STATE OF IDAHO DEPARTMENT OF WATER RESOURCES BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

- 1. Current Owner: PALOUSE PRAIRIE FARMS LLC 1051 PLEASANT HILL RD TROY ID 83871
- Accompanied by: Jen Elliott
 Phone No: 208-892-9030
 Address: Same as above
 Relationship to permit Holder: Applicant's Representative

3. SOURCE: UNNAMED STREAM

Method of Determination: Arcmap and DRG.

B. OVERLAP REVIEW

1. Other water rights with the same place of use: YES Overlap

Water Right No.	Source	Purpose of Use	Basis		
86-12082	UNNAMED STREAM	STOCKWATER	PERMIT / IN PROCESS LICENSING		

Comments: WR 86-12082 is for same owner as this water right, was split from this water right, and is not a concern for enlargement nor overlap.

2. Other water rights w	with the same point-of-divers	sion: <u>NO</u> Overlap		
Water Right No.	Source	Purpose of Use	Basis	

Comments:

C. DIVERSION AND DELIVERY SYSTEM

1. LOCATION OF POINT(S) OF DIVERSION:

UNNAMED STREAM NE¹/₄ SW¹/₄, Sec. 24, Twp 40N, Rge 03W, B.M. LATAH County UNNAMED STREAM NW¹/₄ SW¹/₄, Sec. 24, Twp 40N, Rge 03W, B.M. LATAH County

Method of Determination: Arcmap, DRG, GPS. Two ponds with earthen dam locations -116°39.850, 46°47.415 (main pond) and -116°39.617, 46°47.446 (small pond).

PLACE OF USE: STOCKWATER STORAGE

Two	Png	See	NE		NW		SW			SE			Totals						
Twp Rng Sec	Sec	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE		
40N	03W	24									X	Х							

PLACE OF USE: STOCKWATER FROM STORAGE

Two Dog	See		N	IE			NW		SW			SE			Totals			
I wp Ring	Sec	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
40N 03W	24									Х	Х	X						

Permit No: 86-11975 Exam Date: 06/14/2018

<u>Tributary</u> DRY CREEK



Method of Determination: Arcmap and Field Exam.

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	Нр	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
NONE					

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Туре	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_{LR} = (Acres Irrigated) x (Irrigation Requirement) =
- V_{D.R} = [Diversion Rate (cfs)] x (Days in Irrigation season) x 1.9835 =
- $V = Smaller of V_{LR}$ and $V_{D.R} =$

2. Volume Calculations for Other Uses:

See attached, 2ea pond analysis sheets

STOCKWATER FROM STORAGE = 200 Head cattle x 12 gpd x 365 days = 876,000 gallons / 325,850 gal per af = 2.7 af This is a surface water right, so no volume will be included on the water right license.

G. NARRATIVE/REMARKS/COMMENTS

WR 86-12082 was split from this water right, multiple POU components and a POD component were removed from this license as listed below:

- POD location UNNAMED STREAM SW¼ SW¼, Sec. 24, Twp 40N, Rge 03W, B.M. LATAH County
- POU for stockwater from storage from SWSW
- POU for stockwater storage from SWSW
- Water use and quantity for stockwater 0.05 cfs

Afore mentioned components and diversions are accounted for on WR 86-12082, and do not enlarge the original permit authorized diversion rate and/or diversion volume. At time of licensing, PLSS place of use QQ areas were updated to reflect field exam determined historical POU beneficial usage by applicant.

Field exam performed with an applicant's representative, Jen Elliot, showed two ponds that were fed by unnamed streams being uses for stockwater storage and stockwater from storage purposes. Water was drawn primarily from the large pond, and supplemented by water from the smaller pond throughout the year. Applicant would allow the ponds to recharge with water filling from unnamed streams, and then use a portable 1hp generator driven pump to fill portable stockwater containers located throughout his property's stockwater POU. Overflow would be discharged back into natural stream channel.

The large pond has a surface area of 0.6 acres, a maximum depth of 14 feet, average depth of 5.6 feet, a max capacity of 3.4 af, and estimated seepage loss of 0.7 af, and estimated evaporation loss of 0.9 af. The large pond has 2.7 af of multi-fill usage by applicant, and a total required volume of 7.7 af.

The small pond has a surface area of 0.1 acres, a maximum depth of 10 feet, average depth of 4 feet, a max capacity of 0.4 af, an estimated seepage loss of 0.1 af and estimated evaporation loss of 0.2 af. The small pond has 2.7 af of multi-fill usage by applicant, and a total required volume of 3.4 af.

The maximum diversion volume for this water right equals [7.7 af (total volume large pond) + 3.4 af (total volume small pond) -2.7 af (non-additive multi-fill requirement)] = **8.4 af**, which will be applied to license. There is no diversion rate applied to license.

Condition 26A was removed from license. Condition 029 was removed from license. Condition 220 was added to describe 2ea pond's capacity (af) and surface area (acres). Condition 259 was added to describe 2ea pond components and identify additional refill requirements for stockwater from storage use. Condition X35 was added to describe that when combined, WR 86-11975 and WR 86-12082 cannot exceed 2,7 af for Stockwater. The applicant has an overlapping water permit that is being licensed congruently with this water right, WR 86-12082 split from this water right, but the overlap concerns are mitigated by condition X35.

Have conditions of permit approval been met? X Yes No

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use	Annual Volume	
STOCKWATER STORAGE	01/01 to 12/31	8.4 AF	
STOCKWATER FROM STORAGE	01/01 to 12/31	2.7 AF	

Totals: 8.4 AF

Permit No 86-11975

2. Recommended Amendments

Change P.D. as reflected above	Add P.D. as reflected abo	ve X	None
			8

Change P.U. as reflected above _____ Add P.U. as reflected above _____ None

I.	AUTHENTICATION	Luke Bates - Water Resource Agent		
	Field Examiner's Name	- Full	Date	5/12/2020
	Reviewer	ZABID	Date	5/8/2020





Total Storage Calculations

FILE NUMBER	86-11975
REVIEWER	Luke Bates
DATE	5/7/2020

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.)	0.6	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	5.6	"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)	3.4	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.
r		
Multiple Fill Volume Above Initial Fill to Fulfill From Storage Needs- "Multiple Fills" (AF)	2.7	The "Multiple Fill Volume Above initial Fill" is the acre-reet 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)	0.7	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	0.9	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	7.7	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

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DATE	5/7/2020

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.)	0.1	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	4	"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)	0.4	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.
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Estimated Seepage Loss (AF)	0.1	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)	3.4	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.



POWER FOR POND NO. 1 PERIMETER FENCE



STOCKWATER STORAGE POND NO.1





STOCKWATER STORAGE POND NO.1



OUTFLOW POND NO.1



OUTFLOW POND NO.1



STOCKWATER STORAGE POND NO.2



STOCKWATER STORAGE POND NO.2



OUTFLOW POND NO.2



OUTFLOW POND NO.2



PORTABLE GENERATOR TO PULL WATER FROM PONDS



STOCKWATER CONTAINMENT TANKS



STOCK ON PROPERTY