

RECEIVED

DEPARTMENT OF WATER RESOURCES

APPLICATION FOR PERMIT

To appropriate the public waters of the State of Idaho

WATER RESOURCES

1. Name of applicant(s) Aaron Fuhrman Phone 208-Name connector (check one): ☐ and ☐ or ☐ and/orMailing address 7262 S. Angel Way City MeridianState ID ZIP 83642 Email aaron@smallbiz

2. Name of representative, if any _____ Phone _____

Mailing address _____ City _____

State _____ ZIP _____ Email _____

a. ☐ Send all correspondence for this application to the representative and not to the applicant OR☐ Send original correspondence to the applicant and copies to the representative.b. ☐ The representative may submit information for the applicant but is not authorized to sign for the applicant OR☐ The representative is authorized to sign for the applicant. Attach a Power of Attorney or other documentation.3. Source of water supply ground water which is a tributary of _____

4. Location of point(s) of diversion:

Twp	Rge	Sec	Govt Lot	1/4	1/4	1/4	County	Source	Local name or tag #
<u>03N</u>	<u>10E</u>	<u>10</u>	<u>8</u>		<u>NE</u>	<u>SE</u>	<u>Elmore</u>	<u>Ground Water</u>	

5. Water will be used for the following purposes:

Amount 5.0 for recreation storage purposes from 1/1 to 12/31 (both dates inclusive)
(cfs or acre-feet per year)Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
(cfs or acre-feet per year)Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
(cfs or acre-feet per year)Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
(cfs or acre-feet per year)6. Total quantity to be appropriated is (a) _____ cubic feet per second (cfs) and/or (b) 5.0 acre-feet per year (af).

7. Proposed diverting works:

a. Describe type and size of devices used to divert water from the source. digging pond to be filled with irrigation and ground waterb. Height of storage dam 0 feet; active reservoir capacity 5.0 acre-feet; total reservoir capacity 5.0 acre-feet. If the reservoir will be filled more than once each year, describe the refill plan in item 12. Fordams 10 feet or more in height AND having a storage capacity of 50 acre-feet or more, submit a separate Application for Construction or Enlargement of a New or Existing Dam. Application required? ☐ Yes ☒ No

c. Proposed well diameter is _____ inches; proposed depth of well is _____ feet.

d. Is ground water with a temperature of greater than 85°F being sought? ☐ Yes ☐ No

e. If well is already drilled, when? _____; drilling firm _____; well was drilled for (well owner) _____; Drilling Permit No. _____

For Department Use

Received by LE Date 09/24/2020 Time 4:10pm Preliminary check by TSFee \$ 100 Received by LE Receipt No. W048727 Date 09/24/2020

8. Description of proposed uses (if irrigation only, go to item 9):
- Hydropower; show total feet of head and proposed capacity in kW. _____
 - Stockwatering; list number and kind of livestock. _____
 - Municipal; must complete and attach the Municipal Water Right Application Checklist.
 - Domestic; show number of households _____
 - Other; describe fully. recreational pond with 5.0 acre feet capacity

9. Description of place of use:
- If water is for irrigation, indicate acreage in each subdivision in the tabulation below.
 - If water is used for other purposes, place a symbol of the use (example: D for Domestic) in the corresponding place of use below. See instructions for standard symbols.

TWP	RGE	SEC	NE				NW				SW				SE				TOTALS
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
03N	10E	10													R				
															S				

Total number of acres to be irrigated: 5.0

10. Describe any other water rights used for the same purposes as described above. Include water delivered by a municipality, canal company, or irrigation district. If this application is for domestic purposes, do you intend to use this water, water from another source, or both, to irrigate your lawn, garden, and/or landscaping? we will be using our irrigation water rights to fill this pond. water rights 63-4005N and 63-4005K
11. a. Who owns the property at the point of diversion? Aaron Fuhrman
b. Who owns the land to be irrigated or place of use? Aaron Fuhrman
c. If the property is owned by a person other than the applicant, describe the arrangement enabling the applicant to make this filing: _____
12. Describe your proposal in narrative form, and provide additional explanation for any of the items above. Attach additional pages if necessary. We are going to dig a pond right where the current irrigation ditch is. The pond will be used for recreation. etc
13. Time required for completion of works and application of water to proposed beneficial use is 5 years (minimum 1 year).
14. **MAP OF PROPOSED PROJECT REQUIRED** - Attach an 8½" x 11" map or maps clearly identifying the proposed point of diversion, place of use, section #, township & range. The map scale shall not be less than two (2) inches equal to one (1) mile.

The information contained in this application is true to the best of my knowledge. I understand that any willful misrepresentations made in this application may result in rejection of the application or cancellation of an approval.

Aaron Fuhrman
Signature of Applicant
Aaron Fuhrman
Print Name (and title, if applicable)

Signature of Applicant

Print Name (and title, if applicable)





State of Idaho

DEPARTMENT OF WATER RESOURCES

WESTERN Region • 2735 W AIRPORT WAY • BOISE, ID 83705-5082

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

Brad Little
Governor

Gary Spackman
Director

February 11, 2021

AARON FUHRIMAN
CAROLL FUHRIMAN
7262 S ANGEL WAY
MERIDIAN, ID 83642-9294

RE: Application for Permit No. 63-34966
Transfer No. 84657
Water Right No(s). 63-34985

Dear Applicant(s):

The Department of Water Resources has received your water right transfer application. Please refer to the transfer number referenced above in all future correspondence regarding this transfer.

A legal notice of the application has been prepared and is scheduled for publication in the MOUNTAIN HOME NEWS on 2/17/2021 and 2/24/2021. Protests to this application may be submitted for a period ending ten (10) days after the second publication.

If the application is protested, you will be sent a copy of each protest. All protests must be resolved before the application can be considered for approval. If the protest(s) cannot be resolved voluntarily, the Department will conduct a conference and/or hearing on the matter.

If the application is not protested, the Department will process your application and notify you of any action taken on the application. If your application is approved, the Department will send you a copy of the approval document.

Please contact this office if you have any questions regarding the application.

Sincerely,

Denise Lauerma
Administrative Assistant

CC:
SPF WATER ENGINEERING LLC
C/O SCOTT KING
300 E MALLARD DR STE 350
BOISE, ID 83706



State of Idaho

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Brad Little
Governor

Gary Spackman
Director

February 11, 2021

LAWRENCE RIGGINS
RT 8 BOX 293
CALDWELL, ID 83605

RE: Application for Permit No. 63-34966, 34967
Transfer No. 84657, 84656
Water Right No(s). 63-34985, 63-34986

Dear Interested Party:

The Department of Water Resources (IDWR) is seeking written comment and/or recommendations from your organization regarding the above referenced water right application. You can find a copy of the application at:

<https://idwr.idaho.gov/apps/ExtSearch/WRAJSearch/WRADJSearch.aspx>.

IDWR can finish reviewing an unprotested application as soon as the protest period has past. Therefore, your prompt response to this request is appreciated. If your organization desires to formally protest the approval of this application, you may do so after the notice is published by filing a written protest along with a \$25.00 filing fee within 10 days of the final publication.

Please contact this office if you have any questions regarding the application.

Sincerely,

Denise Lauerman
Administrative Assistant 1

Enclosure(s)

Lauerman, Denise

From: Lauerman, Denise
Sent: Thursday, February 11, 2021 11:19 AM
To: 'legaldept@mountainhomenews.com'
Subject: ELMORE COUNTY Legal Notice - Application for Permit No. 63-34966, 63-34967, Transfer No. 84656, 84657
Attachments: Cover Letter Elmore County.docx; Legal Notice.docx

Good morning,

Please see the attached ad for publication on 02/17/2021 and 02/24/2021.

Please publish the enclosed legal notice on the dates indicated (once a week for two consecutive weekly issues). If you cannot publish the notice on the proposed dates, please contact us immediately.

An affidavit of publication must be submitted to the Department along with the publication bill. Please send the affidavit and bill to this office before 3/8/2021. Your cooperation is appreciated.

Please confirm this is okay to publish as shown and send confirmation and all other correspondence to this email.

Thanks much!
Denise

Denise Lauerman | *Administrative Assistant*
IDWR-Western Region
2735 W Airport Way, Boise ID 83705
(208).334.2190 | denise.lauerman@idwr.idaho.gov



State of Idaho

DEPARTMENT OF WATER RESOURCES

WESTERN Region • 2735 W AIRPORT WAY • BOISE, ID 83705-5082

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Brad Little
Governor

Gary Spackman
Director

February 11, 2021

LEGAL NOTICE DEPARTMENT
MOUNTAIN HOME NEWS
PO BOX 1330
MOUNTAIN HOME, ID 83647-1330

RE: Application for Permit No. 63-34966, 63-34967
Transfer No. 84656, 84657
Water Right No(s). 63-34986, 63-34985

Dear Legal Notice Department:

Please publish the enclosed legal notice on the dates indicated (once a week for two consecutive weekly issues). If you cannot publish the notice on the proposed dates, please contact us immediately.

An affidavit of publication must be submitted to the Department along with the publication bill. Please send the affidavit and bill to this office before 3/8/2021. Your cooperation is appreciated.

Sincerely,

Denise Lauerman
Administrative Assistant

Enclosure(s)

The following application(s) have been filed to appropriate the public waters of the State of Idaho:

63-34966

AARON FUHRIMAN

7262 S ANGEL WAY

MERIDIAN, ID 83642-9294

Point of Diversion L8 (NESE) S10 T03N R10E ELMORE County Source GROUND WATER

Use: RECREATION STORAGE 01/01 to 12/31 5 AF

Total Diversion: 5 AF

Date Filed: 09-24-2020

Place Of Use: RECREATION STORAGE

T03N R10E S10 L8 (NESE)

Water bearing zone to be appropriated is from 0 to 15 feet.

63-34967

SPENCER HILL

5086 S BITTERCREEK AVE

MERIDIAN, ID 83642-7971

Point of Diversion L8 (NESE) S10 T03N R10E ELMORE County Source GROUND WATER

Use: RECREATION STORAGE 01/01 to 12/31 5 AF

Total Diversion: 5 AF

Date Filed: 09-24-2020

Place Of Use: RECREATION STORAGE

T03N R10E S10 L8 (NESE)

Water bearing zone to be appropriated is from 0 to 15 feet.

NOTICE OF PROPOSED CHANGE OF WATER RIGHT

TRANSFER NO. 84656

SPENCER HILL and SARA HILL, 5086 S BITTERCREEK AVE, MERIDIAN, ID 83642-7971 has filed Application No. 84656 for changes to the following water rights within ELMORE County(s): Right No(s). 63-34986; to see a full description of these rights and the proposed transfer, please see <https://research.idwr.idaho.gov/apps/waterrights/querynewtransfers>. The purpose of the transfer is to change a portion of the above rights as follows:

Spencer and Sara Hill (applicants) are property owners in Elmore County. The applicants filed transfer no. 84656 to change the nature of use, period of use, and place of use for water right 63-34986. The applicants propose changing the nature of use of a portion of the identified water right to cover the evaporative losses resulting from a pond proposed under application for permit no. 63-34967.

Scott King of SPF Water Engineering is the representative for the transfer. Mr. King can be reached at 208-383-4140 or sking@spfwater.com

TRANSFER NO. 84657

AARON FUHRIMAN and CAROLL FUHRIMAN, 7262 S ANGEL WAY, MERIDIAN, ID 83642-9294 has filed Application No. 84657 for changes to the following water rights within ELMORE County(s): Right No(s). 63-34985; to see a full description of these rights and the proposed transfer, please see <https://research.idwr.idaho.gov/apps/waterrights/querynewtransfers>. The purpose of the transfer is to change a portion of the above rights as follows:

Aaron and Caroll Fuhriman (applicants) are property owners in Elmore County. The applicants filed transfer no. 84657 to change the nature of use, period of use, and place of use for water right 63-34985. The applicants propose changing the nature of use of a portion of the identified water right to cover the evaporative losses resulting from a pond proposed under application for permit no. 63-34966.

Scott King of SPF Water Engineering is the representative for the transfer. Mr. King can be reached at 208-383-4140 or sking@spfwater.com

Permits will be subject to all prior water rights. For additional information concerning the property location, contact Western Region office at (208)334-2190. Protests may be submitted based on the criteria of Idaho Code Sec. 42-222. Any protest against the proposed change must be filed with the Department of Water Resources, Western Region, 2735 W AIRPORT WAY, BOISE ID 83705-5082 together with a protest fee of \$25.00 for each application on or before 3/8/2021. The protestant must also send a copy of the protest to the applicant.

GARY SPACKMAN, Director

Published on 2/17/2021 and 2/24/2021



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

BRAD LITTLE
Governor

GARY SPACKMAN
Director

November 13, 2020

COPY

SPF WATER ENGINEERING LLC
C/O SCOTT KING
300 E MALLARD DR STE 350
BOISE, ID 83706

Re: Letter to Nick Miller dated October 20, 2020

Dear Scott,

As per our phone conversation the morning of November 13, 2020 regarding applications for permit 63-34966 & 63-34967 for Aaron Fuhrman and Spencer Hill, the Department would like to respond with the following:

According to the pond analysis spreadsheet you provided, the ponds will intercept shallow groundwater in hydraulic connection to the North Fork Boise River and each pond will have a surface area of 0.27 acres with average depths of 5 feet. Peak daily maintenance volume required to offset evaporative and seepage losses of groundwater for these ponds will be approximately 1,400 gallons per day per pond. Therefore, if the pond uses are collectively small enough to fit within the 13,000 gpd limitation, then a water right permit is *not* required to construct and use a pond that meets the statutory requirements for exemption of domestic uses under Sections 42-111 and 42-227, *Idaho Code*. Since there is no existing groundwater domestic right associated with this use, the ponds would not be considered enlargement as a domestic use has yet to be established. If homes associated with the ponds are built in the future, the combined daily groundwater use for both the ponds and other domestic uses would be limited to 13,000 gal combined.

Since the ponds will be constructed on a surface water ditch, enlargement of the ditch will result in impounding surface water off-stream, and consumptive losses should be considered. Irrigation water rights 63-4005K & 63-4005N do not authorize any storage uses. The primary function of the ponds are recreation and therefore they would not fall under the Department's 24-hour rule. Therefore, nature of use transfer applications should be filed in order to offset the consumptive use of the surface water being impounded by the ponds. The Department does not see this as "double dipping" in mitigation as we must consider the surface water and groundwater sources, and their respective losses, separately.

If the historic consumptive irrigation requirement under water rights 63-4005K & 63-4005N is 2.0 af per acre, then the nature of use change for one acre of irrigation will cover the 2.0 af total volume required for each pond according to the pond analysis spreadsheet provided. However, this is just an estimate and the burden of proof of this historic use is that of the applicants when filing a nature of use transfer.

Going forward, if it is decided that a nature of use transfer will be pursued for both ponds, the applications for permit can be withdrawn and the fees for those applications can be put towards the transfer applications.

Please respond with how the applicants intend to move forward with their applications within the next thirty (30) days. If IDWR does not receive your written response within thirty (30) days, a refund will be issued for this filing. You may receive future correspondence regarding more specific details of your application. IDWR forms and other information are available on the Internet at www.idwr.idaho.gov. Please consult the IDWR website or contact this office at 208-334-2190 and ask for me or Nick Miller if you have any questions about the necessary information.

Sincerely,

Tyler Smith
Water Resource Agent
Western Region

Enclosure:



State of Idaho

DEPARTMENT OF WATER RESOURCES

Western Region • 2735 W Airport Way • Boise ID 83705-5082

Phone: (208) 334-2190 • Fax: (208) 334-2348

Website: idwr.idaho.gov • Email: westerninfo@idwr.idaho.gov

BRAD LITTLE
Governor

GARY SPACKMAN
Director

October 27, 2020

COPY

AARON FUHRIMAN
7262 S ANGEL WAY
MERIDIAN, ID 83642

RE: Application for Permit No. 63-34966

Dear Applicant:

The Idaho Department of Water Resources (IDWR) received your Application for Permit seeking a new water right. Your proposal involves a point of diversion within an area where new appropriations of water from the Boise River system (including ground water considered tributary to the river) are not approvable since the Boise River system is considered fully appropriated most of the year. IDWR believes that the use in your application may fall under the 42-111 domestic exemption as long as the pond intercepts shallow groundwater, does not exceed 13,000 gallons per day, and if approved would be conditioned as non-consumptive. If a home is built in the future, this groundwater when combined with other domestic uses could not exceed 13,000 gallons per day.

According to your Application for Permit, the pond you propose to build will be in the middle of the surface water ditch which provides water to you and other water users downstream. By enlarging the ditch, it will result in impounding of water off-stream, and consumptive losses should be considered. The water rights you submitted ownership changes for, 63-4005K & 63-4005N, do not authorize any storage. Therefore, an Application for Transfer must be submitted to change the nature of use for a portion of your water rights 63-4005K and 63-4005N from irrigation to recreation storage.

When an Application for Transfer is received, the Department must ensure that a proposed transfer does not:

- Injure other water rights
- Enlarge the original water right
- Conflict with the local public interest
- Prevent the conservation of water resources within Idaho
- Adversely affect the local economy

The transfer applicant is responsible for providing information demonstrating compliance with these requirements. The applicant will need to demonstrate that historical use of irrigation is equivalent to capacity and consumptive losses for storage use associated with the pond.

Please provide IDWR with a written response outlining how you intend to proceed within the next thirty (30) days. You may seek additional time to provide the response by making a written request to interrupt processing for up to six months. Refunds are not issued for voided applications.

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.

Regards,

Tyler Smith
Water Resource Agent
Western Region

Enclosures: Application for Transfer, Application for Transfer Instructions

October 20, 2020

Idaho Department of Water Resources
2735 W Airport Way
Boise, ID 83705-5082

Attn: Nick Miller

Re: Applications for Permit Nos. 63-34966 (Fuhriman) and 63-34967 (Hill)

Dear Nick,

Enclosed on behalf of our client Aaron Fuhriman are Application Processing Memo #76 pond capacity calculations for ponds proposed by the above-referenced applications for permit. I understand that Mr. Fuhriman and Mr. Hill propose to construct separate ponds of near identical dimensions on their respective properties near Featherville, Idaho. The ponds will each have a surface area of 12,000 square feet and average depth of 5 feet. The ponds will be constructed into sedimentary deposits near the North Fork Boise River and will intercept shallow groundwater that is assumed to be in hydraulic connection with the river.

Based on University of Idaho ET_{Idaho} 2017 climate data using the Anderson Dam climate station data set, pond evaporation is calculated to be 0.6 acre-feet per year. Peak daily maintenance volume required to offset evaporative loss is 0.004 acre-feet (1360 gallons), equivalent to approximately 1 gpm of constant flow. Seepage losses are not expected to require additional supply as the ponds intercept shallow groundwater.

In my opinion, the proposed consumptive uses proposed by these applications at this location will have negligible impacts to the Boise River system and mitigation should not be required. If IDWR determines that mitigation is required, the applicants could provide up to 1360 gallons per day from groundwater to the ponds under their respective 13,000 gpd domestic exemptions for groundwater sources for domestic use.

Please let me know if you have any questions.

Sincerely,

Scott N. King, P.E.
Project Manager



File: Fuhriman / Featherville Ponds

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	63-34966
REVIEWER	Scott King, SPF Water
DATE	10/20/2020

User Input
Calculated value
Formula Explanations

INPUTS

Pond Surface Area (AC.)	0.28	AC.
-------------------------	------	-----

Pond Surface Area (SQ. FT.)	12000	SQ. FT.
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I used the following method to obtain my Soil Classification information:	NRCS Web Soil Survey	
My Soil Classification is	GrndWtr	
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
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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 the NRCS Web Soil Survey (Tab #1), an ArcMap Soil Classification Map (Tab #1.1), or published NRCS Soil Survey (Tab #1.2). 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	63-34966
REVIEWER	Scott King, SPFW
DATE	10/20/2020

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	-1.85	31	0.00
Feb	-0.82	28	0.00
March	0.19	31	5.89
April	1.89	30	56.70
May	3.17	31	98.27
June	3.60	30	108.00
July	4.62	31	143.22
August	4.04	31	125.24
September	2.60	30	78.00
October	1.24	31	38.44
November	-1.42	30	0.00
December	-1.63	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 = 653.76

$$\left(\frac{653.76}{304.8} \right) \times 0.28 = 0.6 \text{ AFA}$$

Total Storage Calculations

FILE NUMBER	63-34966
REVIEWER	Scott King, SPF Water
DATE	10/20/2020

This spreadsheet has been designed by Idaho Department of Water Resources to estimate the total seepage, evaporation and fill capacity required for a pond.

User Input
Calculated value
Formula Explanations

Surface Area (AC.)	0.28	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	5	"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)	1.38	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)	0.6	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	2.0	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.

Flow Rate Into Pond (CFS)	0.04	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)	4.62	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)	0.004	"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)	0.002	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	18	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	39	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.

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	63-34967 / Hill
REVIEWER	Scott King, SPF Water
DATE	10/20/2020

User Input
Calculated value
Formula Explanations

INPUTS

Pond Surface Area (AC.)	0.28	AC.
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Pond Surface Area (SQ. FT.)	12000	SQ. FT.
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I used the following method to obtain my Soil Classification information:	NRCS Web Soil Survey	
My Soil Classification is	GrndWtr	
Suggested Seepage Rate (FT./DAY)	0.0000	FT./DAY

Formula: (Surface Area X Seepage Rate) X 7.48 = Gallons Per Day Loss
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Convert to GPD	0	GPD
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Total Seepage Loss (AFA)	0.0	AFA
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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 the NRCS Web Soil Survey (Tab #1), an ArcMap Soil Classification Map (Tab #1.1), or published NRCS Soil Survey (Tab #1.2). 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	63-34967 / Hill
REVIEWER	Scott King, SPFW
DATE	10/20/2020

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	-1.85	31	0.00
Feb	-0.82	28	0.00
March	0.19	31	5.89
April	1.89	30	56.70
May	3.17	31	98.27
June	3.60	30	108.00
July	4.62	31	143.22
August	4.04	31	125.24
September	2.60	30	78.00
October	1.24	31	38.44
November	-1.42	30	0.00
December	-1.63	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 = 653.76

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

(653.76 ÷ 304.8) X 0.28 = 0.6 AFA

Total Storage Calculations

FILE NUMBER	63-34967 / Hill
REVIEWER	Scott King, SPF Wat
DATE	10/20/2020

This spreadsheet has been designed by Idaho Department of Water Resources to estimate the total seepage, evaporation and fill capacity required for a pond.

User Input
Calculated value
Formula Explanations

Surface Area (AC.)	0.28	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	5	"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)	1.38	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)	0.6	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	2.0	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.

Flow Rate into Pond (CFS)	0.04	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)	4.62	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)	0.004	"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.
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Days Required to Fill the Pond at 13,000 Gallons per Day	39	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.



State of Idaho

DEPARTMENT OF WATER RESOURCES

Western Region • 2735 W Airport Way • Boise ID 83705-5082

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BRAD LITTLE
Governor

GARY SPACKMAN
Director

COPY

October 7, 2020

AARON FUHRIMAN
7262 S ANGEL WAY
MERIDIAN, ID 83642

RE: Application for Permit No. 63-34966

Dear Applicant:

The Idaho Department of Water Resources (IDWR) received your Application for Permit seeking a new water right. Your proposal involves a point of diversion within an area where new appropriations of water from the Boise River system (including ground water considered tributary to the river) are not approvable since the Boise River system is considered fully appropriated most of the year. IDWR policy states that applications for consumptive use that propose diversion of water in this portion of the Boise River system will be held without further processing unless the applicant can show that the new appropriation will not injure existing users or that injury will be avoided through some mitigating practice that completely offsets the impacts (in time, location, and quantity) of the proposed use on the water supply of other users.

Based on the information above, the following are the options with regard to your application:

- a) You may provide evidence the use will not injure existing water right users.
- b) You may provide an acceptable mitigation plan to offset injury to existing water right users.
- c) You may request IDWR to hold your application without further processing
- d) You may withdraw your application (form enclosed).

If you choose option b, please provide a detailed plan to mitigate the depletion expected by the proposed use. The plan should describe the expected depletion to the Boise River from the new appropriation, and should describe how that depletion will be mitigated at the appropriate quantity and time. IDWR Application Processing Memorandum #71 and #72 describe various types of mitigation and the criteria for evaluating mitigation plans (copies enclosed for your reference).

Water Rights 63-4005K and 63-4005N which you have filed ownership change documents for have priority dates of 1911 and 1963 respectively. These water rights are not adequate for mitigation purposes because they are junior water rights that would not be available and in priority to mitigate for evaporative losses associated with the proposed water use.

Please provide IDWR with a written response outlining which option you chose with regard to your application. You may seek additional time to provide the response by making a written request to

interrupt processing for up to six months. The application will be voided without a timely written reply within the next thirty (30) days. Refunds are not issued for voided applications.

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.

Regards,

Tyler Smith
Water Resource Agent
Western Region

Enclosures: Memo #s 71 and 72, withdrawal form