

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 83-11987
Exam Date: 6/25/2020

1. Current Owner:
ID DEPT OF FISH & GAME PO BOX 25 BOISE ID 83707-0025
2. Accompanied by: In office exam.

3. **SOURCE:**
DEER CREEK

Tributary
REEDS CREEK

Method of Determination: Arcmap and DRG.

B. OVERLAP REVIEW

1. Other water rights with the same place of use: YES Overlap

Water Right No.	Source	Purpose of Use	Basis
83-11930	DEER CREEK	RECREATION STORAGE	LICENSE

Comments: WR 83-11930 is for same applicant as this WR, and has same source and POU area (Deer Creek Reservoir). WR 83-11987 is for added storage volume to account for seepage and evaporation, plus additional volume required to fill reservoir not licensed for in WR 83-11930. There is no overlap concern.

2. Other water rights with the same point-of-diversion: YES Overlap

Water Right No.	Source	Purpose of Use	Basis
83-11930	DEER CREEK	RECREATION STORAGE	LICENSE

Comments: WR 83-11930 and this WR 83-11987 have the same POD. Condition F06 was added describing same POD between WRs.

C. DIVERSION AND DELIVERY SYSTEM1. **LOCATION OF POINT(S) OF DIVERSION:**

DEER CREEK NW¼ NW¼, Sec. 24, Twp 38N, Rge 05E, B.M. CLEARWATER County

Method of Determination: WR 83-11930 utilized for this WR's POD, as they are the same. GPS location -115° 46.765, 46° 37.55.

PLACE OF USE: RECREATION STORAGE

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
38N	05E	13			X					X	X		X	X		X			
38N	05E	24					X	X	X										

Method of Determination: Arcmap aerial imagery.

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
N/A					

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

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 Sheet.

G. NARRATIVE/REMARKS/COMMENTS

An in office field exam was conducted on 6/25/2020, by Luke Bates, identifying Deer Creek Reservoir being used by Idaho Fish and Game for Recreation Storage purposes. Prior field exam conducted on 6/8/2017 by Adam Frederick references WR 83-11930, which is the initial water right for Deer Creek Reservoir. This WR is being licensed to account for added storage volume and seepage/evaporation volume not accounted for to meet the maximum storage capacity of Deer Creek Reservoir.

Pond analysis sheet created on 7/17/2017 showed a reservoir with surface area of 62 acres, average depth of 15.8 feet, maximum depth of 39.5 feet, reservoir capacity of 979.6 af, an estimated seepage loss of 67.9 af, an estimated evaporation loss of 15.3 af, and a total volume requirement of 1,062.8 af. At time of licensing for WR 83-11930 (11/9/2017), a maximum diversion volume of 900.0 af was licensed, which was 162.8 af less than the total volume required from volume analysis values.

During in office exam on 6/25/2020, a new pond analysis sheet was completed, validating prior pond analysis data detailed above. This WR will be licensed for the difference of total volume requirement (af) and maximum diversion volume licensed in issuance of WR 83-11930 equaling $1,062.8 \text{ af} - 900.0 \text{ af} = 162.8 \text{ af}$, which will be carried forward to license.

All conditions permitted for remain on license. Condition F06 was added to describe same POD for WRs 83-11930 and WR 83-11987. Condition X35 was added describing that WRs 83-11930 and 83-11987 when combined shall not exceed a total annual maximum diversion volume of 1,062.8 af for recreation storage. There are no overlap concerns for this WR.

Have conditions of permit approval been met? X Yes No

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use	Annual Volume
RECREATION STORAGE	01/01 to 12/31	162.8 AF

Totals: 162.8 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

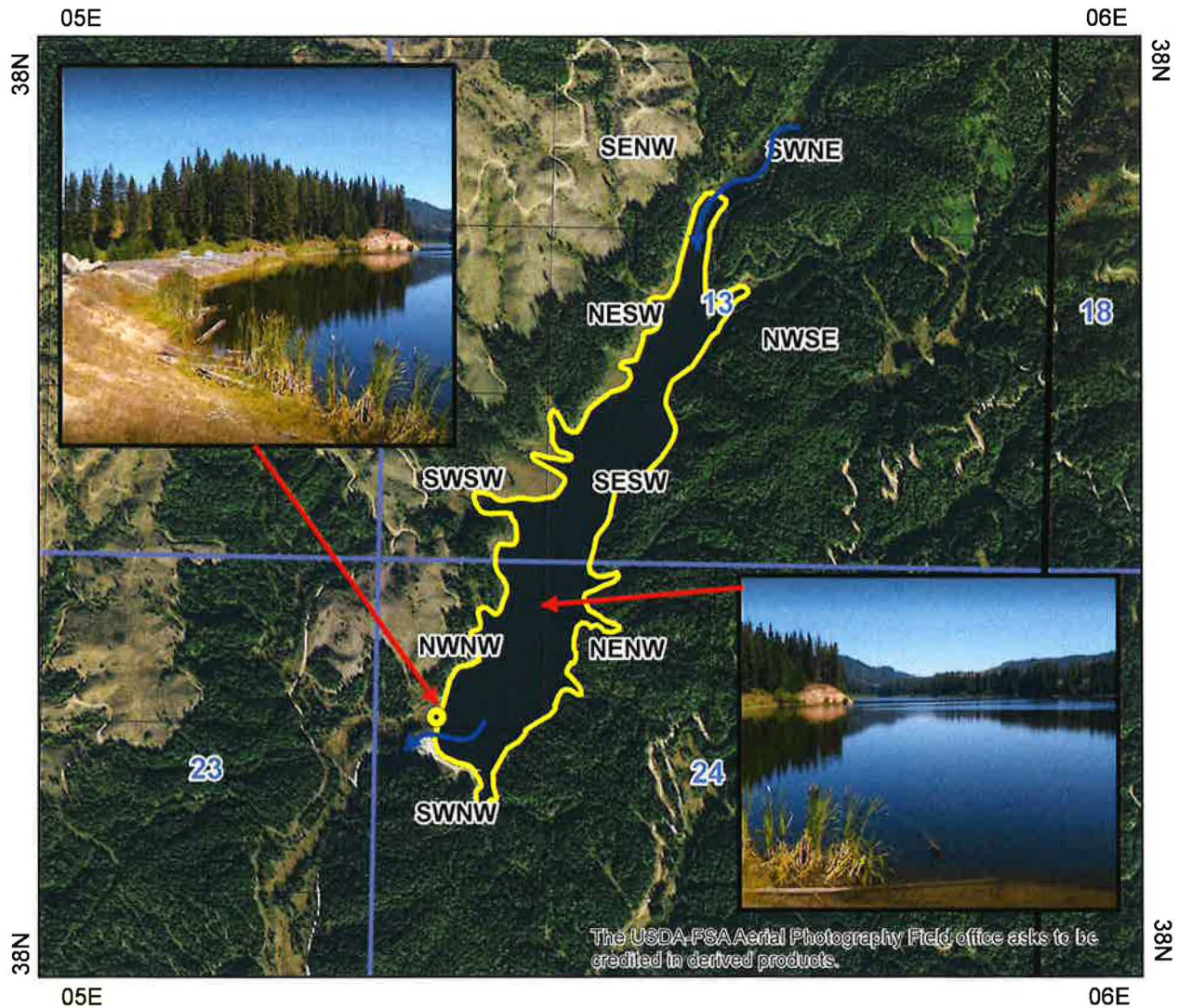
Luke Bates - Water Resource Agent

Field Examiner's Name Luke Bates Date 6/25/2020

Reviewer Adam Franklin Date 6/29/2020

State of Idaho
Department of Water Resources
Attachment to Field Exam
83-11987

RECREATION STORAGE system diagram.



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

0 0.15 0.3 0.6 Miles



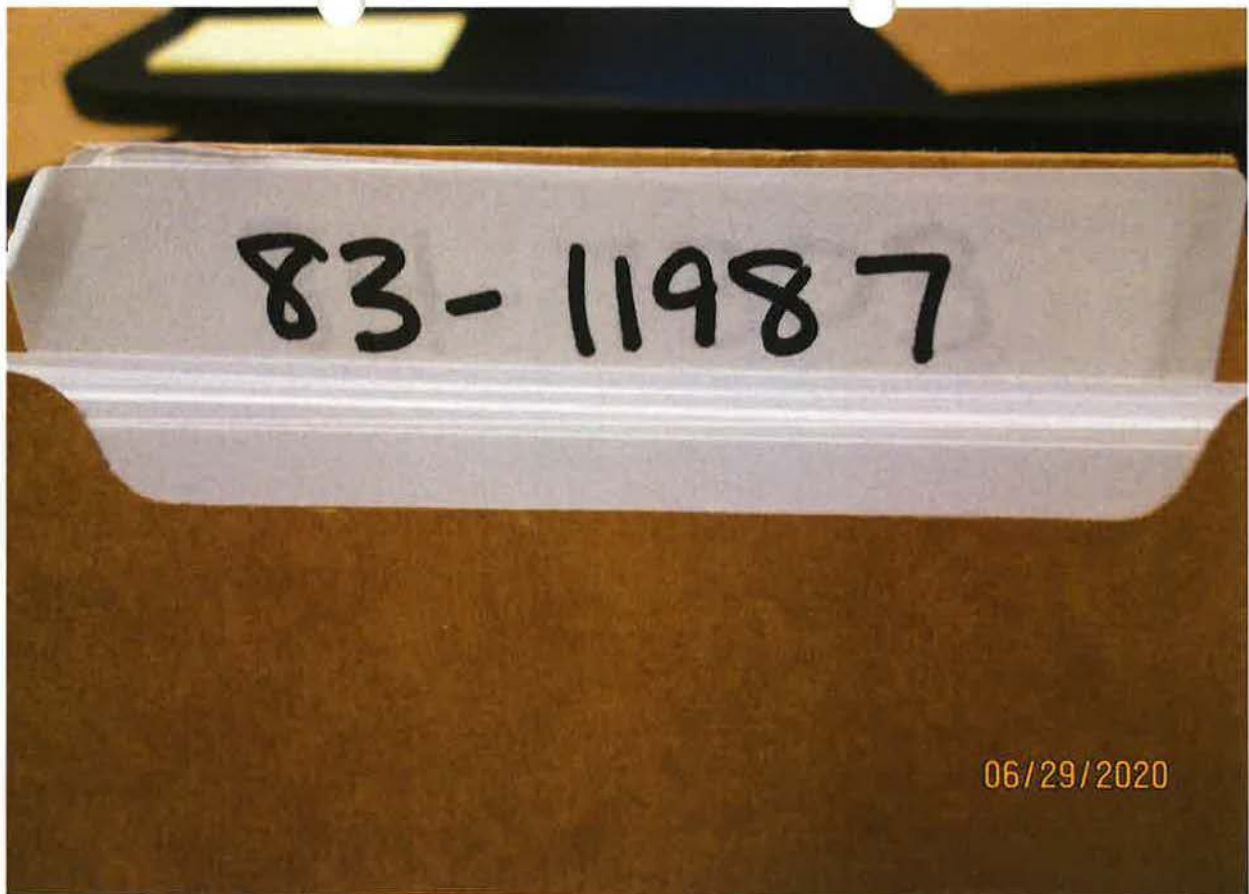
Total Storage Calculations

FILE NUMBER	83-11987
REVIEWER	Luke Bates
DATE	6/25/2020

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.)	62	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	15.8	"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)	979.6	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)	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)	67.9	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	15.3	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	1062.8	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.



POD - SPILLWAY INFLOW



POD – DAM



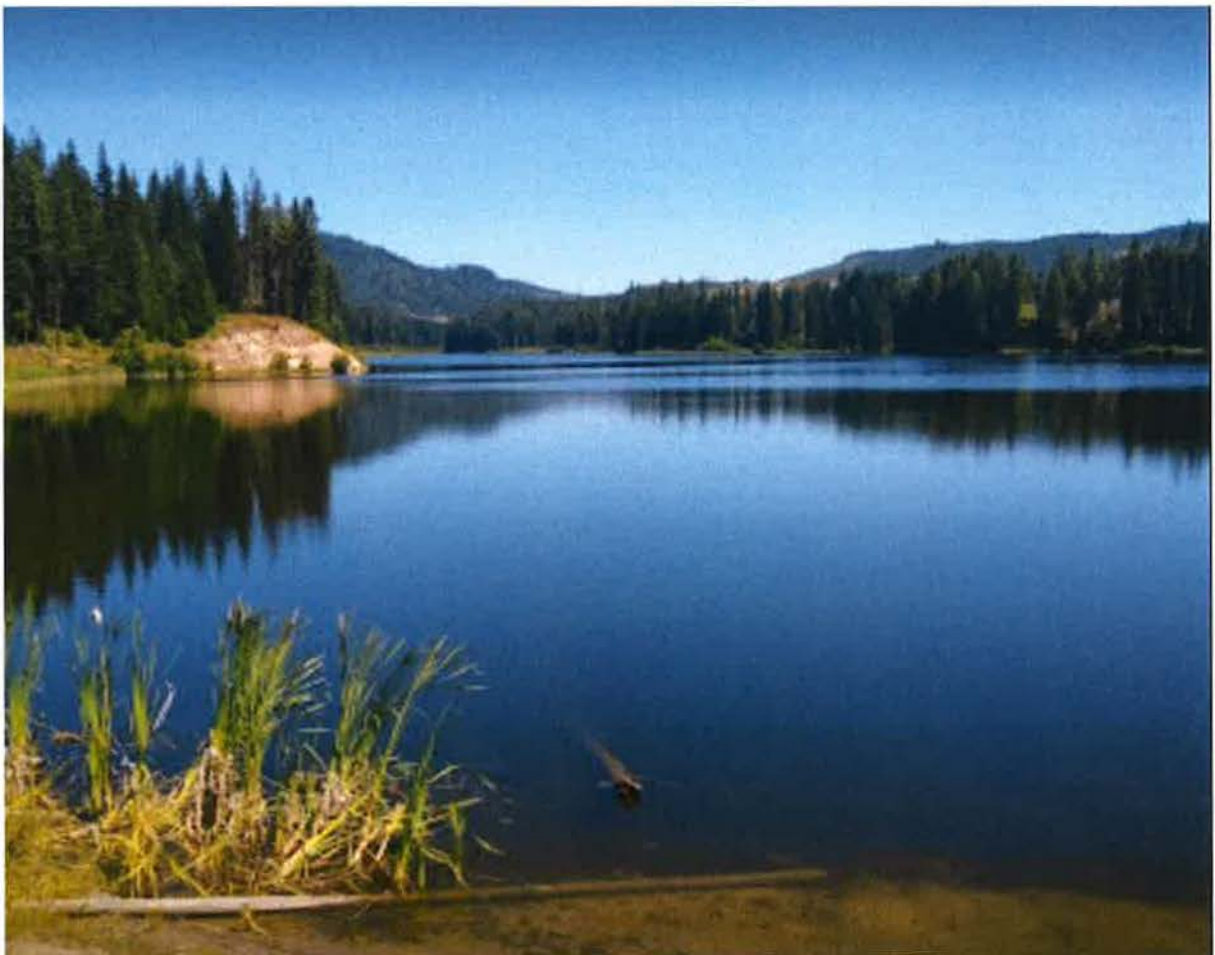


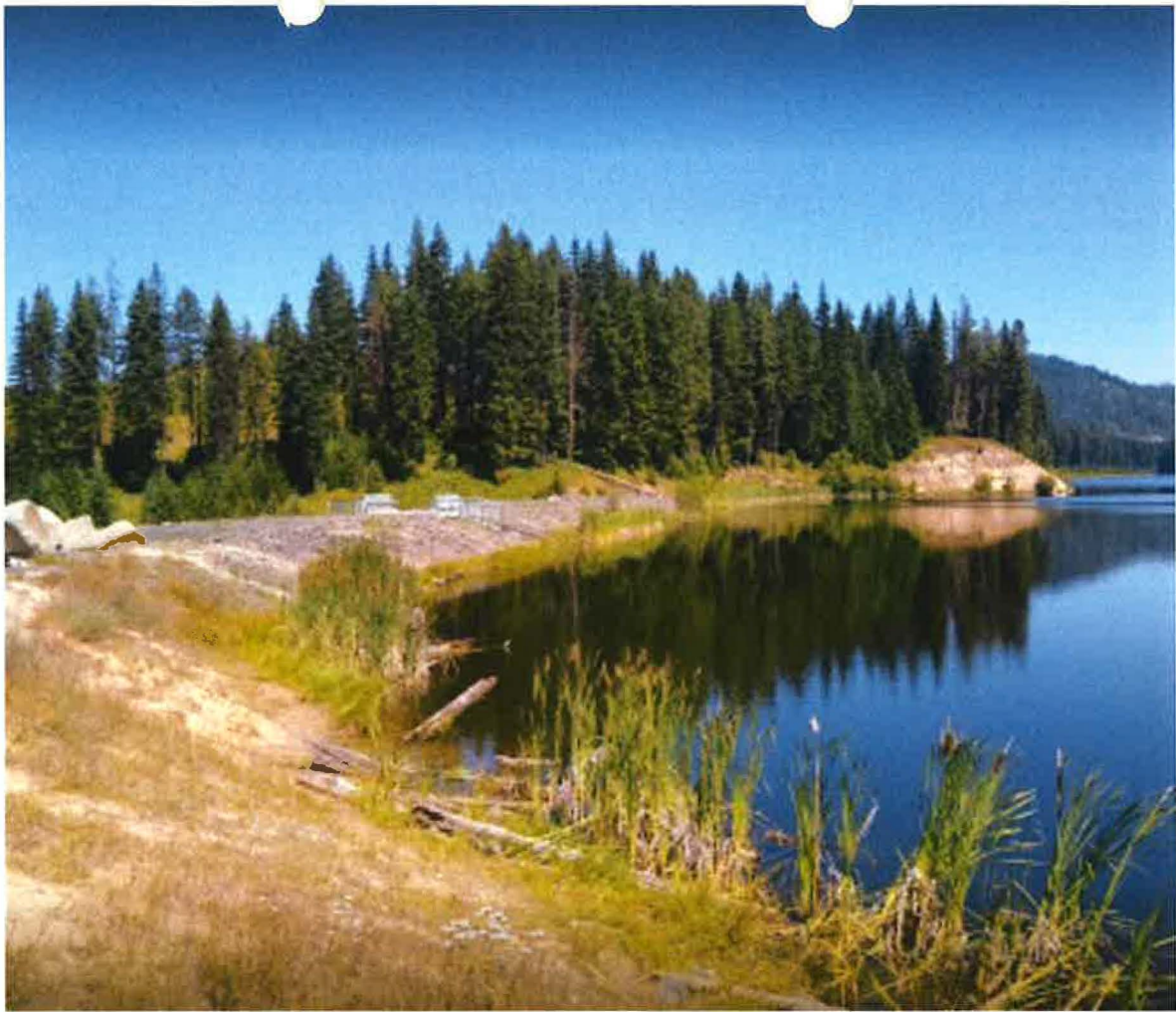
POU





POU





POU

