

JUL 16 2009

Elizabeth Mathieu Revocable Living Trust

Attorney Name & Address:

Page 1

right. This water right, and Water Right No. 37-28K are appurtenant to, and Claimant is the owner of, Lot 3, Buckhorn Subdivision, Blaine County, Idaho ("Lot 3").

2. My law firm is also the counsel of record for Thomas A. Kennedy and Deborah M. Kirby ("Kennedy"), the owners of Lot 2, Buckhorn Subdivision, Blaine County, Idaho ("Lot 2") and its appurtenant water rights, 37-28J and 27-297M, and William P. Clifford and Tamera L. Clifford ("Clifford"), the owner of Lot 1, Buckhorn Subdivision, Blaine County, Idaho ("Lot 1") and its appurtenant water rights, 27-28D and 37-297E. Kennedy had filed timely objections to his water rights thus creating contested subcases. No objections were filed to the director's report recommendations for Claimant's and Clifford's water rights which thus remain uncontested.

3. Attached hereto as **Exhibit A** is a copy of the Blaine County Parcel Map depicting the location of these three adjacent Lots. The above-described water rights of Kennedy, Clifford and Claimant are all delivered from the Big Wood River via the Hiawatha Canal, which runs along the eastern boundaries of Lots 1, 2 and 3, into the pond situated on all three Lots as shown on Exhibit A. During the past year the question was raised as to whether or not this pond was small enough to be justified as the irrigation storage pond for these six (6) water rights. SPF Engineering was then retained to accurately measure the size of the pond and it was determined that the pond is, in fact, too large to so qualify.

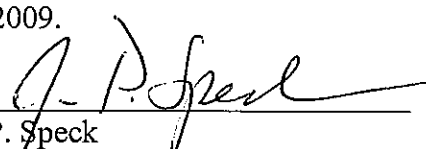
4. The pond, however, had been constructed and in use prior to November, 1987 so that the storage of water in the pond could be justified as an "accomplished transfer" of portions of the irrigation water rights pursuant to Idaho Code Section 42-1425. Accordingly, at the initial hearing

for the Kennedy Subcases, I made an oral motion to amend the claims which was granted by Special Master Bilyeu. Attached as **Exhibit B** is a copy of the Order Granting Motion to File Amended Notice of Claim, Setting Subcase Deadlines and Status Conference in those Subcases (the "Kennedy Order").

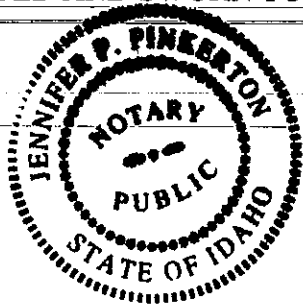
5. Pursuant to the Kennedy Order, Kennedy worked with attorneys and agents for the Idaho Department of Water Resources ("IDWR") to arrive at the proper format for the amended claims. Upon completing that work, Kennedy recently filed Amended Notices of Claim in Subcases 37-28J and 37-297M, copies of which are attached hereto as **Exhibits C and D**, respectively. An Amended Director's Report for these water rights was filed with this Court on December 26, 2008. No objections were filed. On May 28, 2009, Special Master Bilyeu issued her Special Master's Report and Recommendation; Findings of Fact and Conclusions of Law for these water rights, a copy of which is attached hereto as **Exhibit E**.

6. Since Claimant shares the use of the pond with Kennedy and Clifford, Claimant desires to amend its claim to be consistent with those now filed by Kennedy. IDWR has asked Claimant to file a Motion to File Late Objection so that Claimant's water right becomes the subject of a contested subcase and, at the same time, file a Motion to File Amended Notice of Claim. My law firm will file similar motions for Clifford.

DATED this 15 day of JULY, 2009.


James P. Speck

SUBSCRIBED AND SWORN TO before me this 15 day of July, 2009.



Jennifer Pinkerton
NOTARY PUBLIC for Idaho
Residing at: Ketchum, ID
Comm. Expires: 2/9/15

CERTIFICATE OF SERVICE

I hereby certify that on the 15 day of July, 2009, I served a true and correct copy of the foregoing AFFIDAVIT OF JAMES P. SPECK IN SUPPORT MOTION TO FILE LATE OBJECTION AND MOTION TO FILE AMENDED NOTICE OF CLAIM on the following persons in the manner designated below:

Clerk of the District Court
Snake River Basin Adjudication
253 Third Avenue North
P. O. Box 2707
Twin Falls, Idaho 83303-2707

- ☒ United States Mail, Postage Prepaid
☐ Hand Delivery
☐ Facsimile, with copy by United States Mail, Postage Prepaid

Elizabeth Mathieu Revocable Living Trust
30 Prescott Ave.
Bronxville, NY 10708

- ☒ United States Mail, Postage Prepaid
☐ Hand Delivery
☐ Facsimile, with copy by United States Mail, Postage Prepaid

Chief, Natural Resources Division
Office of the Attorney General, State of Idaho
P. O. Box 44449
Boise, ID 83711-4449

- ☒ United States Mail, Postage Prepaid
☐ Hand Delivery
☐ Facsimile, with copy by United States Mail, Postage Prepaid

The United States Department of Justice
Environmental and Natural Resources
Division
550 West Fort Street
Box 33
Boise, ID 83724

- ☒ United States Mail, Postage Prepaid
☐ Hand Delivery
☐ Facsimile, with copy by United States Mail, Postage Prepaid

Idaho Department of Water Resources
Document Depository
P.O. Box 83720
Boise, ID 83720-0098

- ☒ United States Mail, Postage Prepaid
☐ Hand Delivery
☐ Facsimile, with copy by United States Mail, Postage Prepaid

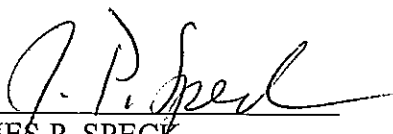

JAMES P. SPECK



EXHIBIT A

2008 OCT -2 PM 3:03

FILED

IN THE DISTRICT COURT OF THE FIFTH JUDICIAL DISTRICT OF THE
STATE OF IDAHO, IN AND FOR THE COUNTY OF TWIN FALLS

In Re SRBA	)	ORDER GRANTING MOTION TO
	)	FILE AMENDED NOTICE OF CLAIM,
Case No. 39576	)	SETTING SUBCASE DEADLINES AND
	)	STATUS CONFERENCE
	)	
	)	SUBCASE NOS.: 37-28J and 37-297M
	)	
	)	

I. PROCEDURAL BACKGROUND

An Initial Hearing was held on September 18, 2008. At the hearing, counsel James Speck made an oral *Motion to Amend* Claim.

II. STANDARD OF REVIEW

The SRBA Court administrative rules establish that motions to amend claims "shall be freely given when justice so requires." *SRBA Administrative Order 1 (A01)* § 4d (2) (k)

III. FINDINGS

Mr. Speck explained that the claim needs to be amended to more accurately describe these water rights.

No parties to the SRBA opposed the *Motion*, and there is no showing prejudice would result from allowing the amended claim. Therefore, the *Motion to File Amended Notice of Claim* is granted.

IT IS ORDERED that the following deadlines shall govern further proceedings

December 30, 2008	5:00 pm	Deadline to File Amended Director's Report
January 28, 2009	5:00 pm	Deadline to File Objection
February 16, 2009	5:00 pm	Deadline to File Response

ORDER GRANTING MOTION TO FILE AMENDED NOTICE OF CLAIM,
SETTING SUBCASE DEADLINES AND STATUS CONFERENCE
G:/BASIN FOLDERS/37ORDERS/28J.297M.MOTNGRANT AMENDCLAIM.SET DLINES
9/25/08

EXHIBIT B

March 18, 2009

2:00 pm

Status Conference

Location: Snake River Basin Adjudication
253 3rd Ave. North
Twin Falls, Idaho 83301

Parties may participate by phone for the Status Conference by dialing 1-225-383-1099 and when prompted enter participant code 926509. Any questions regarding telephone participation, please contact the Clerk's office at (208) 736-3011.

DATED: September 24, 2008.

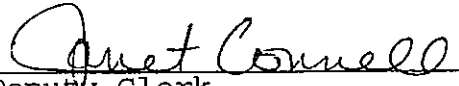

BRIGETTE BILYEU
Special Master
Snake River Basin Adjudication

CERTIFICATE OF MAILING

I certify that a true and correct copy of the ~~ORDER GRANTING~~
MOTION TO FILE AMENDED NOTICE OF CLAIM, SETTING SUBCASE DEADLINES
AND STATUS CONFERENCE was mailed on October 02, 2008, with sufficient
first-class postage to the following:

DEBORAH M KIRBY
THOMAS A KENNEDY
Represented by:
JAMES P. SPECK
SPECK & AANESTAD
120 EAST AVENUE
PO BOX 987
KETCHUM, ID 83340
Phone: 208-726-4421

DIRECTOR OF IDWR
PO BOX 83720
BOISE, ID 83720-0098


Deputy Clerk

1574

IN THE DISTRICT COURT OF THE FIFTH JUDICIAL DISTRICT OF THE STATE OF IDAHO,
IN AND FOR THE COUNTY OF TWIN FALLS

IN RE THE GENERAL ADJUDICATION
OF RIGHTS TO THE USE OF WATER FROM
THE SNAKE RIVER BASIN WATER SYSTEM

CIVIL CASE NUMBER: 39576

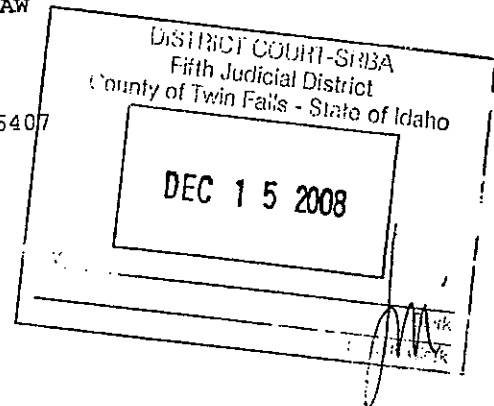
Subcase Number 37-28J
Date Received:
Receipt No:
Received By:

AMENDED NOTICE OF CLAIM TO A WATER RIGHT
ACQUIRED UNDER STATE LAW

1. Name of Claimant(s)

Thomas A. Kennedy
Deborah M. Kirby
P.O. Box 2773
Ketchum, ID 83340

Phone: (208) 788-6407



2. Date of Priority: March 24, 1883

3. Source: Big Wood River Trib. to: Malad River

4. Point of Diversion:

Township	Range	Section	1/4 of 1/4 of 1/4 Lot	County	Type
3N	18E	20	SW NW	Blaine	

5. Description of diverting works: Hiawatha Canal

6. Water is used for the following purposes:

Purpose	From	To	C.F.S.	(or) A.F.A
IRRIGATION	04/15	10/31	0.03	
DIVERSION TO STORAGE	04/15	10/31	0.01	0.87
AESTHETIC STORAGE	01/01	12/31		0.87
AESTHETIC	04/15	10/31	0.01	0.47

7. Total Quantity Appropriated is:
0.04 CFS/1.34 AFA

8. Non-irrigation uses: Storage for aesthetic use occurs in an excavated pond

Last Name: Kennedy/Kirby

Subcase No. 37-28J

EXHIBIT C

9. Place of use:

TWP	RGE	SEC	NE				NW				SW				SE				TOTALS
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
3N	18E	33												1.2					1.2
3N	18E	33												A ¹					

Total number of acres irrigated: 1.2

10. Place of use in counties: Blaine

11. Do you own the property listed above as place of use? Yes

12. Other Water Rights Used: 37-297M

13. Remarks:

Right Nos. 37-28J and 37-297M are limited to the irrigation of a combined total of 1.2 acres in a single irrigation season.

Rights 37-28J and 37-297M when combined shall not exceed a total annual maximum storage volume of 1.34 af.

14. Basis of Claim: Decree

¹ Aesthetic Storage and Aesthetic use

15. Signature(s)

(a.) By signing below, I/We acknowledge that I/We have received, read and understand the form entitled "How you will receive notice in the Snake River Basin Adjudication." (b.) I/We do ☐ do not ☒ wish to receive and pay a small annual fee for monthly copies of the docket sheet.

Number of attachments: 4 (map, ET_{Idaho} data, calculation spreadsheet and explanation)

I do solemnly swear or affirm that the statements contained in the foregoing document are true and correct.

Signature of Claimant: Thomas A. Kennedy Date: 12/14/08
Thomas A. Kennedy

State of Idaho)

County of)

Subscribed and sworn (or affirmed) before me this 12th of December, 2008.



Opal Davis
Notary Public

Residing at Rt 1, Box 1210, Fairfield ID 83327
My commission Expires 6/20/13

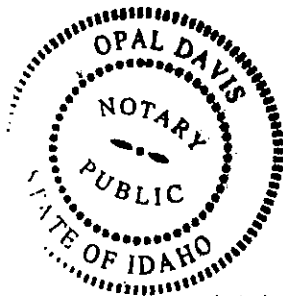
I do solemnly swear or affirm that the statements contained in the foregoing document are true and correct.

Signature of Claimant: Deborah M. Kirby Date: 12/12/08
Deborah M. Kirby

State of Idaho)

County of)

Subscribed and sworn (or affirmed) before me this 12th of December, 2008.



Opal Davis
Notary Public

Residing at Rt 1, Box 1210, Fairfield ID 83327
My commission Expires 6/20/13

Last Name: Kennedy/Kirby

Subcase No. 37-28J

Explanation

Aesthetic use and year-round storage for aesthetic use are claimed as accomplished changes in nature of use and season of use, pursuant to §42-1425, Idaho Code. The following is a description of historical water use at the claimed site, changes to the use that occurred prior to 1987, and a narrative description of the net effect on the portions of water rights 37-28 and 37-297 claimed by Thomas A. Kennedy and Deborah M. Kirby (the claimants).

Background

Water rights 37-28 and 37-297 were diverted from the Big Wood River, delivered through the Hiawatha Canal, and used for the irrigation of agricultural land prior to subdivision and development. The claimants' pond was excavated and filled with water as the lots in Buckhorn Subdivision were sold; beneficial use as an aesthetic pond began in April 1987 when the claimants' home was completed (see attached map, the home is clearly visible on the 1987/88 aerial photography).

The pond now lies on three properties, owned by Kennedy and Kirby (the claimants), and their neighbors (Clifford and Mathieu, who will be claiming their portions of the pond separately). The following water rights are diverted from the Hiawatha Canal and flow through the claimed pond:

Water Right No.	Owner	Priority Date	Diversion Rate (cfs)	Irrigated Area (acres)
37-28D	Clifford	March 24, 1883	0.04	2.0
37-28J	Kennedy/Kirby	March 24, 1883	0.04	1.9 ²
37-28K	Mathieu	March 24, 1883	0.04	1.9
37-297A	Mathieu	November 26, 1886	0.08	1.9
37-297E	Clifford	November 26, 1886	0.08	1.6
37-297M	Kennedy/Kirby	November 26, 1886	0.08	1.9 ²

Table 1: Area Water Rights

The surface area of the pond is 0.44 acres, of which 0.29 acres are on the Kennedy/Kirby lot. The pond depth averages three feet for a total volume of 1.32 acre-feet (0.87 acre-feet on the claimants' lot). A total diversion of 0.36 cfs flows into the pond from the Kennedy/Kirby, Clifford and Mathieu water rights.

Analysis

The claimants own a 2-acre parcel (Lot 2, Blk. 1, Buckhorn Subdivision) which was historically irrigated with the claimed water rights. It is assumed the primary crop was grass hay. GIS software was used to determine the irrigation place of use prior to construction of the home and driveway, and excavation of the pond (1.9 acres were irrigated). The irrigated area after construction of the home and driveway and excavation of the pond was also determined using GIS technology (1.2 acres are currently irrigated).

² The Kennedy/Kirby place of use was originally recommended in the SRBA as 1.1 acres. This amended claim asserts the original place of use (prior to excavation of the pond) was 1.9 acres.

Online data, available from the ET_{Idaho} website for the Hailey Ranger Station site (www.kimberly.uidaho.edu/ETIdaho), was used to calculate three volumes: 1) the volume of water used during the irrigation season for irrigation of 1.9 acres of grass hay, 2) the volume of water used for irrigation during the irrigation season for 1.2 acres of turf grass (lawn), and 3) the volume of water consumed by evaporative losses from the pond surface on the Kennedy/Kirby property (0.29 acres) year-round. The ET_{Idaho} data is attached to this application. These volumes were compared to show no enlargement of the water rights occurred when the change in nature of use and season of use was accomplished (see Table 5).

Precipitation Deficit (grass hay)	Mean Monthly PD* (mm/day)	Days	PD (mm)	PD (feet)	PD Vol (acre-feet)
April	0.52	15	7.80	0.03	0.05
May	2.43	31	75.33	0.25	0.47
June	4.64	30	139.20	0.46	0.87
July	6.40	31	198.40	0.65	1.24
August	4.20	31	130.20	0.43	0.81
September	2.60	30	78.00	0.26	0.49
October	0.54	31	16.74	0.05	0.10
			Total	2.12	4.02

Table 2: Irrigation before change (grass hay)

Precipitation Deficit (turf grass)	Mean Monthly PD* (mm/day)	Days	PD (mm)	PD (feet)	PD Vol (acre-feet)
April	0.47	15	7.05	0.02	0.03
May	2.02	31	62.62	0.21	0.25
June	4.04	30	121.20	0.40	0.48
July	5.42	31	168.02	0.55	0.66
August	4.49	31	139.19	0.46	0.55
September	2.69	30	80.70	0.26	0.32
October	0.6	31	18.60	0.06	0.07
			Total	1.96	2.35

Table 3: Irrigation after change (turf grass)

Precipitation Deficit (pond)	Mean Monthly PD* (mm/day)	Days	PD (mm)	PD (feet)	PD (acre-feet)
January	-1.91	31	-59.21	-0.19	0.00
February	-1.05	28	-29.40	-0.10	0.00
March	0.07	31	2.17	0.01	0.00
April	1.33	15	19.95	0.07	0.02
May	2.19	31	67.89	0.22	0.06
June	2.62	30	78.60	0.26	0.07
July	3.97	31	123.07	0.40	0.12
August	3.40	31	105.40	0.35	0.10
September	2.17	30	65.10	0.21	0.06
October	1.03	31	31.93	0.10	0.03
November	-0.78	30	-23.40	-0.08	0.00
December	-1.53	31	-47.43	-0.16	0.00
Total				1.10	0.47

Table 4: Evaporation from pond surface after change

Before Change		Diversion (cfs)	Area (acres)	Vol (afa)	PD Vol (afa)	Notes
irrigation	37-28J	0.04	1.9		4.02	grass hay; 4/15 to 10/31
	37-297M	0.08				
Totals		0.12	1.9	4.03 afa for irrigation only		
After Change		Diversion (cfs)	Area (acres)	Vol (afa)	PD Vol (afa)	Notes
irrigation	37-28J	0.03	1.2		2.35	turf grass; 4/15 to 10/31
	37-297M	0.05				
diversion to pond	37-28J	0.04		0.87		4/15 to 10/31
	37-297M	0.08				
pond evaporation	37-28J		0.29		0.47	4/15 to 10/31
	37-297M					
Totals		0.12	1.49	0.87	2.82	
				3.69 for irrigation and storage		

Table 5: Water Consumption Before and After Change in Nature of Use

Summary

The Kennedy/Kirby pond was excavated at the time the subdivision was developed, without benefit of a formal design. The pond is relatively small and the inflow from the Hiawatha canal (a total of 0.36 cfs from Kennedy/Kirby, Clifford and Mathieu) contributes to a pond environment that is clean and clear with a healthy population of fish, aquatic plants and invertebrates. The pond has been used for its aesthetic value since 1987.

Actual water consumption prior to excavation of the pond is estimated to have been 4.02 acre-feet annually. Actual water consumption (for irrigation and evaporative loss) after excavation of the pond is estimated to be 3.69 acre-feet annually (including filling the pond annually, when needed).



Last Name: Kennedy/Kirby

Subcase No. 37-28J

ETIdaho --- Evapotranspiration and Consumptive Irrigation

Water Requirements for Idaho

Please send suggestions for improving this site to robinson@kimberly.uidaho.edu Copyright 2007, University of Idaho.

Hailey Ranger Stn (NWS NOAA--103942)

Statistics based on 30 years between 1947 to 1981

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 - Turf (lawns) - Irrigated														
Precipitation Deficit (Click here for a graph)														
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Growing Season ^a	Annual
Mean	mm/day												mm	
Monthly ^b	0.02	0.13	0.21	0.47	2.02	4.04	5.42	4.49	2.69	0.60	-0.26	-0.05	574	620
15-Day Moving Average ^c	0.03	0.12	0.23	0.46	1.94	4.02	5.48	4.45	2.66	0.57	-0.38	-0.06		
7-Day Moving Average ^d	0.03	0.12	0.22	0.47	1.98	3.99	5.45	4.48	2.67	0.57	-0.33	-0.06		
3-Day Moving Average ^e	0.02	0.13	0.21	0.46	2.02	4.02	5.42	4.50	2.68	0.60	-0.28	-0.06		
Standard Deviation	mm/day												mm	
Monthly	0.15	0.09	0.19	0.30	1.62	1.26	0.69	1.54	1.10	0.82	0.26	0.29	84	83
15-Day Moving Average	0.15	0.15	0.22	0.41	1.42	1.59	0.63	1.49	1.37	0.85	0.49	0.31		
7-Day Moving Average	0.25	0.28	0.36	0.66	1.78	2.09	0.87	1.66	1.70	1.21	0.82	0.43		
3-Day Moving Average	0.43	0.45	0.62	1.14	2.23	2.64	1.32	2.03	2.17	1.63	1.25	0.62		
20% Exceedance	mm/day												mm	
Monthly	0.10	0.21	0.31	0.75	3.06	4.96	5.83	5.12	3.70	0.85	-0.07	0.04	630	689
15-Day Moving Average	0.23	0.34	0.51	0.95	4.28	5.77	6.10	5.66	4.30	1.98	0.25	0.17		
7-Day Moving Average	0.33	0.54	0.74	1.16	5.18	6.40	6.67	6.20	4.63	2.85	0.45	0.27		
3-Day Moving Average	0.40	0.61	1.02	1.83	6.19	7.17	7.25	6.61	5.59	3.54	0.66	0.34		
80% Exceedance	mm/day												mm	
Monthly	0.08	0.04	0.04	0.21	0.94	3.21	4.88	4.19	1.71	0.18	-0.56	-0.17	491	546
15-Day Moving	-									-				

Average	0.27	-0.13	-0.21	-0.29	-0.02	2.07	4.48	3.44	0.23	0.59	-1.27	-0.35		
7-Day Moving Average	0.75	-0.60	-0.72	-0.93	-2.04	-1.25	3.39	1.82	0.76	2.21	-2.63	-0.79		
3-Day Moving Average	2.03	-1.43	-1.92	-2.67	-5.52	-3.46	1.21	-0.17	5.12	5.38	-6.48	-1.68		
Ave Highest ET	mm/day												--	
15-Day Moving Average ^f	0.16	0.28	0.44	0.78	2.95	5.04	5.92	5.15	3.58	1.21	0.15	0.11		
7-Day Moving Average ^g	0.27	0.45	0.65	1.09	4.02	5.98	6.42	5.84	4.17	1.64	0.39	0.23		
3-Day Moving Average ^h	0.36	0.55	0.88	1.62	5.21	6.72	6.96	6.34	4.97	2.20	0.51	0.29		
Ave Lowest ET	mm/day												--	
15-Day Moving Average ^f	0.13	-0.02	-0.01	0.06	0.99	3.06	4.98	3.78	1.74	0.04	-0.65	-0.23		
7-Day Moving Average ^g	0.42	-0.31	-0.38	-0.62	-0.21	1.62	4.31	2.87	0.81	0.95	-1.42	-0.54		
3-Day Moving Average ^h	1.06	-0.92	-1.30	-2.10	-2.48	-0.80	2.52	1.06	1.10	2.67	-3.16	-1.23		
Special normal distribution parameters for monthly, seasonal, and annual intervals													--	
Skew	0.28	-0.82	0.12	0.26	0.16	-0.89	0.14	-0.75	0.65	0.18	-0.38	-1.14	0.31	0.15
Kurtosis	0.81	3.57	0.72	2.81	0.64	3.66	0.64	1.61	2.52	0.90	2.22	3.78	3.11	2.87

^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 Mean of the average daily value for month

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

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

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

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

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

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

Copyright 2007, University of Idaho.

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, 2006 (Revised 2007). Evapotranspiration and Consumptive Irrigation Water Requirements for Idaho, 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

ET Idaho --- Evapotranspiration and Consumptive Irrigation

Water Requirements for Idaho

Please send suggestions for improving this site to robison@kimberly.uidaho.edu Copyright 2007, University of Idaho.

Hailey Ranger Stn (NWS NOAA--103942) Statistics based on 30 years between 1947 to 1981

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 Hay Precipitation Deficit (Click here for a graph)													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Growing Season ^a
Mean	mm/day												mm
Monthly ^b	0.06	0.12	0.21	0.52	2.43	4.64	6.40	4.20	2.60	0.54	-0.38	-0.19	624
15-Day Moving Average ^c	0.06	0.12	0.23	0.48	2.38	4.58	6.50	4.04	2.57	0.50	-0.47	-0.22	
7-Day Moving Average ^d	0.06	0.12	0.22	0.49	2.41	4.56	6.46	4.13	2.57	0.50	-0.43	-0.19	
3-Day Moving Average ^e	0.06	0.12	0.21	0.50	2.44	4.61	6.40	4.18	2.58	0.53	-0.40	-0.19	
Standard Deviation	mm/day												mm
Monthly	0.46	0.11	0.19	0.38	1.74	1.32	0.69	1.48	1.13	0.90	0.44	0.45	87
15-Day Moving Average	0.42	0.17	0.22	0.44	1.56	1.67	0.66	1.51	1.39	0.93	0.63	0.50	
7-Day Moving Average	0.60	0.31	0.36	0.70	1.98	2.16	0.94	1.79	1.72	1.34	1.01	0.65	
3-Day Moving Average	0.87	0.49	0.62	1.20	2.43	2.68	1.38	2.16	2.24	1.82	1.52	0.93	
20% Exceedance	mm/day												mm
Monthly	0.10	0.21	0.31	0.75	3.64	5.66	6.75	4.84	3.62	0.68	-0.08	0.03	677
15-Day Moving Average	0.23	0.34	0.51	1.00	4.63	6.68	7.20	6.16	4.18	1.91	0.24	0.17	
7-Day Moving Average	0.33	0.54	0.74	1.18	5.43	7.19	7.56	6.70	4.70	2.67	0.45	0.27	
3-Day Moving Average	0.40	0.61	1.02	2.08	6.33	7.61	7.98	6.98	5.56	3.40	0.66	0.34	
80% Exceedance	mm/day												mm
Monthly	0.16	0.04	0.04	0.21	1.46	3.82	5.90	3.71	1.70	0.03	-0.83	-0.41	544
													580

15-Day Moving Average	0.50	-0.13	-0.20	-0.29	0.48	2.69	5.34	2.79	0.23	0.63	-1.69	-0.95	
7-Day Moving Average	1.07	-0.60	-0.72	-0.93	-1.21	-0.77	4.17	1.15	0.76	2.56	-3.05	-1.88	
3-Day Moving Average	2.53	-1.43	-1.95	-2.67	-5.81	-3.59	1.41	0.00	4.47	5.74	-6.92	-3.94	
Ave Highest ET	mm/day												--
15-Day Moving Average ^f	0.15	0.28	0.44	0.86	3.53	5.70	6.97	5.08	3.41	1.20	0.14	0.10	
7-Day Moving Average ^g	0.27	0.45	0.65	1.23	4.63	6.69	7.31	5.93	4.10	1.66	0.39	0.23	
3-Day Moving Average ^h	0.36	0.55	0.88	1.90	5.72	7.28	7.77	6.64	4.78	2.19	0.52	0.29	
Ave Lowest ET	mm/day												--
15-Day Moving Average ^f	0.26	-0.03	0.00	0.06	1.32	3.55	5.95	3.16	1.72	0.16	-0.89	-0.49	
7-Day Moving Average ^g	0.68	-0.32	-0.38	-0.61	-0.02	2.07	5.07	2.18	0.76	1.20	-1.81	-1.04	
3-Day Moving Average ^h	1.62	-0.97	-1.30	-2.10	-2.34	-0.41	3.27	0.69	1.24	3.23	-3.88	-2.24	
Special normal distribution parameters for monthly, seasonal, and annual intervals													--
Skew	1.16	-1.89	0.11	0.97	0.11	-0.74	0.16	-0.54	0.66	0.08	-1.01	-0.51	0.44 0.30
Kurtosis	3.30	8.00	0.71	3.81	0.68	3.46	0.74	1.21	2.67	1.00	3.31	1.19	3.27 2.60

^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 Mean of the average daily value for month

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

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

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

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

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

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

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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.

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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

ETIdaho --- Evapotranspiration and Consumptive Irrigation

Water Requirements for Idaho

Please send suggestions for improving this site to robison@kimberly.uidaho.edu Copyright 2007, University of Idaho.

Hailey Ranger Stn (NWS NOAA--103942)

Statistics based on 30 years between 1947 to 1981

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	Annual
Mean	mm/day												mm	
Monthly ^b	-1.91	-1.05	0.07	1.33	2.19	2.62	3.97	3.40	2.17	1.03	-0.78	-1.53	353	353
15-Day Moving Average ^c	-2.13	-1.02	0.01	1.48	2.17	2.59	4.01	3.43	2.12	1.03	-0.94	-1.46		
7-Day Moving Average ^d	-2.00	-1.03	0.03	1.40	2.19	2.56	4.00	3.43	2.15	1.02	-0.84	-1.51		
3-Day Moving Average ^e	-1.93	-1.02	0.04	1.33	2.20	2.59	3.97	3.41	2.17	1.03	-0.79	-1.53		
Standard Deviation	mm/day												mm	
Monthly	2.42	1.13	0.99	0.91	1.49	1.33	0.63	1.09	0.86	0.98	1.06	2.54	118	118
15-Day Moving Average	2.67	1.75	1.10	1.15	1.51	1.65	0.57	1.10	1.19	1.00	1.43	2.51		
7-Day Moving Average	3.52	2.55	1.51	1.63	1.90	2.20	0.76	1.24	1.52	1.44	1.99	3.31		
3-Day Moving Average	4.76	3.40	2.24	2.37	2.44	2.74	1.12	1.62	2.09	1.96	2.77	4.19		
20% Exceedance	mm/day												mm	
Monthly	-0.55	-0.10	0.75	1.98	2.88	3.75	4.32	3.84	2.80	1.67	0.29	-0.20	459	459
15-Day Moving Average	0.37	0.64	1.33	2.88	3.84	4.22	4.59	4.19	3.16	2.06	0.64	0.36		
7-Day Moving Average	0.63	0.99	1.62	3.18	4.23	4.64	4.75	4.31	3.52	2.46	1.06	0.48		
3-Day Moving Average	0.76	1.09	2.03	3.60	4.64	4.89	4.98	4.54	3.73	2.70	1.16	0.59		
80% Exceedance	mm/day												mm	

Monthly	-3.55	-2.27	-0.83	0.23	1.71	1.58	3.64	3.11	1.66	0.26	-2.00	-2.46	280	280
15-Day Moving Average	-6.21	-4.27	-1.94	-0.96	0.18	0.11	3.18	2.35	0.49	0.92	-3.92	-4.25		
7-Day Moving Average	10.90	-8.97	-3.84	-2.94	-1.79	3.01	2.16	1.17	1.26	2.62	-6.30	-6.68		
3-Day Moving Average	16.43	15.38	-8.92	-6.49	-5.97	6.56	0.04	-1.57	5.32	6.20	10.55	13.65		
Ave Highest ET	mm/day												--	
15-Day Moving Average ^f	0.19	0.38	0.93	2.23	3.11	3.61	4.35	3.91	2.78	1.76	0.36	0.17		
7-Day Moving Average ^g	0.48	0.87	1.45	2.77	3.91	4.38	4.59	4.23	3.29	2.16	0.82	0.40		
3-Day Moving Average ^h	0.64	1.00	1.77	3.22	4.30	4.75	4.85	4.45	3.59	2.51	1.05	0.50		
Ave Lowest ET	mm/day												--	
15-Day Moving Average ^f	-3.77	-2.22	-0.86	0.50	1.17	1.60	3.63	2.85	1.46	0.30	-1.84	-2.87		
7-Day Moving Average ^g	-6.92	-4.66	-2.20	-1.05	-0.48	0.01	2.98	2.05	0.53	0.97	-3.55	-5.21		
3-Day Moving Average ^h	12.77	-8.87	-5.14	-3.85	-3.36	2.44	1.54	0.43	1.77	3.31	-6.94	-9.69		
Special normal distribution parameters for monthly, seasonal, and annual intervals													--	
Skew	-0.39	-0.58	-0.12	-0.53	-0.51	0.92	0.31	-1.28	1.30	0.07	-0.53	-1.00	-0.13	-0.13
Kurtosis	0.95	2.84	0.51	2.60	1.63	3.39	0.87	4.26	4.28	0.49	2.19	3.23	3.36	3.36

^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 Mean of the average daily value for month

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

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

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

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

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

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

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1575

IN THE DISTRICT COURT OF THE FIFTH JUDICIAL DISTRICT OF THE STATE OF IDAHO,
IN AND FOR THE COUNTY OF TWIN FALLS

IN RE THE GENERAL ADJUDICATION
OF RIGHTS TO THE USE OF WATER FROM
THE SNAKE RIVER BASIN WATER SYSTEM

CIVIL CASE NUMBER: 39576

Subcase Number 37-297M

Date Received:

Receipt No:

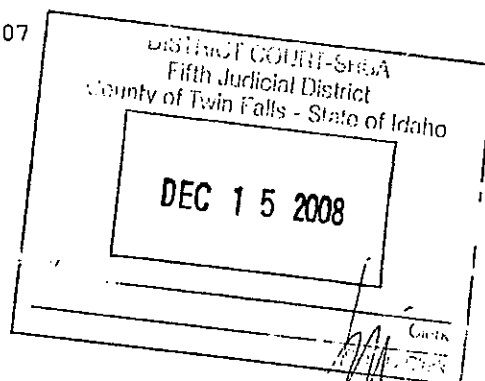
Received By:

AMENDED NOTICE OF CLAIM TO A WATER RIGHT
ACQUIRED UNDER STATE LAW

1. Name of Claimant(s)

Thomas A. Kennedy
Deborah M. Kirby
P.O. Box 2773
Ketchum, ID 83340

Phone: (208) 788-6407



2. Date of Priority: November 26, 1886

3. Source: Big Wood River Trib. to: Malad River

4. Point of Diversion:

Township	Range	Section	1/4 of 1/4 of 1/4 Lot	County	Type
3N	18E	20	SW NW	Blaine	

5. Description of diverting works: Hiawatha Canal

6. Water is used for the following purposes:

Purpose	From	To	C.F.S.	(or) A.F.A
IRRIGATION	04/15	10/31	0.05	
DIVERSION TO STORAGE	04/15	10/31	0.03	0.87
AESTHETIC STORAGE	01/01	12/31		0.87
AESTHETIC	04/15	10/31	0.03	0.47

7. Total Quantity Appropriated is:
0.08 CFS/1.34 AFA

8. Non-irrigation uses: Aesthetic use occurs in an excavated pond.

Last Name: Kennedy/Kirby

Subcase No. 37-297M

EXHIBIT D

9. Place of use:

TWP	RGE	SEC	NE				NW				SW				SE				TOTALS
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
3N	18E	33												1.2					1.2
3N	18E	33												A ¹					

Total number of acres irrigated: 1.2

10. Place of use in counties: Blaine

11. Do you own the property listed above as place of use? Yes

12. Other Water Rights Used: 37-28J

13. Remarks:

Right Nos. 37-28J and 37-297M are limited to the irrigation of a combined total of 1.2 acres in a single irrigation season.

Rights 37-28J and 37-297M when combined shall not exceed a total annual maximum storage volume of 1.34 af.

14. Basis of Claim: Decree

¹ Aesthetic Storage and Aesthetic use

15. Signature(s)

(a.) By signing below, I/We acknowledge that I/We have received, read and understand the form entitled "How you will receive notice in the Snake River Basin Adjudication." (b.) I/We do ☐ do not ☒ wish to receive and pay a small annual fee for monthly copies of the docket sheet.

Number of attachments: 4 (map, ET_{Idaho} data, calculation spreadsheet and explanation)

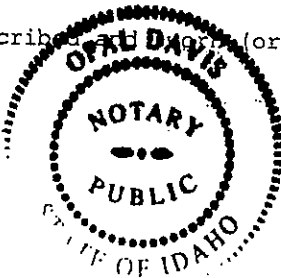
I do solemnly swear or affirm that the statements contained in the foregoing document are true and correct.

Signature of Claimant: Thomas A. Kennedy Date: 12-12-08

State of Idaho)

County of)

Subscribed and sworn (or affirmed) before me this 12th of December 2008.



Opal Davis
Notary Public

Residing at Rt 1, Box 1210, Fairfield, ID 83327

My commission Expires 6/20/13

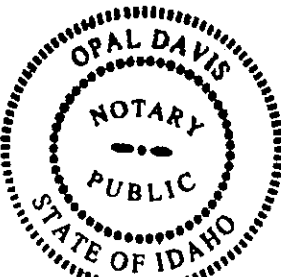
I do solemnly swear or affirm that the statements contained in the foregoing document are true and correct.

Signature of Claimant: Deborah M. Kirby Date: 12/12/08

State of Idaho)

County of)

Subscribed and sworn (or affirmed) before me this 12th of December 2008.



Opal Davis
Notary Public

Residing at Rt 1, Box 1210, Fairfield, ID 83327

My commission Expires 6/20/13

Last Name: Kennedy/Kirby

Subcase No. 37-297M

Explanation

Aesthetic use and year-round storage for aesthetic use are claimed as accomplished changes in nature of use and season of use, pursuant to §42-1425, Idaho Code. The following is a description of historical water use at the claimed site, changes to the use that occurred prior to 1987, and a narrative description of the net effect on the portions of water rights 37-28 and 37-297 claimed by Thomas A. Kennedy and Deborah M. Kirby (the claimants).

Background

Water rights 37-28 and 37-297 were diverted from the Big Wood River, delivered through the Hiawatha Canal, and used for the irrigation of agricultural land prior to subdivision and development. The claimants' pond was excavated and filled with water as the lots in Buckhorn Subdivision were sold; beneficial use as an aesthetic pond began in April 1987 when the claimants' home was completed (see attached map, the home is clearly visible on the 1987/88 aerial photography).

The pond now lies on three properties, owned by Kennedy and Kirby (the claimants), and their neighbors (Clifford and Mathieu, who will be claiming their portions of the pond separately). The following water rights are diverted from the Hiawatha Canal and flow through the claimed pond:

Water Right No.	Owner	Priority Date	Diversion Rate (cfs)	Irrigated Area (acres)
37-28D	Clifford	March 24, 1883	0.04	2.0
37-28J	Kennedy/Kirby	March 24, 1883	0.04	1.9 ²
37-28K	Mathieu	March 24, 1883	0.04	1.9
37-297A	Mathieu	November 26, 1886	0.08	1.9
37-297E	Clifford	November 26, 1886	0.08	1.6
37-297M	Kennedy/Kirby	November 26, 1886	0.08	1.9 ²

Table 1: Area Water Rights

The surface area of the pond is 0.44 acres, of which 0.29 acres are on the Kennedy/Kirby lot. The pond depth averages three feet for a total volume of 1.32 acre-feet (0.87 acre-feet on the claimants' lot). A total diversion of 0.36 cfs flows into the pond from the Kennedy/Kirby, Clifford and Mathieu water rights.

Analysis

The claimants own a 2-acre parcel (Lot 2, Blk. 1, Buckhorn Subdivision) which was historically irrigated with the claimed water rights. It is assumed the primary crop was grass hay. GIS software was used to determine the irrigation place of use prior to construction of the home and driveway, and excavation of the pond (1.9 acres were irrigated). The irrigated area after construction of the home and driveway and excavation of the pond was also determined using GIS technology (1.2 acres are currently irrigated).

² The Kennedy/Kirby place of use was originally recommended in the SRBA as 1.1 acres. This amended claim asserts the original place of use (prior to excavation of the pond) was 1.9 acres.

Precipitation Deficit (pond)	Mean Monthly PD (mm/day)	Days	PD (mm)	PD (feet)	PD (acre-feet)
January	-1.91	31	-59.21	-0.19	0.00
February	-1.05	28	-29.40	-0.10	0.00
March	0.07	31	2.17	0.01	0.00
April	1.33	15	19.95	0.07	0.02
May	2.19	31	67.89	0.22	0.06
June	2.62	30	78.60	0.26	0.07
July	3.97	31	123.07	0.40	0.12
August	3.40	31	105.40	0.35	0.10
September	2.17	30	65.10	0.21	0.06
October	1.03	31	31.93	0.10	0.03
November	-0.78	30	-23.40	-0.08	0.00
December	-1.53	31	-47.43	-0.16	0.00
Total				1.10	0.47

Table 4: Evaporation from pond surface after change

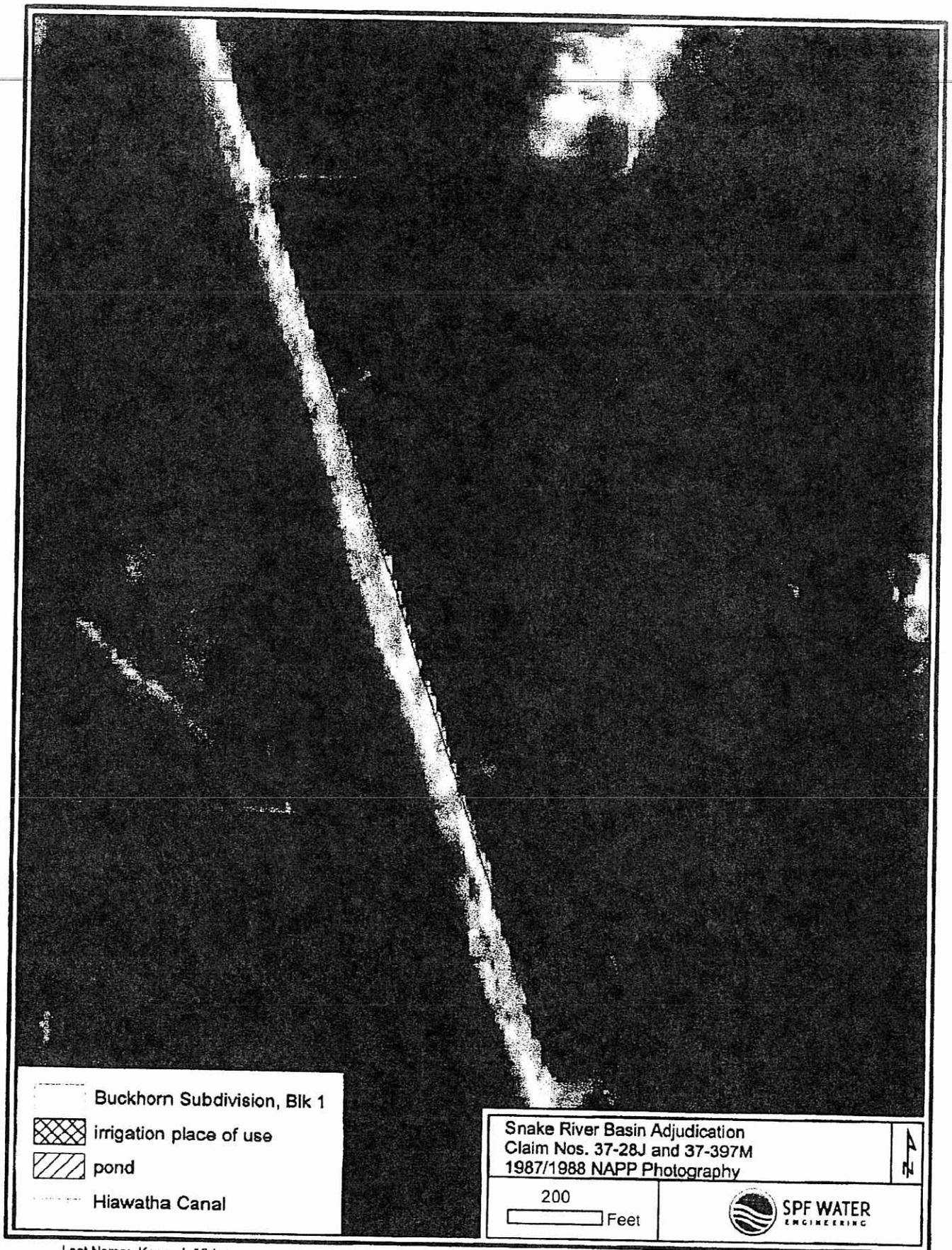
Before Change		Diversion (cfs)	Area (acres)	Vol (afa)	PD Vol (afa)	Notes
irrigation	37-28J	0.04	1.9		4.02	grass hay; 4/15 to 10/31
	37-297M	0.08				
Totals		0.12	1.9	4.03 afa for irrigation only		
After Change		Diversion (cfs)	Area (acres)	Vol (afa)	PD Vol (afa)	Notes
irrigation	37-28J	0.03	1.2		2.35	turf grass; 4/15 to 10/31
	37-297M	0.05				
diversion to pond	37-28J	0.04		0.87		4/15 to 10/31
	37-297M	0.08				
pond evaporation	37-28J		0.29		0.47	4/15 to 10/31
	37-297M					
Totals		0.12	1.49	0.87	2.82	
				3.69 for irrigation and storage		

Table 5: Water Consumption Before and After Change in Nature of Use

Summary

The Kennedy/Kirby pond was excavated at the time the subdivision was developed, without benefit of a formal design. The pond is relatively small and the inflow from the Hiawatha canal (a total of 0.36 cfs from Kennedy/Kirby, Clifford and Mathieu) contributes to a pond environment that is clean and clear with a healthy population of fish, aquatic plants and invertebrates. The pond has been used for its aesthetic value since 1987.

Actual water consumption prior to excavation of the pond is estimated to have been 4.02 acre-feet annually. Actual water consumption (for irrigation and evaporative loss) after excavation of the pond is estimated to be 3.69 acre-feet annually (including filling the pond annually, when needed).



Last Name: Kennedy/Kirby

Subcase No. 37-297M

ET Idaho --- Evapotranspiration and Consumptive Irrigation

Water Requirements for Idaho

Please send suggestions for improving this site to robison at kimberly dot uidaho dot edu Copyright 2007, University of Idaho.

Hailey Ranger Stn (NWS NOAA--103942)

Statistics based on 30 years between 1947 to 1981

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 - Turf (lawns) - Irrigated														
Precipitation Deficit (Click here for a graph)														
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Growing Season ^a	Annual
Mean	mm/day												mm	
Monthly ^b	0.02	0.13	0.21	0.47	2.02	4.04	5.42	4.49	2.69	0.60	-0.26	-0.05	574	620
15-Day Moving Average ^c	0.03	0.12	0.23	0.46	1.94	4.02	5.48	4.45	2.66	0.57	-0.38	-0.06		
7-Day Moving Average ^d	0.03	0.12	0.22	0.47	1.98	3.99	5.45	4.48	2.67	0.57	-0.33	-0.06		
3-Day Moving Average ^e	0.02	0.13	0.21	0.46	2.02	4.02	5.42	4.50	2.68	0.60	-0.28	-0.06		
Standard Deviation	mm/day												mm	
Monthly	0.15	0.09	0.19	0.30	1.62	1.26	0.69	1.54	1.10	0.82	0.26	0.29	84	83
15-Day Moving Average	0.15	0.15	0.22	0.41	1.42	1.59	0.63	1.49	1.37	0.85	0.49	0.31		
7-Day Moving Average	0.25	0.28	0.36	0.66	1.78	2.09	0.87	1.66	1.70	1.21	0.82	0.43		
3-Day Moving Average	0.43	0.45	0.62	1.14	2.23	2.64	1.32	2.03	2.17	1.63	1.25	0.62		
20% Exceedance	mm/day												mm	
Monthly	0.10	0.21	0.31	0.75	3.06	4.96	5.83	5.12	3.70	0.85	-0.07	0.04	630	689
15-Day Moving Average	0.23	0.34	0.51	0.95	4.28	5.77	6.10	5.66	4.30	1.98	0.25	0.17		
7-Day Moving Average	0.33	0.54	0.74	1.16	5.18	6.40	6.67	6.20	4.63	2.85	0.45	0.27		
3-Day Moving Average	0.40	0.61	1.02	1.83	6.19	7.17	7.25	6.61	5.59	3.54	0.66	0.34		
80% Exceedance	mm/day												mm	
Monthly	0.08	0.04	0.04	0.21	0.94	3.21	4.88	4.19	1.71	0.18	-0.56	-0.17	491	546
15-Day Moving	-	-	-	-	-	-	-	-	-	-	-	-		

Average	0.27	-0.13	-0.21	-0.29	-0.02	2.07	4.48	3.44	0.23	0.59	-1.27	-0.35		
7-Day Moving Average	0.75	-0.60	-0.72	-0.93	-2.04	-1.25	3.39	1.82	0.76	2.21	-2.63	-0.79		
3-Day Moving Average	2.03	-1.43	-1.92	-2.67	-5.52	-3.46	1.21	-0.17	5.12	5.38	-6.48	-1.68		
Ave Highest ET	mm/day												--	
15-Day Moving Average ^f	0.16	0.28	0.44	0.78	2.95	5.04	5.92	5.15	3.58	1.21	0.15	0.11		
7-Day Moving Average ^g	0.27	0.45	0.65	1.09	4.02	5.98	6.42	5.84	4.17	1.64	0.39	0.23		
3-Day Moving Average ^h	0.36	0.55	0.88	1.62	5.21	6.72	6.96	6.34	4.97	2.20	0.51	0.29		
Ave Lowest ET	mm/day												--	
15-Day Moving Average ^f	0.13	-0.02	-0.01	0.06	0.99	3.06	4.98	3.78	1.74	0.04	-0.65	-0.23		
7-Day Moving Average ^g	0.42	-0.31	-0.38	-0.62	-0.21	1.62	4.31	2.87	0.81	0.95	-1.42	-0.54		
3-Day Moving Average ^h	1.06	-0.92	-1.30	-2.10	-2.48	-0.80	2.52	1.06	1.10	2.67	-3.16	-1.23		
Special normal distribution parameters for monthly, seasonal, and annual intervals													--	
Skew	0.28	-0.82	0.12	0.26	0.16	-0.89	0.14	-0.75	0.65	0.18	-0.38	-1.14	0.31	0.15
Kurtosis	0.81	3.57	0.72	2.81	0.64	3.66	0.64	1.61	2.52	0.90	2.22	3.78	3.11	2.87

^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 Mean of the average daily value for month

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

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

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

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

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ET Idaho --- Evapotranspiration and Consumptive Irrigation

Water Requirements for Idaho

Please send suggestions for improving this site to robinson@kimberly.uidaho.edu Copyright 2007, University of Idaho.

Hailey Ranger Stn (NWS NOAA--103942)
Statistics based on 30 years between 1947 to 1981

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 Hay														
Precipitation Deficit (Click here for a graph)														
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Growing Season ^a	Annual
Mean	mm/day												mm	
Monthly ^b	0.06	0.12	0.21	0.52	2.43	4.64	6.40	4.20	2.60	0.54	-0.38	-0.19	624	657
15-Day Moving Average ^c	0.06	0.12	0.23	0.48	2.38	4.58	6.50	4.04	2.57	0.50	-0.47	-0.22		
7-Day Moving Average ^d	0.06	0.12	0.22	0.49	2.41	4.56	6.46	4.13	2.57	0.50	-0.43	-0.19		
3-Day Moving Average ^e	0.06	0.12	0.21	0.50	2.44	4.61	6.40	4.18	2.58	0.53	-0.40	-0.19		
Standard Deviation	mm/day												mm	
Monthly	0.46	0.11	0.19	0.38	1.74	1.32	0.69	1.48	1.13	0.90	0.44	0.45	87	88
15-Day Moving Average	0.42	0.17	0.22	0.44	1.56	1.67	0.66	1.51	1.39	0.93	0.63	0.50		
7-Day Moving Average	0.60	0.31	0.36	0.70	1.98	2.16	0.94	1.79	1.72	1.34	1.01	0.65		
3-Day Moving Average	0.87	0.49	0.62	1.20	2.43	2.68	1.38	2.16	2.24	1.82	1.52	0.93		
20% Exceedance	mm/day												mm	
Monthly	0.10	0.21	0.31	0.75	3.64	5.66	6.75	4.84	3.62	0.68	-0.08	0.03	677	742
15-Day Moving Average	0.23	0.34	0.51	1.00	4.63	6.68	7.20	6.16	4.18	1.91	0.24	0.17		
7-Day Moving Average	0.33	0.54	0.74	1.18	5.43	7.19	7.56	6.70	4.70	2.67	0.45	0.27		
3-Day Moving Average	0.40	0.61	1.02	2.08	6.33	7.61	7.98	6.98	5.56	3.40	0.66	0.34		
80% Exceedance	mm/day												mm	
Monthly	0.16	0.04	0.04	0.21	1.46	3.82	5.90	3.71	1.70	0.03	-0.83	-0.41	544	580

15-Day Moving Average	0.50	-0.13	-0.20	-0.29	0.48	2.69	5.34	2.79	0.23	0.63	-1.69	-0.95	
7-Day Moving Average	1.07	-0.60	-0.72	-0.93	-1.21	-0.77	4.17	1.15	0.76	2.56	-3.05	-1.88	
3-Day Moving Average	2.53	-1.43	-1.95	-2.67	-5.81	-3.59	1.41	0.00	4.47	5.74	-6.92	-3.94	
Ave Highest ET	mm/day												--
15-Day Moving Average ^f	0.15	0.28	0.44	0.86	3.53	5.70	6.97	5.08	3.41	1.20	0.14	0.10	
7-Day Moving Average ^g	0.27	0.45	0.65	1.23	4.63	6.69	7.31	5.93	4.10	1.66	0.39	0.23	
3-Day Moving Average ^h	0.36	0.55	0.88	1.90	5.72	7.28	7.77	6.64	4.78	2.19	0.52	0.29	
Ave Lowest ET	mm/day												--
15-Day Moving Average ^f	0.26	-0.03	0.00	0.06	1.32	3.55	5.95	3.16	1.72	0.16	-0.89	-0.49	
7-Day Moving Average ^g	0.68	-0.32	-0.38	-0.61	-0.02	2.07	5.07	2.18	0.76	1.20	-1.81	-1.04	
3-Day Moving Average ^h	1.62	-0.97	-1.30	-2.10	-2.34	-0.41	3.27	0.69	1.24	3.23	-3.88	-2.24	
Special normal distribution parameters for monthly, seasonal, and annual intervals													--
Skew	1.16	-1.89	0.11	0.97	0.11	-0.74	0.16	-0.54	0.66	0.08	-1.01	-0.51	0.44 0.30
Kurtosis	3.30	8.06	0.71	3.81	0.68	3.46	0.74	1.21	2.67	1.00	3.31	1.19	3.27 2.66

^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 Mean of the average daily value for month

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

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

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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.

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ET Idaho --- Evapotranspiration and Consumptive Irrigation

Water Requirements for Idaho

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Hailey Ranger Stn (NWS NOAA--103942)

Statistics based on 30 years between 1947 to 1981

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
Mean	mm/day												mm
Monthly ^b	-1.91	-1.05	0.07	1.33	2.19	2.62	3.97	3.40	2.17	1.03	-0.78	-1.53	353
15-Day Moving Average ^c	-2.13	-1.02	0.01	1.48	2.17	2.59	4.01	3.43	2.12	1.03	-0.94	-1.46	
7-Day Moving Average ^d	-2.00	-1.03	0.03	1.40	2.19	2.56	4.00	3.43	2.15	1.02	-0.84	-1.51	
3-Day Moving Average ^e	-1.93	-1.02	0.04	1.33	2.20	2.59	3.97	3.41	2.17	1.03	-0.79	-1.53	
Standard Deviation	mm/day												mm
Monthly	2.42	1.13	0.99	0.91	1.49	1.33	0.63	1.09	0.86	0.98	1.06	2.54	118
15-Day Moving Average	2.67	1.75	1.10	1.15	1.51	1.65	0.57	1.10	1.19	1.00	1.43	2.51	
7-Day Moving Average	3.52	2.55	1.51	1.63	1.90	2.20	0.76	1.24	1.52	1.44	1.99	3.31	
3-Day Moving Average	4.76	3.40	2.24	2.37	2.44	2.74	1.12	1.62	2.09	1.96	2.77	4.19	
20% Exceedance	mm/day												mm
Monthly	-0.55	-0.10	0.75	1.98	2.88	3.75	4.32	3.84	2.80	1.67	0.29	-0.20	459
15-Day Moving Average	0.37	0.64	1.33	2.88	3.84	4.22	4.59	4.19	3.16	2.06	0.64	0.36	
7-Day Moving Average	0.63	0.99	1.62	3.18	4.23	4.64	4.75	4.31	3.52	2.46	1.06	0.48	
3-Day Moving Average	0.76	1.09	2.03	3.60	4.64	4.89	4.98	4.54	3.73	2.70	1.16	0.59	
80% Exceedance	mm/day												mm

Monthly	-3.55	-2.27	-0.83	0.23	1.71	1.58	3.64	3.11	1.66	0.26	-2.00	-2.46	280	280
15-Day Moving Average	-6.21	-4.27	-1.94	-0.96	0.18	0.11	3.18	2.35	0.49	0.92	-3.92	-4.25		
7-Day Moving Average	10.90	-8.97	-3.84	-2.94	-1.79	3.01	2.16	1.17	1.26	2.62	-6.30	-6.68		
3-Day Moving Average	16.43	15.38	-8.92	-6.49	-5.97	6.56	0.04	-1.57	5.32	6.20	10.55	13.65		
Ave Highest ET	mm/day												--	
15-Day Moving Average ^f	0.19	0.38	0.93	2.23	3.11	3.61	4.35	3.91	2.78	1.76	0.36	0.17		
7-Day Moving Average ^g	0.48	0.87	1.45	2.77	3.91	4.38	4.59	4.23	3.29	2.16	0.82	0.40		
3-Day Moving Average ^h	0.64	1.00	1.77	3.22	4.30	4.75	4.85	4.45	3.59	2.51	1.05	0.50		
Ave Lowest ET	mm/day												--	
15-Day Moving Average ^f	-3.77	-2.22	-0.86	0.50	1.17	1.60	3.63	2.85	1.46	0.30	-1.84	-2.87		
7-Day Moving Average ^g	-6.92	-4.66	-2.20	-1.05	-0.48	0.01	2.98	2.05	0.53	0.97	-3.55	-5.21		
3-Day Moving Average ^h	12.77	-8.87	-5.14	-3.85	-3.36	2.44	1.54	0.43	1.77	3.31	-6.94	-9.69		
Special normal distribution parameters for monthly, seasonal, and annual intervals													--	
Skew	-0.39	-0.58	-0.12	-0.53	-0.51	0.92	0.31	-1.28	1.30	0.07	-0.53	-1.00	-0.13	-0.13
Kurtosis	0.95	2.84	0.51	2.60	1.63	3.39	0.87	4.26	4.28	0.49	2.19	3.23	3.36	3.36

^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.

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IN THE DISTRICT COURT OF THE FIFTH JUDICIAL DISTRICT OF THE
STATE OF IDAHO, IN AND FOR THE COUNTY OF TWIN FALLS

I. FINDINGS OF FACT

Objections were filed by Thomas Kennedy and Deborah Kirby on November 14, 2007. An Initial Hearing was held on September 18, 2008. At the hearing, Thomas Kennedy and Deborah Kirby made an oral *Motion to File Amended Notice of Claims*. There was no opposition to the *Motion*.

II. CONCLUSIONS OF LAW

DATED: May 28, 2009.

SPECIAL MASTER'S REPORT AND RECOMMENDATION
G:/basin folders/37MRR/28J.297M.OBJ.AMENDCLAIM.AMENDEDR
5/27/09

IN THE DISTRICT COURT OF THE FIFTH JUDICIAL DISTRICT OF THE
STATE OF IDAHO, IN AND FOR THE COUNTY OF TWIN FALLS

DISTRICT COURT-SRBA
Fifth Judicial District
County of Twin Falls - State of Idaho

MAY 28 2009

In Re SRBA)
Case No. 39576)
PARTIAL DECREE PURSUANT TO
I.R.C.P. 54(b) FOR
Water Right 37-00028J

By _____
Clerk
Deputy Clerk

NAME AND ADDRESS: DEBORAH M KIRBY
THOMAS A KENNEDY
PO BOX 2773
KETCHUM, ID 83340

SOURCE: BIG WOOD RIVER TRIBUTARY: MALAD RIVER

QUANTITY: 0.04 CFS

Right Nos. 37-28J and 37-297M are diverted into a pond with a storage capacity of 0.87 AF, and are limited to a total combined annual volume of 1.34 AF for aesthetic storage.

PRIORITY DATE: 03/24/1883

POINT OF DIVERSION: T03N R18E S20 SWNW Within Blaine County

PURPOSE AND PERIOD OF USE:	PURPOSE OF USE	PERIOD OF USE	QUANTITY
	Irrigation	04-15 TO 10-31	0.03 CFS
	Aesthetic Storage	01-01 TO 12-31	1.34 AFY
	Diversion to Storage	04-15 TO 10-31	0.01 CFS

PLACE OF USE: Irrigation
T03N R18E S33 SESW 1.2 Within Blaine County
1.2 Acres Total

Aesthetic Storage
T03N R18E S33 SESW Within Blaine County

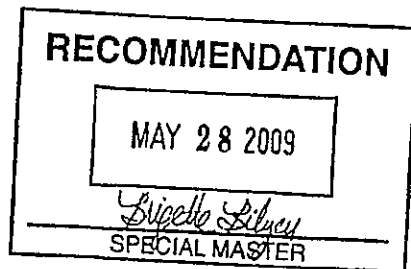
Right Nos. 37-28J and 37-297M are limited to the irrigation of a combined total of 1.2 acres in a single irrigation season.

OTHER PROVISIONS NECESSARY FOR DEFINITION OR ADMINISTRATION OF THIS WATER RIGHT:

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. I.C. SECTION 42-1412(6).

RULE 54(b) CERTIFICATE

With respect to the issues determined by the above judgment or order, it is hereby CERTIFIED, in accordance with Rule 54(b), I.R.C.P., that the court has determined that there is no just reason for delay of the entry of a final judgment and that the court has and does hereby direct that the above judgment or order shall be a final judgment upon which execution may issue and an appeal may be taken as provided by the Idaho Appellate Rules.



John M. Melanson
Presiding Judge of the
Snake River Basin Adjudication

IN THE DISTRICT COURT OF THE FIFTH JUDICIAL DISTRICT OF THE
STATE OF IDAHO, IN AND FOR THE COUNTY OF TWIN FALLS

DISTRICT COURT-SRBA
Fifth Judicial District
County of Twin Falls - State of Idaho

MAY 28 2009

In Re SRBA)
Case No. 39576)
_____)

PARTIAL DECREE PURSUANT TO
I.R.C.P. 54(b) FOR

Water Right 37-00297M

By _____
Clerk
Deputy Clerk

NAME AND ADDRESS: DEBORAH M KIRBY
THOMAS A KENNEDY
PO BOX 2773
KETCHUM, ID 83340

SOURCE: BIG WOOD RIVER TRIBUTARY: MALAD RIVER

QUANTITY: 0.08 CFS

Right Nos. 37-28J and 37-297M are diverted into a pond with a
storage capacity of 0.87 AF, and are limited to a total combined
annual volume of 1.34 AF for aesthetic storage.

PRIORITY DATE: 11/26/1986

POINT OF DIVERSION: T03N R18E S20 SWNW Within Blaine County

PURPOSE AND PERIOD OF USE:	PURPOSE OF USE	PERIOD OF USE	QUANTITY
	Irrigation	04-15 TO 10-31	0.05 CFS
	Diversion to Storage	04-15 TO 10-31	0.03 CFS
	Aesthetic Storage	01-01 TO 12-31	1.34 AFY

PLACE OF USE: Irrigation
T03N R18E S33 SESW 1.2 Within Blaine County
1.2 Acres Total

Aesthetic Storage
T03N R18E S33 SESW Within Blaine County

Right Nos. 37-28J and 37-297M are limited to the irrigation of a
combined total of 1.2 acres in a single irrigation season.

OTHER PROVISIONS NECESSARY FOR DEFINITION OR ADMINISTRATION OF THIS WATER RIGHT:

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. I.C. SECTION 42-1412(6).

RULE 54(b) CERTIFICATE

With respect to the issues determined by the above judgment or order, it is hereby CERTIFIED, in accordance
with Rule 54(b), I.R.C.P., that the court has determined that there is no just reason for delay of the entry of a
final judgment and that the court has and does hereby direct that the above judgment or order shall be a final
judgment upon which execution may issue and an appeal may be taken as provided by the Idaho Appellate Rules.

RECOMMENDATION

MAY 28 2009

Bigelle Libbey
SPECIAL MASTER

John M. Melanson
Presiding Judge of the
Snake River Basin Adjudication

DISTRICT COURT-SRBA
Fifth Judicial District
County of Twin Falls - State of Idaho

MAY 28 2009

By _____ Clerk
Deputy Clerk

IN THE DISTRICT COURT OF THE FIFTH JUDICIAL DISTRICT OF THE
STATE OF IDAHO, IN AND FOR THE COUNTY OF TWIN FALLS

In Re SRBA)
Case No. 39576)
_____)

NOTICE OF ISSUANCE OF
SPECIAL MASTER'S
RECOMMENDATION

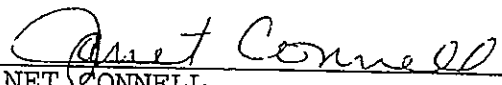
Water Right(s): 37-00028J
37-00297M

On May 28, 2009, Special Master BRIGETTE BILYEU issued a SPECIAL MASTER'S RECOMMENDATION for the above subcase(s) pursuant to SRBA Administrative Order 1 (AO1), Section 13a.

Pursuant to SRBA Administrative Order 1, Section 13a, any party to the adjudication including parties to the subcase, may file a Motion to Alter or Amend on or before the 28th day of the next month.

Failure of any party in the adjudication to pursue or participate in a Motion to Alter or Amend the SPECIAL MASTER'S RECOMMENDATION shall constitute a waiver of the right to challenge it before the Presiding Judge.

DATED May 28, 2009.


JANET CONNELL
Deputy Clerk

DISTRICT COURT-SRBA Fifth Judicial District County of Twin Falls - State of Idaho
MAY 28 2009
By _____ Clerk Deputy Clerk

IN THE DISTRICT COURT OF THE FIFTH JUDICIAL DISTRICT OF THE
STATE OF IDAHO, IN AND FOR THE COUNTY OF TWIN FALLS

In Re SRBA)
Case No. 39576)
_____)

CERTIFICATE OF MAILING

Water Right(s): 37-00028J
37-00297M

CERTIFICATE OF MAILING

I certify that a true and correct copy of the SPECIAL MASTER'S REPORT, SPECIAL MASTER'S RECOMMENDATION FOR PARTIAL DECREE and NOTICE OF ISSUANCE OF SPECIAL MASTER'S REPORT AND RECOMMENDATION were mailed on May 28, 2009, with sufficient first-class postage prepaid to the following:

DIRECTOR OF IDWR
PO BOX 83720
BOISE, ID 83720-0098

DEBORAH M KIRBY
THOMAS A KENNEDY
Represented by:
JAMES P. SPECK
SPECK & AANESTAD
120 EAST AVENUE
PO BOX 987
KETCHUM, ID 83340
Phone: 208-726-4421


JANET CONNELL
Deputy Clerk

CERTIFICATE OF MAILING

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