

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 94-9662
Exam Date: 10/25/2024

1. Current Owner:
ALBERT VILAIR WALSH 12718 OLD RIVER RD KINGSTON ID 83839-9769
2. Accompanied by: Albert Walsh
Phone No: 504-208-7808
Address: Same as above.
Relationship to permit Holder: Permit Holder

3. **SOURCE:**
UNNAMED STREAM

Tributary
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:**

UNNAMED STREAM L4 (SW $\frac{1}{4}$ SW $\frac{1}{4}$), Sec. 19, Twp 49N, Rge 01E, B.M. KOOTENAI County
UNNAMED STREAM L4 (SW $\frac{1}{4}$ SW $\frac{1}{4}$), Sec. 19, Twp 49N, Rge 01E, B.M. KOOTENAI County

Method of Determination: GPS; two ponds developed sub-surface to natural topography with outflow channels located at -116°23.4214, 47°34.5657 (Northern Pond) and -116°23.3980, 47°34.4630 (Southern Pond).

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	
49N	01E	19										X L3	X L4						

Method of Determination: Beneficial use field examination and 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
TWO PONDS WITH EARTHEN OUTFLOW CHANNELS	N/A	N/A	N/A	N/A	N/A

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
NONE						

2. Measurements: two storage ponds were excavated entirely below the natural ground level with inflow channels receiving unnamed stream water as an in-stream pond(s) and outflow channel cuts into the southern extent of each pond as release mechanisms to spill stream water during peak runoff season when the intermittent stream is primarily flowing.

E. FLOW CALCULATIONS

Measured Method: N/A – instream pond(s) development doesn't require a diversion rate.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation: N/A
2. Volume Calculations for Other Uses: See attached two each pond analysis worksheets for volumetric calculations.

G. NARRATIVE/REMARKS/COMMENTS

I performed a beneficial use field examination on 10/25/2024 with the Permit Holder, Mr. Albert Walsh, which showed two excavated storage ponds impounding unnamed stream water for aesthetic storage & fire protection storage beneficial uses (BU). The Permit authorized development of five ponds, but only two had been developed upon submission of the Statement of Completion form by the Permit Holder. The two ponds have been developed on-stream and impound intermittent stream flow which during normal years has run dry by mid-July.

The Permit included both surface runoff water and unnamed stream water as the sources, but the three ponds intended to capture surface runoff were not developed and I've removed the surface runoff source from the Permit during licensing review. The two ponds are located along the eastern frontage of a low elevation ridge and may benefit from surface runoff capture, but the Department doesn't regulate surface runoff source water, and the Permit Holder isn't required to gain recorded rights for the impoundment of surface runoff source water.

Both small storage ponds have been excavated entirely below the natural ground water, and unnamed stream flow enters each and shallow indentations on the southern edge of each pond serve as the overflow device which allows source water to continue flowing downstream during peak runoff periods. Based on the information provided by Mr. Walsh, the intermittent stream runs to ground by mid-summer and the northern storage pond may not spill water after peak runoff periods some years. Regardless, the two ponds impound unnamed stream water prior to the source reaching a historic wetland area. I've used ArcMap GIS to designate each pond's POD using GPS located points for licensing purposes.

The storage ponds impounding water for aesthetic & fire protection purposes are passive BUs that don't authorize the Permit Holder to pump from each pond. The two POU's volumetric data were derived during licensing review using Pond

Analysis Worksheets as described below:

- Northern Pond: 0.1 ac surface area (considering Department rounding standards), 8 ft maximum depth, 3.2 ft average depth, 0.3 af pond capacity, and 0.2 af seepage and evaporative rate losses; the total volume required to keep the pond full year-round if water is available equals 0.5 af.
- Southern Pond: 0.1 ac surface area (considering Department rounding standards), 15 ft maximum depth, 6 ft average depth, 0.6 af pond capacity, and 0.2 af seepage and evaporative rate losses; the total volume required to keep the pond full year-round if water is available equals 0.8 af.

I've recommended an annual and maximum diversion volume of **1.3 af**, or the sum of both ponds total volume requirements, assigned to each BU for licensing purposes. Each BU's volume is not additive as the storage water fulfills both uses simultaneously. I used ArcMap aerial imagery and field maps sketches with photographs to trace each pond's POU shape for licensing purposes. Year 2023 ArcMap imagery doesn't show the southern pond, which was excavated after the year's image capture.

ArcMap DRG layer illustrates potential for hydraulic connectivity between the intermittent unnamed stream and a wet land area. There are no clear boundaries with boots on the ground and the field exam demonstrated a strip of dry pastureland east of the Permit Holders property. The intermittent stream goes to ground prior to crossing the dry pasture and I've maintained the tributary as "Sinks" for licensing purposes.

During licensing review, I removed conditions 029 and 220 from the Permit; 220 was removed based on directive from the Deputy Bureau Chief Shelley Keen. I revised condition 219 to reflect the pond(s) size and volume data post field exam as detailed above. All other conditions on the Permit are being carried to the license. There are no overlapping water right concerns toward licensing 94-9662.

Have conditions of permit approval been met? X 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	1.3 AF
AESTHETIC STORAGE	01/01 to 12/31	1.3 AF

Totals: 1.3 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

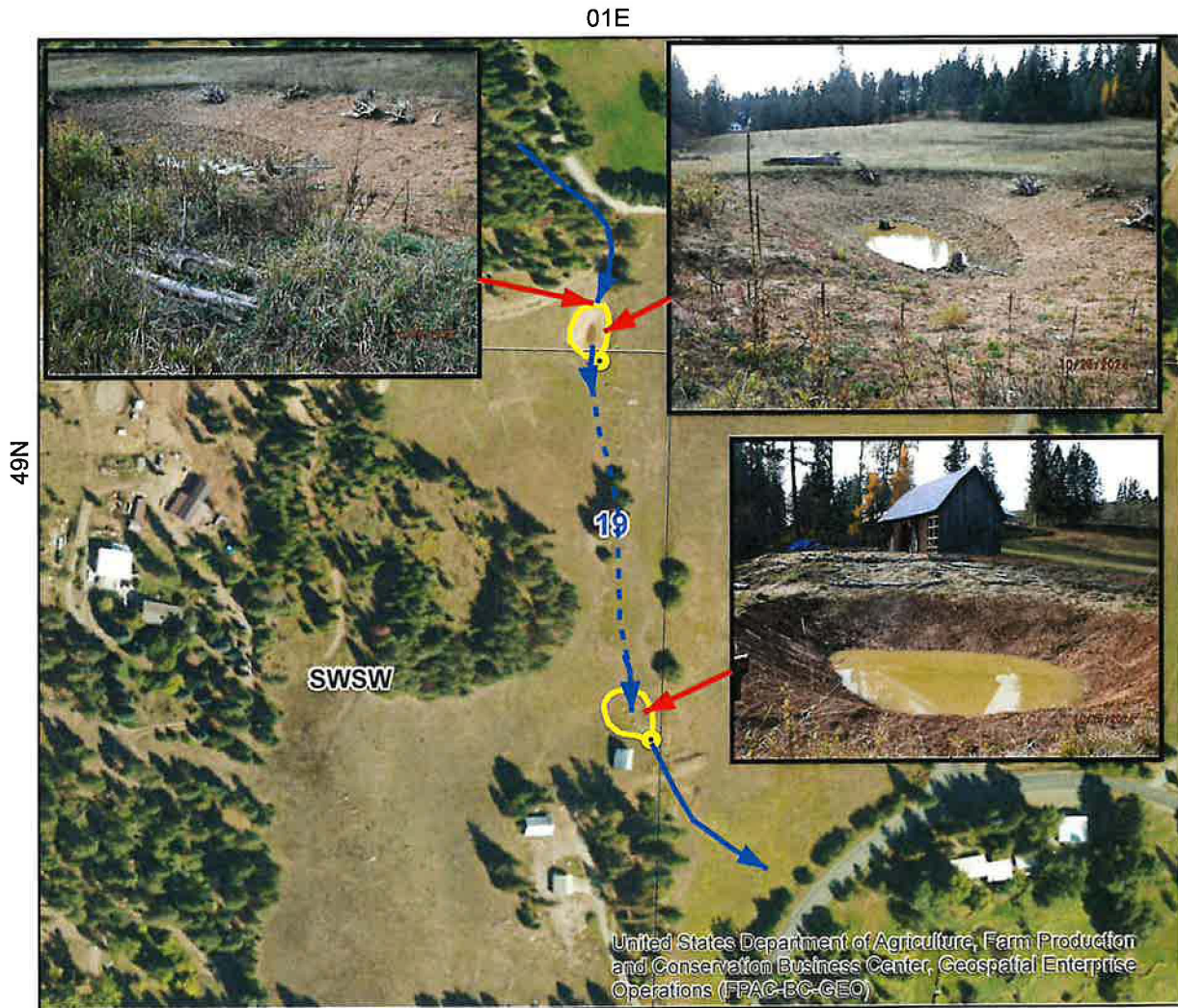
Luke Bates – Sr Water Resource Agent

Field Examiner's Name *L. Bates* Date 01 January 2025

Reviewer *Chris Bell* Date 2/18/2025

State of Idaho
Department of Water Resources
Attachment to Field Exam
94-9662

This map depicts the FIRE PROTECTION STORAGE and AESTHETIC STORAGE system(s) diagram.



0 0.035 0.07 0.14 Miles

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



Total Storage Calculations

FILE NUMBER	94-9662
REVIEWER	Luke Bates
DATE	4/5/2024

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

SOUTHERN 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.

Total Storage Calculations

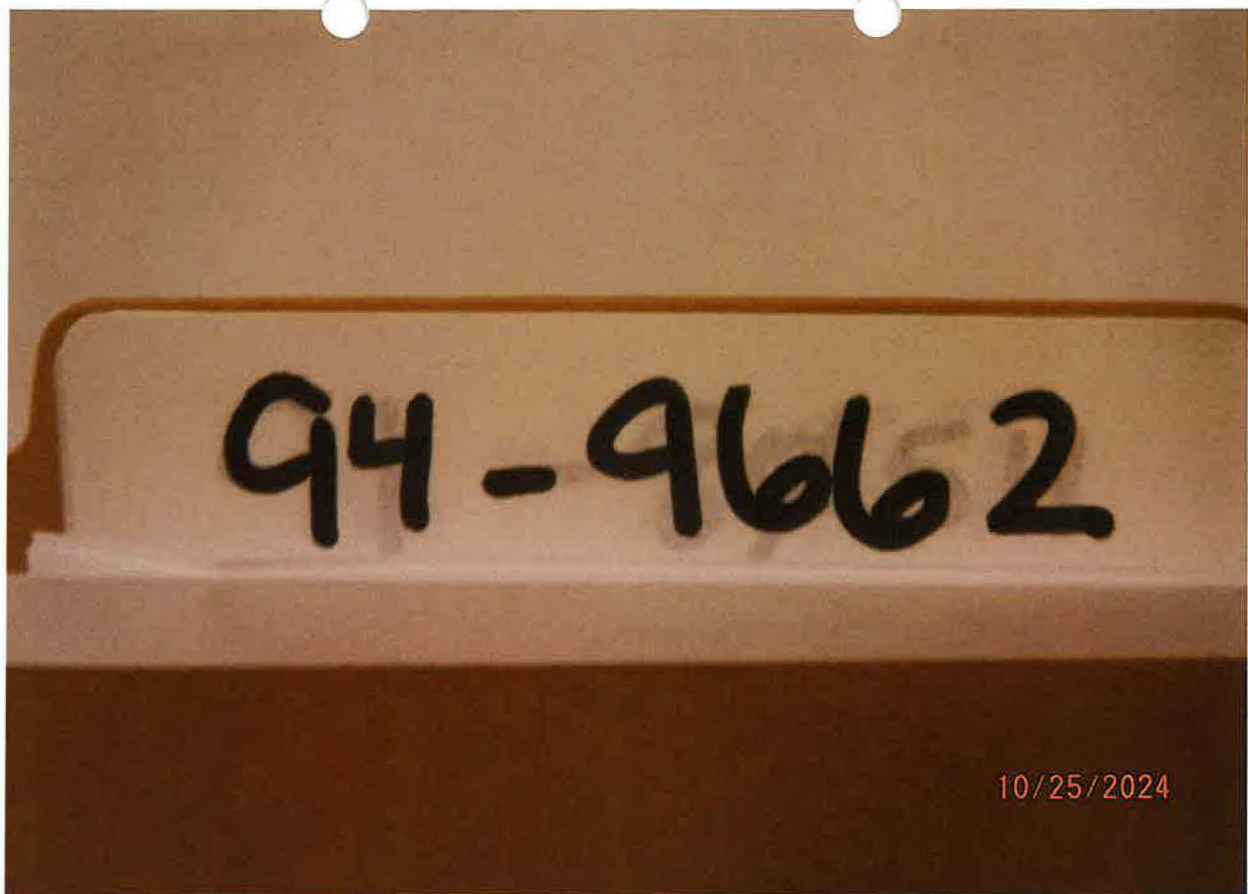
FILE NUMBER	94-9662
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User Input
Calculated value
Formula Explanations

NORTHERN POND

Surface Area (AC.)	0.1	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	3.2	"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)	0.3	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)	0.5	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 10/25/2024



POU – NORTHERN FIRE PROTECTION & AESTHETIC STORAGE POND WITH
UNNAMED STREAM INFLOW CHANNEL



POU & POD – NORTHERN STORAGE POND EXCAVATED ENTIRELY BELOW THE NORMAL GROUND ELEVATION WITH MINOR OVERFLOW EARTHEN CHANNEL ALLOWING INTERMITTENT STREAM TO SPILL FROM POND



POU – SOUTHERN STORAGE POND USED FOR FIRE PROTECTION AND AESTHETIC USES.



POD – SOUTHERN POND EXCAVATED ENTIRELY BELOW NORMAL GROUND ELEVATION WITH EARTHEN SPILL CHANNEL ADDED TO ALLOW INTERMITTENT STREAM FLOW TO SPILL FROM POND