

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

RECEIVED

AUG 29 2016

Department of Water Resources
Eastern Region

APPLICATION FOR TRANSFER OF WATER RIGHT PART 1

Name of Applicant(s) Willard and Realene Humpherys Phone (801) 544-8870Mailing address 3028 E Corral Drive, Layton, UT 84040 Email whumpherys@yahoo.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**.

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.

Willard P. Humpherys
Signature of Applicant or Authorized Representative

WILLARD P. HUMPHERYS OWNER
Print Name and Title if applicable

8/26/2016
Date

Cindy Raele Humpherys
Signature of Applicant or Authorized Representative

CINDY RAELE HUMPHERYS
Print Name and Title if applicable

8/26/2016
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 _____
- 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.2**.
 We would like to dry up 0.4 irrigated acres of water right 25-14014 to create two small ponds on our property. Water from the big pond will be used for irrigation and stockwater during the summer. Small pond = stockwater. Ponds will hold about 0.4 acre-feet. Seepage and evaporation losses = 0.3 acre-feet. Total pond storage = 0.7 acre-feet.

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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 ☒ ☐	25-14014	0.03/3.2	Irrigation	05/01 to 10/31	Unnamed Stream
☐ ☐		0.02/4.0	Stockwater	01/01 to 12/31	Spring
☐ ☐		0.7 af	Irrigation Storage	01/01 to 12/31	Unnamed Stream
☐ ☐		0.7 af	Stockwater Storage	01/01 to 12/31	Unnamed Stream
☐ ☐		0.4 af	Irrigation from Storage	05/01 to 10/31	Unnamed Stream
☐ ☐		0.4af	Stockwater from Storag	01/01 to 12/31	Unnamed Stream
☐ ☐				to	
☐ ☐				to	
☐ ☐				to	

Total authorized under rights 0.05 cfs and/or 7.9 acre-feet.

2. Total amount of water proposed to be transferred or changed 0.05 cubic feet per second and/or 7.9 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 #
Y			SE	NE	11	04S	43E	Bonneville	Unnamed Stream	Small Stock Pond
N			SE	NE	11	04S	43E	Bonneville	Unnamed Stream	Large Pond/Ditch
N			SE	NE	11	04S	43E	Bonneville	Spring	

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	
04S	43E	11				0.9													
						IS													
						SS													
						IFS													
						SFS													
Total Acres (for irrigation use)																			

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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:

Water captured in large pond then diverted for irrigation through open ditch. Stockwater diverted from spring.

Stockwater also captured in large pond and released into unnamed stream channel for use by cows. Small stock pond on upper end of property.

- 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:
N/A

- 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: N/A Water rights are not moving off of property.

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?

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:

0.4 acres are being dried up to offset evaporation and seepage losses and the seasonal filling of the pond.

- 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:

None.

- 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:

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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.
- ☒ 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.

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 (Water Balance)

- ☒ 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.

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 sc Date 8/29/16 Preliminary check by _____ Date _____

Fee paid 450- Date 8/29/16 Received by sc Receipt # E042405

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)

8/17/2016

<u>Owner Type</u>	<u>Name and Address</u>
Current Owner	WILLARD D HUMPHERYS 3028 E CORRAL DR LAYTON, UT 84040 (801)544-8870

Tributary
GRAYS LAKE
GRAYS LAKE

			NE				NW				SW				SE				
Twp	Rng	Sec	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	Totals
04S	43E	11				1.3													1.3

8 1 2 3 2

ET_{Idaho} 2012 -- Evapotranspiration and Consumptive Irrigation Water Requirements for Idaho

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Soda Springs (NWS -- 108535)

Statistics based on thirty year normal spans 1979 to 2007 years

For a different land cover or crop click on the above link.

You can highlight this table and copy via the clipboard to a Microsoft Excel or OpenOffice spreadsheet to plot or otherwise work with this data.

Open water - shallow systems (ponds, streams)

Precipitation Deficit (Click here for a graph)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Growing Season ^a	Non Growing Season ^b	Annual
Mean^j	mm/day												mm		
Monthly ^c	-0.55	-0.41	0.12	1.05	1.71	2.64	3.17	2.61	1.53	0.64	-0.39	-0.52	357	0	357
15-Day Moving Average ^d	-0.55	-0.60	0.08	1.18	1.77	2.64	3.23	2.48	1.55	0.74	-0.35	-0.53			
7-Day Moving Average ^e	-0.55	-0.55	0.09	1.10	1.75	2.61	3.14	2.57	1.51	0.72	-0.40	-0.51			
3-Day Moving Average ^f	-0.55	-0.46	0.11	1.08	1.72	2.62	3.17	2.61	1.51	0.66	-0.38	-0.51			
Standard Deviation^k	mm/day												mm		
Monthly ^c	0.66	0.81	1.04	0.80	1.52	0.98	1.69	1.41	0.97	0.76	0.85	0.65	150	0	150
15-Day Moving Average ^d	0.67	0.99	0.86	1.16	1.35	1.32	1.34	1.45	1.21	0.86	0.95	0.59			
7-Day Moving Average ^e	0.92	1.30	1.20	1.75	2.05	1.91	1.89	1.75	1.82	1.28	1.28	0.77			
3-Day Moving Average ^f	1.29	1.73	1.72	2.36	2.98	2.54	2.69	2.48	2.60	1.87	1.81	1.15			
20% Exceedance^l	mm/day												mm		
Monthly ^c	-0.07	0.21	0.59	1.85	2.32	3.52	4.12	3.28	2.26	1.03	0.21	-0.20	478	0	478
15-Day Moving Average ^d	0.23	0.45	1.20	2.71	3.48	4.47	4.70	4.09	2.94	1.81	0.57	0.16			

7-Day Moving Average ^e	0.46	0.78	1.58	3.47	4.15	4.87	4.96	4.24	3.25	2.20	0.92	0.41			
3-Day Moving Average ^f	0.58	0.93	1.89	3.85	4.42	5.20	5.23	4.66	3.60	2.51	1.07	0.50			
80% Exceedance ^m	mm/day												mm		
Monthly ^c	-1.05	-1.48	-0.93	0.15	0.51	1.75	1.49	1.64	0.17	0.15	-0.97	-1.16	228	0	228
15-Day Moving Average ^d	-1.82	-2.91	-1.80	-0.96	-1.37	-0.28	-0.04	-0.63	-1.38	-1.17	-2.05	-2.28			
7-Day Moving Average ^e	-3.03	-4.51	-3.59	-3.52	-3.20	-2.77	-2.79	-1.03	-3.60	-2.20	-4.05	-2.94			
3-Day Moving Average ^f	-5.88	-7.06	-5.86	-7.28	-9.54	-6.01	-7.60	-6.85	-7.24	-5.90	-7.31	-5.25			
Ave Highest P _{def}	mm/day												--		
15-Day Moving Average ^g	0.14	0.25	0.80	2.13	2.87	3.80	4.10	3.29	2.34	1.43	0.40	0.08			
7-Day Moving Average ^h	0.38	0.56	1.36	2.91	3.74	4.39	4.68	4.06	3.11	2.02	0.71	0.30			
3-Day Moving Average ⁱ	0.52	0.81	1.65	3.34	4.20	4.87	4.97	4.45	3.42	2.26	0.91	0.43			
Ave Lowest P _{def}	mm/day												--		
15-Day Moving Average ^g	-1.10	-1.07	-0.47	0.05	0.74	1.46	2.35	1.59	0.66	-0.17	-0.88	-0.95			
7-Day Moving Average ^h	-1.90	-1.89	-1.47	-1.68	-0.95	-0.25	0.78	0.41	-0.77	-1.36	-1.94	-1.59			
3-Day Moving Average ⁱ	-3.56	-3.57	-3.62	-4.22	-4.48	-3.00	-2.57	-2.43	-3.92	-3.85	-4.46	-3.08			
Special normal distribution parameters for monthly, seasonal, and annual intervals															
Skew ^m	-0.16	-0.81	-0.23	-0.01	-0.04	-0.14	-0.22	-0.38	-0.79	0.32	-1.70	-0.36	-0.49	0.00	-0.49
Kurtosis ^o	0.69	2.87	0.60	2.38	0.59	2.05	0.49	1.09	2.45	0.90	6.24	0.84	2.70	0.00	2.70

^a Growing Season: This is usually the time from green up or planting in the spring to a killing frost or harvest in the fall. It is not applicable for entries without a growing season and will be blank.

^b Nongrowing Season: This is usually the time from a killing frost or harvest in the fall to the of green up in the spring. It is not applicable for entries without a growing season.

^c Mean of the average daily value for month

^d Mean of the fourteen 15-day period averages contained in the month

^e Mean of the twenty three 7-day period averages contained in the month

^f Mean of the twenty seven 3-day period averages contained in the month

^g Mean of the highest/lowest 15-day period average in month

^h Mean of the highest/lowest 7-day period average in month

ⁱ Mean of the highest/lowest 3-day period average in month

^j This value represents the *mean value* for the parameter for the month over the 'normal' period of record. Generally, the 'normal' period is the last thirty years with data.

^k This value represents the *standard deviation* for the parameter for the month over the 'normal' period.

^l This value represents the *value* for the parameter that has a 20% chance of being exceeded that month during any particular year. Conversely, there is an 80% chance that the parameter value will be less than the *value* shown.

^m This value represents the *value* for the parameter that has a 80% chance of being exceeded that month during any particular year. Conversely, there is an 20% chance that the parameter value will be less than the *value* shown.

ⁿ This value represents the *skewness (asymmetry) of the distribution of the parameter values* for the month (year) over the 'normal' period. A value near zero indicates that the distribution approximates a normal (Gaussian) and symmetrical distribution. A negative skew indicates that the parameter distribution has relatively few low values compared to high values. A positive skew indicates that the distribution has relatively few high values compared to the number of low values. A skew value near 1 indicates that the underlying distribution approximates a lognormal distribution.

^o This value represents the *kurtosis* of the parameter value distribution for the month (year) over the 'normal' period. Kurtosis is a measurement of the height to width ratio of the probability distribution, or the *peakedness (slenderness)*. A normal (Gaussian) distribution has a kurtosis of 3. A high kurtosis distribution has a sharper peak and longer tails, while a low kurtosis distribution has a more rounded peak and shorter tails.

This work and report were prepared by the University of Idaho Research and Extension Center at Kimberly, Idaho under contract with the Idaho Department of Water Resources. Work was supported by funding from IDWR and the Idaho Agricultural Experiment Station and Idaho Engineering Experiment Station. The authors gratefully acknowledge the long-term evapotranspiration data collection and long-standing advice provided by Dr. James L. Wright, USDA-ARS Kimberly (ret.), the more than two decades of high quality agricultural weather data collection by the U.S. Bureau of Reclamation AgriMet system, and the very long-standing, routine data collection by the hundreds of cooperative weather station volunteers across the state who, for more than one-hundred years, have faithfully observed daily air temperature and precipitation.

The citation for the evapotranspiration data used from this site should be: Allen, Richard G. and Clarence W. Robison, 2012. *Evapotranspiration and Consumptive Irrigation Water Requirements for Idaho: Supplement updating the Time Series through December 2008*, Research Technical Completion Report, Kimberly Research and Extension Center, University of Idaho, Moscow, ID.

Questions regarding the data should be addressed to [Clarence W. Robison](#) or [Richard G. Allen](#), University of Idaho, Kimberly Research and Extension Center, 3793 North 3600 East, Kimberly, ID 83341. Telephone (208)-423-6610

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ET_{Idaho} 2012 -- Evapotranspiration and Consumptive Irrigation Water Requirements for Idaho

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Soda Springs (NWS -- 108535)

Statistics based on thirty year normal spans 1979 to 2007 years

For a different land cover or crop click on the above link.

You can highlight this table and copy via the clipboard to a Microsoft Excel or OpenOffice spreadsheet to plot or otherwise work with this data.

Grass Pasture - low management																
Precipitation Deficit (Click here for a graph)																
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Growing Season ^a	Non Growing Season ^b	Annual	
Mean ⁱ	mm/day												mm			
Monthly ^c	-0.12	0.04	0.08	0.25	1.47	3.56	4.27	3.37	1.61	-0.18	-0.48	-0.18	441	-22	416	
15-Day Moving Average ^d	-0.10	0.01	0.09	0.22	1.39	3.50	4.31	3.33	1.67	-0.15	-0.48	-0.18				
7-Day Moving Average ^e	-0.12	0.02	0.07	0.22	1.43	3.54	4.22	3.36	1.63	-0.17	-0.52	-0.18				
3-Day Moving Average ^f	-0.13	0.03	0.08	0.24	1.46	3.57	4.26	3.37	1.61	-0.18	-0.49	-0.18				
Standard Deviation ^k	mm/day												mm			
Monthly ^c	0.43	0.07	0.12	0.31	1.49	0.84	1.37	1.12	1.04	0.70	0.44	0.35	106	22	107	
15-Day Moving Average ^d	0.39	0.10	0.18	0.39	1.28	1.17	1.13	1.25	1.27	0.84	0.66	0.32				
7-Day Moving Average ^e	0.51	0.18	0.33	0.72	1.76	1.74	1.63	1.71	1.70	1.39	0.93	0.40				
3-Day Moving Average ^f	0.69	0.28	0.58	1.07	2.52	2.51	2.41	2.43	2.42	2.07	1.34	0.55				
20% Exceedance ^l	mm/day												mm			
Monthly ^c	0.02	0.06	0.13	0.37	2.22	4.37	4.92	3.94	2.42	0.09	-0.15	0.00	549	-6	524	
15-Day Moving Average ^d	0.11	0.20	0.38	0.76	3.15	5.13	5.55	4.87	3.36	1.04	0.14	0.08				

81232

7-Day Moving Average ^c	0.19	0.34	0.70	1.14	3.88	6.43	6.32	5.71	4.40	1.68	0.41	0.18			
3-Day Moving Average ^f	0.24	0.37	0.93	2.03	6.02	7.97	7.87	6.87	5.68	2.73	0.53	0.22			
80% Exceedance ^m	mm/day												mm		
Monthly ^c	-0.51	-0.01	-0.02	-0.04	0.31	2.81	3.11	2.79	0.28	-0.79	-0.94	-0.51	303	-45	278
15-Day Moving Average ^d	-0.94	-0.22	-0.24	-0.37	-0.78	0.97	1.89	0.82	-0.50	-1.85	-1.16	-0.81			
7-Day Moving Average ^e	-1.94	-0.39	-0.65	-1.22	-2.90	-1.44	-0.71	-0.37	-2.32	-4.15	-2.55	-1.16			
3-Day Moving Average ^f	-2.92	-0.96	-1.89	-2.45	-8.18	-4.40	-5.75	-5.05	-5.84	-9.76	-5.08	-2.20			
Ave Highest P _{def}	mm/day												--		
15-Day Moving Average ^g	0.09	0.12	0.30	0.63	2.37	4.68	5.02	4.24	2.48	0.68	0.10	0.05			
7-Day Moving Average ^h	0.16	0.25	0.54	1.12	3.52	5.73	5.97	5.31	3.54	1.21	0.28	0.13			
3-Day Moving Average ⁱ	0.22	0.36	0.77	1.72	5.01	7.21	7.27	6.30	4.43	1.98	0.40	0.19			
Ave Lowest P _{def}	mm/day												--		
15-Day Moving Average ^g	-0.30	-0.08	-0.12	-0.19	0.40	2.31	3.45	2.25	0.74	-0.96	-0.85	-0.36			
7-Day Moving Average ^h	-0.63	-0.22	-0.49	-0.79	-0.99	0.87	2.13	1.01	-0.54	-2.30	-1.60	-0.67			
3-Day Moving Average ⁱ	-1.23	-0.60	-1.32	-1.90	-3.50	-1.96	-0.60	-1.72	-2.86	-4.87	-3.32	-1.24			
Special normal distribution parameters for monthly, seasonal, and annual intervals															
Skew ^m	-0.81	-0.52	0.11	0.69	0.11	0.11	-0.30	-0.32	-0.08	-0.07	-1.18	-0.32	-0.34	0.70	-0.20
Kurtosis ^o	1.96	3.92	0.47	3.05	0.67	2.24	0.61	1.22	2.07	0.88	4.03	0.65	1.79	3.04	1.77

^a Growing Season: This is usually the time from green up or planting in the spring to a killing frost or harvest in the fall. It is not applicable for entries without a growing season and will be blank.

^b Nongrowing Season: This is usually the time from a killing frost or harvest in the fall to the of green up in the spring. It is not applicable for entries without a growing season.

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^l This value represents the *value* for the parameter that has a 20% chance of being exceeded that month during any particular year. Conversely, there is an 80% chance that the parameter value will be less than the *value* shown.

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ⁿ This value represents the *skewness (asymmetry) of the distribution of the parameter values* for the month (year) over the 'normal' period. A value near zero indicates that the distribution approximates a normal (Gaussian) and symmetrical distribution. A negative skew indicates that the parameter distribution has relatively few low values compared to high values. A positive skew indicates that the distribution has relatively few high values compared to the number of low values. A skew value near 1 indicates that the underlying distribution approximates a lognormal distribution.

^o This value represents the *kurtosis* of the parameter value distribution for the month (year) over the 'normal' period. Kurtosis is a measurement of the height to width ratio of the probability distribution, or the *peakedness (slenderness)*. A normal (Gaussian) distribution has a kurtosis of 3. A high kurtosis distribution has a sharper peak and longer tails, while a low kurtosis distribution has a more rounded peak and shorter tails.

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The citation for the evapotranspiration data used from this site should be: Allen, Richard G. and Clarence W. Robison, 2012. *Evapotranspiration and Consumptive Irrigation Water Requirements for Idaho: Supplement updating the Time Series through December 2008*, Research Technical Completion Report, Kimberly Research and Extension Center, University of Idaho, Moscow, ID.

Questions regarding the data should be addressed to [Clarence W. Robison](#) or [Richard G. Allen](#), University of Idaho, Kimberly Research and Extension Center, 3793 North 3600 East, Kimberly, ID 83341. Telephone (208)-423-6610

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ETIdaho web site powered by [Debian](#), [Apache](#), [Firebird DBMS](#), [Python](#), with [matplotlib](#), and [kinterbasdb](#).

Pond Calculations

Humpherys Application for Transfer

Pond Size

Vol = surf area x max depth x slope factor

Surface Area 0.11 acres (50 ft x 100 ft = 5000 sq ft)

Max Depth 8 feet

Sloped Sides Factor 0.4

Volume 0.35 acre-feet

Evaporation

Evaporation (Precipitation Deficit from ET Idaho Tables)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
mm/day	0	0	0.12	1.05	1.71	2.64	3.17	2.61	1.53	0.64	0	0
day/month	31	28	31	30	31	30	31	31	30	31	30	31
mm/month	0.00	0.00	3.72	31.50	53.01	79.20	98.27	80.91	45.90	19.84	0.00	0.00
ft/month	0.00	0.00	0.01	0.10	0.17	0.26	0.32	0.27	0.15	0.07	0.00	0.00
surface area	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
acre-feet	0.00	0.00	0.00	0.01	0.02	0.03	0.04	0.03	0.02	0.01	0.00	0.00

Total Evaporation Acre-Feet 0.15

Seepage

Soil Type: ML/CL (silty loam)

Seepage Rate: 0.003 ft/day

Annual Seepage: 0.12 afa (surface area x seepage x 365)

Total Acres to Dry Up

Irrigated Crop: Grass Pasture (Low Management)

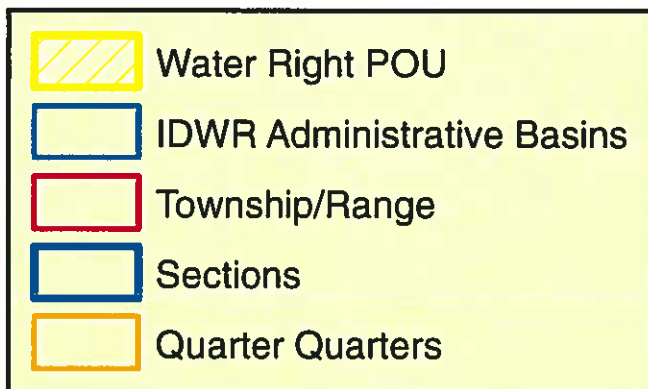
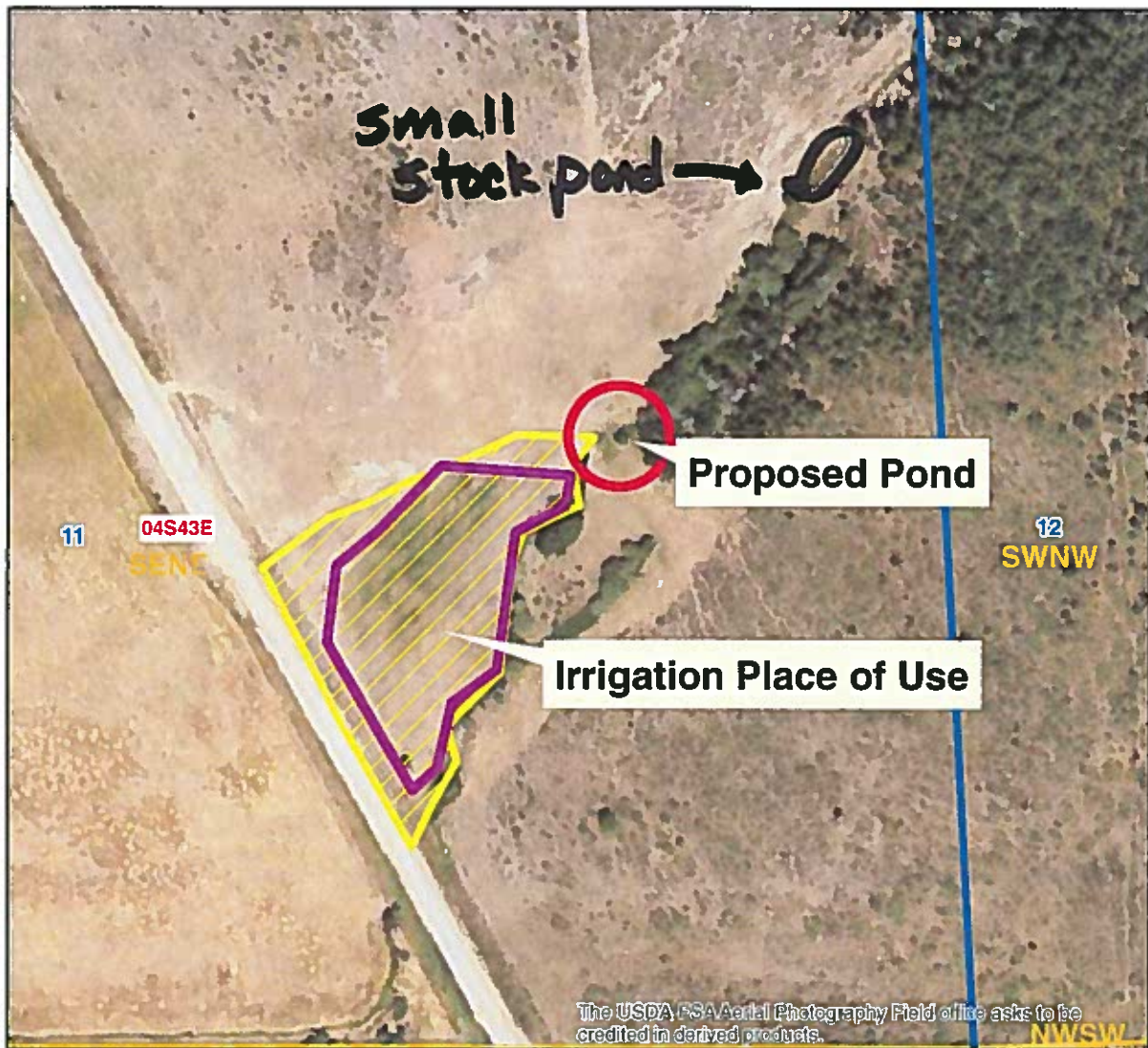
Growing Season ET (mm): 441

Growing Season ET (af/acre): 1.45

Total Pond Acre-Feet: 0.62 (0.5 + 0.15 + 0.12)

Total Acres to Dry-Up: 0.4

Humpherys Transfer Application



0 125 250 Feet

