

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 96-09578

Exam Date: 10/3/2016

1. Current Owner:

WILLIAM KRAUSE 169 MOUNT BALDY LN SANDPOINT ID 83864 (208) 946-7737

And/Or

LISA KRAUSE 169 MOUNT BALDY LN SANDPOINT ID 83864 (208) 946-7737

2. Accompanied by: William Krause

3. SOURCE:

SPRING

UNNAMED STREAM

TRIBUTARY:

SYRINGA CREEK

SYRINGA 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 SYSTEM1. LOCATION OF POINT(S) OF DIVERSION:

UNNAMED STREAM NE¼SE¼ Sec. 17, Twp 57N, Rge 02W, B.M. BONNER County

SPRING SE¼NE¼SE¼ Sec. 17, Twp 57N, Rge 02W, B.M. BONNER County

Method of Determination: GPS and maps. Dam location at 48° 17.146, 116° 35.479

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	
57N	02W	17													X				

Method of Determination: Google Earth and Arc map.

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:

E. FLOW**CALCULATIONS**

Measured Method:

_____ Additional Computation Sheets Attached

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 SHEETS

G. NARRATIVE/REMARKS/COMMENTS

Field exam with Mr. Krause showed a pond on an unnamed stream with a surface area of 0.37 acres. Applicant had stated at time of application that previous owner said there was a spring in the pond as well as unnamed stream. He said the spring was located in the middle of the pond and that is what the pond was built on. The pond was excavated with an average depth of 7 feet with a 2-3 foot high dam. Water from unnamed stream flowed through culvert under the driveway into the pond. During high flow periods it would flow over dam and into Syringa Creek. At time of application, the Department was using a different tool for pond analysis. Values appear different using the new pond analysis tool but are not far apart. License will be issued for what was applied for at 5.0 acre feet. New and old pond analysis sheets will be included in the field exam report for reference.

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>
WILDLIFE STORAGE	01/01 to 12/31		5.0 AF
<u>Totals:</u>			5.00 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

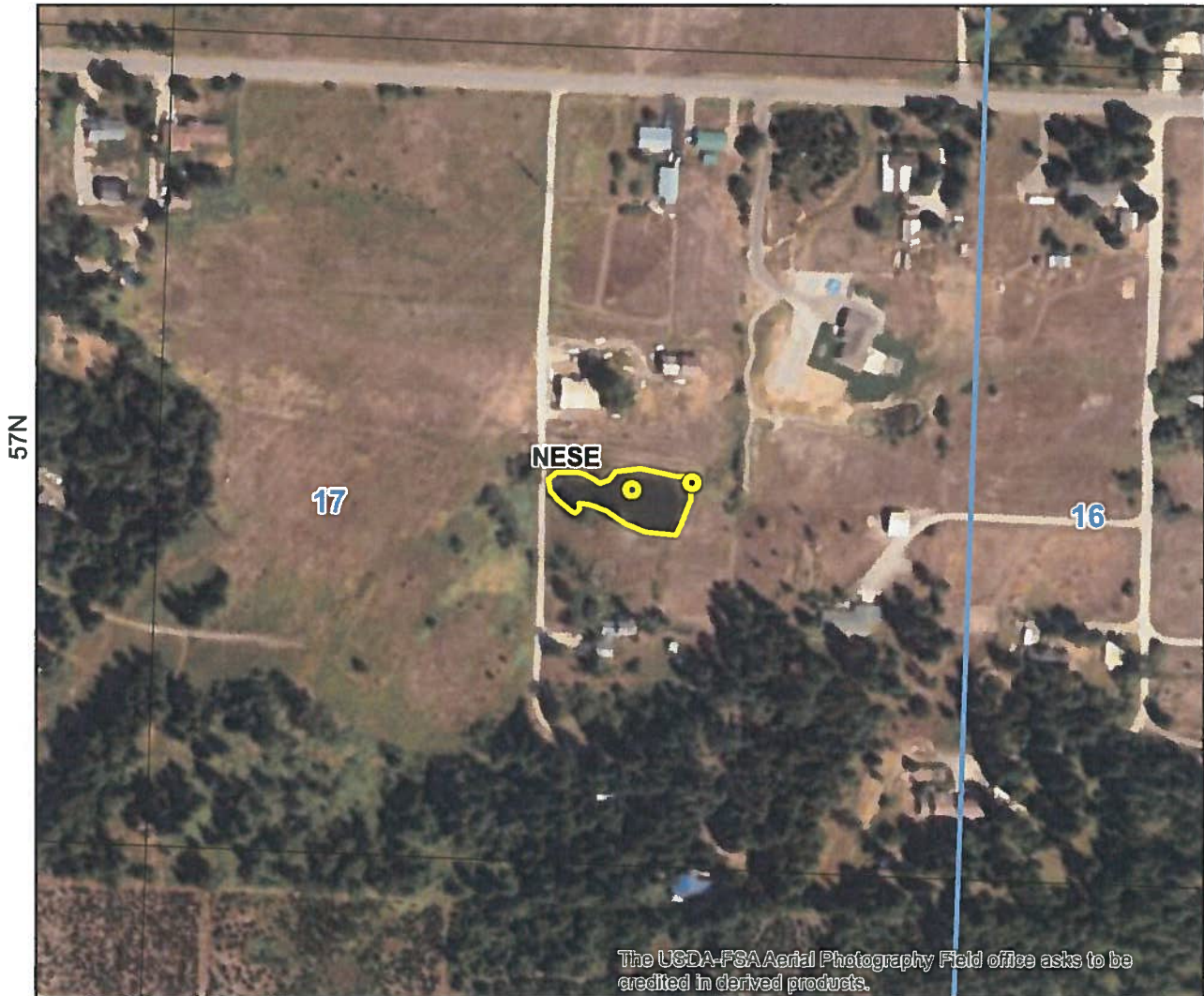
I. AUTHENTICATION

Field Examiner's Name Adam Fendrich Date 1-9-2017
 Reviewer Mary Ann Date 2/22/2017

State of Idaho
Department of Water Resources
Water Right License
96-9578

WILDLIFE STORAGE

02W



0 0.035 0.07 0.14 Miles

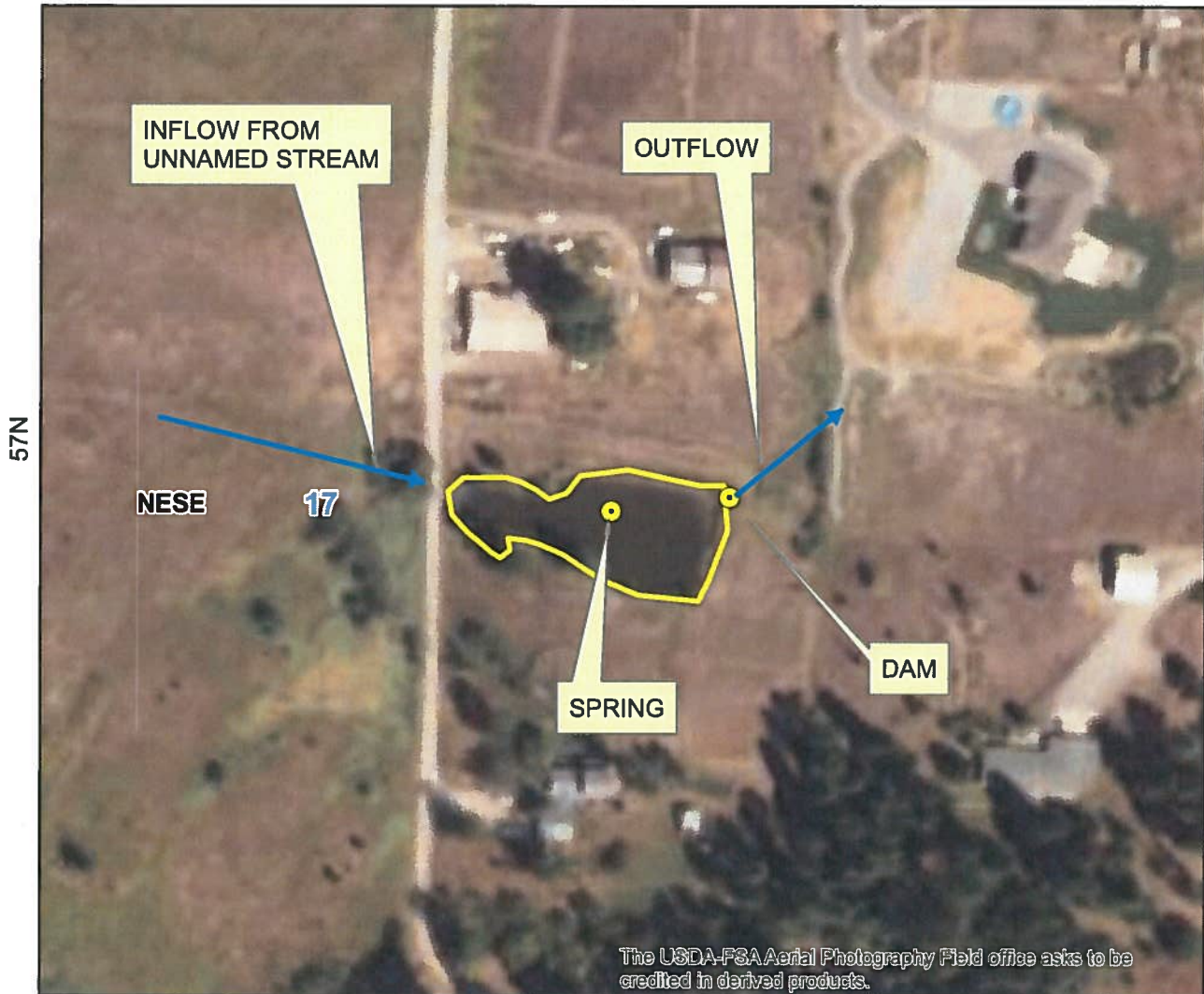
-  Point of Diversion
-  Place Of Use Boundary
-  Townships
-  PLS Sections



State of Idaho
Department of Water Resources
Water Right License
96-9578

SYSTEM DIAGRAM

02W



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

0 0.0175 0.035 0.07 Miles



Total Storage Calculations

FILE NUMBER	96-9578
REVIEWER	Adam Frederick
DATE	1/9/2017

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.)	0.37	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	7	"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)	2.59	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. <i>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.</i>
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). <i>Note: You must have a "From Storage" component exceeding the initial fill on the permit to include a volume in this space.</i>
Estimated Seepage Loss (AF)	2.7	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)	5.7	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.

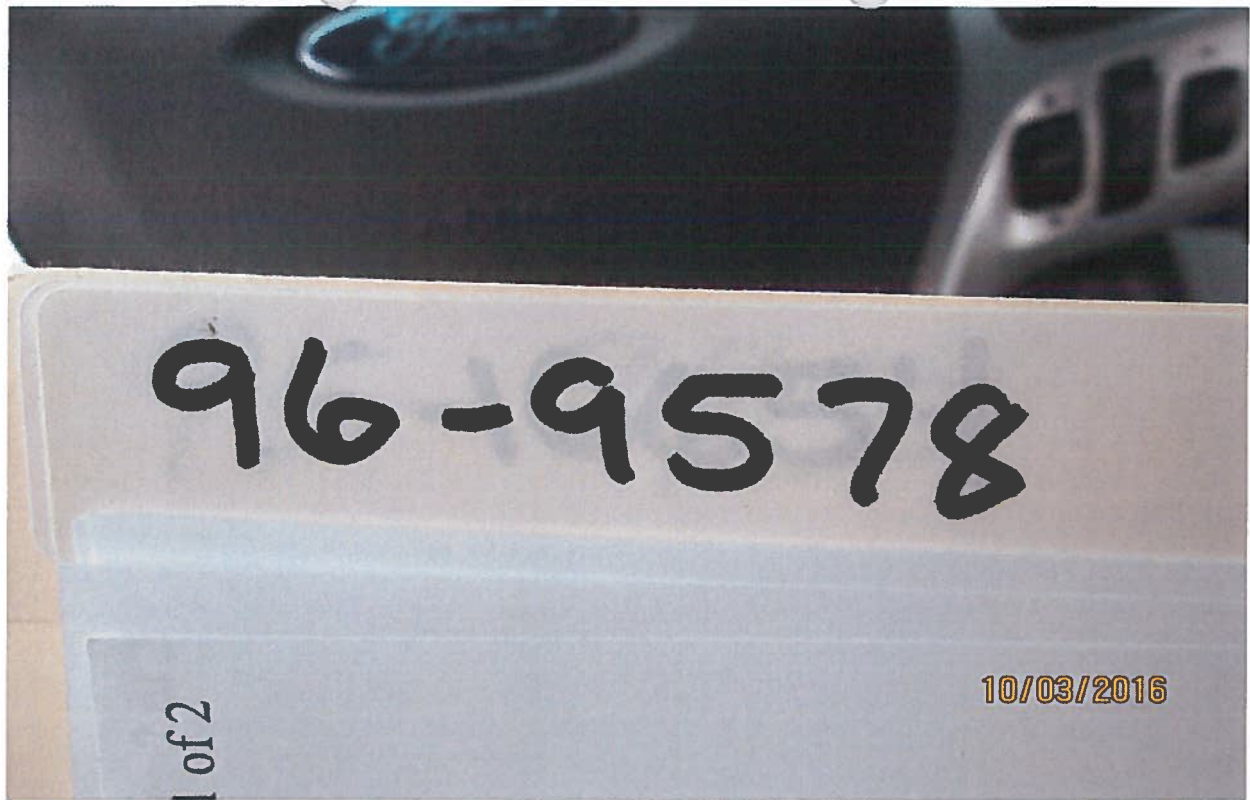
KRAUSE APPLICATION FOR PERMIT
POND ANALYSIS SHEET

POND SIZE: $16,030 \text{ SQFT} / 43,560 = 0.37 \text{ ACRES} \times 7 \text{ FT DEEP} = 2.6 \text{ AF}$

SEEPAGE: $1199 \text{ GPD} \times 365 \text{ DAYS} / 325,850 \text{ GAL/AF} = 1.3 \text{ AF}$

EVAPORATION: $999 \text{ GPD} \times 365 \text{ DAYS} / 325,850 \text{ GAL/AF} = 1.1 \text{ AF}$

5.0 AF	WILDLIFE STORAGE	A) POND SIZE	2.6 AF
		B) EVAORATION	1.1 AF
		C) SEEPAGE	1.3 AF
		TOTAL	5.0 AF



View of pond from near dam. Looking east towards roadway and culvert from unnamed stream.





Culvert under road leading into pond from unnamed stream.



View from roadway looking towards dam to west.