

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 81-12031
Exam Date: 07/23/2024

1. Current Owner:
DOUG HICKS 545 RED FIR RD KOOSKIA ID 83539-5135 AND/OR
MARLOUS HICKS 545 RED FIR RD KOOSKIA ID 83539-5135
2. Accompanied by: Marlous Hicks
Phone No: 208-926-4385
Address: Same as above
Relationship to permit Holder: Permit Holder

3. **SOURCE:**
UNNAMED STREAM

Tributary
LITTLE CEDAR CREEK

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 SE¼ NW¼, Sec. 22, Twp 32N, Rge 05E, B.M. IDAHO County
UNNAMED STREAM SE¼ NW¼, Sec. 22, Twp 32N, Rge 05E, B.M. IDAHO County

Method of Determination: GPS; two earthen pond dam(s) POD(s) with culvert overflow discharge devices located at -115°49.166, 46°05.961 (upper) and -115°49.334, 46°05.962 (lower).

PLACE OF USE: STOCKWATER STORAGE, RECREATION STORAGE, and FIRE PROTECTION 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	
32N	05E	22								X									

Method of Determination: Beneficial use field examination and ArcMap GIS software.

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
Upper Pond Dam	N/A	N/A	N/A	N/A	18" metal corrugated culvert installed in dam
Lower Pond Dam	N/A	N/A	N/A	N/A	18" metal corrugated culvert installed in dam

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
N/A						

2. Measurements: the ponds constructed under this permit are considered in-stream ponds and diversion rate(s) are not associated with this permit.

E. FLOW CALCULATIONS

Measured Method: N/A – no diversion rates are required for this Permit's on-stream pond(s) development.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation: N/A

2. Volume Calculations for Other Uses: See the attached 2ea pond analysis worksheets.

- Stockwater Storage annual volume = 100 head x 12 gpd x 365 days = 438,000 gal per year / 325,850 gal per acre-feet = **1.3 af** considering Department rounding standards.

G. NARRATIVE/REMARKS/COMMENTS

I performed a beneficial use field examination on 7/23/2024 with one of the Permit Holders, Marlous Hicks, which showed an unnamed stream being impounded for stockwater storage, recreation storage, and fire protection storage uses. At the upper pond in elevation, an earthen dam serves as the main driveway crossing the stream and riparian area to access a homestead. Using aerial imagery, the driveway was constructed in the mid-1970's with the earthen dike serving as a pond dam. An 18-inch culvert serves as the overflow device allowing source water to flow downstream from the pond. Inflow of water to the upper pond occurs more from percolating in broad wetted interface as the intermittent stream enters a relatively shallow basin and no historic stream channel was observed during the exam; the landscape at the head of the upper pond appears to be more of a wetland region that is the backwater of the storage pond. It was unclear whether the stream went to ground and daylighted within the pond or seep in naturally through many braided channels within the wetland environment.

The lower pond POD is also an earthen dike across a shallow drainage basin with an 18-inch corrugated metal culvert serving as the overflow device allowing overflow discharge to continue downstream in the historic stream channel. Both upper and lower PODs were installed approximately 50 years ago and the lower metal culvert showed signs of rusting out on the outflow portion of the pond dam. Flow measurements are not required for these two on-stream ponds as developed and there is no diversion rate associated with this water right. The Permit Holder asserts the stream historically doesn't flow into the 2 ponds past the early summer months, which is supported by no flowing water discharging from either culvert by

late July at the time of exam. I used a GPS to locate each POD associated with each earthen pond dam and aerial imagery illustrates the POD(s) at approximate location of the metal culverts.

I walked the two storage ponds serving as stockwater storage, recreation storage, & fire protection storage POU's and took photographs of them during the exam, with photos added to this report. During licensing review, I used ArcMap aerial imagery to accurately trace out each POU's surface area and used pond analysis worksheets to evaluate volumetric data shown below:

- The upper pond has a surface area of 0.3 acres, maximum depth of 12 ft, average depth of 4.8 ft, pond capacity of 1.4 af, seepage and evaporative loss volume of 0.8 af, and total volume required equaling 1.8 af.
- The lower pond has a surface area of 0.3 acres, maximum depth of 12 ft, average depth of 4.8 ft, pond capacity of 1.4 af, seepage and evaporative loss volume of 0.8 af, and total volume required equaling 1.8 af.
- The combined total volume to fill both ponds and keep them full all year, water availability dependent, equals **3.6 af** which is assigned as the recreation storage and fire protection storage annual volume for licensing purposes. 3.6 af is recommended for each beneficial use but is not additive toward the maximum diversion volume.

The stockwater storage annual volume equals **1.3 af** for 50 head breeding pairs which includes 2 horses on average with the loss of a few calves each year; stock animals drink directly from the two ponds and are rotated through multiple pastures owned by the Permit Holders throughout the season. The maximum diversion volume recommended for licensing equals **4.9 af**, which is less than the Permit authorized for development, but the pond(s) were not 20 feet deep as designated on the application documents.

I made several changes to the conditions of approval regarding recommending the permit for licensing purposes as follows:

- Removed condition 029 – IDFG didn't require any specific screening or fish passage during the two-week advertisement period and this condition is not applicable for licensing purposes.
- I removed condition 220 based on guidance from the Deputy Director Shelley Keen.
- I revised condition 259 to reflect post field exam volumetric pond data.
- I removed a text condition describing the recreation storage use, as the swimming & boating description isn't required for licensing purposes.
- I replaced condition 227 with WB9 describing Minimum Stream Flow (MSF) requirements for the Right Holder to self-curtail when flows in Clear Creek, which is a tributary of this Right's Little Cedar Creek tributary source, aren't meeting flow levels for Right 81-11957.
 - The Permit used 227 based on gauging station No. 13337099, which is no longer active on the USGS streamflow website [USGS Current Conditions for Idaho Streamflow](#)
 - I've assigned condition WB9 using the Clear Creek source because there isn't a viable gauging station in place the Right Holder may used to evaluate the stream flow regularly. The Upper Clear Creek stream gauge is located upstream from the confluence of both Big & Little Cedar Creek(s) which doesn't help evaluate MSF requirements for this Right.
- Condition 18C shall be carried forward to licensing. As required by the Wild & Scenic Settlement Agreement, in part for the Middle Fork Clearwater River, which requires development of a means to measure the amount of water entering the reservoir and the amount of water released from the reservoir. As discussed above, inflow to the upper pond is not measurable as a wetland interconnect with the storage pond with no delineation of a stream channel; however, the overflow culvert discharging out of the upper pond may be used to assess stream flow by timing the filling of a vessel of known volume and the outflow of the lower pond has similar design.
- Condition 195 requires the Right Holder to install a lockable device, subject to the approval of the Department, in a manner that will provide suitable control of the diversion. My assessment is that the two storage ponds as

historically constructed are unable to meet this requirement but I don't recommend non-compliance stop the licensing of this Permit; in the future if curtailment processes are implemented the Right Holder may have to install a headgate on each pond to satisfy condition 195; as the culverts are aged and may require replacement in the near future to maintain the earthen dikes from degrading I recommend headgates be added to the system as part of each pond's maintenance.

- The fact that the two ponds fill during peak runoff events annually and normally the intermittent stream is dry by the month of July indicates the impoundment of water is done during a period of time prior water rights are being satisfied. Each pond's water level was a few feet below the outflow culvert at time of exam in late July 2023 indicating the storage pond isn't being refilled to offset seepage and evaporative loss rates by a source that is seasonally insufficient to fulfill these storage components consistently.
- All other conditions on the Permit are being carried forward to licensing.

I've updated the Wild & Scenic database to capture that 81-12031 "does not benefit from subordination" pertaining to the Wild & Scenic Agreement. The Right Holders have a private ground water well associated with Right 81-10079 that serves the homestead with domestic water uses, but there is no overlapping water right concerns toward licensing 81-12031.

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>
STOCKWATER STORAGE	01/01 to 12/31	1.3 AF
RECREATION STORAGE	01/01 to 12/31	3.6 AF
FIRE PROTECTION STORAGE	01/01 to 12/31	3.6 AF

Totals: 4.9 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

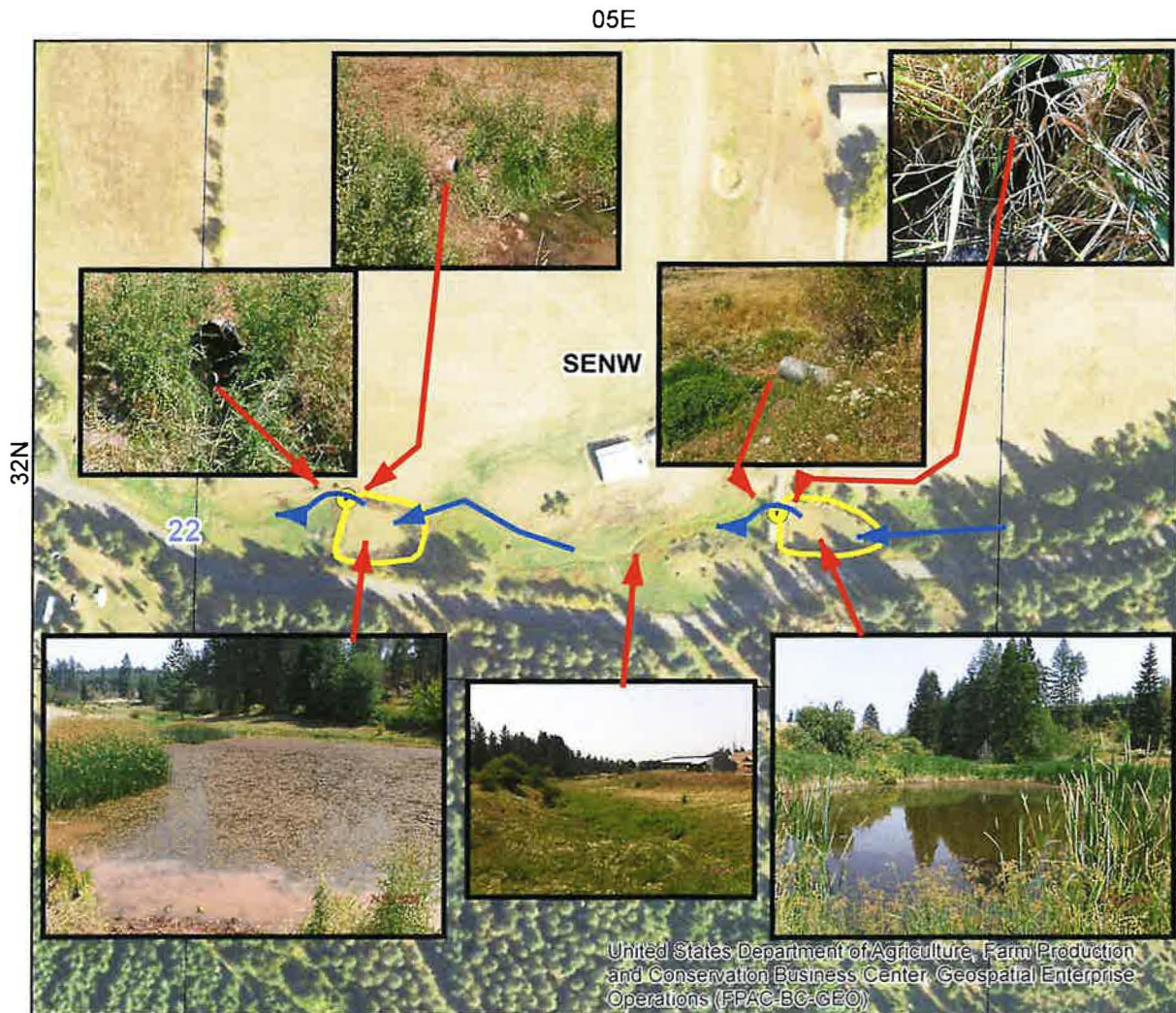
I. AUTHENTICATION Luke Bates – Sr Water Resource Agent

Field Examiner's Name *J. Bates* Date 12/2/2024

Reviewer *Chris Bell* Date 5/7/2025

State of Idaho
Department of Water Resources
Attachment to Field Exam
81-12031

This map depicts the STOCKWATER STORAGE, RECREATION 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.



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	81-12031
REVIEWER	Luke Bates
DATE	12/2/2024

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

Upper Pond

Surface Area (AC.)	0.3	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	4.8	"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)	1.4	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)	1.3	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)	0.2	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	0.2	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	3.1	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.

* The total stockwater Storage Volume was calculated on the upper Pond analysis worksheet, but stock may use either pond for up to 1.3af annually.

Total Storage Calculations

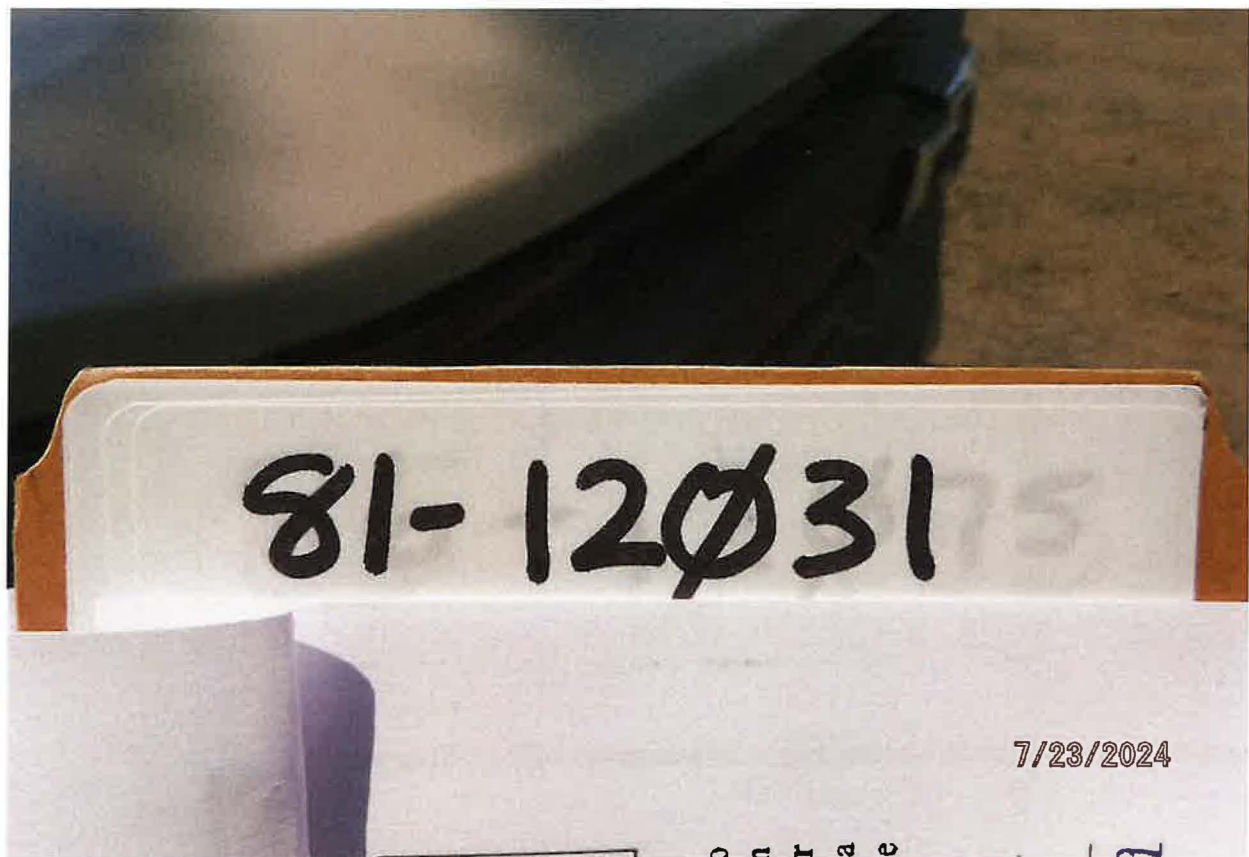
FILE NUMBER	81-12031
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This spreadsheet has been designed by Idaho Department of Water Resources to estimate the total seepage, evaporation and fill capacity required for a pond.

User Input
Calculated value
Formula Explanations

Lower Pond

Surface Area (AC.)	0.3	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	4.8	"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)	1.4	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)	0.2	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	0.2	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	1.8	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 7/23/2024



DRY FIELD JUST UPGRADE OF SPRING WHICH HEADWATERS THE UNNAMED STREAM SOURCE



POU – UPPER STORAGE POND – INSTREAM STOCKWATER STORAGE, RECREATION STORAGE, & FIRE PROTECTION STORAGE. INFLOW PERCOLATES WITHIN BASIN AS UNNAMED STREAM DAYLIGHTS IN THIS REACH OF THE STREAM CHANNEL





POD – EARTHEN DAM SERVES AS DRIVEWAY DIKED IMPOUNDING UNNAMED STREAM WATER. 24-INCH CULVERT ALLOWS OVERFLOW DISCHARGE WATER TO CONTINUE DOWNSTREAM



OVERFLOW DISCHARGE FROM UPPER POND – STREAM FLOW NORMALLY DRIES UP BY EARLY JULY EACH YEAR



UNNAMED STREAM REACH BETWEEN TWO STORAGE PONDS. HISTORICALLY STRAIGHTENED BY
PROPERTY OWNERS TO INCREASE LAND USE PRACTICES



POU – LOWER STORAGE POND USED FOR MULTIPLE STORAGE BENEFICIAL USES



POD – EARTHEN DAM DIKE IMPOUNDS UNNAMED STREAM WATER



LOWER POND OVERFLOW DISCHARGE PIPE



LOWER POND OVERFLOW DISCHARGE DOWN SLOPE VIEW – DRY AT TIME OF EXAM IN JULY



DOWN SLOPE UNNAMED STREAM DRAINAGE FROM LOWER POND