

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 95-18309
Exam Date: 5/19/2022

1. Current Owner:
DON INGERSOLL 211 STRIFE LN PLUMMER ID 83851-5001 AND/OR
MARY INGERSOLL 211 STRIFE LN PLUMMER ID 83851-5001
2. Accompanied by: Don & Mary Ingersoll
Phone No: 775-771-1523
Address: Same as above
Relationship to permit Holder: Permit holders

3. **SOURCE:**
SPRING

Tributary
LITTLE PLUMMER CREEK

Method of Determination: Arcmap and DRG.

B. OVERLAP REVIEW

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

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

SPRING NE¼ NW¼ SE¼, Sec. 33, Twp 46N, Rge 04W, B.M. BENEWAH County

Method of Determination: GPS. POD is located at -116°50.376, 47°17.176

PLACE OF USE: STOCKWATER STORAGE, WILDLIFE STORAGE, RECREATION STORAGE, & 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	
46N	04W	33														X			

Method of Determination: beneficial use field examination and Arcmap aerial imagery.

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
NONE					

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
N/A						

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: Stockwater Storage annual volume = 75 head cattle x 12 gpd x 365 day = 3,285,000 gal per year / 325,850 gal per af = 1.0 af considering department rounding standards.

- See attached Pond Analysis Worksheet

PARENT RIGHT 95-15010 & SPLIT RIGHT(S) RECOMMENDED DIVERSION RATE/VOLUME DATA					
Permit 95-15010 approved value(s)		WR 95-15010 License Recommended Value	WR 95-18309 License Recommended Value	WR 95-18310 License Recommended Value	Enlarged (Y/N)
Diversion to Storage	0.20 cfs	diversion to storage beneficial use not developed, instream ponds only; removed from permit during licensing review - L.Bates			N/A
Irrigation	0.15 cfs	irrigation direct flow beneficial use not developed; removed from permit during licensing review - L.Bates			N/A
Irrigation Storage	22.5 af	13.8 af	-	-	N
Irrigation from Storage	15.0 af	13.8 af	-	-	N
Stockwater	0.03 cfs	-	-	0.02 cfs / 1.0 af	N
Stockwater Storage	9.2 af	1.0 af	1.0 af	-	N
Stockwater from Storage	1.0 af	stockwater from storage beneficial use not developed; removed from permit during licensing review - L.Bates			N/A
Fire Protection Storage	8.2 af	3.3 af	0.5 af	-	N
Recreation Storage	8.2 af	3.3 af	0.5 af	-	N
Wildlife Storage	8.2 af	3.3 af	0.5 af	-	N
MAXIMUM DIVERSION RATE / VOLUME		18.1 af	1.5 af	0.02 cfs / 1.0 af	

G. NARRATIVE/REMARKS/COMMENTS

Admin Note: this right was split from Permit 95-15010 due to 3ea validated spring source(s) being independent with water flow from each & not co-mingling in a common water system. This right accounts for the northern small pond from the Permit used for multiple storage uses that doesn't incorporate any from storage beneficial uses.

An initial field exam was performed by department staff on 8/19/2016 but inadequate data was collected to finalize the Permit for licensing purposes. A follow-up exam was conducted on 5/19/2022 with the applicant(s), Don & Mary Ingersoll, which showed water from a spring source being used for Stockwater Storage, Wildlife Storage, Recreation Storage, & Fire Protection Storage use(s). At the POD, a small pond was excavated to include the spring source within the pond boundary. There isn't a diversion rate associated with this right, and diversion to storage was removed from the permit during licensing review.

During the exam photographs were taken of the multiple storage pond POU. The pond banks have been eroded by stock use over time, and the pond wasn't full at time of exam indicating either the spring is a low flow spring or during excavation of the pond the bottom retaining soil layer was breached allowing extra seepage from the pond floor. A natural overflow channel allows excess water to discharge downstream into the historic intermittent stream channel created by spring flow. It appears the pond does benefit from seasonal runoff each spring, but the applicant asserts the swales leading to the pond dry up by summer prior to haying and cattle being cycled into the pasture where the pond is located; at that time the spring maintains the pond level throughout the season.

During licensing review Arcmap aerial imagery was used to accurately trace out the pond's surface area which equals 0.1 ac. The pond's maximum depth = 8 ft, average depth = 3.2 ft, pond volume capacity = 0.3 af, seepage and evaporation rate loss = 0.2 af, stockwater storage multiple fill volume = 1.0 af, and total volume required annually = **1.5 af** which is recommended as the maximum diversion volume for licensing purposes. The stockwater storage annual volume of 1.0 af is based on 75 head of stock drinking directly from the pond. The wildlife storage, recreation storage, & fire protection storage components annual diversion volume equals 0.3 af (pond capacity) + 0.2 af (seepage/evaporation loss rate) = 0.5 af respectively, but not additive toward the maximum diversion volume for licensing purposes.

Referencing the table above, out of the three WRs 95-18309 includes a portion of storage component beneficial use(s) recommended for licensing. There are no concerns for enlargement by diversion volume for licensing any of the three associated water rights. The following are a list of beneficial uses removed from the Permit during licensing review for WR 95-18309: Irrigation, Stockwater, Stockwater from Storage, Diversion to Storage, Irrigation Storage, & Irrigation from Storage.

Conditions 082, 26A, X02, & R66 were removed during licensing review. Conditions 219 & 220 were revised to reflect post field exam pond analysis worksheet size & volume metrics. Condition X35 was added describing combined stockwater storage use between rights 95-15010, 95-18309, & 95-18310 for 75 head of cattle. Condition 004 was carried forward to licensing. Aside from stockwater combined use there are no concerns for overlap with 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>
STOCKWATER STORAGE	01/01 to 12/31	1.0 AF
WILDLIFE STORAGE	01/01 to 12/31	0.5 AF
RECREATION STORAGE	01/01 to 12/31	0.5 AF
FIRE PROTECTION STORAGE	01/01 to 12/31	0.5 AF

Totals: 1.5 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

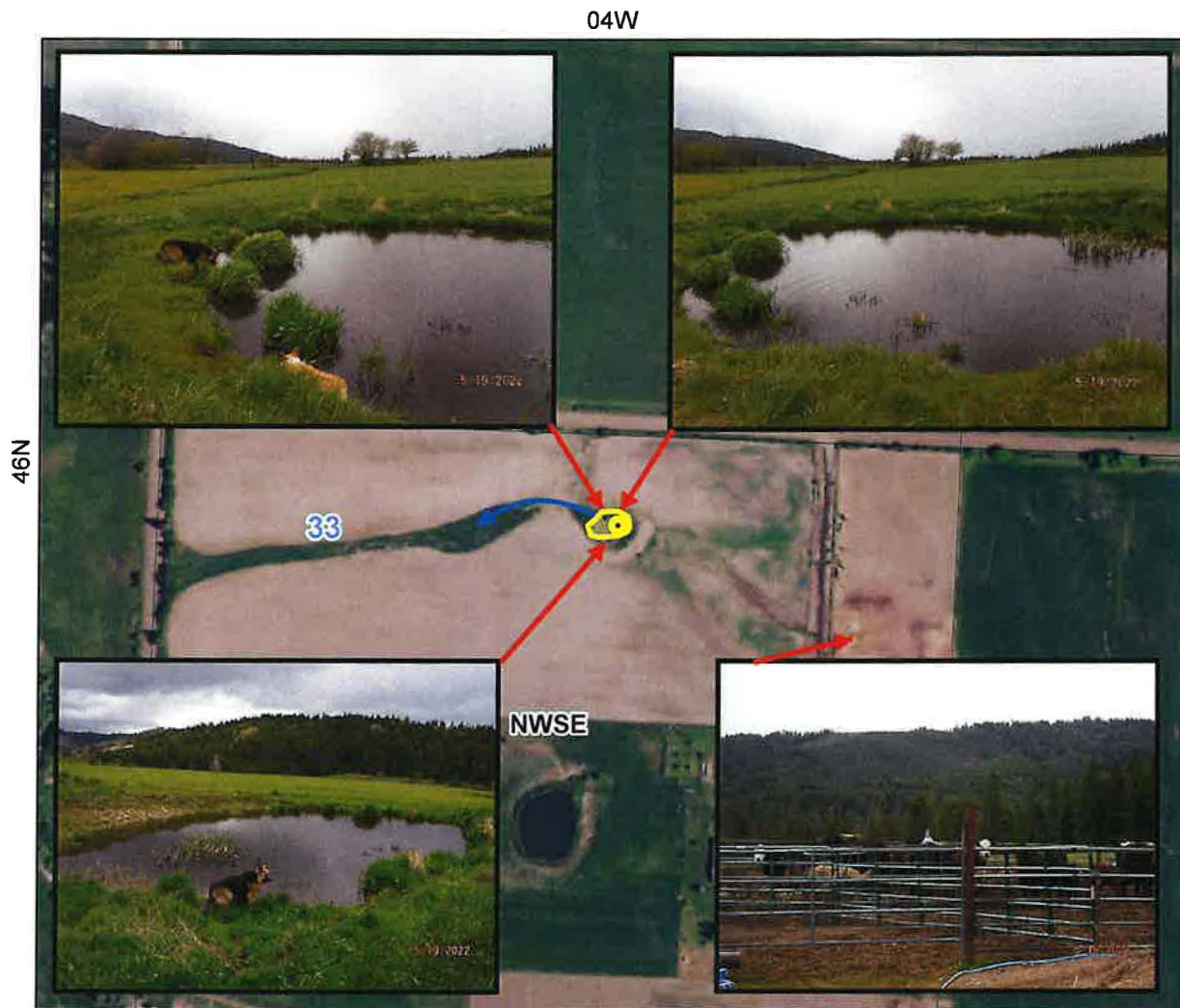
Luke Bates -

Field Examiner's Name FSB/P Date 6/16/2022

Reviewer Ad Furti Date 7/21/2022

State of Idaho
Department of Water Resources
Attachment to Field Exam
95-18309

STOCKWATER STORAGE, WILDLIFE STORAGE, RECREATION STORAGE,
& FIRE PROTECTION STORAGE system diagram.



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

0 0.035 0.07 0.14 Miles



Total Storage Calculations

FILE NUMBER	95-18309
REVIEWER	luke bates
DATE	5/23/2022

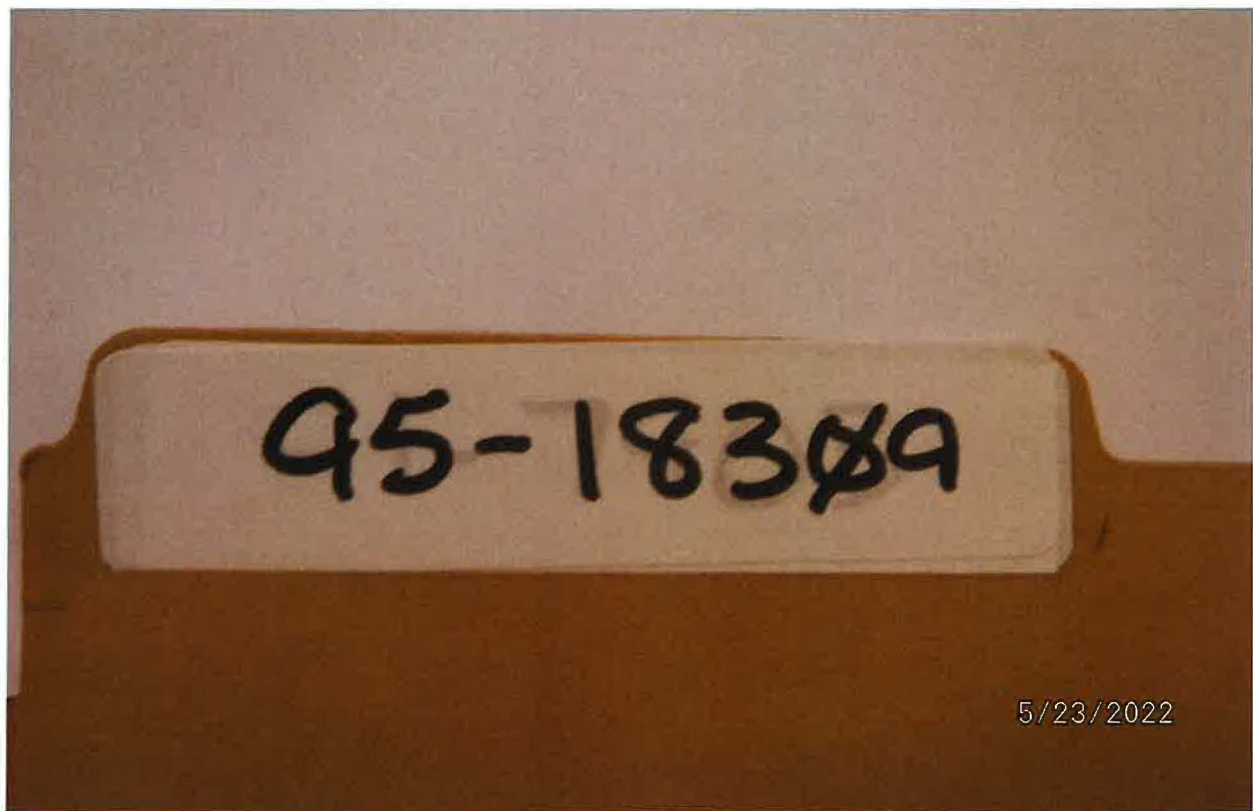
This spreadsheet has been designed by Idaho Department of Water Resources to estimate the total seepage, evaporation and fill capacity required for a pond.

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.)	3.2	"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)	0.3	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	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)	0.1	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	0.1	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.

$$\text{Multiple Fill} = 1.0 \text{ af (Stockwater Storage)}$$



INITIAL FIELD EXAM DATE 8/19/2016; FOLLOW-UP SITE VISIT 5/19/2022; SPLIT FROM 95-15010



POD – SPRING CO-LOCATED WITH SMALL STORAGE POND



POU - MULTI- USE STORAGE POND (IMAGE FROM INTIAL EXAM 8/19/2016)



POU – STOCKWATER STORAGE, FIRE PROTECTION STORAGE, RECREATION STORAGE, WILDLIFE STORAGE





CATTLE ON PROPERTY THAT USE STORAGE POND FOR STOCKWATER

