

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 98-07914

Exam Date: 7/12/2017

1. Current Owner:

MICHAEL F HANSON PO BOX 662 BONNERS FERRY ID 83805 (208) 267-9805

And

ANITA C HANSON PO BOX 662 BONNERS FERRY ID 83805 (208) 267-9805

2. Accompanied by: Michael Hanson

3. SOURCE:

UNNAMED STREAM

TRIBUTARY:

ROCK 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 SE¼NW¼ Sec. 23, Twp 63N, Rge 01E, B.M. BOUNDARY County

Method of Determination: Maps and GPS. POD located at -116° 18.054, 48° 47.997

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	
63N	01E	23								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	
63N	01E	23								X									

PLACE OF USE: IRRIGATION FROM 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	
63N	01E	23								0.5									.5

Total Acres: 0.5

PLACE OF USE: IRRIGATION 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	
63N	01E	23								X									

Method of Determination: Google Earth, Bing Map, and Arcmap.

3.

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

☒ Indicate weir size/pipe as applicable.☒ Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.☒ Aerial Photo Attached (required for irrigation of 10+ acres).☒ 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:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 0.5 \text{ AC} \times 3 \text{ AF} = 1.5 \text{ AF}$$

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

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} =$$

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

G. NARRATIVE/REMARKS/COMMENTS

Field exam with Michael Hanson showed a snake like pond located on an unnamed stream. There was a berm dam of about 8-9 feet on the west end of the pond. Mr. Hanson said the depth was an average depth of 8 feet with some areas being deeper and some shallower. Surface area of pond was measured during license review and was equal to 0.2 acres. This application was taken prior to newer pond analysis tool and had different numbers for seepage and evaporation. Because the permit had more than adequate storage, the newer numbers for evaporation and seepage will be used on license. The initial fill of the pond is equal to 1.6 acre-feet with 0.5 acre-feet needed for seepage and evaporation.

Next to the pond, the applicant had built a stilling well that was connected through a pipe to the pond. The applicant had a ½ hp pump for the irrigation of garden, orchard, and grass around house. The actual acreage measured out to 0.5 acres. It was discovered during license review that the irrigation season was for year round use. That error was corrected during licensing to show the correct season of use. Irrigation storage and irrigation from storage will be licensed for 1.5 acre-feet each.

The pond was only fed from an unnamed stream and there was no spring source. The spring source will be removed from the license along with diversion to storage. There was no need to keep domestic, irrigation and wildlife as a cfs on the license. During review of the topo map during licensing, it was found that the unnamed stream was intermittent and made it all the way to Rock Creek. Because it shows that water can make it to a named stream, the tributary will be changed from sinks to Rock Creek.

A majority of the conditions will either be reworded, changed, or removed from license. Conditions 132, R66, 26A, and 082 will be removed at time of licensing. Condition 219 will be changed to 259 to account for the from storage component. Condition 220 will be changed to show the actual storage volume and surface area. Condition R58 will replace R66 to limit the irrigation to only 3 acre-feet per acre. Condition 218 and 004 will be kept on license. 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>
IRRIGATION STORAGE	01/01 to 12/31		1.5 AF
IRRIGATION FROM STORAGE	04/01 to 10/31		1.5 AF
WILDLIFE STORAGE	01/01 to 12/31		2.1 AF
FIRE PROTECTION STORAGE	01/01 to 12/31		2.1 AF
<u>Totals:</u>			3.60 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 Fink

Date

2/28/2018

Reviewer

Douglas Jones P.E.

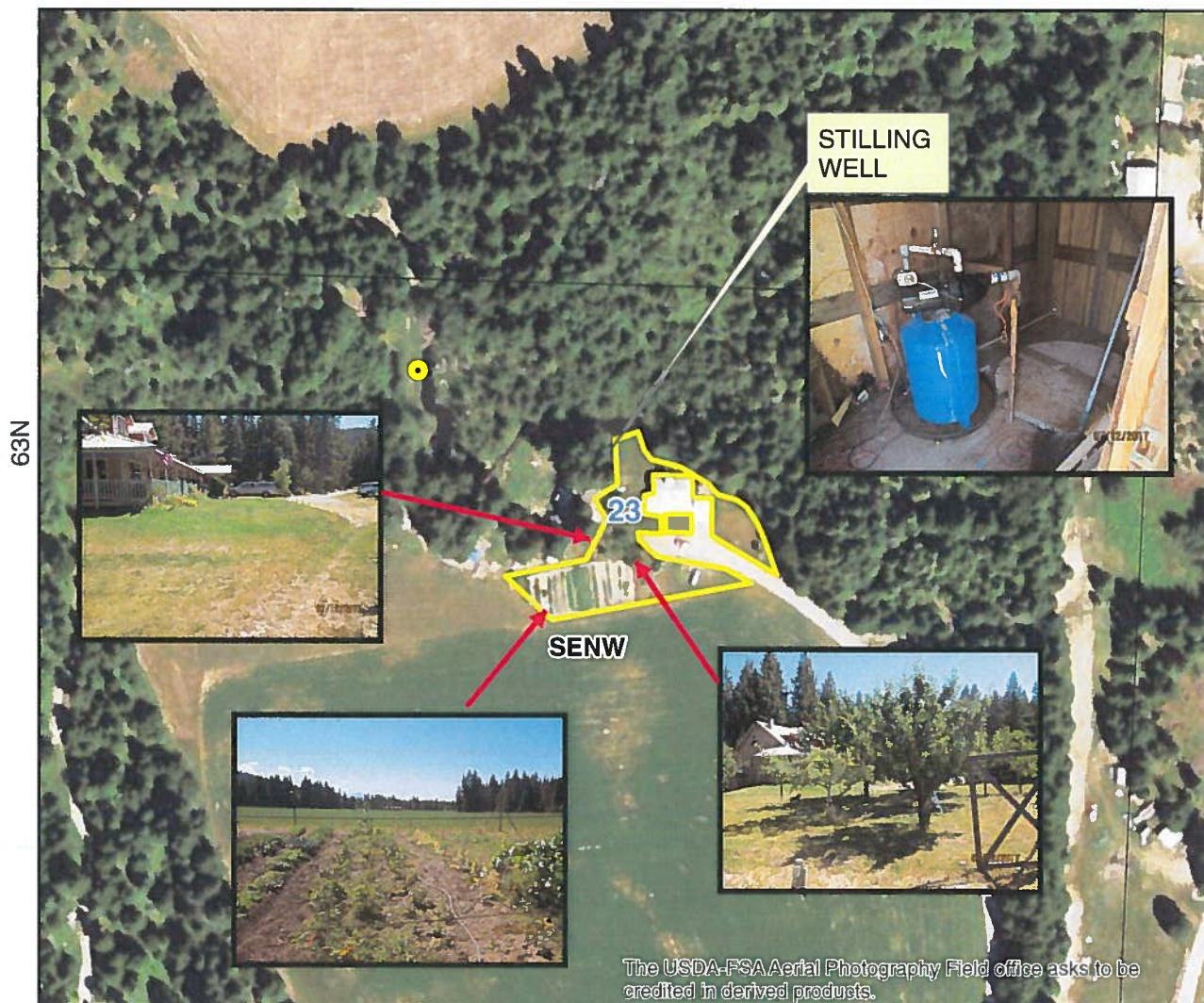
Date

3/7/2018

State of Idaho
Department of Water Resources
Attachment to Field Exam
98-7914

IRRIGATION FROM STORAGE / SYSTEM DIAGRAM

01E



0 0.025 0.05 0.1 Miles

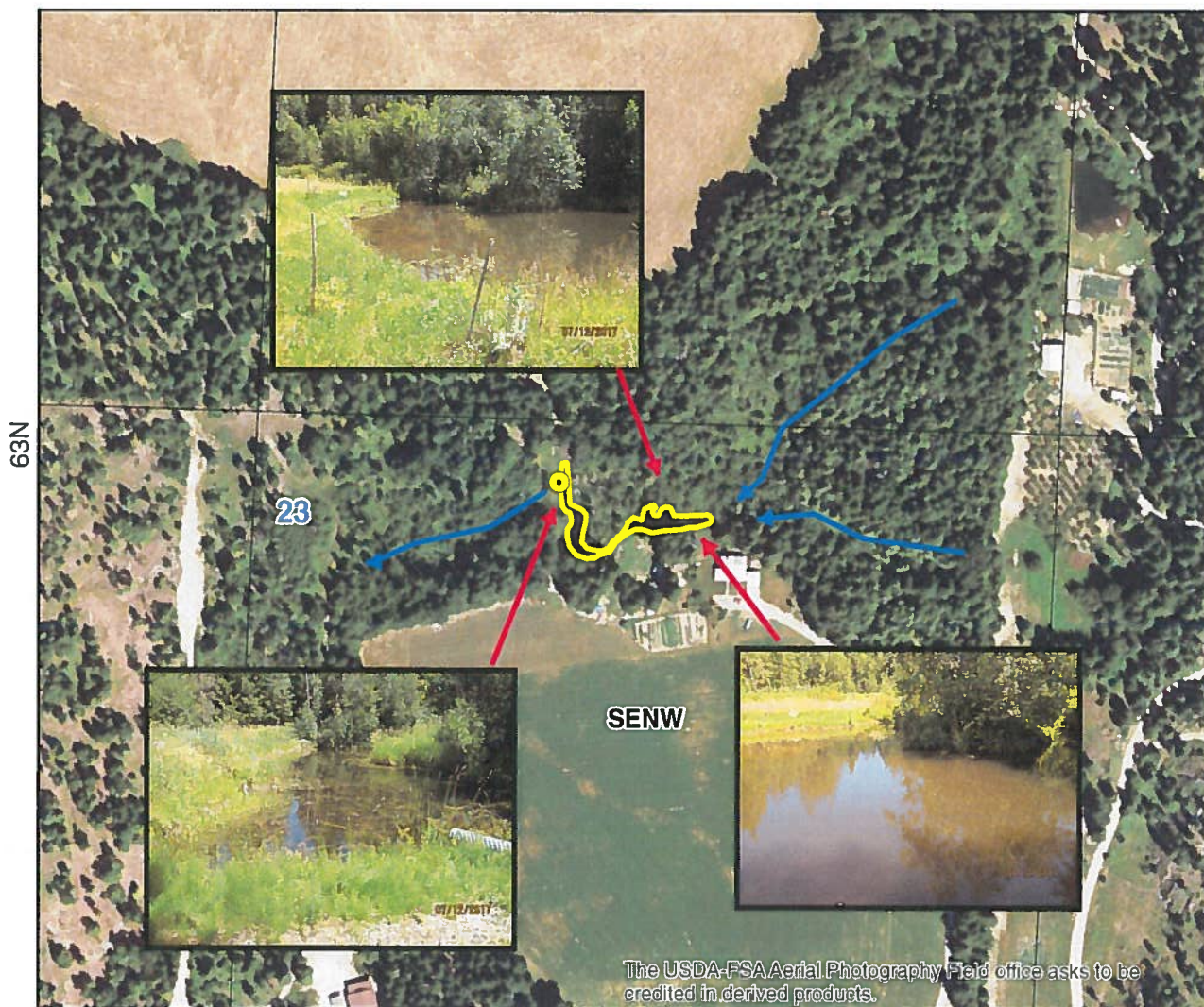
- Point of Diversion
- Place Of Use Boundary
- Townships
- PLS Sections



State of Idaho
Department of Water Resources
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FIRE PROTECTION STORAGE, WILDLIFE STORAGE, and IRRIGATION STORAGE / SYSTEM DIAGRAM

01E



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

0 0.035 0.07 0.14 Miles



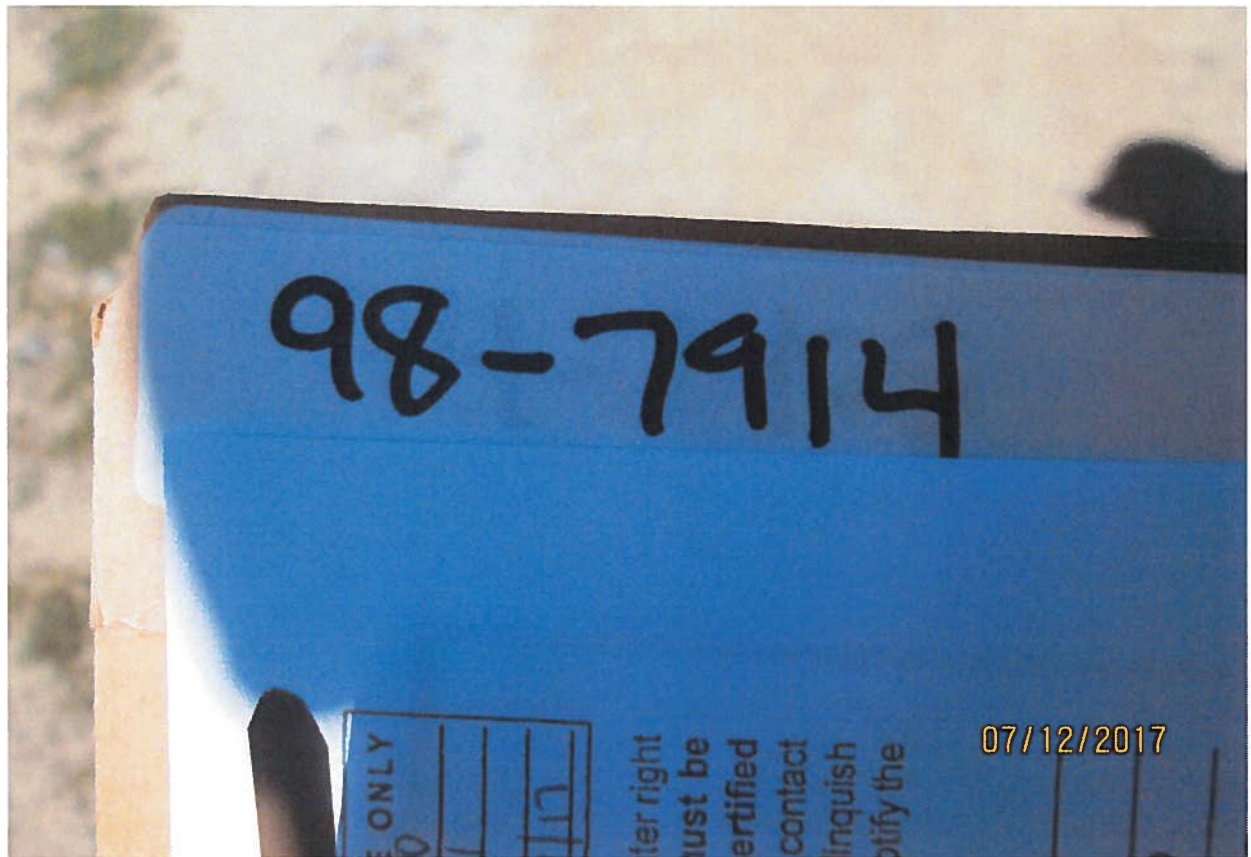
Total Storage Calculations

FILE NUMBER	98-7914
REVIEWER	Adam Frederick
DATE	2/28/2018

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.)	0.2	"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)	1.6	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)	1.5	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 " <u>From Storage</u> " component exceeding the initial fill on the permit to include a volume in this space.
Estimated Seepage Loss (AF)	0.2	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	0.3	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	3.6	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.



Dam to the left of the picture. Applicant had built access road across pond and put culvert underneath.



Storage POU.





Storage POU.





Storage POU.



Beginning of pond looking upstream to source.



Applicant had built stilling well adjacent to pond for a cleaner source of water.



Irrigation POU.



Irrigation POU.





Irrigation POU.

