

MINIMUM REQUIREMENTS CHECKLIST
TO BE SUBMITTED WITH APPLICATION FOR TRANSFER

An application for transfer must be prepared in accordance with the minimum requirements listed below to be acceptable for processing by the Department. Incomplete applications will be returned. The instructions, fee schedule, Part 2A reports and additional Part 2B forms are available from any Department office or on the Department's website at idwr.idaho.gov.

Name of Applicant(s) Louis Nils Berg and Terrisa Jayne Berg

Check whether each item below is *attached* (Yes) or *not applicable* (N/A) for the proposed transfer.

Yes N/A * Means the item is always required and must be included with the application.

- ☒ * Completed Application for Transfer of Water Right form, Part 1.
- ☒ * Signature of applicant(s) or applicant's authorized representative on Application for Transfer Part 1. Include evidence of authority labeled Attachment #3 (see below) if signed by representative.
- ☒ * Application for Transfer Part 2A. Attach a Part 2A report describing each water right in the transfer as currently recorded.
- ☐ ☒ Complete and attach an Application for Transfer Part 2B for each water right for which only a portion is proposed to be changed through this transfer application.
- ☒ * Application for Transfer Part 3A is always required (see Attachment #7a below); Parts 3B and 3C must be completed for transfer applications proposing to change the nature of use of the water right(s) or proposing changes to supplemental right(s).
- ☒ * Correct fee submitted with transfer application form. (Fee schedule is on website and instructions for application for transfer.)

Attachments to Application - Label each attachment with the corresponding number shown below as Attachment #1-10.

- ☐ ☒ #1 If the applicant is a business, partnership, organization, or association, and not currently registered in the State of Idaho as a business entity, attach documentation identifying officers authorized to sign or act on behalf of right holder. (See Part 1.)
- ☐ ☒ #2a Water Right ownership documentation if Dept. records do not show the applicant as the current water right owner. **
- ☐ ☒ #2b If the ownership of the water right will change as a result of the proposed transfer to a new place of use, attach documentation showing land and water right ownership at the new place of use. Include documentation for all affected land and owner(s). **
** Additional fee(s) required for water right ownership changes; see fee schedule.
- ☐ ☒ #3 Documentation of authority to make the change if the applicant is not the water right owner.
- ☐ ☒ #4 Power of Attorney or documentation providing authority to sign or act on the applicant's behalf. (See Part 1.)
- ☐ ☒ #5 If the transfer application proposes to change the point of diversion for a water right affecting the Eastern Snake Plain Aquifer (ESPA), attach the results of an ESPA analysis and a detailed mitigation plan to offset any depletions to hydraulically connected reaches of the Snake River. ESPA transfer spreadsheet and model grid labeled cells are available on the Department's website at <https://idwr.idaho.gov/water-rights/transfers/resources/>.
- ☒ ☐ #6 Notarized statement of agreement or a statement on official letterhead signed by an authorized representative from each lien holder or other entity with financial interest in the water right(s) or land affected by the proposed transfer. (See Part 1.5.c.)
- ☒ * #7a Attach a map identifying the proposed point(s) of diversion, place(s) of use, and water diversion and distribution system details as described on the application. Include legal description labels. If only a portion of the right is proposed to be changed, identify the current location of the part of the existing right(s) proposed to be changed. (See Part 3A.)
- ☒ ☐ #7b If the transfer application proposes to change the place or purpose of use of an irrigation right attach a Geographic Information System (GIS) shape file, or an aerial photo or other image clearly delineating the location and extent of existing acres and changes to the place of use. If some or all of any right is leased to the Water Supply Bank, you must also show the specific location and/or acres to be idled at the new, proposed place of use to satisfy lease requirements.
- ☒ ☐ #8a If the transfer application proposes to change the nature of use or period of use for one or more rights, provide documentation describing the extent of historic beneficial use for the water rights proposed to be transferred and document how enlargement will be avoided. (See Part 3B.) Additional fee required for proposed changes to nature of use; see fee schedule.
- ☐ ☒ #8b If the transfer application proposes to change the place of use of a supplemental irrigation right, provide documentation regarding the historic use of the supplemental right(s) and availability or reliability of the primary right(s) being supplemented, both before and after the proposed change. (See Part 3C.)
- ☐ ☒ #9 Water Supply Bank information for all rights proposed for transfer and currently leased to the Bank. (Attachment WSB)
- ☒ ☐ #10 Other. Please describe: Supporting information for this application is provided in Attachments as Figures 1-3; Tables 1-11; Parts 1A.3 and 1.B.5C; Attachments 7a, 7b, and 8a; and other documents.

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

RECEIVED

JAN 18 2024

APPLICATION FOR TRANSFER OF WATER RIGHT
PART 1

Department of Water Resources
Eastern Region

Name of Applicant(s) Louis Nils Berg and Terrisa Jayne BergPhone (208) 270-9577Mailing address 4540 South 2nd Avenue, Pocatello, ID 83204Email louisnberg@gmail.com

- ☐ If applicant is not an individual and not registered to do business in the State of Idaho, attach documentation identifying officers authorized to sign or act on behalf of the applicant. Label it **Attachment #1**.
- ☐ Attach water right ownership documentation if Department records do not show the transfer applicant as the current water right owner. Label it **Attachment #2a**.
- ☐ If the ownership of the water right will change as a result of the proposed transfer to a new place of use, attach documentation showing land and water right ownership at the new place of use. Include documentation for all affected land and owner(s). Label it **Attachment #2b**.
- ☐ Attach documentation of authority to make the proposed change if the applicant is not the water right owner. Label it **Attachment #3**.

Provide contact information below if a consultant, attorney, or any other person is representing the applicant in this transfer process.

☐ No Representative

Name of Representative _____

Phone _____

Mailing address _____

Email _____

- ☐ 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.
- ☐ 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 providing authority to sign for the applicant and label it **Attachment #4**.

AMENDED

I hereby assert that no one will be injured by the proposed changes and that the proposed changes do not constitute an enlargement in use of the original right(s). 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.

Louis Nils Berg
Signature of Applicant or Authorized Representative

Louis Nils Berg

Print Name and Title if applicable

01/11/2024

Date

Terrisa Jayne Berg
Signature of Applicant or Authorized Representative

Terrisa Jayne Berg

Print Name and Title if applicable

01/11/2024

Date

A. PURPOSE OF TRANSFER

- ☐ Change point of diversion

☒ Change nature of use

☐ Add diversion point(s)

☒ Change period of use

☒ Change place of use

☐ Other _____
- Is this a transfer for changes pursuant to Idaho Code § 42-221.0.8? No

If yes, ☐ attach an explanation and any supporting documentation labeled as **Part 1A.2**.
- Describe your proposal in narrative form, including a detailed description of non-irrigation uses to justify amounts transferred (i.e. number of stock, etc.), and provide additional explanation of any other items on the application. Attach additional pages if necessary and label it **Part 1A.3**. See Attachment A. Summary: We will restore surface water, fish, wildlife, & riparian veg. to property. Water will flow from POD into fish pond. Outflow will be meandering stream & flow into piece of historic Portneuf River channel diked to create waterfowl pond. Other water from POD will irrigate 5.36 acres of pasture, create amphibian pond, & water livestock.

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

APPLICATION FOR TRANSFER OF WATER RIGHT

PART 1 Continued

B. DESCRIPTION OF RIGHTS AFTER THE REQUESTED CHANGES. IF THE RIGHTS ARE BEING SPLIT, DESCRIBE PORTIONS TO BE CHANGED AS THEY WOULD APPEAR AFTER THE REQUESTED CHANGES.

1.	Right Number	Amount (cfs/ac-ft)	Nature of Use	Period of Use	Source & Tributary
All or Part ☒ ☐	29-8011	0.06 cfs	irrigation	03/15 to 11/15	groundwater
☐ ☐		0.14 cfs	diversion to storage	01/01 to 12/31	groundwater
☐ ☐		32.2 af	wildlife storage	01/01 to 12/31	groundwater
☐ ☐		.02 cfs	stockwater	01/01 to 12/31	groundwater
☐ ☐				to	
☐ ☐				to	
☐ ☐				to	
☐ ☐				to	
☐ ☐				to	

Total authorized under rights .20 cfs and/or 43.4 acre-feet.

2. Total amount of water proposed to be transferred or changed .20 cubic feet per second and/or 43.0 acre-feet per year.

3. Point(s) of Diversion:

- ☒ No changes to point(s) of diversion are proposed - the following chart is therefore not completed. (Proceed to #4.)
- ☐ Attach Eastern Snake Plain Aquifer analysis if this transfer proposes to change a point of diversion affecting the ESPA. Label it **Attachment #5**.

New ?	Lot	¼	¼	¼	Sec	Twp	Rge	County	Source	Local name or tag #

4. Place of use: (If irrigation, identify with number of acres irrigated per ¼ ¼ tract.)

- ☐ No changes to place of use are proposed - the following chart is therefore not completed. (Proceed to #5.)

Twp	Rge	Sec	NE ¼				NW ¼				SW ¼				SE ¼				Acre Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
07S	35E	7			WS										WS	WS			
					0.5										0.7	4.2			5.4
Total Acres (for irrigation use)																			5.4

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

APPLICATION FOR TRANSFER OF WATER RIGHT

PART 1 Continued

5. General Information:

- a. Describe the complete diversion system, including how you will accommodate a measuring device and lockable controlling works should they be required now or in the future:
Pump from groundwater well. Will install measuring device/totalizing flowmeter if required
(e.g. electromagnetic spooled ultrasonic or clamp-on ultrasonic).
- b. Who owns the property at the point(s) of diversion? Applicant
 If other than the applicant, describe the arrangement enabling the applicant to access the property for the diversion system:
- c. Are the lands from which you propose to transfer the water right subject to any liens, deeds of trust, mortgages, or contracts?
 If yes, ☒ attach a notarized statement from the holder of the lien, deed of trust, mortgage or contract agreeing to the proposed changes on official letterhead signed by an authorized representative. Label it **Attachment #6**. List the name of the entity and type of lien: See Part 1B.5C in Attachment A. It is a conservation easement deed owned by the
City to a portion of our property, prevents some development, but does not require, prevent, limit,
nor dictate our use of water. Nevertheless, we have informed the City of our plans.
 It is the applicant's responsibility to provide notice to lien holder, trustee, mortgagor, or contract holder of the proposed changes that may impact or change the value of the water rights or affected real property. Any misrepresentation of legal encumbrance on this application may result in rejection of the application or cancellation of an approval.
- d. Are any of the water rights proposed for transfer currently leased to the Water Supply Bank? No
 If yes, ☐ complete Attachment WSB.
- e. Describe the effect on the land now irrigated if the place or purpose of use is changed pursuant to this transfer:
Restoration of surface water, riparian vegetation, fish, & wildlife. Most of the land currently
irrigated with sprinklers will no longer be irrigated. The proposed changes are expected to
increase the scenic attributes & value of the property.
- f. Describe the use of any other water right(s) for the same purpose or land, or the same diversion system as right(s) proposed to be transferred at both the existing and proposed point(s) of diversion and place(s) use:
An application is being submitted concurrently for a water right for the nonconsumptive
aspects of our proposed project.
- g. To your knowledge, has/is any portion of the water right(s) proposed to be changed:
- Yes No
- ☐ ☒ undergone a period of five or more consecutive years of non-use,
☐ ☒ currently leased to the Water Supply Bank,
☐ ☒ currently used in a mitigation plan limiting the use of water under the right, or
☐ ☒ currently enrolled in a Federal set-aside program limiting the use of water under the rights?

If yes, describe:

N/A

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

APPLICATION FOR TRANSFER OF WATER RIGHT PART 3

A. PLAT MAP (See Part 3A of Instructions for application for transfer for complete requirements.)

- ☒ Attach a map of the diversion, measurement, control, and distribution system. Label it **Attachment #7a**. Also as Figure 3
- ☒ If the transfer application proposes to change the place or purpose of use of an irrigation right attach a Geographic Information System (GIS) shape file, or an aerial photo or other image clearly delineating the location and extent of existing acres and changes to the place of use. Label it **Attachment #7b**. Also shown as Figures 1 & 2 in Attachment

If the place of use currently consists of a permissible place of use, then the attachment is not required if the application contains a clear statement that the boundaries for the place of use are not proposed to be changed by the transfer and the total number of irrigated acres within the place of use before and after the transfer is clearly stated.

If any part of the irrigation water right is leased to the Water Supply Bank, you must also specify the location and number of acres that will remain idled for the duration of the lease contract at the new, proposed place of use.

B. CHANGES IN NATURE OF USE (WaterBalance)

- ☒ If you propose to change the nature of use or period of use of all or part of the rights(s) listed in this application, attach documentation describing the extent of historic beneficial use of the portion of the right(s) proposed to be changed. Also attach documentation showing that the portion of the right(s) to be changed will not be enlarged in rate, volume, or consumptive use through the proposed change. Label it **Attachment #8a**. Also shown as Table 11 in Attachment

C. PLACE OF USE CHANGES TO SUPPLEMENTAL IRRIGATION RIGHTS

- ☐ If you propose to change the place of use of a supplemental irrigation right, answer below and attach supporting documentation. Label it **Attachment #8b**.

Describe how the supplemental water rights have been used historically in conjunction with other water rights at the existing place of use. Describe the time during the irrigation season that the supplemental rights have been used. Include information about the availability or reliability of the primary right(s) being supplemented, both before and after the change. If the applicant is proposing to change a supplemental irrigation right to a primary right, provide the information required on Part 3B above:

N/A

FOR DEPARTMENT USE ONLY

Transfer contains _____ pages and _____ attachments.

Received by _____ Date _____ Preliminary check by _____ Date _____

Fee paid 50.00 Date 1-18-24 Received by M. Patten Receipt # E049740

Add'l fee paid _____ Date _____ Received by _____ Receipt # _____

Check all that apply: Attachment WSB ☐ (copy sent to state office) Lessor Designation form ☐ &/or W-9 ☐ (originals to state office)

ATTACHMENTS
to
State of Idaho
Department of Water Resources
APPLICATION FOR TRANSFER NO. 87982
OF CONSUMPTIVE WATER RIGHT 29-8011

Submitted by
Louis and Terrisa Berg
January 12, 2024

PART 1A.3 PROPOSED PROJECT

Under Water Right No. 29-8011, owners of the property we purchased a year and a half ago in Bannock County have been allowed to annually pump 84.7 acre-feet of groundwater to sprinkler irrigate 25 acres of pasture for livestock during the 1 April – 31 October period. They have additionally been allowed to use 0.4 acre-feet of groundwater for year-round stock watering. Figure 1 is a map showing the point of diversion and location of these water uses. Figure 3 shows the current water distribution system. There has been no water measurement device on the pipe delivering water from the point of diversion to sprinkler lines and stock tank, so it is unknown if the full water right has ever been applied to the property. Table 11 presents a history of recent years for which there is aerial-imagery evidence that some beneficial use occurred. The only year we know of in which the actual amount of water use was estimated is 2022, when an estimated 44.68 acre-feet of water was delivered via an irripod sprinkler irrigation system. We found our personal physical capacity too limited to continue even that level of use, which requires intensive movement of irrigation lines over the full acreage.

We now propose changes to the nature, place, and period of our groundwater use to restore our property and its associated resources to a condition closer to the natural state they existed in before the railroad came to the Portneuf Valley in the late 1800s. The railroad cut the Portneuf River off from the property, eliminating its surface water except during rare springtime events when the water table rises enough to refill pieces of the historic river channel. This loss of surface water caused the disappearance of numerous species of plants, invertebrates, amphibians, fish, birds, mammals, and other wildlife on the property. Restoring surface water by pumping groundwater is a foundational element of our project.

The nature of our water use will change from strictly agriculture (irrigation of 25 acres) to a combination of irrigation of wildlife habitat including perennial vegetation (irrigation of 5.36 acres) and water-body storage for wildlife in ponds and stream (total surface area of 2.71 acres). Figure 2, Tables 1-10, and other attachments herein provide a detailed description of our proposed water uses. The annual irrigation season will be from March 15 to November 15. This longer-than-usual season is desired to establish trees and shrubs beneficial to wildlife. These species cannot survive if soil dries out before they have a chance to become well established. Non-irrigation water use will be year-round.

These changes will result in an overall reduction in the quantity of water we are allowed to use. There will be 42.99 acre-feet of consumptive use and 19.40 acre-feet of nonconsumptive use (the latter through a separate application and permit). Our proposed water bodies, their locations, and their consumptive and nonconsumptive water needs, are shown and described in the figures and tables, and in an October 25, 2023 letter we sent to Water Resource Agent Thomas Lafortune. All of these constitute

the supporting information for our project. The consumptive-use portion of the project is known as Water Right Transfer No. 87982 of existing Water Right 29-8011.

PART 2A

IDAHO DEPARTMENT OF WATER RESOURCES

WATER RIGHT REPORT

5/25/2023

IDAHO DEPARTMENT OF WATER RESOURCES

Water Right Report

WATER RIGHT NO. 29-8011

<u>Owner Type</u>	<u>Name and Address</u>
Current Owner	LOUIS N BERG
Current Owner	TERRISA J BERG
	4540 S 2ND AVE
	POCATELLO, ID 83204-2250
	2082709577

Priority Date: 04/06/1990

Basis: Decreed

Status: Active

<u>Source</u>	<u>Tributary</u>
GROUND WATER	

<u>Beneficial Use</u>	<u>From</u>	<u>To</u>	<u>Diversion Rate</u>	<u>Volume</u>
IRRIGATION	04/01	10/31	0.2 CFS	84.7 AFA
STOCKWATER	01/01	12/31	0.02 CFS	0.4 AFA
Total Diversion			0.2 CFS	85.1 AFA

Location of Point(s) of Diversion:

GROUND WATER | SWSWNE | Sec. 07 | Township 07S | Range 35E | BANNOCK County

Place(s) of use:

Place of Use Legal Description: IRRIGATION BANNOCK County

<u>Township</u>	<u>Range</u>	<u>Section</u>	<u>Lot</u>	<u>Tract</u>	<u>Acres</u>	<u>Lot</u>	<u>Tract</u>	<u>Acres</u>	<u>Lot</u>	<u>Tract</u>	<u>Acres</u>	<u>Lot</u>	<u>Tract</u>	<u>Acres</u>
07S	35E	7		SWNE	0.5									
				NESE	16		NWSE	6.4		SESE	2.1			

Total Acres: 25

Conditions of Approval:

PART 2A (Continued)

1. C18 THIS PARTIAL DECREE IS SUBJECT TO SUCH GENERAL PROVISIONS NECESSARY FOR THE DEFINITION OF THE RIGHTS OR FOR THE EFFICIENT ADMINISTRATION OF THE WATER RIGHTS AS MAY BE ULTIMATELY DETERMINED BY THE COURT AT A POINT IN TIME NO LATER THAN THE ENTRY OF A FINAL UNIFIED DECREE. SECTION 42-1412(6), IDAHO CODE.

Dates:

Licensed Date:

Decreed Date: 03/22/2004

Permit Proof Due Date: 10/1/1991

Permit Proof Made Date: 10/9/1990

Permit Approved Date: 9/27/1990

Permit Moratorium Expiration Date:

Enlargement Use Priority Date:

Enlargement Statute Priority Date:

Water Supply Bank Enrollment Date Accepted:

Water Supply Bank Enrollment Date Removed:

Application Received Date: 04/06/1990

Protest Deadline Date:

Number of Protests: 0

Other Information:

State or Federal: S

Owner Name Connector: AND

Water District Number: EXC

Generic Max Rate per Acre:

Generic Max Volume per Acre:

Civil Case Number:

Old Case Number:

Decree Plaintiff:

Decree Defendant:

Swan Falls Trust or Nontrust:

Swan Falls Dismissed:

DLE Act Number:

Cary Act Number:

Mitigation Plan: False

STATE OF IDAHO

Department of Water Resources
Eastern Region

T7S R35E Sec. 7

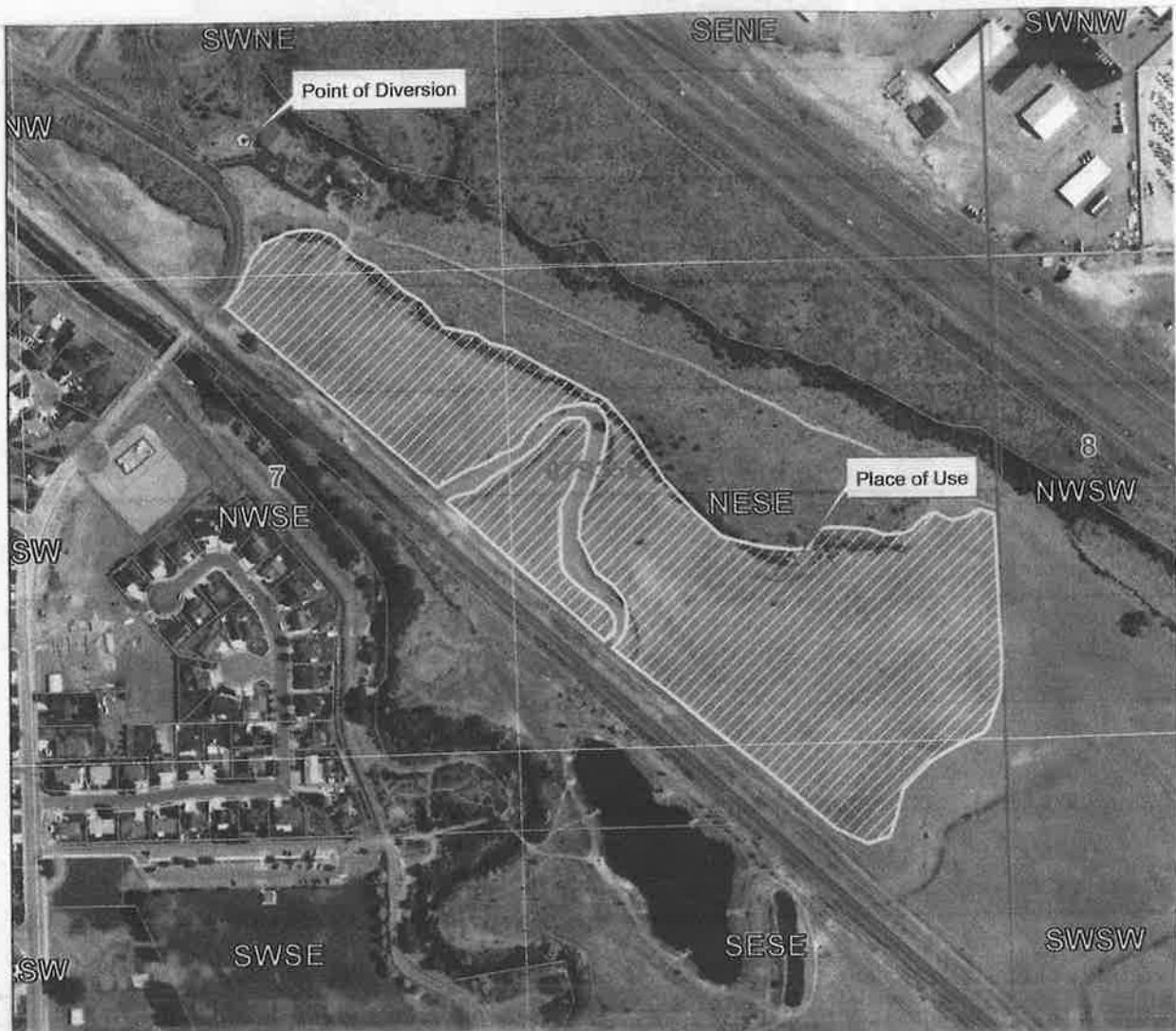


Figure 1. Map showing current locations of the Point of Diversion and Place of Use for consumptive Water Right 29-8011.



STATE OF IDAHO

Department of Water Resources
Eastern Region

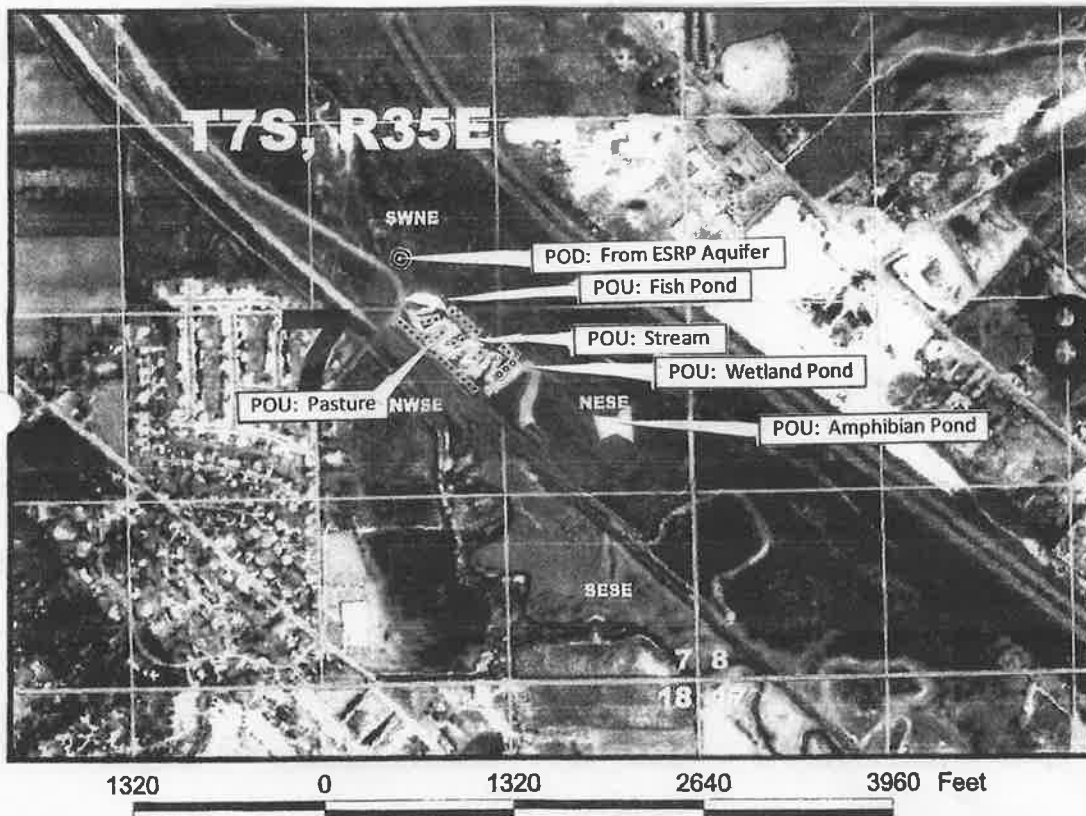


Figure 2. Also known as Attachment 7b for Part 3A of this application. Map showing locations of the Point of Diversion (POD) and Places of Use (POU) for proposed Transfer No. 87982 of consumptive Water Right 29-8011.

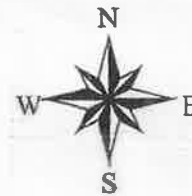




Figure 3. A map showing the layout of the fixed portion of the current irrigation system. Along the buried mainline, there are 49 head-valve risers to which individual sprinkler lines may be attached. There has been enough water pressure to operate from three to five lines, with an average of seven heads each, concurrently. However, because we have only five lines, frequent line movement has been necessary to irrigate the entire 25-acre POU.

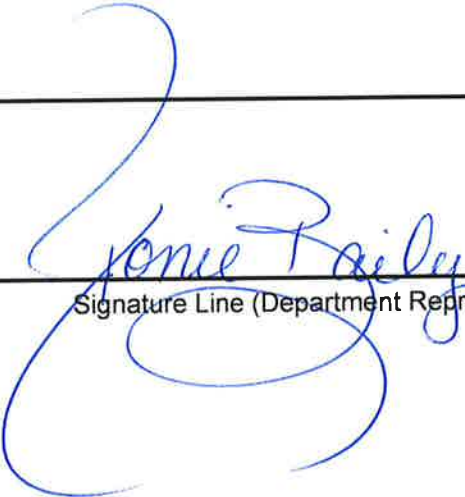
Idaho Department of Water Resources Receipt

Receipt ID: E049216

Payment Amount	\$500.00	Date Received	5/25/2023	Region	EASTERN
Payment Type	Check	Check Number	5428		
Payer	Berg, Louis				
Comments	Transfer Application for Louis and Terrisa Berg 29-8011				

Fee Details

Amount	Description	PCA	Fund	Fund Detail	Subsidiary	Object
\$500.00	TRANSFERS	63105	0229	21		1155



Signature Line (Department Representative)

PART 1B.5C. A copy of the conservation easement deed owned by the City of Pocatello to a portion of our property. The document states an objective of having the property be in its natural, or original, condition (hence, this proposal to restore surface water by creating water bodies). The deed specifies all of our restrictions regarding use of the property. It indicates that agriculture is allowed, but it does not require, prevent, limit, nor dictate our use of water.

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CONSERVATION EASEMENT

This deed of easement is made this 28th day of September, 2007, between R. Corey Snow and Nicole T. Snow, as Grantors, and the City of Pocatello, a municipal corporation of the State of Idaho, as Grantee, witnesseth:

WHEREAS, Grantors are the owners in fee simple of certain real property situated in Bannock County, Idaho, and more particularly described in Exhibit "A" attached hereto and incorporated herein; and

WHEREAS, the property has scenic, natural, and aesthetic value in its present state as a natural area which has not been subject to development or exploitation, and also provides protection for the City's aquifer, which travels directly below said property; and

WHEREAS, the Grantors are willing to grant a conservation easement over the property, thereby restricting and limiting the use of the land and contiguous water areas of the property, on the terms and conditions and for the purposes hereinafter set forth, and the Grantee is willing to accept such easement; and

WHEREAS, the Grantors and the Grantee recognize the scenic, natural, and aesthetic value of the property in its present natural state and the protection the property affords the City's aquifer, and have, by the conveyance of a conservation easement to the Grantee, the common purpose of conserving the natural values of the property, preserving the natural character of the property, and preventing the use or development of the property for any purpose or in any manner which would conflict with the maintenance of the property in its scenic, natural and agricultural condition;

NOW, THEREFORE, for good and valuable consideration paid to the Grantors, which Grantors acknowledge has been provided to Grantee by the Natural Resources Conservation Service (NRCS) pursuant to Grant Agreement No. 68-0211-6-115, the receipt of which is hereby acknowledged, and in further consideration of the mutual covenants, terms, conditions, and

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g.2

restrictions set forth, Grantors hereby grant and convey unto the Grantee, its successors and assigns in perpetuity an interest and conservation easement of the nature and character and to the extent set forth, in respect to the lands of the Grantors located in Bannock County, Idaho, and more particularly described in Exhibit "A", attached.

The terms, conditions, and restrictions of the conservation easement are as set forth:

1. No building, billboard or advertising material, or other structure shall be erected on the property.
2. There shall be no dumping of soil, ashes, waste or other unsightly or offensive material on the property.
3. There shall be no excavation, dredging or removal of loam, gravel, soil, rock, sand, or other material nor any building of roads or change in the general topography of the land, excepting the maintenance of existing foot trails, fire lanes, farm roads, or other accesses, or public safety/welfare improvements.
4. There shall be no removal, destruction, or cutting of trees, shrubs, or other vegetation except as may be necessary for (a) the maintenance of existing foot trails, fire lanes, or other accesses, (b) the prevention or treatment of disease, or (c) other good husbandry practices approved by the Grantee.
5. No advertising of any kind or nature shall be located on or within the property.
6. There shall be no activities, actions, or uses detrimental or adverse to aquifer protection, water conservation, erosion control, soil conservation, preservation of basalt cliff formations, and fish and wildlife or habitat preservation.
7. There shall be no subdivision of the property.

In the event a violation of these terms, conditions, or restrictions is found to exist, the Grantee, or its successor or assign, may, after a 30 day notice to the Grantors, or their successors or

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assigns, institute a suit to enjoin by temporary and/or permanent injunction such violation, to require the restoration of the property to its prior condition, and/or for damages for the breach of covenant.

The Grantee, or its successors or assigns, does not waive or forfeit the right to take action as may be necessary to insure compliance with the terms, conditions, and purposes of this conservation easement by a prior failure to act.

The Grantee, or its successor or assign, reserves the right to enter the property at all reasonable times for the purpose of inspecting the property to determine if the Grantors or their successors or assigns, are complying with the terms conditions, restrictions, and purposes of this conservation easement.

The Grantors expressly reserve for themselves , their successors or assigns, the right to continue the use of the property for all purposes not inconsistent with this conservation easement.

The Grantors agree that the terms, conditions, restrictions, and purposes of this conservation easement will be inserted by them in any subsequent deed, or other legal instrument, by which they divest themselves of either the fee simple title, to or of their possessory interest in the subject property.

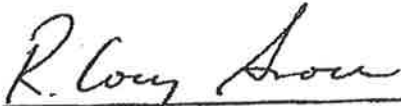
To have and to hold unto the City of Pocatello, Grantee, and R. Corey Snow and Nicole T. Snow, Grantors, to the use of the Grantee, its successors and assigns forever. The covenants agreed to and the terms, conditions, restrictions, and purposes imposed as aforesaid shall not only be binding upon the Grantors, but also their agents, assigns and all other successors to it in interest and shall continue as a servitude running in perpetuity with the above described land.

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In witness whereof, the Grantors and the Grantee have hereunto set their hands and seals
on the day and year above written.

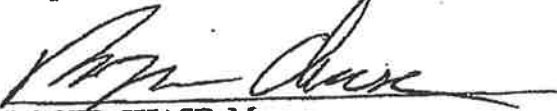
GRANTOR:


R. COREY SNOW


NICOLE T. SNOW

GRANTEE:

CITY OF POCA TELLO, a municipal
Corporation of the State of Idaho


ROGER CHASE, Mayor

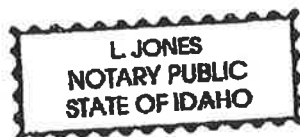
STATE OF IDAHO

)
ss:
)

County of Bannock

On this 28th day of September, 2007, before me, the undersigned, a Notary Public for the State, personally appeared R. Corey Snow and Nicole T. Snow, known or proved to me to be the persons whose names are subscribed to the foregoing instrument, and acknowledged to me that they executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the date and year in this certificate first above written.




NOTARY PUBLIC FOR IDAHO
Residing in Pocatello, Idaho
My commission expires: 09-01-13

4.6
20723521

STATE OF IDAHO)

ss:

County of Bannock)

On this 28th day of September, 2007, before me, the undersigned, a Notary Public for the State, personally appeared Roger W. Chase, known to me to be the Mayor of the City of Pocatello, and acknowledged to me that he executed the foregoing instrument for and on behalf of said municipal corporation and that said municipal corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the date and year in this certificate first above written.



L. Jones
 NOTARY PUBLIC FOR IDAHO
 Residing in Pocatello, Idaho
 My commission expires: 06-01-13

OFFICIAL RECORD BK# 899
 BANNOCK COUNTY IDAHO

RECORDED AT REQUEST OF
 FEE 24 DEPUTY MD

ALLIANCE TITLE & ESCROW

20723521

2007 SEP 28 P 3:51

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20723521

Conservation Easement No. 1

A parcel of land located in the east ½ of Section 7, T 7 S, R 35 E, Boise Meridian, Bannock County, Idaho, said parcel being more particularly described as follows (basis of bearings is City of Pocatello Survey datum):

Commencing at the northeast 1/16 corner of said Section 7, said corner being marked by a found Idaho Transportation Department brass cap set in a concrete post; thence N 89°43'48" W along the north 1/16 line of said Section 7, 450.32 feet to a point of non-tangency with a 5879.91 foot radius curve on the southwesterly right-of-way line of Interstate 15, said point being marked by a set ½-inch diameter rebar with a red plastic cap stamped "PLS 8075", and said point being the True Point of Beginning; thence southeasterly along said right-of-way line of Interstate 15, along a curve to the left, said curve having a central angle of 14°56'33", a radius of 5879.91 feet, and a chord bearing of S 43°43'08" E, for an arc length of 1533.46 feet to a point of tangency; said point being marked by a found Idaho Transportation Department brass cap set in a concrete post; thence S 51°11'24" E, 911.09 feet to a point on the east line of Section 7, said point being marked by a set ½-inch diameter rebar with a red plastic cap stamped "PLS 8075"; thence S 0°13'49" W along the east line of said Section 7, 172.65 feet to a point on the top of the lava rock cliff; thence northwesterly along the top of the lava rock cliff the following courses and distances;

N 50°04'57" W, 75.04 feet; thence N 83°41'16" W, 70.47 feet;
thence N 72°07'48" W, 44.99 feet; thence N 59°04'14" W, 165.06 feet;
thence N 60°35'19" W, 164.24 feet; thence N 89°41'19" W, 39.50 feet;
thence N 60°16'42" W, 86.43 feet; thence N 83°29'38" W, 68.25 feet;
thence N 72°34'37" W, 98.00 feet; thence N 46°09'56" W, 58.19 feet;
thence N 54°15'04" W, 107.08 feet; thence N 66°45'58" W, 142.14 feet;
thence N 37°01'56" W, 146.61 feet; thence S 83°05'56" W, 119.91 feet;
thence N 60°32'00" W, 71.28 feet; thence N 36°43'22" W, 98.23 feet;
thence N 82°36'08" W, 51.45 feet; thence N 45°27'51" W, 95.03 feet;
thence N 77°03'58" W, 204.57 feet; thence N 59°08'29" W, 241.48 feet;
thence N 40°30'37" W, 120.40 feet; thence N 36°53'05" W, 153.97 feet to a point leaving the top of the lava rock cliff;

thence N 41°45'29" E, 41.27 feet to a set ½-inch diameter rebar with a red plastic cap stamped "PLS 8075"; thence N 32°40'25" W, 799.24 feet to a point on the north 1/16 line of said Section 7, said point being marked by a set P-K nail with an aluminum washer stamped "PLS 8075"; thence S 89°43'48" E along said north 1/16 line, 652.51 feet to the true point of beginning.

Said parcel containing 27.7 acres, more or less.



8-7
20723521Conservation Easement No. 2

A parcel of land located in the east 1/2 of Section 7, T 7 S, R 35 E, Boise Meridian, Bannock County, Idaho, said parcel being more particularly described as follows (basis of bearings is City of Pocatello Survey datum):

Commencing at the northeast 1/16 corner of said Section 7, said corner being marked by a found Idaho Transportation Department brass cap set in a concrete post; thence N 89°43'48" W along the north 1/16 line of said Section 7, 1102.83 feet to a set P-K nail with an aluminum washer stamped "PLS 8075"; thence S 32°40'25" E, 799.24 feet to a set 1/2-inch diameter rebar with a red plastic cap stamped "PLS 8075"; thence S 41°45'29" W, 41.27 feet to a point on the top of the lava rock cliff, said point being the True Point of Beginning; thence southeasterly along the top of the lava rock cliff the following courses and distances;

S 36°53'05" E, 153.97 feet; thence S 40°30'37" E, 120.40 feet;
thence S 59°08'29" E, 241.48 feet; thence S 77°03'58" E, 204.57 feet;
thence S 45°27'51" E, 95.03 feet; thence S 82°36'08" E, 51.45 feet;
thence S 36°43'22" E, 98.23 feet; thence S 60°32'00" E, 71.28 feet;
thence N 83°05'56" E, 119.91 feet; thence S 37°01'56" E, 47.63 feet to a point leaving the top of the lava rock cliff, said point being marked by a set P-K nail with an aluminum washer stamped "PLS 8075"; thence S 32°18'08" W, 158.93 feet to a set 1/2-inch diameter rebar with a red plastic cap stamped "PLS 8075"; thence N 65°25'49" W, 398.73 feet to a set 1/2-inch diameter rebar with a red plastic cap stamped "PLS 8075";
thence N 57°03'27" W, 378.12 feet to a set 1/2-inch diameter rebar with a red plastic cap stamped "PLS 8075"; thence N 20°05'47" E, 70.74 feet to a set 1/2-inch diameter rebar with a red plastic cap stamped "PLS 8075"; thence N 52°24'19" W, 287.65 feet to a set 1/2-inch diameter rebar with a red plastic cap stamped "PLS 8075"; thence S 43°40'53" W, 215.79 feet to a point on the northeasterly right-of-way line of South Second Avenue, said point being marked by a set 1/2-inch diameter rebar with a red plastic cap stamped "PLS 8075"; thence S 56°42'43" E along said northeasterly right-of-way line, 44.61 feet to a point of tangency with a 265.50 foot radius curve, said point being marked by a set 1/2-inch diameter rebar with a red plastic cap stamped "PLS 8075"; thence southeasterly along a curve to the right, said curve having a central angle of 13°59'01", a radius of 265.50 feet, and a chord bearing of S 49°43'12" E, for an arc length of 64.80 feet to a point of non-tangency, said point being marked by a set 1/2-inch diameter rebar with a red plastic cap stamped "PLS 8075"; thence N 83°01'18" E, 78.13 feet to a set 1/2-inch diameter rebar with a red plastic cap stamped "PLS 8075"; thence S 57°52'08" E, 378.75 feet to a found 5/8-inch diameter rebar with a red plastic cap stamped "LS 9168"; thence S 59°59'50" E, 569.78 feet to a set 1/2-inch diameter rebar with a red plastic cap stamped "PLS 8075"; thence S 32°18'08" W, 93.18 feet to a set 1/2-inch diameter rebar with a red plastic cap stamped "PLS 8075"; thence S 56°02'08" E, 427.46 feet to a set 1/2-inch diameter rebar with a red plastic cap stamped "PLS 8075"; thence N 32°33'40" E, 343.98 feet to a point on the top of the lava rock cliff, said point being marked by a set 1/2-inch diameter rebar with a red plastic cap stamped "PLS 8075";

20723521

Conservation Easement No. 2, Cont'd.

thence southeasterly along the top of the lava rock cliff the following courses and distances;

thence S 72°34'37" E, 28.66 feet; thence S 83°29'38" E, 68.25 feet;
thence S 60°16'42" E, 86.43 feet; thence S 89°41'19" E, 39.50 feet;
thence S 60°35'19" E, 164.24 feet; thence S 59°04'14" E, 165.06 feet;
thence S 72°07'48" E, 44.99 feet; thence S 83°41'16" E, 70.47 feet;
S 50°04'57" E, 75.04 feet to a point leaving the top of the lava rock cliff on the east line of Section 7;

thence S 0°13'49" W along the east line of said Section 7, 1289.18 feet to a point which is 80 feet (measured at right angles) northeasterly of the northeasterly right-of-way line of the Union Pacific Railroad, said point being marked by a found ½-inch diameter rebar with a yellow plastic cap stamped "PELS 2341"; thence N 46°45'40" W parallel to the northeasterly right-of-way line of the Union Pacific Railroad, 2789.60 feet to a point of non-tangency with a 265.50 foot radius curve on the southeasterly right-of-way line of Cheyenne Avenue, said point being marked by a set ½-inch diameter rebar with a red plastic cap stamped "PLS 8075"; thence northerly along said southeasterly right-of-way line along a curve to the left, said curve having a central angle of 82°57'07", a radius of 265.50 feet and a chord bearing of N 15°14'09" W, for an arc length of 384.39 feet to a point of tangency on the northeasterly right-of-way line of South Second Avenue, said point being marked by a set ½-inch diameter rebar with a red plastic cap stamped "PLS 8075"; thence N 56°42'43" W along said northeasterly right-of-way line, 112.46 feet to a set ½-inch diameter rebar with a red plastic cap stamped "PLS 8075"; thence N 41°45'29" E, 314.81 feet to the true point of beginning.

Said parcel containing 39.6 acres, more or less.





Table 1. Predicted minimum consumptive volume of water required for our proposed water bodies and overall project, compared to the estimated consumptive volume of water used (i.e. applied to our pastures by irrigation) in 2022.

Water body or area	Initial fill (total volume of storage) or Irrigation (A-ft)	Evaporation loss (A-ft)*	Evapo-transpiration from riparian vegetation (A-ft)*	Consumptive volume, used in 2022 or required for proposed project (A-ft)
Fish pond	2.78	0.57 (see Table 3)	0.00	3.35
Stream	0.22	0.23 (see Table 4)	2.13 (see Table 7)	2.58
Waterfowl pond	16.26	3.83 (see Table 5)	0.52 (see Table 8)	20.61
Amphibian pond	1.44	3.69 (see Table 6)	0.58 (see Table 9)	5.71
Upper pasture (for proposal only)	10.84	--	--	10.84**
Entire proposed project (all of above elements)	31.54	8.22	3.23	42.99
Pastures (everything that was used in 2022)	44.68**	-	-	44.68**

*Average of values calculated according to procedures at

<http://data.kimberly.uidaho.edu/ETIdaho/> using data from two stations containing our location: (1) Pocatello WB AP (NWS – USW00024156) and (2) Bannock County – Fort Hall (PN-AM – FTHI)

**Calculated using flow-rate measurements and use patterns of our sprinkler lines

Table 2. Estimated nonconsumptive water use by seepage back into the aquifer from our proposed water bodies.

Statistic	Water body				
	Fish pond	Stream*	Waterfowl pond	Amphibian pond	All
Average depth (ft)	11.10	2.00	10.00	2.00	--
Surface area (acres)	0.2500	0.1091	1.63	0.7180	2.7071
Surface area (ft ²)	10,890	4,752	70,848	31,275	117,765
Seepage rate (ft/day)	0.02	0.02	0.02	0.02	0.02
Seepage rate (gal/day)	1,629	711	10,599	4,679	--
Total seepage loss (gal)	594,585	152,154	3,868,635	1,707,835	6,323,209
Total seepage loss (a-ft)	1.82	0.47	11.87	5.24	19.40

*Irrigation season only (7 months or 214 days, April-October)

NOTE: Water seepage calculations are based upon the following geographical soil classification information from the Natural Resources Conservation Service:

SOIL CLASSIFICATION (NRCS WSS)

Station name: Pocatello WBAP

Station type: NWS

County: Power

Station ID: USW00024156

Elevation: 4470

Land cover type: Grass Pasture - Low Management

Soil name: Mcdole

Soil depth: 0-21" or 21-74

Soil Classification - United: CL-ML, CL where:

CL = low- to medium-plasticity clays

ML = inorganic silts; very fine sands, silty- or clayey-fine sands

Table 3. Estimated evaporation loss from our proposed fish pond.

Month	Days	Mean precipitation deficit in open-water shallow systems (ponds/streams), by station			
		Pocatello WB AP (NWS – USW00024156)		Bannock County - Fort Hall (PN-AM – FTHI)	
		mm/day	mm/month	mm/day	mm/month
JAN	31	-0.32	0.00	-0.09	0.00
FEB	28	0.06	1.68	0.38	10.64
MAR	31	0.84	26.04	1.05	32.55
APR	30	2.10	63.00	1.93	57.90
MAY	31	2.70	83.70	2.25	69.75
JUN	30	4.08	122.40	3.25	97.50
JUL	31	4.74	146.94	4.23	131.13
AUG	31	4.25	131.75	4.30	133.30
SEP	30	2.92	87.60	2.82	84.60
OCT	31	1.54	47.74	1.16	35.96
NOV	30	0.18	5.40	0.33	9.90
DEC	31	-0.43	0.00	-0.15	0.00
Total	365		716.25/year		663.23/year
/ Conversion			304.8		304.8
= Feet/year			2.35		2.18
X Acres			0.25		0.25
= Evaporation loss (A-ft)			0.59		0.55

Table 4. Estimated evaporation loss from our proposed seasonal stream.

Month	Days	Mean precipitation deficit in open-water shallow systems (ponds/streams), by station			
		Pocatello WB AP (NWS – USW00024156)		Bannock County - Fort Hall (PN-AM – FTHI)	
		mm/day	mm/month	mm/day	mm/month
APR	30	2.10	63.00	1.93	57.90
MAY	31	2.70	83.70	2.25	69.75
JUN	30	4.08	122.40	3.25	97.50
JUL	31	4.74	146.94	4.23	131.13
AUG	31	4.25	131.75	4.30	133.30
SEP	30	2.92	87.60	2.82	84.60
OCT	31	1.54	47.74	1.16	35.96
Total	214		683.13/year		610.14/year
/ Conversion			304.8		304.8
= Feet/year			2.24		2.00
X Acres			0.11		0.11
= Evaporation loss (A-ft)			0.24		0.22

Table 5. Estimated evaporation loss from our proposed waterfowl pond.

Month	Days	Mean precipitation deficit in open water – shallow systems (ponds/streams), by station			
		Pocatello WB AP (NWS – USW00024156)		Bannock County - Fort Hall (PN-AM – FTHI)	
		mm/day	mm/month	mm/day	mm/month
JAN	31	-0.32	0.00	-0.09	0.00
FEB	28	0.06	1.68	0.38	10.64
MAR	31	0.84	26.04	1.05	32.55
APR	30	2.10	63.00	1.93	57.90
MAY	31	2.70	83.70	2.25	69.75
JUN	30	4.08	122.40	3.25	97.50
JUL	31	4.74	146.94	4.23	131.13
AUG	31	4.25	131.75	4.30	133.30
SEP	30	2.92	87.60	2.82	84.60
OCT	31	1.54	47.74	1.16	35.96
NOV	30	0.18	5.40	0.33	9.90
DEC	31	-0.43	0.00	-0.15	0.00
Total	365		716.25/year		663.23/year
/ Conversion			304.8		304.8
= Feet/year			2.35		2.18
X Acres			1.63		1.63
= Evaporation loss (A-ft)			3.83		3.55

Table 6. Estimated evaporation loss from our proposed amphibian pond.

Month	Days	Mean precipitation deficit in open water – shallow systems (ponds/streams), by station			
		Pocatello WB AP (NWS – USW00024156)		Bannock County - Fort Hall (PN-AM – FTHI)	
		mm/day	mm/month	mm/day	mm/month
JAN	31	-0.32	0.00	-0.09	0.00
FEB	28	0.06	1.68	0.38	10.64
MAR	31	0.84	26.04	1.05	32.55
APR	30	2.10	63.00	1.93	57.90
MAY	31	2.70	83.70	2.25	69.75
JUN	30	4.08	122.40	3.25	97.50
JUL	31	4.74	146.94	4.23	131.13
AUG	31	4.25	131.75	4.30	133.30
SEP	30	2.92	87.60	2.82	84.60
OCT	31	1.54	47.74	1.16	35.96
NOV	30	0.18	5.40	0.33	9.90
DEC	31	-0.43	0.00	-0.15	0.00
Total	365		716.25/year		663.23/year
/ Conversion			304.8		304.8
= Feet/year			2.35		2.18
X Acres			0.07		0.07
= Evaporation loss (a-ft)			0.16		0.15

Table 7. Predicted evapotranspiration in the riparian zone of willows along our proposed seasonal stream.

Month	Days	Evapotranspiration, by station			
		Pocatello WB AP (NWS – USW00024156)		Bannock County – Fort Hall (PN-AM – FTHI)	
		mm/day	mm/month	mm/day	mm/month
APR	30	2.33	69.90	1.79	53.70
MAY	31	4.66	144.46	3.95	122.45
JUN	30	6.17	185.10	5.09	152.70
JUL	31	6.52	202.12	5.74	177.94
AUG	31	5.50	170.50	5.50	170.50
SEP	30	3.85	115.50	4.01	120.30
OCT	31	1.79	55.49	2.10	65.10
ALL	214	4.41	943.07	4.03	862.69
/ Conversion			304.8		304.8
= Feet/year			3.09		2.83
X Acres			0.72		0.72
= ET loss (A-ft)			2.22		2.04

Table 8. Predicted evapotranspiration in the riparian zone of willows around our proposed waterfowl pond.

Month	Days	Evapotranspiration, by station			
		Pocatello WB AP (NWS – USW00024156)		Bannock County – Fort Hall (PN-AM – FTHI)	
		mm/day	mm/month	mm/day	mm/month
JAN	31	0.34	10.54	0.26	8.06
FEB	28	0.56	15.68	0.43	12.04
MAR	31	1.08	33.48	0.89	27.59
APR	30	2.33	69.90	1.79	53.70
MAY	31	4.66	144.46	3.95	122.45
JUN	30	6.17	185.10	5.09	152.70
JUL	31	6.52	202.12	5.74	177.94
AUG	31	5.50	170.50	5.50	170.50
SEP	30	3.85	115.50	4.01	120.30
OCT	31	1.79	55.49	2.10	65.10
NOV	30	0.56	16.80	0.51	15.30
DEC	31	0.28	8.68	0.21	6.51
ALL	214		1,028.25	4.03	932.19
/ Conversion			304.8		304.8
= Feet/year			3.37		3.06
X Acres			0.16		0.16
= ET loss (A-ft)			0.54		0.49

Table 9. Predicted evapotranspiration in the narrow-stand-wetland riparian zone around our proposed amphibian pond.

Month	Days	Evapotranspiration, by station			
		Pocatello WB AP (NWS – USW00024156)		Bannock County – Fort Hall (PN-AM – FTHI)	
		mm/day	mm/month	mm/day	mm/month
JAN	31	0.34	10.54	0.26	8.06
FEB	28	0.56	15.68	0.43	12.04
MAR	31	0.98	30.38	0.82	25.42
APR	30	1.12	33.60	0.92	27.60
MAY	31	1.70	52.70	1.54	47.74
JUN	30	6.11	183.30	6.01	180.30
JUL	31	11.77	364.87	11.09	343.79
AUG	31	11.11	344.41	11.78	365.18
SEP	30	3.36	100.80	7.81	234.30
OCT	31	0.88	27.28	1.83	56.73
NOV	30	0.45	13.50	0.41	12.30
DEC	31	0.28	8.68	0.21	6.51
ALL	214		1,185.74		1,319.97
/ Conversion			304.8		304.8
= Feet/year			3.89		4.33
X Acres			0.14		0.14
= ET loss (A-ft)			0.54		0.61

Table 10. Estimated characteristics of the waterfowl pond at various depths. These data were used to estimate evaporation loss from the water body and evapotranspiration loss from its associated riparian zone, at water depths from which a maximum would be selected. The channel was unable to accommodate a depth greater than 10 feet.

Water depth (ft)	Mean channel width (ft)	Riparian zone width (ft)	Channel length (ft)	Channel surface area		Volume of water in channel		Riparian Zone area***		Evapo-transpiration (A-ft)	
				Ft2	Acres	Ft3	A-ft	Ft2	Acres	Pocatello*	Bannock**
1	39.6	39.6	984	38,966	0.8945	38,966	0.8945	38,966	0.8945	3.01	2.74
2	43.2	7.2	984	42,509	0.9759	85,018	1.9518	7,085	0.1626	0.54	0.49
3	46.8	7.2	984	46,051	1.0572	138,153	3.1716	7,085	0.1626	0.54	0.49
4	50.4	7.2	984	49,594	1.1385	198,376	4.5540	7,085	0.1626	0.54	0.49
5	54.0	7.2	984	53,136	1.2198	265,680	6.0990	7,085	0.1626	0.54	0.49
6	57.6	7.2	984	56,678	1.3011	340,068	7.8066	7,085	0.1626	0.54	0.49
7	61.2	7.2	984	60,221	1.3825	421,547	9.6775	7,085	0.1626	0.54	0.49
8	64.8	7.2	984	63,763	1.4638	510,104	11.7104	7,085	0.1626	0.54	0.49
9	68.4	7.2	984	67,306	1.5451	605,754	13.9059	7,085	0.1626	0.54	0.49
10	72.0	7.2	984	70,848	1.6264	708,480	16.2640	7,085	0.1626	0.54	0.49

*Pocatello WB AP (NWS – USW00024156)

**Bannock County - Fort Hall (PN-AM – FTHI)

Table 11. A history of recent years for which we documented that some beneficial use of water occurred.

Year	Landowner/lessee* recollection	Aerial/satellite imagery
2004		ESRI**
2006		Google***
2007		Google***
2008		Google***
2009		Google***, ESRI**
2010		Google***
2012		Google***
2013		ESRI** (stock watering only)
2015	Duane Schaper, Galen Williams	ESRI**
2016	Duane Schaper, Galen Williams	Google***
2017	Duane Schaper, Galen Williams	ESRI**
2018	Duane Schaper, Galen Williams	World Imagery Wayback****
2019	Duane Schaper, Galen Williams	Google***, ESRI**
2020	Duane Schaper, Galen Williams	World Imagery Wayback****
2021	Duane Schaper, Galen Williams	Google***, ESRI**
2022	Louis Berg	Google***
2023	Louis Berg	

*Livestock operator

**ESRI's University of Idaho ARCGIS maps

***Google Earth Pro

****A digital archive of ESRI's World Imagery basemap



IDAHO DEPARTMENT OF
WATER RESOURCES

Eastern Region • 900 N Skyline Drive, Suite A • Idaho Falls, ID 83402-1718

Phone: 208-525-7161 • Fax: 208-525-7177 • Email: easterninfo@idwr.idaho.gov • Web: idwr.idaho.gov

Governor Brad Little

Director Mathew Weaver

February 14, 2024

TERRISA J BERG
LOUIS BERG
4540 S 2ND AVE
POCATELLO, ID 83204-2250

RE: Amended Transfer No. 87982
Water Right No(s). 29-8011

Dear Applicant:

The Department of Water Resources has received your amended 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 IDAHO STATE JOURNAL on 2/21/2024 and 2/28/2024. 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,

Christina Henman
Administrative Assistant

Henman, Christina

From: Henman, Christina
Sent: Wednesday, February 14, 2024 4:15 PM
To: legalnotices@postregister.com
Subject: Legal Notice for Idaho State Journal
Attachments: 29-14527, 87982 Idaho State Journal.docx

LEGAL NOTICE DEPARTMENT
IDAHO STATE JOURNAL
PO BOX 431
POCATELLO, ID 83204-0431

RE: Application for Permit No. 29-14527, Transfer 87982

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 3/11/2024. Your cooperation is appreciated.

Thank You,



Christina Henman
Administrative Assistant
IDWR, Eastern Region
900 N Skyline Ste. A
Idaho Falls, ID 83402
Phone: (208) 525-7161

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

29-14527

TERRISA J & LOUIS N BERG, 4540 S 2ND AVE, POCATELLO, ID 83204-2250

Point of Diversion SWNE S7 T07S R35E BANNOCK County

Source GROUND WATER Tributary

Use: DIVERSION TO STORAGE

01/01 to 12/31

0.2 CFS

Use: WILDLIFE STORAGE

01/01 to 12/31

19.4 AF

Total Diversion:

0.2 CFS

19.4 AF

Date Filed: 01-18-2024

Place Of Use: WILDLIFE STORAGE

T07S R35E S7

SWNE,NWSE,NESE

Permits will be subject to all prior water rights. For additional information concerning the property location, contact the Eastern office at (208)525-7161; or for a full description of the right(s), please see <https://idwr.idaho.gov/apps/ExtSearch/WRAApplicationResults/>. Protests may be submitted based on the criteria of Idaho Code § 42-203A. Any protest against the approval of this application must be filed with the Director, Dept. of Water Resources, Eastern Region, 900 N SKYLINE DR STE A, IDAHO FALLS ID 83402-1718 together with a protest fee of \$25.00 for each application on or before 3/11/2024. The protestant must also send a copy of the protest to the applicant.

NOTICE OF PROPOSED CHANGE OF WATER RIGHT

TRANSFER NO. 87982

TERRISA J BERG and LOUIS BERG, 4540 S 2ND AVE, POCATELLO, ID 83204-2250 has filed Application No. 87982 for changes to the following water rights within BANNOCK County(s): Right No(s). 29-8011; 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: change nature of use, period of use, and place of use. Applicant proposes to divert 0.20 cfs from ground water for irrigation, stockwater, and wildlife storage (new). Proposed place of use is in SWNE, NESE, and NWSE Sec 7 T07S R35E for 5.4 acres of irrigation, stockwater, and 32.2 af of wildlife storage. Proposed period of use for diversion to wildlife storage and stockwater is 01/01 to 12/31. Proposed period of use for irrigation is 03/15 to 11/15.

For additional information concerning the property location, contact Eastern Region office at (208)525-7161. 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, Eastern Region, 900 N SKYLINE DR STE A, IDAHO FALLS ID 83402-1718 together with a protest fee of \$25.00 for each application on or before 3/11/2024. The protestant must also send a copy of the protest to the applicant.

MATHEW WEAVER, Director

Published on 2/21/2024 and 2/28/2024

4540 South 2nd Avenue
Pocatello, ID 83204

October 25, 2023

Thomas Lafortune, Water Resource Agent
Idaho Department of Water Resources
900 N Skyline Dr, Ste A
Idaho Falls, ID 83402

Dear Mr. Lafortune:

Thank you for giving us the means to accomplish our water-use objectives and maximize the volume of water we have the right(s) to use. We are writing in fulfillment of Option #2 in your 08/28/2023 email message. You will find herein the information needed to make appropriate modifications to our transfer application. Also, you will find the information necessary for us to make application for a non-consumptive water right.

To follow your instructions for Option #2, we made selections and calculations from maps, information, and a spreadsheet available at <http://data.kimberly.uidaho.edu/ETIdaho/>. Where necessary, we sought additional information from other sources, and made measurements and calculations of our own.

Consumptive volume of water we used in 2022

Our first task given by you was to determine the consumptive volume of water used under Water Right 29-8011 in 2022. I irrigated for an estimated average of 18 out of every 24 hours, or 75% of the time, over the 214-day, April 1-October 31 irrigation season. I used three 1.5-inch-diameter Irripod sprinkler lines concurrently. Each line contained 7 sprinkler nozzles, so there were 21 nozzles in all. I estimated the amount of water used in 2022 by measuring, in September 2023, with the same three lines running, the flow rate from the nozzles. Each individual nozzle had a flow rate of 3 gal/min. Thus, the consumptive volume of water used in 2022 was: 3 lines x 7 sprinklers x 3 gal/min x 60 min/hour x 18 hours/day x 214 days x 1 A-ft/325,851 gal = **44.68 A-ft**.

Our irrigation system allowed use of a larger consumptive volume

We have some comments regarding this incomplete use of our 85.1-A-ft water right in 2022. The finding of an identical flow rate at all sprinkler nozzles was surprising to us. We had expected the flow rate at nozzles to differ at least between lines because of

variations in line elevation and distance from the Point of Diversion. To see if there were pressure differences between lines, I measured, multiple times, with the three lines running concurrently, the flow rate at each line's end with the plug removed. Mean flow rates varied between lines, ranging from 32 to 40 gal/min. So yes, there were pressure differences between lines. But given that flow rates of all 21 nozzles were identical (3 gal/min), there must be a maximum flow rate each nozzle is engineered to produce when line pressure is above a certain minimum pressure, and all three of our lines exceeded that minimum pressure. Which means that by running more than three lines we apparently could have used more of our total water right, or a larger consumptive volume.

I was physically incapable of using the total consumptive volume allowed by the irrigation system

My decision to use three sprinkler lines in 2021 (our first year of owning the property) and 2022 was based upon some very limited visual observations I made when I began irrigating in June 2021. It had appeared that the maximum number of 1.5-inch sprinkler lines I could run concurrently with optimal results (and that had probably been used by irrigators in previous years) was three. Unfortunately, however, I did not make an attempt then to confirm that guess through actual measurements because an accident I had sustained in 2004 (one that involved multiple spinal fractures and spinal cord injury, led to permanent total physical disability, resulted in physician orders to avoid sitting and that established lifting and pulling limits, and caused extreme pain and exhaustion) made it very difficult for me to move lines by hand or vehicle. Moving three lines was barely possible and moving more was impossible, regardless of the optimal number for maximizing water use. The difficulty I expected with moving sprinkler lines was a partial reason for our proposed water right transfer, intended from the beginning.

What consumptive volume was our irrigation system capable of producing?

If I had been physically capable of running five lines (the number available) instead of three in 2022, and if nozzle flow rates had remained at 3 gal/min, the consumptive volume of water used would have been: 5 lines x 7 sprinklers x 3 gal/min x 60 min/hour x 18 hours/day x 214 days x 1 A-ft/325,851 gal = **74.47 A-ft**. Increasing the daily irrigation period, from 18 hours/day to 20.58 hours/day, would have further raised our consumptive water use to the point where our water right was fully utilized, at **85.1 A-ft**.

Consumptive volume of water required for our proposed project

Our second task given by you was to determine the consumptive volume of water that will be needed if our proposed project is approved. The project involves creation and operation of a 0.25-acre fish pond an average of 11.1 ft deep; a 0.11-acre stream 0.45 mile long, 2 feet wide, and 2 ft deep; a 1.63-acre waterfowl pond 0.19 mile long, 72 feet

wide, and 10 feet deep; and a 0.72-acre amphibian pond 2 ft deep. The consumptive volume requirement of the project would be comprised of the initial fill, or storage volume, of the water bodies ($2.78 + 0.22 + 16.26 + 1.44$ A-ft = 20.70 A-ft); expected evaporation loss from the surface of the ponds and stream ($0.57 + 0.23 + 3.83 + 3.69$ A-ft = 8.22 A-ft); and predicted evapotranspiration from wetland and riparian vegetation surrounding the stream, waterfowl pond, and amphibian pond ($2.13 + 0.52 + 0.58$ A-ft = 3.23 A-ft) (there would be no evapotranspiration associated with the fish pond because it would be enclosed by a berm of bare soil and rip rap managed to prevent growth of vegetation); and continued sprinkler irrigation of 5.28 acres of our upper pasture (10.84 A-ft): for a total of **42.99 A-ft** (Table 1).

We desire to manage our proposed fish pond with clean water of optimum quality for fish and with limited buildup of algae, for both private-fishery and public-scenery purposes. Good trout ponds require a continuous and sufficient flowthrough of water, year-round. Ponds containing warmwater fish, which need less oxygen than trout, also depend on a continuous and sufficient, year-round flowthrough unless they are deep enough that during the winter, or non-irrigation season, the gradually-thinning layer of oxygen-bearing water (usually under ice cover in southeast Idaho) is not totally depleted. Our fish pond is designed to be deep enough for warmwater fish to survive the cold-weather months of November through March without a flowthrough. However, for optimum fish health in a pond the size of ours, during the flowthrough period a minimum water replacement rate of 10% of the pond's volume per week is recommended (Stanton 2023). This is a replacement rate of 90,418 gallons/week, 12,926 gallons/day, 9 gallons/minute, 0.15 gallons/second, or 8.49 A-ft for the irrigation season. When added to the initial fill volume of 2.78 A-ft, we arrive at a minimum water requirement for the fish pond alone of 11.27 A-ft.

It has been our wish to retain as much of our current 85.1-A-ft water right as possible. Obviously, the amount we can be granted by IDWR is constrained by the consumptive volume I used historically, or that I might have used if I had been capable of doing so. As we already mentioned, these figures in 2022 were an estimated **44.68 A-ft** and **74.47 A-ft**, respectively. To be reasonable, our water right should also be limited to the needs of our proposed project, which are **42.99 A-ft** in consumptive volume plus a nonconsumptive volume reported below.

Non-consumptive volume of water that will seep back into the aquifer from our proposed water bodies

Our third task was to estimate seepage from our proposed ponds and stream back into the underlying aquifer. Results are shown in Table 2. Please assist us with making application for a nonconsumptive water right to offset/account for the estimated total volume of these losses, **19.40 A-ft**.

When our projected consumptive volume of 42.99 A-ft is added to the nonconsumptive volume of 19.40 A-ft, the total water volume required for our proposed project becomes **62.39 A-ft**. We do not anticipate needing more water than that unless seepage is more than expected. Our fish pond will be located next to lava cliffs that may lie along a fault line, which could increase seepage to more than the 0.02 mm/day that is expected based on the region's average soil type. Our waterfowl pond will be in an old river channel where, after the water table has raised and flooded the channel temporarily during rare springtime events (for three weeks in 2023, for example), we have observed the water level lower rapidly, so seepage there also may be greater than expected. If either, or both, of these possibilities occur, we will need to increase the volume of the nonconsumptive water right we hope to obtain to an amount greater than the 19.40 A-ft we want to apply for now.

Sincerely,

Louis N. Berg

Table 1. Predicted minimum consumptive volume of water required for our proposed water bodies and overall project, compared to the estimated consumptive volume of water used (i.e. applied to our pastures by irrigation) in 2022.

Water body or area	Initial fill (total volume of storage) or Irrigation (A-ft)	Evaporation loss (A-ft)*	Evapo-transpiration from riparian vegetation (A-ft)*	Consumptive volume, used in 2022 or required for proposed project (A-ft)
Fish pond	2.78	0.57 (see Table 3)	0.00	3.35
Stream	0.22	0.23 (see Table 4)	2.13 (see Table 7)	2.58
Waterfowl pond	16.26	3.83 (see Table 5)	0.52 (see Table 8)	20.61
Amphibian pond	1.44	3.69 (see Table 6)	0.58 (see Table 9)	5.71
Upper pasture (for proposal only)	10.84	--	--	10.84**
Entire proposed project (all of above elements)	31.54	8.22	3.23	42.99
Pastures (everything that was used in 2022)	44.68**	-	-	44.68**

*Average of values calculated according to procedures at <http://data.kimberly.uidaho.edu/ETIdaho/> using data from two stations containing our location: (1) Pocatello WB AP (NWS – USW00024156) and (2) Bannock County – Fort Hall (PN-AM – FTHI)

**Calculated using flow-rate measurements and use patterns of our sprinkler lines

Table 2. Estimated non-consumptive water use by seepage back into the aquifer from our proposed water bodies.

Statistic	Water body				
	Fish pond	Stream*	Waterfowl pond	Amphibian pond	All
Average depth (ft)	11.10	2.00	10.00	2.00	--
Surface area (acres)	0.2500	0.1091	1.63	0.7180	2.7071
Surface area (ft ²)	10,890	4,752	70,848	31,275	117,765
Seepage rate (ft/day)	0.02	0.02	0.02	0.02	0.02
Seepage rate (gal/day)	1,629	711	10,599	4,679	--
Total seepage loss (gal)	594,585	152,154	3,868,635	1,707,835	6,323,209
Total seepage loss (a-ft)	1.82	0.47	11.87	5.24	19.40

*Irrigation season only (7 months or 214 days, April-October)

Table 3. Estimated evaporation loss from our proposed fish pond.

Month	Days	Mean precipitation deficit in open-water shallow systems (ponds/streams), by station			
		Pocatello WB AP (NWS – USW00024156)		Bannock County - Fort Hall (PN-AM – FTHI)	
		mm/day	mm/month	mm/day	mm/month
JAN	31	-0.32	0.00	-0.09	0.00
FEB	28	0.06	1.68	0.38	10.64
MAR	31	0.84	26.04	1.05	32.55
APR	30	2.10	63.00	1.93	57.90
MAY	31	2.70	83.70	2.25	69.75
JUN	30	4.08	122.40	3.25	97.50
JUL	31	4.74	146.94	4.23	131.13
AUG	31	4.25	131.75	4.30	133.30
SEP	30	2.92	87.60	2.82	84.60
OCT	31	1.54	47.74	1.16	35.96
NOV	30	0.18	5.40	0.33	9.90
DEC	31	-0.43	0.00	-0.15	0.00
Total	365		716.25/year		663.23/year
/ Conversion			304.8		304.8
= Feet/year			2.35		2.18
X Acres			0.25		0.25
= Evaporation loss (A-ft)			0.59		0.55

Table 4. Estimated evaporation loss from our proposed seasonal stream.

Month	Days	Mean precipitation deficit in open-water shallow systems (ponds/streams), by station			
		Pocatello WB AP (NWS – USW00024156)		Bannock County - Fort Hall (PN-AM – FTHI)	
		mm/day	mm/month	mm/day	mm/month
APR	30	2.10	63.00	1.93	57.90
MAY	31	2.70	83.70	2.25	69.75
JUN	30	4.08	122.40	3.25	97.50
JUL	31	4.74	146.94	4.23	131.13
AUG	31	4.25	131.75	4.30	133.30
SEP	30	2.92	87.60	2.82	84.60
OCT	31	1.54	47.74	1.16	35.96
Total	214		683.13/year		610.14/year
/ Conversion			304.8		304.8
= Feet/year			2.24		2.00
X Acres			0.11		0.11
= Evaporation loss (A-ft)			0.24		0.22

Table 5. Estimated evaporation loss from our proposed waterfowl pond.

Month	Days	Mean precipitation deficit in open water – shallow systems (ponds/streams), by station			
		Pocatello WB AP (NWS – USW00024156)		Bannock County - Fort Hall (PN-AM – FTHI)	
		mm/day	mm/month	mm/day	mm/month
JAN	31	-0.32	0.00	-0.09	0.00
FEB	28	0.06	1.68	0.38	10.64
MAR	31	0.84	26.04	1.05	32.55
APR	30	2.10	63.00	1.93	57.90
MAY	31	2.70	83.70	2.25	69.75
JUN	30	4.08	122.40	3.25	97.50
JUL	31	4.74	146.94	4.23	131.13
AUG	31	4.25	131.75	4.30	133.30
SEP	30	2.92	87.60	2.82	84.60
OCT	31	1.54	47.74	1.16	35.96
NOV	30	0.18	5.40	0.33	9.90
DEC	31	-0.43	0.00	-0.15	0.00
Total	365		716.25/year		663.23/year
/ Conversion			304.8		304.8
= Feet/year			2.35		2.18
X Acres			1.63		1.63
= Evaporation loss (A-ft)			3.83		3.55

Table 6. Estimated evaporation loss from our proposed amphibian pond.

Month	Days	Mean precipitation deficit in open water – shallow systems (ponds/streams), by station			
		Pocatello WB AP (NWS – USW00024156)		Bannock County - Fort Hall (PN-AM – FTHI)	
		mm/day	mm/month	mm/day	mm/month
JAN	31	-0.32	0.00	-0.09	0.00
FEB	28	0.06	1.68	0.38	10.64
MAR	31	0.84	26.04	1.05	32.55
APR	30	2.10	63.00	1.93	57.90
MAY	31	2.70	83.70	2.25	69.75
JUN	30	4.08	122.40	3.25	97.50
JUL	31	4.74	146.94	4.23	131.13
AUG	31	4.25	131.75	4.30	133.30
SEP	30	2.92	87.60	2.82	84.60
OCT	31	1.54	47.74	1.16	35.96
NOV	30	0.18	5.40	0.33	9.90
DEC	31	-0.43	0.00	-0.15	0.00
Total	365		716.25/year		663.23/year
/ Conversion			304.8		304.8
= Feet/year			2.35		2.18
X Acres			0.07		0.07
= Evaporation loss (a-ft)			0.16		0.15

Table 7. Predicted evapotranspiration in the riparian zone of willows along our proposed seasonal stream.

Month	Days	Evapotranspiration, by station			
		Pocatello WB AP (NWS – USW00024156)		Bannock County – Fort Hall (PN-AM – FTHI)	
		mm/day	mm/month	mm/day	mm/month
APR	30	2.33	69.90	1.79	53.70
MAY	31	4.66	144.46	3.95	122.45
JUN	30	6.17	185.10	5.09	152.70
JUL	31	6.52	202.12	5.74	177.94
AUG	31	5.50	170.50	5.50	170.50
SEP	30	3.85	115.50	4.01	120.30
OCT	31	1.79	55.49	2.10	65.10
ALL	214	4.41	943.07	4.03	862.69
/ Conversion			304.8		304.8
= Feet/year			3.09		2.83
X Acres			0.72		0.72
= ET loss (A-ft)			2.22		2.04

Table 8. Predicted evapotranspiration in the riparian zone of willows around our proposed waterfowl pond.

Month	Days	Evapotranspiration, by station			
		Pocatello WB AP (NWS – USW00024156)		Bannock County – Fort Hall (PN-AM – FTHI)	
		mm/day	mm/month	mm/day	mm/month
JAN	31	0.34	10.54	0.26	8.06
FEB	28	0.56	15.68	0.43	12.04
MAR	31	1.08	33.48	0.89	27.59
APR	30	2.33	69.90	1.79	53.70
MAY	31	4.66	144.46	3.95	122.45
JUN	30	6.17	185.10	5.09	152.70
JUL	31	6.52	202.12	5.74	177.94
AUG	31	5.50	170.50	5.50	170.50
SEP	30	3.85	115.50	4.01	120.30
OCT	31	1.79	55.49	2.10	65.10
NOV	30	0.56	16.80	0.51	15.30
DEC	31	0.28	8.68	0.21	6.51
ALL	214		1,028.25	4.03	932.19
/ Conversion			304.8		304.8
= Feet/year			3.37		3.06
X Acres			0.16		0.16
= ET loss (A-ft)			0.54		0.49

Table 9. Predicted evapotranspiration in the narrow-stand-wetland riparian zone around our proposed amphibian pond.

Month	Days	Evapotranspiration, by station			
		Pocatello WB AP (NWS – USW00024156)		Bannock County – Fort Hall (PN-AM – FTHI)	
		mm/day	mm/month	mm/day	mm/month
JAN	31	0.34	10.54	0.26	8.06
FEB	28	0.56	15.68	0.43	12.04
MAR	31	0.98	30.38	0.82	25.42
APR	30	1.12	33.60	0.92	27.60
MAY	31	1.70	52.70	1.54	47.74
JUN	30	6.11	183.30	6.01	180.30
JUL	31	11.77	364.87	11.09	343.79
AUG	31	11.11	344.41	11.78	365.18
SEP	30	3.36	100.80	7.81	234.30
OCT	31	0.88	27.28	1.83	56.73
NOV	30	0.45	13.50	0.41	12.30
DEC	31	0.28	8.68	0.21	6.51
ALL	214		1,185.74		1,319.97
/ Conversion			304.8		304.8
= Feet/year			3.89		4.33
X Acres			0.14		0.14
= ET loss (A-ft)			0.54		0.61

Table 10. Estimated characteristics of the waterfowl pond at various depths. These data were used to estimate evaporation loss from the water body and evapotranspiration loss from its associated riparian zone, at water depths from which a maximum would be selected. The channel was unable to accommodate a depth greater than 10 feet.

Water depth (ft)	Mean channel width (ft)	Riparian zone width (ft)	Channel length (ft)	Channel surface area		Volume of water in channel		Riparian Zone area***		Evapo-transpiration (A-ft)	
				Ft2	Acres	Ft3	A-ft	Ft2	Acres	Pocatello*	Bannock**
1	39.6	39.6	984	38,966	0.8945	38,966	0.8945	38,966	0.8945	3.01	2.74
2	43.2	7.2	984	42,509	0.9759	85,018	1.9518	7,085	0.1626	0.54	0.49
3	46.8	7.2	984	46,051	1.0572	138,153	3.1716	7,085	0.1626	0.54	0.49
4	50.4	7.2	984	49,594	1.1385	198,376	4.5540	7,085	0.1626	0.54	0.49
5	54.0	7.2	984	53,136	1.2198	265,680	6.0990	7,085	0.1626	0.54	0.49
6	57.6	7.2	984	56,678	1.3011	340,068	7.8066	7,085	0.1626	0.54	0.49
7	61.2	7.2	984	60,221	1.3825	421,547	9.6775	7,085	0.1626	0.54	0.49
8	64.8	7.2	984	63,763	1.4638	510,104	11.7104	7,085	0.1626	0.54	0.49
9	68.4	7.2	984	67,306	1.5451	605,754	13.9059	7,085	0.1626	0.54	0.49
10	72.0	7.2	984	70,848	1.6264	708,480	16.2640	7,085	0.1626	0.54	0.49

*Pocatello WB AP (NWS – USW00024156)

**Bannock County - Fort Hall (PN-AM – FTHI)

Literature Cited

Stanton, Lindsey. September 18, 2023. How often to change pond water? 3 methods.
<http://www.hepper.com>.

Other

SOIL CLASSIFICATION (NRCS WSS)

Station name: Pocatello WBAP

Station type: NWS

County: Power

Station ID: USW00024156

Elevation: 4470

Land cover type: Grass Pasture - Low Management

Soil name: Mcdole

Soil depth: 0-21" or 21-74

Soil Classification - United: CL-ML, CL where:

CL = low- to medium-plasticity clays

ML = inorganic silts; very fine sands, silty- or clayey-fine sands

Lafortune, Thomas

From: Louis Berg <louisnberg@gmail.com>
Sent: Friday, August 18, 2023 8:19 AM
To: Lafortune, Thomas
Subject: Louis Berg Water Right Use Records Letter for Transfer Application- AUG 2023

CAUTION: This email originated outside the State of Idaho network. Verify links and attachments BEFORE you click or open, even if you recognize and/or trust the sender. Contact your agency service desk with any concerns.

4540 South 2nd Avenue
Pocatello, ID 83204

August 17, 2023

Thomas Lafortune, Water Resource Agent
Idaho Department of Water Resources
900 N Skyline Dr, Ste A
Idaho Falls, ID 83402

Dear Mr. Lafortune:

We received your 07/20/2023 email message regarding our application for a transfer of water right 29-8011. This is our response. Fortunately, we were able to make contact with the previous owner regarding his historical use of the water right and were also able to validate his claims by: (1) communicating with his livestock lessee, (2) using satellite imagery, and (3) utilizing power-company billing records. These data support continuance rather than forfeiture of the water right. We admit that data are lacking on the actual quantities of water used, but we believe it is fair to assume, because there was no water-measuring-device requirement, that during most of the past several years nearly-full use was made of the amount of the water right. We intend to install such a device before the 2024 irrigation season and begin accurate record keeping.

One thing I did not mention to you during our brief conversation the other night is that I think the amounts of our irrigated and irrigable acres, which are accurately reported below, differ from figures you used in a calculation you made (when we met at your office to have you help us prepare our application) of the proportion of our pastureland that has been irrigated or the amount or proportion of our pastureland that our water right should apply to. Please repeat your calculation using the revised figures, if appropriate.

Irrigation records

Prior-water-right owner Duane Schaper provided the following information on his historical use of the water right. Livestock lessee Galen Williams's independent recollection was exactly the same:

2013: No irrigation
2014: No irrigation
2015: Irrigation
2016: Irrigation
2017: Irrigation
2018: Irrigation
2019: Irrigation

2020: Irrigation
2021: Irrigation

The reason there was no irrigation in 2013 and 2014 is that Mr. Schaper was having the current water pump installed. We attest that we irrigated the entire irrigable portion of pastureland on our property in 2022 and that we have also irrigated in 2023:

2022: Irrigation
2023: Irrigation

Satellite-imagery evidence of irrigation

We inspected satellite imagery from Google Earth Pro (annual 2004-2022), World Imagery Wayback (2018 and 2020), and ESRI's University of Idaho ARCGIS maps (2004, 2009, 2011, 2013, 2015, 2017, 2019, and 2021) to look for evidence of irrigation in years during the 2004-2022 period. Unfortunately, we were unable to determine seasonal dates (dates other than year) for the Google and ESRI sources.

Careful inspection of imaging was often necessary to find evidence of irrigation. Our pasturelands were often mostly brown, suggesting that irrigation may have been inadequate or nonexistent in many years. However, we were able to find evidence that irrigation occurred, i.e. that the water right was used, in most of those years using one or more of these methods: (1) comparing the appearance of the irrigable (22 acres) versus nonirrigable (6 acres) portion of the pasturelands on our property (the latter being separated from the former by deep pieces of historic Portneuf River channel) (the irrigable portion appeared generally more green than the nonirrigable portion in years when irrigation occurred), (2) looking for greenery and/or other evidence of leaks along the irrigation mainline and its head valves, and (3) searching for greenery, pools of water, and/or wet soil around sprinkler heads. Years listed below are those for which we discovered evidence of irrigation. Note that the landowner's claims regarding irrigation years were validated. Also note that we found evidence the preceding landowner irrigated in most years going back to 2004:

2004: ESRI
2006: Google
2007: Google
2008: Google
2009: Google, ESRI
2010: Google
2012: Google
2013: ESRI (livestock watering only)
2015: ESRI
2016: Google
2017: ESRI
2018: World Imagery Wayback
2019: Google, ESRI
2020: World Imagery Wayback
2021: Google, ESRI
2022: Google

Billing-records' evidence of irrigation

Duane Schaper forwarded to us billing records he obtained by calling Idaho Power. These are based on a single meter which records total power usage for a combination of two houses, the pump of a domestic-water well, and the pump of the irrigation-water well. We think it is probably an accurate assumption that power use for pumping irrigation water will dominate and increase total power usage when irrigation occurs, so we should

expect to see higher electrical bills during months of the irrigation season (April through October) than during other months (November through March). In years when this occurs, we can say there is evidence of irrigation. Here are the monthly billing records:

Amount of water bill by year								
Month	2015	2016	2017	2018	2019	2020	2021	AVG
Jan	\$ 9.53	17.68	50.08	45.93	61.41	54.69	49.00	41.19
Feb	\$ 9.88	13.84	32.22	37.22	27.23	34.45	35.43	27.18
Mar	\$ 11.00	17.15	5.24	5.24	7.71	5.19	5.16	8.10
Apr	\$ 11.08	23.94	5.24	5.24	9.13	5.19	5.16	9.28
May	\$ 26.74	226.41	5.24	5.24	11.20	5.19	25.78	43.69
Jun	\$159.17	245.20	117.24	5.24	58.97	59.72	76.17	103.10
Jul	\$ 94.43	282.60	71.22	68.83	96.54	49.48	124.98	112.58
Aug	\$137.80	105.41	91.96	7.05	48.89	103.45	67.67	80.32
Sep	\$ 72.63	40.04	20.57	5.24	5.19	39.56	54.10	33.90
Oct	\$ 33.13	98.75	45.58	13.10	14.31	8.19	27.15	34.32
Nov	\$ 23.86	231.11*	51.43	57.57	62.13	20.94	13.66	65.81
Dec	\$ 24.41	62.64	48.20	53.07	54.69	39.98	40.45	46.21

*Inflated by house construction

Other comments

Factors besides the amount of irrigation water used that may have helped create our irrigable pastureland's often-generally-brown appearance include the amount of natural precipitation, species of vegetation present, duration and frequency of irrigation periods, season of viewing (dates of satellite imagery other than year were usually not given), and intensity and duration of livestock grazing.

Our irrigable pasturelands are watered by sprinkler hand lines in what is called an irripod system. The water pump does not produce enough pressure to run more than three handlines simultaneously, which are moved every two days and rotated among 55 individual irrigation stations (there are from eight to 30 stations per pasture). During 2015-2021, the total irrigation period at each station was approximately 14 hours (3.5 hours each morning and night for two days and nights), and during 2022-2023 it was about 36 hours (run continuously). There was one handline for each pasture. The time period between each watering of a station ranged from 16 to 60 days (see below). The overall rotation period for all pasture's combined, was 36.6 days. We believe that the owner irrigated the entire pasture during each of these years, but that he did not move the water frequently enough to keep forage green throughout the growing season. The following table shows the frequency of irrigation on our pastures during years 2015-2023.

(the of or Pasture #	Number of irrigation stations (A)	Number of hand lines (B)	Stations to be covered per hand line (C=A/B)	Days a line spent at each station per watering (D)	Nonessential information		Days between a station's watering frequency irrigation, rotation period) (E=C*D)
					Total hours of irrigation at each station per watering*	Total number of stations watered per day	
1	17	1	17	2	14 or 36	0.5	34
2	8	1	8	2	14 or 36	0.5	16
3	30	1	30	2	14 or 36	0.5	60
ALL	55	3	18.3	2	14 or 36	1.5	36.6

*The former figures are for 2015-2021 and the latter for 2022-2023.

We investigated whether maximum possible livestock densities on our pastures were high enough to create their generally brown appearance in some satellite imagery. The sizes of our three pastures are 5.64, 4.15, and 12.33 acres. Livestock use of those pastures and of a 100-acre, City-owned pasture is determined by the livestock operator, who lives in Idaho Falls. He stocked 32 cow-calf pairs in 2013-2022 and 39 cow-calf pairs in 2023. The operator does not stock all pastures at the same time or rate. Based on our experience the last two years, he seems to be absent for weeks at a time. It is likely that the intensity and duration of grazing for his animals varies greatly between pastures and between years. In the following table we show the range in possible livestock densities on our pastures since 2013 to give you an idea regarding how dense or light they may have been at any particular point in time. We make no claim regarding actual livestock densities, but we wish to show you that the maximum possible livestock density in each of our pastures (2.60-7.71 in 2013-2022 and 3.16-9.40 in 2023) was high enough, if sustained, to practically eliminate above-ground, green vegetation and create a brown appearance in satellite imagery. We note that even a much lower livestock density when combined with a long irrigation rotation period may create such an appearance.

Pasture #	Size (acres)	Range in possible			
		Number of cow-calf pairs		Density of cow-calf pairs per acre	
		2013-2022	2023	2013-2022	2023
1	5.64	0-32	0-39	0-5.67	0-6.91
2	4.15	0-32	0-39	0-7.71	0-9.40
3	12.33	0-32	0-39	0-2.60	0-3.16
City	100.00	0-32	0-39	0-0.32	0-0.39
ALL	122.11	0-32	0-39	0-0.26	0-0.32

One of us is a disabled, former fish and wildlife biologist. During 2019-2022 we looked for a property with acreage, water rights, and habitat restoration opportunities located within 2 hours of where many of our children live. We discovered here what we wanted and purchased this property having a \$1,000,000 price tag in 2022. The water rights associated with a portion of the property are its most important element in our opinion. We would not have made the purchase if we had known that a forfeiture decision was being seriously considered by your agency. The seller of the

property did not inform us of that possibility. Because of his claim that he had been irrigating the property's pastureland, and our validation of that claim in this letter, we feel somewhat relieved and look forward to your processing of our transfer application.

Sincerely,

Louis N. Berg
Terrisa J. Berg