

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 65-23520
Exam Date: 05/17/2019

1. Current Owner:
C/O LEONARD IVENTOSCH
IVENTOSCH FAMILY 2010 TRUST
411-F DEINHARD LN
PMB 151 MC CALL ID 83638 OR

LEONARD IVENTOSCH 2441 BENTLEY DR RENO NV 89523

2. Accompanied by: Leonard Iventosch
Phone No:
Address:
Relationship to permit Holder: Same

3. **SOURCE:**
GROUND WATER

Method of Determination: Site visit

B. OVERLAP REVIEW

1. Other water rights with the same place of use: NO Overlap

Comments: _____

2. Other water rights with the same point-of-diversion: NO Overlap

Comments: _____

C. DIVERSION AND DELIVERY SYSTEM

1. **LOCATION OF POINT(S) OF DIVERSION:**
GROUND WATER SW $\frac{1}{4}$ NE $\frac{1}{4}$, Sec. 34, Twp 17N, Rge 04E, B.M. VALLEY County

Method of Determination: Pond centroid, aerial imagery, digital PLS map

PLACE OF USE: RECREATION 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	
17N	04E	34			X														

Method of Determination: Aerial imagery, digital PLS map

- 2.
- ☒ Delivery System Diagram Attached (required). Indicate all major components and distances between components. 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.
 - ☒ Aerial Photo Attached (required for irrigation of 10+ acres).
 - ☒ Photo of Diversion and System Attached

3.

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:

No diversion rate to measure.

E. FLOW CALCULATIONS

_____ Additional Computation Sheets Attached

Measured Method:

NONE

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) =$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 =$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} =$$

2. Volume Calculations for Other Uses:

Pond Capacity

$$\text{West end: } 0.2 \text{ acres} \times 20 \text{ ft} \times 0.4 = 1.6 \text{ acre feet}$$

$$\text{East end: } 0.1 \text{ acres} \times 10 \text{ ft} \times 0.4 = 0.4 \text{ acre feet}$$

Evaporation

$$0.5 \text{ acre feet (per McCall NWS precip deficit data)}$$

TOTAL 2.5 afa

G. NARRATIVE/REMARKS/COMMENTS

Permit 65-23520 was approved on November 21st 2012, authorizing the interception and storage of shallow groundwater in a small pond used for recreation. Proof of Beneficial Use was submitted October 18, 2013. I, WRA Cody Parker, completed this field exam on May 17, 2019.

The pond is approximately 0.3 acres in surface area. The west end of the pond is as deep as 20 ft, while the east end is more like 10 ft deep. The storage capacity, I calculated was 2.0 acre-feet. The pond is kept full throughout the year as there is no way to control the interception of groundwater by the pond. I have assumed that there is no seepage from the pond since it is fed from below by groundwater. I estimate the annual evaporation from the pond to be 0.5 afa. I estimated evaporation using the McCall NWS station precipitation deficit dataset. The total recreation storage volume I am recommending is 2.5 afa.

The permit lists the source as ground water tributary to Rapid Creek, which means that it is regulated by the watermaster of water district 65. There does not appear to be any justification of the tributary interpretation in the backfile. It is not current Department practice to automatically consider groundwater tributary to nearby surface water sources except in areas where a determination has been made by the Department. Therefore, I have recommended dropping the tributary information for the source and removing water district conditions from the right at licensing.

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

H. RECOMMENDATIONS**1. Recommended Amounts**

<u>Beneficial Use</u>	<u>Period of Use</u>	<u>Rate of Diversion</u>	<u>Annual Volume</u>
RECREATION STORAGE	01/01 to 12/31		2.5 AF

Totals:

2.5 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

Cody Parker - Water Resource Agent, Senior

Field Examiner's Name Cody Parker Date 06-12-19Reviewer Patricia Wiley Date 6-13-2019

State of Idaho
Department of Water Resources
Beneficial Use Field Report
65-23520

RECREATION STORAGE

04E



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

0 0.035 0.07 0.14 Miles





Legend

-  10 ft max depth
-  20 ft max depth
-  839 Homestead Rd

Rapid Creek

839 Homestead Rd

Google Earth

© 2018 Google



400 ft



Google Earth

© 2018 Google

200 ft

N

East End

Total Storage Calculations

FILE NUMBER	XX-XXXXX
REVIEWER	Joe Agent
DATE	1/1/2000

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.
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)	0.6	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.

West End

Total Storage Calculations

FILE NUMBER	XX-XXXXX
REVIEWER	Joe Agent
DATE	1/1/2000

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.)	0.2	"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)	1.6	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)	0.3	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	1.9	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.

Evaporation Loss Calculations

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

FILE NUMBER	xx-xxxxx
REVIEWER	Joe Agent
DATE	1/1/2000

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: Twin Falls 2 NNE (NWS -- 109294)

Month	mm/day ¹	Days per month	mm/Month
Jan	-1.92	31	0.00
Feb	-1.11	28	0.00
March	-0.93	31	0.00
April	0.75	30	22.50
May	1.46	31	45.26
June	2.38	30	71.40
July	4.26	31	132.06
August	3.69	31	114.39
September	2.18	30	65.40
October	0.39	31	12.09
November	-1.92	30	0.00
December	-2.16	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 = 463.10

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

$$(463.10 \div 304.8) \times 0.30 = 0.5 \text{ AFA}$$

65-6085 LOOMIS, SPRINGS DOMESTIC

[illegible]

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

17N04E34

BasinSeq Owner	Source
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65-12309 GEIGER, / CAMP CREEK

65-12514 KOLSKY, SAPPHIRE CREEK

65-13909 HERBEL, SPRING

65-17020 BYARD, I GROUND WATER

65-22370 PASCOE, SPRING

65-23520 CRESTLI GROUND WATER

65-6085 LOOMIS, SPRINGS

[illegible]