

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 65-13932

Exam Date: 11/7/2018

1. Current Owner:
DEBRA A STOUNE 5011 HIGHWAY 52 NEW PLYMOUTH ID 83655-5226 (541) 212-1152
2. Accompanied by: DEBRA A STOUNE
Phone No: (541) 212-1152
Address: 5011 HIGHWAY 52 NEW PLYMOUTH ID 83655-5226
Relationship to Permit Holder: OWNER

3. **SOURCE:**
GROUND WATER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 65-5459B
2. Other water rights with the same point-of-diversion: NONE

C. DIVERSION AND DELIVERY SYSTEM1. **LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER NW¼SW¼ Sec. 35, Twp 08N, Rge 04W, B.M. PAYETTE County

Method of Determination: Field exam, aerial imagery, and ArcMap Tools.

2.

PLACE OF USE: AESTHETIC STORAGE

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
08N	04W	35										X							

Method of Determination: Field exam, aerial imagery, and ArcMap Tools.

3.

- X Delivery System Diagram Attached (required). Indicate all major components and distances between components.
Indicate weir size/pipe as applicable.

- X 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.

Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
	N/A	N/A	N/A	N/A	N/A

D. FLOW MEASUREMENTS

1.

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

2. Measurements: No measurement was necessary to obtain during the field exam.

E. FLOW CALCULATIONS

Measured Method: N/A

F. VOLUME CALCULATIONS

1. Volume Calculations for Aesthetic Storage (see attached pond analysis):

V_R = IDWR does not have a policy/standard volume for beneficial use developed under AESTHETIC STORAGE use.

$V_{D.R}$ = Pond capacity and evaporative losses total **25.6 AF**

V = Smaller of V_R and $V_{D.R}$ = **25.6 AF**

G. NARRATIVE/REMARKS/COMMENTS

System Description:

Three (3) ponds were developed as aesthetic storage use as shown on the attached map and pond analysis. Pond A has a surface area of 1.13 acres, a maximum depth of 15' (6' average) that has a capacity of 6.8 AF, and loses 2.4 AF to evaporation. Pond B has a surface area of 1.18 acres, a maximum depth of 15' (6' average) that has a capacity of 7.1 AF, and loses 2.5 AF to evaporation. Pond C has a surface area of 0.80 acres, a maximum depth of 16' (6.4' average) that has a capacity of 5.1 AF, and loses 1.7 AF to evaporation.

The ponds are connected with a common ditch between them. Ground water initiates the fill in Pond A and slowly fills all three ponds. Surface water from WR No. 65-5459B is used to fill and maintain the pond system as well.

Conditions:

The explanatory condition describing aesthetic storage was forwarded to licensing, while the other two explanatory conditions were not. Condition 121 and R04 were updated to 103 and R05 respectively and forwarded to licensing. Conditions 219 and 220 were added to describe the pond and forwarded to licensing. Condition X35 was added to establish a combined use limit for both rights associated to the pond.

Have conditions of permit approval been met? ☒ Yes ☐ No

H. RECOMMENDATIONS

1. Recommended Amounts

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
AESTHETIC STORAGE	01/01 to 12/31		25.6 AF
<u>Totals:</u>			25.6 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

Field Examiner's Name [Signature] Date 12/11/2018

Reviewer [Signature] Date 12/11/18

State of Idaho
Department of Water Resources
Place of Use and Point of Diversion
WR Permit No. 65-13932



0 0.015 0.03 0.06 Miles

Legend

- Point of Diversion
- Ponds



[illegible]

Traces	Depth	Owner	Source	USE	NENE	NWHE	SWHE	SENE	NWNN	SWNN	SENN	NWSSW	SWSSW	NSSW	SESSW	SWSE	SESE	TOTAL	40
Base Sequence																			
N BAR N RANCH INC; COLWELL, CHERYL F; COLWELL, GEORGE E; INTERWEST INSURANCE CO.; J R SIMPLOT CO	65-1258	N	BAR N RANCH INC; COLWELL, CHERYL F; COLWELL, GEORGE E; INTERWEST INSURANCE CO.; J R SIMPLOT CO	PAVETTE RIVER															
N LOWER PAVETTE DITCH CO	65-11413	N	LOWER PAVETTE DITCH CO	GRAVYARD GULCH WASTEWAY															
N LOWER PAVETTE DITCH CO	65-12279	N	LOWER PAVETTE DITCH CO	GRAVYARD GULCH WASTEWAY															
N STOUNE J L	65-3932	Y	STOUNE J L	GROUND WATER															
N LOWER PAVETTE DITCH CO	65-1654	N	LOWER PAVETTE DITCH CO	PAVETTE RIVER															
N LOWER PAVETTE DITCH CO	65-1654	N	LOWER PAVETTE DITCH CO	PAVETTE RIVER															
N LOWER PAVETTE DITCH CO	65-1580	N	LOWER PAVETTE DITCH CO	PAVETTE RIVER															
N LOWER PAVETTE DITCH CO	65-1654	N	LOWER PAVETTE DITCH CO	PAVETTE RIVER															
N LOWER PAVETTE DITCH CO	65-1654	N	LOWER PAVETTE DITCH CO	PAVETTE RIVER															
N COUWELL CHERYL J; COLWELL, GEORGE E; J R SIMPLOT CO	65-25312	N	COUWELL CHERYL J; COLWELL, GEORGE E; J R SIMPLOT CO	PAVETTE RIVER															
N LAKE RESERVOIR CO; OSTEMILLER, DANIEL P; STRINGER, C LOHN	65-29232	N	LAKE RESERVOIR CO; OSTEMILLER, DANIEL P; STRINGER, C LOHN	PAVETTE RIVER															
N LAKE RESERVOIR CO; NEFF, BRUCE H; WHITEMAN JR, MARVIN E	65-29236	N	LAKE RESERVOIR CO; NEFF, BRUCE H; WHITEMAN JR, MARVIN E	PAVETTE RIVER															
N SCHROEDER, ROBERT W	65-3970	N	SCHROEDER, ROBERT W	PAVETTE RIVER															
N BOTTS, HAROLD E	65-39708	N	BOTTS, HAROLD E	PAVETTE RIVER															
N NOBLE DITCH CO	65-4034	N	NOBLE DITCH CO	PAVETTE RIVER															
N BAR N RANCH INC; COLWELL, CHERYL F; COLWELL, GEORGE E; EAGLE ISLAND RANCH; INTERWEST INSURANCE CO.; J R SIMPLOT CO; YOUNG, KEN	65-52304	N	BAR N RANCH INC; COLWELL, CHERYL F; COLWELL, GEORGE E; EAGLE ISLAND RANCH; INTERWEST INSURANCE CO.; J R SIMPLOT CO; YOUNG, KEN	PAVETTE RIVER															
N BAR N RANCH INC; COLWELL, CHERYL F; COLWELL, GEORGE E; EAGLE ISLAND RANCH; INTERWEST INSURANCE CO.; J R SIMPLOT CO; YOUNG, KEN	65-52304	N	BAR N RANCH INC; COLWELL, CHERYL F; COLWELL, GEORGE E; EAGLE ISLAND RANCH; INTERWEST INSURANCE CO.; J R SIMPLOT CO; YOUNG, KEN	PAVETTE RIVER															
N BAR N RANCH INC; COLWELL, CHERYL F; COLWELL, GEORGE E; EAGLE ISLAND RANCH; INTERWEST INSURANCE CO.; J R SIMPLOT CO; YOUNG, KEN	65-52304	N	BAR N RANCH INC; COLWELL, CHERYL F; COLWELL, GEORGE E; EAGLE ISLAND RANCH; INTERWEST INSURANCE CO.; J R SIMPLOT CO; YOUNG, KEN	PAVETTE RIVER															
N NESBITT, CLARENCE; NESBITT, LETA M; SOWELL, MYRTLE; STOUNE J L	65-5238	N	NESBITT, CLARENCE; NESBITT, LETA M; SOWELL, MYRTLE; STOUNE J L	GROUND WATER															
N BAR N RANCH INC; COLWELL, CHERYL F; COLWELL, GEORGE E; EAGLE ISLAND RANCH; INTERWEST INSURANCE CO.; J R SIMPLOT CO; YOUNG, KEN	65-5230	N	BAR N RANCH INC; COLWELL, CHERYL F; COLWELL, GEORGE E; EAGLE ISLAND RANCH; INTERWEST INSURANCE CO.; J R SIMPLOT CO; YOUNG, KEN	GROUND WATER															
N BAR N RANCH INC; COLWELL, CHERYL F; COLWELL, GEORGE E; EAGLE ISLAND RANCH; INTERWEST INSURANCE CO.; J R SIMPLOT CO; YOUNG, KEN	65-5231	N	BAR N RANCH INC; COLWELL, CHERYL F; COLWELL, GEORGE E; EAGLE ISLAND RANCH; INTERWEST INSURANCE CO.; J R SIMPLOT CO; YOUNG, KEN	GROUND WATER															
N BAR N RANCH INC; COLWELL, CHERYL F; COLWELL, GEORGE E; EAGLE ISLAND RANCH; INTERWEST INSURANCE CO.; J R SIMPLOT CO; YOUNG, KEN	65-6032	N	BAR N RANCH INC; COLWELL, CHERYL F; COLWELL, GEORGE E; EAGLE ISLAND RANCH; INTERWEST INSURANCE CO.; J R SIMPLOT CO; YOUNG, KEN	GROUND WATER															
N LOWER PAVETTE DITCH CO	65-7425	N	LOWER PAVETTE DITCH CO	PAVETTE RIVER															
N LOWER PAVETTE DITCH CO	65-7428	N	LOWER PAVETTE DITCH CO	PAVETTE RIVER															
N LOWER PAVETTE DITCH CO	65-7428	N	LOWER PAVETTE DITCH CO	PAVETTE RIVER															
N LOWER PAVETTE DITCH CO	65-7428	N	LOWER PAVETTE DITCH CO	PAVETTE RIVER															
N LOWER PAVETTE DITCH CO	65-7482	N	LOWER PAVETTE DITCH CO	PAVETTE RIVER															
N CONNECTICUT GENERAL LIFE INSURANCE CO; LOWER PAVETTE DITCH CO</																			

Overlap; combine limits not to exceed 25.6 AF have been

Total Storage Calculations - Pond A

FILE NUMBER	65-13932
REVIEWER	Aaron Skinner
DATE	12/3/2018

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.)	1.13	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	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)	6.8	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 " <u>From Storage</u> " 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)	2.4	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	9.1	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.

Flow Rate into Pond (CFS)	0.02	The "Flow Rate into Pond" depicts the actual flow, either measured or estimated, into the pond. For offstream facilities, this will be equivalent to "diversion to storage" rate.
Highest Daily Evaporation Rate From Evaporation Tab. (mm/Day)	3.97	This number is carried over from the "Evaporation Loss" sheet. It is the highest recorded number in the "Precipitation Deficit Table".
Required Daily Maintenance Volume (AF/Day)	0.01	"Required Daily Maintenance Volume" is the maximum volume of water needed on any given day during the year to maintain pond volume. It is calculated by adding the highest daily evaporation loss to the average daily seepage loss in acre feet. The average daily seepage loss is calculated by dividing the "Estimated Seepage Loss" by 365 days. This is acceptable, since the seepage rate shouldn't vary throughout the season unless the pond completely freezes over during the winter months. The highest daily evaporation loss is calculated by dividing the Highest Daily Evaporation Rate by the 304.8 conversion factor and multiplying this number by the pond surface area to attain a combined daily acre feet requirement.
Minimum Maintenance Flow (CFS)	0.01	The "Minimum Maintenance Flow" is the minimum amount of flow required to maintain the level of the pond. This number is determined by dividing the "Maximum Required Daily Maintenance Volume" by 1.9835. This flow can be used to determine if the flow rate into the pond is adequate to maintain the pond level.
Days Required to Fill the Pond	271	The "Days Required to Fill the Pond" is calculated by dividing the "Pond Capacity" by the "Flow Rate" minus "Minimum Maintenance Flow" multiplied by 1.9835. This section will assist you in determining if the flow rate being diverted to the pond is adequate to fill the pond while maintaining the pond level. The length of time to fill the pond will help determine if the flow rate is adequate for the size of pond being proposed. <i>If this number is approximately 6 months (180 days) or more, the reviewer should have a discussion with the applicant to make sure he/she understands that it will take a significant length of time to fill the pond.</i>
Days Required to Fill the Pond at 13,000 Gallons per Day	269	Some water users may want to fill a pond under the 13,000 gallons per day domestic exemption. The "Days Required to Fill the Pond at 13,000 Gallons per Day" is calculated by converting the "Pond Capacity" and the "Required Daily Maintenance Volume" to gallons. The "Pond Capacity" is then divided by 13,000 gallons minus the "Required Daily Maintenance Volume" in gallons to determine the number of days to fill pond. <i>If this number is approximately 6 months (180 days) or more, the reviewer should have a discussion with the applicant to make sure he/she understands that it will take a significant length of time to fill the pond.</i> Negative values indicate that the supply of 13,000 gallons per day is not enough volume to overcome the required daily maintenance volume; the pond will never fill.

Evaporation Loss Calculations - Pond A

This spreadsheet has been designed by Idaho Department of Water Resources to estimate the annual evaporation losses from a pond.

FILE NUMBER	65-13932
REVIEWER	Aaron Skinner
DATE	12/3/2018

User Input
Calculated value
Formula Explanations

The acronyms used on the Kimberly Research Center website are defined below:

P = Precipitation
ET= Evapotranspiration
P _d = Precipitation deficit
P _d =ET-P

USING THIS SPREADSHEET

Use the link below to access the Kimberly Research Center website. This website provides the Precipitation Deficit for a station most representative of the pond under examination. The Precipitation Deficit is the total amount of free water surface evaporation minus the precipitation for a given area, which gives the total amount of evaporative losses incurred by the pond. There are several weather sites that are used throughout the state. IDWR staff can find the nearest site using Arc Map. The shape file containing the sites can be found at <X:/Spatial/Climate/ETIdahostations.shp>.

Instructions:

1. Use the link below to navigate to ET Idaho 2012.
2. Select the station which is most representative to your pond location.
3. Click Submit Query.
4. Under "Land Covers with Evapotranspiration Estimates," select "Open Water - Shallow Systems (ponds, streams)" or "Open Water - small stock ponds" depending on the pond size.
5. Click the link to "Precipitation Deficit."
6. Reference and copy (ctrl + C) the first subheading "Mean" values.
7. Click the "Paste Values from ET Idaho" button. The table will automatically enter a zero (0) for any negative precipitation deficit values.

Found at: <http://data.kimberly.uidaho.edu/ETIdaho/>

Precipitation Deficit

Station: Payette (NWS -- 106891)

Month	mm/day ¹	Days per month	mm/Month
Jan	0.00	31	0.00
Feb	0.03	28	0.84
March	0.97	31	30.07
April	2.37	30	71.10
May	2.84	31	88.04
June	3.37	30	101.10
July	3.97	31	123.07
August	3.45	31	106.95
September	2.56	30	76.80
October	1.25	31	38.75
November	0.00	30	0.00
December	0.00	31	0.00

PLEASE NOTE: The seasonal average for precipitation deficit should not be used for calculations because precipitation often exceeds evaporation during wetter months of the year. If the pond is kept full, excess precipitation during wetter months does not serve to refill the pond during drier months.

For example, see Sandpoint KSPT (NWS -- 108137), the annual precipitation deficit is -106 mm. However, April through September have positive precipitation deficit values. To properly estimate the annual volume of water necessary to refill a pond due to evaporation losses, the table will automatically enter a zero (0) for each month that the precipitation value is reported as a negative value.

As described above, precipitation offsets evaporation in winter months, so the net effect is that wintertime precipitation deficit is usually zero.

Total mm/year = 636.72

$$\left(\frac{636.72}{304.8} \right) \times 1.13 = 2.4 \text{ AFA}$$

Total Storage Calculations - Pond B

FILE NUMBER	65-13932
REVIEWER	Aaron Skinner
DATE	12/3/2018

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.)	1.18	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	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)	7.1	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)	2.5	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	9.5	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.

Flow Rate into Pond (CFS)	0.02	The "Flow Rate into Pond" depicts the actual flow, either measured or estimated, into the pond. For offstream facilities, this will be equivalent to "diversion to storage" rate.
Highest Daily Evaporation Rate From Evaporation Tab. (mm/Day)	3.97	This number is carried over from the "Evaporation Loss" sheet. It is the highest recorded number in the "Precipitation Deficit Table".
Required Daily Maintenance Volume (AF/Day)	0.02	"Required Daily Maintenance Volume" is the maximum volume of water needed on any given day during the year to maintain pond volume. It is calculated by adding the highest daily evaporation loss to the average daily seepage loss in acre feet. The average daily seepage loss is calculated by dividing the "Estimated Seepage Loss" by 365 days. This is acceptable, since the seepage rate shouldn't vary throughout the season unless the pond completely freezes over during the winter months. The highest daily evaporation loss is calculated by dividing the Highest Daily Evaporation Rate by the 304.8 conversion factor and multiplying this number by the pond surface area to attain a combined daily acre feet requirement.
Minimum Maintenance Flow (CFS)	0.01	The "Minimum Maintenance Flow" is the minimum amount of flow required to maintain the level of the pond. This number is determined by dividing the "Maximum Required Daily Maintenance Volume" by 1.9835. This flow can be used to determine if the flow rate into the pond is adequate to maintain the pond level.
Days Required to Fill the Pond	291	The "Days Required to Fill the Pond" is calculated by dividing the "Pond Capacity" by the "Flow Rate" minus "Minimum Maintenance Flow" multiplied by 1.9835. This section will assist you in determining if the flow rate being diverted to the pond is adequate to fill the pond while maintaining the pond level. The length of time to fill the pond will help determine if the flow rate is adequate for the size of pond being proposed. <i>If this number is approximately 6 months (180 days) or more, the reviewer should have a discussion with the applicant to make sure he/she understands that it will take a significant length of time to fill the pond.</i>
Days Required to Fill the Pond at 13,000 Gallons per Day	289	Some water users may want to fill a pond under the 13,000 gallons per day domestic exemption. The "Days Required to Fill the Pond at 13,000 Gallons per Day" is calculated by converting the "Pond Capacity" and the "Required Daily Maintenance Volume" to gallons. The "Pond Capacity" is then divided by 13,000 gallons minus the "Required Daily Maintenance Volume" in gallons to determine the number of days to fill pond. <i>If this number is approximately 6 months (180 days) or more, the reviewer should have a discussion with the applicant to make sure he/she understands that it will take a significant length of time to fill the pond.</i> Negative values indicate that the supply of 13,000 gallons per day is not enough volume to overcome the required daily maintenance volume; the pond will never fill.

Evaporation Loss Calculations - Pond B

This spreadsheet has been designed by Idaho Department of Water Resources to estimate the annual evaporation losses from a pond.

FILE NUMBER	65-13932
REVIEWER	Aaron Skinner
DATE	12/3/2018

User Input
Calculated value
Formula Explanations

The acronyms used on the Kimberly Research Center website are defined below:

P = Precipitation
ET= Evapotranspiration
P _d = Precipitation deficit
P _d =ET-P

USING THIS SPREADSHEET

Use the link below to access the Kimberly Research Center website. This website provides the Precipitation Deficit for a station most representative of the pond under examination. The Precipitation Deficit is the total amount of free water surface evaporation minus the precipitation for a given area, which gives the total amount of evaporative losses incurred by the pond. There are several weather sites that are used throughout the state. IDWR staff can find the nearest site using Arc Map. The shape file containing the sites can be found at <X:/Spatial/Climate/ETIdahostations.shp>.

Instructions:

1. Use the link below to navigate to ET Idaho 2012.
2. Select the station which is most representative to your pond location.
3. Click Submit Query.
4. Under "Land Covers with Evapotranspiration Estimates," select "Open Water - Shallow Systems (ponds, streams)" or "Open Water - small stock ponds" depending on the pond size.
5. Click the link to "Precipitation Deficit."
6. Reference and copy (ctrl + C) the first subheading "Mean" values.
7. Click the "Paste Values from ET Idaho" button. The table will automatically enter a zero (0) for any negative precipitation deficit values.

Found at: <http://data.kimberly.uidaho.edu/ETIdaho/>

Precipitation Deficit

Station: Payette (NWS -- 106891)

Month	mm/day ¹	Days per month	mm/Month
Jan	0.00	31	0.00
Feb	0.03	28	0.84
March	0.97	31	30.07
April	2.37	30	71.10
May	2.84	31	88.04
June	3.37	30	101.10
July	3.97	31	123.07
August	3.45	31	106.95
September	2.56	30	76.80
October	1.25	31	38.75
November	0.00	30	0.00
December	0.00	31	0.00

PLEASE NOTE: The seasonal average for precipitation deficit should not be used for calculations because precipitation often exceeds evaporation during wetter months of the year. If the pond is kept full, excess precipitation during wetter months does not serve to refill the pond during drier months.

For example, see Sandpoint KSPT (NWS -- 108137), the annual precipitation deficit is -106 mm. However, April through September have positive precipitation deficit values. To properly estimate the annual volume of water necessary to refill a pond due to evaporation losses, the table will automatically enter a zero (0) for each month that the precipitation value is reported as a negative value.

As described above, precipitation offsets evaporation in winter months, so the net effect is that wintertime precipitation deficit is usually zero.

Total mm/year = 636.72

$[(\text{mm/yr}) \div (\text{convert to feet})] \times (\text{Surface area of pond, in acres}) = \text{Evaporation Loss in Acre Feet}$

$$(636.72 \div 304.8) \times 1.18 = 2.5 \text{ AFA}$$

Total Storage Calculations - Pond C

FILE NUMBER	65-13932
REVIEWER	Aaron Skinner
DATE	12/3/2018

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.)	0.80	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	6.4	"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)	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)	1.7	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	6.8	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.

Flow Rate into Pond (CFS)	0.02	The "Flow Rate into Pond" depicts the actual flow, either measured or estimated, into the pond. For offstream facilities, this will be equivalent to "diversion to storage" rate.
Highest Daily Evaporation Rate From Evaporation Tab. (mm/Day)	3.97	This number is carried over from the "Evaporation Loss" sheet. It is the highest recorded number in the "Precipitation Deficit Table".
Required Daily Maintenance Volume (AF/Day)	0.01	"Required Daily Maintenance Volume" is the maximum volume of water needed on any given day during the year to maintain pond volume. It is calculated by adding the highest daily evaporation loss to the average daily seepage loss in acre feet. The average daily seepage loss is calculated by dividing the "Estimated Seepage Loss" by 365 days. This is acceptable, since the seepage rate shouldn't vary throughout the season unless the pond completely freezes over during the winter months. The highest daily evaporation loss is calculated by dividing the Highest Daily Evaporation Rate by the 304.8 conversion factor and multiplying this number by the pond surface area to attain a combined daily acre feet requirement.
Minimum Maintenance Flow (CFS)	0.01	The "Minimum Maintenance Flow" is the minimum amount of flow required to maintain the level of the pond. This number is determined by dividing the "Maximum Required Daily Maintenance Volume" by 1.9835. This flow can be used to determine if the flow rate into the pond is adequate to maintain the pond level.
Days Required to Fill the Pond	175	The "Days Required to Fill the Pond" is calculated by dividing the "Pond Capacity" by the "Flow Rate" minus "Minimum Maintenance Flow" multiplied by 1.9835. This section will assist you in determining if the flow rate being diverted to the pond is adequate to fill the pond while maintaining the pond level. The length of time to fill the pond will help determine if the flow rate is adequate for the size of pond being proposed. <i>If this number is approximately 6 months (180 days) or more, the reviewer should have a discussion with the applicant to make sure he/she understands that it will take a significant length of time to fill the pond.</i>
Days Required to Fill the Pond at 13,000 Gallons per Day	174	Some water users may want to fill a pond under the 13,000 gallons per day domestic exemption. The "Days Required to Fill the Pond at 13,000 Gallons per Day" is calculated by converting the "Pond Capacity" and the "Required Daily Maintenance Volume" to gallons. The "Pond Capacity" is then divided by 13,000 gallons minus the "Required Daily Maintenance Volume" in gallons to determine the number of days to fill pond. <i>If this number is approximately 6 months (180 days) or more, the reviewer should have a discussion with the applicant to make sure he/she understands that it will take a significant length of time to fill the pond.</i> Negative values indicate that the supply of 13,000 gallons per day is not enough volume to overcome the required daily maintenance volume; the pond will never fill.

Evaporation Loss Calculations - Pond C

This spreadsheet has been designed by Idaho Department of Water Resources to estimate the annual evaporation losses from a pond.

FILE NUMBER	65-13932
REVIEWER	Aaron Skinner
DATE	12/3/2018

User Input
Calculated value
Formula Explanations

The acronyms used on the Kimberly Research Center website are defined below:

P = Precipitation
ET= Evapotranspiration
P _d = Precipitation deficit
P _d =ET-P

USING THIS SPREADSHEET

Use the link below to access the Kimberly Research Center website. This website provides the Precipitation Deficit for a station most representative of the pond under examination. The Precipitation Deficit is the total amount of free water surface evaporation minus the precipitation for a given area, which gives the total amount of evaporative losses incurred by the pond. There are several weather sites that are used throughout the state. IDWR staff can find the nearest site using Arc Map. The shape file containing the sites can be found at X:/Spatial/Climate/ETIdahostations.shp.

Instructions:

1. Use the link below to navigate to ET Idaho 2012.
2. Select the station which is most representative to your pond location.
3. Click Submit Query.
4. Under "Land Covers with Evapotranspiration Estimates," select "Open Water - Shallow Systems (ponds, streams)" or "Open Water - small stock ponds" depending on the pond size.
5. Click the link to "Precipitation Deficit."
6. Reference and copy (ctrl + C) the first subheading "Mean" values.
7. Click the "Paste Values from ET Idaho" button. The table will automatically enter a zero (0) for any negative precipitation deficit values.

Found at: <http://data.kimberly.uidaho.edu/ETIdaho/>

Precipitation Deficit

Station: Payette (NWS -- 106891)

Month	mm/day ¹	Days per month	mm/Month
Jan	0.00	31	0.00
Feb	0.03	28	0.84
March	0.97	31	30.07
April	2.37	30	71.10
May	2.84	31	88.04
June	3.37	30	101.10
July	3.97	31	123.07
August	3.45	31	106.95
September	2.56	30	76.80
October	1.25	31	38.75
November	0.00	30	0.00
December	0.00	31	0.00

PLEASE NOTE: The seasonal average for precipitation deficit should not be used for calculations because precipitation often exceeds evaporation during wetter months of the year. If the pond is kept full, excess precipitation during wetter months does not serve to refill the pond during drier months.

For example, see Sandpoint KSPT (NWS -- 108137), the annual precipitation deficit is -106 mm. However, April through September have positive precipitation deficit values. To properly estimate the annual volume of water necessary to refill a pond due to evaporation losses, the table will automatically enter a zero (0) for each month that the precipitation value is reported as a negative value.

As described above, precipitation offsets evaporation in winter months, so the net effect is that wintertime precipitation deficit is usually zero.

Total mm/year = 636.72

$$[(636.72 \text{ mm/yr}) \div (\text{convert to feet})] \times (\text{Surface area of pond, in acres}) = \text{Evaporation Loss in Acre Feet}$$

(636.72 ÷ 304.8) X 0.80 = 1.7 AFA



Pond A



Overflow pipe into the Payette River if necessary.



Deepest area of Pond A and where ground water enters the pond system.



Corrugated pipe delivers surface water to the pond system. The ditch connects all the ponds together. Conveyance from Pond A to B



Pond B. Deepest area is around the island.



Conveyance from Pond B to C.



Pond C. Deepest
of the three ponds
at 16 feet deep.



State of Idaho

DEPARTMENT OF WATER RESOURCES

Western Region • 2735 Airport Way • Boise, Idaho 83705-5082

Phone: (208) 334-2190 • Fax: (208) 334-2348 • Website: www.idwr.idaho.gov

C.L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Director

October 30, 2018

COPY

DEBRA A STOUNE
5011 HWY 52
NEW PLYMOUTH, ID 83655

RE: Scheduling Field Exam for Water Right Permit No. 65-13932

Dear Ms. Stoune:

We are planning to conduct water right examinations in the vicinity of the above-referenced permit. An examination is needed to verify the water use in order to issue a water right license.

The above-referenced permit authorizes use of ground water for aesthetic storage. I have enclosed a water permit report and map depicting the permit place of use and point of diversion for your reference.

The current water right permit owners of record is JL Stoune. We have been unable to contact Mr. Stoune to schedule a field examination on behalf of the permit owner. Payette County tax lot information indicates you may own the place of use property associated with this permit. A water right permit is personal property of the permit owner. It remains personal property unless it is assigned to a new owner. I have enclosed the Information for New Landowner handout for your reference.

If a beneficial use of water under the permit was not developed or if developed, but subsequently abandoned, a license cannot be issued. The permit will become void if beneficial use under the permit was not developed or was developed, but is now abandoned.

Please contact me within the next thirty (30) days to either schedule an examination or notify the department a beneficial use was not developed or was abandoned. If you do not respond to this letter, the department will void the permit. I appreciate your attention in this matter and I look forward to hearing from you.

Sincerely,

Aaron Skinner

Water Resource Agent, Sr.
Idaho Department of Water Resources
Phone: (208) 334-2190
Email: aaron.skinner@idwr.idaho.gov

Enclosure(s): Water Permit Report, Map, and Information for New Landowner

IDAHO DEPARTMENT OF WATER RESOURCES
WESTERN REGION
2735 Airport Way
Boise, Idaho 83705-5082

RETURN SERVICE REQUESTED

Associated to letter dated 10/17/18
New letter sent to landowner on
10/30/2018.

WATER RESOURCES
WESTERN REGION

RECEIVED

OCT 30 2018

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FIRST CLASS



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State of Idaho

DEPARTMENT OF WATER RESOURCES

Western Region • 2735 Airport Way • Boise, Idaho 83705-5082

Phone: (208) 334-2190 • Fax: (208) 334-2348 • Website: www.idwr.idaho.gov

C.L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Director

October 12, 2018

RECEIVED

OCT 30 2018

WATER RESOURCES
WESTERN REGION

J L STOUNE
609 SW 5TH ST
ONTARIO, OR 97914

RE: Scheduling Field Exam for Water Right Permit No. 65-13932

Dear Permit Holder:

We are planning to conduct water right examinations in the vicinity of the above-referenced permit **this season**. An examination is needed to verify the water use in order to issue a water right license.

The above-referenced permit authorizes **36.8 acre-feet of GROUND WATER for AESTHETIC STORAGE** use. **If you have developed a beneficial use and still own the place of use property, please contact me at your earliest convenience to schedule an examination.**

If you did not develop a beneficial use of water under the permit during the beneficial use period, a license cannot be issued and the permit should be relinquished. If that use was developed, but have ceased using the water and you currently carry no interest in it, please relinquish the permit by submitting the enclosed Relinquishment of Permit form (no fee required).

Please contact me within the next thirty (30) days at (208) 334-2190 to either schedule an examination or submit a relinquishment form. If the Department does not received a response by November 15, 2018, your permit will become void. Thank you for your attention to this matter.

Sincerely,

Aaron Skinner
Water Resource Agent, Sr.
Idaho Department of Water Resources
Phone: (208) 334-2190
Email: aaron.skinner@idwr.idaho.gov

Enclosures: Relinquishment of Permit form
Water Permit Report and Map