

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 96-09491

Exam Date: 8/10/2017

1. Current Owner:

KENNETH W LUNDE 75 PUFFIN RD SANDPOINT ID 83864 (208) 263-8735 And/Or

CELESTE M LUNDE 75 PUFFIN RD SANDPOINT ID 83864 (208) 263-8735

2. Accompanied by: Kenneth Lunde (Owner)

3. SOURCE:

UNNAMED STREAM

TRIBUTARY:

SINKS

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 SE¼SE¼ Sec. 12, Twp 57N, Rge 03W, B.M. BONNER County

Method of Determination: Maps and GPS. POD location at 116° 38.210, 48° 17.807

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	
57N	03W	12																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	
57N	03W	12																X	

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	03W	12																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: N/A

E. FLOW**CALCULATIONS**

Measured Method: N/A

____ Additional Computation Sheets Attached

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

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

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

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

2. Volume Calculations for Other Uses: See attached pond analysis sheet

G. NARRATIVE/REMARKS/COMMENTS

Field exam with owner Kenneth Lundz, showed a small pond with surface area of 0.15 acres and maximum depth of 20 feet. Applicant did not develop the spring source and thus irrigation, fire protection, and diversion to storage and the spring source were taken off at time of licensing. Pond analysis tool says with a total surface of 0.15 acres and an average depth of 8 feet (20 foot maximum x 0.4 = 8 foot average) the pond capacity is 1.2 acre-feet. Evaporation for pond was equal to 0.2 acre-feet with no seepage because it is an on-stream pond. Overall storage volume for water right will be 1.4 acre-feet.

Pond was fed from an unnamed stream, which applicant said was a couple of springs further up the hill. Dam was a berm with a concrete outlet structure. Applicant said that even with the proximity of the pond to Turnipseed Creek, he had never seen water make it there. Source of water will be left as unnamed stream which is tributary to sinks. Pond was used for fire protection, recreation, and wildlife purposes. Applicant had installed a dry hydrant adjacent to pond for firefighting purposes.

During license review it was found that the pond was possibly located in two different QQ (SESE & SWSE). It was found that the IDWR overlay line was not perfectly lined up and should have followed the taxlot line. Bonner County web mapping tool as well as the DRG were used to justify the place of use only being located in the SESE. There were no overlap concerns during review and condition 004 will be left on license because applicant had mentioned he might subdivide property in future.

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		1.4 AF
RECREATION STORAGE	01/01 to 12/31		1.4 AF
WILDLIFE STORAGE	01/01 to 12/31		1.4 AF
<u>Totals:</u>			1.40 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 Friedman Date 9/28/2017

Reviewer Douglas Jones PE Date 11/9/17

Total Storage Calculations

FILE NUMBER	96-9491
REVIEWER	Adam Frederick
DATE	9/28/2017

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.)	0.15	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	8	"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)	1.2	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)	0.0	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	0.2	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	1.4	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
96-9491

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



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

0 0.035 0.07 0.14 Miles



2
110 111 112 113

Feature Labels



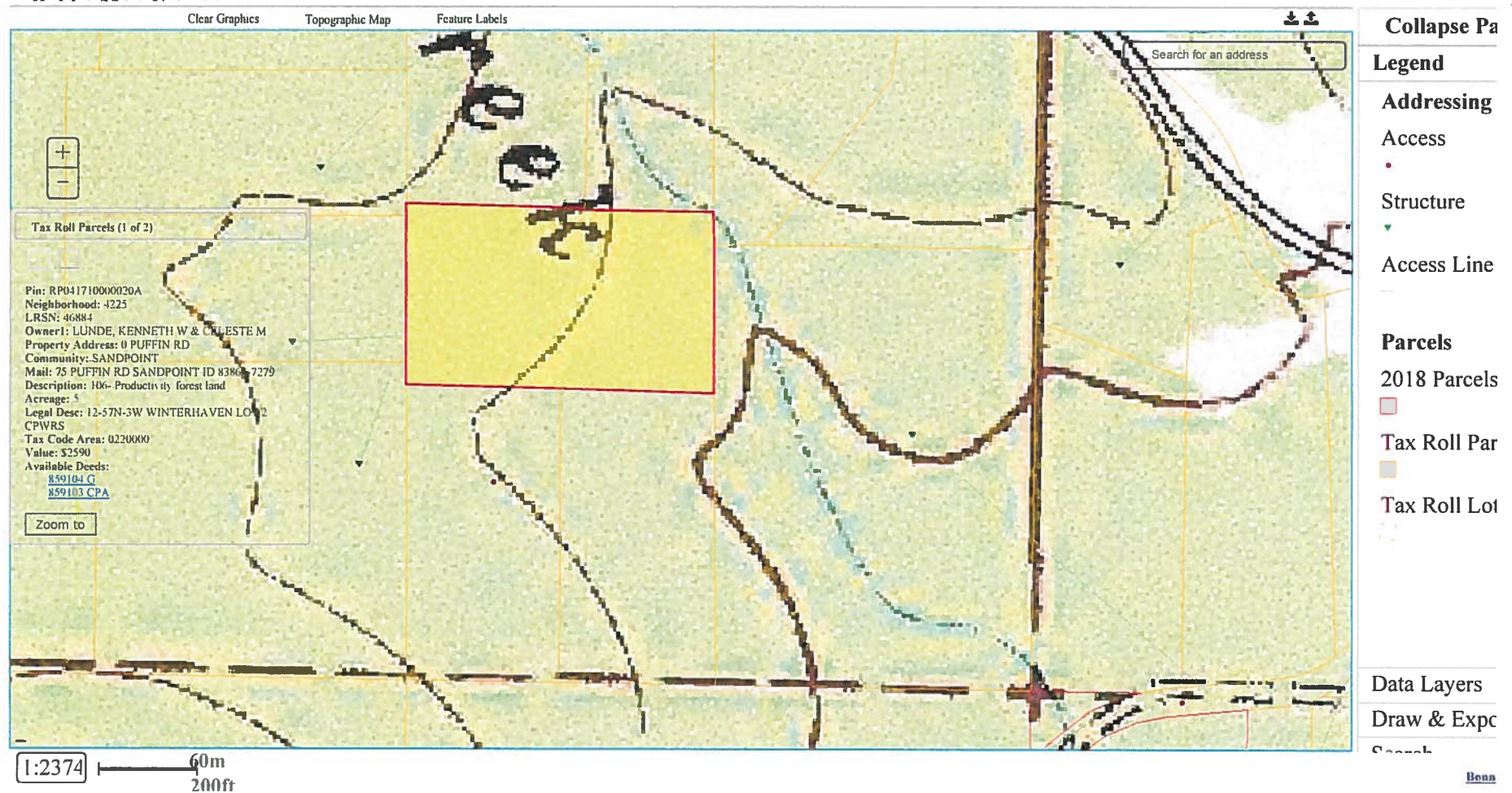
Draw & Exp

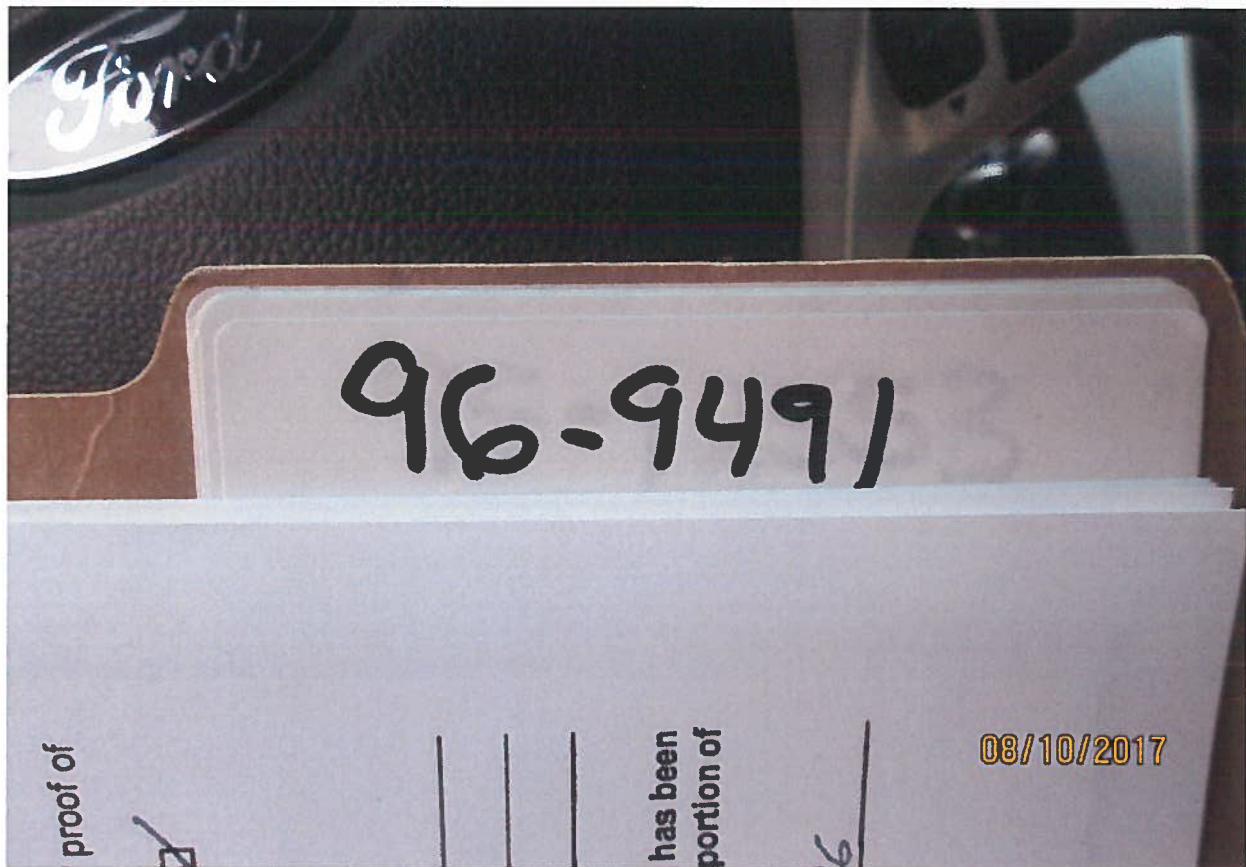
Total Length:

Google

Bonn

Bonner County Map





View of dam on unnamed stream.



Outlet structure.



View downstream from dam.



Place of use.



View of storage and dam with outlet structure with bridge over it.



Place of use.



Dry hydrant to be used by fire department in case of fire.