

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 95-17380
Exam Date: 3/30/2018

1. Current Owner:
CLINTON BARNES 14205 W WINCH AVE RATHDRUM ID 83858 (208) 660-1131
And/Or
JUDY BARNES 14205 W WINCH AVE RATHDRUM ID 83858 (208) 660-1131

2. Accompanied by: Clinton Barnes

3. **SOURCE:**
UNNAMED STREAM

TRIBUTARY:
HOWELL GULCH CREEK

B. OVERLAP REVIEW

1. Other water rights with the same place of use: None
2. Other water rights with the same point-of-diversion: None

C. DIVERSION AND DELIVERY SYSTEM**1. LOCATION OF POINT(S) OF DIVERSION:**

UNNAMED STREAM SW $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 4, Twp 51N, Rge 05W, B.M. KOOTENAI County

Method of Determination: Maps and GPS. POD located at -116° 58.580, 47° 47.526

2.

PLACE OF USE: FIRE PROTECTION STORAGE

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
51N	05W	4										X	X						

PLACE OF USE: RECREATION STORAGE

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
51N	05W	4										X	X						

PLACE OF USE: STOCKWATER STORAGE

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
51N	05W	4										X	X						

Method of Determination: Google Earth and Arcmap.

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

*Code to correspond with No. on map and aerial photo

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date

2. Measurements: N/A

E. FLOW CALCULATIONS

Measured Method: N/A

____ Additional Computation Sheets Attached

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

G. NARRATIVE/REMARKS/COMMENTS

Field exam with applicant, Clinton Barnes, showed a pond on an unnamed stream. Mr. Barnes explained he came into our office back in the 1970's and asked if he needed to apply for any permit to build a pond. It sounds like our office gave him incorrect information because he said they told him as long as he kept his dam under 10 feet he didn't need anything from the department. Mr. Barnes said his dam was 9.5 feet tall with an average depth of 6.5 feet with deeper areas against dam and shallower areas near top of pond. Surface area of pond was equal to 2.45 acres with total storage volume including seepage and evaporation equal to 19.7 acre-feet.

Water flowed into pond from an unnamed stream at the north end of pond. Mr. Barnes said water in stream flowed nearly all year with only a month or so with little to no flow. Water would flow through pond and exit the dam out of a large 2-3 foot culvert returning water into the stream. Mr. Barnes had installed a metal screen to keep the culvert from clogging with debris and to keep fish in the pond. Applicant would occasionally have stock on field after cutting and stock would drink out of pond. There were no stock present during exam.

License will be issued for 19.7 acre-feet for fire protection, recreation, and stockwater purposes. All conditions will remain on license except the one describing the stockwater use. There are no overlap concerns.

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>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
FIRE PROTECTION STORAGE	01/01 to 12/31		19.7 AF
RECREATION STORAGE	01/01 to 12/31		19.7 AF
STOCKWATER STORAGE	01/01 to 12/31		19.7 AF
<u>Totals:</u>			19.70 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

Field Examiner's Name Adrian Fink Date 4/4/2018

Reviewer Douglas Jones P.E. Date 6/21/2018

Total Storage Calculations

FILE NUMBER	95-17380
REVIEWER	Adam Frederick
DATE	4/4/2018

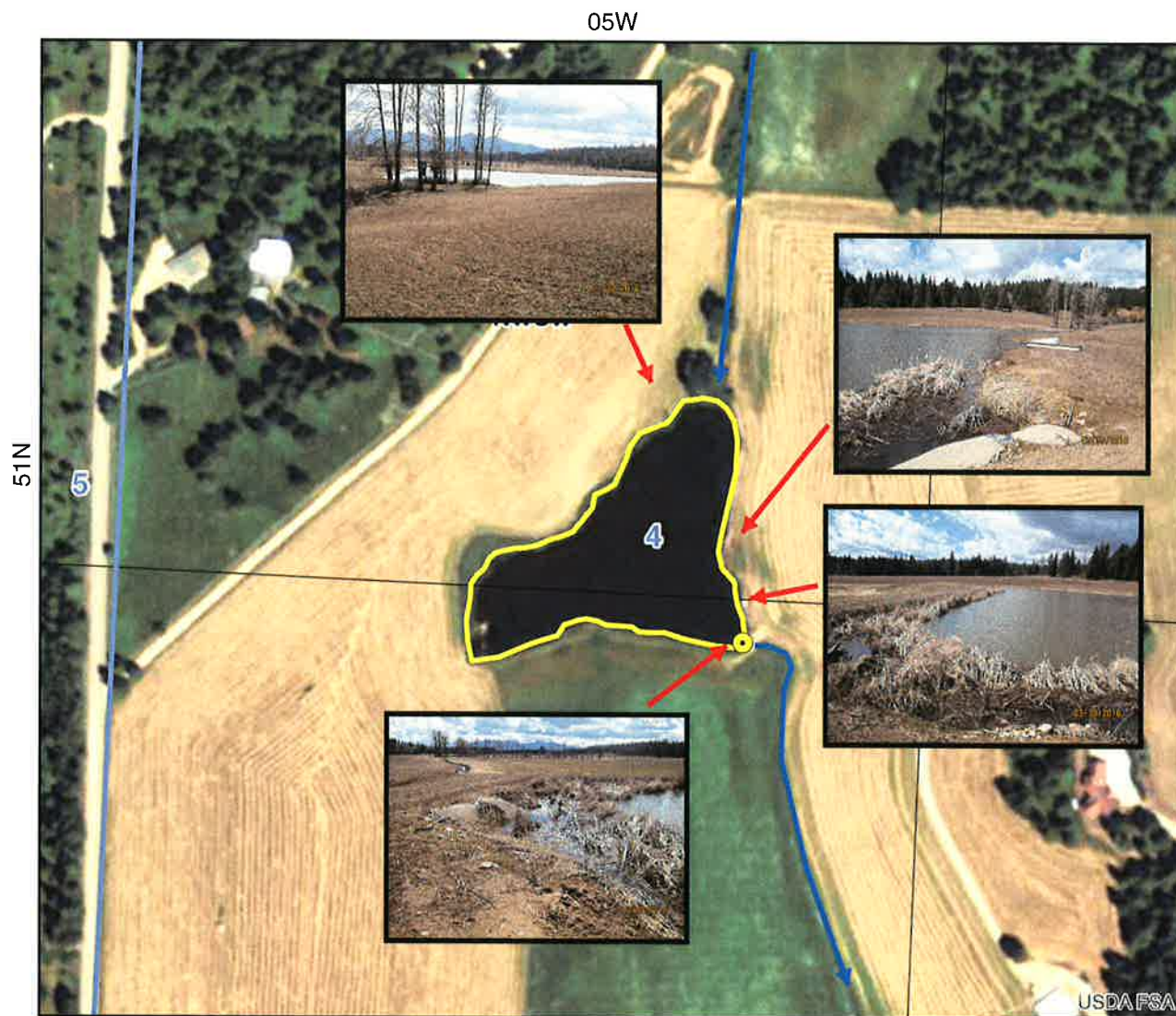
This spreadsheet has been designed by Idaho Department of Water Resources to estimate the total seepage, evaporation and fill capacity required for a pond.

User Input
Calculated value
Formula Explanations

Surface Area (AC.)	2.45	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	6.5	"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)	15.9	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)	3.5	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	19.7	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.

State of Idaho
Department of Water Resources
Attachment to Field Exam
95-17380

FIRE PROTECTION STORAGE, RECREATION STORAGE, and STOCKWATER STORAGE / SYSTEM DIAGRAM



0 0.035 0.07 0.14 Miles

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





Outflow culvert at dam.



Outflow culvert screened to prevent clogging and fish escaping.



View downstream with end of culvert.



View looking downstream from dam.



View of pond and dam.



View of pond from dam.



View upstream from pond.



View of pond from upstream.