

MEMORANDUM

To: James Cefalo, IDWR
From: Kristin Moore, Rocky Mountain Environmental Associates, Inc.
Date: January 29, 2025
RE: Data to Support Transfer App No. 87765, Hard Way LP

The purpose of the proposed transfer application is to provide supplemental ground water to the proposed place of use, which already receives water from Sunnyside Irrigation District and/or Palisades storage water by transferring right 22-14166. For reference in this memorandum, the FROM location is referred to as the "Original Property" and is the current place of use of right 22-14166. The TO location is referred to as the "Proposed POU," which is the location to receive the transferred water right.

In our discussions and review of Application for Transfer No. 87765, we identified two primary concerns to address: 1) Enlargement concerns with unstacking from Liberty Park and restacking with Sunnyside Irrigation District; and 2) historical use of the well.

To answer some of these questions, we first underwent a review of the canal shares that pertain to the property and the historical irrigation practices. The Smiths provided copies of all of their own stock certificates within Liberty Park Irrigation Co. and Bannock Jim Slough Canal Co. and we identified each stock certificate and the property to which it originally pertains.

Bannock Jim Slough

Bannock Jim Slough shares are divided into Class A, Class B, and Class C. Figure 1 is a shares list from Bannock Jim that was used when compiling information for the SRBA. One share is equal to one acre of irrigated land. The red boxes enclose rights for the Original Property, owned by Harold Ward, which was overlapped by Class A and Class C stock to cover 40 acres in the SENE of Section 20. The boxes also show that Boyd Smith owned shares for the lands south of the Ward place, and then also obtained shares from Otto Anderson to cover the lands west of those. All of these shares are now combined into one group of stock certificates that include each of the different classes of stock. They sum to 270.33 shares, nominally enough water for approximately 270 acres. The canal shares described above now are used at the area identified in red on Figure 2. Water has been and continues to be delivered from the Bannock Jim Slough through the pump identified in Figure 2.

Name	Acres	Within the Following Described Property	1889	1905
			Right 01-0139 (miners inches)	Right 01-0140 (miners inches)
LeeRoy Wilcox	10.0	NE1/4SE1/4, within S20, T5N, R39E8M	64.74	17.26
	35.0	NW1/4SW1/4, within S21, T5N, R39E8M		
	7.0	SW1/4SW1/4, within S21, T5N, R39E8M		
	30.0	SE1/4SW1/4, within S21, T5N, R39E8M		
	82.0			
G. Harold Ward	40.0	SE1/4NE1/4, within S20, T5N, R39E8M	31.58	8.42
Boyd Smith	28.0	NE1/4SE1/4, within S20, T5N, R39E8M	23.94	6.39
O Anderson later 4 Sec H 200	2.33	NW1/4SW1/4, within S21, T5N, R39E8M		
	30.33			
Anita Koon	5.0	NE1/4NE1/4, within S13, T5N, R39E8M	3.00	2.00
Gordon Koon	1.7	NW1/4NW1/4, within S18, T5N, R39E8M	1.00	.07
Kathy Koon	1.7	NW1/4NW1/4, within S18, T5N, R39E8M	1.00	.07
GRAND TOTAL	604.83		600.00	160.00

Figure 1. Historical Shares in Bannock Jim Slough

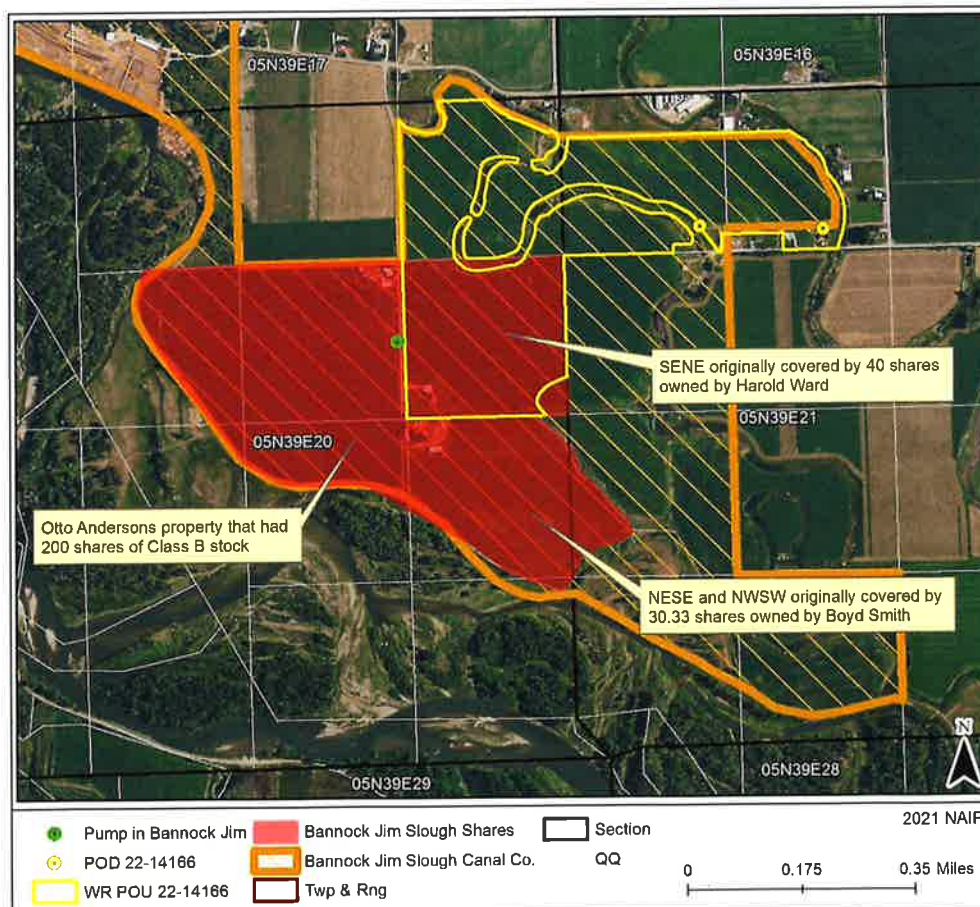


Figure 2. Shares in Bannock Jim Slough Canal Co.

Liberty Park Irrigation Co.

Liberty Park does not have classes of stock certificates and each share is equal to 3 acres of irrigation. After a review of all of the shares obtained by the applicant over the years, each was mapped for historical location and to verify overlaps with the Original Property. A copy of the stock certificates is attached. The table below is a summary of the stock certificates for each of the applicant's properties and Figure 3 illustrates the locations.

Table 1. Liberty Park Stock Certificates Summary

Liberty Park			
	Stock Cert.		
Joyce (Ward) Olsen Shares	395 & 397	11	shares
Original Property		3	ac/share
		33	total acres
O. Anderson Farm	153	15	shares
		45	total acres
Firth Place	245	118	shares
		354	total acres
	100	34	shares
		102	total acres
Irvin Place	304	98	shares
		294	acres
Thomason	344	111	shares
		333	acres
Totals		387	shares
		1,161	acres

The Original Property has only had 11 Liberty Park shares appurtenant to it, which was identified when the ground water right was originally developed. This is the parcel identified as "Joyce (Ward) Olsen Shares" in Table 1, and as "Ward (395 & 397)" in Figure 3. 11 shares only authorize 33 acres to be irrigated. The exact 33 acres are unknown, therefore Figure 3 illustrates a possible polygon of 33 acres for the purpose of showing that at the time the ground water right was developed, only a portion of the Original Property was covered with canal shares.

Not only did the Original Property (also referred in documents as the Ward Place) not have adequate shares, but the Liberty Park shares were not deliverable to the Original Property for many years. A dispute with a neighbor cut off access to the ditch. Access to the Liberty Park shares was restored, but not until about 2018. The applicant owns enough shares across all of the properties to be able to irrigate the Original Property with Liberty Park water, now that the water is accessible. The irrigated

lands sum to roughly 900 acres, and the 387 Liberty Park shares nominally are enough for over 1,100 acres.

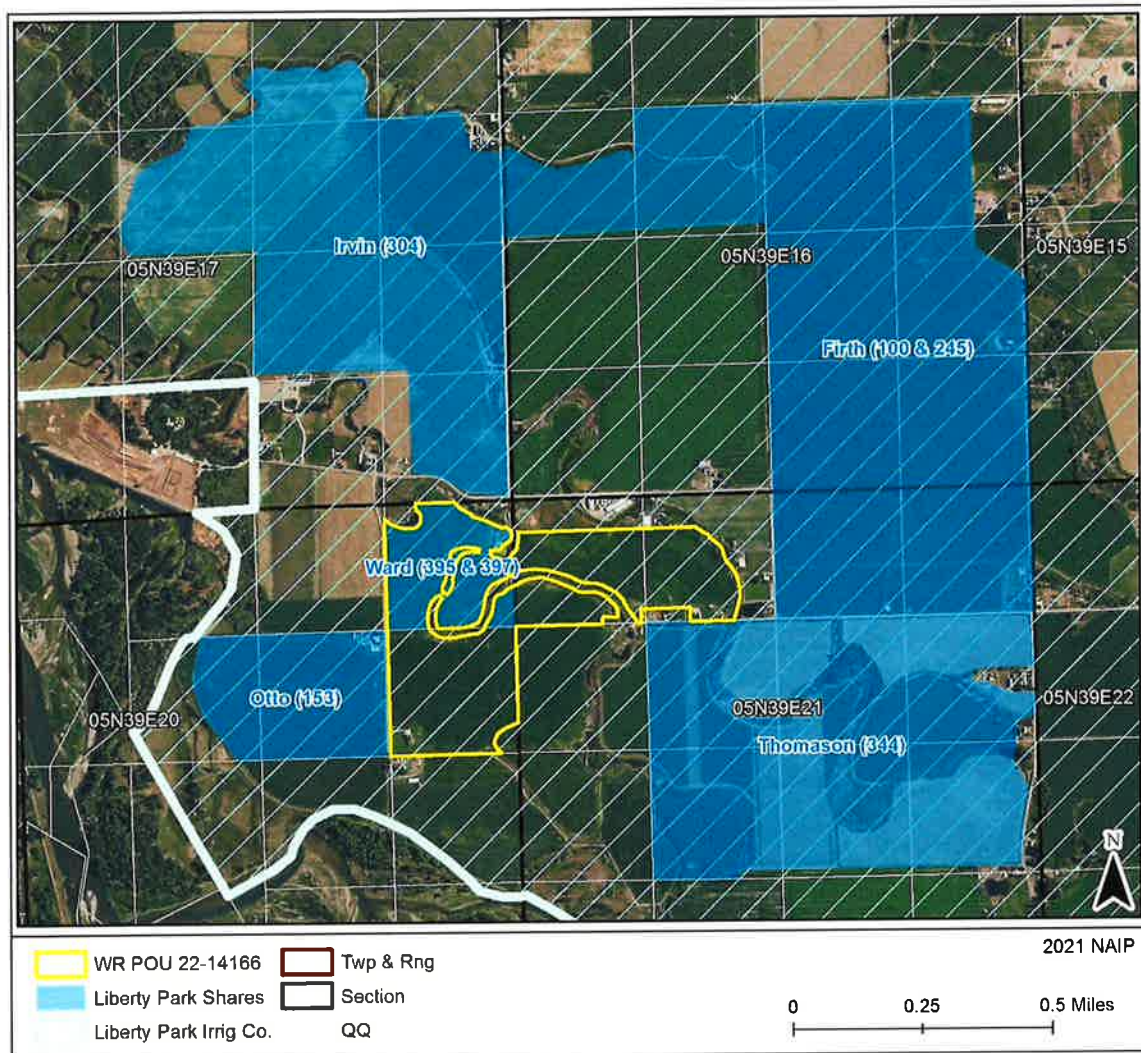


Figure 3. Shares in Liberty Park Irrigation Co.

Historical Irrigation Practices to Present

Without access to the Liberty Park shares, the applicant relied on the Bannock Jim shares and the ground water right as the only sources of water on the Original Property. Figure 4 shows the lands that were irrigated with Bannock Jim water and the lands that were irrigated by the well; ground water on the 29 acres in the NENE of Section 20 and the 34 acres NENW and NWNW of Section 21, and Bannock Jim water on the SENE of Section 20.

Well water was diverted into an open ditch and injected into the slough from which it was reddiverted via a portable pump and mainline to irrigate the 63 acres on the north (29+34), using wheel lines and handlines. Irrigation typically began May 20th and ended by July 31st, with some variability.

Bannock Jim water was diverted at the pump identified on Figure 4 and delivered to a pivot system that covered the south part of the farm¹. The mainline only connected to this pivot during 2010-2014.

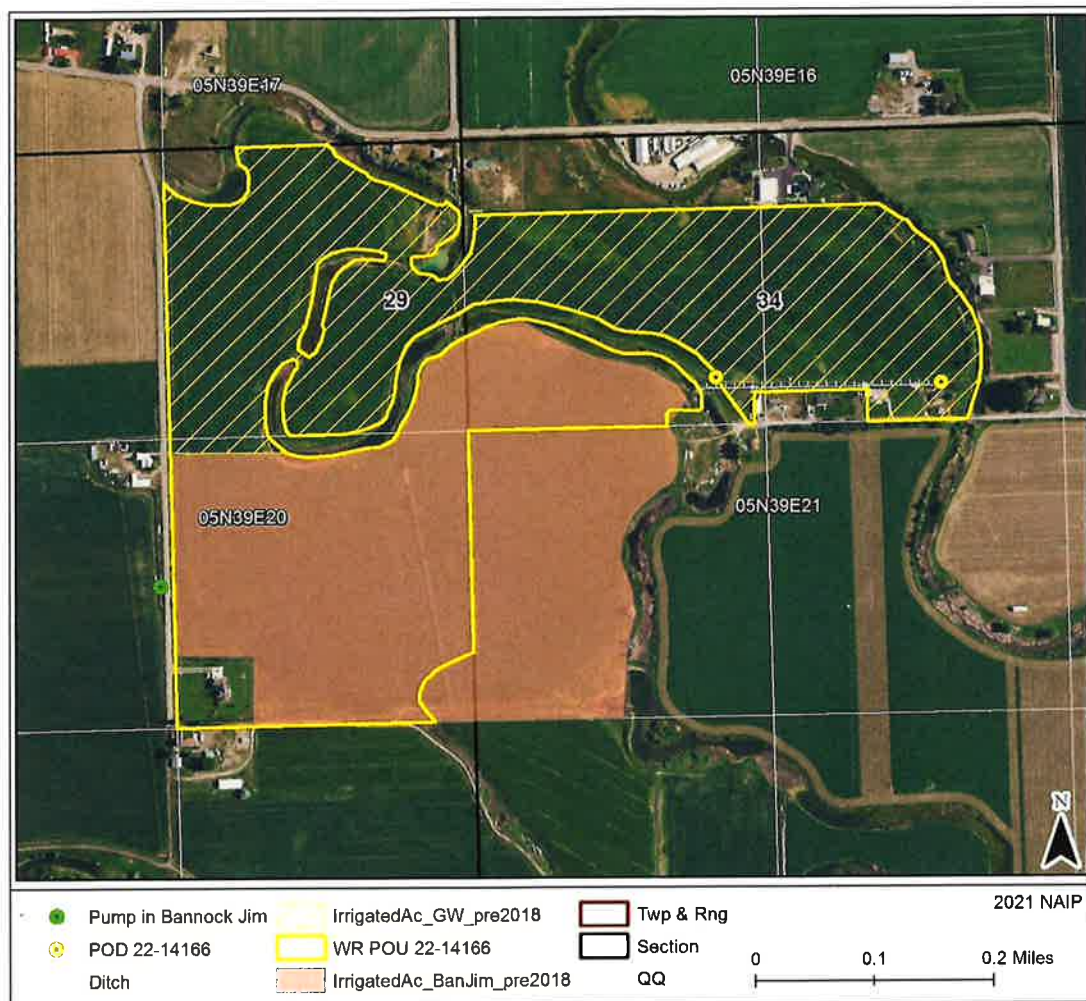


Figure 4. Irrigation Practices in 2017.

¹ The pivot passes outside of both the applicant's property boundaries and the water right boundaries. The lands under the pivot are owned by the neighbor but are leased by the applicant. Bannock Jim shares pertain to those lands and are watered from Bannock Jim using the same irrigation system as the applicant's. The shares are held in the name of the neighbor and were not included in the overlapping shares evaluation.

For the years 2010 through 2014, the applicant grew barley or soft white wheat. Since the 63 acres on the north were only being irrigated with ground water, ET data was collected to support the water requirements to successfully grow the crop in order to understand volumes of groundwater diverted.

IDWR's ET Viewer (Metric ET) was used to collected data relevant to the exact property. However, not all years had data available for this location. Only years 2011 and 2013 had data for this time frame. A copy of each of those reports is attached. The polygon outlining the area measured only includes contiguous lands. Since the property is separated by the Bannock Jim Slough, a single report could not evaluate the entire north lands. According to the applicant, all of the lands were planted with the same crop, so the ET should be consistent across the entire north property, including those lands in the NENE that were not identified in the ET Viewer reports.

ET IDWR was also used to collected data, primarily to verify the ET Viewer data, but also to collect a range of values for comparison. Two stations were used, Rexburg (PN-AM_RXGI) and Idaho Falls FAA Arpt (NWS – USW00024145). Since the property sits between these two stations, and each station differs in elevation and weather patterns, both were used to bracket the expected values. The best crop cover available for these stations that would apply is Spring Grain – Irrigated. However, it doesn't differentiate between Barley and Soft White Wheat, and according to the applicant, Soft White Wheat requires more water than Barley. It can be assumed, therefore, that the values available from ET IDWR are close estimates, but are expected to have a margin of error. Copies of the data are attached.

The table below shows a summary of the year, crop, and possible ET using the sources described above. Data values in the sources are in mm/year and in Table 2 are presented in acre feet per acre (AF/ac) using the conversion $[mm/304.8=ft]$.

Table 2. Estimated Historical ET

Year	Crop	ET Viewer CIR Median (AF/ac)	ET IDWR - Rexburg - Prec. Def. Spring Grain(AF/ac)	ET IDWR - IF Airport - Prec. Def. Spring Grain(AF/ac)
2010	Barley	no data	1.72	2.11
2011	Barley	1.92	1.72	2.11
2012	soft white wheat	no data	1.72	2.11
2013	soft white wheat	2.63	1.72	2.11
2014	soft white wheat	no data	1.72	2.11

In an effort to verify the potential historical diversion of the well, the applicant ran a test in the summer of 2024. He was able to obtain access to the well from the new owner of the neighboring property, reconnected it to the tractor that always had been used to pump water, and pumped the water into the ditch that historically delivered the water to the slough for redirection. The test was successful for 9 days, after which the motor on the tractor gave out and ended the test. The well was run for 10 hours per day for 9 days for a total of 90 hours of operation. Table 3 summaries the test data.

Table 3. 2024 Well Test and Measurement

Reading	# Days (cumulative)	# Hours (cumulative)	Meter Reading (KGAL)	AF/10-hour Day
1	3	30	2302	2.35
2	6	60	3710	1.90
3	9	90	5975	2.04
Average Daily Pumping				2.04

Daily average pumping was about 2.0 af/day for the test, with 10 hours/day of pumping. Assuming² this average applied for an irrigation season, and using typical irrigation practices of 2010-2014, the estimated annual diversion would have been about 108 afa over the course of 53 days, or about 1.71 af/acre for 63 acres. See Table 4.

Table 4. Estimated Annual Diversion

Date	# Days	Daily Average Pumping (AF) @ 10 hrs/day	Watering Period (AF)
May	9	2.04	18.3
June	22	2.04	44.8
July	22	2.04	44.8
Estimated Annual Diversion			108.0
AF/ac for 63 acres			1.71

This value is within a margin of error of the expected ET of Spring Grains. At a minimum, the crops would have required the ET value as a diversion volume, but likely, the diversion volume would have been higher to account for inefficiencies. Wheel lines and hand lines typically have about 80% efficiency. Table 5 estimates a range of expected diversion volumes based on ET IDWR values, using 80% or 90% efficiency values. The estimated annual diversion in Table 4 appears more consistent with the low-end range of values expected at the Rexburg Station. Actual annual diversion volumes would likely have been between about 108 -135 afa.

Table 5. Estimated Range of Diversion Volumes using ET IDWR

ET IDWR Source	Minimum ET (af/ac)	Total ET for 63 acres (afa)	Annual Diversion Volume @ 80% Efficiency (afa)	Annual Diversion Volume @ 90% Efficiency
Rexburg - Def. Spring Grain	1.72	108.4	135.5	120.4
IF Airport - Spring Grain	2.11	132.9	166.2	147.7

² Assumptions include 10 hrs of pumping per day for the given number of days. However, number of hours pumping in a single day varied from 10 hours to 16 hours/day. Number of total days irrigating per month also varied and could have been less on any given year, depending on weather conditions.

Change in Irrigation Practices

In 2018, the applicant was able to obtain access to Liberty Park water by injecting the shares into the Bannock Jim Slough and diverting through the pump on the Bannock Jim Slough. A mainline was run from the pump across the property to connect a second pivot on the north and to the wheel lines on the northwest. Canal shares were then deliverable to the entire property and the well was no longer needed to supply the property.

Conclusions

- The ET data show that the 63 acres of GW-irrigated lands historically experienced full consumptive use and therefore were fully irrigated.
- Reconstruction of GW pumping volumes shows that enough GW was pumped to fully explain the observed consumptive use.
- Transferring the GW right to the Proposed POU will not result in an enlargement, provided the diverted volume does not exceed the historical consumption of the 63 GW-irrigated acres.
- Total historical diversion volume is likely within the range of 108 – 135 afa, accounting for required ET and percent efficiency.

Canal Stock Certificates

SERIES

A-3

STAMPED

50.52

See Reverse for
Certain Definitions



Incorporated under the laws of the State of Idaho

BANNOCK JIM SLOUGH CANAL COMPANY

Total Authorized Issue 960 Shares

600 Shares \$1.00 Par Value
Class A Common Stock

160 Shares \$1.00 Par Value
Class C Common Stock

200 Shares \$1.00 Par Value
Class B Common Stock

THE CORPORATION WILL FURNISH WITHOUT CHARGE TO EACH STOCKHOLDER WHO SO REQUESTS THE POWER, DESIGNATIONS, PREFERENCES AND RELATIVE, PARTICIPATING, OPTIONAL OR OTHER SPECIAL RIGHTS OF EACH CLASS OF STOCK OR SERIES THEREOF AND THE QUALIFICATIONS, LIMITATIONS OR RESTRICTIONS OF SUCH PREFERENCES AND/OR RIGHTS. ANY SUCH REQUEST SHOULD BE ADDRESSED TO THE SECRETARY OF THE CORPORATION. WATER PRIORITY DATES CLASS A 06/01/1889, B 06/01/1898, C 05/01/1905.

This is to certify that Boyd E. Smith is the owner of

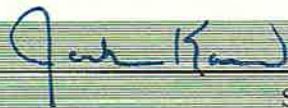
Fifty and Fifty Two Hundredths

Fully Paid and Non-Assessable Shares of Class A Common Stock of
BANNOCK JIM SLOUGH CANAL COMPANY

transferable only on the books of the Corporation by the holder thereof in person or by a duly authorized Attorney upon surrender of this Certificate properly endorsed.

Witness, the seal of the Corporation and the signatures of its duly authorized officers.

Dated December 1, 2012



Secretary





President

CORPKIT, NEW YORK

A-4

5

See Reverse for
Certain Definitions

Incorporated under the laws of the State of Idaho

BANNOCK JIM SLOUGH CANAL COMPANY

600 Shares \$1.00 Par Value
Class A Common Stock

Total Authorized Issue 960 Shares

160 Shares \$1.00 Par Value
Class C Common Stock

200 Shares \$1.00 Par Value
Class B Common Stock

THE CORPORATION WILL FURNISH WITHOUT CHARGE TO EACH STOCKHOLDER WHO SO REQUESTS THE POWER, DESIGNATIONS, PREFERENCES AND RELATIVE, PARTICIPATING, OPTIONAL OR OTHER SPECIAL RIGHTS OF EACH CLASS OF STOCK OR SERIES THEREOF AND THE QUALIFICATIONS, LIMITATIONS OR RESTRICTIONS OF SUCH PREFERENCES AND/OR RIGHTS. ANY SUCH REQUEST SHOULD BE ADDRESSED TO THE SECRETARY OF THE CORPORATION. WATER PRIORITY DATES CLASS A 06/01/1889, B 06/01/1898, C 05/01/1905.

This is to certify that Robert B. Smith is the owner of
Five

Fully Paid and Non-Assessable Shares of Class A Common Stock of
BANNOCK JIM SLOUGH CANAL COMPANY

*transferable only on the books of the Corporation by the holder thereof in person or by a duly
authorized Attorney upon surrender of this Certificate properly endorsed.*

Witness, the seal of the Corporation and the signatures of its duly authorized officers.

Dated December 1, 2012

John K...

Secretary



Jim L. McG...

President

CORP. N.Y.

B-1

200

See Reverse for
Certain Definitions

Incorporated under the laws of the State of Idaho

BANNOCK JIM SLOUGH CANAL COMPANY

Total Authorized Issue 960 Shares

600 Shares \$1.00 Par Value
Class A Common Stock

160 Shares \$1.00 Par Value
Class C Common Stock

200 Shares \$1.00 Par Value
Class B Common Stock

THE CORPORATION WILL FURNISH WITHOUT CHARGE TO EACH STOCKHOLDER WHO SO REQUESTS THE POWER, DESIGNATIONS, PREFERENCES AND RELATIVE, PARTICIPATING, OPTIONAL OR OTHER SPECIAL RIGHTS OF EACH CLASS OF STOCK OR SERIES THEREOF AND THE QUALIFICATIONS, LIMITATIONS OR RESTRICTIONS OF SUCH PREFERENCES AND/OR RIGHTS. ANY SUCH REQUEST SHOULD BE ADDRESSED TO THE SECRETARY OF THE CORPORATION. WATER PRIORITY DATES CLASS A 06/01/1899, B 06/01/1899, C 05/01/1905.

This is to certify that Boyd E. Smith is the owner of
Two Hundred

Fully Paid and Non-Assessable Shares of Class B Common Stock of
BANNOCK JIM SLOUGH CANAL COMPANY

*transferable only on the books of the Corporation by the holder thereof in person or by a duly
authorized Attorney upon surrender of this Certificate properly endorsed.*

Witness, the seal of the Corporation and the signatures of its duly authorized officers.

Dated December 1, 2012

John K. [Signature]
Secretary



Sam L. McGary
President

NUMBER
C-3



SEAL
14.81

See Reverse for
Certain Definitions

Incorporated under the laws of the State of Idaho

BANNOCK JIM SLOUGH CANAL COMPANY

Total Authorized Issue 960 Shares

600 Shares \$1.00 Par Value
Class A Common Stock

160 Shares \$1.00 Par Value
Class C Common Stock

200 Shares \$1.00 Par Value
Class B Common Stock

THE CORPORATION WILL FURNISH WITHOUT CHARGE TO EACH STOCKHOLDER WHO SO REQUESTS THE POWER, DESIGNATIONS, PREFERENCES AND RELATIVE, PARTICIPATING, OPTIONAL OR OTHER SPECIAL RIGHTS OF EACH CLASS OF STOCK OR SERIES THEREOF AND THE QUALIFICATIONS, LIMITATIONS OR RESTRICTIONS OF SUCH PREFERENCES AND/OR RIGHTS. ANY SUCH REQUEST SHOULD BE ADDRESSED TO THE SECRETARY OF THE CORPORATION. WATER PRIORITY DATES CLASS A 06/01/1889, B 06/01/1896, C 05/01/1905.

This is to certify that Boyd E. Smith is the owner of
Fourteen and Eighty One Hundredths

Fully Paid and Non-Assessable Shares of Class C Common Stock of
BANNOCK JIM SLOUGH CANAL COMPANY

*transferable only on the books of the Corporation by the holder thereof in person or by a duly
authorized Attorney upon surrender of this Certificate properly endorsed.*

Witness, the seal of the Corporation and the signatures of its duly authorized officers.

Dated DECEMBER 1, 2012

John K...

Secretary



Jim E. McGary

President

CORP KIT, NEW YORK

INCORPORATED UNDER THE LAWS OF IDAHO, MARCH 10, 1892

Nº 344

CAPITAL STOCK, \$10,000.00
2,000 SHARES, \$5 EACH

/// Shares

Location Of Canal, Independence, Madison County, Idaho

Liberty Park Irrigation Company

Thomason

This Certifies That Warehouse Supply, LLC

is entitled to one hundred eleven Shares of the Capital Stock of the Liberty Park Irrigation Company,

Transferable on the books of the Company by endorsement hereon and surrender of this Certificate.

Independence, Idaho, _____ 20 _____

Larry L. Hansen
PRESIDENT

Boyd E. Smith
SECRETARY

INCORPORATED UNDER THE LAWS OF IDAHO, MARCH 10, 1892

Nº 304

CAPITAL STOCK, \$10,000.00
2,000 SHARES, \$5 EACH

--98-- Shares

Location Of Canal, Independence, Madison County, Idaho

Liberty Park Irrigation Company

lrvm

This Certifies That BOYD E SMITH

is entitled to --NINETY-EIGHT-- Shares of the Capital Stock of the Liberty Park Irrigation Company,

Transferable on the books of the Company by endorsement hereon and surrender of this Certificate.

Independence, Idaho, DECEMBER 13, 20⁰⁵

Larry L. Hanson
PRESIDENT

William L. Hanson
SECRETARY

No. **100**

Incorporated Under the Laws of Idaho, Mar. 10, 1892

CAPITAL STOCK, \$10,000.00

2,000 SHARES, \$5 EACH

34 SHARES

Location of Canal, Independence, Madison County, Idaho

Liberty Park Irrigation Company

This Certifies That Lorenzo T. Firth
is entitled to Thirty four Shares of the Capital Stock of the Liberty Park Irrigation Company,
Transferable on the books of the Company by endorsement hereon and surrender of this Certificate

Independence, Idaho, Dec. 4 1951

Stephen L. Spaulding
PRESIDENT

Rush Anderson
SECRETARY

Forth

INCORPORATED UNDER THE LAWS OF IDAHO, MARCH 10, 1892

Nº 245

CAPITAL STOCK, \$10,000.00
2,000 SHARES, \$5 EACH

-118- shares

Location of Canal, Independence, Madison County, Idaho

Liberty Park Irrigation Company

This Certifies That BOYD E. SMITH

is entitled to --one hundred and eighteen-- Shares of the Capital Stock of the Liberty Park Irrigation Company

Transferable on the books of the Company by endorsement hereon and surrender of this Certificate

Independence, Idaho, AUGUST 3, 19 94

Larry J. Hanson
PRESIDENT

Nicholas J. Hansen
SECRETARY

Firth

ENDORSED WITHOUT RECOURSE

FmHA

BY John J. Pierce

TITLE County Supervisor

No. 153

Incorporated Under the Laws of Idaho, Mar. 10, 1892

CAPITAL STOCK, \$10,000.00

2,000 SHARES, \$5 EACH

15 SHARES

O. Anderson

Location of Canal, Independence, Madison County, Idaho

Liberty Park Irrigation Company

This Certifies That Boyd E. Smith & United States of America,
Boyd E. Smith (mortgage)
is entitled to Fifteen (15) Shares of the Capital Stock of the Liberty Park Irrigation Company,
Transferable on the books of the Company by endorsement hereon and surrender of this Certificate

Independence, Idaho, March 6 1968

Rex Jensen
PRESIDENT

Joseph J. Jensen
SECRETARY

Ward Place
(Joyce)

Nº 397

INCORPORATED UNDER THE LAWS OF IDAHO, MARCH 10, 1892

CAPITAL STOCK, \$10,000.00
2,000 SHARES, \$5 EACH

— 6 — Shares

Location Of Canal, Independence, Madison County, Idaho

Liberty Park Irrigation Company

This Certifies That JOYCE OLSEN

is entitled to — SIX —

Shares of the Capital Stock of the Liberty Park Irrigation Company,
Transferable on the books of the Company by endorsement hereon and surrender of this Certificate.

Independence, Idaho, OCTOBER 13 20.21

Larry L. Hansen

PRESIDENT

Nicholas P. Hansen

SECRETARY

Ward Place
(Joyce)

INCORPORATED UNDER THE LAWS OF IDAHO, MARCH 10, 1892

No 395

CAPITAL STOCK, \$10,000.00
2,000 SHARES, \$5 EACH

- 5 - Shares

Location Of Canal, Independence, Madison County, Idaho

Liberty Park Irrigation Company

This Certifies That JOYCE OLSEN

is entitled to - FIVE - Shares of the Capital Stock of the Liberty Park Irrigation Company,

Transferable on the books of the Company by endorsement hereon and surrender of this Certificate.

Independence, Idaho, OCTOBER 13 20 21

Larry L. Hansen
PRESIDENT

Nicholas Thompson
SECRETARY

ET Data

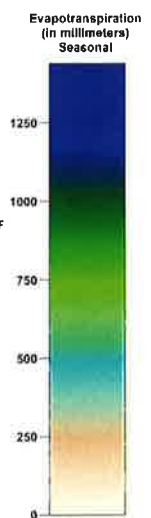
2011 Evapotranspiration Statistics from the METRIC ET Model

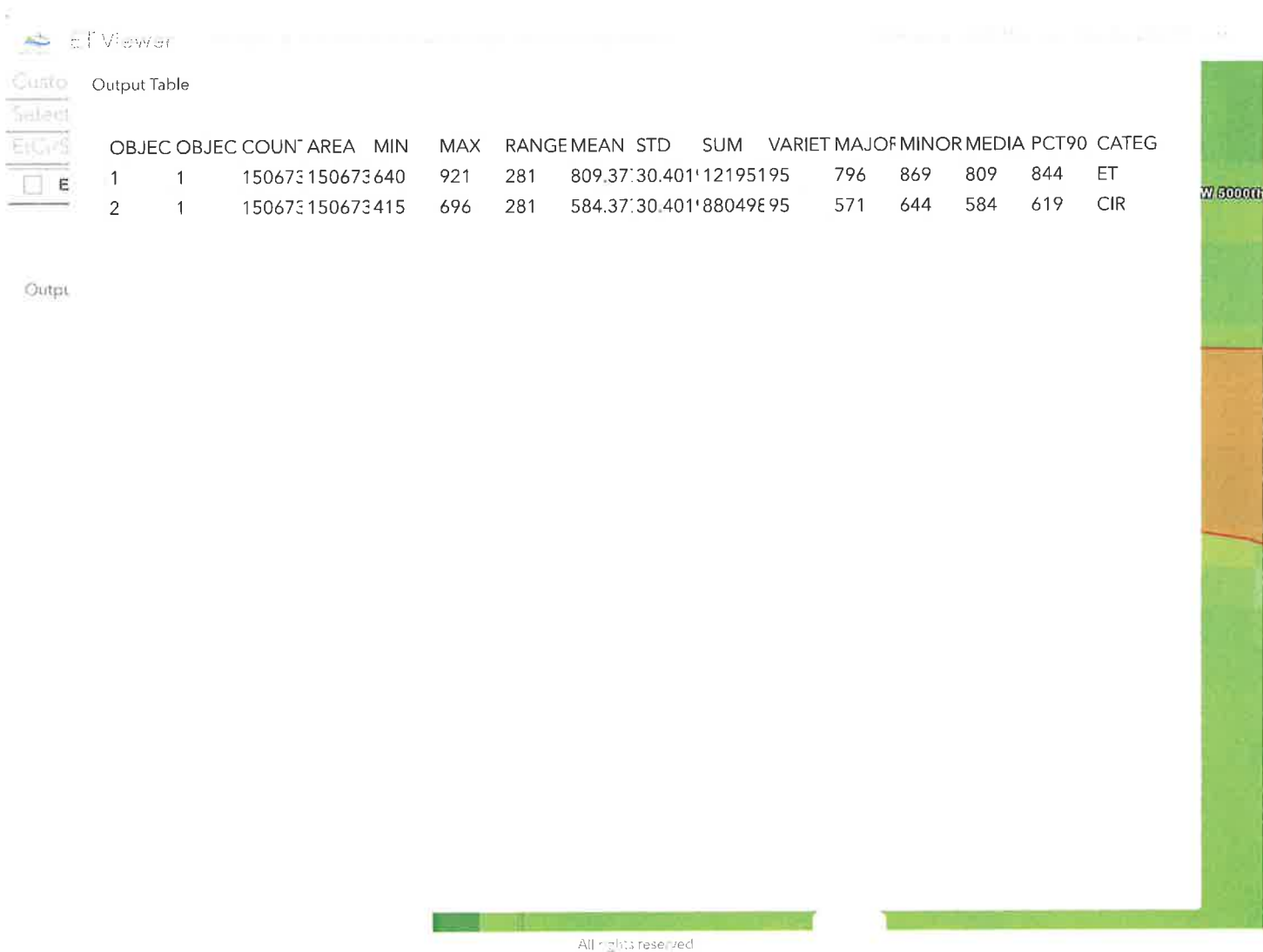


Evapotranspiration Statistics

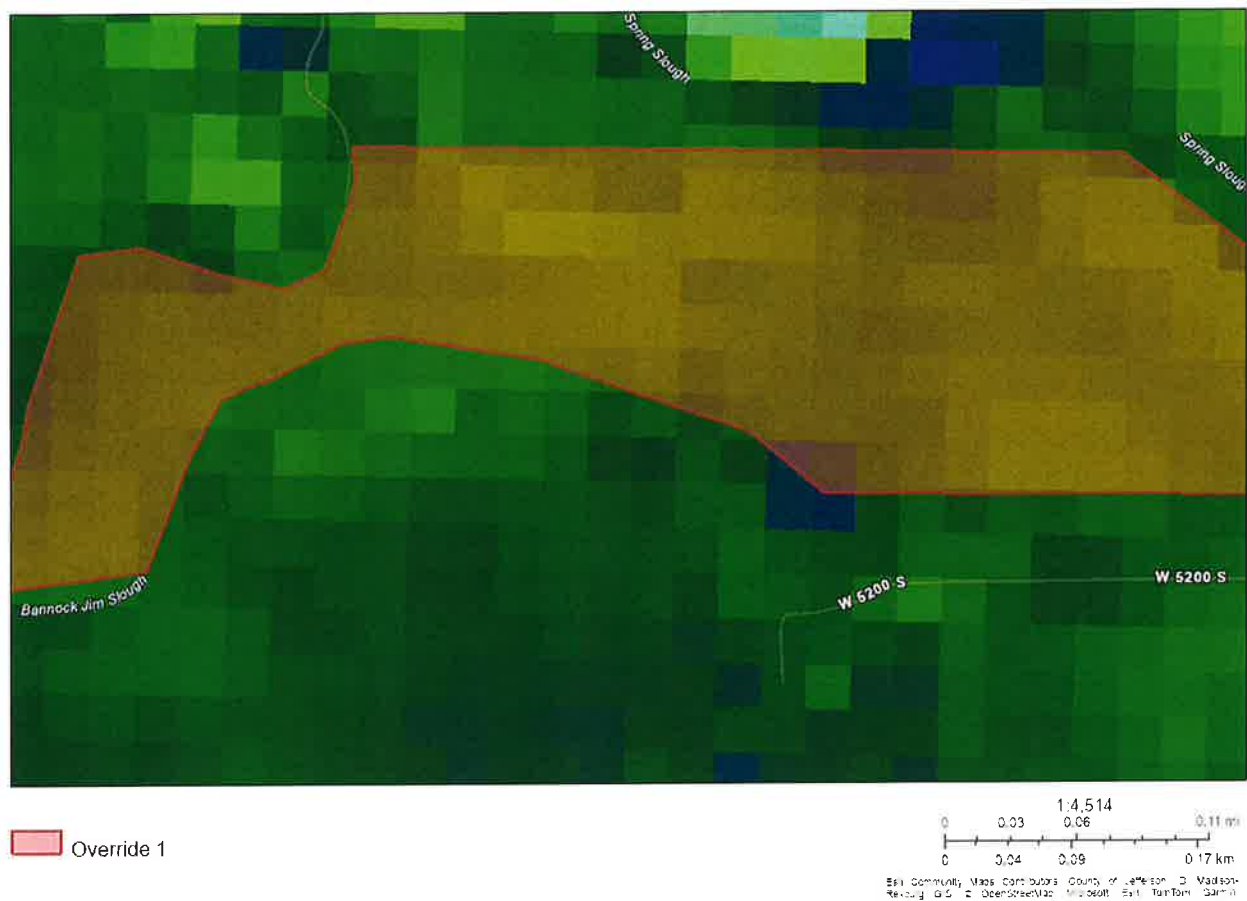
ET Dataset

These statistics were generated by the tools provided at <https://gis.idwr.idaho.gov/Portal/Evapotranspiration> using the **METRIC (Mapping EvapoTranspiration at high Resolution with Internalized Calibration)** model, developed by the University of Idaho. *Evapotranspiration (ET) from irrigated agriculture is synonymous with consumptive use. The consumptive irrigation requirement (CIR) is a measure of the irrigation water, exclusive of within-season effective rainfall, necessary to meet the consumptive use requirement of a crop.* A detailed explanation of these data can be found at <http://idwr.idaho.gov/GIS/mapping-evapotranspiration>





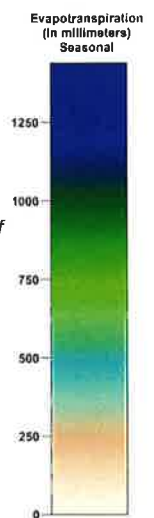
2013 Evapotranspiration Statistics from the METRIC ET Model

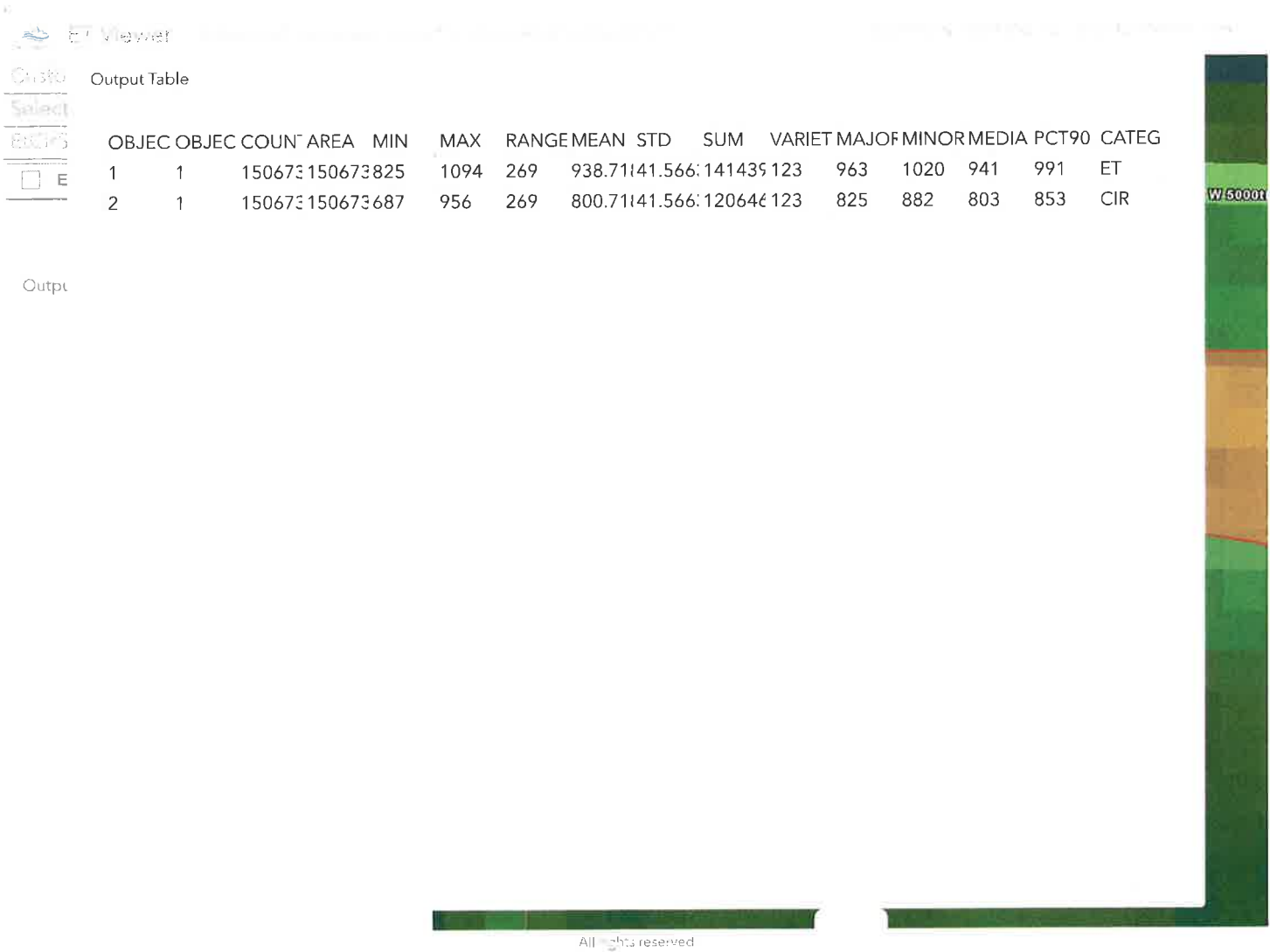


Evapotranspiration Statistics

ET Dataset

These statistics were generated by the tools provided at <https://gis.idwr.idaho.gov/Portal/Evapotranspiration> using the **METRIC (Mapping EvapoTranspiration at high Resolution with Internalized Calibration)** model, developed by the University of Idaho. *Evapotranspiration (ET) from irrigated agriculture is synonymous with consumptive use. The consumptive irrigation requirement (CIR) is a measure of the irrigation water, exclusive of within-season effective rainfall, necessary to meet the consumptive use requirement of a crop.* A detailed explanation of these data can be found at <http://idwr.idaho.gov/GIS/mapping-evapotranspiration>





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Output Table

OBJEC	OBJEC	COUNT	AREA	MIN	MAX	RANGE	MEAN	STD	SUM	VARIET	MAJOF	MINOR	MEDIA	PCT90	CATEG
1	1	150673	150673	825	1094	269	938.71	41.566	141435	123	963	1020	941	991	ET
2	1	150673	150673	687	956	269	800.71	41.566	120646	123	825	882	803	853	CIR

Output



IDAHO DEPARTMENT OF
WATER RESOURCES

ET-IDWR

**Evapotranspiration and Consumptive
Irrigation Water Requirements
for Idaho**

Rexburg (PN-AM -- RXGI)

Statistics based on thirty year normal spans 1992 to 2021 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.

Spring Grain - Irrigated 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	-0.49	-0.14	0.12	0.48	1.78	4.57	6.63	3.48	0.11	-0.30	-0.28	-0.53	525	-51	474
15-Day Moving Average ^d	-0.50	-0.17	0.11	0.41	1.75	4.51	6.62	3.52	0.07	-0.19	-0.27	-0.49			
7-Day Moving Average ^e	-0.50	-0.16	0.12	0.45	1.72	4.55	6.64	3.51	0.11	-0.23	-0.28	-0.52			
3-Day Moving Average ^f	-0.49	-0.15	0.11	0.46	1.75	4.56	6.63	3.50	0.13	-0.28	-0.29	-0.52			
Standard Deviation ^k	mm/day												mm		
Monthly ^c	0.33	0.27	0.25	0.55	1.05	1.62	0.92	1.43	0.56	0.37	0.30	0.36	61	23	65
15-Day Moving Average ^d	0.36	0.35	0.36	0.41	1.07	1.85	0.98	1.73	0.53	0.35	0.37	0.39			
7-Day Moving Average ^e	0.33	0.34	0.27	0.43	1.06	1.73	0.94	1.59	0.52	0.35	0.35	0.38			



IDAHO DEPARTMENT OF
WATER RESOURCES

ET-IDWR

**Evapotranspiration and Consumptive
Irrigation Water Requirements
for Idaho**

Idaho Falls FAA Arpt (NWS -- USW00024145)
Statistics based on thirty year normal spans 1982 to 2016 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.

Spring Grain - Irrigated 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	-0.24	-0.03	0.10	0.75	2.38	6.19	7.39	3.91	0.30	-0.10	-0.37	-0.41	644	-34	609
15-Day Moving Average ^d	-0.28	-0.09	0.10	0.66	2.39	6.20	7.41	3.84	0.29	-0.07	-0.37	-0.41			
7-Day Moving Average ^e	-0.27	-0.06	0.11	0.72	2.35	6.18	7.38	3.90	0.31	-0.08	-0.38	-0.41			
3-Day Moving Average ^f	-0.26	-0.03	0.10	0.73	2.36	6.18	7.38	3.90	0.30	-0.10	-0.37	-0.41			
Standard Deviation ^k	mm/day												mm		
Monthly ^c	0.22	0.31	0.23	0.60	1.25	1.58	1.00	1.54	0.67	0.25	0.39	0.34	56	18	57
15-Day Moving Average ^d	0.30	0.40	0.24	0.56	1.23	1.59	1.10	1.70	0.64	0.25	0.46	0.39			
7-Day Moving Average ^e	0.27	0.38	0.22	0.55	1.26	1.59	1.06	1.64	0.66	0.23	0.44	0.36			