

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 97-7520

Exam Date: 07/20/2020

1. Current Owner:

MERRILL OAKS 362 LANGILLE CANYON RD OLDTOWN ID 83822-9589 AND/OR
MURIEL OAKS 362 LANGILLE CANYON RD OLDTOWN ID 83822-9589

2. Accompanied by: Merrill Oaks

Phone No: 509-592-0142

Address: Same as above

Relationship to permit Holder: Permit Holder

3. **SOURCE:**

SPRINGS

Tributary

PEND OREILLE RIVER

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
97-7325	SPRING	WILDLIFE STORAGE	LICENSE

Comments: right 97-7325 uses spring water for wildlife storage associated with the same pond POU as right 97-7520.
Condition X35 was added to describe the overlap of POUs, and to mitigate overlap concerns.

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 SYSTEM1. **LOCATION OF POINT(S) OF DIVERSION:**

SPRINGS L1 (SW¼ NE¼ NW¼), Sec. 13, Twp 56N, Rge 06W, B.M. BONNER County

SPRINGS L1 (SE¼ NE¼ NW¼), Sec. 13, Twp 56N, Rge 06W, B.M. BONNER County

Method of Determination: Map and GPS. 2 PODs are subsurface in-pond springs with locations -117°02.145, 48°12.497 and
-117°02.078, 48°12.497.

PLACE OF USE: 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	
56N	06W	13					X L1												

Method of Determination: Field exam and Arcmap aerial imagery.

3.

Delivery System Diagram Attached (required). Indicate all major components and distances between components.

X 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

X 1:24,000 or greater.X Aerial Photo Attached (required for irrigation of 10+ acres).X 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: 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

Field exam conducted on 7/20/2020 with the applicant, Merrill Oaks, showed a pond that had two subsurface springs which filled the pond. The pond was excavated to impound spring water for fire protection purposes. There is no diversion rate applied to this water right.

In addition to fire protection storage, Mr. Oaks was permit approved for irrigation storage, stockwater storage, irrigation from

storage, stockwater from storage, and fire protection from storage beneficial use components. At time of field exam it was found that the applicant had not fully developed a pipeline for irrigation and fire protection from storage uses, and had not used water from the pond to irrigate during the permit's development period. It was also identified that the applicant did not use water from the pond for stock animals during the development period. As such, all beneficial use components except Fire Protection Storage were removed from the permit during licensing review. After discussing the licensing requirements for the permit, the applicant is in the process of applying for the additional beneficial use components not developed via a new application for permit.

The pond has a surface area of 1.6 acres with a max depth of 8 feet, an average depth of 3.2 feet, a pond capacity of 5.1 af, and an estimated evaporation rate of 1.3 af. The pond was traced out using arcmap 2013 aerial imagery and has an earthen dam. Based on pond development and current pond analysis sheet calculations, the annual volume equals 6.4 af, which will be applied as the maximum diversion volume on the license.

Due to the removal of several beneficial use components, the following conditions were removed from permit during licensing review: 26A, 082, X02, and R62. Condition 220 was updated to reflect current pond analysis sheet values describing the pond capacity (af) and surface area (ac). Condition 259 was replaced with condition 219, to describe the pond components and volume in af. Water right 97-7325 uses spring water for wildlife storage associated with the same pond POU as right 97-7520. Condition X35 was added to describe the overlap of POUs, and to mitigate overlap concerns. There are no additional overlap concerns for this right.

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	6.4 AF

Totals: 6.4 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  Date 9/21/2020
 Reviewer  Date 9/21/2020

State of Idaho
Department of Water Resources
Attachment to Field Exam
97-7520

FIRE PROTECTION 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	WR 97-7520
REVIEWER	Luke Bates
DATE	7/22/2020

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.)	1.6	"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)	5.1	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)	0.0	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	1.3	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	6.4	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 – 2EA SUBSURFACE SPRINGS FILLING POND



POU – FIRE PROTECTION STORAGE POND

