

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 87-10074
Exam Date: 09/01/2020

1. Current Owner:
DOROTHY MAE LIBEY TRUST 1130 E COVE RD VIOLA ID 83872
2. Accompanied by: Jim Haskell
Phone No: 208-301-4191
Address: Same as above
Relationship to permit Holder: Representative for permit holder

3. **SOURCE:**
UNNAMED STREAM

Tributary
GNAT CREEK

Method of Determination: Arcmap and DRG.

B. OVERLAP REVIEW

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

Water Right No.	Source	Purpose of Use	Basis

Comments: _____

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

Water Right No.	Source	Purpose of Use	Basis

Comments: _____

C. DIVERSION AND DELIVERY SYSTEM

1. **LOCATION OF POINT(S) OF DIVERSION:**

UNNAMED STREAM NE¼ SW¼, Sec. 15, Twp 41N, Rge 05W, B.M. LATAH County

Method of Determination: GPS. Pond earthen dam location -116°57.010, 46°53.728.

PLACE OF USE: WILDLIFE STORAGE, RECREATION STORAGE, and 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	
41N	05W	15									X								

Method of Determination: 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
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:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) =$$

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

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

2. Volume Calculations for Other Uses:

See attached pond analysis sheet.

G. NARRATIVE/REMARKS/COMMENTS

Field exam performed on 9/1/2020 with the applicant's representative, Jim Haskell, showed an excavated pond that was being fed by an unnamed stream. The pond was developed for wildlife storage, recreation storage, and fire protection storage purposes. This is an in-stream pond, and during field exam a black corrugated discharge pipe was identified that allowed overflow to return back to an unnamed stream that flowed into Gnat Creek.

The applicant's permit was approved for 19.6 af of storage volume; at time of field exam in September, the pond was nearly dry, and no water was flowing in Unnamed stream. The pond still had water in the western portion of the pond, and

applicant stated he didn't realize he would lose as much water to seepage as he was over the course of the summer months. An updated pond analysis sheet was created to determine pond components, equaling 3.3 af. This value is smaller than what was permitted for, but the pond was not excavated to the extent of the application proposed construction plan. Wildlife storage, recreation storage, and fire protection storage annual volumes are not additive, and equal 3.3 af each, which will also be applied as the maximum diversion volume for this water right license. During the field exam, water fowl was observed at the pond, as well as deer scared up from the pond when we arrived. The applicant stated his family and friend use the pond to swim in and relax around in the evenings throughout the summer.

The pond has a surface area of 0.4 acres considering department rounding standards, which does not include the small island that was traced out using Arcmap aerial imagery to equal 0.06 acres and subtracted from the overall size of the pond surface area. The pond has a maximum depth of 15 ft, an average depth of 6 ft, a pond capacity of 2.4 af, and an estimated seepage and evaporation rate of 0.9 af. The total volume required for the pond equals 3.3 af.

Conditions 082 and 26A were removed from licensing as they are no longer needed. Condition 219 was modified using current values from pond analysis sheet. Condition 220 was modified to describe storage of water by total capacity and total surface area. There are no overlap concerns for this 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>
WILDLIFE STORAGE	01/01 to 12/31	3.3 AF
RECREATION STORAGE	01/01 to 12/31	3.3 AF
FIRE PROTECTION STORAGE	01/01 to 12/31	3.3 AF

Totals: 3.3 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

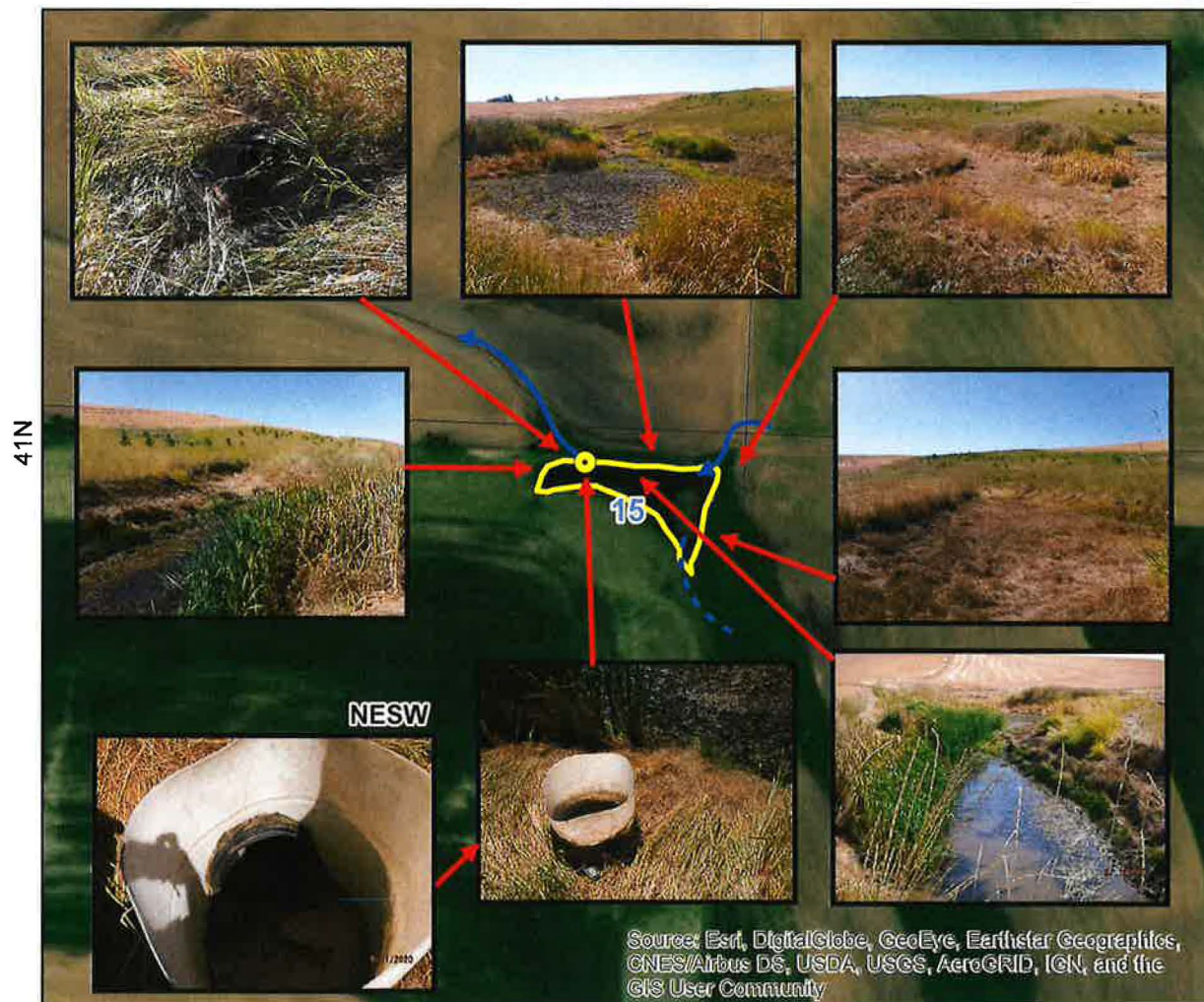
Field Examiner's Name *[Signature]* Date 9/15/2020

Reviewer *[Signature]* Date 9/15/2020

State of Idaho
Department of Water Resources
Attachment to Field Exam
87-10074

WILDLIFE STORAGE, RECREATION STORAGE, and FIRE PROTECTION STORAGE system diagram.

05W



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

0 0.035 0.07 0.14 Miles



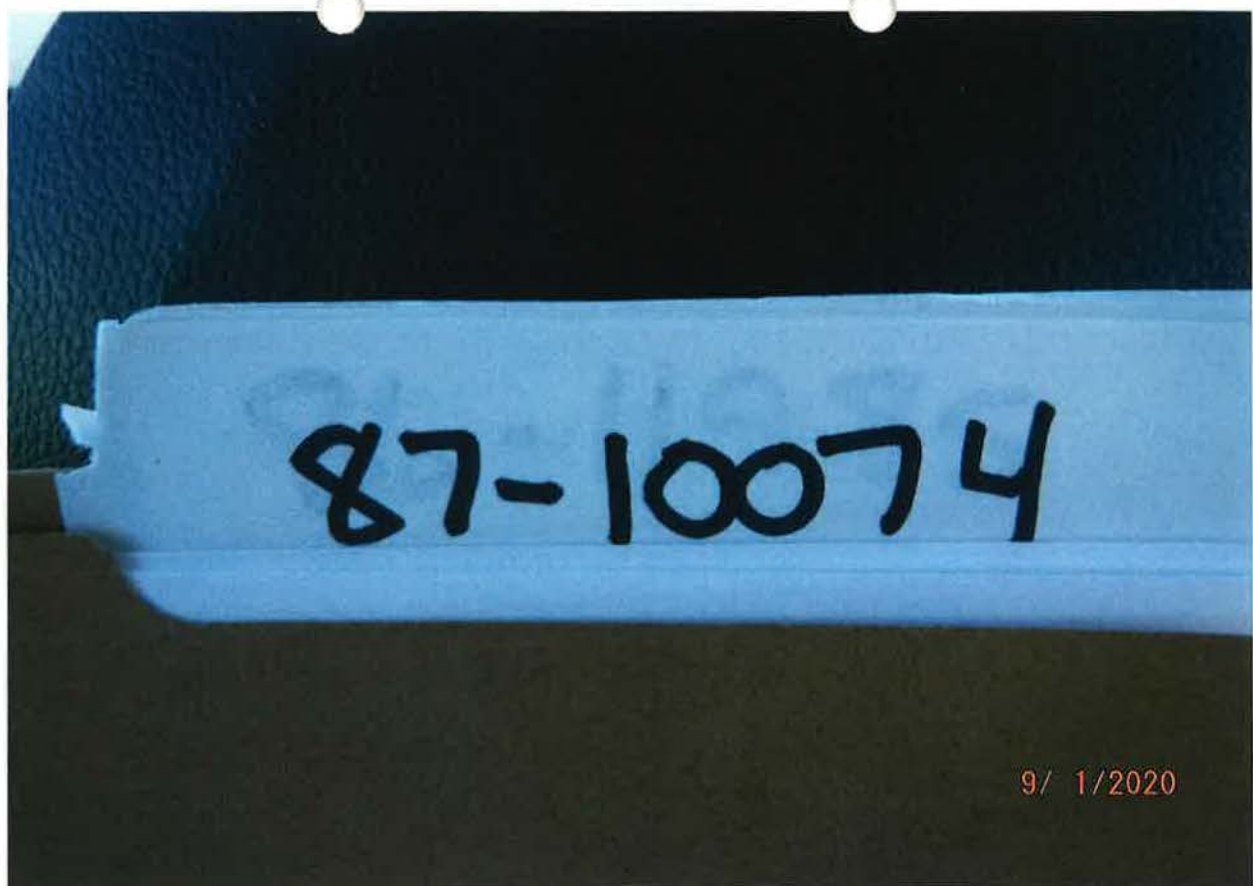
Total Storage Calculations

FILE NUMBER	87-10074
REVIEWER	Luke Bates
DATE	9/11/2020

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.)	0.4	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	6	"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)	2.4	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 "From Storage" component exceeding the initial fill on the permit to include a volume in this space.
Estimated Seepage Loss (AF)	0.4	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	0.5	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	3.3	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.



POD – EARTHEN DAM WITH OVERFLOW DISCHARGE PIPE



POND OVERFLOW DISCHARGE PIPE



DISCHARGE PIPE EXITING POND DAM



INFLOW FROM UNAMED SEASONAL STREAM TO POND



WILDLIFE, RECREATION, AND FIRE PROTECTION STORAGE POU – POND



WILDLIFE, RECREATION, AND FIRE PROTECTION STORAGE POU – POND





WILDLIFE, RECREATION, AND FIRE PROTECTION STORAGE POU – POND

