STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 87-10096
Exam Date: 06/10/2020

1. Current Owner:
PARADISE RIDGE RETREAT LLC C/O DAVID PORT
4382 JOHNSON RD PULLMAN WA 99163

2. Accompanied by: Dave Port
Phone No: 1-509-595-5819
Address: Same as above
Relationship to permit Holder: Representative of Permit Holder

3. **SOURCE:**	**Tributary**
SPRING	SOUTH FORK PALOUSE RIVER
UNNAMED STREAM	SOUTH FORK PALOUSE 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

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:**
UNNAMED STREAM SE¼ SE¼, Sec. 29, Twp 39N, Rge 05W, B.M. LATAH County
SPRING NE¼ SE¼ SE¼, Sec. 29, Twp 39N, Rge 05W, B.M. LATAH County

Method of Determination: POD (dam) located at -116°58.884, 46°41.320. POD from spring located within pond boundary.

PLACE OF USE: IRRIGATION 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	
39N	05W	29																X	

PLACE OF USE: IRRIGATION FROM 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	
39N	05W	29																3.5	3.5

Total Acres: 3.5

Method of Determination: Field exam and Arcmap.

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
NONE					

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:

$V_{I.R.}$ = (Acres Irrigated) x (Irrigation Requirement) = 3.5 acres x 3.0 afa = 10.5 af
$V_{D.R.}$ = [Diversion Rate (cfs)] x (Days in Irrigation season) x 1.9835 = N/A – no diversion rate applied.
V = Smaller of $V_{I.R.}$ and $V_{D.R.}$ = 10.5 af

2. Volume Calculations for Other Uses:

See attached pond analysis sheet

G. NARRATIVE/REMARKS/COMMENTS

Field exam conducted on 6/10/2020 with applicant's representative, Dave Port, showed a pond being used for multiple storage uses and irrigation from storage useage. An unnamed stream flowed through pond and returned to stream channel by means of an overflow culvert, and the pond also received water flow from a spring. Applicant used a small portable water transfer pump to irrigate from the pond. There is no diversion rate applied to this license.

Arcmap was used to trace out pond surface area equal to 0.4 acres with a maximum depth of 10 feet, an average

depth of 8 feet, capacity of 3.2 af, 0.9 af of loss from seepage and evaporation, a multi-fill volume of **10.5 af** applied to irrigation from storage component, and a total volume required of 14.6 af. The Recreation and Fire Protection component annual volumes are equal to the pond's capacity of 3.2 af + seepage/evaporation value of 0.9 af = **4.1 af**. The maximum diversion volume applied to license is **14.6 af**.

At time of field exam in early June, applicant was not actively irrigating due to the increased rain this spring. Applicant irrigated using hose and above ground sprinklers to keep area green for wedding events throughout the season. Aerial imagery did not clearly illustrate the irrigated POU, and sentinel imagery was utilized to determine historical irrigation of POU. Irrigated acreage equal to 3.5 acres was traced out at time of licensing review and a annual volume equal to 3.5 acres x 3.0 afa = 10.5 af, which was applied as the irrigation storage and irrigation from storage annual volume. The pond is used by applicant for recreation activities, and serves as a fire protection storage source.

All conditions from permit will remain on license, with no changes in pond component data for conditions 220 and 259. There are no overlap concerns for this water right.

Have conditions of permit approval been met? _X_ Yes ____ No

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use	Annual Volume
IRRIGATION STORAGE	01/01 to 12/31	10.5 AF
IRRIGATION FROM STORAGE	03/15 to 10/31	10.5 AF
RECREATION STORAGE	01/01 to 12/31	4.1 AF
FIRE PROTECTION STORAGE	01/01 to 12/31	4.1 AF
	Totals:	14.6 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 - Water Resource Agent

Field Examiner's Name _____ Date 6/24/2020

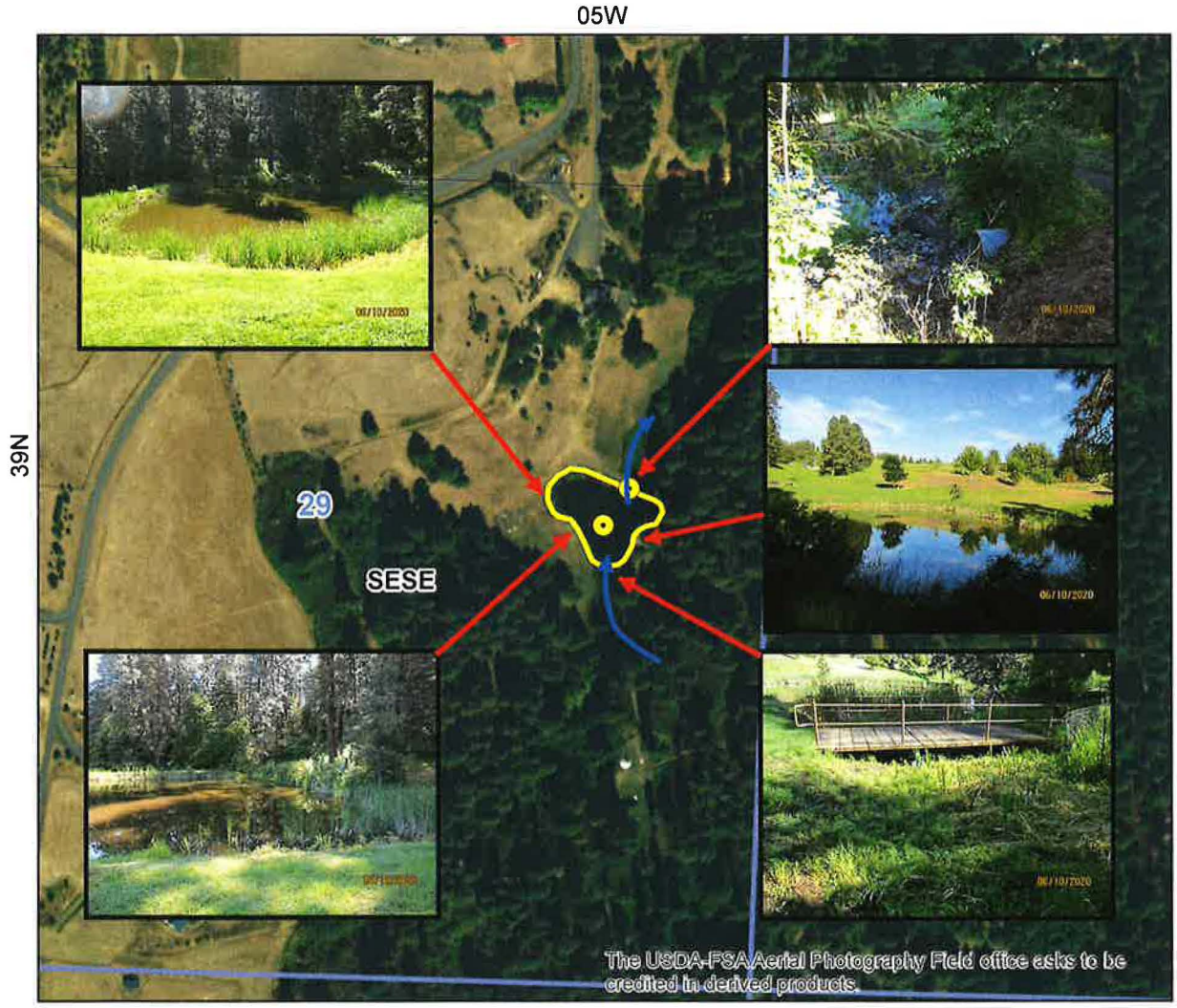
Reviewer _____ Date 6/30/2020

State of Idaho
Department of Water Resources

Attachment to Field Exam

87-10096

IRRIGATION STORAGE, RECREATION STORAGE, and FIRE PROTECTION STORAGE system diagram.



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Department of Water Resources

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IRRIGATION FROM STORAGE system diagram.

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

0 0.035 0.07 0.14 Miles

N

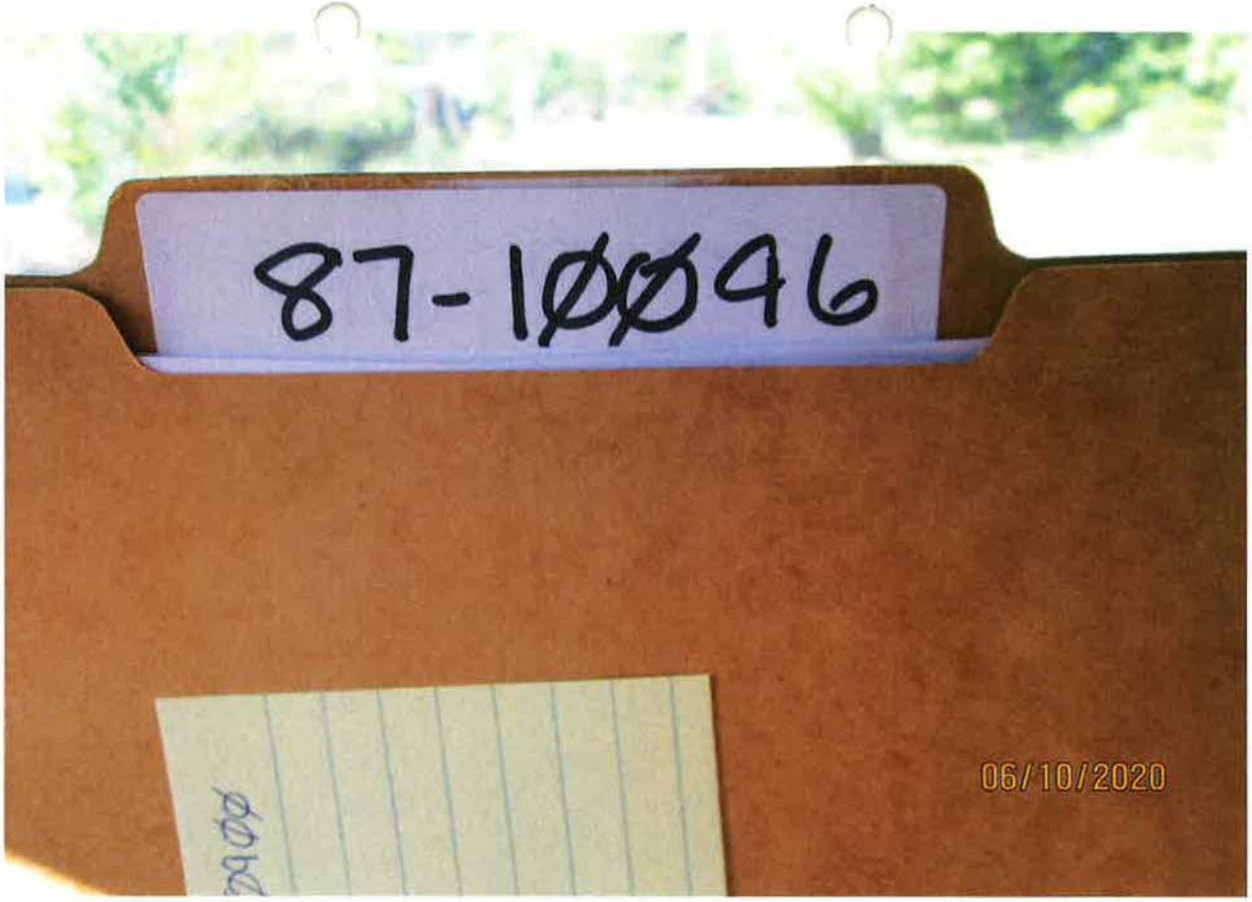
Total Storage Calculations

FILE NUMBER	87-10095
REVIEWER	Luke Bates
DATE	6/22/2020

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.)	0.4	"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)	3.2	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)	10.5	The "Multiple Fill Volume Above Initial Fill" is the acre-feet of water required to meet a *from storage* component if the *from storage* 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)	0.4	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	0.5	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	14.6	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.

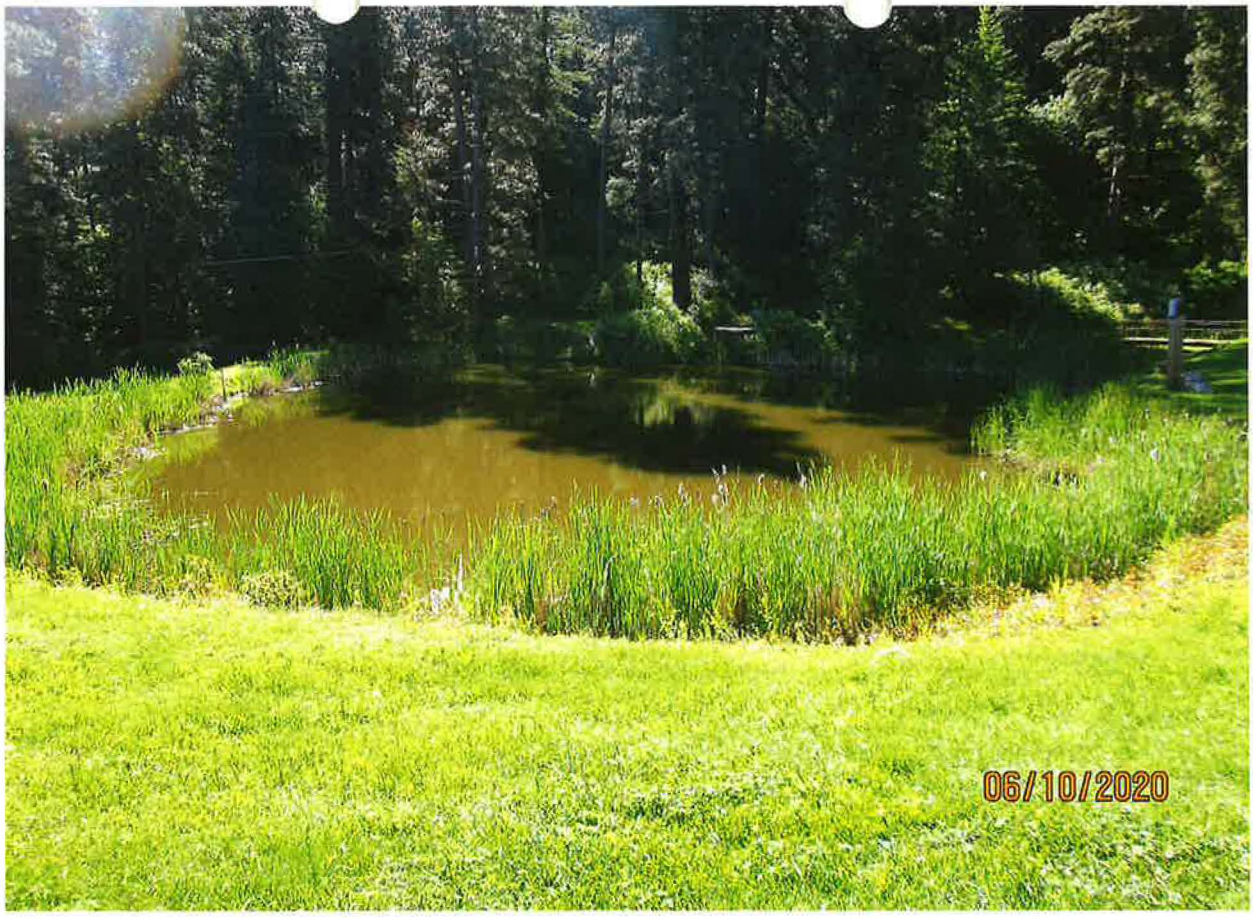


POD – POND DAM AND OVERFLOW CULVERT

POND OVERFLOW CULVERT

INFLOW TO POND FROM UNNAMED STREAM

MULTIPLE STORAGE COMPONENT POU – POND



MULTIPLE STORAGE COMPONENT POU – POND

IRRIGATION POU

IRRIGATION POU

IRRIGATION POU

IRRIGATION POU