

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 98-07979
Exam Date: 7/27/2018

1. Current Owner:
GOODRICH PATTON LIVING TRUST
C/O TRS REBECCA LEA PATTON & RAYMOND THOMAS GOODRICH
1001 FOREST AVE PALO ALTO CA 94301-3031 (650) 322-3569
AND
REBECCA LEA PATTON 1001 FOREST AVE PALO ALTO CA 94301-3031
AND
RAYMOND THOMAS GOODRICH 1001 FOREST AVE PALO ALTO CA 94301-3031
2. Accompanied by: Mark Owens
Phone No:
Address:
Relationship to Permit Holder: Permit Holder (Original permit holder)

3. **SOURCE:**
GROUND WATER
- TRIBUTARY:**
CURLEY CREEK

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 98-7693 & 98-7903 (municipal) 98-4085 (statutory claim for stockwater)
2. Other water rights with the same point-of-diversion: None

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

GROUND WATER NE¼NW¼ Sec. 22, Twp 62N, Rge 03E, B.M. BOUNDARY County
GROUND WATER NE¼NW¼ Sec. 22, Twp 62N, Rge 03E, B.M. BOUNDARY County
GROUND WATER NW¼NE¼ Sec. 22, Twp 62N, Rge 03E, B.M. BOUNDARY County

Method of Determination: Maps and GPS. POD's located at

Pond 1: -116° 03.643, 48° 42.893

Pond 2: -116° 03.520, 48° 42.815

Pond 3: -116° 03.320, 48° 42.810

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	
62N	03E	22	X L 1	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
N/A					

*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
N/A						

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

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) =$$

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

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

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

Pond 1 – surface area of 0.8 acres with maximum depth of 10 feet

Pond 2 – surface area of 0.7 acres with maximum depth of 13 feet

Pond 3 – surface area of 7.5 acres with maximum depth of 12 feet

G. NARRATIVE/REMARKS/COMMENTS

Field exam with applicant, Mark Owens, showed 3 ponds that were built for wildlife purposes. The applicant said the ponds were excavated and filled with groundwater. There was return flow to Curley Creek and thus it's listed as a tributary. Water returned to the creek through excavated channels. The largest pond had a surface area of 7.5 acres and a levee had been built to hold that water. The levee was 5 or 6 feet in height with pond filled within a couple feet of the top. The two smaller ponds have surface areas equal to 0.7 acres and 0.8 acres. The ponds varied in maximum depth from 10 feet to 13 feet. The depths were multiplied by 0.4 to account for the slopes of each pond. Two ponds were very easy to view and access thanks to a road that was built next to them. The third pond was difficult to reach as it got very swampy as I approached it. Photos were taken of all ponds and will be referenced on the layout map as Pond 1, Pond 2, and Pond 3.

The pond analysis tool was used to determine the annual volume for licensing. This was a very recent application and the tool had been used on the application. All values for surface area and maximum depth remained the same through licensing. There was a change in the evaporation from the permit to licensing. The evaporation was 4.9 acre-feet smaller than what was applied for. The ET website shows it was updated in December of 2017 and this might be the reason for smaller evaporation value. The license will be issued for wildlife storage with an annual volume of 52.1 acre-feet.

The values on condition 219 will be changed to reflect the new evaporation values. All other conditions will remain the same. Overlap review shows numerous points of diversions in the general location of this right. Most rights (98-7019, 98-7693, 98-7903, and 98-7217) are in the name of Curley Creek Water Assn. A pump house was spotted during the exam but was some distance from the ponds. Water right 98-7217 is listed with a source as Curley Creek. No point of diversion could be found during exam for this right. Statutory claim 98-4085 has not yet been verified as a valid water right and will not be verified until an adjudication is authorized in the 98 basin. There are no overlap concerns.

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		52.1 AF
<u>Totals:</u>			52.10 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. AUTHENTICATIONField Examiner's Name Adam Franklin Date 1/25/2019Reviewer Douglas Jones PE Date 1/29/2019

Total Storage Calculations (Pond 1)

FILE NUMBER	98-7979
REVIEWER	Adam Frederick
DATE	1/25/2019

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.)	4	"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)	3.2	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)	0.8	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	4.0	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.

Total Storage Calculations (Pond 2)

FILE NUMBER	98-7979
REVIEWER	Adam Frederick
DATE	1/25/2019

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.)	0.7	"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)	3.6	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. <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)	0.0	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	0.7	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	4.4	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.

Total Storage Calculations (Pond 3)

FILE NUMBER	98-7979
REVIEWER	Adam Frederick
DATE	1/25/2019

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User Input
Calculated value
Formula Explanations

Surface Area (AC.)	7.5	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	4.8	"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)	36.0	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)	7.7	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	43.7	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
98-7979

WILDLIFE STORAGE LAYOUT



03E

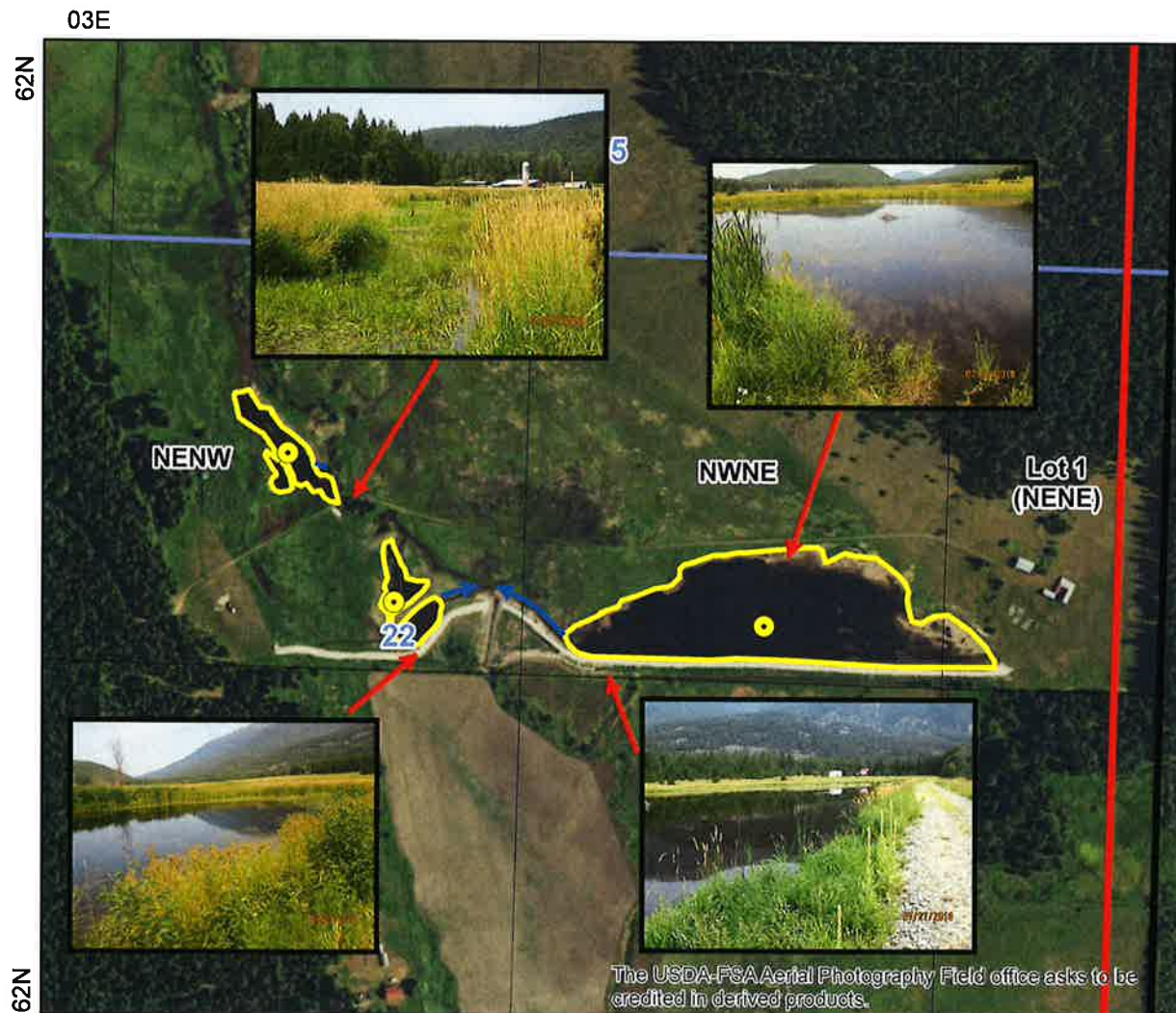
-  Point of Diversion
-  Place Of Use Boundary
-  Townships
-  PLS Sections
-  Quarter Quarters

0 0.05 0.1 0.2 Miles



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WILDLIFE STORAGE / SYSTEM DIAGRAM



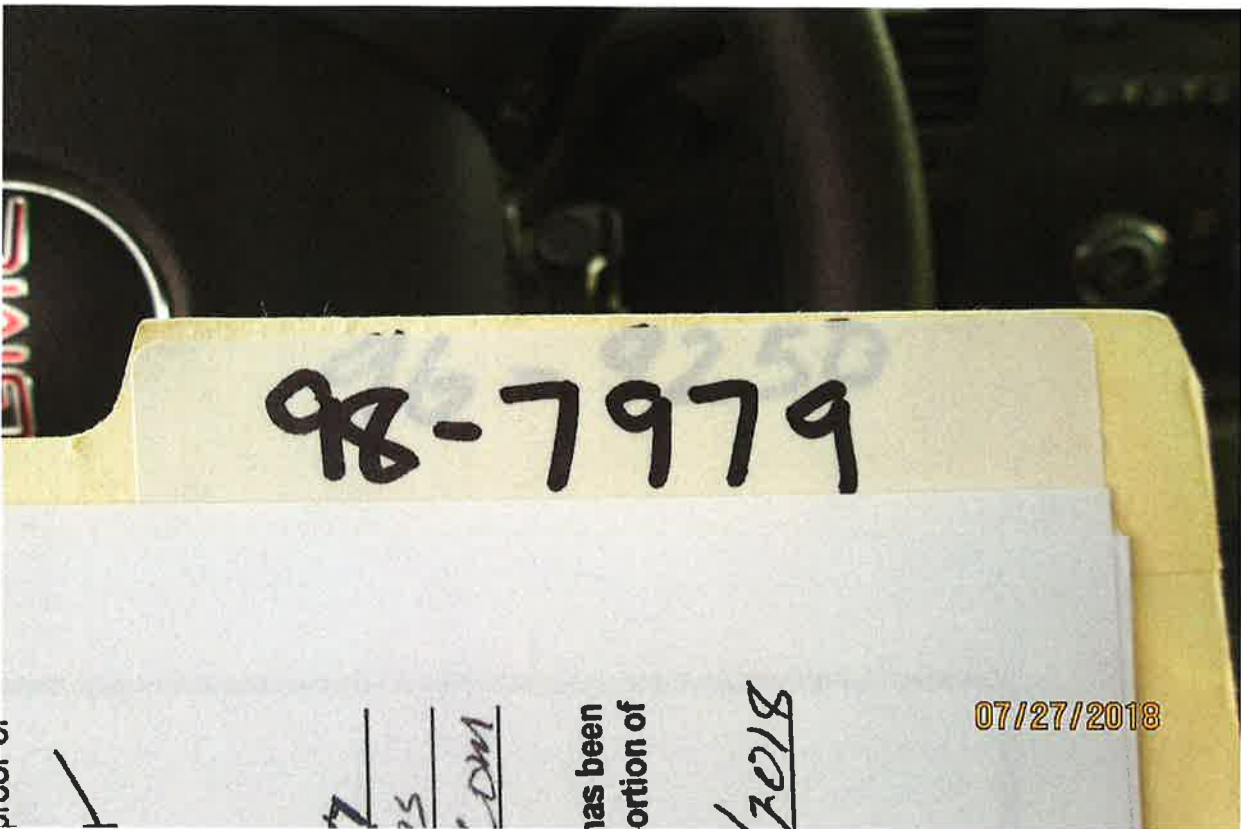
62N

03E

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

0 0.05 0.1 0.2 Miles





Pond 1 wildlife storage.



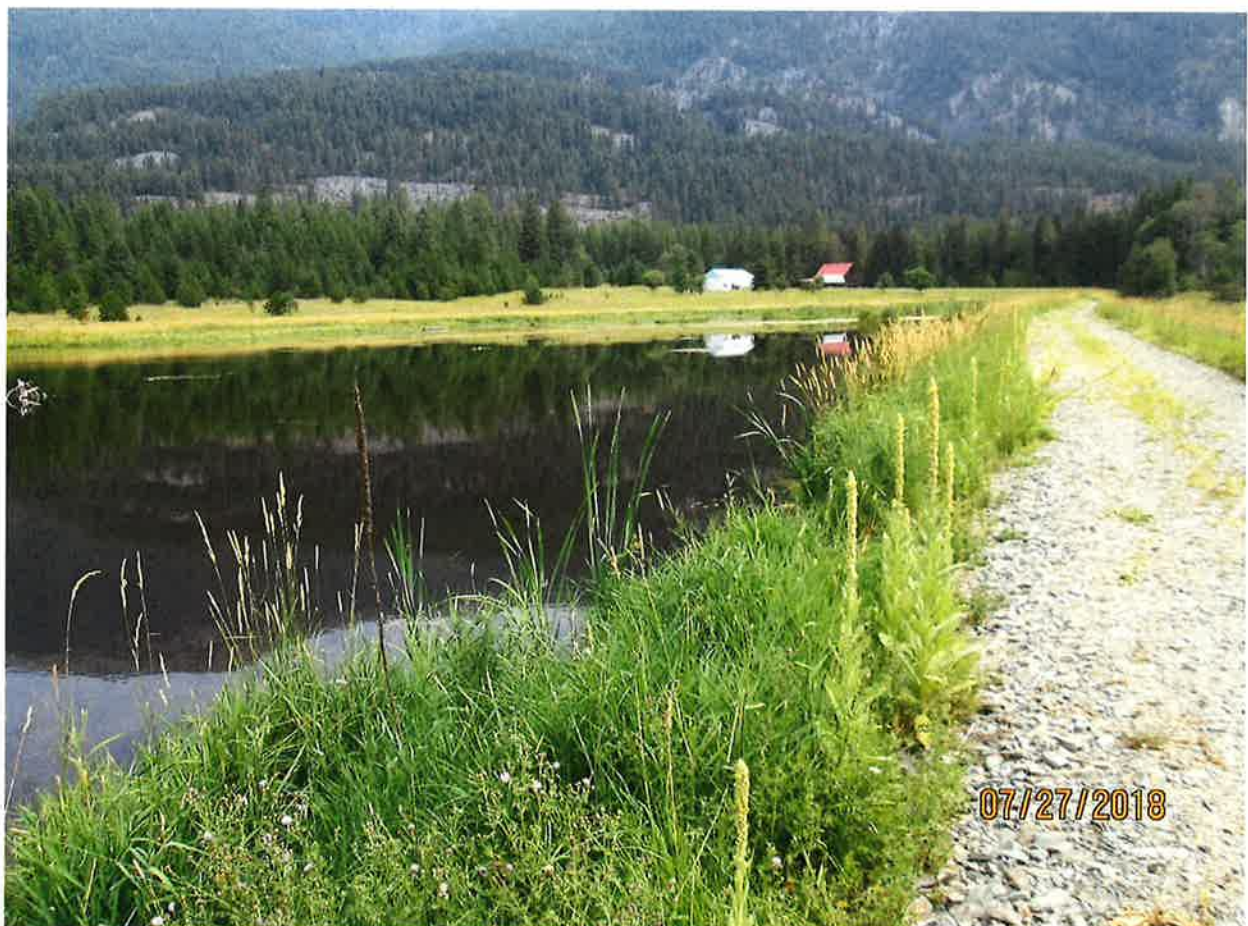
Pond 1 wildlife storage.



Pond 2 wildlife storage.



Pond 2 wildlife storage.



Pond 3 wildlife storage and levee.



Pond 3 wildlife storage.

