

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 93-7175
Exam Date: 09/17/2018

1. Current Owner:
RAYMOND A WILSON 1204 COTTONWOOD DR ST MARIES ID 83861 AND
BEVERLY ANN WILSON 1204 COTTONWOOD DR ST MARIES ID 83861
2. Accompanied by: Raymond Wilson
Phone No: (303) 906-9036
Address: Same as above
Relationship to permit Holder: Permit Holder.

3. **SOURCE:**
UNNAMED STREAM

Tributary
HANGMAN 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 NW¼ SE¼, Sec. 2, Twp 43N, Rge 04W, B.M. BENEWAH County

Method of Determination: Map and GPS. Pond dam location -116°48.120, 47°05.750.

PLACE OF USE: STOCKWATER STORAGE and RECREATION 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	
43N	04W	2														X			

Method of Determination: Arcmap and Field Exam.

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.

$$\text{Stock Water Storage} = (60 \text{ head mixed stock} \times 12 \text{ GPD} \times 365 \text{ days}) / 325,850 \text{ gal per AF} = \underline{0.8 \text{ AF}}$$

G. NARRATIVE/REMARKS/COMMENTS

The field exam was performed on 09/17/2018 with the applicant, Raymond Wilson. The exam showed one ponds that was being fed by an unnamed stream. Photography at date of field exam was taken immediately following construction. Year 2019 aerial imagery was used to identify further beneficial use (see attachment Field Exam system diagram map).

The application for permit authorized a STOCKWATER DIVERSION rate of 0.03 cfs, but at time of field exam there was no pump present, and no pumping of water being diverted. Because no diversion was found from the unnamed stream or pond, the STOCKWATER as a cfs and STOCKWATER FROM STORAGE as an annual volume were removed from the license. At the time of field exam there was no stock present, but visible signs of tracks and stock use was present. As such, STOCKWATER STORAGE will remain on license.

The pond has a surface area of 0.3 acres with an average depth of 9.2 feet, an estimated seepage rate of 0.3 af, and an estimated evaporation rate of 0.3 af. The pond has two islands which were traced out and surface area subtracted from the overall shape size in acres using year 2019 aerial imagery in Arcmap. The pond was excavated and has an earthen dam, but no head gate. Water is fed from an unnamed stream. Pond analysis tool was used to determine the annual volume and seepage/evaporation rates for the pond. The volume is less than what was applied for because the pond analysis tool is more accurate than previous methods of determination. The overall license will be issued with an annual volume of 4.2 af, 3.4 af annual volume for recreation storage and 0.8 af for stockwater storage.

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 added to describe storage of water by total capacity and total surface area.

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

H. RECOMMENDATIONS**1. Recommended Amounts**

Beneficial Use	Period of Use	Rate of Diversion	Annual Volume
STOCKWATER STORAGE	01/01 to 12/31		0.8 AF
RECREATION STORAGE	01/01 to 12/31		3.4 AF

Totals:

4.2 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

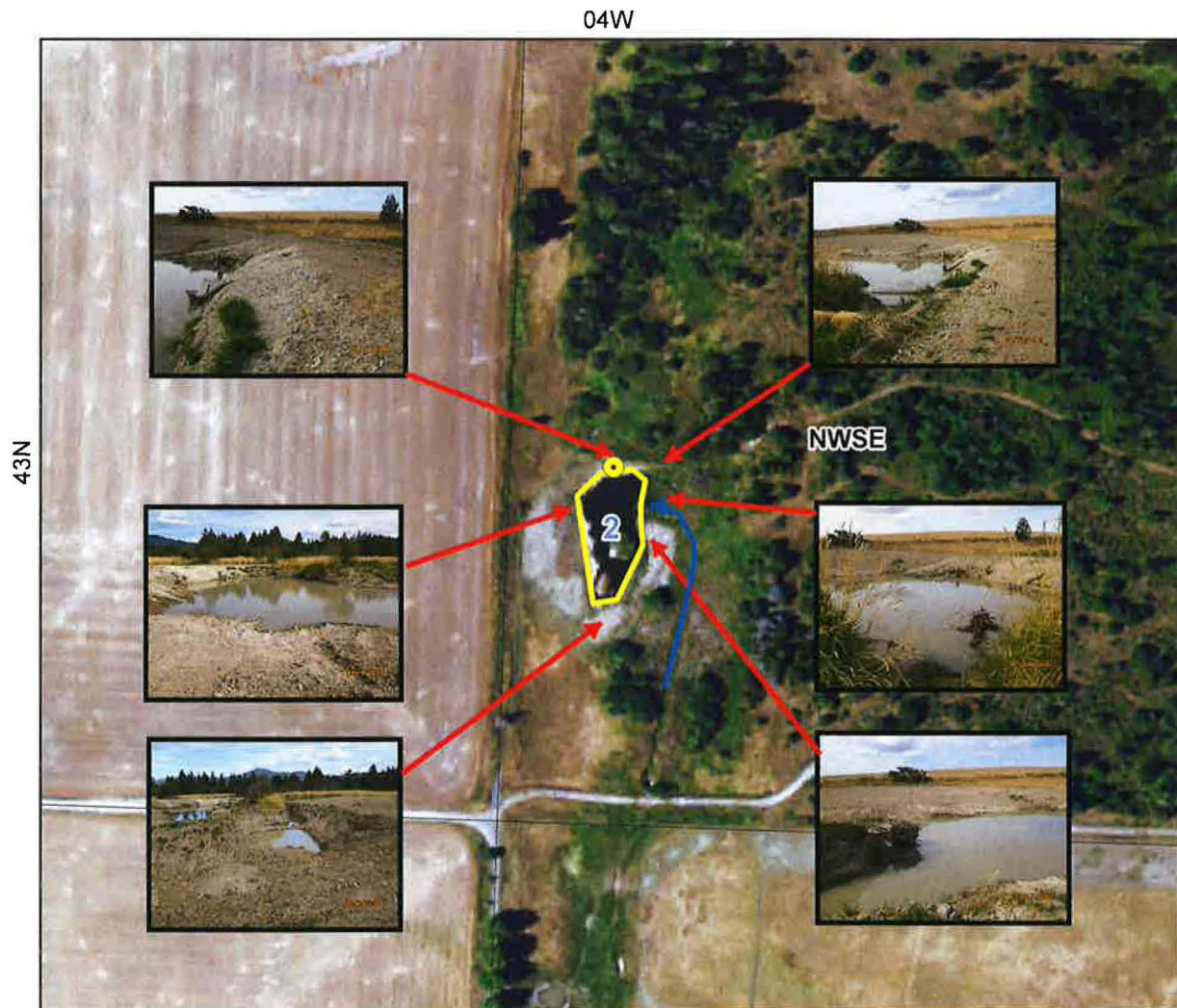
Luke Bates - Water Resource Agent

Field Examiner's Name Adrian F... Date 3/25/2020

Reviewer [Signature] Date 3/25/2020

State of Idaho
Department of Water Resources
Attachment to Field Exam
93-7175

STOCKWATER STORAGE and RECREATION 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	93-7175
REVIEWER	Luke Bates
DATE	3/25/2020

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.)	0.3	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	9.2	"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)	2.8	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)	0.3	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)	3.4	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.

93-7175

LD / yr. -feet. ditions of permit:

☒ No	☒ No	☒ No	☒ No	☐ No	☒ No
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with your proof of 09/17/2018

stem. 036



POU



POU





POU





DAM



POU



INFLOW TO POU





INFLOW TO POU



OUTFLOW FROM POU



POU



DAM



POU



POU LOOKING TOWARD DAM AND OUTFLOW



POU

