

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 87-12393
Exam Date: 03/07/2025

1. Current Owner:
ALESSIO REVOCABLE LIVING TRUST 1022 QUARTZ CREEK RD HARVARD ID 83834-9732
2. Accompanied by: Rachel Alessio
Phone No: 760-533-1370
Address: Same as above
Relationship to permit Holder: Permit Holder - Trustee

3. **SOURCE:**
GROUND WATER
UNNAMED STREAM

Tributary
SINKS
SINKS

Method of Determination: ArcMap and DRG Layer.

B. OVERLAP REVIEW

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

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

GROUND WATER SE¼ NE¼, Sec. 3, Twp 41N, Rge 03W, B.M. LATAH County
UNNAMED STREAM SE¼ NE¼, Sec. 3, Twp 41N, Rge 03W, B.M. LATAH County

Method of Determination: Upper Pond – in-pond Ground water source located at approximately -116° 41.684, 46° 55.755;
Lower Pond – earthen dam-dike GPS located at -116° 41.729, 46° 55.784.

PLACE OF USE: 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	
41N	03W	3				X													

Method of Determination: beneficial use field examination and ArcMap aerial & DRG layer 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
IN-POND GROUNDWATER SOURCE	N/A	N/A	LARGE (UPPER) POND IMPOUNDS IN-POND GW SOURCE WATER WITH AN EARTHEN DAM-DIKE	N/A	N/A
EARTHEN DAM	N/A	N/A	SMALL (LOWER) POND IMPOUNDS UNNAMED STREAM WATER WITH AN EARTHEN DAM-DIKE	N/A	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: N/A

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation: N/A

2. Volume Calculations for Other Uses: See two (2) attached pond analysis worksheets.

G. NARRATIVE/REMARKS/COMMENTS

I conducted the beneficial use field examination on 3/7/2025 with the Permit Holder, Rachel Alessio – Trustee, which showed two excavated ponds impounding water for Fire Protection Storage and Aesthetic Storage purposes. The large (upper) pond impounds Ground Water in-pond source water, and the POD was assigned using ArcMap 2013-year imagery. In 2013 the pre-existing pond was smaller, and I associated the POD within the pond at that time. The upper pond was enlarged after 2013 to its current size which has an earthen dam-dike that serves to impound the ground water source water.

The POD for the smaller (lower) pond is an earthen dam-dike situated in a minor draw (geographic feature). Unnamed stream water with the headwater being the upper pond's groundwater source flows in channel in directly down grade into the lower in-stream pond. I GPS located a point along the earthen dam that would be the natural flow path of the unnamed stream prior to pond excavation and designated the POD using ArcMap aerial imagery. Both ponds have grassed overflow discharge channels cut into the Northeastern corner of each pond respectively.

Any unnamed stream water that overflows the lower pond leaches to ground sinking in the drainage prior to reaching another surface water source. Based on this information I have recommended changes to each water source's tributary changing them from Quartz Creek to "Sinks" for licensing purposes. Both ponds are considered in-stream and there isn't any diversion rate(s) associated with licensing this Permit.

The Fire protection storage and Aesthetic storage POU consists of the two excavated ponds. I collected photographs during the field exam which have been added to the beneficial use report, and during licensing review I used ArcMap aerial imagery to accurately trace out the two pond's surface area assigned as the POU. The year 2021 imagery better represents a pond-full status as the imagery was from earlier in the year than 2023; the assigned POU clearly illustrates the storage ponds at total storage capacity and the pond size and volume elements are designated below:

- The large (upper) pond has a surface area of 0.2 acres, a maximum depth equaling 20 ft, an average depth of 8 ft, a pond capacity equal to 1.6 af, and 0.3 af of loss due to evaporation. As this pond has an in-pond ground water source, there is no seepage loss factored into total volume, which equals 1.9 af annually.
- The small (lower) pond has a surface area of 0.1 acres considering Department rounding standards, a maximum depth equaling 15 ft, an average depth of 6 ft, a pond capacity equal to 0.6 af, and 0.2 af of loss due to seepage & evaporation. The total volume requirement to maintain the pond full annually equals 0.8 af.
- The combined annual volume equals **2.7 af**, which I've recommended as the maximum diversion volume for licensing purposes.

I removed condition 029 from the Permit during licensing review. I revised condition 219 to reflect storage pond(s) size and volume data evaluated post-field exam as found on pond analysis worksheets. I've removed condition 218 based on directive from a Department Deputy Director – Shelley Keen. All other conditions on the Permit are being carried forward to the license. There are no overlapping water right concerns toward licensing Permit 87-12393.

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

H. RECOMMENDATIONS

1. Recommended Amounts

<u>Beneficial Use</u>	<u>Period of Use</u>	<u>Annual Volume</u>
FIRE PROTECTION STORAGE	01/01 to 12/31	2.7 AF
AESTHETIC STORAGE	01/01 to 12/31	2.7 AF

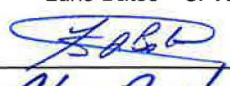
Totals: 2.7 AF

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 – Sr Water Resource Agent

Field Examiner's Name  Date 3/10/2025

Reviewer  Date 5/9/2025

State of Idaho
Department of Water Resources
Attachment to Field Exam
87-12393

This map depicts the AESTHETIC STORAGE and FIRE PROTECTION STORAGE place of use boundary for this water right at the time of this approval and is attached to the approval document solely for illustrative purposes.

03W



0 0.025 0.05 0.1 Miles

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



Total Storage Calculations

FILE NUMBER	87-12393
REVIEWER	Luke Bates
DATE	3/7/2025

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

LARGE POND		
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)	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 " <u>From Storage</u> " 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)	0.3	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	1.9	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.

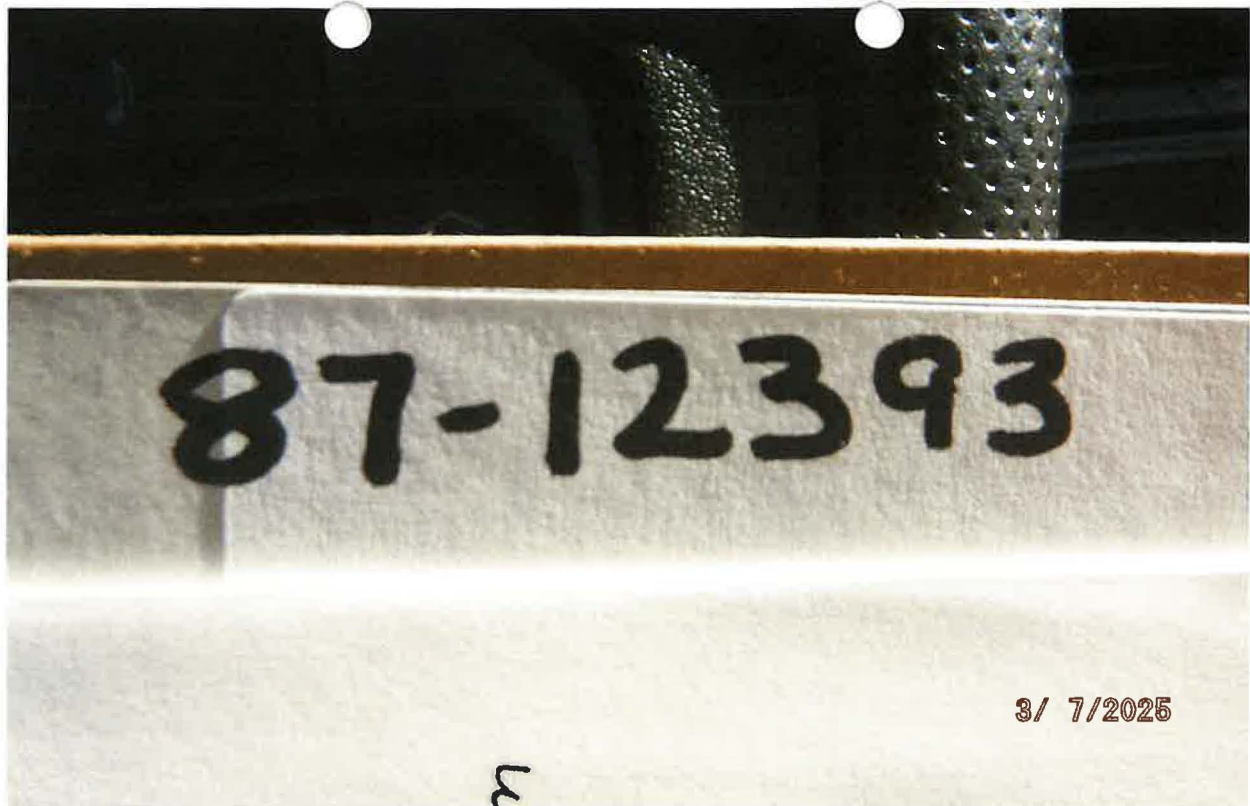
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User Input
Calculated value
Formula Explanations

SMALL POND		
Surface Area (AC.)	0.1	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	6	"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)	0.6	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)	0.1	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)	0.8	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.



BENEFICIAL USE FIELD EXAM DATE 3/7/2025



UPPER POND – GROUND WATER (IN-POND) SOURCE & POD
FIRE PROTECTION STORAGE & AESTHETIC STORAGE POU



UPPER POND EARTHEN DIKE-DAM



UPPER POND GRASED OVERFLOW DISCHARGE CHANNEL – BEGINNING OF
SEASONAL UNNAMED STREAM (REACH BETWEEN UPPER POND AND LOWER
POND)



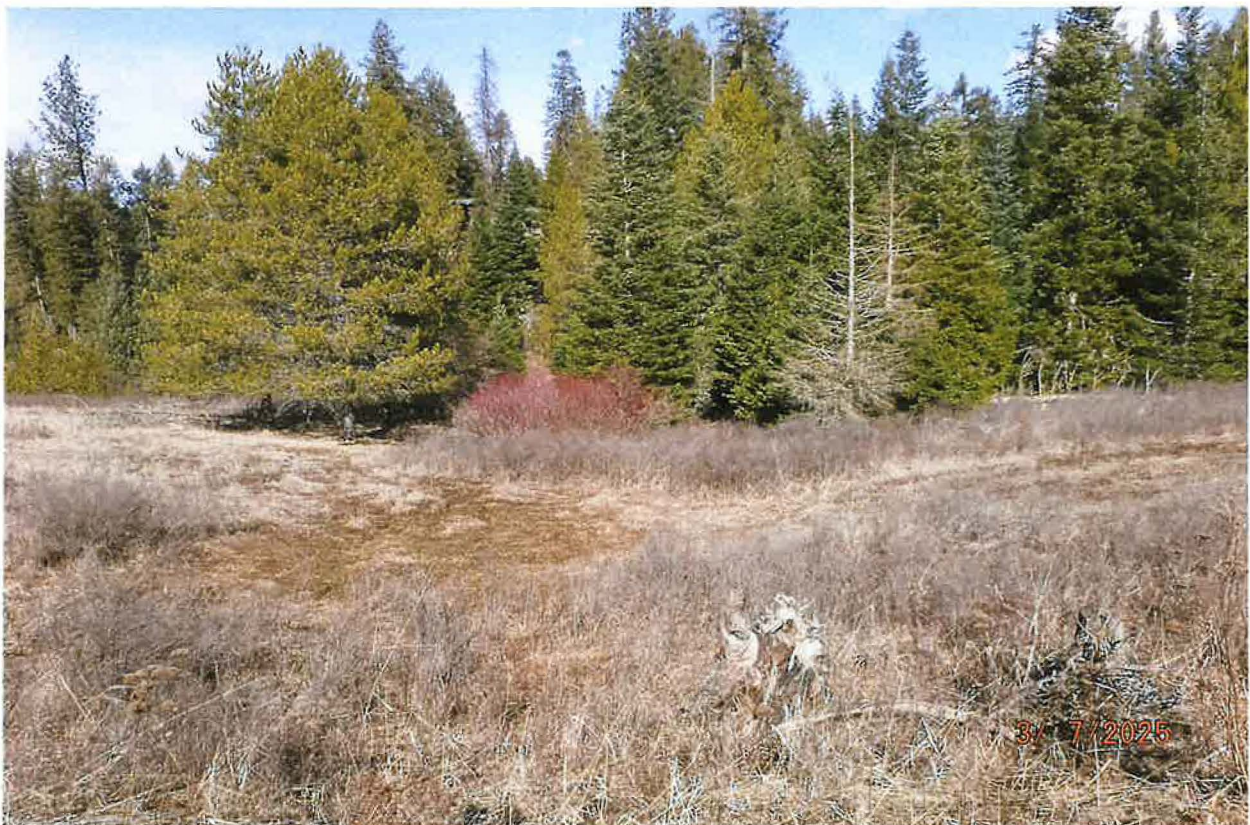
LOWER POND AT INFLOW FROM UPPER POND
FIRE PROTECTION STORAGE & AESTHETIC STORAGE POU



LOWER POND EARTHEN DAM-DIKE POD



LOWER POND GRASSED OVERFLOW DISCHARGE CHANNEL



OVERFLOW DISCHARGE FROM LOWER POND SINKS ON PROPERTY; POND(S)
WATER DOES NOT FLOW INTO QUARTZ CREEK