STATE OF IDAHO DEPARTMENT OF WATER RESOURCES BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

1.	Current Owner:				
	SUSAN E DICKSON	7475 E YELLOWSTONE TRL	COEUR D ALENE	ID	83814-9371

2. Accompanied by: Susan Dickson Phone No: 208-664-3819 Address: Same as above Relationship to permit Holder: Permit Holder

3. SOURCE:

GROUND WATER

Method of Determination: Arcmap and DRG

B. OVERLAP REVIEW

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

Water Right No.	Source	Purpose of Use	Basis	

Comments:

Other water rights w	ith the same point-of-diversion:	<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:

GROUND WATER	SW1/4 NW1/4,	Sec. 22,	Twp 50N,	Rge 02W, B.M.	KOOTENAI County
GROUND WATER	SW1/4 NW1/4,	Sec. 22,	Twp 50N,	Rge 02W, B.M.	KOOTENAI County
GROUND WATER	SW1/4 NW1/4,	Sec. 22,	Twp 50N,	Rge 02W, B.M.	KOOTENAI County
GROUND WATER	SW1/4 NW1/4,	Sec. 22,	Twp 50N,	Rge 02W, B.M.	KOOTENAI County

Method of Determination: Centroids placed within high water mark of each pond, as groundwater influences entire pond.

PLACE OF USE: WILDLIFE STORAGE

Twp Rng			-	N	E			N۷	N			SV	V			SE	Ξ		Totals
	Sec	NE	NW	SW	SE														
50N	02W	22							Х										

Method of Determination: Field exam and Arcmap

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NO Overlap

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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 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
N/A					

D. FLOW MEASUREMENTS

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_{DR} = [Diversion Rate (cfs)] x (Days in Irrigation season) x 1.9835 =

 $V = Smaller of V_{LR}$ and $V_{DR} =$

2. Volume Calculations for Other Uses:

See 4ea attached Pond Analysis Sheets

G. NARRATIVE/REMARKS/COMMENTS

The field exam was performed on 6/17/2020 with the applicant, Susan Dickson, which showed four ponds that were being fed by ground water for wildlife storage purposes, primarily fish ponds. Photography at date of field exam shows beneficial use. Applicant stated that the four groundwater PODs were sufficient to provide pond recharge annually.

2019 aerial imagery layer was used during licensing review, and there was a noticeable shift in PLS coordinate lines when comparing to imagery used to compile permit shapefiles. The WR Layout only allows imagery up to year 2017, which was used to produce attachment to license and field exam maps.

Pond 1 has a surface area of 0.3 acres with a maximum depth of 10 feet, an average depth of 4 feet, pond capacity of 1.2

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af, an estimated evaporation of 0.3 af, and total volume required of 1.5 af. Pond 2 has a surface area of 0.2 acres with a maximum depth of 10 feet, an average depth of 4 feet, pond capacity of 0.8 af, an estimated evaporation of 0.2 af, and total volume required of 1.0 af. Pond 3 has a surface area of 0.1 acres with a maximum depth of 6 feet, an average depth of 2.4 feet, pond capacity of 0.2 af, an estimated evaporation of 0.2 af, and total volume required of 0.4 af. Pond 4 has a surface area of 0.1 acres with a maximum depth of 0.2 af, an estimated evaporation of 0.2 af, and total volume required of 0.4 af. Pond 4 has a surface area of 0.1 acres with a maximum depth of 6 feet, an average depth of 2.4 feet, pond capacity of 0.2 af, an estimated evaporation of 0.2 af, and total volume required of 0.4 af. Pond 4 has a surface area of 0.1 acres with a maximum depth of 6 feet, an average depth of 2.4 feet, pond capacity of 0.2 af, an estimated evaporation of 0.2 af, and total volume required of 0.4 af. The combined volume for the four ponds equals 3.3 af, which is less than what was applied for because the pond analysis tool is more accurate than previous methods of determination. The overall license will be issued with an annual volume of **3.3 af** for wildlife storage, which is also the assigned Maximum Diversion Volume applied to license.

Condition 119 and 220 were updated to reflect current pond analysis worksheet data. At time of application and permitting, one pond analysis sheet was developed to capture all four ponds data; as a result of software rounding, the acreage and capacity vary slightly using individual pond analysis sheets, but the overall diversion volume is less at time of licensing than what permit authorized. All other conditions remain on license from permit. There are no overlap concerns for this water right.

Have conditions of permit approval been met? X Yes No

H. RECOMMENDATIONS

I.

1. Recommended Amounts

Beneficial Use	Period of Use	Annual Volume
WILDLIFE STORAGE	01/01 to 12/31	3.3 AF

Totals: 3.3 AF

2. Recommended Amendments
Change P.D. as reflected above Add P.D. as reflected above

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

AUTHENTICATION Luke Bates - Water Resource Agent

Field Examiner's Name	SAB	Date	6/2	2/2/2020
Reviewer ad 1	and and	Date	6/30	2020

X None



FILE NUMBER REVIEWER	95-17923 Luke Bates	This spreadsheet has been designed by Idaho Department of Water Resources to estimate the total seepage, evaporation and fill capacity	Calculated value				
DATE	6/22/2020	required for a pond. Formula Explanations					
PON	ID 1						
Surface Area (AC.)	0.3	"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 estima know the maximum depth and not the average depth, the Field Examiner's Handbook s the maximum depth by 0.4 to get the average depth, or you can use any method that s attain average depth.	ted. Note: If you suggests multiplying seems reasonable to				
Pond Capacity (AF)	1.2	Pond Capacity is calculated by multiplying the Pond Surface Area by the Average Pond the capacity, divide the capacity by surface area and enter the average pond depth in t Note: If pond capacity is determined using a method shown on the "Pond Capacity" she need to modify the value of "Pond Capacity" (cell B9) manually. Note that if the value i the formula will be altered for future use.	Depth. If you know the space above. eet, the user may is modified manually,				
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 component if the <i>from storage</i> component exceeds a one time fill. This section should amount of water needed to fill the pond initially or the amount of water needed to ma due to evaporation or seepage. For example: if a pond has a capacity of 5 acre feet and seepage and evaporation, but the pond is used for irrigation that requires 10 acre feet the irrigation use, then you would insert 5 acre feet into this location (10 acre feet need the initial fill = 5 acre feet of additional storage needed). Note: You must have a "From Storage" component exceeding the initial fill on the permitvolume in this space.	a from storage I not include the intain the pond level d 2.5 acre feet of of from storage for ded - 5 acre feet from nit to include a				
Estimated Seepage Loss (AF)	0.0	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sh	heet.				
Estimated Evaporation Loss (AF)	0.3	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation L	Loss" sheet.				
Total Volume Required (AF)	1.5	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.					

FILE NUMBER	95-17923	This spreadsheet has been designed by Idaho Department of Water User Input					
REVIEWER	Luke Bates	Resources to estimate the total seepage, evaporation and fill capacity					
DATE	6/22/2020	required for a pond. Formula Explanations					
PON	ID 2						
Surface Area (AC.)	0.2	"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)	0.8	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)	0.2	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.					
Total Volume Required (AF)	1.0	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.					

FILE NUMBER	95-17923	This spreadsheet has been designed by Idaho Department of Water				
DATE	Euke Bates	Resources to estimate the total seepage, evaporation and fill capacity				
DAIL	0/22/2020	Formula Explanations				
PON	ND 3					
Surface Area (AC.)	0.1	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.				
Average Pond Depth (FT.)	2.4	"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)	0.2	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 manuall 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)	0.2	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.				
Total Volume Required (AF)	0.4	The "Total Volume Required" is calculated by adding the Pond Capacity, Multiple Fills, Seepage Loss, a Evaporation Loss amounts to determine the total amount of storage required.				

FILE NUMBER	95-17923	This spreadsheet has been designed by Idaho Department of Water User Input
REVIEWER	Luke Bates	Resources to estimate the total seepage, evaporation and fill capacity
DATE	6/22/2020	required for a pond. Formula Explanations
POND 4		
Surface Area (AC.)	0.1	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	2.4	"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)	0.2	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)	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)	0.2	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	0.4	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.





WILDLIFE STORAGE POU - POND 1



WILDLIFE STORAGE POU – POND 2





WILDLIFE STORAGE POU - POND 4





WILDLIFE STORAGE POU - POND 4