

RECEIVED
FORM 202 11/13
AUG 10 2015
received complete
WATER RESOURCES
WESTERN REGION

COPY
STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
APPLICATION FOR PERMIT
To appropriate the public waters of the State of Idaho

Ident. No. 63-34127
RECEIVED
FEB 26 2016
WATER RESOURCES
WESTERN REGION

1. Name of applicant(s) Keith O'Neil Helmick Phone 208-386-9679
Name connector (check one) ☐ and ☐ or ☐ and/or
Mailing address 16 E INDIAN CREEK RD City MAYFIELD
State ID Zip 83716 Email _____
2. Source of water supply BAINBRIDGE SPRING which is a tributary of LESTER CREEK
3. Location of point(s) of diversion:

TWP	RGE	SEC	Govt Lot	1/4	1/4	1/4	County	Source	Local name or tag #
1N	9E	14		~~NW~~ NE	NE	SE	ELMORE	SPRING	

4. Water will be used for the following purposes:
Amount 6.4 AF for STOCK WATER purposes from 1/1 to 12/31 (both dates inclusive)
(cfs or acre-feet per year)
Amount 6.4 AF for STOCK WATE 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)
5. Total quantity to be appropriated is (a) _____ cubic feet per second (cfs) and/or (b) 6.4 AF acre feet per year (af).
6. Proposed diverting works:
a. Describe type and size of devices used to divert water from the source. EXCAVATED POND 60X60, AVERAGE 5 FOOT DEEP
b. Height of storage dam N/A feet; active reservoir capacity N/A acre-feet; total reservoir capacity N/A acre-feet. If the reservoir will be filled more than once each year, describe the refill plan in item 11. For dams 10 feet or more in height OR reservoirs with a total 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 N/A inches; proposed depth of well is N/A 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. _____
7. Description of proposed uses (if irrigation only, go to item 8):
a. Hydropower; show total feet of head and proposed capacity in kW. _____
b. Stockwatering; list number and kind of livestock. 120 COW/CALF PAIRS
c. Municipal; complete and attach the Municipal Water Right Application Checklist.
d. Domestic; show number of households _____
e. Other; describe fully. _____

8. Description of place of use:

- a. If water is for irrigation, indicate acreage in each subdivision in the tabulation below.
- b. 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	
1N	9E	14													S				
															SS				

Total number of acres to be irrigated: _____

9. 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?

10. a. Who owns the property at the point of diversion? APPLICANT
- b. Who owns the land to be irrigated or place of use? APPLICANT
- c. If the property is owned by a person other than the applicant, describe the arrangement enabling the applicant to make this filing:

11. Describe your proposal in narrative form, and provide additional explanation for any of the items above. Attach additional pages if necessary.

EXCAVATED POND PROVIDES SPRING WATER FOR CALF AND COW

12. Time required for completion of works and application of water to proposed beneficial use is 5 years (minimum 1 year).
13. **MAP OF PROPOSED PROJECT REQUIRED** - Attach an 8 1/2" x 11" map clearly identifying the proposed point of diversion, place of use, section #, township & range. A photocopy of a USGS 7.5 minute topographic quadrangle map is preferred.

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.

Keith O'Neil Helmick
Signature of Applicant

Signature of Applicant

Keith O'Neil Helmick
Print Name (and title, if applicable)

Print Name (and title, if applicable)

Received by AS Date 8/10/15 Time 9:20 Preliminary check by PH
Fec \$ 100.00 Received by AS Receipt No. W043391 Date 8/10/15

received with original application

SWNE

SENE

SWNW

Dond / Spring

14

01N09E

13

NWSE

NESE

NWSW

SWSE

SESE

SWSW

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	Keith O'Neil Helmick
REVIEWER	DM
DATE	8/10/2015

User Input
Calculated value
Formula Explanations

INPUTS

Pond Surface Area (AC.)	0.08	AC.
-------------------------	------	-----

Pond Surface Area (SQ. FT.)	3485	SQ. FT.
-----------------------------	------	---------

I used the following method to obtain my Soil Classification information:	NRCS Web Soil Survey	
My Soil Classification is	SM	
Suggested Seepage Rate (FT./DAY)	0.2000	FT./DAY

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

Convert to GPD	5213	GPD
----------------	------	-----

Total Seepage Loss (AFA)	5.8	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.

603-34127

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: Keith O'Neil He
 REVIEWER: DM
 DATE: 8/10/2015

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

Mountain Home
 1 W (NWS --
 106174)

Station:

Month	mm/day ¹	Days per month	mm/Month
Jan	-0.59	31	0.00
Feb	0.18	28	5.04
March	0.79	31	24.49
April	2.16	30	64.80
May	2.94	31	91.14
June	4.10	30	123.00
July	4.80	31	148.80
August	4.20	31	130.20
September	2.69	30	80.70
October	1.45	31	44.95
November	-0.31	30	0.00
December	-0.76	31	0.00

Total mm/year = 713.12

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.

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

(713.12 ÷ 304.8) X 0.08 = 0.2 AFA

63-34127

Total Storage Calculations

FILE NUMBER	Keith O'Neil Helmiel
REVIEWER	DM
DATE	8/10/2015

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.)	0.08	"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)	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)	5.8	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)	6.4	The "Total Volume Required" is calculated by adding the Pond Capacity, Multiple Fills, Seepage Loss, and Evaporation Loss amounts to determine the total amount of storage required.

63-34127

Flow Rate into Pond (CFS)	0.02	The "Flow Rate into Pond" depicts the actual flow, either measured or estimated, into the pond. For offstream facilities, this will be equivalent to "diversion to storage" rate.
Highest Daily Evaporation Rate From Evaporation Tab. (mm/Day)	4.80	This number is carried over from the "Evaporation Loss" sheet. It is the highest recorded number in the "Precipitation Deficit Table".
Required Daily Maintenance Volume (AF/Day)	0.02	"Required Daily Maintenance Volume" is the maximum volume of water needed on any given day during the year to maintain pond volume. It is calculated by adding the highest daily evaporation loss to the average daily seepage loss in acre feet. The average daily seepage loss is calculated by dividing the "Estimated Seepage Loss" by 365 days. This is acceptable, since the seepage rate shouldn't vary throughout the season unless the pond completely freezes over during the winter months. The highest daily evaporation loss is calculated by dividing the Highest Daily Evaporation Rate by the 304.8 conversion factor and multiplying this number by the pond surface area to attain a combined daily acre feet requirement.
Minimum Maintenance Flow (CFS)	0.01	The "Minimum Maintenance Flow" is the minimum amount of flow required to maintain the level of the pond. This number is determined by dividing the "Maximum Required Daily Maintenance Volume" by 1.9835. This flow can be used to determine if the flow rate into the pond is adequate to maintain the pond level.
Days Required to Fill the Pond	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. <i>If this number is approximately 6 months (180 days) or more, the reviewer should have a discussion with the applicant to make sure he/she understands that it will take a significant length of time to fill the pond.</i>
Days Required to Fill the Pond at 13,000 Gallons per Day	18	Some water users may want to fill a pond under the 13,000 gallons per day domestic exemption. The "Days Required to Fill the Pond at 13,000 Gallons per Day" is calculated by converting the "Pond Capacity" and the "Required Daily Maintenance Volume" to gallons. The "Pond Capacity" is then divided by 13,000 gallons minus the "Required Daily Maintenance Volume" in gallons to determine the number of days to fill pond. <i>If this number is approximately 6 months (180 days) or more, the reviewer should have a discussion with the applicant to make sure he/she understands that it will take a significant length of time to fill the pond.</i> Negative values indicate that the supply of 13,000 gallons per day is not enough volume to overcome the required daily maintenance volume; the pond will never fill.

RECEIVED

FORM 202 11/13

AUG 10 2015

WATER RESOURCES
WESTERN REGION

ORIGINAL

Ident. No.

63-34127

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
APPLICATION FOR PERMIT
To appropriate the public waters of the State of Idaho

1. Name of applicant(s) Keith O'Neil Helmick Phone 208-386-9679
Name connector (check one): ☐ and ☐ or ☐ and/or
Mailing address 16 E INDIAN CREEK RD City MAYFIELD
State ID Zip 83716 Email _____
2. Source of water supply BAINBRIDGE SPRING which is a tributary of LESTER CREEK
3. Location of point(s) of diversion:

TWP	RGE	SEC	Govt Lot	1/4	1/4	1/4	County	Source	Local name or tag #
1N	9E	14		NW	NE	SE	ELMORE	SPRING	

4. Water will be used for the following purposes:
- Amount 6.4 AF for STOCK WATER purposes from 1/1 to 12/31 (both dates inclusive)
(cfs or acre-feet per year)
- Amount 6.4 AF for STOCK WATE 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)
5. Total quantity to be appropriated is (a) _____ cubic feet per second (cfs) and/or (b) 6.4 AF acre feet per year (af).
6. Proposed diverting works:
- a. Describe type and size of devices used to divert water from the source. EXCAVATED POND 60X60, AVERAGE 5 FOOT DEEP
- b. Height of storage dam N/A feet; active reservoir capacity N/A acre-feet; total reservoir capacity N/A acre-feet. If the reservoir will be filled more than once each year, describe the refill plan in item 11. For dams 10 feet or more in height OR reservoirs with a total 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 N/A inches; proposed depth of well is N/A 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. _____.
7. Description of proposed uses (if irrigation only, go to item 8):
- a. Hydropower; show total feet of head and proposed capacity in kW. _____
- b. Stockwatering; list number and kind of livestock. 120 COW/CALF PAIRS
- c. Municipal; complete and attach the Municipal Water Right Application Checklist.
- d. Domestic; show number of households _____
- e. Other; describe fully. _____

Superseded by amended application

8. Description of place of use:

- a. If water is for irrigation, indicate acreage in each subdivision in the tabulation below.
- b. 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	
1N	9E	14													S				
															SS				

Total number of acres to be irrigated: _____

9. 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?

10. a. Who owns the property at the point of diversion? APPLICANT
- b. Who owns the land to be irrigated or place of use? APPLICANT
- c. If the property is owned by a person other than the applicant, describe the arrangement enabling the applicant to make this filing:

11. Describe your proposal in narrative form, and provide additional explanation for any of the items above. Attach additional pages if necessary.

EXCAVATED POND PROVIDES SPRING WATER FOR CALF AND COW

12. Time required for completion of works and application of water to proposed beneficial use is 5 years (minimum 1 year).

13. **MAP OF PROPOSED PROJECT REQUIRED** - Attach an 8½" x 11" map clearly identifying the proposed point of diversion, place of use, section #, township & range. A photocopy of a USGS 7.5 minute topographic quadrangle map is preferred.

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.

Keith O'Neil Helmick
Signature of Applicant

Signature of Applicant

Keith O'Neil Helmick
Print Name (and title, if applicable)

Print Name (and title, if applicable)

Received by AS Date 8/10/15 Time 9:20 Preliminary check by PH
Fee \$ 100.00 Received by AS Receipt No. WD43391 Date 8/10/15

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	Keith O'Neil Helmick
REVIEWER	DM
DATE	8/10/2015

User Input
Calculated value
Formula Explanations

INPUTS

Pond Surface Area (AC.)	0.08	AC.
-------------------------	------	-----

Pond Surface Area (SQ. FT.)	3485	SQ. FT.
-----------------------------	------	---------

I used the following method to obtain my Soil Classification information:	NRCS Web Soil Survey	
My Soil Classification is	SM	
Suggested Seepage Rate (FT./DAY)	0.2000	FT./DAY

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

Convert to GPD	5213	GPD
----------------	------	-----

Total Seepage Loss (AFA)	5.8	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.

63-34127

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	Keith O'Neil He
REVIEWER	DM
DATE	8/10/2015

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

Mountain Home
1 W (NWS --
106174)

Station:

Month	mm/day ¹	Days per month	mm/Month
Jan	-0.59	31	0.00
Feb	0.18	28	5.04
March	0.79	31	24.49
April	2.16	30	64.80
May	2.94	31	91.14
June	4.10	30	123.00
July	4.80	31	148.80
August	4.20	31	130.20
September	2.69	30	80.70
October	1.45	31	44.95
November	-0.31	30	0.00
December	-0.76	31	0.00

Total mm/year = 713.12

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.

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

(713.12 ÷ 304.8) × 0.08 = 0.2 AFA

63-34127

Total Storage Calculations

FILE NUMBER	Keith O'Neil Helmick
REVIEWER	DM
DATE	8/10/2015

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.)	0.08	"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)	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)	5.8	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)	6.4	The "Total Volume Required" is calculated by adding the Pond Capacity, Multiple Fills, Seepage Loss, and Evaporation Loss amounts to determine the total amount of storage required.

63-34127

Flow Rate into Pond (CFS)	0.02	The "Flow Rate into Pond" depicts the actual flow, either measured or estimated, into the pond. For offstream facilities, this will be equivalent to "diversion to storage" rate.
Highest Daily Evaporation Rate From Evaporation Tab. (mm/Day)	4.80	This number is carried over from the "Evaporation Loss" sheet. It is the highest recorded number in the "Precipitation Deficit Table".
Required Daily Maintenance Volume (AF/Day)	0.02	"Required Daily Maintenance Volume" is the maximum volume of water needed on any given day during the year to maintain pond volume. It is calculated by adding the highest daily evaporation loss to the average daily seepage loss in acre feet. The average daily seepage loss is calculated by dividing the "Estimated Seepage Loss" by 365 days. This is acceptable, since the seepage rate shouldn't vary throughout the season unless the pond completely freezes over during the winter months. The highest daily evaporation loss is calculated by dividing the Highest Daily Evaporation Rate by the 304.8 conversion factor and multiplying this number by the pond surface area to attain a combined daily acre feet requirement.
Minimum Maintenance Flow (CFS)	0.01	The "Minimum Maintenance Flow" is the minimum amount of flow required to maintain the level of the pond. This number is determined by dividing the "Maximum Required Daily Maintenance Volume" by 1.9835. This flow can be used to determine if the flow rate into the pond is adequate to maintain the pond level.
Days Required to Fill the Pond	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. <i>If this number is approximately 6 months (180 days) or more, the reviewer should have a discussion with the applicant to make sure he/she understands that it will take a significant length of time to fill the pond.</i>
Days Required to Fill the Pond at 13,000 Gallons per Day	18	Some water users may want to fill a pond under the 13,000 gallons per day domestic exemption. The "Days Required to Fill the Pond at 13,000 Gallons per Day" is calculated by converting the "Pond Capacity" and the "Required Daily Maintenance Volume" to gallons. The "Pond Capacity" is then divided by 13,000 gallons minus the "Required Daily Maintenance Volume" in gallons to determine the number of days to fill pond. <i>If this number is approximately 6 months (180 days) or more, the reviewer should have a discussion with the applicant to make sure he/she understands that it will take a significant length of time to fill the pond.</i> Negative values indicate that the supply of 13,000 gallons per day is not enough volume to overcome the required daily maintenance volume; the pond will never fill.

SWNE

SENE

SWNW

14

NWSE

01N09E

NESE

13

NWSW

SWSE

SESE

SWSW

Dond / Spring

Barnbridge
Spring

6772

01N09E

13



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

April 28, 2016

KEITH O NEIL HELMICK
16 E INDIAN CREEK RD
BOISE, ID 83716

Application for Permit No. 63-34127

Dear Applicant(s):

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

A legal notice of the application has been prepared and is scheduled for publication in the MOUNTAIN HOME NEWS on 5/4/2016 and 5/11/2016. 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 permit.

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

Sincerely,

Rachel Neely
Administrative Assistant

Neely, Rachel

From: Neely, Rachel
Sent: Thursday, April 28, 2016 8:44 AM
To: 'Swenson, Stacy'
Subject: Elmore Legal ads
Attachments: Elmore Cover Letter.docx; Elmore Legal Ad.docx

Good Morning Legal Clerk,

Please see the attached ads for publication on 5/4/2016 & 5/11/2016.

Please confirm these are okay to publish as shown.

Thank you,

Rachel Neely

Administrative Assistant I
IDWR-Western Region
2735 Airport Way Boise, ID 83705
Rachel.Neely@idwr.idaho.gov

April 28, 2016

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

RE: Application for Permit No. 61-12304
Application for Permit No. 63-34127

Dear Legal Notice Department:

Please publish the enclosed legal notices on the dates indicated (once a week for two consecutive weekly issues). If you cannot publish the notices 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 5/23/2016. Your cooperation is appreciated.

Sincerely,

Rachel Neely
Administrative Assistant

Enclosure(s)

The following applications have been filed to appropriate the public waters of the State of Idaho:

61-12304

COLD SPRINGS LLC
4421 N CRESWELL PL
BOISE, ID 83713

Point of Diversion SWNE S31 T05S R09E ELMORE County Source COLD SPRINGS CREEK Tributary SNAKE RIVER

Use: DOMESTIC 01/01 to 12/31 0.04 CFS

Total Diversion: 0.04 CFS

Date Filed: 11/10/2015

Place of Use: DOMESTIC

T05S R09E S31 SWNE

Domestic use is for 13 space RV mobile home park.

63-34127

KEITH O NEIL HELMICK
16 E INDIAN CREEK RD
BOISE, ID 83716

Point of Diversion NENESE S14 T01N R09E ELMORE County Source BAINBRIDGE SPRING Tributary LESTER CREEK

Use: STOCKWATER STORAGE 01/01 to 12/31 6.4 AF

Total Diversion: 6.4 AF

Date Filed: 8/10/2015

Place of Use: STOCKWATER STORAGE

T01N R09E S14 NESE

Permits will be subject to all prior water rights. For additional information concerning the property location, contact Western Region office at (208) 334-2190; or for a full description of the right(s), please see www.idwr.idaho.gov/WaterManagement/WaterRights. Protests may be submitted based on the criteria of Idaho Code § 42-203A. Any protest against the approval of the application(s) must be filed with the Director, Dept. of Water Resources, Western Region, 2735 Airport Way, Boise ID 83705 together with a protest fee of \$25.00 for each application on or before 5/23/2016. The protestant must also send a copy of the protest to the applicant.

GARY SPACKMAN, Director

Published on 5/4/2016 and 5/11/2016

Neely, Rachel

From: Neely, Rachel
Sent: Thursday, April 28, 2016 8:37 AM
To: 'waterdistrict63@qwestoffice.net'
Subject: Application for Permit No. 63-34127
Attachments: Watermaster Recommendation Form.docx; Application for Permit No. 63-34127.pdf

April 28, 2016

REX BARRIE
WATER DISTRICT #63
PO BOX 767
10769 W STATE ST
STAR ID 83669-0767

RE: Application for Permit No. 63-34127

Dear Watermaster:

The Idaho Department of Water Resources (IDWR) is seeking written comment and/or recommendations from you regarding the above referenced water right application. A copy of the application is enclosed with this email for your reference. Please review the application, complete a recommendation form, and submit your reply, if any, to this office by May 23, 2016.

IDWR will assume you do not object to this application if a timely response is not received. Please contact me if you have any questions in this matter. Thank you for your help.

Sincerely,

Rachel Neely

Administrative Assistant I
IDWR-Western Region
2735 Airport Way Boise, ID 83705
Rachel.Neely@idwr.idaho.gov



State of Idaho

DEPARTMENT OF WATER RESOURCES

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

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

C.L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Director

02/23/2016

KEITH O'NEIL HELMICK
16 E INDIAN CREEK RD
MAYFIELD ID 83716

Re: Application for Permit No. 63-34127 Additional Information Required

Dear Applicant:

Your recent application for permit proposing the use of water for stock water storage is being processed. The application has been assigned a priority date but cannot be processed further until the following items are clarified:

- **3 - Point of Diversion(s)**
Based on the map provided, the location of the proposed stock water pond may be listed incorrectly. Please amend section 4, Point of Diversion, to NE ¼ NE ¼ SE ¼ of section 14, Twp 01N, Rng 09E to confirm the location of the POD marked on the map or amend the map to show the POD at the location indicated on the form.
- **9 - Other Water Rights**
Water right no. 63-15028 authorizes in-stream watering of livestock in a reach of Lester Creek beginning at NWSE section 11, Twp 01N, Rng 09E and ending at NWNESE section 14, Twp 01N, Rng 09E in Elmore County (see enclosed map). Part or all of this water right is located on property you may own. Water rights are appurtenant to the land and are often included in the sale of property. Unless specifically excluded from the deed or other documents of sale you may own part or all of water right no. 63-15028 and should submit a Notice of Change in Ownership form to this department to claim ownership of this water right.

Please submit the requested information for application processing to continue. The application will be voided without a timely written reply within the next sixty (60) days. You may seek additional time to provide the information 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.

Sincerely,

Phill Hummer
Water Resource Agent

Enclosure: Copy of Application for Permit No. 63-34127
Notice of Change in Water Right Ownership Form
Copy of Water Right No. 63-15028
Map Showing Place of Use for Water Right 63-15028