

RECEIVED

APR 15 2019

WATER RESOURCES
WESTERN REGION

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) City of Garden City Phone (208) 472-2903
 Name connector (check one): ☐ and ☐ or ☐ and/or
 Mailing address City Hall, 6015 Glenwood St. City Garden City
 State ID Zip 83714-1347 Email _____
2. Source of water supply groundwater which is a tributary of Boise River
3. Location of point(s) of diversion: located in original Boise River channel

TWP	RGE	SEC	Govt Lot	1/4	1/4	1/4	County	Source	Local name or tag #
4N	1E	24			SW	SW	Ada	groundwater	lake centroid

4. Water will be used for the following purposes:
- Amount 41.3 for aesthetic 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)
5. Total quantity to be appropriated is (a) 0 cubic feet per second (cfs) and/or (b) 41.3 acre feet per year (af).
6. Proposed diverting works:
- a. Describe type and size of devices used to divert water from the source. Approximate 5-acre excavated pond known as Long Lake capturing subsurface groundwater. Pond is a freeform polygon that is 15' deep.
- b. Height of storage dam 0 feet; active reservoir capacity 30 acre-feet; total reservoir capacity 30 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? n/a; drilling firm n/a; well was drilled for (well owner) n/a; Drilling Permit No. n/a.
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. _____
- c. Municipal; complete and attach the [Municipal Water Right Application Checklist](#).
- d. Domestic; show number of households _____
- e. Other; describe fully. The application is for an excavated pond on property owned by the City of Garden City. The pond captures subsurface groundwater and is used as an aesthetic water feature.

8. Description of place of use: located in the original Boise River channel

- 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	
4N	1E	24											X						
4N	1E	23																X	
4N	1E	24											L5						

Total number of acres to be irrigated: n/a

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?

None.

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:
n/a

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

Volume: Proposed volume includes pond volume (30 ac-ft) plus calculated evaporative losses (11.4 ac-ft).

Evaporative Losses: Losses were calculated using ETIdaho data for shallow ponds (see attached).

Mitigation: Mitigation for consumptive use (evaporative losses) will be provided by non-diverted shares in Thurman Mill Canal Co. as described in the attached mitigation plan. The number of shares to be provided for mitigation were calculated using ETIdaho data for turf grass irrigation (see attached).

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.

John G. Evans
Signature of Applicant

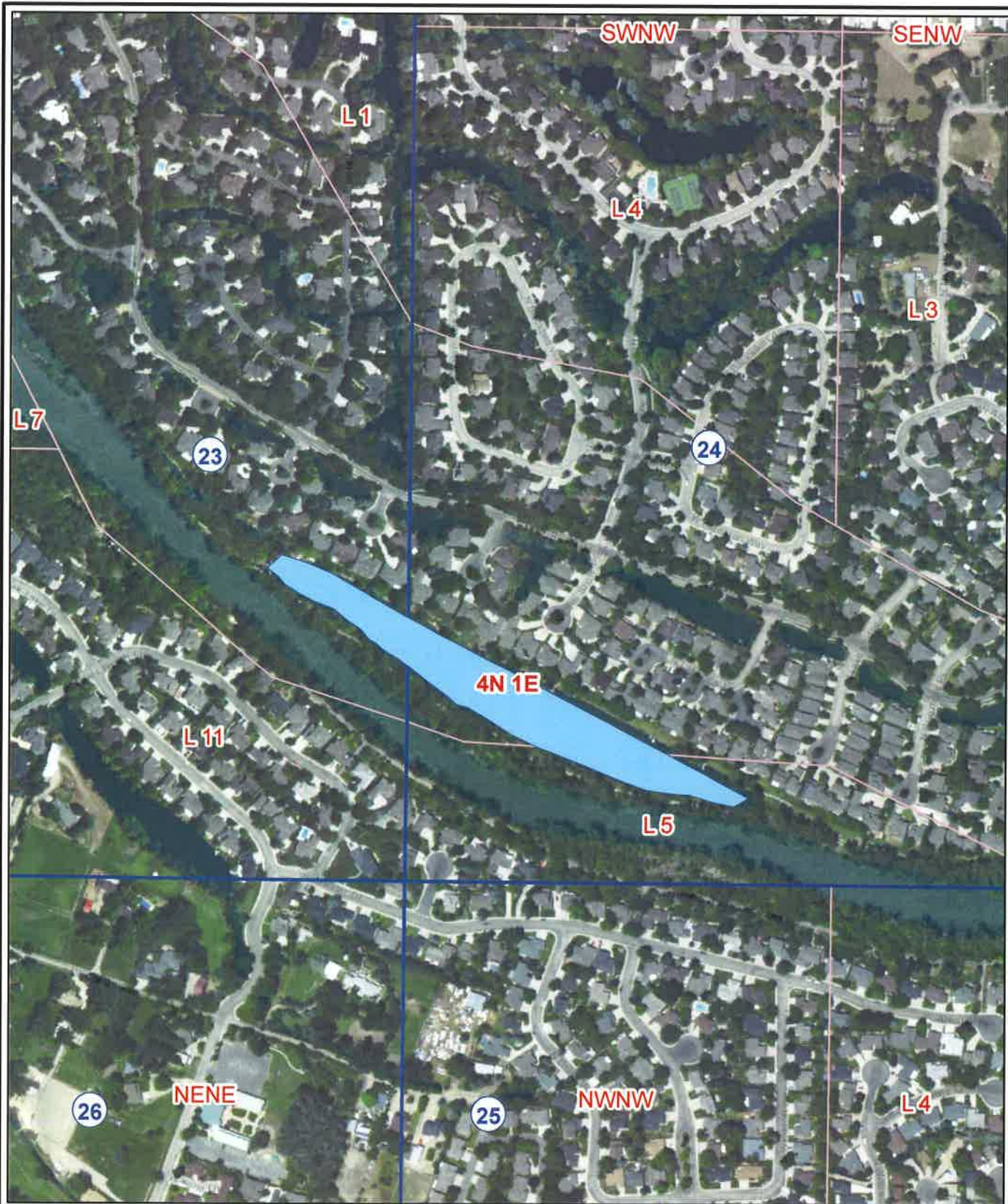
Signature of Applicant

John G. Evans, Mayor
Print Name (and title, if applicable)

Print Name (and title, if applicable)

For Department Use:

Received by _____ Date _____ Time _____ Preliminary check by JS
Fee \$ 250.00 Received by KT Receipt No. W047316 Date 4/15/19



 Long Lake

Application for Permit - Long Lake



500

 Feet



SPF WATER
ENGINEERING

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	TBD
REVIEWER	Lori Graves
DATE	4/12/2019

User Input
Calculated value
Formula Explanations

INPUTS

Pond Surface Area (AC.)	5	AC.
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Pond Surface Area (SQ. FT.)	217800	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	SM	
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 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	TBD
REVIEWER	Lori Graves
DATE	4/12/2019

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/>

Precip Deficit (open water-shallow sys)

Station: Boise WSFO Airport(NWS --US00101022)

Month	mm/day ¹	Days per month	mm/Month
Jan	-0.62	31	0.00
Feb	0.11	28	3.08
March	0.83	31	25.73
April	2.07	30	62.10
May	2.76	31	85.56
June	4.12	30	123.60
July	4.68	31	145.08
Aug	3.95	31	122.45
Sept	2.65	30	79.50
October	1.41	31	43.71
November	-0.21	30	0.00
December	-0.78	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 = 690.81

46.79

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

$$\left(\frac{690.81}{304.8} \right) \times 5.00 = 11.3 \text{ AFA}$$

ET Idaho Data for Turf Grass

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

Precip Deficit (Grass - Turf)

Station: Boise WSFO Airport(NWS -US00101022)

Month	mm/day ¹	Days per month	mm/Month
Jan	-0.03	31	0.00
Feb	0.08	28	2.24
March	0.62	31	19.22
April	3.07	30	92.10
May	4.40	31	136.40
June	5.91	30	177.30
July	6.49	31	201.19
Aug	5.50	31	170.50
Sept	3.87	30	116.10
October	2.21	31	68.51
November	-0.09	30	0.00
December	-0.23	31	0.00

Total mm/year = 983.56

Total Storage Calculations

FILE NUMBER	TBD
REVIEWER	Lori Graves
DATE	4/12/2019

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.)	5	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	6	"Average Pond Depth" depicts the actual depth of the pond either measured or estimated. Note: If you know the maximum depth and not the average depth, the Field Examiner's Handbook suggests multiplying the maximum depth by 0.4 to get the average depth, or you can use any method that seems reasonable to attain average depth.
Pond Capacity (AF)	30	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)	11.3	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	41.3	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)	0.00	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)	4.68	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)	0.08	"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)	0.04	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	-391	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	-814	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.

**PROPOSED MITIGATION PLAN FOR WATER RIGHT PERMIT APPLICATION
CITY OF GARDEN CITY**

To the Idaho Department of Water Resources (IDWR):

Thurman Mill Ditch Company ("Company") agrees to provide 8 shares under its water right portfolio to mitigate for evaporative losses from two ponds. One share of the Company water right equals 1 inch or 0.02 cfs for the irrigation of 1 acre.

The Company agrees to this mitigation plan as follows:

1. The 8 shares that have irrigated an 8-acre place of use will remain in the Boise River, undiverted and unused. No one will be authorized to use those shares for any purpose.
2. All of the following water rights held by the Company act together to provide water to the Company place of use: 63-135, 63-176, 63-193, 63-210, 63-211, 63-221, 63-250, 63-30125, 63-30129, 63-30130, 63-30131. Mitigation will be provided by idling 8 acres under all of those rights. To simplify the process, the amount of water for mitigation can be recorded in water right 63-30130, although the reduction in irrigated acres will be recorded in all the Company water rights.
3. The applicant and any successors in interest for the application place of use will pay the Company for the mitigation shares every year.

If IDWR approves the subject application and this mitigation plan, the Company understands IDWR will change the description of the unused shares from irrigation to mitigation. This will protect the unused shares from forfeiture according to I. C. §42-223(10).

To the extent development proposed in the subject application is not developed, the Company understands this process is reversible by contacting IDWR with appropriate information for water and acres set aside for mitigation to be restored to irrigation use.

Signature: _____

Title: _____

Date: _____



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

June 14, 2019

CITY OF GARDEN CITY
CITY HALL
6015 GLENWOOD ST
GARDEN CITY, ID 83714-1347

Application for Permit No. 63-34713 & 63-34714

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 IDAHO STATESMAN on 6/20/2019 and 6/27/2019. 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,

Anna Kaiser
Administrative Assistant

CC: SPF WATER ENGINEERING LLC

Kaiser, Anna

From: Kaiser, Anna
Sent: Thursday, June 13, 2019 11:43 AM
To: 'BOI Legals'
Subject: Ada Legal Ad
Attachments: Cover Letter.docx; Legal Notice.docx

Follow Up Flag: Follow up
Flag Status: Flagged

Good Afternoon Legal Clerk,

Please see the attached ad for publication on 6/20/2019 & 6/27/2019.

Please confirm these are okay to publish as shown.

Thank You,

Anna Kaiser | Administrative Assistant I
IDWR-Western Region
2735 W Airport Way, Boise ID 83705
(208).334.2190 | anna.kaiser@idwr.idaho.gov

June 13, 2019

LEGAL NOTICE DEPARTMENT

IDAHO STATESMAN
PO BOX 40
BOISE, ID 83707

RE: Application For Permit Nos: 63-34702, 63-34713, 63-34714, 63-34737, 63-34717
RE: Transfer No. 83159 & 83320

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 7/8/2019. Your cooperation is appreciated.

Sincerely,

Anna Kaiser
Administrative Assistant

Enclosure(s)

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

63-34702

CITY OF BOISE

DEPT OF PARKS & RECREATION

1104 ROYAL BLVD

BOISE, ID 83706-2898

Point of Diversion NESE S36 T04N R01E ADA County Source GROUND WATER

Use: AESTHETIC STORAGE 01/01 to 12/31 8.8 AF

Use: DIVERSION TO STORAGE 01/01 to 12/31 0.32 CFS

Use: IRRIGATION 03/01 to 11/15 0.32 CFS

Use: IRRIGATION FROM STORAGE 03/01 to 11/15 4 AF

Use: IRRIGATION STORAGE 03/01 to 11/15 4 AF

Total Diversion: 0.32 CFS 8.8 AF

Date Filed: 4/5/2019

Place Of Use: IRRIGATION, IRRIGATION STORAGE, AESTHETIC STORAGE, IRRIGATION FROM STORAGE

T04N R01E S36 NESE

Total Acres: 16

Water bearing zone to be appropriated is from 200 to 400 feet.

63-34713

CITY OF GARDEN CITY

CITY HALL

6015 GLENWOOD ST

GARDEN CITY, ID 83714-1347

Point of Diversion SWSW S24 T04N R01E ADA County Source GROUND WATER Tributary BOISE RIVER

Use: AESTHETIC STORAGE 01/01 to 12/31 41.3 AF

Total Diversion: 41.3 AF

Date Filed: 4/15/2019

Place Of Use: AESTHETIC STORAGE

T04N R01E S23 SESE

T04N R01E S24 L5(SWSW)

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

Mitigation is proposed for consumptive use.

63-34714

CITY OF GARDEN CITY

CITY HALL

6015 GLENWOOD ST

GARDEN CITY, ID 83714-1347

Point of Diversion NWNE S25 T04N R01E ADA County Source GROUND WATER Tributary BOISE RIVER

Use: AESTHETIC STORAGE 01/01 to 12/31 24.8 AF

Total Diversion: 24.8 AF

Date Filed: 4/15/2019

Place Of Use: AESTHETIC STORAGE

T04N R01E S24 SWSE

T04N R01E S25 NWNE

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

Mitigation is proposed for consumptive use.

63-34737

GERALD CARLSON

SHERRON CARLSON

912 W HEATHER WOODS DR

NAMPA, ID 83686-2679

Point of Diversion L1(NENE) S1 T02N R01W ADA County Source GROUND WATER Tributary

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

Date Filed: 5/31/2019

Place Of Use: DOMESTIC

T02N R01W S1 L1(NENE)

Water bearing zone to be appropriated is from 138 to 210 feet.

63-34717

EG JOHNSON FARMS INC

24007 HIGHWAY 20/26

PARMA, ID 83660-7221

Point of Diversion SENE S3 T05N R04W PAYETTE County Source GROUND WATER

Point of Diversion NESW S3 T05N R04W PAYETTE County Source GROUND WATER

Point of Diversion SESW S3 T05N R04W PAYETTE County Source GROUND WATER

Point of Diversion NESE S3 T05N R04W PAYETTE County Source GROUND WATER

Point of Diversion NWSE S3 T05N R04W PAYETTE County Source GROUND WATER
Point of Diversion SWSE S3 T05N R04W PAYETTE County Source GROUND WATER
Point of Diversion NWSW S3 T05N R04W PAYETTE County Source GROUND WATER
Point of Diversion SESE S3 T05N R04W PAYETTE County Source GROUND WATER
Point of Diversion NENE S10 T05N R04W CANYON County Source GROUND WATER
Point of Diversion SWNE S10 T05N R04W CANYON County Source GROUND WATER
Point of Diversion SENW S10 T05N R04W CANYON County Source GROUND WATER
Point of Diversion NENW S11 T05N R04W CANYON County Source GROUND WATER
Point of Diversion NWNW S11 T05N R04W CANYON County Source GROUND WATER
Use: IRRIGATION 03/01 to 11/15 11 CFS

Total Diversion: 11 CFS

Date Filed: 4/18/2019

Place Of Use: IRRIGATION

T05N R04W S3 SWNE SENE SWNW SENW NESW NWSW SESW NESE NWSE SWSE SESE

T05N R04W S10 NENE NWNE SWNE NENW SENW

T05N R04W S11 NENW NWNW

Total Acres: 691.8

Water bearing zone to be appropriated is from 300 to 1000 feet.

**NOTICE OF PROPOSED CHANGE OF WATER RIGHT
TRANSFER NO. 83159**

TOLL SOUTHWEST LLC, 3103 W SHERYL DR STE 100, MERIDIAN, ID 83642-5674; has filed Application No. 83159 for changes to the following water rights within ADA County(s): Right No(s). 63-10536, 63-11060, 63-25981, 63-25982, 63-31725; to see a full description of these rights and the proposed transfer, please see www.idwr.idaho.gov/apps/wr/QueryNewTransfers/QueryNewTransfers.aspx. The purpose of the transfer is to change a portion of the above rights as follows: The purpose of the transfer is to convert the stockwater and commercial uses to irrigation for a new subdivision being developed 0.8 miles east of intersection Hwy 16 and W Beacon Light Rd. The user proposes to utilize existing wells with potential to drill one new well. Water bearing zone is from 66 to 620 feet.

**TRANSFER NO. 83320
NEW DRY CREEK DITCH CO, C/O KARI ROSTI**

1460 N POLLARD LN, STAR, ID 83669; has filed Application No. 83320 for changes to the following water rights within ADA County(s): Right No(s). 63-125K, 63-126G, 63-161L, 63-205, 63-206, 63-258B, 63-263, 63-286, 63-288B, 63-28977, 63-31778, 63-31806; to see a full description of these rights and the proposed transfer, please see www.idwr.idaho.gov/apps/wr/QueryNewTransfers/QueryNewTransfers.aspx. The purpose of the transfer is to change a portion of the above rights as follows: The purpose of the transfer is to change the place of use increase the service area of New Dry Creek Ditch Co (company) by 167 acres. All rights owned by the company will remain limited to 2,964 acres and is not an application to increase water diverted or acres irrigated. The increased service boundary will be used at the proposed place of use 0.8 miles east of State Hwy 16, south of Beacon Light Rd.

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) or proposed transfer (s) please see www.idwr.idaho.gov. Protests may be submitted based on the criteria of Idaho Code §§ 42-203A and 42-222. 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 7/8/2019. The protestant must also send a copy of the protest to the applicant.

GARY SPACKMAN, Director

Published on 6/20/2019 and 6/27/2019

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	63-34713
REVIEWER	Justin Shearer
DATE	6/12/2019

User Input
Calculated value
Formula Explanations

INPUTS

Pond Surface Area (AC.)	5	AC.
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Pond Surface Area (SQ. FT.)	217800	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)	0.0000	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
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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	63-34713
REVIEWER	Justin Shearer
DATE	6/12/2019

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: Boise WSFO Airport (NWS -- USC00101022)

Month	mm/day ¹	Days per month	mm/Month
Jan	-0.62	31	0.00
Feb	0.11	28	3.08
March	0.83	31	25.73
April	2.07	30	62.10
May	2.76	31	85.56
June	4.12	30	123.60
July	4.68	31	145.08
August	3.95	31	122.45
September	2.65	30	79.50
October	1.41	31	43.71
November	-0.21	30	0.00
December	-0.78	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 = 690.81

$$\left(\frac{690.81}{304.8} \right) \times 5.00 = 11.3 \text{ AFA}$$

Total Storage Calculations

FILE NUMBER	63-34713
REVIEWER	Justin Shearer
DATE	6/12/2019

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.)	5	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	6	"Average Pond Depth" depicts the actual depth of the pond either measured or estimated. Note: If you know the maximum depth and not the average depth, the Field Examiner's Handbook suggests multiplying the maximum depth by 0.4 to get the average depth, or you can use any method that seems reasonable to attain average depth.
Pond Capacity (AF)	30	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)	11.3	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	41.3	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.

RECEIVED

APR 15 2019

WATER RESOURCES
WESTERN REGION

April 12, 2019

Patrick Kelly, Water Right Supervisor
Idaho Department of Water Resources Western Region Office
2735 Airport Way
Boise, ID 83705

Subject: City of Garden City - Applications for Permit (2)

Dear Patrick,

Enclosed on behalf of the City of Garden City are two applications for permit for aesthetic water storage in existing gravel pit lakes located adjacent to the Boise River in Garden City.

- Glenwood Lake has a surface area of 3 acres, volume of 18 acre feet, and annual evaporation loss of 6.8 acre feet. The application seeks 24.8 acre feet.
- Long Lake has a surface area of 5 acres, volume of 30 acre feet, and annual evaporation loss of 11.3 acre feet. The application seeks 41.3 acre feet.

Mitigation for depletive effects on the Boise River resulting from pond evaporative losses will be provided by leaving 8 shares of Thurman Mill Ditch Company water undiverted in the Boise River. The 8 shares are represented by a 0.16 cfs portion of water right 63-30130 with a priority date of June 1, 1868. The place of use for all of Thurman Mill Ditch Company water rights will be reduced by 8 acres as part of this mitigation. A mitigation plan is attached.

The 0.16 cfs portion of water right 63-30130 provides a minimum flow rate of 0.096 cfs when curtailed to 60% delivery under Stewart Decree provisions. The 1868 priority is never reduced below 60% during the irrigation season. The maximum month evaporation rate from open water shallow systems (ponds/streams - Boise) is approximately 4.8 mm/day. For 8 acres of pond surface, the evaporation rate is approximately 0.064 cfs. Thus, the mitigation shares are adequate to provide for the peak month evaporation rate.

The 8 shares provided a historical annual consumptive use of 24.8 acre feet (3.1 acre feet per acre grass pasture – Boise). Annual evaporation loss from 8 acres of pond surface is 16.8 acre feet (2.1 acre feet per acre ponds/streams – Boise). Therefore, the mitigation shares are adequate to provide for the annual evaporation loss.

Check No. 014283 for \$500 is enclosed for the \$250 filing fee for each application.

Thank you very much for your consideration and assistance in this matter. Please call me if you have any questions.

Sincerely,



Terry M. Scanlan, P.E., P.G.

Cc: Colin Schmidt, Garden City Public Works Director
Bryce Farris, Attorney for Thurman Mill Ditch Company

Enclosures

SPF file number: 473.0260