

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 85-15780

Exam Date: 6/13/2018

1. Current Owner:
JANET SHIRA 3429 9TH ST E LEWISTON ID 83501 (208) 983-7243
2. Accompanied by: Peggy Kaufmann
Phone No: 208-983-2341
Address: 765 Whitetail Dr Grangeville ID 83530
Relationship to Permit Holder: Daughter

3. **SOURCE:**
UNNAMED STREAM

TRIBUTARY:
THREEMILE 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 SE¼SE¼ Sec. 29, Twp 30N, Rge 03E, B.M. IDAHO County

Method of Determination: Maps and GPS. POD located at -116° 06.182, 45° 54.230

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	
30N	03E	29																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	
30N	03E	29																X	

PLACE OF USE: RECREATION

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
30N	03E	29																X	

DIVERSION TO STORAGE same as RECREATION

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
5 GALLON BUCKET						

2. Measurements: 5 gallon bucket test in 5.4 sec, 5.6 sec, 5.4 sec with average of 5.5 seconds.

 $(5.5 \text{ sec} / 5 \text{ gal}) * 60 \text{ seconds} = 66 \text{ gpm or } 0.15 \text{ cfs}$ **E. FLOW CALCULATIONS**

Measured Method: N/A

Additional Computation Sheets Attached

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

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

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

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

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

G. NARRATIVE/REMARKS/COMMENTS

Field exam with Peggy Kaufmann showed an off stream pond from an unnamed stream. Water was diverted through a concrete pipe into the pond and returned to the creek through an old metal pipe. There was no accurate way to measure the flow into the pond, but there was a way to measure the outflow. Three 5 gallon bucket tests were performed on the outflow on the pond with an average fill time of 5.5 seconds. Measurement showed a diversion to storage and recreation flow at 66 gpm or 0.15 cfs. Pond had an average depth of 9 feet and surface area of 0.13 acres. The surface area on the application and permit was equal to 0.14 acres but a more accurate shape was made at licensing that was 0.01 acres smaller than permit. The storage volume for recreation and fire protection storage will be lowered to 1.2 acre-feet with 0.1 acre feet required for evaporation and seepage. The permit was issued for 1.4 acre-feet and the license will be issued for 1.3 acre-feet.

Condition 082 will be removed from license and all other conditions will remain. There were minor adjustments to storage volumes on conditions 219 and 220. 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>
DIVERSION TO STORAGE	01/01 to 12/31	0.15 CFS	
RECREATION	01/01 to 12/31	0.15 CFS	
FIRE PROTECTION STORAGE	01/01 to 12/31		1.3 AF
RECREATION STORAGE	01/01 to 12/31		1.3 AF
<u>Totals:</u>		0.150 CFS	

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 Agan F. Smith Date 6/21/2018

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

State of Idaho
Department of Water Resources
Attachment to Field Exam
85-15780

FIRE PROTECTION STORAGE and RECREATION STORAGE / SYSTEM DIAGRAM



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

0 0.02 0.04 0.08 Miles



Total Storage Calculations

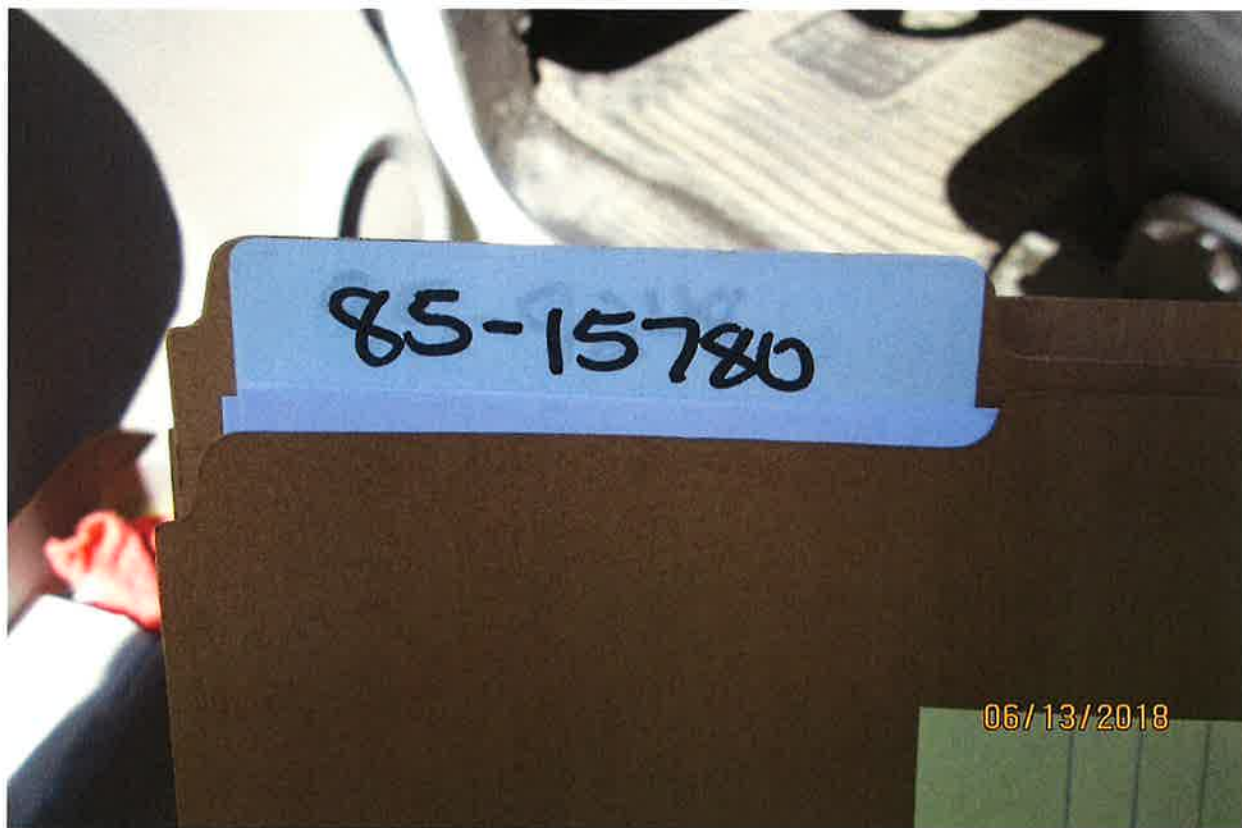
FILE NUMBER	85-15780
REVIEWER	Adam Frederick
DATE	6/21/2018

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.)	0.13	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	9	"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. <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)	0.1	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	1.3	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.

Flow Rate into Pond (CFS)	0.15	The "Flow Rate into Pond" depicts the actual flow, either measured or estimated, into the pond. For offstream facilities, this will be equivalent to "diversion to storage" rate.
Highest Daily Evaporation Rate From Evaporation Tab. (mm/Day)	2.85	This number is carried over from the "Evaporation Loss" sheet. It is the highest recorded number in the "Precipitation Deficit Table".
Required Daily Maintenance Volume (AF/Day)	0.00	"Required Daily Maintenance Volume" is the maximum volume of water needed on any given day during the year to maintain pond volume. It is calculated by adding the highest daily evaporation loss to the average daily seepage loss in acre feet. The average daily seepage loss is calculated by dividing the "Estimated Seepage Loss" by 365 days. This is acceptable, since the seepage rate shouldn't vary throughout the season unless the pond completely freezes over during the winter months. The highest daily evaporation loss is calculated by dividing the Highest Daily Evaporation Rate by the 304.8 conversion factor and multiplying this number by the pond surface area to attain a combined daily acre feet requirement.
Minimum Maintenance Flow (CFS)	0.00	The "Minimum Maintenance Flow" is the minimum amount of flow required to maintain the level of the pond. This number is determined by dividing the "Maximum Required Daily Maintenance Volume" by 1.9835. This flow can be used to determine if the flow rate into the pond is adequate to maintain the pond level.
Days Required to Fill the Pond	4	The "Days Required to Fill the Pond" is calculated by dividing the "Pond Capacity" by the "Flow Rate" minus "Minimum Maintenance Flow" multiplied by 1.9835. This section will assist you in determining if the flow rate being diverted to the pond is adequate to fill the pond while maintaining the pond level. The length of time to fill the pond will help determine if the flow rate is adequate for the size of pond being proposed. <i>If this number is approximately 6 months (180 days) or more, the reviewer should have a discussion with the applicant to make sure he/she understands that it will take a significant length of time to fill the pond.</i>
Days Required to Fill the Pond at 13,000 Gallons per Day	30	Some water users may want to fill a pond under the 13,000 gallons per day domestic exemption. The "Days Required to Fill the Pond at 13,000 Gallons per Day" is calculated by converting the "Pond Capacity" and the "Required Daily Maintenance Volume" to gallons. The "Pond Capacity" is then divided by 13,000 gallons minus the "Required Daily Maintenance Volume" in gallons to determine the number of days to fill pond. <i>If this number is approximately 6 months (180 days) or more, the reviewer should have a discussion with the applicant to make sure he/she understands that it will take a significant length of time to fill the pond.</i> Negative values indicate that the supply of 13,000 gallons per day is not enough volume to overcome the required daily maintenance volume; the pond will never fill.



POD.

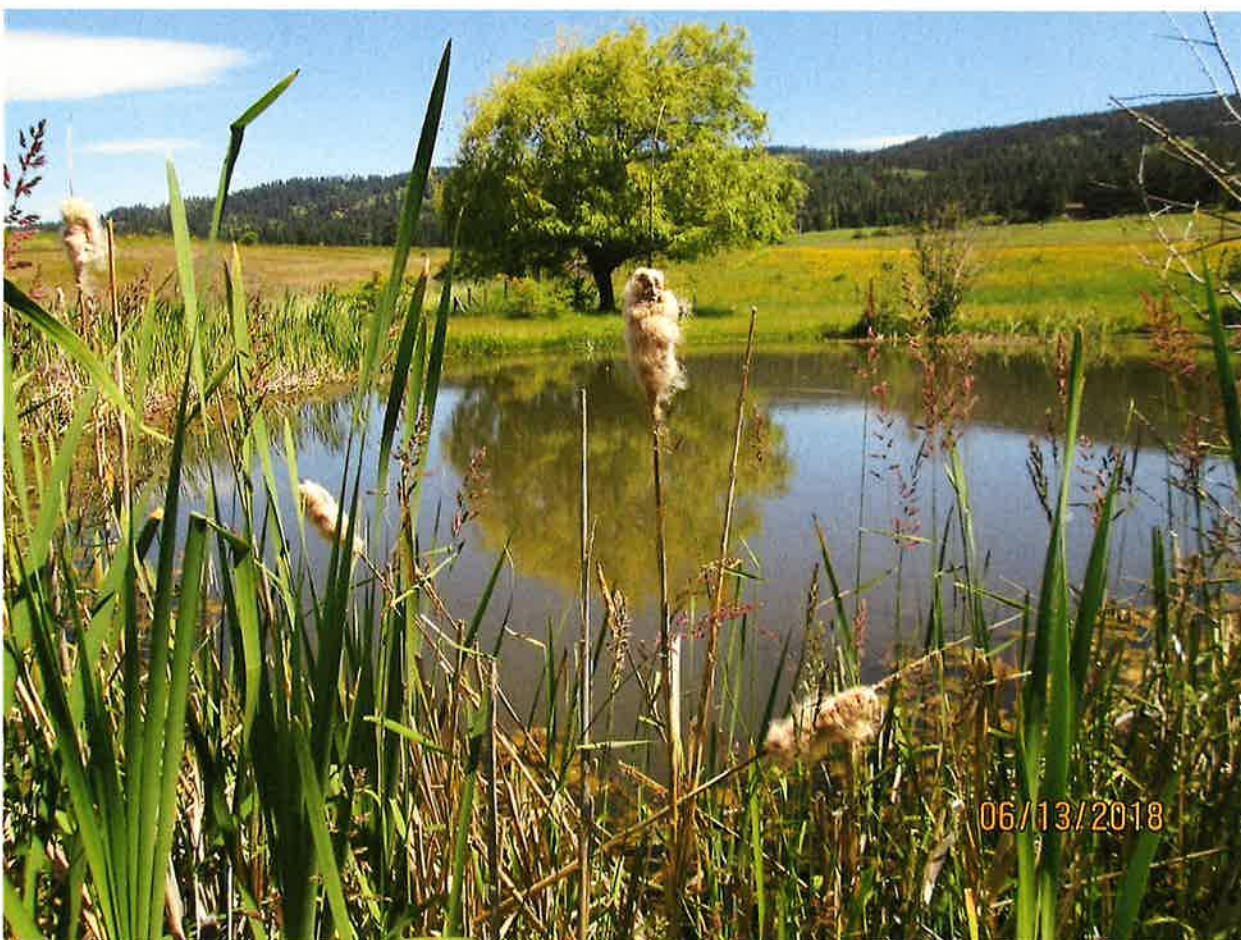


POU.





POU.





Return flow pipe back into creek.

