

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 87-11342
Exam Date: 10/15/2020

1. Current Owner:
LARRY WOLFE 33253 ST JOE RIVER RD CALDER ID 83808-9710 AND/OR
LYNNEL WOLFE 33253 ST JOE RIVER RD CALDER ID 83808-9710
2. Accompanied by: Larry Wolfe
Phone No: 208-755-3801
Address: Same as above
Relationship to permit Holder: Permit holder

3. **SOURCE:**
SPRING

Tributary
SINKS

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:**

SPRING SW¼ SE¼ SW¼, Sec. 4, Twp 41N, Rge 03W, B.M. LATAH County

Method of Determination: Map and GPS. Pond influenced by spring water within the high water mark; location -116°43.634, 46°55.292.

PLACE OF USE: STOCKWATER 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	03W	4												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: N/A

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) =$$

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

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} =$$

2. Volume Calculations for Other Uses:

See attached pond analysis sheet

$$\text{Stock Water Storage} = (5 \text{ horses} \times 12 \text{ GPD} \times 365 \text{ days}) / 325,850 \text{ gal per AF} = \mathbf{0.1 \text{ AF}}$$

$$\text{Maximum diversion volume} = 0.1 \text{ af (stockwater storage)} + 2.4 \text{ af (Recreation and Fire Protection Storage)} = \mathbf{2.5 \text{ AF}}$$

G. NARRATIVE/REMARKS/COMMENTS

Field exam performed on 10/15/2020 with the applicant, Larry Wolfe, showed one pond that was being fed by a spring for stockwater storage, recreation storage, and fire protection storage purposes. Photographs were taken of the pond during the field exam, and the spring water source that fills the pond is within the high water mark of the pond, and does not overflow from the pond banks.

The permit was approved for a maximum diversion volume of 3.3 af. During the field exam, the pond was identified and sketched out on field exam maps. Arcmap aerial imagery was used during licensing review to accurately trace out the pond surface area, which equaled 0.3 acres. The surface area was 0.1 acres smaller than that which was permitted for, resulting in a reduction in volume derived at time of licensing.

The pond has a surface area of 0.3 acres with a maximum depth of 15 feet, an average depth of 6.0 feet, an estimated seepage rate of 0.3 af, and an estimated evaporation rate of 0.4 af. The pond analysis tool was used to determine the annual volume and seepage/evaporation rates for the pond. The annual volumes for recreation storage and fire protection storage equal 2.4 af each, but are not additive. Mr. Wolfe had 5 horses that used the pond for stockwater purposes, and the annual volume for stockwater storage equals $(5 \text{ horses} \times 12 \text{ GPD} \times 365 \text{ days}) / 325,850 \text{ gal per AF} = 0.1 \text{ af}$, considering department rounding standards. The license is recommended for issuance with a maximum diversion volume equaling $0.1 \text{ af (stockwater storage)} + 2.4 \text{ af (Recreation and Fire Protection Storage)} = 2.5 \text{ AF}$.

Condition 26A, 029, and X02 were removed from the permit during licensing review. Conditions 219 and 220 were updated to reflect current pond analysis sheet pond component values. There are no 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>
STOCKWATER STORAGE	01/01 to 12/31	0.1 AF
RECREATION STORAGE	01/01 to 12/31	2.4 AF
FIRE PROTECTION STORAGE	01/01 to 12/31	2.4 AF

Totals: 2.5 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

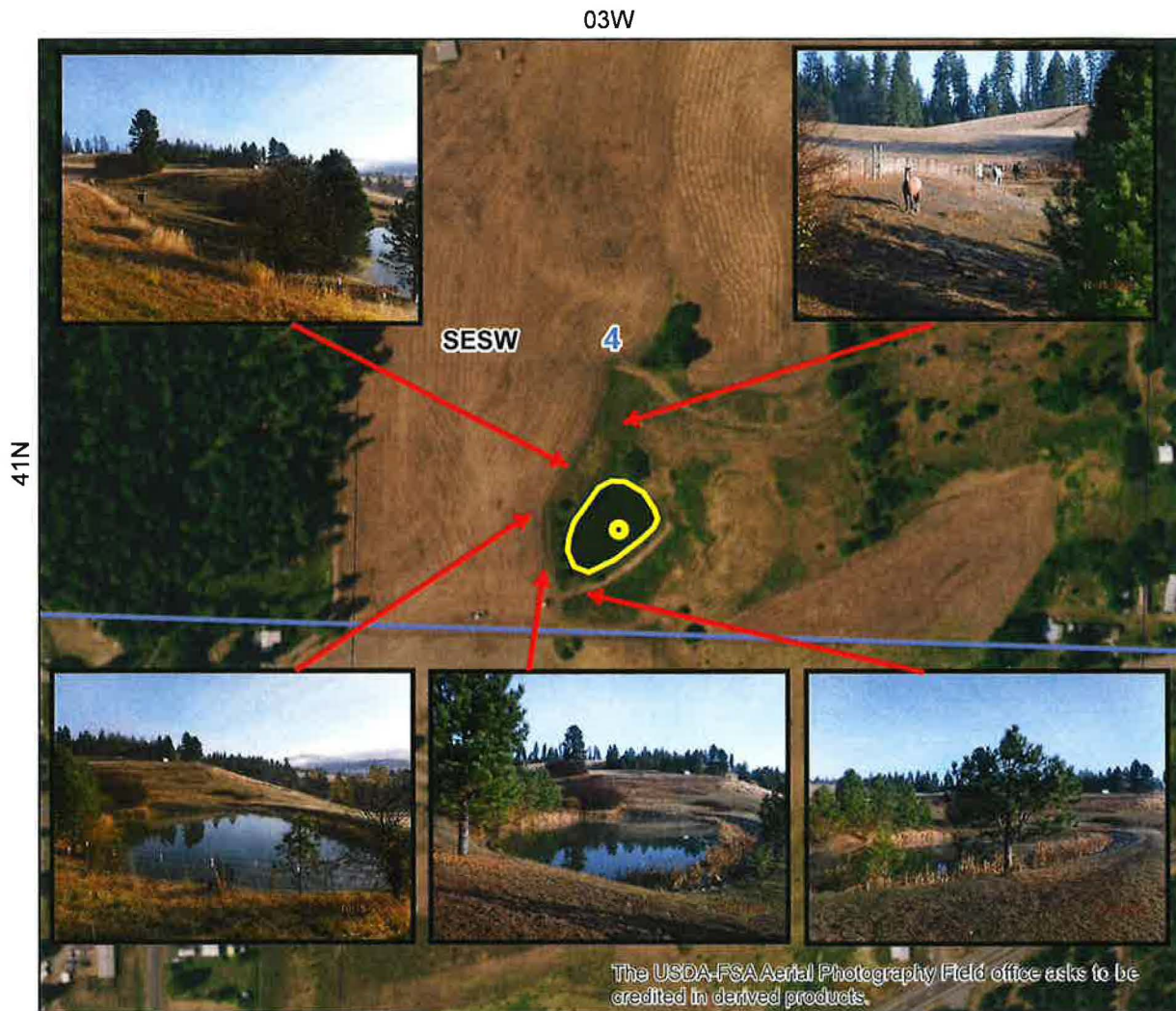
Luke Bates - Water Resource Agent






Field Examiner's Name *As 2B Bates* Date 10/19/2020

Reviewer *Douglas Jones PE* Date 10/19/2020

State of Idaho
Department of Water Resources
Attachment to Field Exam
87-11342

STOCKWATER STORAGE, RECREATION 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



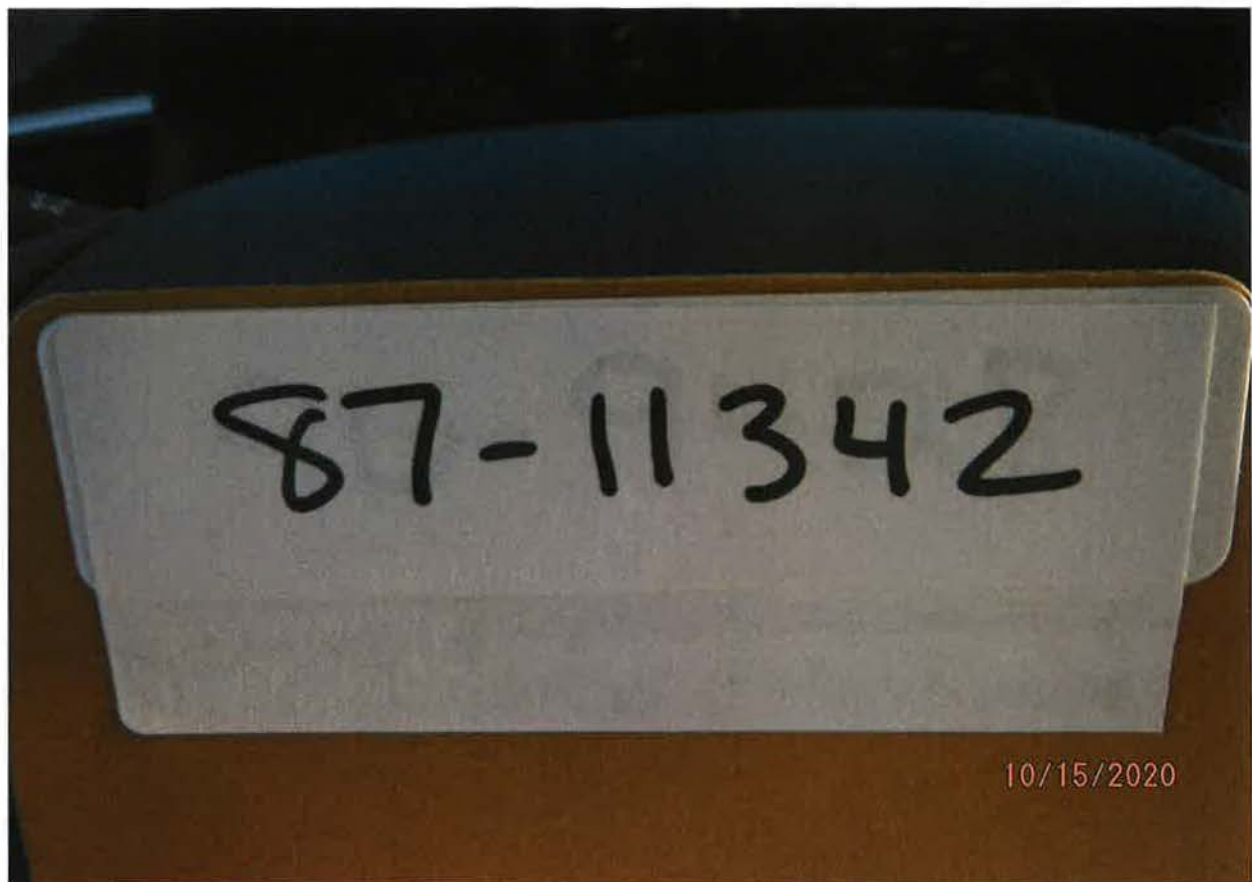
Total Storage Calculations

FILE NUMBER	87-11342
REVIEWER	Luke Bates
DATE	10/19/2020

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.)	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)	1.8	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)	0.4	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	2.5	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.



STOCK WATER STORAGE, RECREATION STORAGE, and FIRE PROTECTION STORAGE POU



STOCK WATER STORAGE, RECREATION STORAGE, and FIRE PROTECTION STORAGE POU



EARTHEN DAM ON POND



STOCKWATER STORAGE USAGE, HORSES DRINK DIRECT FROM POND

