

State of Idaho
Department of Water Resources
Water Right License
WATER RIGHT NO. 65-22960

PRIORITY: March 09, 2005

Maximum Diversion Rate: 0.17 CFS

Maximum Diversion Volume: 145.7 AF

It is hereby certified that:

THE MCCALL ASSOCIATES LLC PO BOX 10117 BOISE ID 83707

has complied with the terms and conditions of the permit, issued pursuant to Application for Permit dated March 09, 2005, and has submitted Proof of Beneficial Use on July 30, 2010. An examination confirms water is diverted from:

SOURCE: GROUND WATER

and a water right has been established as follows:

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL DIVERSION VOLUME</u>
DIVERSION TO STORAGE	01/01 to 12/31	0.17 CFS	
AESTHETIC STORAGE	01/01 to 12/31		145.7 AF
AESTHETIC FROM STORAGE	01/01 to 12/31		145.7 AF
RECREATION STORAGE	01/01 to 12/31		145.7 AF

LOCATION OF POINT(S) OF DIVERSION:

GROUND WATER L1 (SE¼SE¼) Sec. 25, Twp 18N, Rge 02E, B.M. VALLEY County

GROUND WATER L1 (SE¼SE¼) Sec. 25, Twp 18N, Rge 02E, B.M. VALLEY County

PLACE OF USE: AESTHETIC STORAGE, AESTHETIC FROM STORAGE and
RECREATION 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	
18N	02E	25													X	X	X	X L1	

CONDITIONS OF APPROVAL

1. Diversion of water to storage under this right shall be limited to the volume necessary to replace losses resulting from evaporation from the reservoirs.
2. Aesthetic storage and recreation storage uses are for two reservoirs constructed in the Blackhawk on the River subdivision. The aesthetic from storage use is for recirculation of water between the two reservoirs.
3. The two (2) ponds established by the storage of water under this right shall not exceed a total capacity of 134.0 acre-feet or a total surface area of 10.5 acres.
4. This right authorizes a total annual storage volume of 145.7 acre-feet, 134.0 acre-feet to be used for carryover storage of the ponds and 11.7 acre-feet for the replacement of losses caused by evaporation.

State of Idaho
Department of Water Resources
Water Right License
WATER RIGHT NO. 65-22960

5. The right holder shall install and maintain an impermeable liner in the ponds to eliminate seepage losses.
6. After specific notification by the Department, the right holder shall install a suitable measuring device or shall enter into an agreement with the Department to determine the amount of water diverted from power records and shall annually report the information to the Department.
7. When ordered by the Director, the right holder shall provide mitigation acceptable to the Director to offset depletion of lower Snake River flows needed for migrating anadromous fish. The amount of water required for mitigation, which is to be released into the Snake River or a tributary for this purpose, will be determined by the Director based upon the reduction in flow caused by the use of water pursuant to this right. Any order of the Director issued in accordance with this paragraph shall be in conformance with applicable rules allowing the right holder due process as the need for mitigation and the amount of mitigation are determined.

This license is issued pursuant to the provisions of Section 42-219, Idaho Code. The water right confirmed by this license is subject to all prior water rights and shall be used in accordance with Idaho law and applicable rules of the Department of Water Resources.

Signed this 19th day of MAY, 2016.



Nick Miller
Manager, IDWR Western Region

State of Idaho
Department of Water Resources
Attachment to Water Right License
65-22960

This map depicts the AESTHETIC STORAGE, AESTHETIC FROM STORAGE and RECREATION STORAGE place of use boundary for this water right at the time of this approval and is attached to the approval document solely for illustrative purposes.

02E



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

0 0.05 0.1 0.2 Miles





State of Idaho

DEPARTMENT OF WATER RESOURCES

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

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

C. L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Director

May 19, 2016

THE MCCALL ASSOCIATES LLC
PO BOX 10117
BOISE ID 83707

RE: License No. 65-22960

Issuance of License

Dear Water Right Holder(s):

The Department of Water Resources has issued the enclosed Water Right License confirming that a water right has been established in accordance with your permit. Please be sure to thoroughly review the conditions of approval and remarks listed on your license.

The license is a PRELIMINARY ORDER issued by the Department pursuant to section 67-5243, Idaho Code. It can and will become a final order without further action by the Department unless a party petitions for reconsideration or files an exception and/or brief within fourteen (14) days of the service date as described in the enclosed information sheet.

Please note that water right owners are required to report any change of water right ownership and/or mailing address to the Department within 120 days of the change. Failure to report these changes could result in a \$100 late filing fee. Contact any office of the Department or visit the Department's homepage on the Internet to obtain the proper forms and instructions.

If you have any questions, please contact me at (208)334-2190.

Sincerely,

Nick Miller
for:

Nick Miller
Western Regional Manager

Enclosure(s)

CERTIFICATE OF SERVICE

I hereby certify that on May 19, 2016 I mailed a true and correct copy, postage prepaid, of the foregoing PRELIMINARY ORDER(Approved License) to the person(s) listed below:

RE: WATER RIGHT NO.

65-22960

**THE MCCALL ASSOCIATES LLC
PO BOX 10117
BOISE ID 83707**



**Rachel Neely
Administrative Assistant**

EXPLANATORY INFORMATION TO ACCOMPANY A PRELIMINARY ORDER

(To be used in connection with actions when a hearing was **not** held)

(Required by Rule of Procedure 730.02)

The accompanying order or approved document is a "**Preliminary Order**" issued by the department pursuant to section 67-5243, Idaho Code. **It can and will become a final order without further action of the Department of Water Resources ("department") unless a party petitions for reconsideration, files an exception and brief, or requests a hearing as further described below:**

PETITION FOR RECONSIDERATION

Any party may file a petition for reconsideration of a preliminary order with the department within fourteen (14) days of the service date of this order. **Note: the petition must be received by the department within this fourteen (14) day period.** The department will act on a petition for reconsideration within twenty-one (21) days of its receipt, or the petition will be considered denied by operation of law. See Section 67-5243(3) Idaho Code.

EXCEPTIONS AND BRIEFS

Within fourteen (14) days after: (a) the service date of a preliminary order, (b) the service date of a denial of a petition for reconsideration from this preliminary order, or (c) the failure within twenty-one (21) days to grant or deny a petition for reconsideration from this preliminary order, any party may in writing support or take exceptions to any part of a preliminary order and may file briefs in support of the party's position on any issue in the proceeding with the Director. Otherwise, this preliminary order will become a final order of the agency.

REQUEST FOR HEARING

Unless a right to a hearing before the Department or the Water Resource Board is otherwise provided by statute, any person aggrieved by any final decision, determination, order or action of the Director of the Department and who has not previously been afforded an opportunity for a hearing on the matter may request a hearing pursuant to section 42-1701A(3), Idaho Code. A written petition contesting the action of the Director and requesting a hearing shall be filed within fifteen (15) days after receipt of the denial or conditional approval.

ORAL ARGUMENT

If the Director grants a petition to review the preliminary order, the Director shall allow all parties an opportunity to file briefs in support of or taking exceptions to the preliminary order and may schedule oral argument in the matter before issuing a final order. If oral arguments are to be heard, the Director will within a reasonable time period notify each party of the place, date and hour for the argument of the case. Unless the Director orders otherwise, all oral arguments will be heard in Boise, Idaho.

CERTIFICATE OF SERVICE

All exceptions, briefs, requests for oral argument and any other matters filed with the Director in connection with the preliminary order shall be served on all other parties to the proceedings in accordance with IDAPA Rules 37.01.01302 and 37.01.01303 (Rules of Procedure 302 and 303).

FINAL ORDER

The Director will issue a final order within fifty-six (56) days of receipt of the written briefs, oral argument or response to briefs, whichever is later, unless waived by the parties or for good cause shown. The Director may remand the matter for further evidentiary hearings if further factual development of the record is necessary before issuing a final order. The department will serve a copy of the final order on all parties of record.

Section 67-5246(5). Idaho Code, provides as follows:

Unless a different date is stated in a final order, the order is effective fourteen (14) days after its service date if a party has not filed a petition for reconsideration. If a party has filed a petition for reconsideration with the agency head, the final order becomes effective when:

- (a) The petition for reconsideration is disposed of; or
- (b) The petition is deemed denied because the agency head did not dispose of the petition within twenty-one (21) days.

APPEAL OF FINAL ORDER TO DISTRICT COURT

Pursuant to sections 67-5270 and 67-5272, Idaho Code, if this preliminary order becomes final, any party aggrieved by the final order or orders previously issued in this case may appeal the final order and all previously issued orders in this case to district court by filing a petition in the district court of the county in which:

- i. A hearing was held,
- ii. The final agency action was taken.
- iii. The party seeking review of the order resides, or
- iv. The real property or personal property that was the subject of the agency action is located.

The appeal must be filed within twenty-eight (28) days of this preliminary order becoming final. See section 67-5273, Idaho Code. The filing of an appeal to district court does not itself stay the effectiveness or enforcement of the order under appeal.

Kelly, Patrick

From: Ron Shurtleff [waterdist65@srvinet.com]
Sent: Tuesday, March 08, 2016 10:22 AM
To: Kelly, Patrick
Cc: simamuroff@gmail.com
Subject: Agreement to rent water from Rental Pool of Water District No. 65
Attachments: AgreementtoRentWaterWD65.pdf

Patrick,

Attached please find a rental agreement from the Rental Pool of Water District No. 65 for the initial fill of a reservoir connected to Water Right No. 65-22960.

If you need any further information please contact me at 208-642-4465.

Thank you,

Ron Shurtleff

Water District No. 65
102 N. Main
Payette, ID 83661
Phone: 208-642-4465
Fax: 208-642-1042
Cell: 208-642-0230

Water District No. 65

Payette River Basin, State of Idaho
102 North Main Street
Payette, Idaho 83661

Watermaster
Ron Shurtleff

Phone (208) 642-4465
Fax (208) 642-1042
E-Mail waterdist65@srvnet.com

Water District No. 65 Rental Pool AGREEMENT TO RENT WATER FROM THE RENTAL POOL For the 2005 Irrigation Season

The local rental pool Committee of Water District No. 65, being authorized pursuant to Idaho Code Section 42-1765 to lease stored water from water users who own reservoir space and have excess supplies, and to rent said water to requesting parties, does agree to rent to Sage SG, Inc. (entity),

150 Acre-Feet of storage space requested for construction (use). This agreement is subject to the adopted procedures of the Water District No. 65 Rental Pool and execution of same by the party herein named.

Upon receipt of the information requested below, the Payette River Watermaster will release to you from storage, at the rate you specify, 150 Acre-Feet of stored water between 9/12/2005 and 12/31/2005.

Description of Point of Diversion:

Located in SE 1/4 SE 1/4, Sec. 25, T. 18N, R. 02E;

Other _____

On (source) North Fork Payette River Pump H.P. _____ Lift _____

Headgate temporary pump (canal name if appropriate)

Note: The temporary pump had not been selected as of the date of this agreement. Anticipated diversion rate is between 1.3 and 4.0 cfs. Sage SG, Inc. will notify the Watermaster of the intended pump horsepower and diversion rate prior to diverting the water.

Description of Place of Use:

Legal description: SE 1/4 Section 25, T18N R02E

Total acres to be irrigated: NA

Sage SG, Inc. By: SIMA MURPHY
(Name of Organization or Individual) PRINCIPAL (Title)

1220 20th St. SE, Salem, OR 97302 Dated this 3 day of AUG, 2005.
(Address of Organization or Individual)

503-485-4706
(Phone Number)

I have accepted the request of Sage SG, Inc. to rent water from the Water District No. 65 Rental Pool this 9th day of August, 2005.

Ron Shurtleff
Watermaster, Water District No. 65
Agent for the Rental Pool Committee



State of Idaho

DEPARTMENT OF WATER RESOURCES

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

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

C. L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Director

January 7, 2016

COPY

SAGE SGI LLC
PO BOX 1110
MC CALL, ID 83638

RE: Additional Information Request for Permit 65-22960

Dear Permit Owner:

On March 9, 2005, 0 filed an application for permit to appropriate water for an aesthetic storage use in the SE ¼ of Section 25, Township 18 North, Range 2 East. The application was approved and water right permit 65-22960 was issued on September 12, 2005. On July 30, 2010, you filed a proof of beneficial use statement claiming that you developed the domestic use under water right permit 65-22960. A field examination of the ponds was completed by IDWR staff October 16, 2014.

I am now trying to verify the water use under 65-22960 to license this water right permit. Conditions of Approval of the Permit state:

Water for the initial filling of the reservoirs constructed in connection with this right shall be provided through the rental of 150 acre feet of water from the State Water Supply Bank or from some other source of water authorized by the Department.

The Application for Permit suggested that 150 af of water would be rented from Basin 65 Rental Pool water. However, there is no information on record to confirm this occurred. Communication with Ron Shurtleff, Watermaster of Basin 65 has not been able to provide any record. It is assumed that the condition would have been placed on the permit if the applicant wanted to fill the pond at a faster diversion rate than what the permit would allow.

Also, the permit is in the name of SAGE SGI LLC. Currently taxlot data and information collected by the field examiner report ownership in the name of McCall Associates LLC. An Assignment of Permit or Ownership Change form must be completed to correct current ownership.

Please submit evidence that the above condition was complied with and the appropriate ownership documentation for a water right license to be issued. You may seek additional time to provide the information by making a written request to interrupt processing for up to six months. The permit will be voided without a timely written reply within the next thirty (30) days.

IDWR forms and other information are available on the Internet at www.idwr.idaho.gov. Please contact me at 208-334-2190 if you need more information. Thank you for your attention to these matters.

Respectfully,

Patrick Kelly

Water Resource Agent

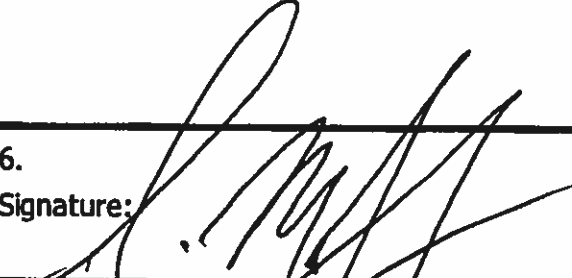
208.287.4933 phone

patrick.kelly@idwr.idaho.gov

Enclosures: Change of Ownership form
 Assignment of Permit form

cc: MCCALL ASSOCIATES LLC
 PO BOX 2084
 MCCALL ID 83638

MCCALL ASSOCIATES LLC
1112 W MAIN ST SUITE 106
BOISE ID 83702

No. W 104930	Reinstatement Annual Report Form ADMIN DISSOLVED 10/21/2015		2. Registered Agent and Office (NOT A P.O. BOX)																																		
Return to: SECRETARY OF STATE 450 N 4th STREET PO BOX 83720 BOISE, ID 83720-0080 REINSTATEMENT FEE DUE: \$30.00	1. Mailing Address: Correct in this box if needed. MCCALL ASSOCIATES LLC (THE) ~~HADEN TANNER~~ ~~PO BOX 2084~~ <i>1112 W Main St Suite 106</i> ~~MCCALL ID 83638~~ <i>Boise ID 83702</i>		~~GIVENS PURSLEY CORPORATE SERVI~~ ~~601 W BANNOCK ST~~ ~~BOISE ID 83702 USA~~ <i>Riverside Management Inc.</i> <i>8919 W Ardene St</i> <i>Boise ID 83709</i>																																		
4. Limited Liability Companies: Enter Names and Addresses of Managers OR Members. See Instructions. <table border="1"> <thead> <tr> <th>Manager or Member</th> <th>Name</th> <th>Street or PO Address</th> <th>City</th> <th>State</th> <th>Country</th> <th>Postal Code</th> </tr> </thead> <tbody> <tr> <td>Manager ☒ Member ☐</td> <td><i>Sima Muroff</i></td> <td><i>1112 W Main St Suite 106</i></td> <td><i>Boise</i></td> <td><i>ID</i></td> <td><i>83702</i></td> <td></td> </tr> <tr> <td>Manager ☐ Member ☐</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Manager ☐ Member ☐</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Manager ☐ Member ☐</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Manager or Member	Name	Street or PO Address	City	State	Country	Postal Code	Manager ☒ Member ☐	<i>Sima Muroff</i>	<i>1112 W Main St Suite 106</i>	<i>Boise</i>	<i>ID</i>	<i>83702</i>		Manager ☐ Member ☐							Manager ☐ Member ☐							Manager ☐ Member ☐							3. New Registered Agent Signature. 
Manager or Member	Name	Street or PO Address	City	State	Country	Postal Code																															
Manager ☒ Member ☐	<i>Sima Muroff</i>	<i>1112 W Main St Suite 106</i>	<i>Boise</i>	<i>ID</i>	<i>83702</i>																																
Manager ☐ Member ☐																																					
Manager ☐ Member ☐																																					
Manager ☐ Member ☐																																					
5. Organized Under the Laws of: IDAHO W 104930	6. Signature:  Name (type or print): <i>Sima Muroff</i> Title: <i>Manager</i>																																				

Issued 11/11/2015 by online

INSTRUCTIONS FOR THE IDAHO ANNUAL REPORT FORM

No. W 104930	Due no later than Jul 31, 2014 Annual Report Form		2. Registered Agent and Address (NO PO BOX)			
Return to: SECRETARY OF STATE 700 WEST JEFFERSON PO BOX 83720 BOISE, ID 83720-0080 NO FILING FEE IF RECEIVED BY DUE DATE			1. Mailing Address: Correct in this box if needed. MCCALL ASSOCIATES LLC (THE) HADEN TANNER PO BOX 2084 MCCALL ID 83638		GIVENS PURSLEY CORPORATE SERVI 601 W BANNOCK ST BOISE ID 83702 USA	
4. Limited Liability Companies: Enter Names and Addresses of at least one Member or Manager.			3. <u>New</u> Registered Agent Signature:*			
5. Organized Under the Laws of: ID W 104930	6. Annual Report must be signed.* Signature: Haden Tanner Name (type or print): Haden Tanner				Date: 07/25/2014 Title: Manager	
Processed 07/25/2014			* Electronically provided signatures are accepted as original signatures.			

Kelly, Patrick

From: Lori Graves [LGraves@spfwater.com]
Sent: Thursday, January 07, 2016 10:43 AM
To: Kelly, Patrick
Subject: RE: Additional information for WR 65-22960

Patrick,

I talked with Terry and he doesn't have any recollection nor see anything in our archive files. Maybe Jennifer remembers something.

Also, it appears SAGE SGI LLC no longer exists. The pond area is now owned by McCall Associates (which lists Sima Muroff as the Manager). Maybe you should contact Sima?

From: Kelly, Patrick [<mailto:Patrick.Kelly@idwr.idaho.gov>]
Sent: Wednesday, January 06, 2016 3:06 PM
To: Lori Graves <LGraves@spfwater.com>
Cc: WATERDIST65@SRVINET.COM
Subject: Additional information for WR 65-22960

Hi Lori,

Rick Collingwood of IDWR completed the field exam for 65-22960 last year and I have inherited his files... so, I am working on getting a draft license completed for signature. This is a pond storage permit in the name of SAGE SGI LLC. I am contacting you today in hopes that you or someone at your office may be able to provide some background information. The application was filed in 2005 and appears to have been represented by Jennifer Sukow of SPF Water Engineering.

Everything seems to be in order to issue a license except a condition of the permit states:

Water for the initial filling of the reservoirs constructed in connection with this right shall be provided through the rental of 150 acre feet of water from the State Water Supply Bank or from some other source of water authorized by the Department.

The Application for Permit suggested that 150 af of water would be rented from Basin 65 Rental Pool water. However, there is no information on record to confirm this occurred. Communication with Ron Shurtleff, Watermaster of Basin 65 has not been able to provide any record. It is assumed that the condition would have been placed on the permit if the applicant wanted to fill the pond at a faster diversion rate than what the permit would allow. Any info you may be able to dig up would be helpful. If nothing is found, the permit will eventually be voided.

Thank you in advance.

Patrick Kelly
Senior Water Resource Agent
Idaho Department of Water Resources
2735 Airport Way
Boise, Idaho 83705
p: 208.334.2190
f: 208.334.2348
patrick.kelly@idwr.idaho.gov

MEMORANDUM

TO: Water Right File 65-22960
FROM: Patrick Kelly; Water Resource Agent
DATE: October 30, 2015
SUBJECT: Review of Water Right File for Licensing

The field exam was completed by Rick Collingwood of IDWR on October 16, 2014. The exam report is found to be accurate and complete with the following recommendations:

- A total volume of 150 af was recommended by Mr. Collingwood given the limits of the permit. A measurement of 9.0 ac (surface area) * 32.0 (max depth) * 0.6 (pond slope) = 173.0 af. Using the latest pond spreadsheet according to admin memo #76 for pond calculation, a total volume of 145.7 af was calculated using a slope of 0.4. This seems like a reasonable assumption based on the shape of the ponds, and guidance found in the memo.
- A recommendation to amend both the POD and POU were made, however my analysis of the information provided shows that development occurred as described by the permit. No amendments are required.
- In an effort to locate the current property owner, a phone conversation with the systems manager Warren Drake was made. Mr. Drake accompanied Rick during the field exam, and informed me that the ponds were lined, by evidence of black plastic being exposed if the banks were not maintained. Condition 221 will be added to the license to reflect a water right where seepage was not considered in the total volume.

Seepage Loss Calculations

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

FILE NUMBER	65-22960
REVIEWER	Patrick Kelly
DATE	10/30/2015

User Input
Calculated value
Formula Explanations

INPUTS

Pond Surface Area (AC.)	10.47	AC.
-------------------------	-------	-----

Pond Surface Area (SQ. FT.)	456073	SQ. FT.
-----------------------------	--------	---------

My Soil Classification is	Lined	
Suggested Seepage Rate (FT./DAY)	0.0000	FT./DAY

Formula: (Surface Area X Seepage Rate) X 7.48 = Gallons Per Day Loss

Convert to GPD	0	GPD
----------------	---	-----

Total Seepage Loss (AFA)	0.0	AFA
--------------------------	-----	-----

Though sand and gravel seepage rates may actually be higher, the maximum allowable rate is 0.2 ft/day, pursuant to Administrative Memo "Seepage Loss Standards for Ponds and Reservoirs."

Suggested Seepage Rates for Different Soil Types:

GW, GP, GM, GC, SW, SP and SM (silty sand, sand silt mixtures and gravel mixtures) = 0.2 ft per day

OL and ML (inorganic silts - very fine sands, silty, or clayey fine sands) = 0.02 ft per day

SC (clayey sands, sand clay mixtures) = 0.007 ft per day

CL (Low to medium plasticity clays) = 0.003 ft per day

MH, OH, PT and CH (high plasticity clays) = 0.0003 ft per day

LINED PONDS (liners can be chemical, fabric, or bentonite) = 0 ft per day

Ponds Intercepting Groundwater (excavated ponds filled by ground water) = 0 ft per day

PLEASE NOTE: The initial basis for the Suggested Seepage Rates in the table above is found on Page 16 of Seepage from Fish Ponds, Bulletin 599, August 1989 Alabama Agricultural experiment Station, Auburn University, Auburn University Alabama. If you don't know the soil type, please refer to the map provided at X:\Spatial\Soils\USCS\PondSoils.lyr. Use "0" if the pond fill relies on the water table.

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	65-22960
REVIEWER	Patrick Kelly
DATE	10/30/2015

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: McCall (NWS -- 105708)

Month	mm/day ¹	Days per month	mm/Month
Jan	-1.93	31	0.00
Feb	-1.57	28	0.00
March	-0.90	31	0.00
April	0.39	30	11.70
May	0.88	31	27.28
June	1.82	30	54.60
July	3.44	31	106.64
August	2.88	31	89.28
September	1.49	30	44.70
October	0.20	31	6.20
November	-2.07	30	0.00
December	-2.53	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 = 340.40

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

(340.40 ÷ 304.8) × 10.47 = 11.7 AFA

Total Storage Calculations

FILE NUMBER	65-22960
REVIEWER	Patrick Kelly
DATE	10/30/2015

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.)	10.47	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	12.8	"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)	134.016	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)	11.7	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	145.7	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.

Flow Rate Into Pond (CFS)	0.17	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)	3.44	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)	0.12	"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)	0.06	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	612	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. 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.
Days Required to Fill the Pond at 13,000 Gallons per Day	-1712	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. 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. 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.