

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 97-07420
Exam Date: 9/17/2004

1. Current Owner:
PHILLIP MACK And/Or
JO ANN MACK
240 GARN LN PO BOX 159
PRIEST RIVER ID 83856-0159 (208) 448-0614
2. Accompanied by: Jo Ann Mack (Exam performed by Wayne Baldwin)

3. **SOURCE:**
UNNAMED STREAM

TRIBUTARY:
PRIEST RIVER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 97-7399
2. Other water rights with the same point-of-diversion: 97-7399

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

UNNAMED STREAM NW¼SW¼ Sec. 12, Twp 56N, Rge 05W, B.M. BONNER County

Method of Determination: Arcmap. POD estimated to be at -116° 54.689, 48° 12.880

2.

PLACE OF USE: WILDLIFE 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	
56N	05W	12										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
2. Volume Calculations for Other Uses: See attached pond analysis sheet.

G. NARRATIVE/REMARKS/COMMENTS

Northern Region was tasked with licensing permits that had been examined during the late 1990's and early 2000's. This file was deemed to have enough information to finish the process and issue a license. Examiner, Wayne Baldwin, performed exam on 8/30/2001 and file has sat in vault since then.

Using new technology, including Arcmap, Google Earth, and the pond analysis tool, we are able to better evaluate and license this older permit. Mr. Baldwin recommended an annual volume of 4.7 acre-feet based upon the size of the pond and max depth. Using Arcmap we are now able to trace the exact surface area of the pond using 2013 imagery. The surface area of the pond was equal to 0.8 acres and an average depth of 5.2 feet. To determine that depth we used the maximum depth of 13 feet and times it by 0.4 to account for the sides of the pond. Mr. Baldwin did not have tools available to determine evaporation or seepage which we can now do. The total capacity of the pond is 4.2 acre-feet with seepage and evaporation equal to 1.8 acre-feet.

This pond is also covered under water right license 97-7399 with a storage volume of 1.0 acre-feet. There are notes in the backfile stating the examiner recommended applying for additional storage to cover actual pond size. When 97-7399 and 97-7420 are combined they cannot exceed 5.7 acre-feet of storage, covered by condition X35 and 219. Pond analysis tool was used to evaluate the volume and with the size, seepage, and evaporation was equal to 5.9 acre-feet. This sheet will be attached as reference, but applicant will not be required to apply for an additional 0.2 acre-feet of storage. The applicant applied when this tool was not available and should not be held to current standards when they applied for enough storage that was required at that time.

The license will be refreshed to show current pond conditions on approval. License will include the following conditions which apply to ponds, 219 and 220. Condition X35 will be added to show the pond is covered by two rights. Condition 227 will be added to address the minimum stream flow in the Priest River and show a gaging station for applicant to monitor. Field report will identify as many aspects as possible and original field exam is already located in the vault.

Water right 97-7399 is for this same pond as shown in field exam photos. This right identifies the pond being located in an adjacent QQ. A licensing amendment was sent out to correct the location of this license. There is no need to file a transfer on water right 97-7399 as the upcoming adjudication in that basin can correct the location of the pond for a much smaller fee.

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

H. RECOMMENDATIONS**1. Recommended Amounts**

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
WILDLIFE STORAGE	01/01 to 12/31		4.7 AF
<u>Totals:</u>			4.70 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

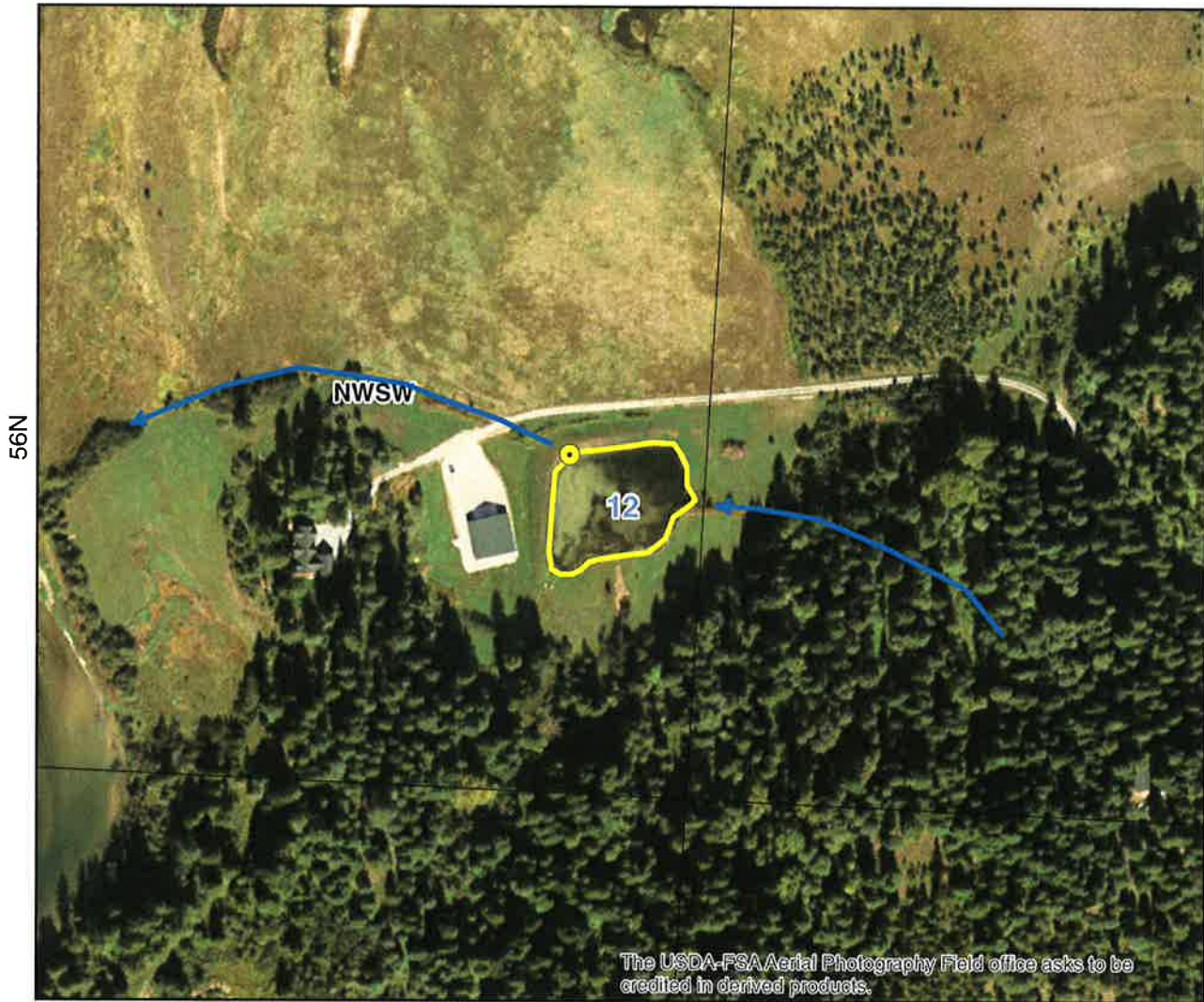
Field Examiner's Name Adam Franklin Date 3/1/18

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

State of Idaho
Department of Water Resources
Attachment to Field Exam
97-7420

WILDLIFE STORAGE / SYSTEM DIAGRAM

05W



0 0.035 0.07 0.14 Miles

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



Total Storage Calculations

FILE NUMBER	97-7420
REVIEWER	Adam Frederick
DATE	2/22/2018

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.)	0.8	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	5.2	"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)	4.2	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)	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)	0.9	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	0.9	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	5.9	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.