

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 95-17471
Exam Date: 06/04/2020

1. Current Owner:
CAROL HURLEY 17288 N TRIANGLE 7 RD HAYDEN ID 83835-7075
2. Accompanied by: Carol Hurley
Phone No: 1-425-941-7994
Address: Same as above
Relationship to permit Holder: Permit Holder

3. **SOURCE:**
UNNAMED STREAM

Tributary
SINKS

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
95-10941	GROUNDWATER	DOMESTIC	DECREED

Comments: WR 95-10941 is for same parcel, but services home and up to ½ acre irrigation from a well not associated with the irrigated area this water right covers; as such, WR 95-10941 is not a concern for overlap.

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 NW¼ NE¼, Sec. 34, Twp 52N, Rge 03W, B.M. KOOTENAI County

Method of Determination: GPS. Pond earthen dam location -116°41.169, 47°48.892.

PLACE OF USE: IRRIGATION 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	
52N	03W	34		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	
52N	03W	34		0.4															0.4

Total Acres: 0.4

Method of Determination: Field exam and Arcmap.

3.

X Delivery System Diagram Attached (required). Indicate all major components and distances between components. 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:

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

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = \text{N/A, there is no diversion rate applied.}$$

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

2. Volume Calculations for Other Uses:

See attached pond analysis sheet

G. NARRATIVE/REMARKS/COMMENTS

The field exam was performed on 06/04/2020 with the applicant, Carol Hurley, which showed a small pond that was being fed by an unnamed stream. At the POD applicant had an overflow pipe that diverted water down grade from pond. Applicant's pond was used for fire protection storage, irrigation storage, and irrigation from storage water use.

The pond has a surface area of 0.03 acres and pond capacity of 0.2 af. The pond has a maximum depth of 5 feet, an

average depth of 2.0 feet, and seepage loss of 0.2 af. The pond has a multi fill component equaling irrigation from storage volume of 1.2 af annually. The total volume required for pond equals 1.6 af, the sum of afore mentioned pond components. The Maximum diversion volume for this water right will be licensed at **1.6 af**, and the is no diversion rate applied to license.

During field exam, it was identified that previous owner, Gerald Davis, was the permit holder that submitted the Statement of Completion for submitting proof of beneficial use. At time of field exam, IDWR staff contacted Gerald Davis to confirm irrigation from storage water use. It was determined that irrigation from the pond was done using a garden hose; the garden hose was dipped into pond and irrigation was by syphon effect and gravity flow to irrigate the irrigation from storage POU. Irrigated acreage was identified during field exam, and traced out using Arcmap equaling 0.4 acres during licensing review. Annual volume for Irrigation from storage equals 0.4 acres x 3.0 afa = 1.2 af, which will be applied to license.

The fire protection component equals the pond capacity plus estimated loss for seepage and evaporation, which equals 0.2 af + 0.2 af = 0.4 af. The maximum diversion volume applied to license equals 1.2 af (irrigation from storage/irrigation storage) + 0.4 af (fire protection storage) = 1.6 af.

All conditions applied to permit will be carried forward to license. WR 95-10941 is for same parcel, but services home and up to ½ acre irrigation from a well not associated with the irrigated area this water right covers; as such, WR 95-10941 is not a concern for overlap. There are no other concerns of overlap 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
FIRE PROTECTION STORAGE	01/01 to 12/31	0.4 AF
IRRIGATION FROM STORAGE	03/15 to 11/15	1.2 AF

Totals: 1.6 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

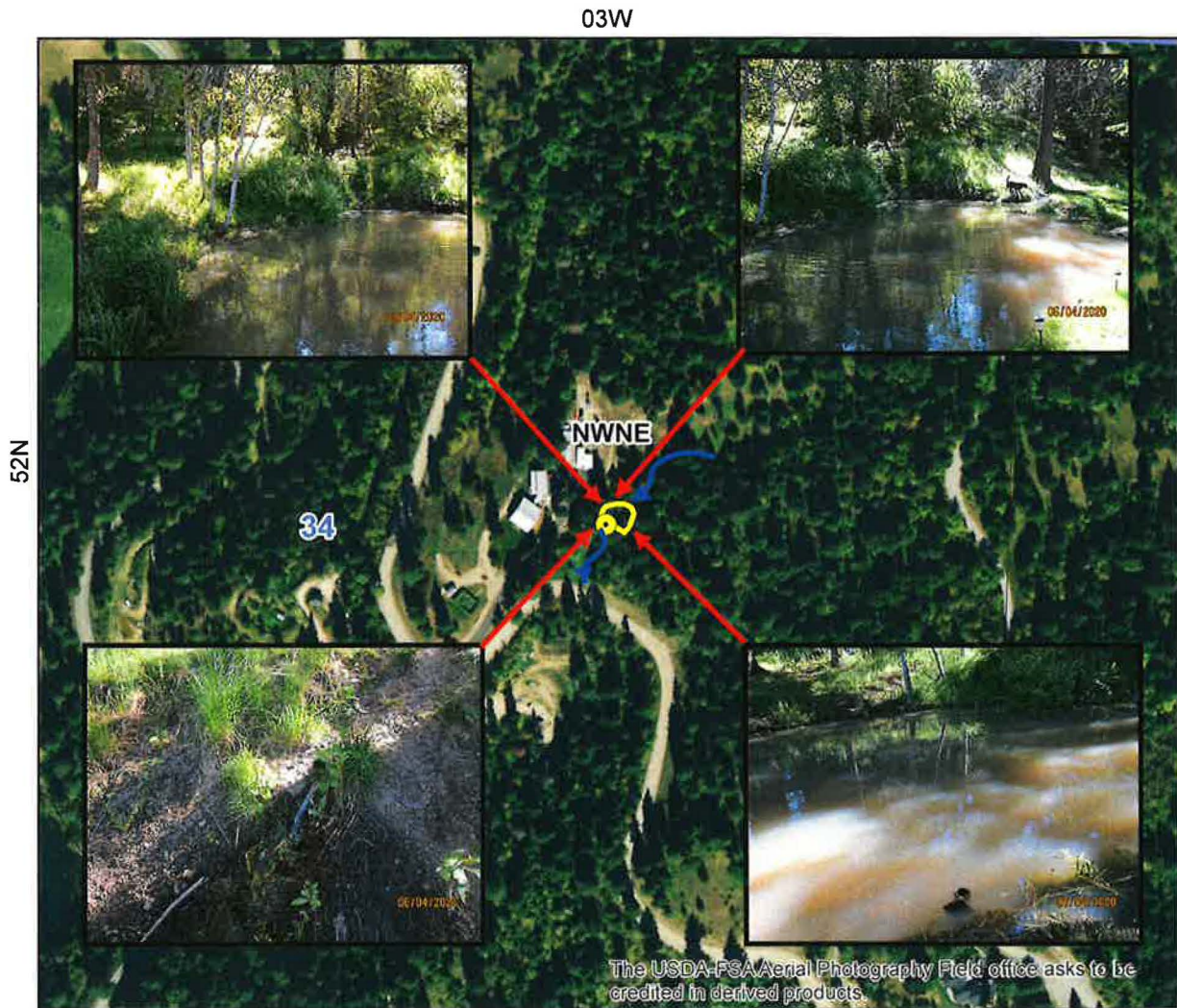
Luke Bates - Water Resource Agent

Field Examiner's Name Luke Bates Date 6/11/2020

Reviewer Ash Date 6/11/2020

State of Idaho
Department of Water Resources
Attachment to Field Exam
95-17471

IRRIGATION STORAGE and FIRE PROTECTION STORAGE system diagram.



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

0 0.035 0.07 0.14 Miles



State of Idaho
Department of Water Resources
Attachment to Field Exam
95-17471

IRRIGATION FROM STORAGE system diagram.



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

0 0.035 0.07 0.14 Miles



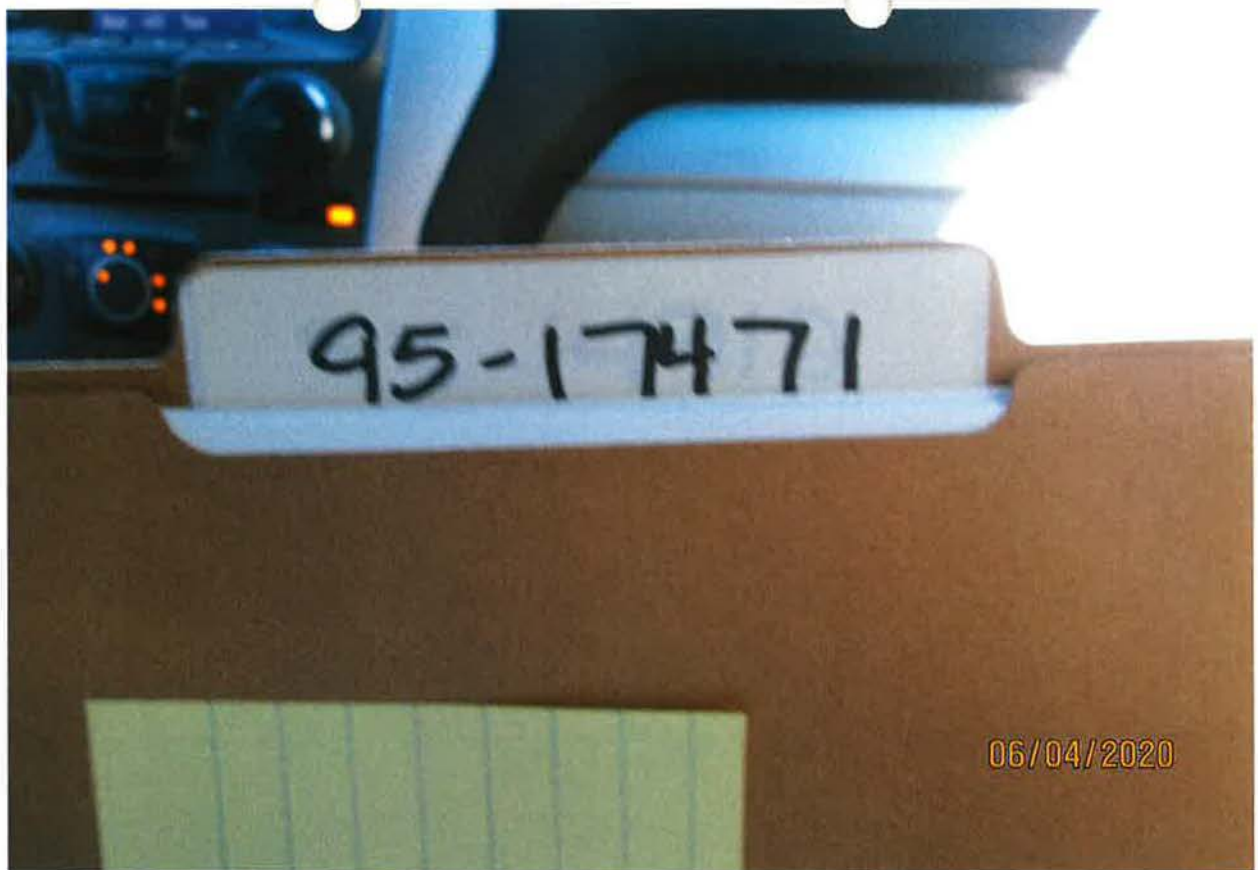
Total Storage Calculations

FILE NUMBER	95-17471
REVIEWER	Luke Bates
DATE	6/11/2020

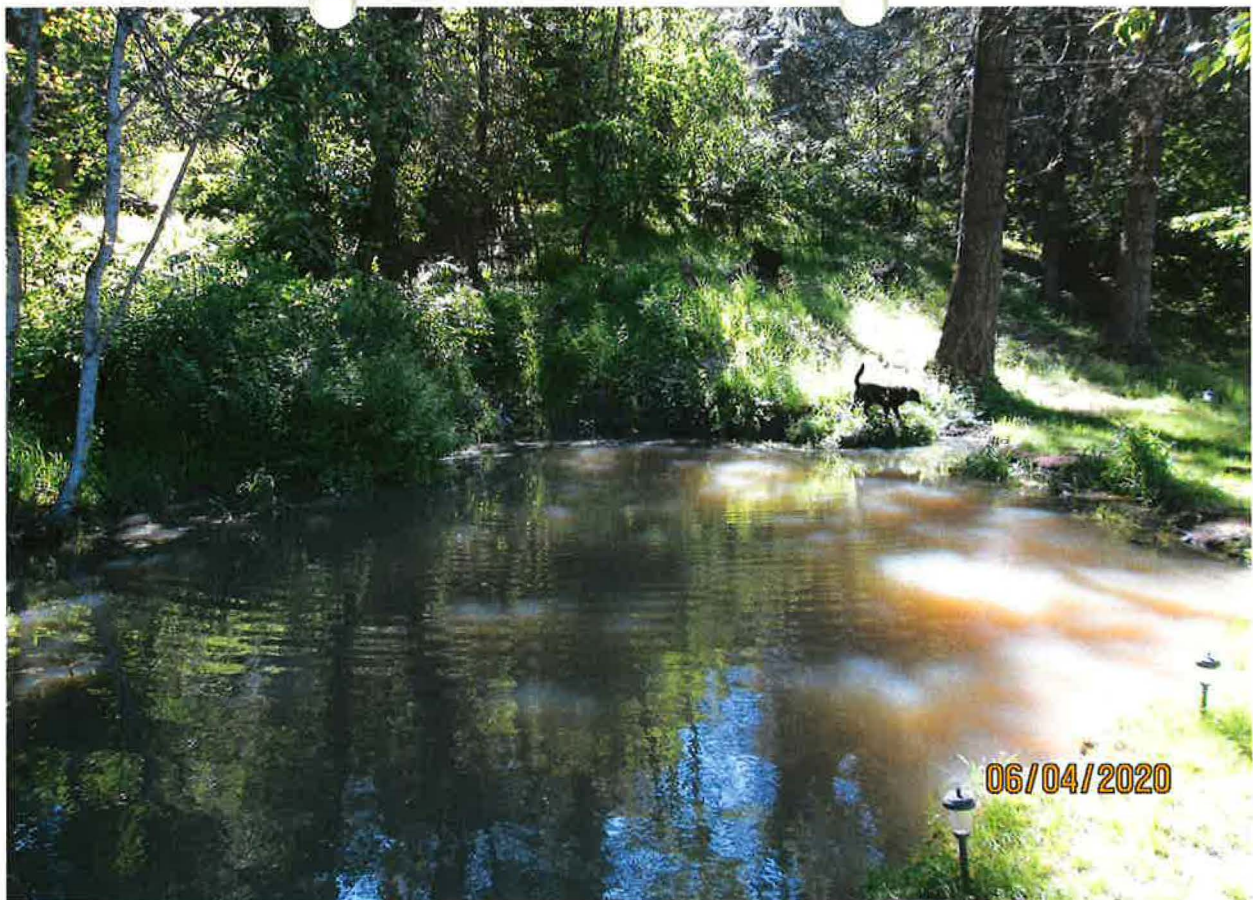
This spreadsheet has been designed by Idaho Department of Water Resources to estimate the total seepage, evaporation and fill capacity required for a pond.

User Input
Calculated value
Formula Explanations

Surface Area (AC.)	0.1	"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)	0.2	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	0.0	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	1.6	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 - DAM WITH OVERFLOW PIPE FROM POND



POU – IRRIGATION STORAGE AND FIRE PROTECTION STORAGE



POND OVERFLOW PIPE



OVERFLOW FROM POND



IRRIGATION POU



IRRIGATION POU





IRRIGATION POU

