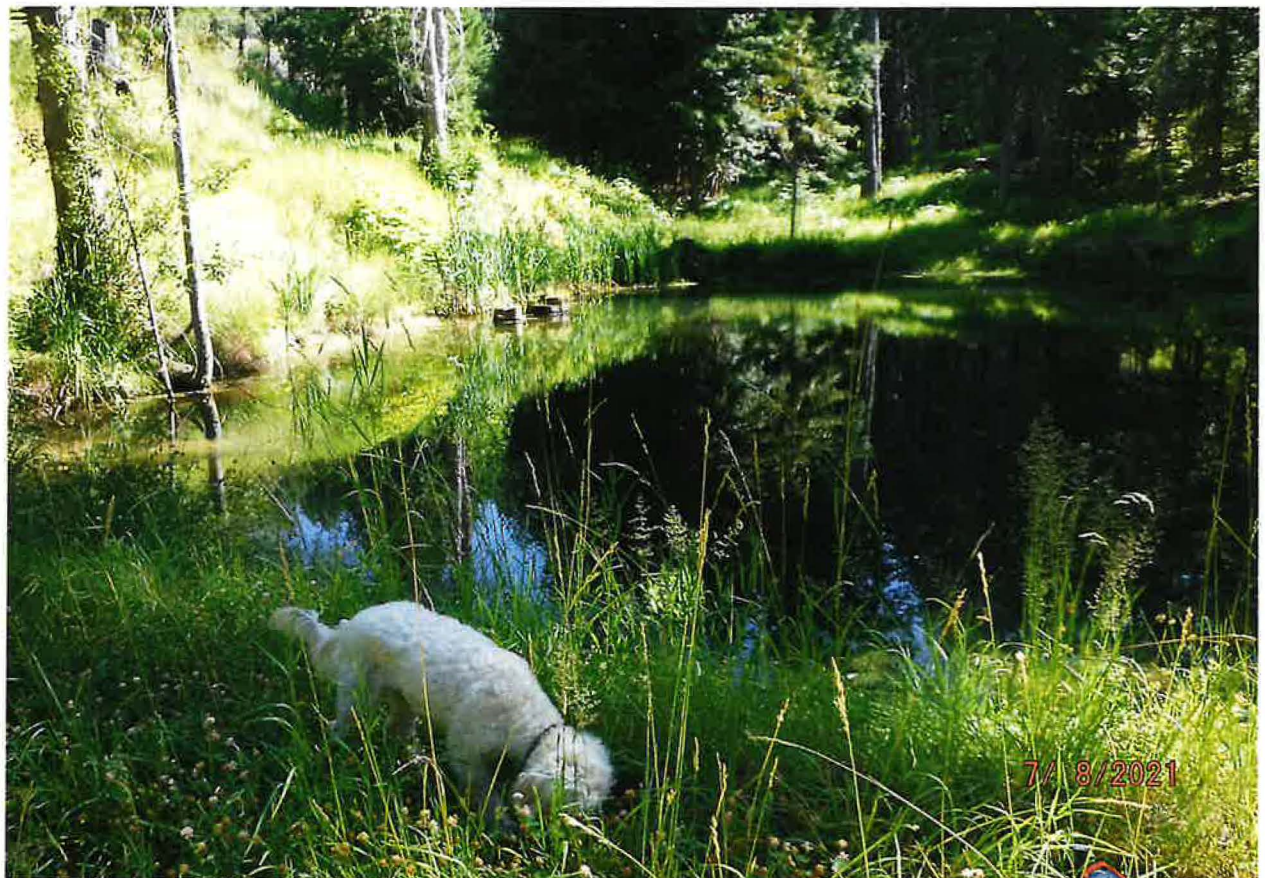
SCREENED OVERFLOW DISCHARGE PIPE – 12 INCH BLACK CORUGATED PIPE



DOWNHILL SLOPE OF POND DAM – OVERFLOW PIPE DISCHARGES BACK TO STREAM CHANNEL



INFLOW FROM INTERMITTENT UNNAMED STREAM



FIRE PROTECTION STORAGE & WILDLIFE STORAGE POU – POND



FIRE PROTECTION STORAGE & WILDLIFE STORAGE POU – POND





