

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 96-9830
Exam Date: 01/25/2021

1. Current Owner:
MARC BRINKMEYER PO BOX 220 LACLEDE ID 83841-0220
2. Accompanied by: Ryan Fobes, Foresite Engineering
Phone No: 208-714-6866
Address: 418 E Lakeside Ave, #01 Coeur D'Alene ID 83814
Relationship to permit Holder: Representative

3. SOURCE:
HORNBY CREEK
GROUND WATER

Tributary
PEND OREILLE RIVER
HORNBY CREEK

Method of Determination: Arcmap and DRG

B. OVERLAP REVIEW

1. Other water rights with the same place of use: NO Overlap

Water Right No.	Source	Purpose of Use	Basis

Comments: _____

2. Other water rights with the same point-of-diversion: NO Overlap

Water Right No.	Source	Purpose of Use	Basis

Comments: _____

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

HORNBY CREEK SW¼ NE¼, Sec. 24, Twp 57N, Rge 03W, B.M. BONNER County
GROUND WATER SE¼ NW¼, Sec. 24, Twp 57N, Rge 03W, B.M. BONNER County

Method of Determination: GPS. Hornby Creek POD is an earthen dam with discharge flow through channel located at -116°38.554, 48°16.477. Groundwater POD is from within the high water line in pond on the western slope, GPS marked using Arcmap aerial imagery approximated at -116°38.581, 48°16.490.

PLACE OF USE: WILDLIFE STORAGE, FIRE PROTECTION STORAGE, and AESTHETIC 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	
57N	03W	24			X					X									

Method of Determination: Drive by completed in conjunction with field exam for permit 96-9738 located on the same property. Photographs taken of the pond and pond depth identified at that time (9/24/2020).

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
NONE						

2. Measurements: N/A

E. FLOW CALCULATIONS

Measured Method: NONE

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation: N/A

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

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

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

2. Volume Calculations for Other Uses:

- See attached pond analysis worksheet

G. NARRATIVE/REMARKS/COMMENTS

A field exam was performed on 9/24/2020 for the same applicant with Ryan Fobes, applicant's representative, and data was collected for this pond at that time. The original permit associated with this pond was voided due to inaccurate water source identified at the time of that permit. The discrepancy was discussed with Mr. Fobes, who then pursued filing for a new permit with the applicant to ensure the storage pond was compliant with Statute 42-351. I was present for a separate permit's field exam, and elected to capture photographs of the pond, derive the maximum depth of the pond, and collect a GPS point at the POD for Hornby Creek. Pond storage is used by the applicant for wildlife storage, fire protection storage, and aesthetic storage purposes. This is an instream pond, and there is no diversion rate applied to the license.

The excavated pond was developed as an in-stream pond, capturing water from Hornby Creek as well as a groundwater source that influences the pond from within the high water line on the western slope of the topography. Water is allowed to return to Hornby Creek via a large flow through channel located in the southeast corner of the pond. Water was not withdrawn from the pond by the applicant. The pond is clearly illustrated using Arcmap aerial imagery, and the POU was traced out during application development, and again during licensing review to validate the surface area of the pond.

The pond has a surface area of 0.7 acres, a maximum depth of 14 feet, an average depth of 5.6 feet, seepage loss of 0.8 af, and evaporation loss of 0.7 af. The total volume required annually to keep the pond full equals 7.1 af, which is being recommended as the maximum diversion volume for licensing purposes. The three beneficial use annual volume requirements are non-additive, and 7.1 af is assigned to each beneficial use. Although groundwater does influence the pond, there is still a seepage factor defined as groundwater was found to enter from the western slope of the pond, not from within center portion of the pond. Due to the size of the pond, it is reasonable to assume a large portion of the pond is still susceptible to seepage.

Condition 029 was removed from the permit during licensing review. All other conditions on the permit will remain on the license. Overlap concerns: statutory claim 96-4431 has the same applicant as this permit, and uses water from Hornby Creek for irrigation purposes which overlap this permit's POU, but have not been verified by the department. 96-4431 is not being considered as a concern for overlap, as any irrigation associated with the statutory claim is independent of the storage pond associated with this right. There are no other overlap concerns for this right.

Have conditions of permit approval been met? ☒ Yes ☐ No

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use	Annual Volume
WILDLIFE STORAGE	01/01 to 12/31	7.1 AF
FIRE PROTECTION STORAGE	01/01 to 12/31	7.1 AF
AESTHETIC STORAGE	01/01 to 12/31	7.1 AF

Totals: 7.1 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. AUTHENTICATION

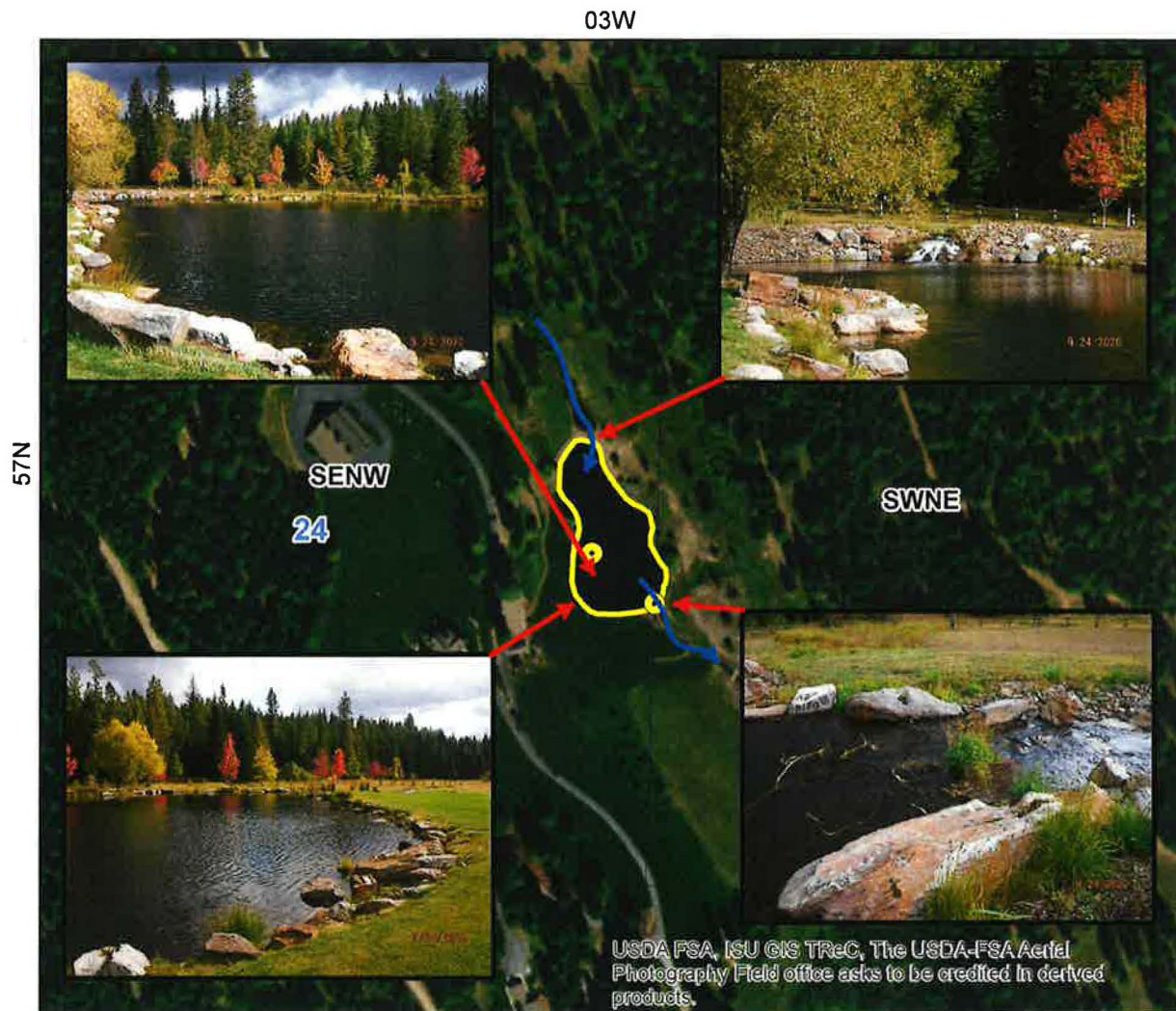
Luke Bates - Water Resource Agent

Field Examiner's Name [Signature] Date 1/27/2021

Reviewer Adam Fink Date 1/28/2021

State of Idaho
Department of Water Resources
Attachment to Field Exam
96-9830

WILDLIFE STORAGE, FIRE PROTECTION STORAGE, and AESTHETIC STORAGE system diagram.



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

0 0.035 0.07 0.14 Miles



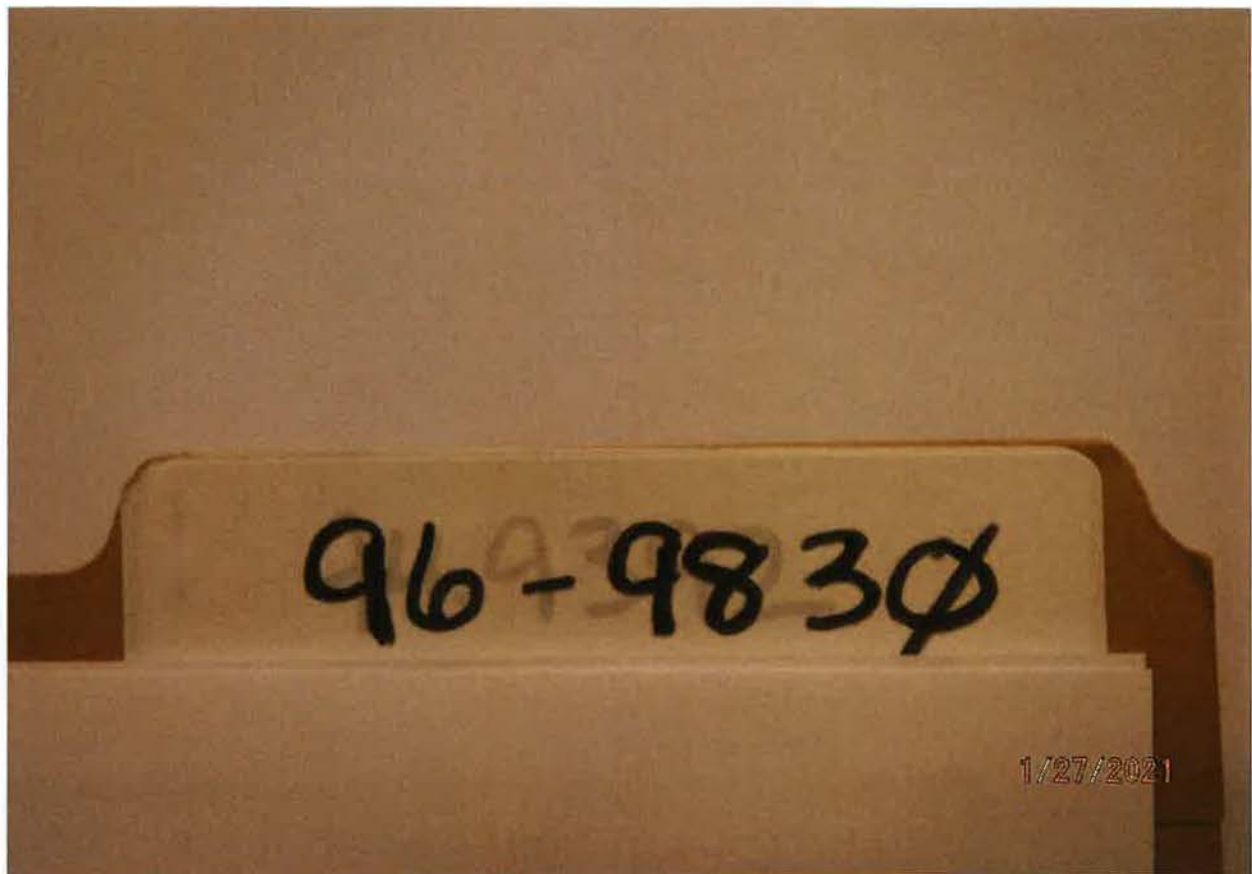
Total Storage Calculations

FILE NUMBER	96-9830
REVIEWER	Luke Bates
DATE	1/25/2021

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.)	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)	5.6	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)	0.8	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)	7.1	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 – EARTHEN DAM WITH FLOW THROUGH PASSAGE BACK TO HORNBY CREEK



INSTREAM POND – INFLOW FROM HORNBY CREEK



POD – GROUNDWATER INFLUENCES POND FROM THE WESTERN SLOPE OF POND



POU – WILDLIFE STORAGE, FIRE PROTECTION STORAGE, and AESTHETIC STORAGE



WATER FLOWS FROM POND BACK TO HISTORIC STREAM CHANNEL – HORNBY CREEK