

**Report of the Colorado State Engineer**

**Concerning Accounting of the Operations**

**of an Offset Account in John Martin Reservoir**

**for Colorado Pumping**

**1999**

Submitted to the

Operations Committee

Arkansas River Compact Administration

December 1, 1999

Report of the Colorado State Engineer

Offset Account Operations

November 1, 1998 to October 31, 1999

An Offset Account in John Martin Reservoir was authorized by the **Resolution Concerning an Offset Account in John Martin Reservoir for Colorado Pumping** dated March 17, 1997 ("Resolution") and by the **Resolution Concerning an Offset Account in John Martin Reservoir for Colorado Pumping As Amended March 30, 1998** ("Amended Resolution").

This report summarizes the operations conducted using the Offset Account for the period November 1, 1998 through October 31, 1999 and has been prepared pursuant to paragraph 11 the Amended Resolution.

At 0000 hours, November 1, 1998 the Offset Account contained 4848.68 acre-feet. From November 1, 1998 through October 31, 1999 there were deliveries to and releases from the Offset Account as summarized in the tables below. On March 31, 1999, 500.4 acre-feet of fully consumable water was delivered to the Offset Account to satisfy the Storage Charge prerequisite for using the account for another year. Copies of the correspondence describing this delivery are included in Section 3.

The entire content of the Offset Account was spilled on two different occasions during the period of this report. On May 3, 1999 the 5985.95 acre-feet in the Offset Account were spilled and on August 8, 1999 the 304.82 acre-feet in the Offset Account were spilled.

In Section 1, a monthly summary of the contents of the Offset Account is provided in Table 1. A summary of the subaccounts of the Offset Account is provided in Tables A through B.2. The outline preceding the tables in Section 1 provides an explanation of the purpose of each subaccount.

Section 2 of this report contains the daily accounting records, by month, for all subaccounts in the Offset Account.

From November 1, 1998 through October 31, 1999, there were five deliveries of water to the Offset Account, including the delivery of 500.4 acre-feet of fully consumable water to satisfy the Storage Charge. These deliveries are summarized in the following table.

Source	Delivery End Date	Amount to Offset Account (ac-ft)	Net Consumable Water (ac-ft)	Net Return Flow Water (ac-ft)
LAWMA (Highland Canal Shares)	November 5, 1998	299.07	286.22	12.85
LAWMA (Article II)	March 31, 1999	834.00	500.40	333.60
LAWMA (Highland Canal Shares)	April 29, 1999	437.47	418.67	18.80
LAWMA (Highland Canal Shares)	August 7, 1999	305.33	305.33	0.00
LAWMA (Highland Canal Shares)	October 31, 1999	2714.64	2714.64	0.00
<b>TOTALS</b>		<b>4590.51</b>	<b>4225.26</b>	<b>365.25</b>

During the period referred to above, there were two releases of water from the Offset Account. As indicated above, the entire contents of the Offset Account were spilled twice during the same period. The two releases are summarized in the following table.

Description of Release	Released To	Release End Date	Quantity Released (ac-ft)
Colorado Instate Return Flows	Conservation Storage	January 11, 1999	165.33
Correction for LAWMA Storage of Highland Canal Shares	Conservation Storage	October 31, 1999	684.02
<b>TOTALS</b>			<b>849.35</b>

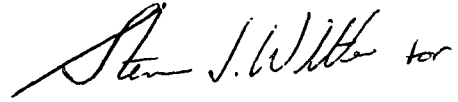
During the months of February, March, and April of 1999, a total of 2122.5 acre-feet of fully consumable water was made available to Kansas in the Offset Account under the provisions of paragraph 5B of the Amended Resolution to offset the estimated monthly net depletions to usable Stateline flow which were computed in accordance with that paragraph. The table below shows the specific transfers from the Colorado Consumable Water subaccount to the Kansas Consumable Water subaccount.

Month of Estimated Net Depletions to Usable Stateline Flow	Date of Transfer	Quantity Transferred (ac-ft)
November, 1998	February 7, 1999	585.6
SWSP's (Apr, 1998 thru Nov, 1998)	March 1, 1999	668.4
December, 1998	March 9, 1999	476.8
January, 1999	April 14, 1999	391.7
<b>TOTALS</b>		<b>2122.5</b>

Section 3 of this report provides copies of the letters reporting each delivery of water to the Offset Account as required by paragraph 3 of the Amended Resolution and copies of the letters reporting each release/transfer of water from the Offset Account.

Section 4 of this report provides copies of the monthly letters reporting Colorado pumping and Offset Account operations that were prepared and submitted in accordance with paragraph 12 of the Amended Resolution.

The Colorado State Engineer and the Kansas Chief Engineer have coordinated Offset Account operations successfully through their respective delegates throughout the year. Colorado continues to solicit suggestions and desires to fully discuss any measures that might have the effect of minimizing Kansas' cost of monitoring use of the Offset Account to facilitate Compact compliance.



Hal D. Simpson  
Colorado State Engineer

12/1/1999  
Date

## **SECTION 1**

## **Outline of Tables**

### **Offset Account (Table 1)**

Contains a monthly summary of the total contents of the Offset Account.

### **A. Consumable Water (Table A)**

#### **1. Colorado Upstream Consumable Water (Table A.1.)**

Contains a monthly summary of the water stored under the provisions of paragraph 6 of the Amended Resolution.

#### **2. Colorado Downstream Consumable Water (Table A.2.)**

Contains a monthly summary of the consumptive use water stored by Colorado users which has not yet been made available to replace depletions to usable stateline flow and therefore has not been transferred to Kansas as provided for in paragraph 5.B. of the Amended Resolution.

#### **3. Kansas Consumable Water (Table A.3.)**

Contains a monthly summary of the consumptive use water that has been made available to replace depletions to usable stateline flow and has therefore been transferred as provided for in paragraph 5.B. of the Amended Resolution.

#### **4. Kansas Storage Charge (Table A.4.)**

Contains a monthly summary of the consumptive use water delivered to the Offset Account under the provisions of paragraph 9 of the Amended Resolution.

### **B. Return Flow Water (Table B)**

#### **1. In State Return Flow Water (Table B.1.)**

Contains a monthly summary of the return flow water which must be released to the river to maintain the return flows to Colorado water users because of deliveries of water historically used for irrigation to the offset account.

##### **a. In State Upstream Return Flow Water (Table B.1.a.)**

Contains a monthly summary of return flow water which must be released to John Martin Reservoir during periods of conservation storage to maintain return flows to conservation storage by the deliveries to the Offset Account of direct flow irrigation water from ditches above John Martin Reservoir.

##### **b. In State Downstream Return Flow Water (Table B.1.b)**

Contains a monthly summary of return flow water which must be released to the river to provide for the return flows to Colorado water users below John Martin Reservoir because of the deliveries of water historically used for irrigation to the offset account.

#### **2. State Line Return Flow Water (Table B.2)**

Contains a monthly summary of return flow water which must ultimately be released to the river to maintain the return flows to the river reaches below any Colorado water users under the provisions of paragraph 4 of the Resolution.

**JOHN MARTIN RESERVOIR**

**TABLE 1  
OFFSET ACCOUNT**

WATER YEAR					
1999	CONTENTS BEG.	INFLOW	EVAPORATION	RELEASE	CONTENTS END
MONTH	OF MONTH A.F.	A.F.	A.F.	A.F.	OF MONTH A.F.
NOVEMBER	4848.68	299.07	30.88	0.00	5116.87
DECEMBER	5116.87	0.00	28.97	0.00	5087.90
JANUARY	5087.90	0.00	26.18	165.33	4896.39
FEBRUARY	4896.39	0.00	36.50	0.00	4859.89
MARCH	4859.89	834.00	67.79	0.00	5626.10
APRIL	5626.10	437.47	73.94	0.00	5989.63
MAY	5989.63	0.00	3.68	5985.95	0.00
JUNE	0.00	0.00	0.00	0.00	0.00
JULY	0.00	0.00	0.00	0.00	0.00
AUGUST	0.00	590.04	1.11	304.82	284.11
SEPTEMBER	284.11	1162.21	10.58	0.00	1435.74
OCTOBER	1435.74	1267.72	21.55	684.02	1997.89
<b>TOTALS</b>		<b>4590.51</b>	<b>301.18</b>	<b>7140.12</b>	

## OFFSET ACCOUNT

### TABLE A CONSUMABLE WATER

WATER YEAR	CONTENTS BEG.	INFLOW	EVAPORATION	RELEASE	CONTENTS END
1999	OF MONTH A.F.	A.F.	A.F.	A.F.	OF MONTH A.F.
MONTH					
NOVEMBER	4693.92	286.22	29.91	0.00	4950.23
DECEMBER	4950.23	0.00	27.99	0.00	4922.24
JANUARY	4922.24	0.00	25.85	0.00	4896.39
FEBRUARY	4896.39	0.00	36.50	0.00	4859.89
MARCH	4859.89	500.40	67.79	0.00	5292.50
APRIL	5292.50	418.67	69.57	0.00	5641.60
MAY	5641.60	0.00	3.47	5638.13	0.00
JUNE	0.00	0.00	0.00	0.00	0.00
JULY	0.00	0.00	0.00	0.00	0.00
AUGUST	0.00	590.04	1.11	304.82	284.11
SEPTEMBER	284.11	1162.21	10.58	0.00	1435.74
OCTOBER	1435.74	1267.72	21.55	684.02	1997.89
<b>TOTALS</b>		<b>4225.26</b>	<b>294.32</b>	<b>6626.97</b>	

### TABLE B RETURN FLOW WATER

WATER YEAR	CONTENTS BEG.	INFLOW	EVAPORATION	RELEASE	CONTENTS END
1999	OF MONTH A.F.	A.F.	A.F.	A.F.	OF MONTH A.F.
MONTH					
NOVEMBER	154.76	12.85	0.97	0.00	166.64
DECEMBER	166.64	0.00	0.98	0.00	165.66
JANUARY	165.66	0.00	0.33	165.33	0.00
FEBRUARY	0.00	0.00	0.00	0.00	0.00
MARCH	0.00	333.60	0.00	0.00	333.60
APRIL	333.60	18.80	4.37	0.00	348.03
MAY	348.03	0.00	0.21	347.82	0.00
JUNE	0.00	0.00	0.00	0.00	0.00
JULY	0.00	0.00	0.00	0.00	0.00
AUGUST	0.00	0.00	0.00	0.00	0.00
SEPTEMBER	0.00	0.00	0.00	0.00	0.00
OCTOBER	0.00	0.00	0.00	0.00	0.00
<b>TOTALS</b>		<b>365.25</b>	<b>6.86</b>	<b>513.15</b>	



**OFFSET ACCOUNT**

**TABLE A.1.  
CONSUMABLE WATER  
COLORADO UPSTREAM**

WATER YEAR 1999 MONTH	CONTENTS BEG. OF MONTH A.F.	INFLOW A.F.	EVAPORATION A.F.	RELEASE A.F.	CONTENTS END OF MONTH A.F.
NOVEMBER	0.00	0.00	0.00	0.00	0.00
DECEMBER	0.00	0.00	0.00	0.00	0.00
JANUARY	0.00	0.00	0.00	0.00	0.00
FEBRUARY	0.00	0.00	0.00	0.00	0.00
MARCH	0.00	0.00	0.00	0.00	0.00
APRIL	0.00	0.00	0.00	0.00	0.00
MAY	0.00	0.00	0.00	0.00	0.00
JUNE	0.00	0.00	0.00	0.00	0.00
JULY	0.00	0.00	0.00	0.00	0.00
AUGUST	0.00	0.00	0.00	0.00	0.00
SEPTEMBER	0.00	0.00	0.00	0.00	0.00
OCTOBER	0.00	0.00	0.00	0.00	0.00
TOTALS		0.00	0.00	0.00	

**TABLE A.2.  
CONSUMABLE WATER  
COLORADO DOWNSTREAM**

WATER YEAR 1999 MONTH	CONTENTS BEG. OF MONTH A.F.	INFLOW A.F.	EVAPORATION A.F.	RELEASE A.F.	CONTENTS END OF MONTH A.F.
NOVEMBER	4233.12	286.22	27.15	0.00	4492.19
DECEMBER	4492.19	0.00	25.36	0.00	4466.83
JANUARY	4466.83	0.00	23.37	0.00	4443.46
FEBRUARY	4443.46	0.00	29.84	585.60	3828.02
MARCH	3828.02	0.00	39.55	1145.20	2643.27
APRIL	2643.27	418.67	32.80	391.70	2637.44
MAY	2637.44	0.00	1.62	2635.82	0.00
JUNE	0.00	0.00	0.00	0.00	0.00
JULY	0.00	0.00	0.00	0.00	0.00
AUGUST	0.00	590.04	1.11	304.82	284.11
SEPTEMBER	284.11	1162.21	10.58	0.00	1435.74
OCTOBER	1435.74	1267.72	21.55	684.02	1997.89
TOTALS		3724.86	212.93	5747.16	

**OFFSET ACCOUNT**

**TABLE A.3.  
CONSUMABLE WATER  
KANSAS**

WATER YEAR	CONTENTS BEG.	INFLOW	EVAPORATION	RELEASE	CONTENTS END
1999	OF MONTH A.F.	A.F.	A.F.	A.F.	OF MONTH A.F.
MONTH					
NOVEMBER	0.00	0.00	0.00	0.00	0.00
DECEMBER	0.00	0.00	0.00	0.00	0.00
JANUARY	0.00	0.00	0.00	0.00	0.00
FEBRUARY	0.00	585.60	3.30	0.00	582.30
MARCH	582.30	1145.20	22.00	0.00	1705.50
APRIL	1705.50	391.70	24.44	0.00	2072.76
MAY	2072.76	0.00	1.28	2071.48	0.00
JUNE	0.00	0.00	0.00	0.00	0.00
JULY	0.00	0.00	0.00	0.00	0.00
AUGUST	0.00	0.00	0.00	0.00	0.00
SEPTEMBER	0.00	0.00	0.00	0.00	0.00
OCTOBER	0.00	0.00	0.00	0.00	0.00
<b>TOTALS</b>		2122.50	51.02	2071.48	

**TABLE A.4.  
CONSUMABLE WATER  
KANSAS STORAGE CHARGE**

WATER YEAR	CONTENTS BEG.	INFLOW	EVAPORATION	RELEASE	CONTENTS END
1999	OF MONTH A.F.	A.F.	A.F.	A.F.	OF MONTH A.F.
MONTH					
NOVEMBER	460.80	0.00	2.76	0.00	458.04
DECEMBER	458.04	0.00	2.63	0.00	455.41
JANUARY	455.41	0.00	2.48	0.00	452.93
FEBRUARY	452.93	0.00	3.36	0.00	449.57
MARCH	449.57	500.40	6.24	0.00	943.73
APRIL	943.73	0.00	12.33	0.00	931.40
MAY	931.40	0.00	0.57	930.83	0.00
JUNE	0.00	0.00	0.00	0.00	0.00
JULY	0.00	0.00	0.00	0.00	0.00
AUGUST	0.00	0.00	0.00	0.00	0.00
SEPTEMBER	0.00	0.00	0.00	0.00	0.00
OCTOBER	0.00	0.00	0.00	0.00	0.00
<b>TOTALS</b>		500.40	30.37	930.83	

**OFFSET ACCOUNT**

**TABLE B.1.  
RETURN FLOW WATER  
INSTATE**

WATER YEAR	CONTENTS BEG.	INFLOW	EVAPORATION	RELEASE	CONTENTS END
1999	OF MONTH A.F.	A.F.	A.F.	A.F.	OF MONTH A.F.
MONTH					
NOVEMBER	154.76	12.85	0.97	0.00	166.64
DECEMBER	166.64	0.00	0.98	0.00	165.66
JANUARY	165.66	0.00	0.33	165.33	0.00
FEBRUARY	0.00	0.00	0.00	0.00	0.00
MARCH	0.00	0.00	0.00	0.00	0.00
APRIL	0.00	18.80	0.02	0.00	18.78
MAY	18.78	0.00	0.01	18.77	0.00
JUNE	0.00	0.00	0.00	0.00	0.00
JULY	0.00	0.00	0.00	0.00	0.00
AUGUST	0.00	0.00	0.00	0.00	0.00
SEPTEMBER	0.00	0.00	0.00	0.00	0.00
OCTOBER	0.00	0.00	0.00	0.00	0.00
<b>TOTALS</b>		31.65	2.31	184.10	

**TABLE B.2.  
RETURN FLOW WATER  
STATELINE**

WATER YEAR	CONTENTS BEG.	INFLOW	EVAPORATION	RELEASE	CONTENTS END
1999	OF MONTH A.F.	A.F.	A.F.	A.F.	OF MONTH A.F.
MONTH					
NOVEMBER	0.00	0.00	0.00	0.00	0.00
DECEMBER	0.00	0.00	0.00	0.00	0.00
JANUARY	0.00	0.00	0.00	0.00	0.00
FEBRUARY	0.00	0.00	0.00	0.00	0.00
MARCH	0.00	333.60	0.00	0.00	333.60
APRIL	333.60	0.00	4.35	0.00	329.25
MAY	329.25	0.00	0.20	329.05	0.00
JUNE	0.00	0.00	0.00	0.00	0.00
JULY	0.00	0.00	0.00	0.00	0.00
AUGUST	0.00	0.00	0.00	0.00	0.00
SEPTEMBER	0.00	0.00	0.00	0.00	0.00
OCTOBER	0.00	0.00	0.00	0.00	0.00
<b>TOTALS</b>		333.60	4.55	329.05	

**OFFSET ACCOUNT**

**TABLE B.1.a.  
INSTATE RETURN FLOW  
UPSTREAM**

WATER YEAR	CONTENTS BEG.	INFLOW	EVAPORATION	RELEASE	CONTENTS END
1999	OF MONTH A.F.	A.F.	A.F.	A.F.	OF MONTH A.F.
MONTH					
NOVEMBER	154.76	12.85	0.97	0.00	166.64
DECEMBER	166.64	0.00	0.98	0.00	165.66
JANUARY	165.66	0.00	0.33	165.33	0.00
FEBRUARY	0.00	0.00	0.00	0.00	0.00
MARCH	0.00	0.00	0.00	0.00	0.00
APRIL	0.00	18.80	0.02	0.00	18.78
MAY	18.78	0.00	0.01	18.77	0.00
JUNE	0.00	0.00	0.00	0.00	0.00
JULY	0.00	0.00	0.00	0.00	0.00
AUGUST	0.00	0.00	0.00	0.00	0.00
SEPTEMBER	0.00	0.00	0.00	0.00	0.00
OCTOBER	0.00	0.00	0.00	0.00	0.00
<b>TOTALS</b>		<b>31.65</b>	<b>2.31</b>	<b>184.10</b>	

**TABLE B.1.b.  
INSTATE RETURN FLOW  
DOWNSTREAM**

WATER YEAR	CONTENTS BEG.	INFLOW	EVAPORATION	RELEASE	CONTENTS END
1999	OF MONTH A.F.	A.F.	A.F.	A.F.	OF MONTH A.F.
MONTH					
NOVEMBER	0.00	0.00	0.00	0.00	0.00
DECEMBER	0.00	0.00	0.00	0.00	0.00
JANUARY	0.00	0.00	0.00	0.00	0.00
FEBRUARY	0.00	0.00	0.00	0.00	0.00
MARCH	0.00	0.00	0.00	0.00	0.00
APRIL	0.00	0.00	0.00	0.00	0.00
MAY	0.00	0.00	0.00	0.00	0.00
JUNE	0.00	0.00	0.00	0.00	0.00
JULY	0.00	0.00	0.00	0.00	0.00
AUGUST	0.00	0.00	0.00	0.00	0.00
SEPTEMBER	0.00	0.00	0.00	0.00	0.00
OCTOBER	0.00	0.00	0.00	0.00	0.00
<b>TOTALS</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	

## **SECTION 2**

OFFSET ACCOUNT													PG 1
OFFSET ACCOUNT				CONSUMABLE WATER				RETURN FLOW					
NOV 1998:	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	
1	48.37	0.00	0.00	4848.68	46.29	0.00	0.00	4693.92	2.08	0.00	0.00	154.76	
2	50.11	0.00	1.11	4946.05	47.96	0.00	1.07	4740.21	2.15	0.00	0.04	156.84	
3	58.24	0.00	0.99	5003.30	55.74	0.00	0.96	4787.10	2.50	0.00	0.03	158.95	
4	64.49	0.00	0.45	5067.34	61.72	0.00	0.44	4841.88	2.77	0.00	0.01	161.42	
5	77.86	0.00	0.68	5144.52	74.51	0.00	0.66	4903.16	3.35	0.00	0.02	164.18	
6	0.00	0.00	0.56	5143.96	0.00	0.00	0.54	4977.01	0.00	0.00	0.02	167.51	
7	0.00	0.00	0.46	5143.50	0.00	0.00	0.45	4976.47	0.00	0.00	0.01	167.49	
8	0.00	0.00	0.46	5143.04	0.00	0.00	0.45	4976.02	0.00	0.00	0.01	167.48	
9	0.00	0.00	0.00	5143.04	0.00	0.00	0.00	4975.57	0.00	0.00	0.01	167.47	
10	0.00	0.00	0.46	5142.58	0.00	0.00	0.45	4975.57	0.00	0.00	0.01	167.47	
11	0.00	0.00	0.91	5141.67	0.00	0.00	0.88	4975.12	0.00	0.00	0.01	167.46	
12	0.00	0.00	0.91	5140.76	0.00	0.00	0.88	4974.24	0.00	0.00	0.03	167.43	
13	0.00	0.00	1.36	5139.40	0.00	0.00	1.32	4973.36	0.00	0.00	0.03	167.40	
14	0.00	0.00	1.36	5138.04	0.00	0.00	1.32	4972.04	0.00	0.00	0.04	167.36	
15	0.00	0.00	1.46	5136.58	0.00	0.00	1.41	4970.72	0.00	0.00	0.04	167.32	
16	0.00	0.00	1.68	5134.90	0.00	0.00	1.63	4969.31	0.00	0.00	0.05	167.27	
17	0.00	0.00	1.45	5133.45	0.00	0.00	1.40	4967.68	0.00	0.00	0.05	167.22	
18	0.00	0.00	1.79	5131.66	0.00	0.00	1.73	4966.28	0.00	0.00	0.05	167.17	
19	0.00	0.00	0.89	5130.77	0.00	0.00	0.86	4964.55	0.00	0.00	0.06	167.11	
20	0.00	0.00	1.01	5129.76	0.00	0.00	0.98	4963.69	0.00	0.00	0.03	167.08	
21	0.00	0.00	1.01	5128.75	0.00	0.00	0.98	4962.71	0.00	0.00	0.03	167.05	
22	0.00	0.00	1.00	5127.75	0.00	0.00	0.97	4961.73	0.00	0.00	0.03	167.02	
23	0.00	0.00	1.67	5126.08	0.00	0.00	1.62	4960.76	0.00	0.00	0.03	166.99	
24	0.00	0.00	2.01	5124.07	0.00	0.00	1.94	4959.14	0.00	0.00	0.05	166.94	
25	0.00	0.00	1.56	5122.51	0.00	0.00	1.51	4957.20	0.00	0.00	0.07	166.87	
26	0.00	0.00	1.56	5120.95	0.00	0.00	1.51	4955.69	0.00	0.00	0.05	166.82	
27	0.00	0.00	1.22	5119.73	0.00	0.00	1.18	4954.18	0.00	0.00	0.05	166.77	
28	0.00	0.00	1.21	5118.52	0.00	0.00	1.17	4953.00	0.00	0.00	0.04	166.73	
29	0.00	0.00	1.21	5117.31	0.00	0.00	1.17	4951.83	0.00	0.00	0.04	166.69	
30	0.00	0.00	0.44	5116.87	0.00	0.00	0.43	4950.66	0.00	0.00	0.04	166.65	
TOT	299.07	0.00	30.88		286.22	0.00	29.91		12.85	0.00	0.97	166.64	

CONSUMABLE WATER													PG 1
COLORADO UPSTREAM				COLORADO DOWNSTREAM				KANSAS					
NOV 1998:	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	
1	0.00	0.00	0.00	0.00	46.29	0.00	0.00	4233.12	0.00	0.00	0.00	0.00	
2	0.00	0.00	0.00	0.00	47.96	0.00	0.97	4279.41	0.00	0.00	0.00	0.00	
3	0.00	0.00	0.00	0.00	55.74	0.00	0.87	4326.40	0.00	0.00	0.00	0.00	
4	0.00	0.00	0.00	0.00	61.72	0.00	0.40	4381.27	0.00	0.00	0.00	0.00	
5	0.00	0.00	0.00	0.00	74.51	0.00	0.60	4442.59	0.00	0.00	0.00	0.00	
6	0.00	0.00	0.00	0.00	0.00	0.00	0.49	4516.50	0.00	0.00	0.00	0.00	
7	0.00	0.00	0.00	0.00	0.00	0.00	0.41	4516.01	0.00	0.00	0.00	0.00	
8	0.00	0.00	0.00	0.00	0.00	0.00	0.41	4515.60	0.00	0.00	0.00	0.00	
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4515.19	0.00	0.00	0.00	0.00	
10	0.00	0.00	0.00	0.00	0.00	0.00	0.41	4515.19	0.00	0.00	0.00	0.00	
11	0.00	0.00	0.00	0.00	0.00	0.00	0.80	4514.78	0.00	0.00	0.00	0.00	
12	0.00	0.00	0.00	0.00	0.00	0.00	0.80	4513.98	0.00	0.00	0.00	0.00	
13	0.00	0.00	0.00	0.00	0.00	0.00	1.20	4513.18	0.00	0.00	0.00	0.00	
14	0.00	0.00	0.00	0.00	0.00	0.00	1.20	4511.98	0.00	0.00	0.00	0.00	
15	0.00	0.00	0.00	0.00	0.00	0.00	1.28	4510.78	0.00	0.00	0.00	0.00	
16	0.00	0.00	0.00	0.00	0.00	0.00	1.48	4509.50	0.00	0.00	0.00	0.00	
17	0.00	0.00	0.00	0.00	0.00	0.00	1.27	4508.02	0.00	0.00	0.00	0.00	
18	0.00	0.00	0.00	0.00	0.00	0.00	1.57	4506.75	0.00	0.00	0.00	0.00	
19	0.00	0.00	0.00	0.00	0.00	0.00	0.78	4505.18	0.00	0.00	0.00	0.00	
20	0.00	0.00	0.00	0.00	0.00	0.00	0.89	4504.40	0.00	0.00	0.00	0.00	
21	0.00	0.00	0.00	0.00	0.00	0.00	0.89	4503.51	0.00	0.00	0.00	0.00	
22	0.00	0.00	0.00	0.00	0.00	0.00	0.88	4502.62	0.00	0.00	0.00	0.00	
23	0.00	0.00	0.00	0.00	0.00	0.00	1.47	4501.74	0.00	0.00	0.00	0.00	
24	0.00	0.00	0.00	0.00	0.00	0.00	1.76	4500.27	0.00	0.00	0.00	0.00	
25	0.00	0.00	0.00	0.00	0.00	0.00	1.37	4498.51	0.00	0.00	0.00	0.00	
26	0.00	0.00	0.00	0.00	0.00	0.00	1.37	4497.14	0.00	0.00	0.00	0.00	
27	0.00	0.00	0.00	0.00	0.00	0.00	1.07	4495.77	0.00	0.00	0.00	0.00	
28	0.00	0.00	0.00	0.00	0.00	0.00	1.06	4494.70	0.00	0.00	0.00	0.00	
29	0.00	0.00	0.00	0.00	0.00	0.00	1.06	4493.64	0.00	0.00	0.00	0.00	
30	0.00	0.00	0.00	0.00	0.00	0.00	0.39	4492.58	0.00	0.00	0.00	0.00	
TOT	0.00	0.00	0.00		286.22	0.00	27.15		0.00	0.00	0.00	0.00	

CONSUMABLE WATER

NOV 1998:	KANSAS STORAGE CHARGE				TOTAL				INFLow	RELEASE	EVAP	OWN
	INFLow	RELEASE	EVAP	OWN	INFLow	RELEASE	EVAP	OWN				
				460.80				4693.92				
1	0.00	0.00	0.00	460.80	46.29	0.00	0.00	4740.21				
2	0.00	0.00	0.10	460.70	47.96	0.00	1.07	4787.10				
3	0.00	0.00	0.09	460.61	55.74	0.00	0.96	4841.88				
4	0.00	0.00	0.04	460.57	61.72	0.00	0.44	4903.16				
5	0.00	0.00	0.06	460.51	74.51	0.00	0.66	4977.01				
6	0.00	0.00	0.05	460.46	0.00	0.00	0.54	4976.47				
7	0.00	0.00	0.04	460.42	0.00	0.00	0.45	4976.02				
8	0.00	0.00	0.04	460.38	0.00	0.00	0.45	4975.57				
9	0.00	0.00	0.00	460.38	0.00	0.00	0.00	4975.57				
10	0.00	0.00	0.04	460.34	0.00	0.00	0.45	4975.12				
11	0.00	0.00	0.08	460.26	0.00	0.00	0.88	4974.24				
12	0.00	0.00	0.08	460.18	0.00	0.00	0.88	4973.36				
13	0.00	0.00	0.12	460.06	0.00	0.00	1.32	4972.04				
14	0.00	0.00	0.12	459.94	0.00	0.00	1.32	4970.72				
15	0.00	0.00	0.13	459.81	0.00	0.00	1.41	4969.31				
16	0.00	0.00	0.15	459.66	0.00	0.00	1.63	4967.68				
17	0.00	0.00	0.13	459.53	0.00	0.00	1.40	4966.28				
18	0.00	0.00	0.16	459.37	0.00	0.00	1.73	4964.55				
19	0.00	0.00	0.08	459.29	0.00	0.00	0.86	4963.69				
20	0.00	0.00	0.09	459.20	0.00	0.00	0.98	4962.71				
21	0.00	0.00	0.09	459.11	0.00	0.00	0.98	4961.73				
22	0.00	0.00	0.09	459.02	0.00	0.00	0.97	4960.76				
23	0.00	0.00	0.15	458.87	0.00	0.00	1.62	4959.14				
24	0.00	0.00	0.18	458.69	0.00	0.00	1.94	4957.20				
25	0.00	0.00	0.14	458.55	0.00	0.00	1.51	4955.69				
26	0.00	0.00	0.14	458.41	0.00	0.00	1.51	4954.18				
27	0.00	0.00	0.11	458.30	0.00	0.00	1.18	4953.00				
28	0.00	0.00	0.11	458.19	0.00	0.00	1.17	4951.83				
29	0.00	0.00	0.11	458.08	0.00	0.00	1.17	4950.66				
30	0.00	0.00	0.04	458.04	0.00	0.00	0.43	4950.23				
TOT	0.00	0.00	2.76		286.22	0.00	29.91					

RETURN FLOW

NOV 1998:	INSTATE				STATE LINE				TOTAL			
	INFLow	RELEASE	EVAP	OWN	INFLow	RELEASE	EVAP	OWN	INFLow	RELEASE	EVAP	OWN
				154.76				0.00				154.76
1	2.08	0.00	0.00	156.84	0.00	0.00	0.00	0.00	2.08	0.00	0.00	156.84
2	2.15	0.00	0.04	158.95	0.00	0.00	0.00	0.00	2.15	0.00	0.04	158.95
3	2.50	0.00	0.03	161.42	0.00	0.00	0.00	0.00	2.50	0.00	0.03	161.42
4	2.77	0.00	0.01	164.18	0.00	0.00	0.00	0.00	2.77	0.00	0.01	164.18
5	3.35	0.00	0.02	167.51	0.00	0.00	0.00	0.00	3.35	0.00	0.02	167.51
6	0.00	0.00	0.02	167.49	0.00	0.00	0.00	0.00	0.00	0.00	0.02	167.49
7	0.00	0.00	0.01	167.48	0.00	0.00	0.00	0.00	0.00	0.00	0.01	167.48
8	0.00	0.00	0.01	167.47	0.00	0.00	0.00	0.00	0.00	0.00	0.01	167.47
9	0.00	0.00	0.00	167.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	167.47
10	0.00	0.00	0.01	167.46	0.00	0.00	0.00	0.00	0.00	0.00	0.01	167.46
11	0.00	0.00	0.03	167.43	0.00	0.00	0.00	0.00	0.00	0.00	0.03	167.43
12	0.00	0.00	0.03	167.40	0.00	0.00	0.00	0.00	0.00	0.00	0.03	167.40
13	0.00	0.00	0.04	167.36	0.00	0.00	0.00	0.00	0.00	0.00	0.04	167.36
14	0.00	0.00	0.04	167.32	0.00	0.00	0.00	0.00	0.00	0.00	0.04	167.32
15	0.00	0.00	0.05	167.27	0.00	0.00	0.00	0.00	0.00	0.00	0.05	167.27
16	0.00	0.00	0.05	167.22	0.00	0.00	0.00	0.00	0.00	0.00	0.05	167.22
17	0.00	0.00	0.05	167.17	0.00	0.00	0.00	0.00	0.00	0.00	0.05	167.17
18	0.00	0.00	0.06	167.11	0.00	0.00	0.00	0.00	0.00	0.00	0.06	167.11
19	0.00	0.00	0.03	167.08	0.00	0.00	0.00	0.00	0.00	0.00	0.03	167.08
20	0.00	0.00	0.03	167.05	0.00	0.00	0.00	0.00	0.00	0.00	0.03	167.05
21	0.00	0.00	0.03	167.02	0.00	0.00	0.00	0.00	0.00	0.00	0.03	167.02
22	0.00	0.00	0.03	166.99	0.00	0.00	0.00	0.00	0.00	0.00	0.03	166.99
23	0.00	0.00	0.05	166.94	0.00	0.00	0.00	0.00	0.00	0.00	0.05	166.94
24	0.00	0.00	0.07	166.87	0.00	0.00	0.00	0.00	0.00	0.00	0.07	166.87
25	0.00	0.00	0.05	166.82	0.00	0.00	0.00	0.00	0.00	0.00	0.05	166.82
26	0.00	0.00	0.05	166.77	0.00	0.00	0.00	0.00	0.00	0.00	0.05	166.77
27	0.00	0.00	0.04	166.73	0.00	0.00	0.00	0.00	0.00	0.00	0.04	166.73
28	0.00	0.00	0.04	166.69	0.00	0.00	0.00	0.00	0.00	0.00	0.04	166.69
29	0.00	0.00	0.04	166.65	0.00	0.00	0.00	0.00	0.00	0.00	0.04	166.65
30	0.00	0.00	0.01	166.64	0.00	0.00	0.00	0.00	0.00	0.00	0.01	166.64
TOT	12.85	0.00	0.97		0.00	0.00	0.00		12.85	0.00	0.97	





DEC 1998:	OFFSET ACCOUNT				CONSUMABLE WATER				RETURN FLOW			PG 1
	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	
				5116.87				4950.23				166.64
1	0.00	0.00	3.10	5113.77	0.00	0.00	3.00	4947.23	0.00	0.00	0.10	166.54
2	0.00	0.00	1.10	5112.67	0.00	0.00	1.06	4946.17	0.00	0.00	0.04	166.50
3	0.00	0.00	1.00	5111.67	0.00	0.00	0.97	4945.20	0.00	0.00	0.03	166.47
4	0.00	0.00	0.67	5111.00	0.00	0.00	0.65	4944.55	0.00	0.00	0.02	166.45
5	0.00	0.00	0.55	5110.45	0.00	0.00	0.53	4944.02	0.00	0.00	0.02	166.43
6	0.00	0.00	0.55	5109.90	0.00	0.00	0.53	4943.49	0.00	0.00	0.02	166.41
7	0.00	0.00	0.88	5109.02	0.00	0.00	0.85	4942.64	0.00	0.00	0.03	166.38
8	0.00	0.00	0.88	5108.14	0.00	0.00	0.85	4941.79	0.00	0.00	0.03	166.35
9	0.00	0.00	0.87	5107.27	0.00	0.00	0.84	4940.95	0.00	0.00	0.03	166.32
10	0.00	0.00	0.89	5106.38	0.00	0.00	0.86	4940.09	0.00	0.00	0.03	166.29
11	0.00	0.00	0.89	5105.49	0.00	0.00	0.86	4939.23	0.00	0.00	0.03	166.26
12	0.00	0.00	0.89	5104.60	0.00	0.00	0.86	4938.37	0.00	0.00	0.03	166.23
13	0.00	0.00	0.89	5103.71	0.00	0.00	0.86	4937.51	0.00	0.00	0.03	166.20
14	0.00	0.00	0.89	5102.82	0.00	0.00	0.86	4936.65	0.00	0.00	0.03	166.17
15	0.00	0.00	0.88	5101.94	0.00	0.00	0.85	4935.80	0.00	0.00	0.03	166.14
16	0.00	0.00	0.88	5101.06	0.00	0.00	0.85	4934.95	0.00	0.00	0.03	166.11
17	0.00	0.00	0.88	5100.18	0.00	0.00	0.85	4934.10	0.00	0.00	0.03	166.08
18	0.00	0.00	0.88	5099.30	0.00	0.00	0.85	4933.25	0.00	0.00	0.03	166.05
19	0.00	0.00	0.88	5098.42	0.00	0.00	0.85	4932.40	0.00	0.00	0.03	166.02
20	0.00	0.00	0.88	5097.54	0.00	0.00	0.85	4931.55	0.00	0.00	0.03	165.99
21	0.00	0.00	0.88	5096.66	0.00	0.00	0.85	4930.70	0.00	0.00	0.03	165.96
22	0.00	0.00	0.88	5095.78	0.00	0.00	0.85	4929.85	0.00	0.00	0.03	165.93
23	0.00	0.00	0.87	5094.91	0.00	0.00	0.84	4929.01	0.00	0.00	0.03	165.90
24	0.00	0.00	0.87	5094.04	0.00	0.00	0.84	4928.17	0.00	0.00	0.03	165.87
25	0.00	0.00	0.87	5093.17	0.00	0.00	0.84	4927.33	0.00	0.00	0.03	165.84
26	0.00	0.00	0.87	5092.30	0.00	0.00	0.84	4926.49	0.00	0.00	0.03	165.81
27	0.00	0.00	0.87	5091.43	0.00	0.00	0.84	4925.65	0.00	0.00	0.03	165.78
28	0.00	0.00	0.87	5090.56	0.00	0.00	0.84	4924.81	0.00	0.00	0.03	165.75
29	0.00	0.00	0.89	5089.67	0.00	0.00	0.86	4923.95	0.00	0.00	0.03	165.72
30	0.00	0.00	0.89	5088.78	0.00	0.00	0.86	4923.09	0.00	0.00	0.03	165.69
31	0.00	0.00	0.88	5087.90	0.00	0.00	0.85	4922.24	0.00	0.00	0.03	165.66
TOT	0.00	0.00	28.97		0.00	0.00	27.99		0.00	0.00	0.98	

DEC 1998:	COLORADO UPSTREAM				CONSUMABLE WATER				KANSAS				PG 1
	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	
				0.00				4492.19				0.00	
1	0.00	0.00	0.00	0.00	0.00	0.00	2.72	4489.47	0.00	0.00	0.00	0.00	
2	0.00	0.00	0.00	0.00	0.00	0.00	0.96	4488.51	0.00	0.00	0.00	0.00	
3	0.00	0.00	0.00	0.00	0.00	0.00	0.88	4487.63	0.00	0.00	0.00	0.00	
4	0.00	0.00	0.00	0.00	0.00	0.00	0.59	4487.04	0.00	0.00	0.00	0.00	
5	0.00	0.00	0.00	0.00	0.00	0.00	0.48	4486.56	0.00	0.00	0.00	0.00	
6	0.00	0.00	0.00	0.00	0.00	0.00	0.48	4486.08	0.00	0.00	0.00	0.00	
7	0.00	0.00	0.00	0.00	0.00	0.00	0.77	4485.31	0.00	0.00	0.00	0.00	
8	0.00	0.00	0.00	0.00	0.00	0.00	0.77	4484.54	0.00	0.00	0.00	0.00	
9	0.00	0.00	0.00	0.00	0.00	0.00	0.76	4483.78	0.00	0.00	0.00	0.00	
10	0.00	0.00	0.00	0.00	0.00	0.00	0.78	4483.00	0.00	0.00	0.00	0.00	
11	0.00	0.00	0.00	0.00	0.00	0.00	0.78	4482.22	0.00	0.00	0.00	0.00	
12	0.00	0.00	0.00	0.00	0.00	0.00	0.78	4481.44	0.00	0.00	0.00	0.00	
13	0.00	0.00	0.00	0.00	0.00	0.00	0.78	4480.66	0.00	0.00	0.00	0.00	
14	0.00	0.00	0.00	0.00	0.00	0.00	0.78	4479.88	0.00	0.00	0.00	0.00	
15	0.00	0.00	0.00	0.00	0.00	0.00	0.77	4479.11	0.00	0.00	0.00	0.00	
16	0.00	0.00	0.00	0.00	0.00	0.00	0.77	4478.34	0.00	0.00	0.00	0.00	
17	0.00	0.00	0.00	0.00	0.00	0.00	0.77	4477.57	0.00	0.00	0.00	0.00	
18	0.00	0.00	0.00	0.00	0.00	0.00	0.77	4476.80	0.00	0.00	0.00	0.00	
19	0.00	0.00	0.00	0.00	0.00	0.00	0.77	4476.03	0.00	0.00	0.00	0.00	
20	0.00	0.00	0.00	0.00	0.00	0.00	0.77	4475.26	0.00	0.00	0.00	0.00	
21	0.00	0.00	0.00	0.00	0.00	0.00	0.77	4474.49	0.00	0.00	0.00	0.00	
22	0.00	0.00	0.00	0.00	0.00	0.00	0.77	4473.72	0.00	0.00	0.00	0.00	
23	0.00	0.00	0.00	0.00	0.00	0.00	0.76	4472.96	0.00	0.00	0.00	0.00	
24	0.00	0.00	0.00	0.00	0.00	0.00	0.76	4472.20	0.00	0.00	0.00	0.00	
25	0.00	0.00	0.00	0.00	0.00	0.00	0.76	4471.44	0.00	0.00	0.00	0.00	
26	0.00	0.00	0.00	0.00	0.00	0.00	0.76	4470.68	0.00	0.00	0.00	0.00	
27	0.00	0.00	0.00	0.00	0.00	0.00	0.76	4469.92	0.00	0.00	0.00	0.00	
28	0.00	0.00	0.00	0.00	0.00	0.00	0.76	4469.16	0.00	0.00	0.00	0.00	
29	0.00	0.00	0.00	0.00	0.00	0.00	0.78	4468.38	0.00	0.00	0.00	0.00	
30	0.00	0.00	0.00	0.00	0.00	0.00	0.78	4467.60	0.00	0.00	0.00	0.00	
31	0.00	0.00	0.00	0.00	0.00	0.00	0.77	4466.83	0.00	0.00	0.00	0.00	
TOT	0.00	0.00	0.00		0.00	0.00	25.36		0.00	0.00	0.00		

CONSUMABLE WATER

DEC 1998:	KANSAS STORAGE CHARGE				TOTAL				INFLow	RELEASE	EVAP	OWN
	INFLow	RELEASE	EVAP	OWN	INFLow	RELEASE	EVAP	OWN				
:				458.04				4950.23				
1 :	0.00	0.00	0.28	457.76	0.00	0.00	3.00	4947.23				
2 :	0.00	0.00	0.10	457.66	0.00	0.00	1.06	4946.17				
3 :	0.00	0.00	0.09	457.57	0.00	0.00	0.97	4945.20				
4 :	0.00	0.00	0.06	457.51	0.00	0.00	0.65	4944.55				
5 :	0.00	0.00	0.05	457.46	0.00	0.00	0.53	4944.02				
6 :	0.00	0.00	0.05	457.41	0.00	0.00	0.53	4943.49				
7 :	0.00	0.00	0.08	457.33	0.00	0.00	0.85	4942.64				
8 :	0.00	0.00	0.08	457.25	0.00	0.00	0.85	4941.79				
9 :	0.00	0.00	0.08	457.17	0.00	0.00	0.84	4940.95				
10 :	0.00	0.00	0.08	457.09	0.00	0.00	0.86	4940.09				
11 :	0.00	0.00	0.08	457.01	0.00	0.00	0.86	4939.23				
12 :	0.00	0.00	0.08	456.93	0.00	0.00	0.86	4938.37				
13 :	0.00	0.00	0.08	456.85	0.00	0.00	0.86	4937.51				
14 :	0.00	0.00	0.08	456.77	0.00	0.00	0.86	4936.65				
15 :	0.00	0.00	0.08	456.69	0.00	0.00	0.85	4935.80				
16 :	0.00	0.00	0.08	456.61	0.00	0.00	0.85	4934.95				
17 :	0.00	0.00	0.08	456.53	0.00	0.00	0.85	4934.10				
18 :	0.00	0.00	0.08	456.45	0.00	0.00	0.85	4933.25				
19 :	0.00	0.00	0.08	456.37	0.00	0.00	0.85	4932.40				
20 :	0.00	0.00	0.08	456.29	0.00	0.00	0.85	4931.55				
21 :	0.00	0.00	0.08	456.21	0.00	0.00	0.85	4930.70				
22 :	0.00	0.00	0.08	456.13	0.00	0.00	0.85	4929.85				
23 :	0.00	0.00	0.08	456.05	0.00	0.00	0.84	4929.01				
24 :	0.00	0.00	0.08	455.97	0.00	0.00	0.84	4928.17				
25 :	0.00	0.00	0.08	455.89	0.00	0.00	0.84	4927.33				
26 :	0.00	0.00	0.08	455.81	0.00	0.00	0.84	4926.49				
27 :	0.00	0.00	0.08	455.73	0.00	0.00	0.84	4925.65				
28 :	0.00	0.00	0.08	455.65	0.00	0.00	0.84	4924.81				
29 :	0.00	0.00	0.08	455.57	0.00	0.00	0.86	4923.95				
30 :	0.00	0.00	0.08	455.49	0.00	0.00	0.86	4923.09				
31 :	0.00	0.00	0.08	455.41	0.00	0.00	0.85	4922.24				
TOT :	0.00	0.00	2.63		0.00	0.00	27.99					

RETURN FLOW

DEC 1998:	INSTATE				STATE LINE				TOTAL			
	INFLow	RELEASE	EVAP	OWN	INFLow	RELEASE	EVAP	OWN	INFLow	RELEASE	EVAP	OWN
:				166.64				0.00				166.64
1 :	0.00	0.00	0.10	166.54	0.00	0.00	0.00	0.00	0.00	0.00	0.10	166.54
2 :	0.00	0.00	0.04	166.50	0.00	0.00	0.00	0.00	0.00	0.00	0.04	166.50
3 :	0.00	0.00	0.03	166.47	0.00	0.00	0.00	0.00	0.00	0.00	0.03	166.47
4 :	0.00	0.00	0.02	166.45	0.00	0.00	0.00	0.00	0.00	0.00	0.02	166.45
5 :	0.00	0.00	0.02	166.43	0.00	0.00	0.00	0.00	0.00	0.00	0.02	166.43
6 :	0.00	0.00	0.02	166.41	0.00	0.00	0.00	0.00	0.00	0.00	0.02	166.41
7 :	0.00	0.00	0.03	166.38	0.00	0.00	0.00	0.00	0.00	0.00	0.03	166.38
8 :	0.00	0.00	0.03	166.35	0.00	0.00	0.00	0.00	0.00	0.00	0.03	166.35
9 :	0.00	0.00	0.03	166.32	0.00	0.00	0.00	0.00	0.00	0.00	0.03	166.32
10 :	0.00	0.00	0.03	166.29	0.00	0.00	0.00	0.00	0.00	0.00	0.03	166.29
11 :	0.00	0.00	0.03	166.26	0.00	0.00	0.00	0.00	0.00	0.00	0.03	166.26
12 :	0.00	0.00	0.03	166.23	0.00	0.00	0.00	0.00	0.00	0.00	0.03	166.23
13 :	0.00	0.00	0.03	166.20	0.00	0.00	0.00	0.00	0.00	0.00	0.03	166.20
14 :	0.00	0.00	0.03	166.17	0.00	0.00	0.00	0.00	0.00	0.00	0.03	166.17
15 :	0.00	0.00	0.03	166.14	0.00	0.00	0.00	0.00	0.00	0.00	0.03	166.14
16 :	0.00	0.00	0.03	166.11	0.00	0.00	0.00	0.00	0.00	0.00	0.03	166.11
17 :	0.00	0.00	0.03	166.08	0.00	0.00	0.00	0.00	0.00	0.00	0.03	166.08
18 :	0.00	0.00	0.03	166.05	0.00	0.00	0.00	0.00	0.00	0.00	0.03	166.05
19 :	0.00	0.00	0.03	166.02	0.00	0.00	0.00	0.00	0.00	0.00	0.03	166.02
20 :	0.00	0.00	0.03	165.99	0.00	0.00	0.00	0.00	0.00	0.00	0.03	165.99
21 :	0.00	0.00	0.03	165.96	0.00	0.00	0.00	0.00	0.00	0.00	0.03	165.96
22 :	0.00	0.00	0.03	165.93	0.00	0.00	0.00	0.00	0.00	0.00	0.03	165.93
23 :	0.00	0.00	0.03	165.90	0.00	0.00	0.00	0.00	0.00	0.00	0.03	165.90
24 :	0.00	0.00	0.03	165.87	0.00	0.00	0.00	0.00	0.00	0.00	0.03	165.87
25 :	0.00	0.00	0.03	165.84	0.00	0.00	0.00	0.00	0.00	0.00	0.03	165.84
26 :	0.00	0.00	0.03	165.81	0.00	0.00	0.00	0.00	0.00	0.00	0.03	165.81
27 :	0.00	0.00	0.03	165.78	0.00	0.00	0.00	0.00	0.00	0.00	0.03	165.78
28 :	0.00	0.00	0.03	165.75	0.00	0.00	0.00	0.00	0.00	0.00	0.03	165.75
29 :	0.00	0.00	0.03	165.72	0.00	0.00	0.00	0.00	0.00	0.00	0.03	165.72
30 :	0.00	0.00	0.03	165.69	0.00	0.00	0.00	0.00	0.00	0.00	0.03	165.69
31 :	0.00	0.00	0.03	165.66	0.00	0.00	0.00	0.00	0.00	0.00	0.03	165.66
TOT :	0.00	0.00	0.98		0.00	0.00	0.00		0.00	0.00	0.98	



OFFSET ACCOUNT													CONSUMABLE WATER				RETURN FLOW			PG 1
JAN 1999:	INFLOW	RELEASE	EVAP	OWN	:	INFLOW	RELEASE	EVAP	OWN	:	INFLOW	RELEASE	EVAP	OWN						
				5087.90	:				4922.24	:				165.66						
1	0.00	0.00	0.88	5087.02	:	0.00	0.00	0.85	4921.39	:	0.00	0.00	0.03	165.63						
2	0.00	0.00	0.88	5086.14	:	0.00	0.00	0.85	4920.54	:	0.00	0.00	0.03	165.60						
3	0.00	0.00	0.88	5085.26	:	0.00	0.00	0.85	4919.69	:	0.00	0.00	0.03	165.57						
4	0.00	0.00	0.87	5084.39	:	0.00	0.00	0.84	4918.85	:	0.00	0.00	0.03	165.54						
5	0.00	0.00	0.87	5083.52	:	0.00	0.00	0.84	4918.01	:	0.00	0.00	0.03	165.51						
6	0.00	0.00	0.87	5082.65	:	0.00	0.00	0.84	4917.17	:	0.00	0.00	0.03	165.48						
7	0.00	0.00	0.87	5081.78	:	0.00	0.00	0.84	4916.33	:	0.00	0.00	0.03	165.45						
8	0.00	0.00	0.87	5080.91	:	0.00	0.00	0.84	4915.49	:	0.00	0.00	0.03	165.42						
9	0.00	0.00	0.87	5080.04	:	0.00	0.00	0.84	4914.65	:	0.00	0.00	0.03	165.39						
10	0.00	0.00	0.87	5079.17	:	0.00	0.00	0.84	4913.81	:	0.00	0.00	0.03	165.36						
11	0.00	165.33	0.86	4912.98	:	0.00	0.00	0.83	4912.98	:	0.00	165.33	0.03	0.00						
12	0.00	0.00	0.83	4912.15	:	0.00	0.00	0.83	4912.15	:	0.00	0.00	0.00	0.00						
13	0.00	0.00	0.83	4911.32	:	0.00	0.00	0.83	4911.32	:	0.00	0.00	0.00	0.00						
14	0.00	0.00	0.83	4910.49	:	0.00	0.00	0.83	4910.49	:	0.00	0.00	0.00	0.00						
15	0.00	0.00	0.82	4909.67	:	0.00	0.00	0.82	4909.67	:	0.00	0.00	0.00	0.00						
16	0.00	0.00	0.84	4908.83	:	0.00	0.00	0.84	4908.83	:	0.00	0.00	0.00	0.00						
17	0.00	0.00	0.83	4908.00	:	0.00	0.00	0.83	4908.00	:	0.00	0.00	0.00	0.00						
18	0.00	0.00	0.83	4907.17	:	0.00	0.00	0.83	4907.17	:	0.00	0.00	0.00	0.00						
19	0.00	0.00	0.83	4906.34	:	0.00	0.00	0.83	4906.34	:	0.00	0.00	0.00	0.00						
20	0.00	0.00	0.82	4905.52	:	0.00	0.00	0.82	4905.52	:	0.00	0.00	0.00	0.00						
21	0.00	0.00	0.84	4904.68	:	0.00	0.00	0.84	4904.68	:	0.00	0.00	0.00	0.00						
22	0.00	0.00	0.84	4903.84	:	0.00	0.00	0.84	4903.84	:	0.00	0.00	0.00	0.00						
23	0.00	0.00	0.83	4903.01	:	0.00	0.00	0.83	4903.01	:	0.00	0.00	0.00	0.00						
24	0.00	0.00	0.83	4902.18	:	0.00	0.00	0.83	4902.18	:	0.00	0.00	0.00	0.00						
25	0.00	0.00	0.82	4901.36	:	0.00	0.00	0.82	4901.36	:	0.00	0.00	0.00	0.00						
26	0.00	0.00	0.84	4900.52	:	0.00	0.00	0.84	4900.52	:	0.00	0.00	0.00	0.00						
27	0.00	0.00	0.83	4899.69	:	0.00	0.00	0.83	4899.69	:	0.00	0.00	0.00	0.00						
28	0.00	0.00	0.83	4898.86	:	0.00	0.00	0.83	4898.86	:	0.00	0.00	0.00	0.00						
29	0.00	0.00	0.83	4898.03	:	0.00	0.00	0.83	4898.03	:	0.00	0.00	0.00	0.00						
30	0.00	0.00	0.82	4897.21	:	0.00	0.00	0.82	4897.21	:	0.00	0.00	0.00	0.00						
31	0.00	0.00	0.82	4896.39	:	0.00	0.00	0.82	4896.39	:	0.00	0.00	0.00	0.00						
TOT	0.00	165.33	26.18		:	0.00	0.00	25.85		:	0.00	165.33	0.33							

CONSUMABLE WATER													PG 1	
JAN 1999:	COLORADO UPSTREAM				:	COLORADO DOWNSTREAM				:	KANSAS			
	INFLOW	RELEASE	EVAP	OWN	:	INFLOW	RELEASE	EVAP	OWN	:	INFLOW	RELEASE	EVAP	OWN
				0.00	:				4466.83	:				0.00
1	0.00	0.00	0.00	0.00	:	0.00	0.00	0.77	4466.06	:	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	:	0.00	0.00	0.77	4465.29	:	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	:	0.00	0.00	0.77	4464.52	:	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	:	0.00	0.00	0.76	4463.76	:	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	:	0.00	0.00	0.76	4463.00	:	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	:	0.00	0.00	0.76	4462.24	:	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	:	0.00	0.00	0.76	4461.48	:	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	:	0.00	0.00	0.76	4460.72	:	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	:	0.00	0.00	0.76	4459.96	:	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	:	0.00	0.00	0.76	4459.20	:	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	:	0.00	0.00	0.75	4458.45	:	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	:	0.00	0.00	0.75	4457.70	:	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	:	0.00	0.00	0.75	4456.95	:	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	:	0.00	0.00	0.75	4456.20	:	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	:	0.00	0.00	0.74	4455.46	:	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	:	0.00	0.00	0.76	4454.70	:	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	:	0.00	0.00	0.75	4453.95	:	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	:	0.00	0.00	0.75	4453.20	:	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	:	0.00	0.00	0.75	4452.45	:	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	:	0.00	0.00	0.74	4451.71	:	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	:	0.00	0.00	0.76	4450.95	:	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	:	0.00	0.00	0.76	4450.19	:	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	:	0.00	0.00	0.75	4449.44	:	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	:	0.00	0.00	0.75	4448.69	:	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	:	0.00	0.00	0.74	4447.95	:	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	:	0.00	0.00	0.76	4447.19	:	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	:	0.00	0.00	0.75	4446.44	:	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	:	0.00	0.00	0.75	4445.69	:	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	:	0.00	0.00	0.75	4444.94	:	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	:	0.00	0.00	0.74	4444.20	:	0.00	0.00	0.00	0.00
31	0.00	0.00	0.00	0.00	:	0.00	0.00	0.74	4443.46	:	0.00	0.00	0.00	0.00
TOT	0.00	0.00	0.00		:	0.00	0.00	23.37		:	0.00	0.00	0.00	

CONSUMABLE WATER

JAN 1999:	KANSAS STORAGE CHARGE				TOTAL				INFLW	RELEASE	EVAP	OWN
	INFLW	RELEASE	EVAP	OWN	INFLW	RELEASE	EVAP	OWN				
				455.41				4922.24				
1	0.00	0.00	0.08	455.33	0.00	0.00	0.85	4921.39				
2	0.00	0.00	0.08	455.25	0.00	0.00	0.85	4920.54				
3	0.00	0.00	0.08	455.17	0.00	0.00	0.85	4919.69				
4	0.00	0.00	0.08	455.09	0.00	0.00	0.84	4918.85				
5	0.00	0.00	0.08	455.01	0.00	0.00	0.84	4918.01				
6	0.00	0.00	0.08	454.93	0.00	0.00	0.84	4917.17				
7	0.00	0.00	0.08	454.85	0.00	0.00	0.84	4916.33				
8	0.00	0.00	0.08	454.77	0.00	0.00	0.84	4915.49				
9	0.00	0.00	0.08	454.69	0.00	0.00	0.84	4914.65				
10	0.00	0.00	0.08	454.61	0.00	0.00	0.84	4913.81				
11	0.00	0.00	0.08	454.53	0.00	0.00	0.83	4912.98				
12	0.00	0.00	0.08	454.45	0.00	0.00	0.83	4912.15				
13	0.00	0.00	0.08	454.37	0.00	0.00	0.83	4911.32				
14	0.00	0.00	0.08	454.29	0.00	0.00	0.83	4910.49				
15	0.00	0.00	0.08	454.21	0.00	0.00	0.82	4909.67				
16	0.00	0.00	0.08	454.13	0.00	0.00	0.84	4908.83				
17	0.00	0.00	0.08	454.05	0.00	0.00	0.83	4908.00				
18	0.00	0.00	0.08	453.97	0.00	0.00	0.83	4907.17				
19	0.00	0.00	0.08	453.89	0.00	0.00	0.83	4906.34				
20	0.00	0.00	0.08	453.81	0.00	0.00	0.82	4905.52				
21	0.00	0.00	0.08	453.73	0.00	0.00	0.84	4904.68				
22	0.00	0.00	0.08	453.65	0.00	0.00	0.84	4903.84				
23	0.00	0.00	0.08	453.57	0.00	0.00	0.83	4903.01				
24	0.00	0.00	0.08	453.49	0.00	0.00	0.83	4902.18				
25	0.00	0.00	0.08	453.41	0.00	0.00	0.82	4901.36				
26	0.00	0.00	0.08	453.33	0.00	0.00	0.84	4900.52				
27	0.00	0.00	0.08	453.25	0.00	0.00	0.83	4899.69				
28	0.00	0.00	0.08	453.17	0.00	0.00	0.83	4898.86				
29	0.00	0.00	0.08	453.09	0.00	0.00	0.83	4898.03				
30	0.00	0.00	0.08	453.01	0.00	0.00	0.82	4897.21				
31	0.00	0.00	0.08	452.93	0.00	0.00	0.82	4896.39				
TOT	0.00	0.00	2.48		0.00	0.00	25.85					

RETURN FLOW

JAN 1999:	INSTATE				STATE LINE				TOTAL			
	INFLW	RELEASE	EVAP	OWN	INFLW	RELEASE	EVAP	OWN	INFLW	RELEASE	EVAP	OWN
				165.66				0.00				
1	0.00	0.00	0.03	165.63	0.00	0.00	0.00	0.00	0.00	0.00	0.03	165.66
2	0.00	0.00	0.03	165.60	0.00	0.00	0.00	0.00	0.00	0.00	0.03	165.63
3	0.00	0.00	0.03	165.57	0.00	0.00	0.00	0.00	0.00	0.00	0.03	165.60
4	0.00	0.00	0.03	165.54	0.00	0.00	0.00	0.00	0.00	0.00	0.03	165.57
5	0.00	0.00	0.03	165.51	0.00	0.00	0.00	0.00	0.00	0.00	0.03	165.54
6	0.00	0.00	0.03	165.48	0.00	0.00	0.00	0.00	0.00	0.00	0.03	165.51
7	0.00	0.00	0.03	165.45	0.00	0.00	0.00	0.00	0.00	0.00	0.03	165.48
8	0.00	0.00	0.03	165.42	0.00	0.00	0.00	0.00	0.00	0.00	0.03	165.45
9	0.00	0.00	0.03	165.39	0.00	0.00	0.00	0.00	0.00	0.00	0.03	165.42
10	0.00	0.00	0.03	165.36	0.00	0.00	0.00	0.00	0.00	0.00	0.03	165.39
11	0.00	165.33	0.03	0.00	0.00	0.00	0.00	0.00	0.00	165.33	0.03	165.36
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOT	0.00	165.33	0.33		0.00	0.00	0.00		0.00	165.33	0.33	

JAN 1999:	UPSTREAM				INSTATE DOWNSTREAM				TOTAL			OWN
	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	
1 :	0.00	0.00	0.03	165.66 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.03	165.66
2 :	0.00	0.00	0.03	165.63 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.03	165.63
3 :	0.00	0.00	0.03	165.60 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.03	165.60
4 :	0.00	0.00	0.03	165.57 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.03	165.57
5 :	0.00	0.00	0.03	165.54 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.03	165.54
6 :	0.00	0.00	0.03	165.51 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.03	165.51
7 :	0.00	0.00	0.03	165.48 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.03	165.48
8 :	0.00	0.00	0.03	165.45 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.03	165.45
9 :	0.00	0.00	0.03	165.42 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.03	165.42
10 :	0.00	0.00	0.03	165.39 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.03	165.39
11 :	0.00	165.33	0.03	165.36 :	0.00	0.00	0.00	0.00 :	0.00	165.33	0.03	165.36
12 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
13 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
14 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
15 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
16 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
17 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
18 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
19 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
20 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
21 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
22 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
23 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
24 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
25 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
26 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
27 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
28 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
29 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
30 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
31 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
TOT :	0.00	165.33	0.33	:	0.00	0.00	0.00	:	0.00	165.33	0.33	

JAN 1999:	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN
1 :												
2 :												
3 :												
4 :												
5 :												
6 :												
7 :												
8 :												
9 :												
10 :												
11 :												
12 :												
13 :												
14 :												
15 :												
16 :												
17 :												
18 :												
19 :												
20 :												
21 :												
22 :												
23 :												
24 :												
25 :												
26 :												
27 :												
28 :												
29 :												
30 :												
31 :												
TOT :												

FEB 1999:	OFFSET ACCOUNT				CONSUMABLE WATER				RETURN FLOW				PG 1
	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	
				4896.39				4896.39					0.00
1	0.00	0.00	1.33	4895.06	0.00	0.00	1.33	4895.06	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	1.33	4893.73	0.00	0.00	1.33	4893.73	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	1.32	4892.41	0.00	0.00	1.32	4892.41	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	1.32	4891.09	0.00	0.00	1.32	4891.09	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	1.31	4889.78	0.00	0.00	1.31	4889.78	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	1.31	4888.47	0.00	0.00	1.31	4888.47	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	1.32	4887.15	0.00	0.00	1.32	4887.15	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	1.31	4885.84	0.00	0.00	1.31	4885.84	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	1.31	4884.53	0.00	0.00	1.31	4884.53	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	1.30	4883.23	0.00	0.00	1.30	4883.23	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	1.30	4881.93	0.00	0.00	1.30	4881.93	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	1.30	4880.63	0.00	0.00	1.30	4880.63	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	1.30	4879.33	0.00	0.00	1.30	4879.33	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	1.30	4878.03	0.00	0.00	1.30	4878.03	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	1.30	4876.73	0.00	0.00	1.30	4876.73	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	1.29	4875.44	0.00	0.00	1.29	4875.44	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	1.29	4874.15	0.00	0.00	1.29	4874.15	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	1.29	4872.86	0.00	0.00	1.29	4872.86	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	1.29	4871.57	0.00	0.00	1.29	4871.57	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	1.29	4870.28	0.00	0.00	1.29	4870.28	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	1.29	4868.99	0.00	0.00	1.29	4868.99	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	1.30	4867.69	0.00	0.00	1.30	4867.69	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	1.30	4866.39	0.00	0.00	1.30	4866.39	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	1.30	4865.09	0.00	0.00	1.30	4865.09	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	1.30	4863.79	0.00	0.00	1.30	4863.79	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	1.30	4862.49	0.00	0.00	1.30	4862.49	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	1.30	4861.19	0.00	0.00	1.30	4861.19	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	1.30	4859.89	0.00	0.00	1.30	4859.89	0.00	0.00	0.00	0.00	0.00
TOT	0.00	0.00	36.50		0.00	0.00	36.50		0.00	0.00	0.00		

FEB 1999:	COLORADO UPSTREAM				COLORADO DOWNSTREAM				KANSAS				PG 1
	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	
				0.00				4443.46					0.00
1	0.00	0.00	0.00	0.00	0.00	0.00	1.21	4442.25	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	1.21	4441.04	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	1.20	4439.84	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	1.20	4438.64	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	1.19	4437.45	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	1.19	4436.26	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	585.60	1.20	3849.46	585.60	0.00	0.00	0.00	585.60
8	0.00	0.00	0.00	0.00	0.00	0.00	1.03	3848.43	0.00	0.00	0.16	0.16	585.44
9	0.00	0.00	0.00	0.00	0.00	0.00	1.03	3847.40	0.00	0.00	0.16	0.16	585.28
10	0.00	0.00	0.00	0.00	0.00	0.00	1.02	3846.38	0.00	0.00	0.16	0.16	585.12
11	0.00	0.00	0.00	0.00	0.00	0.00	1.02	3845.36	0.00	0.00	0.16	0.16	584.96
12	0.00	0.00	0.00	0.00	0.00	0.00	1.02	3844.34	0.00	0.00	0.16	0.16	584.80
13	0.00	0.00	0.00	0.00	0.00	0.00	1.02	3843.32	0.00	0.00	0.16	0.16	584.64
14	0.00	0.00	0.00	0.00	0.00	0.00	1.02	3842.30	0.00	0.00	0.16	0.16	584.48
15	0.00	0.00	0.00	0.00	0.00	0.00	1.02	3841.28	0.00	0.00	0.16	0.16	584.32
16	0.00	0.00	0.00	0.00	0.00	0.00	1.02	3840.26	0.00	0.00	0.15	0.15	584.17
17	0.00	0.00	0.00	0.00	0.00	0.00	1.02	3839.24	0.00	0.00	0.15	0.15	584.02
18	0.00	0.00	0.00	0.00	0.00	0.00	1.02	3838.22	0.00	0.00	0.15	0.15	583.87
19	0.00	0.00	0.00	0.00	0.00	0.00	1.02	3837.20	0.00	0.00	0.15	0.15	583.72
20	0.00	0.00	0.00	0.00	0.00	0.00	1.02	3836.18	0.00	0.00	0.15	0.15	583.57
21	0.00	0.00	0.00	0.00	0.00	0.00	1.02	3835.16	0.00	0.00	0.15	0.15	583.42
22	0.00	0.00	0.00	0.00	0.00	0.00	1.02	3834.14	0.00	0.00	0.16	0.16	583.26
23	0.00	0.00	0.00	0.00	0.00	0.00	1.02	3833.12	0.00	0.00	0.16	0.16	583.10
24	0.00	0.00	0.00	0.00	0.00	0.00	1.02	3832.10	0.00	0.00	0.16	0.16	582.94
25	0.00	0.00	0.00	0.00	0.00	0.00	1.02	3831.08	0.00	0.00	0.16	0.16	582.78
26	0.00	0.00	0.00	0.00	0.00	0.00	1.02	3830.06	0.00	0.00	0.16	0.16	582.62
27	0.00	0.00	0.00	0.00	0.00	0.00	1.02	3829.04	0.00	0.00	0.16	0.16	582.46
28	0.00	0.00	0.00	0.00	0.00	0.00	1.02	3828.02	0.00	0.00	0.16	0.16	582.30
TOT	0.00	0.00	0.00		0.00	585.60	29.84		585.60	0.00	3.30		

CONSUMABLE WATER

FEB 1999:	KANSAS STORAGE CHARGE				TOTAL				INFLW	RELEASE	EVAP	OWN
	INFLW	RELEASE	EVAP	OWN	INFLW	RELEASE	EVAP	OWN				
:				452.93 :				4896.39 :				
1 :	0.00	0.00	0.12	452.81 :	0.00	0.00	1.33	4895.06 :				
2 :	0.00	0.00	0.12	452.69 :	0.00	0.00	1.33	4893.73 :				
3 :	0.00	0.00	0.12	452.57 :	0.00	0.00	1.32	4892.41 :				
4 :	0.00	0.00	0.12	452.45 :	0.00	0.00	1.32	4891.09 :				
5 :	0.00	0.00	0.12	452.33 :	0.00	0.00	1.31	4889.78 :				
6 :	0.00	0.00	0.12	452.21 :	0.00	0.00	1.31	4888.47 :				
7 :	0.00	0.00	0.12	452.09 :	0.00	0.00	1.32	4887.15 :				
8 :	0.00	0.00	0.12	451.97 :	0.00	0.00	1.31	4885.84 :				
9 :	0.00	0.00	0.12	451.85 :	0.00	0.00	1.31	4884.53 :				
10 :	0.00	0.00	0.12	451.73 :	0.00	0.00	1.30	4883.23 :				
11 :	0.00	0.00	0.12	451.61 :	0.00	0.00	1.30	4881.93 :				
12 :	0.00	0.00	0.12	451.49 :	0.00	0.00	1.30	4880.63 :				
13 :	0.00	0.00	0.12	451.37 :	0.00	0.00	1.30	4879.33 :				
14 :	0.00	0.00	0.12	451.25 :	0.00	0.00	1.30	4878.03 :				
15 :	0.00	0.00	0.12	451.13 :	0.00	0.00	1.30	4876.73 :				
16 :	0.00	0.00	0.12	451.01 :	0.00	0.00	1.29	4875.44 :				
17 :	0.00	0.00	0.12	450.89 :	0.00	0.00	1.29	4874.15 :				
18 :	0.00	0.00	0.12	450.77 :	0.00	0.00	1.29	4872.86 :				
19 :	0.00	0.00	0.12	450.65 :	0.00	0.00	1.29	4871.57 :				
20 :	0.00	0.00	0.12	450.53 :	0.00	0.00	1.29	4870.28 :				
21 :	0.00	0.00	0.12	450.41 :	0.00	0.00	1.29	4868.99 :				
22 :	0.00	0.00	0.12	450.29 :	0.00	0.00	1.30	4867.69 :				
23 :	0.00	0.00	0.12	450.17 :	0.00	0.00	1.30	4866.39 :				
24 :	0.00	0.00	0.12	450.05 :	0.00	0.00	1.30	4865.09 :				
25 :	0.00	0.00	0.12	449.93 :	0.00	0.00	1.30	4863.79 :				
26 :	0.00	0.00	0.12	449.81 :	0.00	0.00	1.30	4862.49 :				
27 :	0.00	0.00	0.12	449.69 :	0.00	0.00	1.30	4861.19 :				
28 :	0.00	0.00	0.12	449.57 :	0.00	0.00	1.30	4859.89 :				
TOT :	0.00	0.00	3.36		0.00	0.00	36.50					

RETURN FLOW

FEB 1999:	INSTATE				STATE LINE				TOTAL			
	INFLW	RELEASE	EVAP	OWN	INFLW	RELEASE	EVAP	OWN	INFLW	RELEASE	EVAP	OWN
:				0.00 :				0.00 :				0.00
1 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
2 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
3 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
4 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
5 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
6 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
7 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
8 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
9 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
10 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
11 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
12 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
13 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
14 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
15 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
16 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
17 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
18 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
19 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
20 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
21 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
22 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
23 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
24 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
25 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
26 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
27 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
28 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
TOT :	0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00	







CONSUMABLE WATER

MAR 1999:	KANSAS STORAGE CHARGE				TOTAL				INFLOW	RELEASE	EVAP	OWN
	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN				
				449.57				4859.89				
1	0.00	0.00	0.19	449.38	0.00	0.00	2.08	4857.81				
2	0.00	0.00	0.19	449.19	0.00	0.00	2.08	4855.73				
3	0.00	0.00	0.19	449.00	0.00	0.00	2.08	4853.65				
4	0.00	0.00	0.19	448.81	0.00	0.00	2.08	4851.57				
5	0.00	0.00	0.19	448.62	0.00	0.00	2.08	4849.49				
6	0.00	0.00	0.19	448.43	0.00	0.00	2.07	4847.42				
7	0.00	0.00	0.19	448.24	0.00	0.00	2.07	4845.35				
8	0.00	0.00	0.19	448.05	0.00	0.00	2.07	4843.28				
9	0.00	0.00	0.19	447.86	0.00	0.00	2.07	4841.21				
10	0.00	0.00	0.19	447.67	0.00	0.00	2.07	4839.14				
11	0.00	0.00	0.19	447.48	0.00	0.00	2.06	4837.08				
12	0.00	0.00	0.19	447.29	0.00	0.00	2.06	4835.02				
13	0.00	0.00	0.19	447.10	0.00	0.00	2.07	4832.95				
14	0.00	0.00	0.19	446.91	0.00	0.00	2.07	4830.88				
15	0.00	0.00	0.19	446.72	0.00	0.00	2.06	4828.82				
16	0.00	0.00	0.19	446.53	0.00	0.00	2.06	4826.76				
17	0.00	0.00	0.19	446.34	0.00	0.00	2.06	4824.70				
18	0.00	0.00	0.19	446.15	0.00	0.00	2.06	4822.64				
19	0.00	0.00	0.17	445.98	0.00	0.00	1.86	4820.78				
20	0.00	0.00	0.17	445.81	0.00	0.00	1.85	4818.93				
21	0.00	0.00	0.18	445.63	0.00	0.00	1.96	4816.97				
22	0.00	0.00	0.15	445.48	0.00	0.00	1.65	4815.32				
23	0.00	0.00	0.19	445.29	0.00	0.00	2.04	4813.28				
24	0.00	0.00	0.00	445.29	0.00	0.00	0.00	4813.28				
25	0.00	0.00	0.18	445.11	0.00	0.00	1.95	4811.33				
26	0.00	0.00	0.25	444.86	0.00	0.00	2.72	4808.61				
27	0.00	0.00	0.25	444.61	0.00	0.00	2.72	4805.89				
28	0.00	0.00	0.26	444.35	0.00	0.00	2.82	4803.07				
29	0.00	0.00	0.20	444.15	0.00	0.00	2.14	4800.93				
30	0.00	0.00	0.35	443.80	0.00	0.00	3.79	4797.14				
31	500.40	0.00	0.47	943.73	500.40	0.00	5.04	5292.50				
TOT	500.40	0.00	6.24		500.40	0.00	67.79					

RETURN FLOW

MAR 1999:	INSTATE				STATE LINE				TOTAL			
	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN
				0.00				0.00				0.00
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	0.00	0.00	0.00	333.60	0.00	0.00	333.60	333.60	0.00	0.00	333.60
TOT	0.00	0.00	0.00		333.60	0.00	0.00		333.60	0.00	0.00	





CONSUMABLE WATER

APR 1999:	KANSAS STORAGE CHARGE				TOTAL				INFLW	RELEASE	EVAP	OWN
	INFLW	RELEASE	EVAP	OWN	INFLW	RELEASE	EVAP	OWN				
1	0.00	0.00	0.59	943.73	0.00	0.00	3.31	5292.50				
2	0.00	0.00	0.17	943.14	0.00	0.00	0.96	5289.19				
3	0.00	0.00	0.17	942.97	0.00	0.00	0.96	5288.23				
4	0.00	0.00	0.19	942.80	0.00	0.00	1.07	5287.27				
5	0.00	0.00	0.31	942.61	0.00	0.00	1.71	5286.20				
6	0.00	0.00	0.44	942.30	0.00	0.00	2.46	5284.49				
7	0.00	0.00	0.89	941.86	0.00	0.00	5.01	5282.03				
8	0.00	0.00	0.80	940.97	0.00	0.00	4.49	5277.02				
9	0.00	0.00	0.84	940.17	0.00	0.00	4.69	5272.53				
10	0.00	0.00	0.84	939.33	0.00	0.00	4.69	5267.84				
11	0.00	0.00	0.84	938.49	0.00	0.00	4.69	5263.15				
12	0.00	0.00	0.63	937.65	0.00	0.00	3.51	5258.46				
13	0.00	0.00	0.09	937.02	0.00	0.00	0.53	5254.95				
14	0.00	0.00	0.19	936.93	0.00	0.00	1.06	5254.42				
15	0.00	0.00	0.47	936.74	0.00	0.00	2.65	5253.36				
16	0.00	0.00	0.51	936.27	0.00	0.00	2.87	5250.71				
17	0.00	0.00	0.51	935.76	0.00	0.00	2.87	5247.84				
18	0.00	0.00	0.51	935.25	0.00	0.00	2.87	5244.97				
19	0.00	0.00	0.51	934.74	0.00	0.00	2.87	5242.10				
20	0.00	0.00	0.63	934.23	0.00	0.00	2.87	5239.23				
21	0.00	0.00	0.00	933.60	47.03	0.00	0.00	5235.72				
22	0.00	0.00	0.21	933.60	41.78	0.00	1.18	5282.75				
23	0.00	0.00	0.06	933.39	38.21	0.00	0.32	5323.35				
24	0.00	0.00	0.06	933.33	39.48	0.00	0.32	5361.24				
25	0.00	0.00	0.06	933.27	38.35	0.00	0.32	5400.40				
26	0.00	0.00	0.40	933.21	41.78	0.00	2.32	5438.43				
27	0.00	0.00	0.53	932.81	52.84	0.00	3.12	5477.89				
28	0.00	0.00	0.63	932.28	66.12	0.00	3.72	5527.61				
29	0.00	0.00	0.25	931.65	53.08	0.00	1.49	5590.01				
30	0.00	0.00	0.00	931.40	0.00	0.00	0.00	5641.60				
TOT	0.00	0.00	12.33		418.67	0.00	69.57					

RETURN FLOW

APR 1999:	INSTATE				STATE LINE				TOTAL			
	INFLW	RELEASE	EVAP	OWN	INFLW	RELEASE	EVAP	OWN	INFLW	RELEASE	EVAP	OWN
1	0.00	0.00	0.00	0.00	0.00	0.00	0.21	333.60	0.00	0.00	0.21	333.60
2	0.00	0.00	0.00	0.00	0.00	0.00	0.06	333.39	0.00	0.00	0.06	333.39
3	0.00	0.00	0.00	0.00	0.00	0.00	0.06	333.33	0.00	0.00	0.06	333.33
4	0.00	0.00	0.00	0.00	0.00	0.00	0.07	333.27	0.00	0.00	0.07	333.27
5	0.00	0.00	0.00	0.00	0.00	0.00	0.11	333.20	0.00	0.00	0.11	333.20
6	0.00	0.00	0.00	0.00	0.00	0.00	0.15	333.09	0.00	0.00	0.15	333.09
7	0.00	0.00	0.00	0.00	0.00	0.00	0.32	332.94	0.00	0.00	0.32	332.94
8	0.00	0.00	0.00	0.00	0.00	0.00	0.28	332.62	0.00	0.00	0.28	332.62
9	0.00	0.00	0.00	0.00	0.00	0.00	0.30	332.34	0.00	0.00	0.30	332.34
10	0.00	0.00	0.00	0.00	0.00	0.00	0.30	332.04	0.00	0.00	0.30	332.04
11	0.00	0.00	0.00	0.00	0.00	0.00	0.30	331.74	0.00	0.00	0.30	331.74
12	0.00	0.00	0.00	0.00	0.00	0.00	0.22	331.44	0.00	0.00	0.22	331.44
13	0.00	0.00	0.00	0.00	0.00	0.00	0.03	331.22	0.00	0.00	0.03	331.22
14	0.00	0.00	0.00	0.00	0.00	0.00	0.07	331.19	0.00	0.00	0.07	331.19
15	0.00	0.00	0.00	0.00	0.00	0.00	0.17	331.12	0.00	0.00	0.17	331.12
16	0.00	0.00	0.00	0.00	0.00	0.00	0.18	330.95	0.00	0.00	0.18	330.95
17	0.00	0.00	0.00	0.00	0.00	0.00	0.18	330.77	0.00	0.00	0.18	330.77
18	0.00	0.00	0.00	0.00	0.00	0.00	0.18	330.59	0.00	0.00	0.18	330.59
19	0.00	0.00	0.00	0.00	0.00	0.00	0.18	330.41	0.00	0.00	0.18	330.41
20	0.00	0.00	0.00	0.00	0.00	0.00	0.22	330.23	0.00	0.00	0.22	330.23
21	2.11	0.00	0.00	0.00	0.00	0.00	0.00	330.01	0.00	0.00	0.00	330.01
22	1.88	0.00	0.00	2.11	0.00	0.00	0.00	330.01	2.11	0.00	0.00	332.12
23	1.72	0.00	0.00	3.99	0.00	0.00	0.07	329.94	1.88	0.00	0.07	333.93
24	1.72	0.00	0.00	5.71	0.00	0.00	0.02	329.90	1.72	0.00	0.02	335.63
25	1.72	0.00	0.00	7.48	0.00	0.00	0.02	329.90	1.72	0.00	0.02	337.38
26	1.88	0.00	0.00	9.20	0.00	0.00	0.02	329.88	1.72	0.00	0.02	339.08
27	2.37	0.00	0.01	11.08	0.00	0.00	0.14	329.74	1.88	0.00	0.14	340.82
28	2.97	0.00	0.01	13.44	0.00	0.00	0.18	329.74	2.37	0.00	0.19	343.00
29	2.38	0.00	0.00	16.40	0.00	0.00	0.22	329.56	2.97	0.00	0.23	345.74
30	0.00	0.00	0.00	18.78	0.00	0.00	0.09	329.34	2.38	0.00	0.09	348.03
TOT	18.80	0.00	0.02	18.78	0.00	0.00	4.35	329.25	18.80	0.00	4.37	348.03

APR 1999:	UPSTREAM				INSTATE DOWNSTREAM				TOTAL			
	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN
:				0.00				0.00				0.00
1 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21 :	2.11	0.00	0.00	2.11	0.00	0.00	0.00	0.00	2.11	0.00	0.00	2.11
22 :	1.88	0.00	0.00	3.99	0.00	0.00	0.00	0.00	1.88	0.00	0.00	3.99
23 :	1.72	0.00	0.00	5.71	0.00	0.00	0.00	0.00	1.72	0.00	0.00	5.71
24 :	1.77	0.00	0.00	7.48	0.00	0.00	0.00	0.00	1.77	0.00	0.00	7.48
25 :	1.72	0.00	0.00	9.20	0.00	0.00	0.00	0.00	1.72	0.00	0.00	9.20
26 :	1.88	0.00	0.00	11.08	0.00	0.00	0.00	0.00	1.88	0.00	0.00	11.08
27 :	2.37	0.00	0.01	13.44	0.00	0.00	0.00	0.00	2.37	0.00	0.01	13.44
28 :	2.97	0.00	0.01	16.40	0.00	0.00	0.00	0.00	2.97	0.00	0.01	16.40
29 :	2.38	0.00	0.00	18.78	0.00	0.00	0.00	0.00	2.38	0.00	0.00	18.78
30 :	0.00	0.00	0.00	18.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.78
TOT :	18.80	0.00	0.02		0.00	0.00	0.00		18.80	0.00	0.02	

APR 1999:	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN
1 :												
2 :												
3 :												
4 :												
5 :												
6 :												
7 :												
8 :												
9 :												
10 :												
11 :												
12 :												
13 :												
14 :												
15 :												
16 :												
17 :												
18 :												
19 :												
20 :												
21 :												
22 :												
23 :												
24 :												
25 :												
26 :												
27 :												
28 :												
29 :												
30 :												
TOT :												





CONSUMABLE WATER

MAY 1999:	KANSAS STORAGE CHARGE				TOTAL				OWN	INFLOW	RELEASE	EVAP	OWN
	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN					
:				931.40				5641.60					
1 :	0.00	0.00	0.00	931.40	0.00	0.00	0.00	5641.60					
2 :	0.00	0.00	0.57	930.83	0.00	0.00	3.47	5638.13					
3 :	0.00	930.83	0.00	0.00	0.00	5638.13	0.00	0.00					
4 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
5 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
6 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
7 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
8 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
9 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
10 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
11 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
12 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
13 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
14 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
15 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
16 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
17 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
18 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
19 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
20 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
21 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
22 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
23 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
24 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
25 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
26 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
27 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
28 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
29 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
30 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
31 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
TOT :	0.00	930.83	0.57		0.00	5638.13	3.47						

RETURN FLOW

MAY 1999:	INSTATE				STATE LINE				TOTAL				OWN
	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	
:				18.78				329.25					348.03
1 :	0.00	0.00	0.00	18.78	0.00	0.00	0.00	329.25	0.00	0.00	0.00		348.03
2 :	0.00	0.00	0.01	18.77	0.00	0.00	0.20	329.05	0.00	0.00	0.21		347.82
3 :	0.00	18.77	0.00	0.00	0.00	329.05	0.00	0.00	0.00	347.82	0.00		0.00
4 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
5 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
6 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
7 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
8 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
9 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
10 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
11 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
12 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
13 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
14 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
15 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
16 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
17 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
18 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
19 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
20 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
21 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
22 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
23 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
24 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
25 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
26 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
27 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
28 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
29 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
30 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
31 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
TOT :	0.00	18.77	0.01		0.00	329.05	0.20		0.00	347.82	0.21		













JUL 1999:	UPSTREAM				INSTATE DOWNSTREAM				TOTAL			
	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN
:				0.00				0.00				0.00
1 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOT :	0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00	

JUL 1999:	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN
1 :												
2 :												
3 :												
4 :												
5 :												
6 :												
7 :												
8 :												
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24 :												
25 :												
26 :												
27 :												
28 :												
29 :												
30 :												
31 :												
TOT :												





CONSUMABLE WATER

AUG 1999:	KANSAS STORAGE CHARGE				TOTAL				INFLW	RELEASE	EVAP	OWN
	INFLW	RELEASE	EVAP	OWN :	INFLW	RELEASE	EVAP	OWN :				
:				0.00 :				0.00 :				
1 :	0.00	0.00	0.00	0.00 :	13.34	0.00	0.00	13.34 :				
2 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	13.34 :				
3 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	13.34 :				
4 :	0.00	0.00	0.00	0.00 :	72.64	0.00	0.00	85.98 :				
5 :	0.00	0.00	0.00	0.00 :	67.36	0.00	0.08	153.26 :				
6 :	0.00	0.00	0.00	0.00 :	91.92	0.00	0.05	245.13 :				
7 :	0.00	0.00	0.00	0.00 :	60.07	0.00	0.19	305.01 :				
8 :	0.00	0.00	0.00	0.00 :	0.00	304.82	0.19	0.00 :				
9 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :				
10 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :				
11 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :				
12 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :				
13 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :				
14 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :				
15 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :				
16 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :				
17 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :				
18 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :				
19 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :				
20 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :				
21 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :				
22 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :				
23 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :				
24 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :				
25 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :				
26 :	0.00	0.00	0.00	0.00 :	59.45	0.00	0.00	59.45 :				
27 :	0.00	0.00	0.00	0.00 :	53.58	0.00	0.04	112.99 :				
28 :	0.00	0.00	0.00	0.00 :	46.87	0.00	0.08	159.78 :				
29 :	0.00	0.00	0.00	0.00 :	45.14	0.00	0.12	204.80 :				
30 :	0.00	0.00	0.00	0.00 :	40.68	0.00	0.15	245.33 :				
31 :	0.00	0.00	0.00	0.00 :	38.99	0.00	0.21	284.11 :				
TOT :	0.00	0.00	0.00	:	590.04	304.82	1.11	:				

RETURN FLOW

AUG 1999:	INSTATE				STATE LINE				TOTAL			
	INFLW	RELEASE	EVAP	OWN :	INFLW	RELEASE	EVAP	OWN :	INFLW	RELEASE	EVAP	OWN
:				0.00 :				0.00 :				0.00
1 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
2 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
3 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
4 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
5 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
6 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
7 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
8 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
9 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
10 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
11 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
12 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
13 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
14 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
15 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
16 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
17 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
18 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
19 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
20 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
21 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
22 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
23 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
24 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
25 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
26 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
27 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
28 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
29 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
30 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
31 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00 :	0.00	0.00	0.00	0.00
TOT :	0.00	0.00	0.00	:	0.00	0.00	0.00	:	0.00	0.00	0.00	



SEP 1999:	OFFSET ACCOUNT				CONSUMABLE WATER				RETURN FLOW			
	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN
1	36.82	0.00	0.32	284.11	36.82	0.00	0.32	284.11	0.00	0.00	0.00	0.00
2	34.12	0.00	0.26	320.61	34.12	0.00	0.26	320.61	0.00	0.00	0.00	0.00
3	37.33	0.00	0.20	354.47	37.33	0.00	0.20	354.47	0.00	0.00	0.00	0.00
4	35.74	0.00	0.21	391.60	35.74	0.00	0.21	391.60	0.00	0.00	0.00	0.00
5	33.76	0.00	0.24	427.13	33.76	0.00	0.24	427.13	0.00	0.00	0.00	0.00
6	31.50	0.00	0.26	460.65	31.50	0.00	0.26	460.65	0.00	0.00	0.00	0.00
7	30.33	0.00	0.34	491.89	30.33	0.00	0.34	491.89	0.00	0.00	0.00	0.00
8	29.78	0.00	0.43	521.88	29.78	0.00	0.43	521.88	0.00	0.00	0.00	0.00
9	23.08	0.00	0.28	551.23	23.08	0.00	0.28	551.23	0.00	0.00	0.00	0.00
10	20.45	0.00	0.41	574.03	20.45	0.00	0.41	574.03	0.00	0.00	0.00	0.00
11	22.36	0.00	0.42	594.07	22.36	0.00	0.42	594.07	0.00	0.00	0.00	0.00
12	21.23	0.00	0.45	616.01	21.23	0.00	0.45	616.01	0.00	0.00	0.00	0.00
13	22.85	0.00	0.36	636.79	22.85	0.00	0.36	636.79	0.00	0.00	0.00	0.00
14	23.03	0.00	0.51	659.28	23.03	0.00	0.51	659.28	0.00	0.00	0.00	0.00
15	25.80	0.00	0.05	681.80	25.80	0.00	0.05	681.80	0.00	0.00	0.00	0.00
16	27.22	0.00	0.10	707.55	27.22	0.00	0.10	707.55	0.00	0.00	0.00	0.00
17	21.18	0.00	0.19	734.67	21.18	0.00	0.19	734.67	0.00	0.00	0.00	0.00
18	60.81	0.00	0.20	755.66	60.81	0.00	0.20	755.66	0.00	0.00	0.00	0.00
19	74.39	0.00	0.20	816.27	74.39	0.00	0.20	816.27	0.00	0.00	0.00	0.00
20	61.21	0.00	0.23	890.46	61.21	0.00	0.23	890.46	0.00	0.00	0.00	0.00
21	59.74	0.00	0.44	951.44	59.74	0.00	0.44	951.44	0.00	0.00	0.00	0.00
22	54.17	0.00	0.34	1010.74	54.17	0.00	0.34	1010.74	0.00	0.00	0.00	0.00
23	46.88	0.00	0.38	1064.57	46.88	0.00	0.38	1064.57	0.00	0.00	0.00	0.00
24	49.17	0.00	0.62	1111.07	49.17	0.00	0.62	1111.07	0.00	0.00	0.00	0.00
25	46.60	0.00	0.65	1159.62	46.60	0.00	0.65	1159.62	0.00	0.00	0.00	0.00
26	43.81	0.00	0.65	1205.57	43.81	0.00	0.65	1205.57	0.00	0.00	0.00	0.00
27	47.34	0.00	0.32	1248.73	47.34	0.00	0.32	1248.73	0.00	0.00	0.00	0.00
28	50.46	0.00	0.34	1295.75	50.46	0.00	0.34	1295.75	0.00	0.00	0.00	0.00
29	46.06	0.00	0.59	1345.87	46.06	0.00	0.59	1345.87	0.00	0.00	0.00	0.00
30	44.99	0.00	0.59	1391.34	44.99	0.00	0.59	1391.34	0.00	0.00	0.00	0.00
TOT	1162.21	0.00	10.58	1435.74	1162.21	0.00	10.58	1435.74	0.00	0.00	0.00	0.00

SEP 1999:	COLORADO UPSTREAM				COLORADO DOWNSTREAM				KANSAS			
	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN
1	0.00	0.00	0.00	0.00	36.82	0.00	0.32	284.11	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	34.12	0.00	0.26	320.61	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	37.33	0.00	0.20	354.47	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	35.74	0.00	0.21	391.60	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	33.76	0.00	0.24	427.13	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	31.50	0.00	0.26	460.65	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	30.33	0.00	0.34	491.89	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	29.78	0.00	0.43	521.88	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	23.08	0.00	0.28	551.23	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	20.45	0.00	0.41	574.03	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	22.36	0.00	0.42	594.07	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	21.23	0.00	0.45	616.01	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	22.85	0.00	0.36	636.79	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	23.03	0.00	0.51	659.28	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	25.80	0.00	0.05	681.80	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	27.22	0.00	0.10	707.55	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	21.18	0.00	0.19	734.67	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	60.81	0.00	0.20	755.66	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	74.39	0.00	0.20	816.27	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	61.21	0.00	0.23	890.46	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	59.74	0.00	0.44	951.44	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	54.17	0.00	0.34	1010.74	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	46.88	0.00	0.38	1064.57	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	49.17	0.00	0.62	1111.07	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	46.60	0.00	0.65	1159.62	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	43.81	0.00	0.65	1205.57	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	47.34	0.00	0.32	1248.73	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	50.46	0.00	0.34	1295.75	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	46.06	0.00	0.59	1345.87	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	44.99	0.00	0.59	1391.34	0.00	0.00	0.00	0.00
TOT	0.00	0.00	0.00	0.00	1162.21	0.00	10.58	1435.74	0.00	0.00	0.00	0.00

CONSUMABLE WATER

SEP 1999:	KANSAS STORAGE CHARGE				TOTAL				INFLW	RELEASE	EVAP	OWN
	INFLW	RELEASE	EVAP	OWN	INFLW	RELEASE	EVAP	OWN				
1	0.00	0.00	0.00	0.00	36.82	0.00	0.32	284.11				
2	0.00	0.00	0.00	0.00	34.12	0.00	0.26	320.61				
3	0.00	0.00	0.00	0.00	37.33	0.00	0.20	354.47				
4	0.00	0.00	0.00	0.00	35.74	0.00	0.21	391.60				
5	0.00	0.00	0.00	0.00	33.76	0.00	0.24	427.13				
6	0.00	0.00	0.00	0.00	31.50	0.00	0.26	460.65				
7	0.00	0.00	0.00	0.00	30.33	0.00	0.34	491.89				
8	0.00	0.00	0.00	0.00	29.78	0.00	0.43	521.88				
9	0.00	0.00	0.00	0.00	23.08	0.00	0.28	551.23				
10	0.00	0.00	0.00	0.00	20.45	0.00	0.41	574.03				
11	0.00	0.00	0.00	0.00	22.36	0.00	0.42	594.07				
12	0.00	0.00	0.00	0.00	21.23	0.00	0.45	616.01				
13	0.00	0.00	0.00	0.00	22.85	0.00	0.36	636.79				
14	0.00	0.00	0.00	0.00	23.03	0.00	0.51	659.28				
15	0.00	0.00	0.00	0.00	25.80	0.00	0.05	681.80				
16	0.00	0.00	0.00	0.00	27.22	0.00	0.10	707.55				
17	0.00	0.00	0.00	0.00	21.18	0.00	0.19	734.67				
18	0.00	0.00	0.00	0.00	60.81	0.00	0.20	755.66				
19	0.00	0.00	0.00	0.00	74.39	0.00	0.20	816.27				
20	0.00	0.00	0.00	0.00	61.21	0.00	0.23	890.46				
21	0.00	0.00	0.00	0.00	59.74	0.00	0.44	951.44				
22	0.00	0.00	0.00	0.00	54.17	0.00	0.34	1010.74				
23	0.00	0.00	0.00	0.00	46.88	0.00	0.38	1064.57				
24	0.00	0.00	0.00	0.00	49.17	0.00	0.62	1111.07				
25	0.00	0.00	0.00	0.00	46.60	0.00	0.65	1159.62				
26	0.00	0.00	0.00	0.00	43.81	0.00	0.65	1205.57				
27	0.00	0.00	0.00	0.00	47.34	0.00	0.32	1248.73				
28	0.00	0.00	0.00	0.00	50.46	0.00	0.34	1295.75				
29	0.00	0.00	0.00	0.00	46.06	0.00	0.59	1345.87				
30	0.00	0.00	0.00	0.00	44.99	0.00	0.59	1391.34				
TOT	0.00	0.00	0.00		1162.21	0.00	10.58	1435.74				

RETURN FLOW

SEP 1999:	INSTATE				STATE LINE				TOTAL			
	INFLW	RELEASE	EVAP	OWN	INFLW	RELEASE	EVAP	OWN	INFLW	RELEASE	EVAP	OWN
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOT	0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00	





CONSUMABLE WATER

OCT 1999:	KANSAS STORAGE CHARGE				TOTAL				OWN	INFLOW	RELEASE	EVAP	OWN	
	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN						
:				0.00	:				1435.74	:				:
1 :	0.00	0.00	0.00	0.00	:	46.84	0.00	0.52	1482.06	:				:
2 :	0.00	0.00	0.00	0.00	:	44.76	0.00	0.48	1526.34	:				:
3 :	0.00	0.00	0.00	0.00	:	42.62	0.00	0.49	1568.47	:				:
4 :	0.00	0.00	0.00	0.00	:	40.80	0.00	0.53	1608.74	:				:
5 :	0.00	0.00	0.00	0.00	:	41.63	0.00	0.75	1649.62	:				:
6 :	0.00	0.00	0.00	0.00	:	38.78	0.00	1.13	1687.27	:				:
7 :	0.00	0.00	0.00	0.00	:	34.83	0.00	0.20	1721.90	:				:
8 :	0.00	0.00	0.00	0.00	:	42.13	0.00	0.69	1763.34	:				:
9 :	0.00	0.00	0.00	0.00	:	48.89	0.00	0.74	1811.49	:				:
10 :	0.00	0.00	0.00	0.00	:	42.69	0.00	0.76	1853.42	:				:
11 :	0.00	0.00	0.00	0.00	:	37.30	0.00	0.74	1889.98	:				:
12 :	0.00	0.00	0.00	0.00	:	39.49	0.00	0.65	1928.82	:				:
13 :	0.00	0.00	0.00	0.00	:	33.13	0.00	0.85	1961.10	:				:
14 :	0.00	0.00	0.00	0.00	:	33.41	0.00	1.22	1993.29	:				:
15 :	0.00	0.00	0.00	0.00	:	33.41	0.00	0.56	2026.14	:				:
16 :	0.00	0.00	0.00	0.00	:	33.41	0.00	0.53	2059.02	:				:
17 :	0.00	0.00	0.00	0.00	:	32.49	0.00	0.54	2090.97	:				:
18 :	0.00	0.00	0.00	0.00	:	42.31	0.00	0.00	2133.28	:				:
19 :	0.00	0.00	0.00	0.00	:	37.22	0.00	0.55	2169.95	:				:
20 :	0.00	0.00	0.00	0.00	:	37.30	0.00	0.61	2206.64	:				:
21 :	0.00	0.00	0.00	0.00	:	39.06	0.00	0.80	2244.90	:				:
22 :	0.00	0.00	0.00	0.00	:	45.21	0.00	0.58	2289.53	:				:
23 :	0.00	0.00	0.00	0.00	:	58.92	0.00	0.60	2347.85	:				:
24 :	0.00	0.00	0.00	0.00	:	52.74	0.00	0.71	2399.88	:				:
25 :	0.00	0.00	0.00	0.00	:	48.76	0.00	0.67	2447.97	:				:
26 :	0.00	0.00	0.00	0.00	:	43.09	0.00	0.79	2490.27	:				:
27 :	0.00	0.00	0.00	0.00	:	37.22	0.00	0.65	2526.84	:				:
28 :	0.00	0.00	0.00	0.00	:	39.27	0.00	0.81	2565.30	:				:
29 :	0.00	0.00	0.00	0.00	:	40.54	0.00	1.08	2604.76	:				:
30 :	0.00	0.00	0.00	0.00	:	38.50	0.00	1.15	2642.11	:				:
31 :	0.00	0.00	0.00	0.00	:	40.97	684.02	1.17	1997.89	:				:
TOT :	0.00	0.00	0.00	:	1267.72	684.02	21.55	:	:	:				:

RETURN FLOW

OCT 1999:	INSTATE				STATE LINE				TOTAL					
	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN		
:				0.00	:				0.00	:				0.00
1 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
2 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
3 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
4 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
5 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
6 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
7 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
8 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
9 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
10 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
11 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
12 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
13 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
14 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
15 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
16 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
17 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
18 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
19 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
20 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
21 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
22 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
23 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
24 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
25 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
26 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
27 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
28 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
29 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
30 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
31 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
TOT :	0.00	0.00	0.00	:	0.00	0.00	0.00	:	0.00	0.00	0.00	:		



INSTATE

OCT 1999:	UPSTREAM				:	DOWNSTREAM				:	TOTAL			OWN
	INFLOW	RELEASE	EVAP	OWN		INFLOW	RELEASE	EVAP	OWN		INFLOW	RELEASE	EVAP	
1 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
2 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
3 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
4 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
5 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
6 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
7 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
8 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
9 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
10 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
11 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
12 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
13 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
14 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
15 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
16 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
17 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
18 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
19 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
20 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
21 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
22 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
23 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
24 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
25 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
26 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
27 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
28 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
29 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
30 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
31 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
TOT :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00

OCT 1999:	INFLOW	RELEASE	EVAP	OWN	:	INFLOW	RELEASE	EVAP	OWN	:	INFLOW	RELEASE	EVAP	OWN
1 :					:					:				
2 :					:					:				
3 :					:					:				
4 :					:					:				
5 :					:					:				
6 :					:					:				
7 :					:					:				
8 :					:					:				
9 :					:					:				
10 :					:					:				
11 :					:					:				
12 :					:					:				
13 :					:					:				
14 :					:					:				
15 :					:					:				
16 :					:					:				
17 :					:					:				
18 :					:					:				
19 :					:					:				
20 :					:					:				
21 :					:					:				
22 :					:					:				
23 :					:					:				
24 :					:					:				
25 :					:					:				
26 :					:					:				
27 :					:					:				
28 :					:					:				
29 :					:					:				
30 :					:					:				
31 :					:					:				
TOT :					:					:				

## **SECTION 3**

## STATE OF COLORADO

WATER DIVISION 2  
OFFICE OF THE STATE ENGINEER310 East Abriendo, Suite B  
Pueblo, CO 81004  
Phone (719) 542-3368  
FAX (719) 544-0800

December 11, 1998

David L. Pope  
Kansas Chief Engineer  
Kansas Board of Agriculture  
901 S. Kansas Avenue, 2nd Floor  
Topeka, KS 66612-1283Roy Romer  
GovernorJames S. Lochhead  
Executive DirectorHal D. Simpson  
State EngineerSteven J. Witte, P.E.  
Division Engineer

RE: Notice of Delivery to the Offset Account in John Martin Reservoir

Dear Mr. Pope:

The purpose of this letter is to provide the notice required by paragraph 3 of the **Resolution Concerning an Offset Account in John Martin Reservoir for Colorado Pumping As Amended March 30, 1998** ("Resolution") of a delivery of water to the Offset Account. This letter provides the monthly reporting of deliveries to the Offset Account from the Lower Arkansas Water Management Association (LAWMA) shares of the Highland Irrigation Company using the procedures described in my letter of August 10, 1998 which provided the initial notice of the delivery of water from this replacement source for the current year. This report provides the information for the month of November, 1998.

Enclosure 1 contains the accounting spreadsheet for the month of November, 1998. The format of this spreadsheet is provided and described in my letter of August 25, 1997. Enclosure 2 contains the accounting sheet for the Offset Account for November which reflects the delivery of the quantities reported in Enclosure 1 to the appropriate subaccounts of the Offset Account.

The following table summarizes the delivery of water into the Offset Account during the reporting period. As stated in my August 25, 1997 letter, the return flow water is being stored in the Offset Account for delivery to conservation storage in John Martin Reservoir during the months of December (1998) and January (1999).

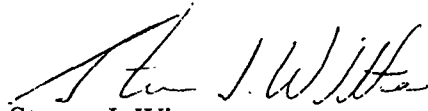
MONTH	C. U. Water (ac-ft)	Return Flow (ac-ft)
November	286.22	12.85

Please contact me if you have any questions or require additional information.

David L. Pope  
December 11, 1998

Page 2

Sincerely,



Steven J. Witte  
Division Engineer  
Colorado Division of Water Resources

2 Enclosures

cc: Mark Rude  
John Draper  
Dale Book  
Hal Simpson  
Dennis Montgomery  
Bill Howland

**Accounting Spreadsheet**  
**Deliveries from Highland Canal to Offset Account**  
**Month-November 1998**

Day	Mode (1 or 2)	Diversion at 5 ft Flume (cfs)	Wasteway #3 Flow Rate (cfs)	Transit Loss to JMR (%)	Arrival Rate at JMR (cfs)	Arrival Quantity at JMR (ac-ft)	Amount to CU Water Account (ac-ft)	Amount to Return Flow Acct (ac-ft)	
1	2	39.95	35.96	0.059533	33.82	67.08	46.29	2.08	
2	2	41.40	37.26	0.059533	35.04	69.50	47.96	2.15	
3	2	47.50	42.75	0.047214	40.73	80.79	55.74	2.50	
4	2	51.95	46.76	0.035582	45.10	89.46	61.72	2.77	
5	2	62.70	56.43	0.035237	54.44	107.98	74.51	3.35	
6	Suspended credits @2400 hr, 11/5/98; pro-rata diversion for November								
7	met.								
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									
Note: Diversions at flume and wasteway are 24 hr prior to date shown									

Enclosure 1

NOV 1998:	OFFSET ACCOUNT				OFFSET ACCOUNT				RETURN FLOW			
	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN
1	48.37	0.00	0.00	4848.68	46.29	0.00	0.00	4693.92				154.76
2	50.11	0.00	1.11	4897.05	47.96	0.00	1.07	4740.21	2.08	0.00	0.00	156.84
3	58.24	0.00	0.99	4946.05	55.74	0.00	0.96	4787.10	2.15	0.00	0.04	158.95
4	64.49	0.00	0.45	5003.30	61.72	0.00	0.44	4841.88	2.50	0.00	0.03	161.42
5	77.86	0.00	0.68	5067.34	74.51	0.00	0.66	4903.16	2.77	0.00	0.01	164.18
6	0.00	0.00	0.56	5144.52	0.00	0.00	0.54	4977.01	3.35	0.00	0.02	167.51
7	0.00	0.00	0.46	5143.96	0.00	0.00	0.45	4976.47	0.00	0.00	0.02	167.49
8	0.00	0.00	0.46	5143.50	0.00	0.00	0.45	4976.02	0.00	0.00	0.01	167.48
9	0.00	0.00	0.00	5143.04	0.00	0.00	0.00	4975.57	0.00	0.00	0.01	167.47
10	0.00	0.00	0.46	5143.04	0.00	0.00	0.45	4975.12	0.00	0.00	0.01	167.47
11	0.00	0.00	0.91	5142.58	0.00	0.00	0.88	4975.12	0.00	0.00	0.01	167.46
12	0.00	0.00	0.91	5141.67	0.00	0.00	0.88	4974.24	0.00	0.00	0.03	167.43
13	0.00	0.00	1.36	5140.76	0.00	0.00	1.32	4973.36	0.00	0.00	0.03	167.40
14	0.00	0.00	1.36	5139.40	0.00	0.00	1.32	4972.04	0.00	0.00	0.04	167.36
15	0.00	0.00	1.46	5138.04	0.00	0.00	1.32	4970.72	0.00	0.00	0.04	167.36
16	0.00	0.00	1.68	5136.58	0.00	0.00	1.41	4969.31	0.00	0.00	0.05	167.32
17	0.00	0.00	1.45	5134.90	0.00	0.00	1.63	4967.68	0.00	0.00	0.05	167.27
18	0.00	0.00	1.79	5133.45	0.00	0.00	1.40	4966.28	0.00	0.00	0.05	167.22
19	0.00	0.00	1.01	5131.66	0.00	0.00	1.73	4964.55	0.00	0.00	0.06	167.17
20	0.00	0.00	0.89	5130.77	0.00	0.00	0.86	4963.69	0.00	0.00	0.06	167.11
21	0.00	0.00	1.01	5129.76	0.00	0.00	0.98	4962.71	0.00	0.00	0.03	167.08
22	0.00	0.00	1.01	5128.75	0.00	0.00	0.98	4961.73	0.00	0.00	0.03	167.05
23	0.00	0.00	1.00	5127.75	0.00	0.00	0.97	4960.76	0.00	0.00	0.03	167.02
24	0.00	0.00	1.67	5126.08	0.00	0.00	1.62	4959.14	0.00	0.00	0.05	166.99
25	0.00	0.00	2.01	5124.07	0.00	0.00	1.94	4957.20	0.00	0.00	0.07	166.94
26	0.00	0.00	1.56	5122.51	0.00	0.00	1.51	4955.69	0.00	0.00	0.05	166.87
27	0.00	0.00	1.56	5120.95	0.00	0.00	1.51	4954.18	0.00	0.00	0.05	166.82
28	0.00	0.00	1.22	5119.73	0.00	0.00	1.18	4953.00	0.00	0.00	0.05	166.77
29	0.00	0.00	1.21	5118.52	0.00	0.00	1.17	4951.83	0.00	0.00	0.04	166.73
30	0.00	0.00	1.21	5117.31	0.00	0.00	1.17	4950.66	0.00	0.00	0.04	166.69
TOT	299.07	0.00	30.88	5116.87	286.22	0.00	29.91	4950.23	12.85	0.00	0.97	166.65

NOV 1998:	CONSUMABLE WATER				CONSUMABLE WATER				KANSAS			
	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN
1				0.00	46.29	0.00	0.00	4233.12				0.00
2	0.00	0.00	0.00	0.00	47.96	0.00	0.97	4279.41	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	55.74	0.00	0.87	4326.40	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	61.72	0.00	0.40	4381.27	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	74.51	0.00	0.60	4442.59	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.49	4516.50	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.41	4516.01	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.41	4515.60	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.41	4515.19	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4515.19	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.41	4514.78	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.80	4513.98	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.80	4513.18	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	1.20	4511.98	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	1.20	4510.78	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	1.28	4509.50	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	1.48	4508.02	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	1.27	4506.75	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	1.57	4505.18	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.78	4504.40	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.89	4503.51	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.89	4502.62	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.88	4501.74	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	1.47	4500.27	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	1.76	4498.51	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	1.37	4497.14	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	1.37	4495.77	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	1.07	4494.70	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	1.06	4493.64	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00	1.06	4492.58	0.00	0.00	0.00	0.00
TOT	0.00	0.00	0.00	0.00	286.22	0.00	27.15	4492.19	0.00	0.00	0.00	0.00

Enclosure 2

CONSUMABLE WATER

NOV 1998:	KANSAS STORAGE CHARGE			TOTAL								
	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN
1	0.00	0.00	0.00	460.80	46.29	0.00	0.00	4693.92				
2	0.00	0.00	0.10	460.80	47.96	0.00	1.07	4740.21				
3	0.00	0.00	0.09	460.70	55.74	0.00	0.96	4787.10				
4	0.00	0.00	0.04	460.61	61.72	0.00	0.44	4841.88				
5	0.00	0.00	0.06	460.57	74.51	0.00	0.66	4903.16				
6	0.00	0.00	0.05	460.51	0.00	0.00	0.54	4977.01				
7	0.00	0.00	0.04	460.46	0.00	0.00	0.45	4976.47				
8	0.00	0.00	0.04	460.42	0.00	0.00	0.45	4976.02				
9	0.00	0.00	0.00	460.38	0.00	0.00	0.00	4975.57				
10	0.00	0.00	0.04	460.38	0.00	0.00	0.45	4975.12				
11	0.00	0.00	0.08	460.34	0.00	0.00	0.88	4975.24				
12	0.00	0.00	0.08	460.26	0.00	0.00	0.88	4974.24				
13	0.00	0.00	0.12	460.18	0.00	0.00	1.32	4973.36				
14	0.00	0.00	0.12	460.06	0.00	0.00	1.32	4972.04				
15	0.00	0.00	0.13	459.94	0.00	0.00	1.41	4970.72				
16	0.00	0.00	0.13	459.81	0.00	0.00	1.63	4969.31				
17	0.00	0.00	0.15	459.66	0.00	0.00	1.40	4967.68				
18	0.00	0.00	0.13	459.53	0.00	0.00	1.73	4966.28				
19	0.00	0.00	0.16	459.37	0.00	0.00	0.86	4964.55				
20	0.00	0.00	0.08	459.29	0.00	0.00	0.98	4963.69				
21	0.00	0.00	0.09	459.20	0.00	0.00	0.98	4962.71				
22	0.00	0.00	0.09	459.11	0.00	0.00	0.97	4961.73				
23	0.00	0.00	0.09	459.02	0.00	0.00	1.62	4960.76				
24	0.00	0.00	0.15	458.87	0.00	0.00	1.94	4959.14				
25	0.00	0.00	0.18	458.69	0.00	0.00	1.51	4957.20				
26	0.00	0.00	0.14	458.55	0.00	0.00	1.51	4955.69				
27	0.00	0.00	0.14	458.41	0.00	0.00	1.18	4954.18				
28	0.00	0.00	0.11	458.30	0.00	0.00	1.17	4953.00				
29	0.00	0.00	0.11	458.19	0.00	0.00	1.17	4951.83				
30	0.00	0.00	0.11	458.08	0.00	0.00	1.17	4950.66				
TOT	0.00	0.00	2.76	458.04	286.22	0.00	29.91	4950.23				

RETURN FLOW

NOV 1998:	INSTA			STATE LINE				TOTAL				
	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN
1	2.08	0.00	0.00	154.76	0.00	0.00	0.00	0.00	2.08	0.00	0.00	154.76
2	2.15	0.00	0.04	156.84	0.00	0.00	0.00	0.00	2.15	0.00	0.04	156.84
3	2.50	0.00	0.03	158.95	0.00	0.00	0.00	0.00	2.50	0.00	0.03	158.95
4	2.77	0.00	0.01	161.42	0.00	0.00	0.00	0.00	2.77	0.00	0.01	161.42
5	3.35	0.00	0.02	164.18	0.00	0.00	0.00	0.00	3.35	0.00	0.02	164.18
6	0.00	0.00	0.02	167.51	0.00	0.00	0.00	0.00	0.00	0.00	0.02	167.51
7	0.00	0.00	0.01	167.49	0.00	0.00	0.00	0.00	0.00	0.00	0.01	167.49
8	0.00	0.00	0.01	167.48	0.00	0.00	0.00	0.00	0.00	0.00	0.01	167.48
9	0.00	0.00	0.01	167.47	0.00	0.00	0.00	0.00	0.00	0.00	0.01	167.47
10	0.00	0.00	0.00	167.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	167.47
11	0.00	0.00	0.01	167.46	0.00	0.00	0.00	0.00	0.00	0.00	0.01	167.46
12	0.00	0.00	0.03	167.43	0.00	0.00	0.00	0.00	0.00	0.00	0.03	167.43
13	0.00	0.00	0.03	167.40	0.00	0.00	0.00	0.00	0.00	0.00	0.03	167.40
14	0.00	0.00	0.04	167.36	0.00	0.00	0.00	0.00	0.00	0.00	0.04	167.36
15	0.00	0.00	0.04	167.32	0.00	0.00	0.00	0.00	0.00	0.00	0.04	167.32
16	0.00	0.00	0.05	167.27	0.00	0.00	0.00	0.00	0.00	0.00	0.05	167.27
17	0.00	0.00	0.05	167.22	0.00	0.00	0.00	0.00	0.00	0.00	0.05	167.22
18	0.00	0.00	0.06	167.17	0.00	0.00	0.00	0.00	0.00	0.00	0.06	167.17
19	0.00	0.00	0.03	167.11	0.00	0.00	0.00	0.00	0.00	0.00	0.03	167.11
20	0.00	0.00	0.03	167.08	0.00	0.00	0.00	0.00	0.00	0.00	0.03	167.08
21	0.00	0.00	0.03	167.05	0.00	0.00	0.00	0.00	0.00	0.00	0.03	167.05
22	0.00	0.00	0.03	167.02	0.00	0.00	0.00	0.00	0.00	0.00	0.03	167.02
23	0.00	0.00	0.03	166.99	0.00	0.00	0.00	0.00	0.00	0.00	0.03	166.99
24	0.00	0.00	0.05	166.94	0.00	0.00	0.00	0.00	0.00	0.00	0.05	166.94
25	0.00	0.00	0.07	166.87	0.00	0.00	0.00	0.00	0.00	0.00	0.07	166.87
26	0.00	0.00	0.05	166.82	0.00	0.00	0.00	0.00	0.00	0.00	0.05	166.82
27	0.00	0.00	0.05	166.77	0.00	0.00	0.00	0.00	0.00	0.00	0.05	166.77
28	0.00	0.00	0.04	166.73	0.00	0.00	0.00	0.00	0.00	0.00	0.04	166.73
29	0.00	0.00	0.04	166.69	0.00	0.00	0.00	0.00	0.00	0.00	0.04	166.69
30	0.00	0.00	0.04	166.65	0.00	0.00	0.00	0.00	0.00	0.00	0.04	166.65
TOT	12.85	0.00	0.97	166.64	0.00	0.00	0.00	0.00	12.85	0.00	0.97	166.64

Enclosure 2 (Continued)

INSTATE

NOV 1998:	UPSTREAM				DOWNSTREAM				TOTAL			
	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN
1	2.08	0.00	0.00	154.76	0.00	0.00	0.00	0.00	2.08	0.00	0.00	154.76
2	2.15	0.00	0.04	156.84	0.00	0.00	0.00	0.00	2.15	0.00	0.04	156.84
3	2.50	0.00	0.03	158.95	0.00	0.00	0.00	0.00	2.50	0.00	0.03	158.95
4	2.77	0.00	0.01	161.42	0.00	0.00	0.00	0.00	2.77	0.00	0.01	161.42
5	3.35	0.00	0.02	164.18	0.00	0.00	0.00	0.00	3.35	0.00	0.02	164.18
6	0.00	0.00	0.02	167.51	0.00	0.00	0.00	0.00	0.00	0.00	0.02	167.51
7	0.00	0.00	0.01	167.49	0.00	0.00	0.00	0.00	0.00	0.00	0.01	167.49
8	0.00	0.00	0.01	167.48	0.00	0.00	0.00	0.00	0.00	0.00	0.01	167.48
9	0.00	0.00	0.01	167.47	0.00	0.00	0.00	0.00	0.00	0.00	0.01	167.47
10	0.00	0.00	0.01	167.47	0.00	0.00	0.00	0.00	0.00	0.00	0.01	167.47
11	0.00	0.00	0.03	167.46	0.00	0.00	0.00	0.00	0.00	0.00	0.03	167.46
12	0.00	0.00	0.03	167.43	0.00	0.00	0.00	0.00	0.00	0.00	0.03	167.43
13	0.00	0.00	0.04	167.40	0.00	0.00	0.00	0.00	0.00	0.00	0.04	167.40
14	0.00	0.00	0.04	167.36	0.00	0.00	0.00	0.00	0.00	0.00	0.04	167.36
15	0.00	0.00	0.05	167.32	0.00	0.00	0.00	0.00	0.00	0.00	0.05	167.32
16	0.00	0.00	0.05	167.27	0.00	0.00	0.00	0.00	0.00	0.00	0.05	167.27
17	0.00	0.00	0.05	167.22	0.00	0.00	0.00	0.00	0.00	0.00	0.05	167.22
18	0.00	0.00	0.06	167.17	0.00	0.00	0.00	0.00	0.00	0.00	0.06	167.17
19	0.00	0.00	0.03	167.11	0.00	0.00	0.00	0.00	0.00	0.00	0.03	167.11
20	0.00	0.00	0.03	167.08	0.00	0.00	0.00	0.00	0.00	0.00	0.03	167.08
21	0.00	0.00	0.03	167.05	0.00	0.00	0.00	0.00	0.00	0.00	0.03	167.05
22	0.00	0.00	0.03	167.02	0.00	0.00	0.00	0.00	0.00	0.00	0.03	167.02
23	0.00	0.00	0.05	166.99	0.00	0.00	0.00	0.00	0.00	0.00	0.05	166.99
24	0.00	0.00	0.07	166.94	0.00	0.00	0.00	0.00	0.00	0.00	0.07	166.94
25	0.00	0.00	0.05	166.87	0.00	0.00	0.00	0.00	0.00	0.00	0.05	166.87
26	0.00	0.00	0.05	166.82	0.00	0.00	0.00	0.00	0.00	0.00	0.05	166.82
27	0.00	0.00	0.05	166.77	0.00	0.00	0.00	0.00	0.00	0.00	0.05	166.77
28	0.00	0.00	0.04	166.73	0.00	0.00	0.00	0.00	0.00	0.00	0.04	166.73
29	0.00	0.00	0.04	166.69	0.00	0.00	0.00	0.00	0.00	0.00	0.04	166.69
30	0.00	0.00	0.01	166.65	0.00	0.00	0.00	0.00	0.00	0.00	0.04	166.65
TOT	12.85	0.00	0.97	166.64	0.00	0.00	0.00	0.00	12.85	0.00	0.97	166.64

NOV 1998:	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
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21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
TOT												

Enclosure 2 (Continued)





## STATE OF COLORADO

WATER DIVISION 2  
OFFICE OF THE STATE ENGINEER

310 East Abriendo, Suite B  
Pueblo, Colorado 81004  
Phone: (719) 542-3368  
FAX: (719) 544-0800

<http://water.state.co.us/default.htm>

David L. Pope  
Kansas Chief Engineer  
Kansas Board of Agriculture  
901 S. Kansas Avenue, 2nd Floor  
Topeka, KS 66612-1283

February 8, 1999



Bill Owens  
Governor

Greg E. Walcher  
Executive Director

Hal D. Simpson, P.E.  
State Engineer

Steven J. Witte, P.E.  
Division Engineer

RE: Notice of Transfer from the Offset Account in John Martin Reservoir

Dear Mr. Pope:

The purpose of this letter is to provide an accounting for a transfer of water from the Offset Account in John Martin in accordance with the **Resolution Concerning an Offset Account in John Martin Reservoir for Colorado Pumping As Amended March 30, 1998** ("Resolution") and the **Stipulation Re Offset Account in John Martin Reservoir** dated March 17, 1997 ("Stipulation").

The Lower Arkansas Water Management Association (LAWMA) delivered water to the Offset Account during the period from July, 1998 through November, 1998 resulting from its use of shares of the Highland Irrigation Company. These deliveries were conducted using the procedures described in my letters of August 25, 1997 and August 10, 1998 which provided the initial notice of the delivery of water from this replacement source for 1997 and 1998. As provided by those letters, 3.1% of the total amount of water reaching John Martin Reservoir represents the delayed return flows from diversions attributable to LAWMA's shares which would arrive at the reservoir during the months of December, and January. This quantity is to be stored as return flow water in the Offset Account to be released to conservation storage during those two months.

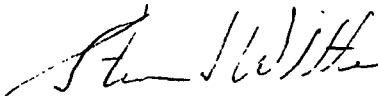
On January 11, 1999, the instate upstream return flow subaccount of the Offset Account contained 165.33 acre-feet of water that had been stored during the delivery of water attributable to LAWMA's shares of the Highland Irrigation Company. On that date, the entire 165.33 acre-feet of return flow water was transferred to conservation storage in John Martin Reservoir. A copy of the January accounting spreadsheet for the Offset Account which shows this transaction is attached at Enclosure 1.

David L. Pope  
February 8, 1999

Page 2

Please contact me if you have any questions or require additional information.

Sincerely,



Steven J. Witte  
Division Engineer  
Colorado Division of Water Resources

1 Enclosure

cc: Mark Rude  
John Draper  
Dale Book  
Hal Simpson  
Dennis Montgomery  
Bill Howland



CONSUMABLE WATER

JAN 1999:	KANSAS STORAGE CHARGE				TOTAL				OWN
	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	
1	0.00	0.00	0.08	455.41	0.00	0.00	0.85	4922.24	
2	0.00	0.00	0.08	455.33	0.00	0.00	0.85	4921.39	
3	0.00	0.00	0.08	455.25	0.00	0.00	0.85	4920.54	
4	0.00	0.00	0.08	455.17	0.00	0.00	0.85	4919.69	
5	0.00	0.00	0.08	455.09	0.00	0.00	0.84	4918.85	
6	0.00	0.00	0.08	455.01	0.00	0.00	0.84	4918.01	
7	0.00	0.00	0.08	454.93	0.00	0.00	0.84	4917.17	
8	0.00	0.00	0.08	454.85	0.00	0.00	0.84	4916.33	
9	0.00	0.00	0.08	454.77	0.00	0.00	0.84	4915.49	
10	0.00	0.00	0.08	454.69	0.00	0.00	0.84	4914.65	
11	0.00	0.00	0.08	454.61	0.00	0.00	0.84	4913.81	
12	0.00	0.00	0.08	454.53	0.00	0.00	0.83	4912.98	
13	0.00	0.00	0.08	454.45	0.00	0.00	0.83	4912.15	
14	0.00	0.00	0.08	454.37	0.00	0.00	0.83	4911.32	
15	0.00	0.00	0.08	454.29	0.00	0.00	0.83	4910.49	
16	0.00	0.00	0.08	454.21	0.00	0.00	0.82	4909.67	
17	0.00	0.00	0.08	454.13	0.00	0.00	0.84	4908.83	
18	0.00	0.00	0.08	454.05	0.00	0.00	0.83	4908.00	
19	0.00	0.00	0.08	453.97	0.00	0.00	0.83	4907.17	
20	0.00	0.00	0.08	453.89	0.00	0.00	0.83	4906.34	
21	0.00	0.00	0.08	453.81	0.00	0.00	0.82	4905.52	
22	0.00	0.00	0.08	453.73	0.00	0.00	0.84	4904.68	
23	0.00	0.00	0.08	453.65	0.00	0.00	0.84	4903.84	
24	0.00	0.00	0.08	453.57	0.00	0.00	0.83	4903.01	
25	0.00	0.00	0.08	453.49	0.00	0.00	0.83	4902.18	
26	0.00	0.00	0.08	453.41	0.00	0.00	0.82	4901.36	
27	0.00	0.00	0.08	453.33	0.00	0.00	0.84	4900.52	
28	0.00	0.00	0.08	453.25	0.00	0.00	0.83	4899.69	
29	0.00	0.00	0.08	453.17	0.00	0.00	0.83	4898.86	
30	0.00	0.00	0.08	453.09	0.00	0.00	0.83	4898.03	
31	0.00	0.00	0.08	453.01	0.00	0.00	0.82	4897.21	
TOT	0.00	0.00	2.48	452.93	0.00	0.00	25.85	4896.39	

RETURN FLOW

JAN 1999:	INSTATE				STATE LINE				TOTAL			
	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN
1	0.00	0.00	0.03	165.66	0.00	0.00	0.00	0.00	0.00	0.00	0.03	165.66
2	0.00	0.00	0.03	165.63	0.00	0.00	0.00	0.00	0.00	0.00	0.03	165.63
3	0.00	0.00	0.03	165.60	0.00	0.00	0.00	0.00	0.00	0.00	0.03	165.60
4	0.00	0.00	0.03	165.57	0.00	0.00	0.00	0.00	0.00	0.00	0.03	165.57
5	0.00	0.00	0.03	165.54	0.00	0.00	0.00	0.00	0.00	0.00	0.03	165.54
6	0.00	0.00	0.03	165.51	0.00	0.00	0.00	0.00	0.00	0.00	0.03	165.51
7	0.00	0.00	0.03	165.48	0.00	0.00	0.00	0.00	0.00	0.00	0.03	165.48
8	0.00	0.00	0.03	165.45	0.00	0.00	0.00	0.00	0.00	0.00	0.03	165.45
9	0.00	0.00	0.03	165.42	0.00	0.00	0.00	0.00	0.00	0.00	0.03	165.42
10	0.00	0.00	0.03	165.39	0.00	0.00	0.00	0.00	0.00	0.00	0.03	165.39
11	0.00	165.33	0.03	165.36	0.00	0.00	0.00	0.00	0.00	0.00	0.03	165.36
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	165.33	0.03	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOT	0.00	165.33	0.33		0.00	0.00	0.00		0.00	165.33	0.33	





# STATE OF COLORADO

**WATER DIVISION 2  
OFFICE OF THE STATE ENGINEER**

310 East Abriendo, Suite B  
Pueblo, Colorado 81004  
Phone: (719) 542-3368  
FAX: (719) 544-0800

<http://water.state.co.us/default.htm>



Bill Owens  
Governor

Greg E. Walcher  
Executive Director

Hal D. Simpson, P.E.  
State Engineer

Steven J. Witte, P.E.  
Division Engineer

March 30, 1999

Mark Rude  
Kansas Department of Agriculture (By FAX and E-Mail)

Dear Mark,

The purpose of this letter is to provide you with initial information of a transfer of water to the Offset Account in John Martin Reservoir. The Lower Arkansas Water Management Association (LAWMA) has initiated actions to transfer **500.4 acre-feet** of fully consumable water to the Offset Account for the purpose of satisfying the Storage Charge prerequisite for using the Offset Account as provided for in paragraph 9 of the **Resolution Concerning an Offset Account in John Martin Reservoir for Colorado Pumping As Amended March 30, 1998** ("Resolution"). The transfer will be made at 2400 hrs, March 31, 1999. 834 acre-feet of water will be transferred from LAWMA's Stubbs Article II account (800 acre-feet) and from LAWMA's XY-Graham Article II account (34 acre-feet). Using a consumptive use factor of 60%, this transfer will yield 500.4 acre-feet of fully consumable water which will be placed in the Kansas Storage Charge subaccount of the Offset Account and 333.6 acre-feet of return flow water which will be placed in the State Line Return Flow subaccount of the Offset Account. I will provide you with a formal notification which will have all of the details concerning the size and timing of the transfer into the Offset Account after the transfer takes place.

If you have any questions in the meantime, please call me.

Sincerely,

Dale E. Straw  
Augmentation Coordinator



# TRANSMISSION JOURNAL

MAR-30-1999 14:46 TUE

FAX NUMBER : 719-544-0800

NAME : DIV 2 DWR

NO.	FAX NUMBER	START TIME	TIME	MODE	PAGE	RESULTS
168	1-303-866-2334	03-24 14:54	00' 49"	G3	002/002	OK
869	542-3203	03-24 15:29	00' 27"	ECM	001/001	OK
870	13032320857	03-24 15:32	01' 52"	ECM	007/007	OK
171	542-3203	03-25 08:09	00' 55"	ECM	001/001	OK
172	544-5897	03-25 13:33	00' 28"	ECM	001/001	OK
873	542-3203	03-25 17:07	00' 58"	ECM	001/001	OK
174	542-3203	03-26 08:08	00' 53"	ECM	001/001	OK
175	1-303-866-3415	03-26 08:26	01' 40"	ECM	006/006	OK
176	1-303-866-3589	03-26 09:03	00' 43"	ECM	003/003	OK
877	17195920876	03-26 09:24	03' 06"	G3	003/003	OK
178	544-5897	03-26 09:42	00' 27"	ECM	001/001	OK
179	13032320857	03-26 11:39	01' 46"	ECM	007/007	OK
880	544-5897	03-26 14:18	00' 29"	ECM	001/001	OK
181	1-303-866-3415	03-26 14:25	01' 22"	ECM	006/006	OK
182	542-3203	03-29 08:14	00' 55"	ECM	001/001	OK
183	5456788	03-29 09:26	00' 49"	ECM	002/002	OK
884	542-3203	03-29 10:18	01' 25"	ECM	002/002	OK
185	1-303-866-3589	03-29 11:13	00' 37"	ECM	002/002	OK
186	542-3203	03-29 11:26	00' 34"	ECM	001/001	OK
887	1-303-792-2165	03-29 11:49	03' 58"	ECM	008/008	OK
888	1-719-336-2422	03-29 11:54	05' 43"	G3	008/008	OK
189	13037950440	03-29 13:22	04' 10"	G3	006/006	OK
190	6763302	03-29 13:43	01' 47"	G3	003/003	OK
891	17194711234	03-29 14:23	01' 38"	ECM	005/005	OK
192	544-5897	03-29 14:26	00' 27"	ECM	001/001	OK
193	13037612802	03-29 15:01	00' 45"	ECM	003/003	OK
194	542-3203	03-29 15:11	00' 58"	ECM	001/001	OK
895	1-303-792-2165	03-29 15:36	02' 12"	ECM	005/005	OK
196	544-5897	03-29 15:43	00' 00"	G3	000/001	[ NO ANSWER ]
197	544-5897	03-29 16:09	00' 27"	ECM	001/001	OK
898	17196323461	03-29 16:15	02' 12"	ECM	005/005	OK
199	13038323804	03-29 16:18	00' 24"	G3	000/010	[ COMM. ERROR ]
100	13038323804	03-29 16:20	04' 05"	ECM	010/010	OK
101	542-3203	03-30 08:24	00' 54"	ECM	001/001	OK
902	1-303-866-2417	03-30 09:42	00' 44"	ECM	002/002	OK
103	17196330814	03-30 10:57	04' 27"	ECM	006/006	OK
104	1-303-866-3415	03-30 11:39	00' 00"	G3	000/006	[ NO ANSWER ]
905	544-5897	03-30 11:46	00' 28"	ECM	001/001	OK
906	19094451166	03-30 11:51	05' 33"	ECM	010/010	OK
107	1-303-866-3415	03-30 12:01	04' 54"	ECM	006/006	OK
108	719-462-5755	03-30 12:36	00' 37"	ECM	002/002	OK
909	542-3203	03-30 12:46	01' 23"	ECM	002/002	OK
110	1-303-866-2417	03-30 14:09	01' 02"	ECM	003/003	OK
111	13162769315	03-30 14:15	01' 06"	ECM	002/002	OK
112	1132961176	03-30 14:20	00' 00"	G3	000/002	[ NO ANSWER ]
913	17194465400	03-30 14:23	01' 43"	G3	003/003	OK
114	19132961176	03-30 14:31	00' 00"	G3	000/002	[ STOP PRESSED ]
115	13162769315	03-30 14:35	01' 06"	ECM	002/002	OK
916	17852961176	03-30 14:40	00' 37"	ECM	002/002	OK
917	1-303-296-2388	03-30 14:43	00' 37"	ECM	002/002	OK

*Rudo  
Pope  
Montgomery*

TOTAL TIME : 01:14:12



## STATE OF COLORADO

WATER DIVISION 2  
OFFICE OF THE STATE ENGINEER310 East Abriendo, Suite B  
Pueblo, Colorado 81004  
Phone: (719) 542-3368  
FAX: (719) 544-0800

April 6, 1999

<http://water.state.co.us/default.htm>David L. Pope  
Kansas Chief Engineer  
Kansas Board of Agriculture  
901 S. Kansas Avenue, 2nd Floor  
Topeka, KS 66612-1283Bill Owens  
GovernorGreg E. Walcher  
Executive DirectorHal D. Simpson, P.E.  
State EngineerSteven J. Witte, P.E.  
Division Engineer

RE: Notice of Transfer to the Offset Account in John Martin Reservoir

Dear Mr. Pope:

The purpose of this letter is to provide the notice required by paragraph 3 of the **Resolution Concerning an Offset Account in John Martin Reservoir for Colorado Pumping As Amended March 30, 1998** ("Resolution") of a transfer of water to the Offset Account.

The Lower Arkansas Water Management Association (LAWMA) has transferred **500.4 acre-feet** of fully consumable water to the Offset Account for the purpose of satisfying the Storage Charge prerequisite for using the Offset Account as provided for in paragraph 9 of the Resolution. A total of 834 acre-feet of water was transferred from LAWMA's Stubbs Article II account (800 acre-feet) and from LAWMA's XY-Graham Article II account (34 acre-feet). 500.4 acre-feet of fully consumable water was placed in the Kansas Storage Charge subaccount of the Offset Account and 333.6 acre-feet of return flow water was placed in the Stateline Return Flow subaccount of the Offset Account.

A copy of the accounting spreadsheet for the Offset Account for the month of March, 1999 is attached at Enclosure 1. This accounting shows the transfer of water into the Kansas Storage Charge subaccount and the Stateline Return Flow subaccount.

The following information is provided in accordance with paragraph 3 of the Resolution.

Source of Water Transferred: LAWMA Stubbs and XY-Graham Article II Accounts.

Time Associated With Transfer  
Transfer Made At:

2400 hours, 31 March, 1999

Extent Water is Fully Consumable:

LAWMA Stubbs and XY-Graham Article II Account water is 60% consumable.

Return Flow Information

David L. Pope  
April 6, 1999

Page 2

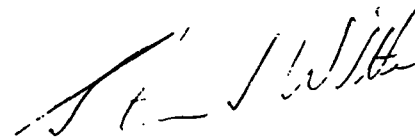
Quantity: 333.6 acre-feet  
Timing: Available to Kansas as Stateline Return Flow in accordance with paragraph 4 of the Resolution.  
Location: Stateline Return Flow subaccount.

Please provide your instructions for the disposition of the water being delivered as Storage Charge Water and Stateline Return Flow Water.

Release to River  
 Transfer to Kansas Article II Account  
 Retain in Offset Account

Please contact me if you have any questions or require additional information.

Sincerely,



Steven J. Witte  
Division Engineer  
Colorado Division of Water Resources

1 Enclosure

cc: Mark Rude  
John Draper  
Dale Book  
Hal Simpson  
Dennis Montgomery  
Bill Howland



CONSUMABLE WATER

MAR 1999:	KANSAS STORAGE CHARGE				TOTAL				INFLow	RELEASE	EVAP	OWN
	INFLow	RELEASE	EVAP	OWN	INFLow	RELEASE	EVAP	OWN				
1	0.00	0.00	0.19	449.57	0.00	0.00	2.08	4859.89				
2	0.00	0.00	0.19	449.38	0.00	0.00	2.08	4857.81				
3	0.00	0.00	0.19	449.19	0.00	0.00	2.08	4855.73				
4	0.00	0.00	0.19	449.00	0.00	0.00	2.08	4853.65				
5	0.00	0.00	0.19	448.81	0.00	0.00	2.08	4851.57				
6	0.00	0.00	0.19	448.62	0.00	0.00	2.08	4849.49				
7	0.00	0.00	0.19	448.43	0.00	0.00	2.07	4847.42				
8	0.00	0.00	0.19	448.24	0.00	0.00	2.07	4845.35				
9	0.00	0.00	0.19	448.05	0.00	0.00	2.07	4843.28				
10	0.00	0.00	0.19	447.86	0.00	0.00	2.07	4841.21				
11	0.00	0.00	0.19	447.67	0.00	0.00	2.07	4839.14				
12	0.00	0.00	0.19	447.48	0.00	0.00	2.06	4837.08				
13	0.00	0.00	0.19	447.29	0.00	0.00	2.06	4835.02				
14	0.00	0.00	0.19	447.10	0.00	0.00	2.07	4832.95				
15	0.00	0.00	0.19	446.91	0.00	0.00	2.07	4830.88				
16	0.00	0.00	0.19	446.72	0.00	0.00	2.06	4828.82				
17	0.00	0.00	0.19	446.53	0.00	0.00	2.06	4826.76				
18	0.00	0.00	0.19	446.34	0.00	0.00	2.06	4824.70				
19	0.00	0.00	0.19	446.15	0.00	0.00	2.06	4822.64				
20	0.00	0.00	0.17	445.98	0.00	0.00	1.86	4820.78				
21	0.00	0.00	0.17	445.81	0.00	0.00	1.85	4818.93				
22	0.00	0.00	0.18	445.63	0.00	0.00	1.96	4816.97				
23	0.00	0.00	0.15	445.48	0.00	0.00	1.65	4815.32				
24	0.00	0.00	0.19	445.29	0.00	0.00	2.04	4813.28				
25	0.00	0.00	0.00	445.29	0.00	0.00	0.00	4813.28				
26	0.00	0.00	0.18	445.11	0.00	0.00	1.95	4811.33				
27	0.00	0.00	0.25	444.86	0.00	0.00	2.72	4808.61				
28	0.00	0.00	0.25	444.61	0.00	0.00	2.72	4805.89				
29	0.00	0.00	0.26	444.35	0.00	0.00	2.82	4803.07				
30	0.00	0.00	0.20	444.15	0.00	0.00	2.14	4800.93				
31	500.40	0.00	0.35	443.80	0.00	0.00	3.79	4797.14				
TOT	500.40	0.00	6.24	943.73	500.40	0.00	5.04	5292.50				

RETURN FLOW

MAR 1999:	INSTATE				STATE LINE				TOTAL			
	INFLow	RELEASE	EVAP	OWN	INFLow	RELEASE	EVAP	OWN	INFLow	RELEASE	EVAP	OWN
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	0.00	0.00	0.00	333.60	0.00	0.00	333.60	333.60	0.00	0.00	333.60
TOT	0.00	0.00	0.00		333.60	0.00	0.00		333.60	0.00	0.00	

Enclosure 1 (cont)

MAR 1999:	UPSTREAM				INSTATE DOWNSTREAM				TOTAL			OWN
	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	
1 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOT :	0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00	

MAR 1999:	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN
1 :												
2 :												
3 :												
4 :												
5 :												
6 :												
7 :												
8 :												
9 :												
10 :												
11 :												
12 :												
13 :												
14 :												
15 :												
16 :												
17 :												
18 :												
19 :												
20 :												
21 :												
22 :												
23 :												
24 :												
25 :												
26 :												
27 :												
28 :												
29 :												
30 :												
31 :												
TOT :												

Enclosure 1 (cont)





# STATE OF COLORADO

**WATER DIVISION 2  
OFFICE OF THE STATE ENGINEER**

310 East Abriendo, Suite B  
Pueblo, Colorado 81004  
Phone: (719) 542-3368  
FAX: (719) 544-0800

<http://water.state.co.us/default.htm>



Bill Owens  
Governor

Greg E. Walcher  
Executive Director

Hal D. Simpson, P.E.  
State Engineer

Steven J. Witte, P.E.  
Division Engineer

July 30, 1999

**Mark Rude**  
Kansas Department of Agriculture (By FAX and E-Mail)

Dear Mark,

The purpose of this letter is to provide you with initial information of a delivery of water to the Offset Account in John Martin Reservoir. The Lower Arkansas Water Management Association (LAWMA) is arranging a delivery to the Offset Account of water from its shares of the Highland Irrigation Company using the procedures described in Steve Witte's letter of August 25, 1997 which provided the initial notice of the delivery of water from this replacement source and his letter of August 10, 1998. I will provide you with a formal notification, similar to the letters referenced above, which will have all of the details concerning the size and timing of the deliveries into the Offset Account. The delivery of water to the Offset Account from this source will begin at 0000 hours, 2 August, 1999. The water will initially be placed into the Colorado Downstream Consumable Water subaccount of the Offset Account.

If you have any questions in the meantime, please call me.

Sincerely,

Dale E. Straw  
Assistant Division Engineer

**Straw, Dale**

---

**From:** Straw, Dale  
**Sent:** Friday, July 30, 1999 2:50 PM  
**To:** 'Mark Rude'  
**Cc:** Witte, Steve  
**Subject:** Delivery to Offset Account

July 30, 1999

Mark Rude  
Kansas Department of Agriculture (By FAX and E-Mail)

Mark,

The purpose of this message is to provide you with initial information of a delivery of water to the Offset Account in John Martin Reservoir. The Lower Arkansas Water Management Association (LAWMA) is arranging a delivery to the Offset Account of water from its shares of the Highland Irrigation Company using the procedures described in Steve Witte's letter of August 25, 1997 which provided the initial notice of the delivery of water from this replacement source and his letter of August 10, 1998. I will provide you with a formal notification, similar to the letters referenced above, which will have all of the details concerning the size and timing of the deliveries into the Offset Account. The delivery of water to the Offset Account from this source will begin at 0000 hours, 2 August, 1999. The water will initially be placed into the Colorado Downstream Consumable Water subaccount of the Offset Account.

If you have any questions in the meantime, please call me.

Dale

# TRANSMISSION JOURNAL

JUL-30-1999 14:59 FRI

FAX NUMBER : 719-544-0800

NAME : DIV 2 DWR

NO.	FAX NUMBER	START TIME	TIME	MODE	PAGE	RESULTS
65	544-5897	07-27 13:23	00' 25"	ECM	001/001	OK
766	1-303-336-2526	07-27 13:32	00' 00"	G3	000/002	[ NO ANSWER ]
67	1-719-336-2526	07-27 13:47	00' 35"	ECM	002/002	OK
68	542-3203	07-28 08:26	00' 56"	ECM	001/001	OK
769	542-3203	07-28 09:30	00' 56"	ECM	001/001	OK
70	719-462-5755	07-28 11:17	02' 25"	ECM	006/006	OK
71	1-719-384-2123	07-28 11:22	05' 13"	ECM	006/006	OK
72	1-719-336-2422	07-28 11:36	05' 19"	G3	006/006	OK
773	1-303-792-2165	07-28 11:45	02' 29"	ECM	006/006	OK
74	1-303-761-2802	07-28 11:52	01' 51"	ECM	006/006	OK
75	1-303-665-6959	07-28 11:58	04' 20"	ECM	006/006	OK
776	1-303-866-3589	07-28 12:04	00' 37"	ECM	002/002	OK
777	544-5897	07-28 12:30	00' 27"	ECM	001/001	OK
778	1-719-336-2526	07-28 12:32	03' 30"	ECM	002/002	OK
779	1-303-866-4024	07-28 12:54	00' 24"	ECM	001/001	OK
780	1-303-287-1213	07-28 14:35	00' 41"	ECM	003/003	OK
781	1-303-866-3589	07-28 15:39	00' 41"	ECM	002/002	OK
782	2757538	07-28 16:51	00' 31"	ECM	002/002	OK
783	1-303-866-3589	07-28 18:37	00' 42"	ECM	002/002	OK
784	1-719-227-5297	07-29 08:15	01' 08"	ECM	003/003	OK
785	542-3203	07-29 08:23	00' 56"	ECM	001/001	OK
786	1-303-866-3589	07-29 08:26	01' 00"	ECM	003/003	OK
787	17193952364	07-29 09:44	01' 02"	ECM	002/002	OK
788	5460588	07-29 11:12	02' 05"	ECM	006/006	OK
89	1-303-866-3589	07-29 14:03	06' 35"	ECM	017/017	OK
90	1-719-384-1001	07-29 14:16	00' 46"	ECM	001/001	OK
791	544-5897	07-29 14:37	00' 26"	ECM	001/001	OK
92	1-719-336-2526	07-29 14:57	00' 35"	ECM	002/002	OK
93	13037943245	07-29 15:35	00' 38"	ECM	002/002	OK
94	13162769315	07-29 16:11	00' 40"	ECM	001/004	[ COMM. ERROR ]
795	13162769315	07-29 16:15	01' 48"	ECM	003/004	[ COMM. ERROR ]
796	13162769315	07-29 16:20	00' 43"	ECM	001/004	[ COMM. ERROR ]
797	13162769315	07-29 16:24	00' 43"	ECM	001/004	[ COMM. ERROR ]
798	13162769315	07-29 16:28	00' 44"	ECM	001/004	[ COMM. ERROR ]
799	13162769315	07-29 16:32	00' 16"	ECM	001/001	OK
800	13162769315	07-29 16:33	00' 44"	ECM	001/004	[ COMM. ERROR ]
801	1-303-296-2388	07-29 16:36	00' 47"	ECM	004/004	OK
802	13162769315	07-29 16:37	00' 43"	ECM	001/004	[ COMM. ERROR ]
803	542-3203	07-30 08:49	00' 56"	ECM	001/001	OK
804	1-800-434-0925	07-30 09:36	00' 30"	ECM	001/001	OK
805	542-3203	07-30 10:29	01' 42"	ECM	002/002	OK
806	1-719-336-2526	07-30 11:41	00' 46"	ECM	002/002	OK
807	544-5897	07-30 11:43	00' 40"	ECM	002/002	OK
808	13162769315	07-30 12:08	00' 40"	ECM	001/003	[ COMM. ERROR ]
809	13162769315	07-30 12:12	01' 15"	ECM	002/003	[ COMM. ERROR ]
810	13162769315	07-30 12:17	01' 13"	ECM	002/003	OK
811	13162769315	07-30 13:04	00' 49"	ECM	002/002	OK
812	1-719-384-1001	07-30 13:45	01' 25"	ECM	001/001	OK
813	13162769315	07-30 14:56	01' 03"	ECM	002/002	OK
814	17852961176	07-30 14:58	00' 35"	ECM	002/002	OK

Mark Rude  
David Pope

TOTAL TIME : 01:05:55



Date

# STATE OF COLORADO

**WATER DIVISION 2  
OFFICE OF THE STATE ENGINEER**

310 East Abriendo, Suite B  
Pueblo, Colorado 81004  
Phone: (719) 542-3368  
FAX: (719) 544-0800

<http://water.state.co.us/default.htm>



Bill Owens  
Governor

Greg E. Walcher  
Executive Director

Hal D. Simpson, P.E.  
State Engineer

Steven J. Witte, P.E.  
Division Engineer

November 9, 1999

David L. Pope  
Kansas Chief Engineer  
Kansas Board of Agriculture  
901 S. Kansas Avenue, 2nd Floor  
Topeka, KS 66612-1283

RE: Notice of Delivery to the Offset Account in John Martin Reservoir

Dear Mr. Pope:

The purpose of this letter is to provide the notice required by paragraph 3 of the **Resolution Concerning an Offset Account in John Martin Reservoir for Colorado Pumping As Amended March 30, 1998** ("Resolution") of a delivery of water to the Offset Account. This letter provides the monthly reporting of deliveries to the Offset Account from the Lower Arkansas Water Management Association (LAWMA) shares of the Highland Irrigation Company using the procedures described in my letter of August 25, 1997 which provided the initial notice of the delivery of water from this replacement source. The initial notice for this year's operations was faxed to you and e-mailed and faxed to Mark Rude on July 30, 1999. This report covers the period from the initiation of deliveries on August 2, 1999 through the end of October, 1999.

Enclosure 1 contains the accounting spreadsheets of deliveries from the Highland Canal for the months of August, September, and October. The format of these spreadsheets is provided and described in my letter of August 25, 1997. Enclosure 2 contains the accounting sheets for the Offset Account for August, September, and October which reflect the delivery of water to the appropriate subaccounts of the Offset Account. The accounting sheets for September and October show the delivery of an incorrect amount of water because the consumptive use factor for the Highland Canal's August usage was initially used for all three months. The spreadsheets in Enclosure 1 show the correct daily quantities that should have been delivered. A one time correction was made on October 31, 1999 to deduct the excess water from the Offset Account and add it to conservation storage where it should have gone initially. The quantity returned to conservation storage was corrected for the evaporation loss that it would have experienced in either account. Enclosure 3 provides a table which summarizes the monthly consumptive use factors for the Highland Canal for each month in the irrigation season. LAWMA has agreed not to claim consumptive use credits during November through March, thus eliminating the need to store return flow water in the Offset Account to be delivered during any of these months. Enclosure 4 provides the derivation of the percentages summarized in column 4 of the Highland

Canal table in Enclosure 3. Enclosure 5 provides the derivation of the percentages summarized in column 3 of the Highland Canal table in Enclosure 3.

The following table summarizes the corrected deliveries of water into the Offset Account during the reporting period.

MONTH	C. U. Water (ac-ft)
August	284.71
September	1022.27
October	716.65

Please contact me if you have any questions or require additional information.

Sincerely,



Steven J. Witte  
Division Engineer  
Colorado Division of Water Resources

5 Enclosures

cc: Mark Rude  
John Draper  
Dale Book  
Hal Simpson  
Dennis Montgomery  
Bill Howland

Accounting Spreadsheet

Deliveries from Highland Canal for Consumptive Use Pass-thru Credit and Return Flow Credit stored in Conservation Pool

Day	Mode (1 or 2)	Diversion at 5 ft Flume (cfs)	Wasteway #3 Flow Rate (cfs)	Transit Loss to JMR (%)	Arrival Rate at JMR (cfs)	Arrival Quantity at JMR (ac-ft)	Amount t CU Water Account (ac-ft)	Amount to Return Flow Acct (ac-ft)
1	1	23.85	21.46	0.048638	20.42	31.22	23.82	0.47
2	2	0.00	0.00		0.00	0.00	0.00	0.00
3	2	0.00	0.00		0.00	0.00	0.00	0.00
4	2	49.50	44.55	0.021321	43.60	86.48	76.64	0.00
5	1	61.95	52.16	0.020895	51.07	101.30	67.36	0.00
6	1	66.60	56.34	0.020692	55.17	109.43	91.92	0.00
7	1	57.05	47.74	0.021360	46.77	92.77	60.07	0.00
8		8.00	Reservoir in flood pool; No Credits			0.00	0.00	0.00
9		37.00				0.00	0.00	0.00
10		36.00				0.00	0.00	0.00
11		36.00				0.00	0.00	0.00
12		36.00				0.00	0.00	0.00
13		35.00				0.00	0.00	0.00
14		30.00				0.00	0.00	0.00
15		27.00				0.00	0.00	0.00
16		30.00				0.00	0.00	0.00
17		30.00				0.00	0.00	0.00
18		44.00				0.00	0.00	0.00
19		60.60				0.00	0.00	0.00
20		64.00				0.00	0.00	0.00
21		62.00				0.00	0.00	0.00
22		50.40				0.00	0.00	0.00
23		47.50				0.00	0.00	0.00
24		46.20				0.00	0.00	0.00
25		46.00				0.00	0.00	0.00
26	1	44.50	36.90	0.033000	29.97	59.45	59.45	0.00
27	1	43.60	33.39	0.036720	27.01	53.58	53.58	0.00
28	1	39.00	29.20	0.036720	23.63	46.87	46.87	0.00
29	1	36.90	28.26	0.041238	22.76	45.14	45.14	0.00
30	1	33.35	25.51	0.043180	20.51	40.68	40.68	0.00
31	1	32.10	24.39	0.040530	19.66	38.99	38.99	0.00
							604.52	0.47

Note: Diversions at flume and wasteway are 24 hr prior to date shown

Note: John Martin into flood pool on 8/8. Offset Account spilled.

Note: After Aug. 1, no return flow credit. CU factor = 0.84

HIGHLAND99.xls

Enclosure 1

**Deliveries from Highland Canal for Consumptive Use credit to Offset Account  
September, 1999**

Day	Mode (1 or 2)	Diversion at 5 ft Flume (cfs)	Wasteway #3 Flow Rate (cfs)	Transit Loss to JMR (%)	Arrival Rate at JMR (cfs)	Arrival Quantity at JMR (ac-ft)	Amount t CU Water Account (ac-ft)	Amount to Return Flow Acct (ac-ft)
1	1	30.70	23.13	0.044659	22.10	43.83	36.82	0.00
2	1	28.90	21.51	0.047912	20.48	40.62	29.73	0.00
3	1	30.15	23.54	0.047912	22.41	44.45	32.53	0.00
4	1	30.10	23.49	0.047912	22.36	44.36	32.47	0.00
5	1	26.65	22.19	0.047912	21.12	41.90	30.67	0.00
6	1	24.00	20.70	0.047912	19.71	39.09	28.61	0.00
7	2	22.15	19.94	0.052002	18.90	37.48	27.44	0.00
8	2	20.95	18.86	0.052002	17.87	35.45	25.95	0.00
9	2	16.26	14.63	0.053366	13.85	27.48	20.11	0.00
10	2	14.50	13.05	0.059262	12.28	24.35	17.82	0.00
11	2	15.75	14.18	0.053366	13.42	26.62	19.48	0.00
12	2	15.05	13.55	0.059262	12.74	25.27	18.50	0.00
13	2	16.10	14.49	0.053366	13.72	27.21	19.92	0.00
14	2	16.20	14.58	0.052002	13.82	27.42	20.07	0.00
15	2	18.15	16.34	0.052002	15.49	30.72	22.48	0.00
16	2	19.15	17.24	0.052002	16.34	32.41	23.72	0.00
17	2	14.90	13.41	0.052002	12.71	25.22	18.46	0.00
18	2	42.45	38.21	0.044683	36.50	72.39	52.99	0.00
19	2	51.65	46.49	0.039564	44.65	88.56	64.82	0.00
20	2	42.50	38.25	0.039564	36.74	72.87	53.34	0.00
21	2	41.80	37.62	0.046835	35.86	71.12	52.06	0.00
22	2	37.90	34.11	0.046835	32.51	64.49	47.21	0.00
23	2	35.50	29.52	0.046835	28.14	55.81	40.85	0.00
24	2	37.10	30.96	0.046835	29.51	58.53	42.85	0.00
25	2	35.30	29.34	0.046835	27.97	55.47	40.60	0.00
26	2	33.35	27.59	0.046835	26.29	52.15	38.18	0.00
27	2	33.30	29.97	0.052002	28.41	56.35	41.25	0.00
28	2	35.50	31.95	0.052002	30.29	60.08	43.98	0.00
29	2	32.40	29.16	0.052002	27.64	54.83	40.14	0.00
30	2	31.65	28.49	0.052002	27.00	53.56	39.21	0.00
							1022.27	0.00

Note: Diversions at flume and wasteway are 24 hr prior to date shown  
 Note: After Aug. 1, no return flow credit. CU factor for Sept. = 0.732

HIGHLAND99.xls

Enclosure 1 (cont)



Deliveries from Highland Canal for Consumptive Use Credits to Offset Account  
October, 1999

Day	Mode (1 or 2)	Diversion at 5 ft Flume (cfs)	Wasteway #3 Flow Rate (cfs)	Transit Loss to JMR (%)	Arrival Rate at JMR (cfs)	Arrival Quantity at JMR (ac-ft)	Amount t CU Water Account (ac-ft)	Amount to Return Flow Acct (ac-ft)
1	2	32.95	29.66	0.052002	28.11	55.76	40.82	0.00
2	2	31.45	28.31	0.050926	26.86	53.28	24.78	0.00
3	2	29.95	26.96	0.050926	25.58	50.74	23.60	0.00
4	2	28.70	25.83	0.052002	24.49	48.57	22.58	0.00
5	2	29.25	26.33	0.050926	24.98	49.56	23.04	0.00
6	2	27.25	24.53	0.050926	23.28	46.17	21.47	0.00
7	2	24.50	22.05	0.052002	20.90	41.46	19.28	0.00
8	2	29.60	26.64	0.050926	25.28	50.15	23.32	0.00
9	2	34.35	30.92	0.050926	29.34	58.20	27.06	0.00
10	2	30.00	27.00	0.050926	25.63	50.83	23.63	0.00
11	2	26.40	23.76	0.057898	22.38	44.40	20.65	0.00
12	2	27.95	25.16	0.057898	23.70	47.01	21.86	0.00
13	2	23.45	21.11	0.057898	19.88	39.44	18.34	0.00
14	2	23.65	21.29	0.057898	20.05	39.77	18.50	0.00
15	2	23.65	21.29	0.057898	20.05	39.77	18.50	0.00
16	2	23.65	21.29	0.057898	20.05	39.77	18.50	0.00
17	2	23.00	20.70	0.057898	19.50	38.68	17.99	0.00
18	2	29.95	20.70	0.057898	19.50	38.68	23.42	0.00
19	2	26.35	26.96	0.057898	25.39	50.37	20.61	0.00
20	2	26.40	23.72	0.057898	22.34	44.32	20.65	0.00
21	2	27.65	23.76	0.057898	22.38	44.40	21.62	0.00
22	2	32.00	24.89	0.057898	23.44	46.50	25.03	0.00
23	2	41.40	28.80	0.050926	27.33	54.22	32.62	0.00
24	2	37.10	37.26	0.052002	35.32	70.06	29.20	0.00
25	2	34.30	33.39	0.052002	31.65	62.79	26.99	0.00
26	2	30.50	30.87	0.057898	29.08	57.69	23.85	0.00
27	2	26.35	27.45	0.057898	25.86	51.29	20.61	0.00
28	2	27.80	23.72	0.057898	22.34	44.32	21.74	0.00
29	2	28.70	25.02	0.057898	23.57	46.75	22.44	0.00
30	2	27.25	25.83	0.057898	24.33	48.27	21.31	0.00
31	2	29.00	24.53	0.057898	23.11	45.83	22.68	0.00
							716.65	0.00

Note: Diversions at flume and wasteway are 24 hr prior to date shown  
Note: After Aug. 1, no return flow credit. CU factor = 0.465

HIGHLAND99.xls

Enclosure 1 (cont)

OFFSET ACCOUNT

AUG 1999:	OFFSET ACCOUNT				CONSUMABLE WATER				RETURN FLOW			OWN
	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	
1	13.34	0.00	0.00	13.34	13.34	0.00	0.00	13.34	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	13.34	0.00	0.00	0.00	13.34	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	13.34	0.00	0.00	0.00	13.34	0.00	0.00	0.00	0.00
4	72.64	0.00	0.00	85.98	72.64	0.00	0.00	85.98	0.00	0.00	0.00	0.00
5	67.36	0.00	0.08	153.26	67.36	0.00	0.08	153.26	0.00	0.00	0.00	0.00
6	91.92	0.00	0.05	245.13	91.92	0.00	0.05	245.13	0.00	0.00	0.00	0.00
7	60.07	0.00	0.19	305.01	60.07	0.00	0.19	305.01	0.00	0.00	0.00	0.00
8	0.00	304.82	0.19	0.00	0.00	304.82	0.19	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	59.45	0.00	0.00	59.45	59.45	0.00	0.00	59.45	0.00	0.00	0.00	0.00
27	53.58	0.00	0.04	112.99	53.58	0.00	0.04	112.99	0.00	0.00	0.00	0.00
28	46.87	0.00	0.08	159.78	46.87	0.00	0.08	159.78	0.00	0.00	0.00	0.00
29	45.14	0.00	0.12	204.80	45.14	0.00	0.12	204.80	0.00	0.00	0.00	0.00
30	40.68	0.00	0.15	245.33	40.68	0.00	0.15	245.33	0.00	0.00	0.00	0.00
31	38.99	0.00	0.21	284.11	38.99	0.00	0.21	284.11	0.00	0.00	0.00	0.00
TOT	590.04	304.82	1.11		590.04	304.82	1.11		0.00	0.00	0.00	

CONSUMABLE WATER

AUG 1999:	COLORADO UPSTREAM				COLORADO DOWNSTREAM				KANSAS			OWN
	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	
1	0.00	0.00	0.00	0.00	13.34	0.00	0.00	13.34	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.34	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.34	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	72.64	0.00	0.00	85.98	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	67.36	0.00	0.08	153.26	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	91.92	0.00	0.05	245.13	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	60.07	0.00	0.19	305.01	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	304.82	0.19	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	59.45	0.00	0.00	59.45	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	53.58	0.00	0.04	112.99	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	46.87	0.00	0.08	159.78	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	45.14	0.00	0.12	204.80	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	40.68	0.00	0.15	245.33	0.00	0.00	0.00	0.00
31	0.00	0.00	0.00	0.00	38.99	0.00	0.21	284.11	0.00	0.00	0.00	0.00
TOT	0.00	0.00	0.00		590.04	304.82	1.11		0.00	0.00	0.00	

Enclosure 2

CONSUMABLE WATER

AUG 1999:	KANSAS STORAGE CHARGE				TOTAL				INFLW	RELEASE	EVAP	OWN
	INFLW	RELEASE	EVAP	OWN	INFLW	RELEASE	EVAP	OWN				
:				0.00				0.00				
1	0.00	0.00	0.00	0.00	13.34	0.00	0.00	13.34				
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.34				
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.34				
4	0.00	0.00	0.00	0.00	72.64	0.00	0.00	85.98				
5	0.00	0.00	0.00	0.00	67.36	0.00	0.08	153.26				
6	0.00	0.00	0.00	0.00	91.92	0.00	0.05	245.13				
7	0.00	0.00	0.00	0.00	60.07	0.00	0.19	305.01				
8	0.00	0.00	0.00	0.00	0.00	304.82	0.19	0.00				
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
26	0.00	0.00	0.00	0.00	59.45	0.00	0.00	59.45				
27	0.00	0.00	0.00	0.00	53.58	0.00	0.04	112.99				
28	0.00	0.00	0.00	0.00	46.87	0.00	0.08	159.78				
29	0.00	0.00	0.00	0.00	45.14	0.00	0.12	204.80				
30	0.00	0.00	0.00	0.00	40.68	0.00	0.15	245.33				
31	0.00	0.00	0.00	0.00	38.99	0.00	0.21	284.11				
TOT	0.00	0.00	0.00		590.04	304.82	1.11					

RETURN FLOW

AUG 1999:	INSTATE				STATE LINE				TOTAL			
	INFLW	RELEASE	EVAP	OWN	INFLW	RELEASE	EVAP	OWN	INFLW	RELEASE	EVAP	OWN
:				0.00				0.00				
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOT	0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00	

Enclosure 2 (cont)

AUG 1999:	UPSTREAM				INSTATE DOWNSTREAM				TOTAL			OWN		
	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP			
:				0.00	:				0.00	:				0.00
1 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
2 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
3 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
4 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
5 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
6 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
7 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
8 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
9 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
10 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
11 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
12 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
13 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
14 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
15 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
16 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
17 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
18 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
19 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
20 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
21 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
22 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
23 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
24 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
25 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
26 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
27 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
28 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
29 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
30 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
31 :	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00	:	0.00	0.00	0.00	0.00
TOT :	0.00	0.00	0.00		:	0.00	0.00	0.00		:	0.00	0.00	0.00	

AUG 1999:	INFLOW	RELEASE	EVAP	OWN	:	INFLOW	RELEASE	EVAP	OWN	:	INFLOW	RELEASE	EVAP	OWN
1 :					:					:				
2 :					:					:				
3 :					:					:				
4 :					:					:				
5 :					:					:				
6 :					:					:				
7 :					:					:				
8 :					:					:				
9 :					:					:				
10 :					:					:				
11 :					:					:				
12 :					:					:				
13 :					:					:				
14 :					:					:				
15 :					:					:				
16 :					:					:				
17 :					:					:				
18 :					:					:				
19 :					:					:				
20 :					:					:				
21 :					:					:				
22 :					:					:				
23 :					:					:				
24 :					:					:				
25 :					:					:				
26 :					:					:				
27 :					:					:				
28 :					:					:				
29 :					:					:				
30 :					:					:				
31 :					:					:				
TOT :					:					:				

Enclosure 2 (cont)

OFFSET ACCOUNT												PG 1
SEP 1999:	OFFSET ACCOUNT				CONSUMABLE WATER				RETURN FLOW			
	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN
1 :				284.11 :				284.11 :				0.00
2 :	36.82	0.00	0.32	320.61 :	36.82	0.00	0.32	320.61 :	0.00	0.00	0.00	0.00
3 :	34.12	0.00	0.26	354.47 :	34.12	0.00	0.26	354.47 :	0.00	0.00	0.00	0.00
4 :	37.33	0.00	0.20	391.60 :	37.33	0.00	0.20	391.60 :	0.00	0.00	0.00	0.00
5 :	35.74	0.00	0.21	427.13 :	35.74	0.00	0.21	427.13 :	0.00	0.00	0.00	0.00
6 :	33.76	0.00	0.24	460.65 :	33.76	0.00	0.24	460.65 :	0.00	0.00	0.00	0.00
7 :	31.50	0.00	0.26	491.89 :	31.50	0.00	0.26	491.89 :	0.00	0.00	0.00	0.00
8 :	30.33	0.00	0.34	521.88 :	30.33	0.00	0.34	521.88 :	0.00	0.00	0.00	0.00
9 :	29.78	0.00	0.43	551.23 :	29.78	0.00	0.43	551.23 :	0.00	0.00	0.00	0.00
10 :	23.08	0.00	0.28	574.03 :	23.08	0.00	0.28	574.03 :	0.00	0.00	0.00	0.00
11 :	20.45	0.00	0.41	594.07 :	20.45	0.00	0.41	594.07 :	0.00	0.00	0.00	0.00
12 :	22.36	0.00	0.42	616.01 :	22.36	0.00	0.42	616.01 :	0.00	0.00	0.00	0.00
13 :	21.23	0.00	0.45	636.79 :	21.23	0.00	0.45	636.79 :	0.00	0.00	0.00	0.00
14 :	22.85	0.00	0.36	659.28 :	22.85	0.00	0.36	659.28 :	0.00	0.00	0.00	0.00
15 :	23.03	0.00	0.51	681.80 :	23.03	0.00	0.51	681.80 :	0.00	0.00	0.00	0.00
16 :	25.80	0.00	0.05	707.55 :	25.80	0.00	0.05	707.55 :	0.00	0.00	0.00	0.00
17 :	27.22	0.00	0.10	734.67 :	27.22	0.00	0.10	734.67 :	0.00	0.00	0.00	0.00
18 :	21.18	0.00	0.19	755.66 :	21.18	0.00	0.19	755.66 :	0.00	0.00	0.00	0.00
19 :	60.81	0.00	0.20	816.27 :	60.81	0.00	0.20	816.27 :	0.00	0.00	0.00	0.00
20 :	74.39	0.00	0.20	890.46 :	74.39	0.00	0.20	890.46 :	0.00	0.00	0.00	0.00
21 :	61.21	0.00	0.23	951.44 :	61.21	0.00	0.23	951.44 :	0.00	0.00	0.00	0.00
22 :	59.74	0.00	0.44	1010.74 :	59.74	0.00	0.44	1010.74 :	0.00	0.00	0.00	0.00
23 :	54.17	0.00	0.34	1064.57 :	54.17	0.00	0.34	1064.57 :	0.00	0.00	0.00	0.00
24 :	46.88	0.00	0.38	1111.07 :	46.88	0.00	0.38	1111.07 :	0.00	0.00	0.00	0.00
25 :	49.17	0.00	0.62	1159.62 :	49.17	0.00	0.62	1159.62 :	0.00	0.00	0.00	0.00
26 :	46.60	0.00	0.65	1205.57 :	46.60	0.00	0.65	1205.57 :	0.00	0.00	0.00	0.00
27 :	43.81	0.00	0.65	1248.73 :	43.81	0.00	0.65	1248.73 :	0.00	0.00	0.00	0.00
28 :	47.34	0.00	0.32	1295.75 :	47.34	0.00	0.32	1295.75 :	0.00	0.00	0.00	0.00
29 :	50.46	0.00	0.34	1345.87 :	50.46	0.00	0.34	1345.87 :	0.00	0.00	0.00	0.00
30 :	46.06	0.00	0.59	1391.34 :	46.06	0.00	0.59	1391.34 :	0.00	0.00	0.00	0.00
TOT :	44.99	0.00	0.59	1435.74 :	44.99	0.00	0.59	1435.74 :	0.00	0.00	0.00	0.00
TOT :	1162.21	0.00	10.58		1162.21	0.00	10.58		0.00	0.00	0.00	

CONSUMABLE WATER												PG 1
SEP 1999:	COLORADO UPSTREAM				COLORADO DOWNSTREAM				KANSAS			
	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN
1 :				0.00 :				284.11 :				0.00
2 :	0.00	0.00	0.00	0.00 :	36.82	0.00	0.32	320.61 :	0.00	0.00	0.00	0.00
3 :	0.00	0.00	0.00	0.00 :	34.12	0.00	0.26	354.47 :	0.00	0.00	0.00	0.00
4 :	0.00	0.00	0.00	0.00 :	37.33	0.00	0.20	391.60 :	0.00	0.00	0.00	0.00
5 :	0.00	0.00	0.00	0.00 :	35.74	0.00	0.21	427.13 :	0.00	0.00	0.00	0.00
6 :	0.00	0.00	0.00	0.00 :	33.76	0.00	0.24	460.65 :	0.00	0.00	0.00	0.00
7 :	0.00	0.00	0.00	0.00 :	31.50	0.00	0.26	491.89 :	0.00	0.00	0.00	0.00
8 :	0.00	0.00	0.00	0.00 :	30.33	0.00	0.34	521.88 :	0.00	0.00	0.00	0.00
9 :	0.00	0.00	0.00	0.00 :	29.78	0.00	0.43	551.23 :	0.00	0.00	0.00	0.00
10 :	0.00	0.00	0.00	0.00 :	23.08	0.00	0.28	574.03 :	0.00	0.00	0.00	0.00
11 :	0.00	0.00	0.00	0.00 :	20.45	0.00	0.41	594.07 :	0.00	0.00	0.00	0.00
12 :	0.00	0.00	0.00	0.00 :	22.36	0.00	0.42	616.01 :	0.00	0.00	0.00	0.00
13 :	0.00	0.00	0.00	0.00 :	21.23	0.00	0.45	636.79 :	0.00	0.00	0.00	0.00
14 :	0.00	0.00	0.00	0.00 :	22.85	0.00	0.36	659.28 :	0.00	0.00	0.00	0.00
15 :	0.00	0.00	0.00	0.00 :	23.03	0.00	0.51	681.80 :	0.00	0.00	0.00	0.00
16 :	0.00	0.00	0.00	0.00 :	25.80	0.00	0.05	707.55 :	0.00	0.00	0.00	0.00
17 :	0.00	0.00	0.00	0.00 :	27.22	0.00	0.10	734.67 :	0.00	0.00	0.00	0.00
18 :	0.00	0.00	0.00	0.00 :	21.18	0.00	0.19	755.66 :	0.00	0.00	0.00	0.00
19 :	0.00	0.00	0.00	0.00 :	60.81	0.00	0.20	816.27 :	0.00	0.00	0.00	0.00
20 :	0.00	0.00	0.00	0.00 :	74.39	0.00	0.20	890.46 :	0.00	0.00	0.00	0.00
21 :	0.00	0.00	0.00	0.00 :	61.21	0.00	0.23	951.44 :	0.00	0.00	0.00	0.00
22 :	0.00	0.00	0.00	0.00 :	59.74	0.00	0.44	1010.74 :	0.00	0.00	0.00	0.00
23 :	0.00	0.00	0.00	0.00 :	54.17	0.00	0.34	1064.57 :	0.00	0.00	0.00	0.00
24 :	0.00	0.00	0.00	0.00 :	46.88	0.00	0.38	1111.07 :	0.00	0.00	0.00	0.00
25 :	0.00	0.00	0.00	0.00 :	49.17	0.00	0.62	1159.62 :	0.00	0.00	0.00	0.00
26 :	0.00	0.00	0.00	0.00 :	46.60	0.00	0.65	1205.57 :	0.00	0.00	0.00	0.00
27 :	0.00	0.00	0.00	0.00 :	43.81	0.00	0.65	1248.73 :	0.00	0.00	0.00	0.00
28 :	0.00	0.00	0.00	0.00 :	47.34	0.00	0.32	1295.75 :	0.00	0.00	0.00	0.00
29 :	0.00	0.00	0.00	0.00 :	50.46	0.00	0.34	1345.87 :	0.00	0.00	0.00	0.00
30 :	0.00	0.00	0.00	0.00 :	46.06	0.00	0.59	1391.34 :	0.00	0.00	0.00	0.00
TOT :	0.00	0.00	0.00		44.99	0.00	0.59	1435.74 :	0.00	0.00	0.00	0.00
TOT :	0.00	0.00	0.00		1162.21	0.00	10.58		0.00	0.00	0.00	

Enclosure 2 (cont)

CONSUMABLE WATER

SEP 1999:	KANSAS STORAGE CHARGE				TOTAL							
	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN
1	0.00	0.00	0.00	0.00	36.82	0.00	0.32	284.11				
2	0.00	0.00	0.00	0.00	34.12	0.00	0.26	320.61				
3	0.00	0.00	0.00	0.00	37.33	0.00	0.20	354.47				
4	0.00	0.00	0.00	0.00	35.74	0.00	0.21	391.60				
5	0.00	0.00	0.00	0.00	33.76	0.00	0.24	427.13				
6	0.00	0.00	0.00	0.00	31.50	0.00	0.26	460.65				
7	0.00	0.00	0.00	0.00	30.33	0.00	0.34	491.89				
8	0.00	0.00	0.00	0.00	29.78	0.00	0.43	521.88				
9	0.00	0.00	0.00	0.00	23.08	0.00	0.28	551.23				
10	0.00	0.00	0.00	0.00	20.45	0.00	0.41	574.03				
11	0.00	0.00	0.00	0.00	22.36	0.00	0.42	594.07				
12	0.00	0.00	0.00	0.00	21.23	0.00	0.45	616.01				
13	0.00	0.00	0.00	0.00	22.85	0.00	0.36	636.79				
14	0.00	0.00	0.00	0.00	23.03	0.00	0.51	659.28				
15	0.00	0.00	0.00	0.00	25.80	0.00	0.05	681.80				
16	0.00	0.00	0.00	0.00	27.22	0.00	0.10	707.55				
17	0.00	0.00	0.00	0.00	21.18	0.00	0.19	734.67				
18	0.00	0.00	0.00	0.00	60.81	0.00	0.20	755.66				
19	0.00	0.00	0.00	0.00	74.39	0.00	0.20	816.27				
20	0.00	0.00	0.00	0.00	61.21	0.00	0.23	890.46				
21	0.00	0.00	0.00	0.00	59.74	0.00	0.44	951.44				
22	0.00	0.00	0.00	0.00	54.17	0.00	0.34	1010.74				
23	0.00	0.00	0.00	0.00	46.88	0.00	0.38	1064.57				
24	0.00	0.00	0.00	0.00	49.17	0.00	0.62	1111.07				
25	0.00	0.00	0.00	0.00	46.60	0.00	0.65	1159.62				
26	0.00	0.00	0.00	0.00	43.81	0.00	0.65	1205.57				
27	0.00	0.00	0.00	0.00	47.34	0.00	0.32	1248.73				
28	0.00	0.00	0.00	0.00	50.46	0.00	0.34	1295.75				
29	0.00	0.00	0.00	0.00	46.06	0.00	0.59	1345.87				
30	0.00	0.00	0.00	0.00	44.99	0.00	0.59	1391.34				
TOT	0.00	0.00	0.00		1162.21	0.00	10.58	1435.74				

RETURN FLOW

SEP 1999:	INSTATE				STATE LINE				TOTAL			
	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOT	0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00	

Enclosure 2 (cont)

SEP 1999:	UPSTREAM				INSTATE DOWNSTREAM				TOTAL			OWN
	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOT	0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00	

SEP 1999:	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
TOT												

Enclosure 2 (cont)

		OFFSET ACCOUNT				OFFSET ACCOUNT				CONSUMABLE WATER				RETURN FLOW			PG 1
OCT 1999:		INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN				
1	:	46.84	0.00	0.52	1435.74	46.84	0.00	0.52	1435.74	0.00	0.00	0.00	0.00	:		0.00	
2	:	44.76	0.00	0.48	1482.06	44.76	0.00	0.48	1482.06	0.00	0.00	0.00	0.00	:		0.00	
3	:	42.62	0.00	0.49	1526.34	42.62	0.00	0.49	1526.34	0.00	0.00	0.00	0.00	:		0.00	
4	:	40.80	0.00	0.53	1568.47	40.80	0.00	0.53	1568.47	0.00	0.00	0.00	0.00	:		0.00	
5	:	41.63	0.00	0.75	1608.74	41.63	0.00	0.75	1608.74	0.00	0.00	0.00	0.00	:		0.00	
6	:	38.78	0.00	1.13	1649.62	38.78	0.00	1.13	1649.62	0.00	0.00	0.00	0.00	:		0.00	
7	:	34.83	0.00	0.20	1687.27	34.83	0.00	0.20	1687.27	0.00	0.00	0.00	0.00	:		0.00	
8	:	42.13	0.00	0.69	1721.90	42.13	0.00	0.69	1721.90	0.00	0.00	0.00	0.00	:		0.00	
9	:	48.89	0.00	0.74	1763.34	48.89	0.00	0.74	1763.34	0.00	0.00	0.00	0.00	:		0.00	
10	:	48.89	0.00	0.74	1811.49	48.89	0.00	0.74	1811.49	0.00	0.00	0.00	0.00	:		0.00	
11	:	42.69	0.00	0.76	1853.42	42.69	0.00	0.76	1853.42	0.00	0.00	0.00	0.00	:		0.00	
12	:	37.30	0.00	0.74	1889.98	37.30	0.00	0.74	1889.98	0.00	0.00	0.00	0.00	:		0.00	
13	:	39.49	0.00	0.65	1928.82	39.49	0.00	0.65	1928.82	0.00	0.00	0.00	0.00	:		0.00	
14	:	33.13	0.00	0.85	1961.10	33.13	0.00	0.85	1961.10	0.00	0.00	0.00	0.00	:		0.00	
15	:	33.41	0.00	1.22	1993.29	33.41	0.00	1.22	1993.29	0.00	0.00	0.00	0.00	:		0.00	
16	:	33.41	0.00	0.56	2026.14	33.41	0.00	0.56	2026.14	0.00	0.00	0.00	0.00	:		0.00	
17	:	33.41	0.00	0.53	2059.02	33.41	0.00	0.53	2059.02	0.00	0.00	0.00	0.00	:		0.00	
18	:	32.49	0.00	0.54	2090.97	32.49	0.00	0.54	2090.97	0.00	0.00	0.00	0.00	:		0.00	
19	:	42.31	0.00	0.00	2133.28	42.31	0.00	0.00	2133.28	0.00	0.00	0.00	0.00	:		0.00	
20	:	37.22	0.00	0.55	2169.95	37.22	0.00	0.55	2169.95	0.00	0.00	0.00	0.00	:		0.00	
21	:	37.30	0.00	0.61	2206.64	37.30	0.00	0.61	2206.64	0.00	0.00	0.00	0.00	:		0.00	
22	:	39.06	0.00	0.80	2244.90	39.06	0.00	0.80	2244.90	0.00	0.00	0.00	0.00	:		0.00	
23	:	45.21	0.00	0.58	2289.53	45.21	0.00	0.58	2289.53	0.00	0.00	0.00	0.00	:		0.00	
24	:	58.92	0.00	0.60	2347.85	58.92	0.00	0.60	2347.85	0.00	0.00	0.00	0.00	:		0.00	
25	:	52.74	0.00	0.71	2399.88	52.74	0.00	0.71	2399.88	0.00	0.00	0.00	0.00	:		0.00	
26	:	48.76	0.00	0.67	2447.97	48.76	0.00	0.67	2447.97	0.00	0.00	0.00	0.00	:		0.00	
27	:	43.09	0.00	0.79	2490.27	43.09	0.00	0.79	2490.27	0.00	0.00	0.00	0.00	:		0.00	
28	:	37.22	0.00	0.65	2526.84	37.22	0.00	0.65	2526.84	0.00	0.00	0.00	0.00	:		0.00	
29	:	39.27	0.00	0.81	2565.30	39.27	0.00	0.81	2565.30	0.00	0.00	0.00	0.00	:		0.00	
30	:	40.54	0.00	1.08	2604.76	40.54	0.00	1.08	2604.76	0.00	0.00	0.00	0.00	:		0.00	
31	:	38.50	0.00	1.15	2642.11	38.50	0.00	1.15	2642.11	0.00	0.00	0.00	0.00	:		0.00	
31	:	40.97	684.02	1.17	1997.89	40.97	684.02	1.17	1997.89	0.00	0.00	0.00	0.00	:		0.00	
TOT	:	1267.72	684.02	21.55		1267.72	684.02	21.55		0.00	0.00	0.00		:			

		COLORADO UPSTREAM				CONSUMABLE WATER				COLORADO DOWNSTREAM				KANSAS			PG 1
OCT 1999:		INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN				
1	:	0.00	0.00	0.00	0.00	46.84	0.00	0.52	1435.74	0.00	0.00	0.00	0.00	:		0.00	
2	:	0.00	0.00	0.00	0.00	44.76	0.00	0.48	1482.06	0.00	0.00	0.00	0.00	:		0.00	
3	:	0.00	0.00	0.00	0.00	42.62	0.00	0.49	1526.34	0.00	0.00	0.00	0.00	:		0.00	
4	:	0.00	0.00	0.00	0.00	40.80	0.00	0.53	1568.47	0.00	0.00	0.00	0.00	:		0.00	
5	:	0.00	0.00	0.00	0.00	41.63	0.00	0.75	1608.74	0.00	0.00	0.00	0.00	:		0.00	
6	:	0.00	0.00	0.00	0.00	38.78	0.00	1.13	1649.62	0.00	0.00	0.00	0.00	:		0.00	
7	:	0.00	0.00	0.00	0.00	34.83	0.00	0.20	1687.27	0.00	0.00	0.00	0.00	:		0.00	
8	:	0.00	0.00	0.00	0.00	42.13	0.00	0.69	1721.90	0.00	0.00	0.00	0.00	:		0.00	
9	:	0.00	0.00	0.00	0.00	48.89	0.00	0.74	1763.34	0.00	0.00	0.00	0.00	:		0.00	
10	:	0.00	0.00	0.00	0.00	48.89	0.00	0.74	1811.49	0.00	0.00	0.00	0.00	:		0.00	
11	:	0.00	0.00	0.00	0.00	42.69	0.00	0.76	1853.42	0.00	0.00	0.00	0.00	:		0.00	
12	:	0.00	0.00	0.00	0.00	37.30	0.00	0.74	1889.98	0.00	0.00	0.00	0.00	:		0.00	
13	:	0.00	0.00	0.00	0.00	39.49	0.00	0.65	1928.82	0.00	0.00	0.00	0.00	:		0.00	
14	:	0.00	0.00	0.00	0.00	33.13	0.00	0.85	1961.10	0.00	0.00	0.00	0.00	:		0.00	
15	:	0.00	0.00	0.00	0.00	33.41	0.00	1.22	1993.29	0.00	0.00	0.00	0.00	:		0.00	
16	:	0.00	0.00	0.00	0.00	33.41	0.00	0.56	2026.14	0.00	0.00	0.00	0.00	:		0.00	
17	:	0.00	0.00	0.00	0.00	33.41	0.00	0.53	2059.02	0.00	0.00	0.00	0.00	:		0.00	
18	:	0.00	0.00	0.00	0.00	32.49	0.00	0.54	2090.97	0.00	0.00	0.00	0.00	:		0.00	
19	:	0.00	0.00	0.00	0.00	42.31	0.00	0.00	2133.28	0.00	0.00	0.00	0.00	:		0.00	
20	:	0.00	0.00	0.00	0.00	37.22	0.00	0.55	2169.95	0.00	0.00	0.00	0.00	:		0.00	
21	:	0.00	0.00	0.00	0.00	37.30	0.00	0.61	2206.64	0.00	0.00	0.00	0.00	:		0.00	
22	:	0.00	0.00	0.00	0.00	39.06	0.00	0.80	2244.90	0.00	0.00	0.00	0.00	:		0.00	
23	:	0.00	0.00	0.00	0.00	45.21	0.00	0.58	2289.53	0.00	0.00	0.00	0.00	:		0.00	
24	:	0.00	0.00	0.00	0.00	58.92	0.00	0.60	2347.85	0.00	0.00	0.00	0.00	:		0.00	
25	:	0.00	0.00	0.00	0.00	52.74	0.00	0.71	2399.88	0.00	0.00	0.00	0.00	:		0.00	
26	:	0.00	0.00	0.00	0.00	48.76	0.00	0.67	2447.97	0.00	0.00	0.00	0.00	:		0.00	
27	:	0.00	0.00	0.00	0.00	43.09	0.00	0.79	2490.27	0.00	0.00	0.00	0.00	:		0.00	
28	:	0.00	0.00	0.00	0.00	37.22	0.00	0.65	2526.84	0.00	0.00	0.00	0.00	:		0.00	
29	:	0.00	0.00	0.00	0.00	39.27	0.00	0.81	2565.30	0.00	0.00	0.00	0.00	:		0.00	
30	:	0.00	0.00	0.00	0.00	40.54	0.00	1.08	2604.76	0.00	0.00	0.00	0.00	:		0.00	
31	:	0.00	0.00	0.00	0.00	38.50	0.00	1.15	2642.11	0.00	0.00	0.00	0.00	:		0.00	
31	:	0.00	0.00	0.00	0.00	40.97	684.02	1.17	1997.89	0.00	0.00	0.00	0.00	:		0.00	
TOT	:	0.00	0.00	0.00		1267.72	684.02	21.55		0.00	0.00	0.00		:			

Enclosure 2 (cont)



CONSUMABLE WATER

OCT 1999:	KANSAS STORAGE CHARGE				TOTAL				INFLow	RELEASE	EVAP	OWN
	INFLow	RELEASE	EVAP	OWN	INFLow	RELEASE	EVAP	OWN				
1 :	0.00	0.00	0.00	0.00	46.84	0.00	0.52	1435.74				
2 :	0.00	0.00	0.00	0.00	44.76	0.00	0.48	1482.06				
3 :	0.00	0.00	0.00	0.00	42.62	0.00	0.49	1526.34				
4 :	0.00	0.00	0.00	0.00	40.80	0.00	0.53	1568.47				
5 :	0.00	0.00	0.00	0.00	41.63	0.00	0.75	1608.74				
6 :	0.00	0.00	0.00	0.00	38.78	0.00	1.13	1649.62				
7 :	0.00	0.00	0.00	0.00	34.83	0.00	0.20	1687.27				
8 :	0.00	0.00	0.00	0.00	42.13	0.00	0.69	1721.90				
9 :	0.00	0.00	0.00	0.00	48.89	0.00	0.74	1763.34				
10 :	0.00	0.00	0.00	0.00	42.69	0.00	0.76	1811.49				
11 :	0.00	0.00	0.00	0.00	37.30	0.00	0.74	1853.42				
12 :	0.00	0.00	0.00	0.00	39.49	0.00	0.65	1889.98				
13 :	0.00	0.00	0.00	0.00	33.13	0.00	0.85	1928.82				
14 :	0.00	0.00	0.00	0.00	33.41	0.00	1.22	1961.10				
15 :	0.00	0.00	0.00	0.00	33.41	0.00	0.56	1993.29				
16 :	0.00	0.00	0.00	0.00	33.41	0.00	0.53	2026.14				
17 :	0.00	0.00	0.00	0.00	32.49	0.00	0.54	2059.02				
18 :	0.00	0.00	0.00	0.00	42.31	0.00	0.00	2090.97				
19 :	0.00	0.00	0.00	0.00	37.22	0.00	0.55	2133.28				
20 :	0.00	0.00	0.00	0.00	37.30	0.00	0.61	2169.95				
21 :	0.00	0.00	0.00	0.00	39.06	0.00	0.80	2206.64				
22 :	0.00	0.00	0.00	0.00	45.21	0.00	0.58	2244.90				
23 :	0.00	0.00	0.00	0.00	58.92	0.00	0.60	2289.53				
24 :	0.00	0.00	0.00	0.00	52.74	0.00	0.71	2347.85				
25 :	0.00	0.00	0.00	0.00	48.76	0.00	0.67	2399.88				
26 :	0.00	0.00	0.00	0.00	43.09	0.00	0.79	2447.97				
27 :	0.00	0.00	0.00	0.00	37.22	0.00	0.65	2490.27				
28 :	0.00	0.00	0.00	0.00	39.27	0.00	0.81	2526.84				
29 :	0.00	0.00	0.00	0.00	40.54	0.00	1.08	2565.30				
30 :	0.00	0.00	0.00	0.00	38.50	0.00	1.15	2604.76				
31 :	0.00	0.00	0.00	0.00	40.97	684.02	1.17	2642.11				
TOT :	0.00	0.00	0.00		1267.72	684.02	21.55	1997.89				

RETURN FLOW

OCT 1999:	INSTATE				STATE LINE				TOTAL			
	INFLow	RELEASE	EVAP	OWN	INFLow	RELEASE	EVAP	OWN	INFLow	RELEASE	EVAP	OWN
1 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31 :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOT :	0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00	

Enclosure 2 (cont)

OCT 1999:	UPSTREAM				INSTATE DOWNSTREAM				TOTAL			OWN
	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	
				0.00				0.00				0.00
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOT	0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00	

OCT 1999:	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN
1												
2												
3												
4												
5												
6												
7												
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TOT												

Enclosure 2 (cont)

cc: scd

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 DIVISION ENGINEER  
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May 10, 1999

MEMORANDUM

TO: Steven J. Witte – Division Engineer

FROM: Duane Helton and Jim Slattery <sup>JES</sup>

SUBJECT: Consumptive use factors and volumetric limitations for LAWMA's water rights

This memorandum has been prepared as a follow-up to our recent meeting to summarize our recommendations for the consumptive use factors and volumetric limitations for LAWMA's water rights for the 1999 plan year. Table 1 summarizes the consumptive use factors and volumetric limitations proposed for LAWMA's water rights. Figures 1 through 4 show the procedures used to derive the consumptive use factors proposed for the Fort Bent, Lamar, Manvel, X-Y, and Stubbs direct flow rights. LAWMA proposes to use the same consumptive use factors for both its direct flow water and water from its John Martin Reservoir Article II Account, as shown in the following table:

CONSUMPTIVE USE FACTORS FOR  
LAWMA'S JOHN MARTIN RESERVOIR ARTICLE II WATER

<u>Account</u>	<u>Percent Consumed</u>
Manvel	50.0
X-Y	65.8
Stubbs	67.9

The volumetric limitations reflected in Table 1 for the Manvel direct flow right is the result of updating our previous analysis. The approach that we are applying with the Manvel direct flow right is to receive credit for the consumptive use that would occur under the right as if the headgate had been reconstructed. The Lamar Canal rights, including those owned by the Granada Irrigation Company, provided the base supply for most of the lands irrigated with the Manvel right. Our April 30, 1998 memorandum to you contains our conclusions that 3,110.1 acres historically received Manvel water, of which 755.0 acres were Granada Irrigation Company/Manvel lands, 1,879.0 acres were Lamar/Manvel lands, and 476.1 acres received no other surface water. We concluded in our original analysis that the Granada Irrigation Company water was adequate to supply all the consumptive irrigation requirements on Granada Irrigation Company/Manvel lands, so we are not claiming credits associated with these lands. Table 2 shows the updated analysis for the 1,879 acres of Lamar/Manvel lands, the base supply for which was obtained from 2,450 Lamar Canal shares. Although we don't agree that the H-I Model is reasonable, all efficiency values were obtained from the current version of the H-I Model, which is what you have indicated you will accept. The column headings and the notes

Enclosure 3

Memorandum to Steven J. Witte  
May 10, 1999  
Page 2

fairly well describe the procedure incorporated in this table. Column 5 shows the water that was diverted into the Lamar Canal during these years, and column 6 shows the prorated diversions for the 2,450 shares that supplied the Lamar/Manvel lands. It should be noted that the values in column 6 are overstated because some of the water in column 5 in the 1980s and early 1990s was actually water from the Manvel Article II Account that was carried for Manvel shareholders. Columns 7 and 8 show the crop irrigation requirements in acre-feet per acre from the H-I Model and in acre-feet for the 1,879 acres. Column 10 shows the shortages in crop irrigation requirements based on the maximum irrigation efficiency of 70 percent. Column 11 converts the shortages in consumptive irrigation requirement into equivalent acres. These shortages averaged 844 acre-feet annually and were equivalent to total shortages on 469 acres.

Thus, we believe that the appropriation limitations on the credits available to LAWMA under the Manvel direct flow right should be based on a full water supply for 945 acres, which acreage comprises 469 acres of Lamar/Manvel lands and 476 acres of Manvel only lands. Consumptive use credits should therefore be limited to a maximum of 2,552 acre-feet in any single year and to 18,995 acre-feet in any 10-year period. Please understand that we are continuing to evaluate the issues associated with these consumptive use factors and limitations, but agree to their use in 1999.

Let us know if you have any questions or need additional information.

JES/mic

cc: Hal D. Simpson  
Dennis M. Montgomery, Esq.  
Donald F. Higbee  
Veronica Sperling, Esq.

C:\L101\051099.JES

Enclosure 3 (cont)

Enclosure 3 (cont)

**TABLE 1**  
**CONSUMPTIVE USE FACTORS AND VOLUMETRIC LIMITATIONS FOR LAWMA'S DIRECT FLOW WATER RIGHTS**

Canal — (1)	Measuring Point for LAWMA's shares — (2)	Number of Acres Dried Up by LAWMA (ac) (3)	Average Delivery at Measurement Point (ac-ft/ac) (4)	Maximum Delivery at Measurement Point (ac-ft/ac) (5)	Cumulative Delivery for 10 Years =(3)x(4)x10 (ac-ft) (6)	Maximum Annual Delivery =(3)x(5) (ac-ft) (7)	CU as % of Delivery (%) (8)	Cumulative CU Credit for 10 Years =(6)x(8) (ac-ft) (9)	Maximum Annual CU Credit =(7)x(8) (ac-ft) (10)
Fort Bent shares at Clay Creek Turnout	Farm Turnout	631.9	2.77	3.82	17,504	2,414	66.2	11,587	1,598
Lamar Shares left in Ditch	Canal Flume	23.9	4.02	5.40	961	129	46.7	449	60
Manvel Canal at River Headgate	River Headgate	945.0	4.02	5.40	37,989	5,103	50.0	18,995	2,552
XY Canal at River Headgate	River Headgate	3,364.2	2.83	4.40	95,207	14,802	65.8	62,646	9,740
Stubbs Canal at River Headgate	River Headgate	257.0	2.71	4.44	6,965	1,141	67.9	4,729	775

- Notes: 1) The procedure to calculate the consumptive use factors is documented in the attached figures.  
 2) The average delivery at the measuring point is determined from crop irrigation requirement and efficiencies as described in our April 30, 1998 memorandum entitled "LAWMA's Consumptive Use Factors and Annual Limitations for Water Rights Located Downstream of John Martin".  
 3) The dried up acres shown in column 3 are documented in LAWMA's February 26, 1999 Rule 14 Plan. The Manvel acreage includes 476 acres dried up or irrigated with sole source wells and an equivalent dry up of 469 acres that historically received both Manvel and Lamar water as derived in the attached Table 2.

**HIGHLAND CANAL (3,382 LAWMA shares)**

Month (1)	C.U. as Pct. Of Water at Wasteway No. 3 (3)	C.U. as Pct. Of Water at River Headgate (4)
April	68.2	65.7
May	73.4	71.3
June	79.9	78.3
July	83.2	82.0
August	84.0	83.1
September	73.2	71.3
October	46.5	42.3

	Delivery at Wasteway No. 3	Delivery at River Headgate
<b>Volumetric Limitation</b>		
Cumulative Delivery for 10 Years (ac-ft)	90,870	101,940
Maximum Annual Delivery (ac-ft)	10,804	12,021
Cumulative CU Credit for 10 Years (ac-ft)	73,847	76,761
Maximum Annual CU Credit (ac-ft)	8,622	9,052

- Notes:  
 1) The factors and annual limitations for the deliveries at Wasteway No. 3 are derived as described in our April 30, 1998 memorandum entitled "Calculations of Stream Credits - Highland Canal".  
 2) The factors and annual limitations for the deliveries at the river headgate are derived as described in our March 11, 1999 memorandum entitled "Administration and Operation Highland Canal Water Rights".  
 3) LAWMA's water rights are limited to the months of April through October. It is not necessary to account for winter return flows since the stream depletions in November, February, and March exceed the stream accretions in December and January.

**TABLE 2**  
**CALCULATION OF CROP IRRIGATION REQUIREMENT NOT MEET BY LAMAR CANAL SHARES**  
**LANDS SERVED BY MANVEL AND LAMAR SHARES (Does not include Lands Served with Only Manvel Shares)**

Compact Year	Total Lamar Canal Water Supply				Supply to Lands Receiving Both Lamar and Manvel Shares					
	Direct (ac-ft)	John Martin (ac-ft)	Lamar Power Plant (ac-ft)	Total (ac-ft)	Pro-Rata Share of River Headgate Diversion (ac-ft)	Crop Irrig Req. (ft)	Crop Irrig Req. (ac-ft)	Farm Efficiency (%)	Shortage in Crop Irrig Req. (ac-ft)	Crop Irrigation Req. Shortage In Equivalent Acres
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1950	40,698	0	4,856	45,554	4,272	1.57	2,950	70.0	355	226
1951	37,655	0	4,856	42,511	3,986	1.32	2,480	70.0	58	44
1952	42,447	0	5,866	48,313	4,530	2.29	4,303	70.0	1,550	677
1953	31,165	0	4,950	36,115	3,387	1.83	3,439	70.0	1,381	755
1954	21,456	0	5,483	26,939	2,526	2.21	4,153	70.0	2,618	1,184
1955	38,883	0	6,025	44,908	4,211	2.13	4,002	70.0	1,444	678
1956	27,150	0	5,115	32,265	3,026	1.88	3,533	70.0	1,694	901
1957	38,256	0	5,158	43,414	4,071	1.38	2,593	70.0	119	87
1958	39,125	0	5,722	44,847	4,205	1.65	3,100	70.0	545	330
1959	50,310	0	4,771	55,081	5,165	1.79	3,363	70.0	225	126
1960	22,656	0	5,354	28,010	2,627	1.74	3,269	70.0	1,674	962
1961	32,198	0	6,447	38,645	3,624	1.28	2,405	70.0	203	159
1962	36,427	0	4,924	41,351	3,878	1.64	3,082	70.0	726	442
1963	22,372	0	5,499	27,871	2,614	2.13	4,002	70.0	2,414	1,133
1964	16,383	0	6,634	23,017	2,158	1.92	3,608	70.0	2,296	1,196
1965	24,496	0	6,673	31,169	2,923	1.20	2,255	70.0	479	399
1966	40,452	0	6,188	46,640	4,374	1.46	2,743	70.0	86	59
1967	3,295	40,709	6,280	50,284	4,715	1.55	2,912	70.0	47	31
1968	32,811	0	6,309	39,120	3,668	1.54	2,894	70.0	665	432
1969	29,939	0	6,868	36,807	3,451	1.12	2,104	70.0	7	7
1970	39,164	8,616	6,870	54,651	5,125	1.67	3,138	70.0	24	14
1971	38,210	5,695	6,870	50,775	4,761	1.58	2,969	70.0	76	48
1972	31,359	5,756	7,643	44,758	4,197	1.45	2,725	70.0	174	120
1973	14,448	12,173	4,975	31,596	2,963	1.45	2,725	70.0	924	637
1974	23,915	0	6,314	30,229	2,835	2.06	3,871	70.0	2,148	1,043
1975	25,536	0	7,676	33,212	3,114	1.59	2,988	70.0	1,095	689
1976	23,302	0	7,334	30,636	2,873	1.70	3,194	70.0	1,449	852
1977	10,620	2,596	5,278	18,494	1,734	1.96	3,683	70.0	2,629	1,341
1978	10,923	3,451	5,788	20,162	1,891	1.46	2,743	70.0	1,595	1,092
1979	17,693	2,779	7,978	28,450	2,668	1.28	2,405	70.0	784	613
1980	6,212	17,558	6,989	30,759	2,884	1.74	3,269	70.0	1,517	872
1981	11,766	18,972	6,033	36,771	3,448	2.06	3,871	70.0	1,776	862
1982	23,826	6,841	6,719	37,386	3,506	1.47	2,762	70.0	632	430
1983	14,474	30,189	7,102	51,765	4,854	1.77	3,326	70.0	376	213
1984	16,661	27,777	5,786	50,224	4,710	1.62	3,044	70.0	182	113
1985	29,225	33,341	4,829	67,395	6,320	1.75	3,288	70.0	0	0
1986	21,892	27,045	4,318	53,255	4,994	1.61	3,025	70.0	0	0
1987	5,663	45,488	4,318	55,469	5,201	1.63	3,063	70.0	0	0
1988	28,515	20,918	5,584	55,017	5,159	1.96	3,683	70.0	548	280
1989	25,704	5,657	6,746	38,107	3,573	1.68	3,157	70.0	986	587
1990	27,085	4,673	6,561	38,319	3,593	1.72	3,232	70.0	1,049	610
1991	27,801	5,117	5,353	38,271	3,589	1.60	3,006	70.0	826	516
1992	34,021	4,987	5,437	44,445	4,168	1.15	2,161	70.0	0	0
1993	—	—	—	48,778	4,574	1.16	2,180	70.0	0	0
1994	—	—	—	50,048	4,693	1.84	3,457	70.0	606	329
50-94 Avg	26,423	7,682	5,965	40,485	3,796	1.66	3,115	70.0	844	469
Max	50,310	45,488	7,978	67,395	6,320	2.29	4,303	70.0	2,629	1,341
Min	3,295	0	4,318	18,494	1,734	1.12	2,104	70.0	0	0

**Parameters**

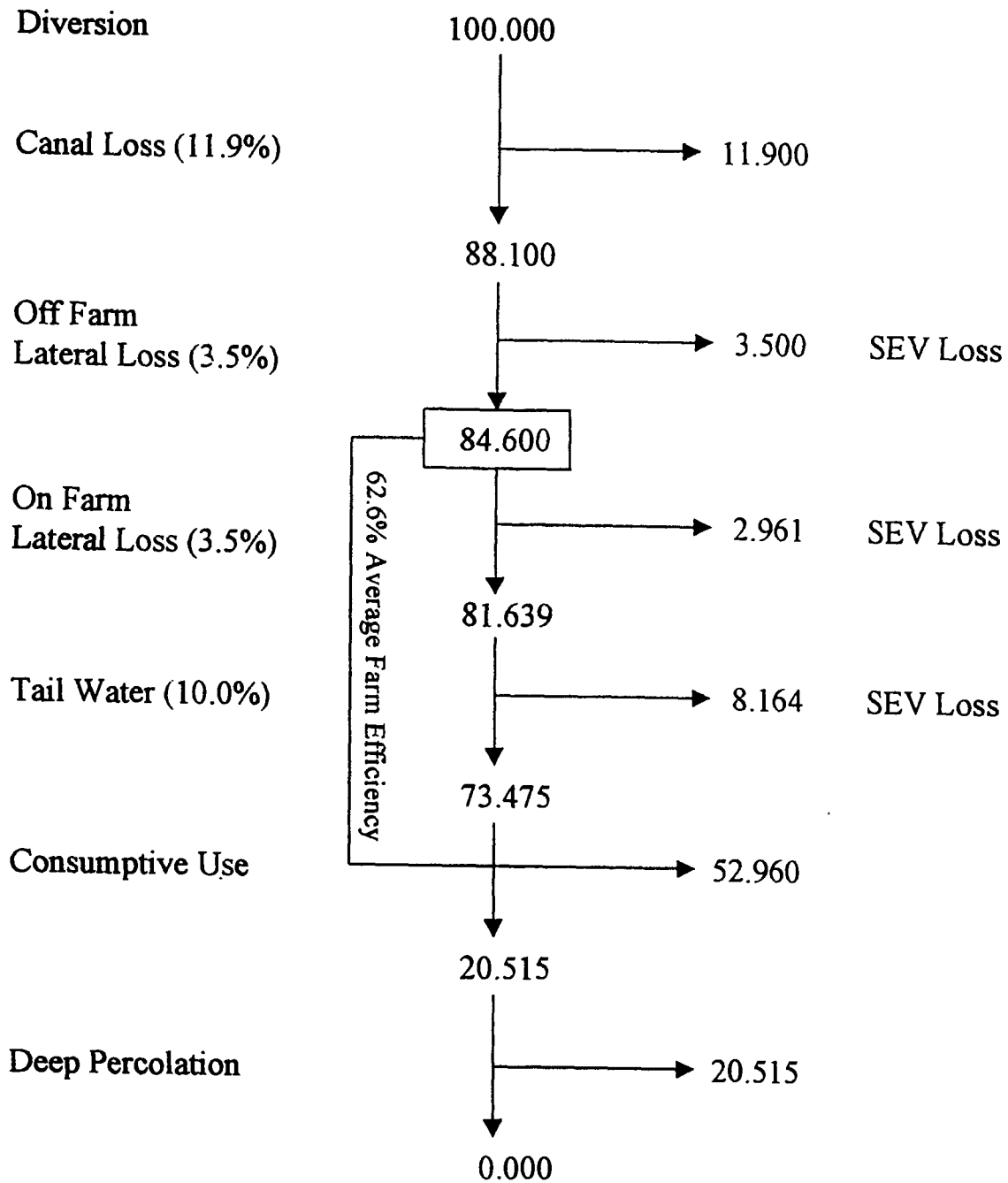
- 26,127 Total Lamar Shares
- 2,450 Lamar Shares on Manvel/Lamar lands
- 1,879 Acres of Lamar/Manvel lands
- 0.132 Canal and off Farm Losses

**Explanation of Columns**

- (2)-(5) Historical records
- (6) Calculated as (5)x2450/26,127
- (7) Kansas HI model data
- (8) (7)x1,879
- (9) Kansas HI model data
- (10) Calculated as positives of (8)-.868x(6)x(9)
- (11) (10)/(7)

Enclosure 3 (cont)

# Figure 1 Procedure To Calculate Consumptive Use Factor Fort Bent Canal



$$\text{Consumptive Use Factor} = \frac{\text{Consumptive Use}}{\text{Farm Headgate Delivery}} = \frac{52.960 + 0.364 (3.500 + 2.961 + 8.164)}{88.1} = 66.2\%$$

For shares at turnout

Note: 1) Annual SEV factor of 36.4% determined from weighted average of monthly SEV factors and 1980-1994 average monthly diversions.

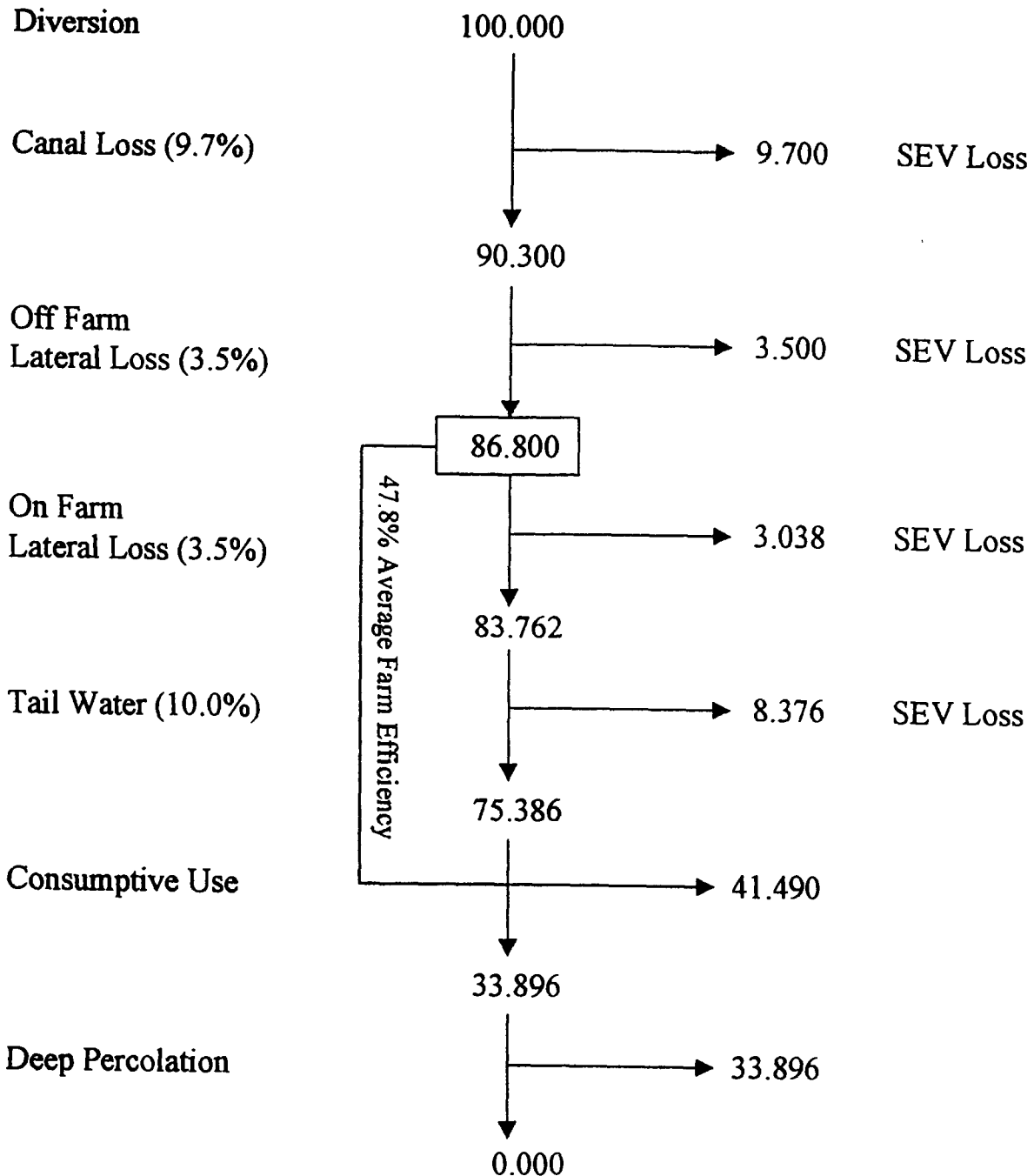
2) Average farm efficiency from output of Kansas HI model-compact run (PE803).

3) No SEV credit on canal loss.

Enclosure 3 (cont)

Figure 2

## Procedure to Calculate Consumptive Use Factor Lamar/Manvel Canal



$$\text{Consumptive Use Factor 1} = \frac{\text{Consumptive Use}}{\text{River Headgate Diversion}} = \frac{41.490 + 0.347 (9.700 + 3.500 + 3.038 + 8.376)}{100} = 50.0\%$$

For Article II water and Manvel Direct

$$\text{Consumptive Use Factor 2} = \frac{\text{Consumptive Use}}{\text{River Headgate Diversion}} = \frac{41.490 + 0.347 (3.500 + 3.038 + 8.376)}{100} = 46.7\%$$

For shares left in Ditch

Note: 1) Annual SEV factor of 34.7% determined from weighted average of monthly SEV factors and 1980-1994 average monthly diversions.

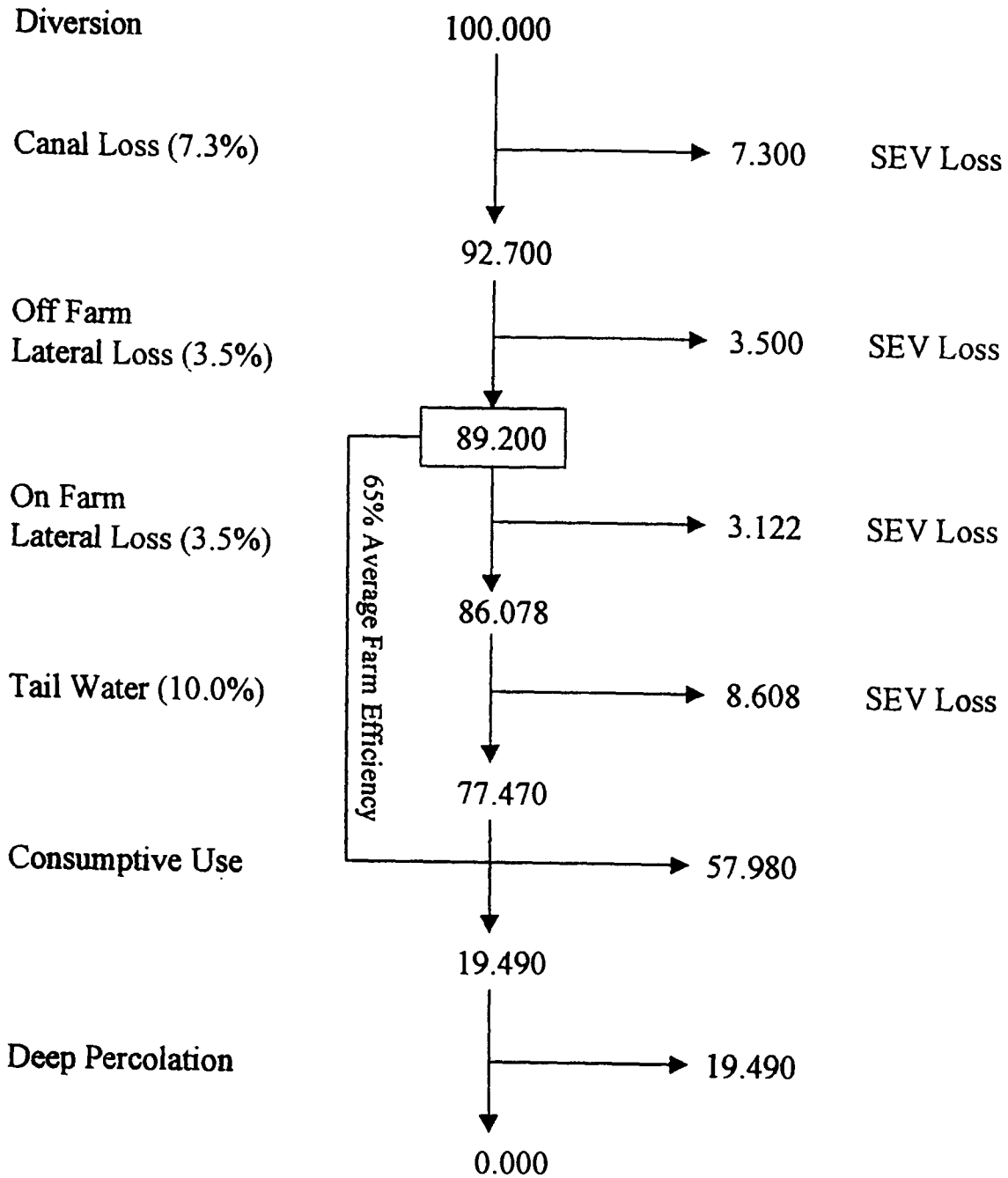
2) Average farm efficiency from output of Kansas HI model-compact run (PE803).

3) No SEV credit for shares still diverted into ditch.

Enclosure 3 (cont)



**Figure 3**  
**Procedure To Calculate Consumptive Use Factor**  
**XY Canal**



$$\text{Consumptive Use Factor} = \frac{\text{Consumptive Use}}{\text{River Headgate Diversion}} = \frac{57.980 + 0.348 (7.300 + 3.500 + 3.122 + 8.608)}{100} = 65.8\%$$

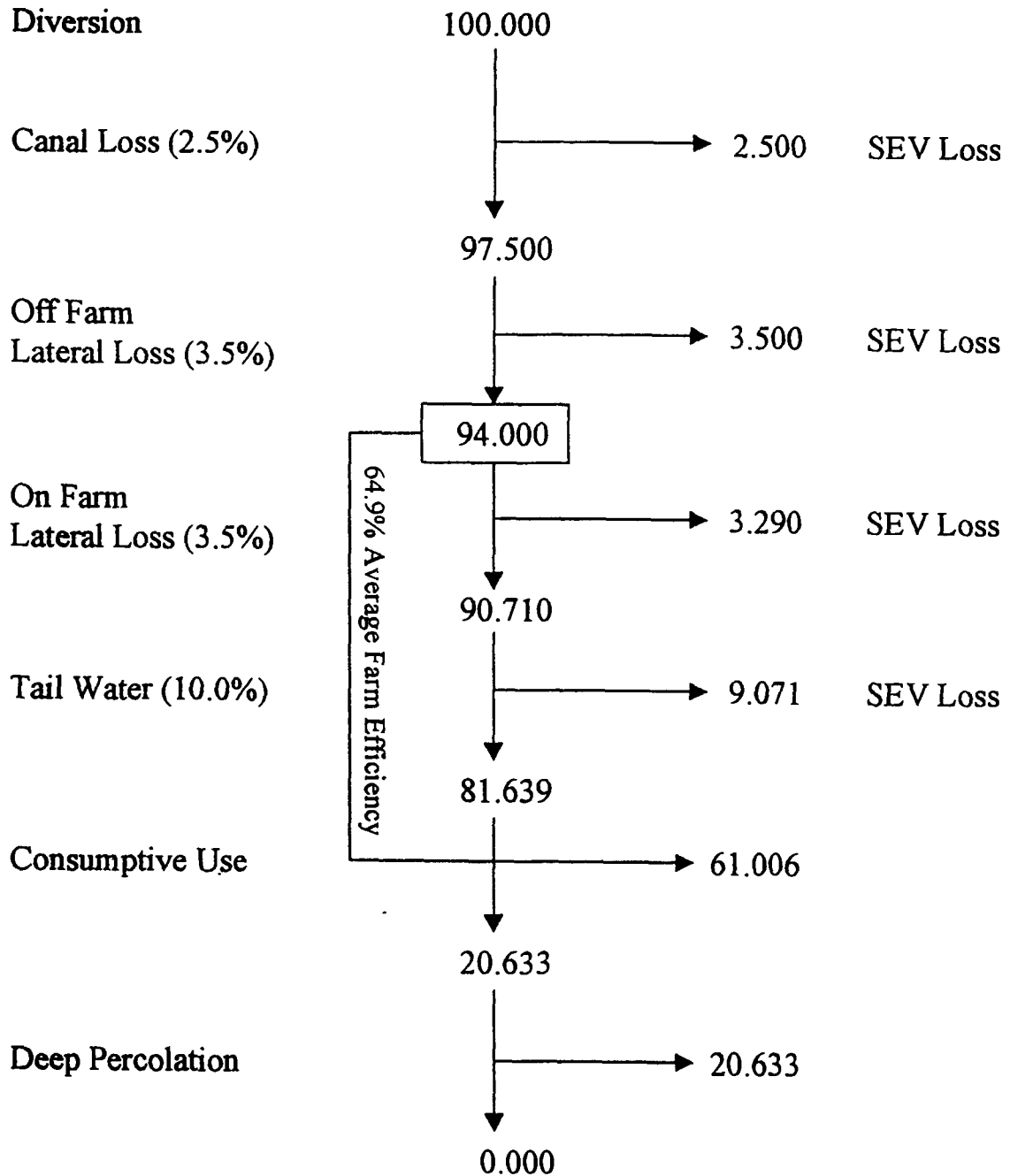
For Direct and Article II water

Note: 1) Annual SEV factor of 34.8% determined from weighted average of monthly SEV factors and 1980-1994 average monthly diversions.

2) Average farm efficiency from output of Kansas HI model-compact run (PE803).

Enclosure 3 (cont)

**Figure 4**  
**Procedure To Calculate Consumptive Use Factor**  
**Stubbs Canal**



$$\text{Consumptive Use Factor For Direct and Article II water} = \frac{\text{Consumptive Use}}{\text{River Headgate Diversion}} = \frac{61.006 + 0.375 (2.500 + 3.500 + 3.290 + 9.071)}{100} = 67.9\%$$

Note: 1) Annual SEV factor of 37.5% determined from weighted average of monthly SEV factors and 1980-1994 average monthly diversions.

2) Average farm efficiency from output of Kansas HI model-compact run (PE803).

Enclosure 3 (cont)

*D. Alraw*

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DIVISION ENGINEER  
PUEBLO, COLORADO

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March 11, 1999

Mr. Steven J. Witte, Division Engineer  
Colorado Division of Water Resources  
310 E. Abriendo, Suite B  
Pueblo, Colorado 81004

Subject: Administration and Operation  
Highland Canal Water Rights

Dear Steve:

We have prepared this proposal for a procedure for administering and operating the Highland water rights in response to your letter of February 12, 1999. Pursuant to your instructions in this letter, we have assumed that (1) a gaging station has been established at the Highland Diversion Dam, (2) a Parshall flume has been installed on the canal a short distance from the headgate, and (3) both measuring points are connected to a data collection platform so that flow data are available to both your personnel and LAWMA on a real-time basis. We have also assumed that the Highland Diversion Dam has been repaired so that the canal can sweep the river. Finally, we understand that Bill Howland presently administers these water rights and performs the accounting of consumptive use and return flow credits for LAWMA's portion of them, and have assumed in this proposal that Mr. Howland will continue to perform these functions.

The general administration and operational procedure will not need to be varied when different flow rates are available or desired under the Highland water rights and therefore we have not specified different procedures for different flow rates. The administration of these water rights in relation to other rights on the Purgatoire and Arkansas Rivers does change to some extent with different flow rates, but this is the present situation and is the result of the relative priorities of the water rights involved; the Arkansas River Compact and the decree in Case No. 1325 in the Bent County District Court, which as you know specifies a sort of futile call condition.

Our proposed procedure involves four steps which are listed and discussed in the following paragraphs:

- 1) LAWMA will inform Mr. Howland of the demand under the Highland water rights.

LAWMA will consult with the non-LAWMA stockholders and will notify Mr. Howland of the date when the stockholders wish to turn the ditch on in the spring, of the demands for water under the Highland rights and changes in demands that may occur during the irrigation season, and the date when they wish to shut the ditch off in the fall. The ditch will usually be turned on sometime in March and be operated into November. Normally, the stockholders will want all the water that is available to them under the priority system as has been the historical practice. Exceptions will occur when occasional freshets occur in the Purgatoire River that reduce the water demand and when LAWMA is not wanting its full amount of water. Outside of the April-through-October period, when only non-LAWMA owners are wanting water, the diversions into the canal will be limited to 4.5 cfs, which is based on prorated historical delivery rates and a 3.00 cfs allowance for canal losses.

*enclosure 4*

- 2) Mr. Howland will determine the water available under the Highland water rights based on the administration of upstream junior water rights as necessary to satisfy the Highland demand and the determination of the water that needs to be passed to senior water rights in Water District 67.

As indicated previously, the Highland stockholders will normally want all the water that is available to them under the priority system. This will require, in some cases, administration of upstream rights. Also, in some cases, not all the water flowing in the river at the Highland diversion facilities will be available under the Highland water rights. In particular, calls made under water rights in the Amity, Lamar, and Fort Bent Canals will limit the divertable water when conservation storage is not contained in John Martin Reservoir. Thus, the water available under the Highland rights will be the sum of the water (a) passing over the diversion dam and (b) being diverted into the canal minus (c) that portion of the water passing over the diversion dam not divertable because of calls from senior water rights in Water District 67. For example, if conservation storage is not contained in John Martin Reservoir and the Amity is calling, not more than 24 cfs will be available under the Highland rights.

- 3) LAWMA will distribute the available water between itself and the other stockholders using a rotational procedure that will be similar to the way water was distributed historically.

Water will be distributed between LAWMA and the other Highland stockholders in a rotation whereby all stockholders receive water equivalent to a "full head" for three days. A full head in this context is 0.01645 cfs per share, derived by dividing the full decreed diversion rate of 62.5 cfs by 3,800 shares. Consequently, a rotation will require that a total of 372 acre-feet ( $62.5 \times 3 \times 1.9835$ ) be available to the Highland rights. A rotation will begin by delivering 6.88 cfs to the non-LAWMA stockholders for three days. LAWMA will get the water not required in this delivery until a total of 372 acre-feet has been registered under the Highland water rights. Then another rotation will start. A rotation will take slightly less than 8 days when only 24 cfs are available under the rights. The following tabulation shows the shares of stock and full-head deliveries for non-LAWMA owners:

<u>Owner</u>	<u>Shares</u>	<u>Full head, cfs</u>
Davidson	181	2.98
Nelson	50	0.82
Waldrop	20	0.33
<u>Spady</u>	<u>167</u>	<u>2.75</u>
Total	418	6.88 cfs

We have estimated for initial use that a diversion of 9.88 cfs will be necessary to make deliveries of 6.88 cfs to the non-LAWMA stockholders. This estimate is based roughly on our previous estimates that the losses in the Highland Canal for the system as a whole averaged about 10 percent historically. This diversion rate can be broken down into the 6.88 cfs delivered to these stockholders, 0.76 cfs of "historical" canal loss, and 2.24 cfs of additional water that is being left in the canal to protect these users from additional canal losses. LAWMA will monitor the deliveries to these other stockholders, however, and will adjust the diversion rate up or down as necessary to provide the proper head of water to these stockholders. When less than 9.88 cfs is available, all the water will be delivered to the non-LAWMA stockholders until 40.9 acre-feet ( $6.88 \times 3 \times 1.9835$ ) have been delivered

Enclosure 4  
(cont)

Mr. Steven J. Witte, Division Engineer  
March 11, 1999  
Page 3

to them, and then all the water will be taken by LAWMA until the rotation has been completed. This rotational procedure will be modified when LAWMA acquires the Spady and Waldrop shares.

- 4) Mr. Howland will record the daily flows attributable to LAWMA's ownership and calculate the daily consumptive use and return flow credits.

We understand that Mr. Howland is presently performing this function, and we expect that he will continue with it in the future. The consumptive use and return flow credits will be calculated on the LAWMA-Highland water that flows over the Highland Diversion Dam. Obviously, the LAWMA-Highland water will not include that being passed to satisfy senior water rights in Water District 67 or water that occurs in the river in excess of the total Highland demand. Mr. Howland can make these calculations in much the same way as is presently done, but different monthly percentages will be used since the ditch will be operated only part of the time. The attached table derives percentages that are appropriate for this situation; it is similar to Table 6 in our April 30, 1998 memorandum which sets forth the percentages that are presently used. The table is based on the average diversions into the canal during 1950-93, with prorations by stock ownership and delivery and use efficiencies patterned after the H-I Model. Rows 1 through 4 derive the water that would have been delivered to the non-LAWMA owners under this proposal and the canal losses that would have been required to make the deliveries. Rows 5 through 18 show a water budget for the LAWMA-Highland water. Rows 19 through 22 show return flows from the LAWMA-Highland water, and Rows 23 and 24 show stream depletion. The monthly stream depletion percentages in Row 24 range from 4.1 in February to 83.1 in August. We propose to simplify the procedure by limiting LAWMA's use of the water rights to the months of April through October for which a single percentage of 75.3 would be applied. In this situation, it will not be necessary to account for winter return flows since the stream depletions in November, February, and March exceed the stream accretions in December and January. Volumetric limitations to apply to the total LAWMA-Highland water as measured at the Highland Diversion Dam are not more than 12,021 acre-feet in any one year and not more than 101,940 acre-feet in any 10-year period.

Please let me know if you have any questions or need additional information.

Sincerely yours,

HELTON & WILLIAMSEN, P.C.

*Thomas A. Williams*

*for* Duane D. Helton

DDH/mlc

Enclosure

cc: Hal D. Simpson w/enc.  
Dale Straw w/enc.  
Donald F. Higbee w/enc.

Enclosure 4  
(cont)

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Enclosure 4  
(cont)

**DERIVATION OF STREAM CREDIT FACTORS FOR USE IN 1999**  
**WATER BUDGET SUMMARY FOR LAWMA'S 3,382 SHARES - HIGHLAND IRRIGATION COMPANY**  
**USING KANSAS H-I MODEL PARAMETERS**  
**AVERAGE FOR 1950-1993**  
(values in acre-feet)

Row	Component	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Annual	Apr-Oct
<b>Derivation of Deliveries and Conveyance Losses to Non-LAWMA Stockholders</b>															
1)	Total historical diversions	336	130	56	228	430	688	832	1,151	1,441	1,663	864	391	8,210	7,030
2)	Historical conveyance loss	45	18	8	31	58	93	112	155	195	225	117	53	1,110	950
3)	Farm delivery to non-LAWMA	32	12	5	22	41	65	79	110	137	158	82	37	780	668
4)	Conveyance loss for non-LAWMA	14	5	2	10	18	28	34	48	60	69	36	16	340	291
<b>Operation of LAWMA's Portion of the Highland Canal</b>															
3)	LAWMA's diversion	290	113	49	196	371	595	719	993	1,244	1,436	746	338	7,090	6,071
3)	Conveyance loss	31	13	6	21	40	65	78	107	135	156	81	37	770	659
7)	Farm delivery	259	100	43	175	331	530	641	886	1,109	1,280	665	301	6,320	5,412
3)	Farm lateral loss	9	4	2	6	12	19	22	31	39	45	23	11	223	190
3)	Deep percolation	57	22	9	38	72	115	140	193	242	279	145	66	1,378	1,180
10)	Tailwater	25	10	4	17	32	51	62	86	107	124	64	29	611	523
1)	Crop consumptive use & soil evap	112	97	90	114	215	301	461	576	721	832	433	156	4,108	3,480
2)	End-of-month soil storage	95	62	0	0	0	44	0	0	0	0	0	39	—	—
3)	Soil storage change	56	-33	-62	0	0	44	-44	0	0	0	0	39	0	39
4)	Secondary evaporation factors	0.099	0.081	0.087	0.126	0.213	0.291	0.348	0.420	0.453	0.387	0.294	0.201	—	—
5)	Secondary evaporation seepage	4	1	1	3	11	24	35	58	79	78	31	10	335	315
6)	Secondary evaporation tailwater	2	1	0	2	7	15	22	36	48	48	19	6	206	194
7)	Total secondary evaporation	6	2	1	5	18	39	57	94	127	126	50	16	541	509
8)	Total consumptive use	118	99	91	119	233	340	518	670	848	958	483	172	4,649	3,989
<b>Return Flow from LAWMA's Interests</b>															
9)	Surface water	23	9	4	15	25	36	40	50	59	76	45	23	405	329
10)	Ground Water Return, % of Annual	8.54%	8.59%	8.57%	8.48%	8.36%	8.24%	8.14%	8.09%	8.08%	8.15%	8.29%	8.47%	100.00%	57.46%
1)	Ground water	174	175	174	173	170	168	166	165	165	166	169	172	2,037	1,171
2)	Total return flow	197	184	178	188	195	204	206	215	224	242	214	195	2,442	1,500
<b>Stream Depletion with respect to LAWMA's Diversions</b>															
3)	Stream depletion	93	-71	-129	8	176	391	513	778	1,020	1,194	532	143	4,648	4,571
4)	Stream depletion, % of canal diversion	32.1%	—	—	4.1%	47.4%	65.7%	71.3%	78.3%	82.0%	83.1%	71.3%	42.3%	65.6%	75.3%

**Row Descriptions:**

- 1) Historical average monthly diversions.
- 2) Row 1 x 13.5%
- 3) Row 1 x 0.865 x 418/3800
- 4) Row 3 / (6.88 \* 1.9835) \* (3.0 \* 1.9835)
- 5) Row 1 - Row 3 - Row 4
- 6) Row 2 - Row 4
- 7) Row 5 - Row 6.
- 8) Row 7 x 3.5 percent.
- 9) (Row 7 - Row 8) x 22.6 percent.

- 10) (Row 7 - Row 8) x 10 percent.
- 11) Lesser of: consumptive irrigation reqt or previous Row 12 + Row 7 - (Rows 8, 9 & 10).
- 12) Previous Row 12 + Row 7 - (Rows 8, 9, 10 & 11).
- 13) Previous Row 12 - Present Row 12.
- 14) Secondary evaporation factors.
- 15) Row 14 x (Rows 6 & 8).
- 16) Row 14 x Row 10.
- 17) Row 15 + Row 16.

- 18) Row 11 + Row 17.
- 19) Row 10 - Row 16.
- 20) Distribution of return flows from canal & lateral seepage & deep percolation.
- 21) Row 20 x (annual sum of (Rows 6, 8 & 9) - annual sum of Row 15).
- 22) Row 19 + Row 21.
- 23) Row 5 - Row 22.
- 24) Row 23 / Row 5 x 100 percent.

Date

# STATE OF COLORADO

**WATER DIVISION 2  
OFFICE OF THE STATE ENGINEER**

310 East Abriendo, Suite B  
Pueblo, Colorado 81004  
Phone: (719) 542-3368  
FAX: (719) 544-0800

<http://water.state.co.us/default.htm>

February 12, 1999



Bill Owens  
Governor

Greg E. Walcher  
Executive Director

Hal D. Simpson, P.E.  
State Engineer

Steven J. Witte, P.E.  
Division Engineer

Don Higbee  
Lower Arkansas Water Management Association  
PO Box 1161  
Lamar, CO 81052

Duane D. Helton  
Helton & Williamsen, P.C.  
384 Inverness Drive South, Suite 144  
Englewood, CO 80112

RE: Measurement of LAWMA's Highland Canal Water Rights

Dear Mr. Higbee & Mr. Helton:

We have reviewed your February 9, 1999 submittal on behalf of the Lower Arkansas Water Management Association (LAWMA) requesting permission for and assistance in the establishment and use of a gaging station on the Purgatoire River for determining water available to LAWMA's Highland Canal water rights. After a preliminary review of your request, I'm requesting that you provide additional information for use in completing the review and evaluation of your request.

For the purpose of evaluating your proposal, assume that the gaging station at the headgate and the Parshall flume on the canal a short distance downstream from the diversion facilities are in place and that both measurement points are connected to a data collection platform. With the required equipment in place, please propose a procedure and algorithm for using this equipment and operating the canal to generate augmentation credits from LAWMA's Highland Canal water rights. The procedure and the algorithm should provide for the determination of augmentation credits, return flow credits and the documenting, computation, and reporting of appropriate data under the various river conditions that are possible (i.e. starting at zero river flow at the headgate and increasing to high flow under all river call conditions which would influence LAWMA's entitlement). Your recommended procedures for operation of the canal should include how LAWMA will make an allowance to the shareholders on the ditch for the additional canal loss that will occur as a result of the removal of LAWMA water.

Thank you for preparing your request as we discussed last Fall. I'm hoping to have enough information to complete the evaluation of this proposal and include the final results in the approval letter for LAWMA's Arkansas River Replacement Plan for the 1999-2000 plan year, if appropriate. If you have any questions, please contact me or Dale Straw for further

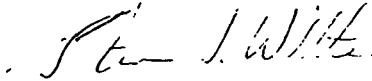
Enclosure 4 (cont)

Don Higbee & Duane D. Helton  
February 12, 1999

Page 2

information or clarification.

Sincerely,



Steven J. Witte  
Division Engineer  
Colorado Division of Water Resources

cc: Hal D. Simpson, State Engineer

Enclosure 4 (cont)



**HELTON & WILLIAMSEN, P.C.**  
**CONSULTING ENGINEERS IN WATER RESOURCES**  
384 INVERNESS DRIVE SOUTH, SUITE 144  
ENGLEWOOD, COLORADO 80112-5822  
PHONE (303) 792-2181  
FAX (303) 792-2165

February 9, 1999

Mr. Hal D. Simpson, State Engineer  
Colorado Division of Water Resources  
1313 Sherman Street, Room 818  
Denver, Colorado 80203

Subject: Measurement of LAWMA's Highland Canal Water Rights

Dear Hal:

This letter has been prepared to request your permission for and assistance in the establishment and use of a gaging station on the Purgatoire River for determining the water available to LAWMA's Highland Canal water rights. We met with several Division 2 staff members last fall concerning this proposal at the Highland diversion facilities, and I believe they feel that it is feasible.

As you know, the Highland Canal diverts from the Purgatoire River approximately 17 miles upstream from its discharge into the Arkansas River. The following three priorities have been decreed to the ditch: priority no. 27 for 16.6 cfs with a May 31, 1866 appropriation date, priority no. 97 for 7.4 cfs with an April 1, 1884 appropriation date, and priority no. 120 for 38.5 cfs with a March 1, 1909 appropriation date. Priority nos. 27 and 97 are, for all practical purposes, not subject to call from senior water rights, but priority no. 120 is junior to several water rights in Water District 67. When water is in conservation storage in John Martin Reservoir and in low-flow conditions, the Highland can sweep the river without regard to downstream water rights. The main canal is about 14 miles in length and extends to within about 2 miles of the city of Las Animas.

As you know also, LAWMA acquired 3,382 shares of stock in the Highland Irrigation Company in 1997 and 1998. The purpose of these acquisitions was to provide water for use in its replacement plan. These shares represent approximately 89 percent of the outstanding stock in the company. Four individuals use the remaining 418 shares. Two of these individuals, who own 231 of these shares, are the two upstream-most users and take their water in the first 4 miles of the canal. The other two individuals, who own 187 shares, take their water at the downstream end of the canal. LAWMA plans eventually to acquire the shares owned by these latter two individuals and to abandon the lower 10 miles of the canal, thereby eliminating any questions about irrigation of dry-up lands.

At present, LAWMA operates the canal in a "rotational" basis of water distribution, which has been the historical practice. LAWMA takes its share of water at Wasteway No. 3, which is located about 4 miles downstream from the diversion facilities. LAWMA's water is released back to the Purgatoire River through the waste gate with measurements based on a rectangular "submerged orifice" rating. This measurement situation is less than ideal. When water is being delivered to the two downstream users, the entire canal is operated. The difficulty with this arrangement is that the canal is difficult and expensive to maintain. Since the flows in the Purgatoire and therefore the water available to the Highland vary continuously, LAWMA has to have a full-time ditch rider. Also, the canal is vulnerable to breaks and washouts whenever rainstorms occur on the prairie to the west.

Enclosure 4 (cont)

Mr. Hal D. Simpson, State Engineer

February 9, 1999

Page 2

LAWMA proposes to change this arrangement to allow the water available under its share of the Highland water rights to be measured in the Purgatoire River as it passes over the Highland diversion dam without an actual diversion. The water available to the other four stockholders will continue to be diverted into the canal with the water distribution to be based on stock ownership. LAWMA will also make an allowance to these other shareholders for the additional canal loss that will occur as the result of the removal of LAWMA water. This method of measurement will require the establishment of a gaging station at the Highland diversion dam and either a Parshall flume or rated section on the canal a short distance downstream from the diversion facilities. Both locations would be equipped with signal transmitters so the flows could be monitored on a real-time basis by Division 2 and LAWMA personnel. The water available under the Highland rights will be the total of the flows passing the diversion dam and being diverted into the canal as limited by calls under downstream senior water rights and the various volumetrics that are established in the annual replacement plan provisions or by the Water Court once LAWMA's plan is adjudicated. Measurements for the ratings can be made in the river just below the diversion dam. This arrangement would be the same as that used to measure the flow in the river at Nine Mile Dam.

Although the Highland diversion dam is relatively tight, a small amount of leakage presently occurs at the dam. LAWMA intends to repair the dam to eliminate this leakage. Once the dam is repaired, it should not be necessary to account for the leakage in allocating water to the Highland rights.

LAWMA is willing to reimburse you for the reasonable costs of establishing this gaging station and to work out an arrangement for maintaining the gaging station. Our analysis of the gaging data at Carlton and Granada leads us to conclude that the Granada gage is adequate for determining the water available to the X-Y. The tabulation included with this letter shows the water that was indicated to be attributable to LAWMA's water rights in 1998 using the data from two gaging stations and the methodology reflected in the accounting that LAWMA presently submits. The Carlton gage actually showed that more water was available to these rights. Therefore, LAWMA believes that the Carlton gage could be moved to the Highland to reduce the costs.

If you have any questions or need additional information, please call.

Sincerely yours,

HELTON & WILLIAMSEN, P.C.



Duane D. Helton

DDH/mlc

Enclosure

cc: Steven J. Witte w/enc.  
Dale Straw w/enc.  
Donald F. Higbee w/enc.

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Enclosure 4 (cont)

**MONTHLY SUMMARY OF LAMAR TO STATELINE DIVERTABLE WATER**  
(values in acre-feet)

*Enclosure 4 (cont)*

Month	<u>Calculation based on the Granada Gage</u>					<u>Calculation based on the Carlton Gage</u>					<u>Granada Gage - Carlton Gage</u>				
	Total	Avail	Avail	Avail	Unused	Total	Avail	Avail	Avail	Unused	Total	Avail	Avail	Avail	Unused
	Divertable	Under X-Y	Under	Under	Native	Divertable	Under X-Y	Under	Under	Native	Divertable	Under X-Y	Under	Under	Native
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	Water	Right	Manvel	Graham	Native	Water	Right	Manvel	Graham	Native	Water	Right	Manvel	Graham	Native
	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow
Apr-98	42,153.8	0.0	0.0	1,184.1	40,969.5	43,723.8	0.0	0.0	1,184.1	42,539.7	-1,570.2	0.0	0.0	0.0	-1,570.2
May-98	8,282.0	455.0	602.6	1,303.6	5,900.8	8,141.7	455.0	602.6	1,303.6	5,780.5	120.3	0.0	0.0	0.0	120.3
Jun-98	6,409.7	1,141.7	600.4	613.7	4,053.9	6,967.3	1,141.7	600.4	613.7	4,611.5	-557.6	0.0	0.0	0.0	-557.6
Jul-98	13,697.5	1,182.7	542.0	2,274.6	9,698.2	13,499.0	1,182.7	542.0	2,253.2	9,521.1	196.5	0.0	0.0	21.4	177.1
Aug-98	10,112.9	1,805.2	789.6	923.9	6,594.2	13,376.6	1,805.2	789.6	1,007.6	9,774.2	-3,263.7	0.0	0.0	-83.7	-3,180.0
Sep-98	4,766.7	2,130.9	799.9	668.7	987.2	5,140.7	2,130.9	799.9	668.7	1,341.2	-354.0	0.0	0.0	0.0	-354.0
Oct-98	6,176.6	492.5	600.0	719.4	4,364.9	8,585.8	492.5	600.0	719.4	6,773.9	-2,409.0	0.0	0.0	0.0	-2,409.0
Sum	91,599.2	7,208.0	3,934.5	7,888.0	72,566.7	99,434.9	7,208.0	3,934.5	7,950.3	80,342.1	-7,835.7	0.0	0.0	-62.3	-7,773.4

**HELTON & WILLIAMSEN, P.C.**  
**CONSULTING ENGINEERS IN WATER RESOURCES**  
**384 INVERNESS DRIVE SOUTH, SUITE 144**  
**ENGLEWOOD, COLORADO 80112**  
PHONE (303) 792-2161  
FAX (303) 792-2165

April 30, 1998

**MEMORANDUM**

TO: Steven J. Witte

FROM: Tom Williamsen *Tom Williamsen*

SUBJECT: Calculations of Stream Credits – Highland Canal

This memorandum supplements information provided to your office previously concerning the historical operation of the Highland Canal. It also describes the procedures used to estimate the historical consumptive use and stream credits available to LAWMA pursuant to its acquisition of a majority interest in the Highland Irrigation Company.

Prior to 1997, the diversions into the Highland Canal were reduced by depletions to the Arkansas and Purgatoire Rivers from well pumping. Specifically, the Highland was affected by reduced accretions in conservation storage in John Martin Reservoir and increased calls from ditches in Water District 67, and to the extent they occurred, depletions to Purgatoire River flows from well pumping in the Purgatoire River basin. Since well owners now have to replace their pumping depletions, additional water will be available under the Colorado pre-compact water rights on these streams. LAWMA, as owner of the Highland water rights, should benefit from this increased yield the same as the owners of the other pre-compact surface rights. We are proposing in this memorandum volumetric limitations based on the irrigation requirements for the historical irrigated acreage rather than average historical diversions.

**Irrigated Acreage and Crops**

In 1997, LAWMA acquired 2,682 shares out of 3,800 shares outstanding of Highland Irrigation Company stock. Irrigation of 2,304.7 acres associated with 2,682 shares was discontinued on June 1, 1997.

Before June 1, 1998, LAWMA anticipates acquiring 700 additional shares which are associated with 498.8 acres of irrigated cropland. By June 1, LAWMA will own 3,382 shares and dry-up will total 2,803.5 acres. LAWMA also will pursue the acquisition of 187 shares from two shareholders at the end of the ditch which historically irrigated 195.2 acres. In total, LAWMA expects to own 3,569 shares and to dry up 2,998.7 acres. See our memorandum dated April 30, 1998 for details about the irrigated acreage.

*Enclosure 5*

### Consumptive Irrigation Requirements

The consumptive irrigation requirements were calculated using the modified Blaney-Criddle method with temperature and precipitation data for Las Animas and the crop distribution shown in Table 1. The values were calculated for 1938 through 1993 but only the post-compact years, 1950 through 1993, are summarized. The resulting consumptive irrigation requirements in inches are shown in Table 2. The consumptive irrigation requirements for 2,998.7 acres averaged 7,104 acre-feet annually and ranged from 6,183 acre-feet in 1958 to 8,284 acre-feet in 1963 as shown in Table 3.

### Diversion Requirement

The theoretical diversion requirement for 2,998.7 acres was calculated by dividing the monthly consumptive irrigation requirements by the maximum farm efficiency, 65 percent, and by the conveyance efficiency, 86.5 percent. The conveyance efficiency is the result of canal losses of 10 percent and off-farm lateral losses of 3.5 percent. These factors are based on parameters used in the H-I Model for Arkansas River ditches. As shown in Table 4, the diversion requirements averaged 12,635 acre-feet annually and ranged from 10,997 acre-feet in 1958 to 14,733 acre-feet in 1963.

### Consumptive Use

Consumptive use has the following two components: 1) crop evapotranspiration, and 2) secondary evaporation and transpiration (SEV) of water lost through canal and lateral seepage and farm tailwater. In 1998, LAWMA will continue to operate the entire length of the canal so the canal loss portion of the SEV will not be available. The SEV was calculated by multiplying the monthly SEV rate by the sum of the off-farm lateral seepage, on-farm lateral seepage, and farm tailwater. As shown on Table 5, the total consumptive use averaged 7,793 acre-feet annually and ranged from 6,763 acre-feet in 1958 to 9,099 acre-feet in 1952. Annually, the consumptive use was 61.7 percent of the average annual diversion requirement for 2,998.7 acres. We propose to establish a maximum annual limit of 9,099 acre-feet of stream credits for 3,569 shares and a running 10-year volume of 77,930 acre-feet. For 1998, LAWMA will own 3,382 shares, so the annual limit should be 8,622 acre-feet ( $9,099 \times 3,382/3,569$ ). When LAWMA begins accounting for its water by use of a river gage near the Highland diversion, the maximum annual and 10-year total limitations will be adjusted to account for SEV from canal loss.

### Stream Depletion Factors

Monthly stream credit factors were calculated using H-I Model parameters as described in our August 8, 1997 letter which is enclosed as Attachment 1. Those stream credit factors were displayed as a percentage of river diversions. In 1998, LAWMA will deliver its pro rata share of the water back to the Purgatoire River at Wasteway No. 3 as it did last year. Accordingly, the monthly factors were adjusted to reflect continued operation of the canal so that credit is not taken for secondary evaporation attributable to canal losses. The calculation of the depletion factors for 1998 are shown in Table 6. We understand that you would like us to derive factors for calculation of delayed winter return flow obligations. The winter return flow obligations total 3.4 percent of the total annual credits. The winter return flow factors are calculated as 3.4 percent of values shown in row 18 of Table 6. Net credit is the difference

Enclosure 5 (cont)

Memorandum to Steven J. Witte  
April 30, 1998  
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between row 18 and the winter return flow factor. Following is a monthly breakdown of the factors for winter return flow obligations and net stream credit:

**Stream Credit as Percent of Canal Delivery**

<u>Month</u>	<u>Winter Return Flow</u>	<u>Net Credit</u>
November	1.3%	36.4%
December	0	0
January	0	0
February	0.4	12.0
March	1.7	49.5
April	2.4	65.8
May	2.5	70.9
June	2.8	77.1
July	2.9	80.3
August	2.9	81.1
September	2.5	70.7
October	1.5	45.0

TAW/mic

Enclosure

cc: Donald F. Higbee w/enc.  
Dennis M. Montgomery, Esq. w/enc.  
Hal D. Simpson w/enc.  
David L. Harrison w/enc.

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Enclosure 5 (cont)

**Table 1**  
**Irrigated Crops**  
**Portion of Highland Irrigation Company<sup>1)</sup>**  
**(values in acres)**

Owner	Alfalfa	Corn <sup>2)</sup>	Winter Wheat	Grain Sorghum	Pasture Grasses	Total
Barks, B.	18.7	—	—	—	—	18.7
CECC <sup>3)</sup>	77.7	24.2	7.7	28.1	30.3	168.0
Clem, P.	—	37.2	—	—	—	37.2
Garcia, O.	100.4	21.2	—	50.6	166.8	339.0
Garcia, W.	61.3	—	82.9	60.4	135.4	340.0
Kenworthy, B.	66.4	—	—	51.8	10.7	128.9
Lowe Estate	23.6	—	—	—	3.0	26.6
Morlan, A.	73.2	—	—	91.6	50.6	215.4
Shiba, R.	154.4	—	—	182.6	2.4	339.4
Morlan, H.	101.8	—	10.0	24.2	3.5	139.5
Morley	11.0	—	—	—	—	11.0
Shiba, J.	95.1	64.3	—	—	—	159.4
Showalter, J.	—	3.5	—	11.9	13.1	28.5
Spady, A.	29.5	87.1	37.3	—	9.1	163.0
Waldroupe	—	—	—	—	32.2	32.2
Wagner Farms	282.5	145.2	—	—	—	427.7
Wagner, J.	114.6	26.9	—	—	15.1	157.0
Wagner, W.	90.4	22.5	—	—	67.8	180.7
Wheeler, M.	86.5	—	—	—	—	86.5
<b>Total</b>	<b>1,387.1</b>	<b>432.1</b>	<b>137.9</b>	<b>501.2</b>	<b>540.4</b>	<b>2,998.7</b>

<sup>1)</sup> Crops irrigated with 3,569 shares in the Highland Irrigation Company, based on interviews of the shareholders and aerial photographs.

<sup>2)</sup> Includes corn grown for grain and ensilage.

<sup>3)</sup> Based on crop acreage and crop distribution of the other shareholders.

Enclosure 5 (cont)

**Table 2**  
**Consumptive Irrigation Requirement**  
**Highland Irrigation Company**  
**Units = inches**

Year	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Total
1950	0.16	0	0	0	3.07	1.62	3.30	5.38	4.97	4.29	2.29	1.08	26.16
1951	0.00	0	0	0	3.07	1.20	3.03	2.81	7.26	5.25	3.50	0.60	26.72
1952	0.00	0	0	0	3.05	0.98	3.53	7.78	8.23	6.20	2.55	0.79	33.11
1953	0.00	0	0	0	3.13	0.72	1.76	7.08	7.60	3.69	3.96	0.77	28.71
1954	0.02	0	0	0	3.07	2.06	2.63	7.29	7.28	6.33	3.62	0.42	32.72
1955	0.03	0	0	0	3.08	1.71	1.62	5.35	8.41	4.94	3.55	0.89	29.58
1956	0.00	0	0	0	3.07	1.03	3.62	7.46	4.49	4.10	4.03	0.96	28.76
1957	0.00	0	0	0	3.06	0.02	1.97	4.62	6.25	5.79	3.00	0.52	25.23
1958	0.00	0	0	0	3.00	1.11	1.68	5.11	3.04	6.04	4.10	0.66	24.74
1959	0.02	0	0	0	3.08	1.13	2.77	6.66	6.51	5.46	2.62	0.12	28.37
1960	0.00	0	0	0	3.00	0.93	3.15	6.02	3.98	6.85	3.37	0.09	27.39
1961	0.03	0	0	0	3.06	1.37	2.82	4.41	5.36	4.39	2.76	0.78	24.98
1962	0.00	0	0	0	3.05	1.69	2.76	4.74	5.10	6.80	3.72	0.84	28.70
1963	0.02	0	0	0	3.20	1.97	3.95	5.89	8.26	5.28	3.48	1.10	33.15
1964	0.03	0	0	0	3.00	1.00	1.29	6.27	8.14	5.82	3.22	0.86	29.63
1965	0.03	0	0	0	3.00	1.98	3.18	2.03	5.42	5.72	3.37	0.94	25.67
1966	0.16	0	0	0	3.33	1.27	4.16	6.55	8.00	5.18	2.61	0.70	31.96
1967	0.03	0	0	0	3.38	2.08	2.34	5.03	5.19	5.36	2.96	0.72	27.09
1968	0.02	0	0	0	3.08	1.18	3.20	4.31	5.61	5.47	3.28	0.88	27.03
1969	0.02	0	0	0	3.00	1.20	2.49	3.20	6.91	5.98	2.46	0.10	25.36
1970	0.03	0	0	0	3.00	0.94	3.19	5.54	5.14	5.51	3.11	0.41	26.87
1971	0.02	0	0	0	3.09	1.26	1.63	6.01	5.27	5.44	2.51	0.25	25.48
1972	0.01	0	0	0	3.40	1.67	3.09	5.47	7.48	5.18	3.06	0.77	30.13
1973	0.00	0	0	0	3.01	0.65	2.19	6.05	6.11	7.11	1.53	0.81	27.46
1974	0.02	0	0	0	3.25	1.20	3.54	5.70	6.61	6.10	3.36	0.58	30.36
1975	0.03	0	0	0	3.07	1.01	3.54	4.73	5.74	5.98	3.14	0.89	28.13
1976	0.00	0	0	0	3.08	1.16	2.59	5.83	6.52	6.18	3.12	0.32	28.80
1977	0.00	0	0	0	3.08	1.18	2.77	5.70	7.20	4.59	4.27	0.91	29.70
1978	0.03	0	0	0	3.33	1.57	2.12	3.66	8.35	5.02	3.78	0.81	28.67
1979	0.03	0	0	0	3.23	1.48	2.43	5.16	5.34	4.72	3.65	0.63	26.67
1980	0.00	0	0	0	3.03	0.04	1.63	6.33	8.80	7.33	3.62	0.82	31.60
1981	0.02	0	0	0	3.14	2.19	3.47	6.25	7.31	5.00	3.00	0.74	31.12
1982	0.03	0	0	0	3.26	1.64	2.86	2.21	6.15	6.67	2.86	0.82	26.50
1983	0.00	0	0	0	3.04	0.54	1.44	5.49	8.31	7.17	4.52	0.94	31.45
1984	0.03	0	0	0	3.03	0.70	2.74	6.34	6.86	6.74	3.07	0.10	29.61
1985	0.03	0	0	0	3.28	1.21	2.61	6.41	5.89	6.38	3.29	0.40	29.50
1986	0.00	0	0	0	3.41	1.95	4.03	4.60	7.38	4.44	2.08	0.22	28.11
1987	0.02	0	0	0	3.06	1.74	2.64	4.88	8.53	4.62	2.15	0.88	28.52
1988	0.03	0	0	0	3.08	0.92	2.62	5.63	7.63	7.01	2.60	0.89	30.41
1989	0.03	0	0	0	3.32	1.75	2.09	4.61	6.33	5.75	2.80	0.82	27.50
1990	0.03	0	0	0	3.06	1.47	1.54	5.90	4.56	6.69	2.73	0.61	26.59
1991	0.02	0	0	0	3.18	1.18	4.17	5.50	5.42	5.10	3.22	0.56	28.35
1992	0.00	0	0	0	3.28	1.93	3.44	3.81	4.34	4.44	3.95	0.70	25.89
1993	0.00	0	0	0	3.04	1.09	2.36	4.80	8.43	5.15	2.94	0.60	28.41
Average	0.02	0	0	0	3.13	1.29	2.73	5.33	6.49	5.62	3.15	0.67	28.43
Maximum	0.16	0	0	0	3.41	2.19	4.17	7.78	8.80	7.33	4.52	1.10	33.15
Minimum	0.00	0	0	0	3.00	0.02	1.29	2.03	3.04	3.69	1.53	0.09	24.74

The crop distribution is: alfalfa, 46.26%; corn, 14.41%; winter wheat, 4.6%; grain sorghum, 16.71%; and pasture grass, 18.02%.  
The March values include the consumptive irrigation requirement and soil evaporation attributable to November through March.  
The consumptive irrigation requirements were calculated using the modified Blaney-Criddle method as described in Technical Release No. 21 published by the Soil Conservation Service with Las Animas temperature and precipitation data.

Enclosure 5 (cont)



**Table 3**  
**Consumptive Irrigation Requirement**  
**Highland Irrigation Company**  
**Units = acre-feet**

Year	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Total
1950	40	0	0	0	767	405	825	1,344	1,242	1,072	572	270	6,537
1951	0	0	0	0	767	300	757	702	1,814	1,312	875	150	6,677
1952	0	0	0	0	762	245	882	1,944	2,057	1,549	637	197	8,273
1953	0	0	0	0	782	180	440	1,769	1,899	922	990	192	7,174
1954	5	0	0	0	767	515	657	1,822	1,819	1,582	905	105	8,177
1955	7	0	0	0	770	427	405	1,337	2,102	1,234	887	222	7,391
1956	0	0	0	0	767	257	905	1,864	1,122	1,025	1,007	240	7,187
1957	0	0	0	0	765	5	492	1,154	1,562	1,447	750	130	6,305
1958	0	0	0	0	750	277	420	1,277	760	1,509	1,025	165	6,183
1959	5	0	0	0	770	282	692	1,664	1,627	1,364	655	30	7,089
1960	0	0	0	0	750	232	787	1,504	995	1,712	842	22	6,844
1961	7	0	0	0	765	342	705	1,102	1,339	1,097	690	195	6,242
1962	0	0	0	0	762	422	690	1,184	1,274	1,689	930	210	7,171
1963	5	0	0	0	800	492	987	1,472	2,064	1,319	870	275	8,284
1964	7	0	0	0	750	250	322	1,567	2,034	1,454	805	215	7,404
1965	7	0	0	0	750	495	795	507	1,354	1,429	842	235	6,414
1966	40	0	0	0	832	317	1,040	1,637	1,999	1,294	652	175	7,986
1967	7	0	0	0	845	520	585	1,257	1,297	1,339	740	180	6,770
1968	5	0	0	0	770	295	800	1,077	1,402	1,367	820	220	6,756
1969	5	0	0	0	750	300	622	800	1,727	1,494	615	25	6,338
1970	7	0	0	0	750	235	797	1,384	1,284	1,377	777	102	6,713
1971	5	0	0	0	772	315	407	1,502	1,317	1,359	627	62	6,366
1972	2	0	0	0	850	417	772	1,367	1,869	1,294	765	192	7,528
1973	0	0	0	0	752	162	547	1,512	1,527	1,777	382	202	6,861
1974	5	0	0	0	812	300	885	1,424	1,652	1,524	840	145	7,587
1975	7	0	0	0	767	252	885	1,182	1,434	1,494	785	222	7,028
1976	0	0	0	0	770	290	647	1,457	1,629	1,544	780	80	7,197
1977	0	0	0	0	770	295	692	1,424	1,799	1,147	1,067	227	7,421
1978	7	0	0	0	832	392	530	915	2,087	1,254	945	202	7,164
1979	7	0	0	0	807	370	607	1,289	1,334	1,179	912	157	6,662
1980	0	0	0	0	757	10	407	1,582	2,199	1,832	905	205	7,897
1981	5	0	0	0	785	547	867	1,562	1,827	1,249	750	185	7,777
1982	7	0	0	0	815	410	715	552	1,537	1,667	715	205	6,623
1983	0	0	0	0	760	135	360	1,372	2,077	1,792	1,130	235	7,861
1984	7	0	0	0	757	175	685	1,584	1,714	1,684	767	25	7,398
1985	7	0	0	0	820	302	652	1,602	1,472	1,594	822	100	7,371
1986	0	0	0	0	852	487	1,007	1,150	1,844	1,110	520	55	7,025
1987	5	0	0	0	765	435	660	1,219	2,132	1,154	537	220	7,127
1988	7	0	0	0	770	230	655	1,407	1,907	1,752	650	222	7,600
1989	7	0	0	0	830	437	522	1,152	1,582	1,437	700	205	6,872
1990	7	0	0	0	765	367	385	1,474	1,140	1,672	682	152	6,644
1991	5	0	0	0	795	295	1,042	1,374	1,354	1,274	805	140	7,084
1992	0	0	0	0	820	482	860	952	1,085	1,110	987	175	6,471
1993	0	0	0	0	760	272	590	1,199	2,107	1,287	735	150	7,100
Average	5	0	0	0	781	322	681	1,332	1,623	1,404	789	166	7,104
Maximum	40	0	0	0	852	547	1,042	1,944	2,199	1,832	1,130	275	8,284
Minimum	0	0	0	0	750	5	322	507	760	922	382	22	6,183

Values shown in Table 2 x 2,998.7 acres divided by 12 inches per foot.

Enclosure 5 (cont)

**Table 4**  
**Diversion Requirement**  
**Highland Irrigation Company**  
**Units = acre-feet**

Year	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Total
1950	71	0	0	0	1,364	720	1,467	2,390	2,209	1,907	1,017	480	11,625
1951	0	0	0	0	1,364	534	1,346	1,249	3,226	2,333	1,556	267	11,875
1952	0	0	0	0	1,355	436	1,569	3,458	3,659	2,755	1,133	350	14,715
1953	0	0	0	0	1,391	320	783	3,146	3,378	1,640	1,761	341	12,760
1954	9	0	0	0	1,364	916	1,169	3,241	3,235	2,814	1,610	187	14,545
1955	12	0	0	0	1,369	759	720	2,378	3,739	2,195	1,578	395	13,145
1956	0	0	0	0	1,364	457	1,610	3,315	1,996	1,823	1,791	427	12,783
1957	0	0	0	0	1,361	9	875	2,052	2,778	2,574	1,334	231	11,214
1958	0	0	0	0	1,334	493	747	2,271	1,352	2,684	1,823	293	10,997
1959	9	0	0	0	1,369	502	1,231	2,960	2,894	2,426	1,165	53	12,609
1960	0	0	0	0	1,334	413	1,400	2,675	1,770	3,045	1,498	39	12,174
1961	12	0	0	0	1,361	608	1,254	1,960	2,382	1,951	1,227	347	11,102
1962	0	0	0	0	1,355	751	1,227	2,106	2,266	3,022	1,654	373	12,754
1963	9	0	0	0	1,423	875	1,755	2,618	3,671	2,346	1,547	489	14,733
1964	12	0	0	0	1,334	445	573	2,787	3,618	2,586	1,432	382	13,169
1965	12	0	0	0	1,334	880	1,414	902	2,408	2,542	1,498	418	11,408
1966	71	0	0	0	1,480	564	1,850	2,912	3,555	2,301	1,160	311	14,204
1967	12	0	0	0	1,503	925	1,040	2,236	2,307	2,382	1,316	320	12,041
1968	9	0	0	0	1,369	525	1,423	1,916	2,494	2,431	1,458	391	12,016
1969	9	0	0	0	1,334	534	1,106	1,423	3,072	2,657	1,094	44	11,273
1970	12	0	0	0	1,334	418	1,418	2,462	2,284	2,449	1,382	181	11,940
1971	9	0	0	0	1,373	560	724	2,671	2,342	2,417	1,115	110	11,321
1972	4	0	0	0	1,512	742	1,373	2,431	3,324	2,301	1,361	341	13,389
1973	0	0	0	0	1,337	288	973	2,689	2,716	3,161	679	359	12,202
1974	9	0	0	0	1,444	534	1,574	2,533	2,938	2,711	1,494	258	13,495
1975	12	0	0	0	1,364	448	1,574	2,102	2,550	2,657	1,396	395	12,498
1976	0	0	0	0	1,369	516	1,151	2,591	2,897	2,746	1,387	142	12,799
1977	0	0	0	0	1,369	525	1,231	2,533	3,200	2,040	1,898	404	13,200
1978	12	0	0	0	1,480	697	943	1,627	3,712	2,230	1,681	359	12,741
1979	12	0	0	0	1,435	658	1,080	2,293	2,373	2,097	1,622	279	11,849
1980	0	0	0	0	1,346	18	724	2,814	3,911	3,258	1,610	365	14,046
1981	9	0	0	0	1,396	973	1,542	2,778	3,249	2,221	1,334	329	13,831
1982	12	0	0	0	1,450	729	1,272	982	2,734	2,965	1,272	365	11,781
1983	0	0	0	0	1,352	240	640	2,440	3,694	3,187	2,010	418	13,981
1984	12	0	0	0	1,346	311	1,218	2,817	3,048	2,995	1,364	44	13,155
1985	12	0	0	0	1,458	537	1,160	2,849	2,618	2,835	1,462	178	13,109
1986	0	0	0	0	1,515	866	1,791	2,045	3,280	1,974	925	98	12,494
1987	9	0	0	0	1,361	774	1,174	2,168	3,792	2,052	955	391	12,676
1988	12	0	0	0	1,369	409	1,165	2,502	3,392	3,116	1,156	395	13,516
1989	12	0	0	0	1,476	777	928	2,049	2,814	2,556	1,245	365	12,222
1990	12	0	0	0	1,361	653	685	2,622	2,028	2,974	1,213	270	11,818
1991	9	0	0	0	1,414	525	1,853	2,444	2,408	2,266	1,432	249	12,600
1992	0	0	0	0	1,458	857	1,530	1,693	1,930	1,974	1,755	311	11,508
1993	0	0	0	0	1,352	484	1,049	2,133	3,747	2,289	1,307	267	12,628
Average	9	0	0	0	1,389	573	1,212	2,370	2,886	2,497	1,402	296	12,635
Maximum	71	0	0	0	1,515	973	1,853	3,458	3,911	3,258	2,010	489	14,733
Minimum	0	0	0	0	1,334	9	573	902	1,352	1,640	679	39	10,997

These values represent the diversion requirements for 2,998.7 acres (3,569 shares).  
 Consumptive irrigation requirement (Table 3) divided by maximum farm efficiency and off-farm conveyance efficiency.  
 Maximum farm efficiency = 65% and off farm conveyance efficiency = 86.5% (canal loss= 10% and off farm lateral loss= 3.5%).  
 These efficiency values are based on parameters used in the H-I model.

Enclosure 5 (cont)

**Table 5**  
**Total Consumptive Use**  
**Highland Irrigation Company**  
**Units = acre-feet**

Year	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Total
1950	41	0	0	0	810	436	901	1,493	1,391	1,182	616	284	7,154
1951	0	0	0	0	810	323	827	780	2,031	1,446	943	158	7,318
1952	0	0	0	0	805	264	963	2,161	2,304	1,708	687	207	9,099
1953	0	0	0	0	826	194	481	1,966	2,127	1,017	1,067	202	7,880
1954	5	0	0	0	810	555	718	2,025	2,037	1,744	976	111	8,981
1955	7	0	0	0	813	460	442	1,486	2,354	1,361	956	234	8,113
1956	0	0	0	0	810	277	989	2,071	1,257	1,130	1,085	253	7,872
1957	0	0	0	0	808	5	537	1,282	1,749	1,596	808	137	6,922
1958	0	0	0	0	792	299	459	1,419	851	1,664	1,105	174	6,763
1959	5	0	0	0	813	304	756	1,849	1,822	1,504	706	31	7,790
1960	0	0	0	0	792	250	860	1,671	1,115	1,888	908	23	7,507
1961	7	0	0	0	808	368	770	1,225	1,500	1,209	744	205	6,836
1962	0	0	0	0	805	455	753	1,316	1,427	1,873	1,002	221	7,852
1963	5	0	0	0	845	530	1,078	1,636	2,312	1,454	938	290	9,088
1964	7	0	0	0	792	269	352	1,741	2,278	1,603	868	226	8,136
1965	7	0	0	0	792	533	868	564	1,516	1,576	908	248	7,012
1966	41	0	0	0	879	342	1,136	1,819	2,239	1,426	703	184	8,769
1967	7	0	0	0	893	560	639	1,397	1,453	1,477	798	190	7,414
1968	5	0	0	0	813	318	874	1,197	1,570	1,507	884	232	7,400
1969	5	0	0	0	792	323	679	889	1,934	1,647	663	26	6,958
1970	7	0	0	0	792	253	871	1,538	1,438	1,518	838	107	7,362
1971	5	0	0	0	816	339	445	1,669	1,475	1,498	676	65	6,988
1972	2	0	0	0	898	449	843	1,519	2,093	1,426	825	202	8,257
1973	0	0	0	0	794	174	598	1,680	1,710	1,959	412	213	7,540
1974	5	0	0	0	858	323	967	1,583	1,850	1,681	905	153	8,325
1975	7	0	0	0	810	271	967	1,313	1,606	1,647	846	234	7,701
1976	0	0	0	0	813	312	707	1,619	1,824	1,702	841	84	7,902
1977	0	0	0	0	813	318	756	1,583	2,015	1,265	1,150	239	8,139
1978	7	0	0	0	879	422	579	1,017	2,337	1,382	1,019	213	7,855
1979	7	0	0	0	852	398	663	1,433	1,494	1,300	983	165	7,295
1980	0	0	0	0	800	11	445	1,758	2,463	2,020	976	216	8,689
1981	5	0	0	0	829	589	947	1,736	2,046	1,377	808	195	8,532
1982	7	0	0	0	861	441	781	614	1,722	1,838	771	216	7,251
1983	0	0	0	0	803	145	393	1,525	2,326	1,976	1,218	248	8,634
1984	7	0	0	0	800	188	748	1,760	1,919	1,857	827	26	8,132
1985	7	0	0	0	866	325	712	1,780	1,649	1,757	886	105	8,087
1986	0	0	0	0	900	524	1,100	1,278	2,065	1,224	561	58	7,710
1987	5	0	0	0	808	469	721	1,355	2,388	1,272	579	232	7,829
1988	7	0	0	0	813	248	715	1,563	2,136	1,932	701	234	8,349
1989	7	0	0	0	877	471	570	1,280	1,772	1,584	755	216	7,532
1990	7	0	0	0	808	395	421	1,638	1,277	1,844	735	160	7,285
1991	5	0	0	0	840	318	1,138	1,527	1,516	1,405	868	147	7,764
1992	0	0	0	0	866	519	940	1,058	1,215	1,224	1,064	184	7,070
1993	0	0	0	0	803	293	644	1,333	2,360	1,419	792	158	7,802
Average	5	0	0	0	825	347	744	1,481	1,817	1,548	850	175	7,793
Maximum	41	0	0	0	900	589	1,138	2,161	2,463	2,020	1,218	290	9,099
Minimum	0	0	0	0	792	5	352	564	851	1,017	412	23	6,763

Crop consumptive use + secondary evaporation from lateral seepage and tailwater.

Diversion requirement (Table 4) x (Secondary evaporation rate x 0.1488 + 0.5623)

In 1998 LAWMA will deliver its water through Wasteway No. 3 and will not receive credit for secondary evaporation from canal loss.

Enclosure 5 (cont)

Enclosure 5 (cont)

**TABLE 8  
DERIVATION OF STREAM CREDIT FACTORS FOR USE IN 1998  
WATER BUDGET SUMMARY FOR 3,569 SHARES - HIGHLAND IRRIGATION COMPANY  
USING KANSAS H-I MODEL PARAMETERS  
AVERAGE FOR 1950-1993  
(values in acre-feet)**

Row	Component	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Total
<b>Ditch Operation</b>														
1)	Prorata Diversion	316	122	52	214	403	646	782	1,081	1,353	1,562	812	368	7,711
2)	Canal Loss	32	12	5	21	40	65	78	108	135	156	81	37	770
3)	Secondary Evaporation	3	1	0	3	9	19	27	45	61	60	24	7	259
3a)	Canal Delivery	284	110	47	193	363	581	704	973	1,218	1,406	731	331	6,941
<b>On-Farm Operation</b>														
4)	Off-farm Lateral Loss	11	4	2	7	14	23	27	38	47	55	28	13	269
5)	Farm Delivery	273	106	45	186	349	558	677	935	1,171	1,351	703	318	6,672
6)	Farm Lateral Loss	10	4	2	7	12	20	24	33	41	47	25	11	236
7)	Deep Percolation	67	25	10	40	76	122	152	211	267	297	153	69	1,489
8)	Tailwater	26	10	4	18	34	54	65	90	113	130	68	31	643
9)	Crop Consumptive Use	4	0	0	0	576	235	440	738	896	878	441	92	4,300
10)	EOM Storage	398	465	494	615	266	393	389	252	106	105	121	236	—
11)	Soil Storage Change	166	67	29	121	-349	127	-4	-137	-146	-1	16	115	4
12)	Secondary Evaporation	5	1	1	4	13	28	40	68	91	90	36	11	388
13)	Total Consumptive Use	9	1	1	4	589	263	480	806	987	968	477	103	4,688
<b>Return Flow</b>														
14)	Surface Water	23	9	4	16	27	38	42	52	62	80	48	25	426
15)	Ground Water	154	155	155	153	150	147	145	144	143	145	148	152	1,791
16)	Total	177	164	159	169	177	185	187	196	205	225	196	177	2,217
<b>Stream Depletion with respect to Canal Deliveries</b>														
17)	Stream Depletion	107	-54	-112	24	186	396	517	777	1,013	1,181	535	154	4,724
18)	Stream Depletion as % of Canal Delivery	37.7%	—	—	12.4%	51.2%	68.2%	73.4%	79.9%	83.2%	84.0%	73.2%	46.5%	68.1%

**Row Description:**

- |  |   |
|--|---|
| <p>1) Prorata share (3569/3800) of the average monthly diversion.<br/>                 2) Row 1 x 10 percent.<br/>                 3) Row 2 x Secondary evaporation rates<br/>                 3a) Row 1 - Row 2<br/>                 4) Row 1 x 3.5 percent.<br/>                 5) Row 1 - Row 2 - Row 3.<br/>                 6) Row 5 x 3.5 percent.<br/>                 7) (Row 5 - Row 6) x 22.6 percent plus excess field deliveries.<br/>                 8) (Row 5 - Row 6) x 10 percent.</p> | <p>9) Crop consumptive use using modified Blaney-Criddle and water budget procedure.<br/>                 10) Previous month's storage + Row 5 - the sum of Rows 6, 7, 8 &amp; 9.<br/>                 11) Previous month storage - present month storage.<br/>                 12) Sum of Rows 4, 6 &amp; 8 x Secondary evaporation rates.<br/>                 13) Row 9 + Row 12<br/>                 14) Row 8 x (1 - Secondary evaporation rate)<br/>                 15) Delayed return flow from lateral seepage and deep percolation.<br/>                 16) Row 14 + Row 15.<br/>                 17) Row 3a - Row 16.<br/>                 18) Row 17 / Row 3a x 100 percent.</p> |
|--|---|

Note: In 1998 LAWMA's water will be delivered through Wasteway No. 3 to the Purgatoire River. Additionally water will be delivered down ditch for two shareholders. LAWMA will not claim credit for secondary evaporation from canal losses and will not make up return flows derived from canal losses in 1998. The maximum farm efficiency is 65 percent.

**ATTACHMENT 1**

**HELTON & WILLIAMSEN, P.C.**  
**CONSULTING ENGINEERS IN WATER RESOURCES**  
384 INVERNESS DRIVE SOUTH, SUITE 115  
ENGLEWOOD, COLORADO 80112  
PHONE (303) 782-2161  
FAX (303) 782-2165

August 8, 1997

Mr. Steven J. Witte  
Colorado Division of Water Resources  
310 E. Abriendo, Suite B  
Pueblo, Colorado 81004

**Subject: Supplemental Information for Replacement Plan Amendment -  
Lower Arkansas Water Management Association**

Dear Mr. Witte:

This letter supplements the information concerning the historical use of LAWMA's interests in the Highland Irrigation Company. Our earlier correspondence, dated July 10, 1997, requested that the Highland Canal water be included as a replacement source for LAWMA's 1997 plan. We submitted an amendment to the replacement plan on August 1 in which we agreed to present an analysis of the historical use of the Highland Canal consistent with the algorithm and parameters used in Kansas' H-I model. This letter presents the results of that analysis.

I conferred with Dewayne Schroeder about the data and procedures used in the H-I model. The Highland Canal was not included in Kansas' analyses of Colorado irrigation ditches, so the parameters used in this analysis are based on information for similar ditches included in the H-I model. In general, the H-I model performs a water budget analysis in which irrigation deliveries are inflow to the root zone and crop consumptive use, tail water and deep percolation are outflow. The soil acts as a reservoir, and when the root zone is full, excess applications are assigned to deep percolation. The model also accounts for canal and lateral seepage. The canal seepage rate is based on the canal length. For the Highland Canal, the seepage rate is calculated to be about 10 percent of the diversion. The lateral seepage has off-farm and on-farm components. The lateral seepage rate used for all Colorado ditches was 7 percent. One-half of this rate, or 3.5 percent, is applied to the canal diversion volume and one-half, 3.5 percent, is applied to the farm delivery. Tail water for all ditches is calculated as 10 percent of the farm delivery less on-farm lateral losses. In the recent H-I model version, the maximum irrigation efficiency for Colorado ditches was limited to 65 percent except for the Lamar/Manvel and Colorado Canals which were set at 70 percent. The irrigation efficiency includes on-farm lateral seepage, tail water and deep percolation losses. Using a maximum efficiency of 65 percent, the minimum deep percolation rate works out to be about 22.6 percent of the farm delivery less on-farm lateral losses.

The H-I model also calculates "secondary evaporation" (SEV) on the canal seepage, off-farm and on-farm lateral seepage and tail water. Following are the monthly SEV rates:

*Enclosure 5 (cont)*

Mr. Steven J. Witte  
August 8, 1997  
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November	.....	9.9%
December	.....	8.1%
January	.....	8.7%
February	.....	12.6%
March	.....	21.3%
April	.....	29.1%
May	.....	34.8%
June	.....	42.0%
July	.....	45.3%
August	.....	38.7%
September	.....	29.4%
October	.....	20.1%

I modified our computer program used for the July 10 submittal to mimic the H-I model's calculations of lateral seepage and secondary evaporation. The deep percolation and net seepage were routed back to the river by a response function developed using Glover techniques which is consistent with the procedure used by Kansas to develop response functions for the Colorado ditches.

The results of our analyses are summarized in Table 1 which is similar in format to the summary presented in our July 10 submittal. On an annual basis, the stream depletions amount to about 64.6 percent of the river diversion, and the monthly values range from 0.9 percent in February to 82.8 percent in August. The monthly values are very similar to the depletion rates presented in our July 10 submittal.

In December and January, the return flow exceeds the diversion, i.e., net gain in streamflow. These monthly volumes represent 4.5 percent of the sum of the stream depletions in the other 10 months. In our July 10 submittal, the December through February river gain averaged 5.0 percent of the stream depletions in the other 9 months.

Also shown is the amount of consumptive use, attributable to on-farm uses as a percent of the farm delivery. The consumptive use includes crop consumptive use, secondary evaporation associated with on-farm laterals and tail water, and change in soil moisture storage. The annual value averages 69.0 percent of the farm delivery, and the monthly values range from 63.7 percent in November to 70.0 percent in July. Until such time that a river gage is installed at the Highland Canal diversion dam, LAWMA's water will be delivered to the Purgatoire River through Wasteway No. 3. Accordingly, these percentages would represent the consumptive use when delivering water through this wasteway. The values presented above and in Table 1 are not substantially different from the values presented in our July 10 submittal.

LAWMA has obtained ownership of 2,682 shares (about 71 percent of the outstanding shares) and anticipates purchasing 887 shares before next spring. At that time, LAWMA will own 3,569 shares out of 3,800 shares outstanding. The owners, which have sold their shares to LAWMA, have discontinued irrigation of the fields at the time of the closing. The purchase contracts have provisions for revegetation and dry-up.

Enclosure 5 (cont)

Mr. Steven J. Witte  
August 8, 1997  
Page 3

The use of the H-I model parameters does not change our conclusions set forth in the July 10 submittal about the procedure to calculate replacement credit for this year. Accordingly, we propose to use the following algorithm for calculating replacement credit for LAWMA's Highland Canal Interests delivered to the Purgatoire River through Wasteway No. 3:

1. When the Highland Canal diversions are being delivered to turnouts downstream of Wasteway No. 3 as well as to Wasteway No. 3, the delivery to the Purgatoire River will be measured and recorded using the rating table prepared for the wasteway gate. The replacement credit at the Purgatoire River will equal the measured delivery times 69.4 percent.
2. When water is delivered to Wasteway No. 3, but not to down-ditch turnouts, the delivery will equal the measured flow at the 5-foot Parshall flume less 10 percent for ditch seepage and minus the delivery to Davidson's turnout (if any). The replacement credit will be equal to 69.4 percent of the calculated delivery.

The Highland Canal ditchrider will inform Bill Howland daily of the deliveries to the Purgatoire River and will submit the daily written record to LAWMA. LAWMA proposes to store the replacement credit less transit loss in John Martin Reservoir's Offset Account. LAWMA requests that the unconsumed portion of the assessed transit loss (90 percent) between Wasteway No. 3 and the reservoir be stored in the Offset Account. LAWMA also requests that 5.0 percent of the storage accruals in the Offset Account attributable to Highland Canal deliveries be reserved for replacement with respect to Conservation Storage during December, January and February.

Please call if you have any questions.

Sincerely yours,

HELTON & WILLIAMSEN, P.C.



Thomas A. Williamsen

TAW/mic

Enclosure

cc: Donald F. Higbee w/enc.  
Hal D. Simpson w/enc.  
David L. Harrison, Esq. w/enc.  
Dennis M. Montgomery, Esq., w/enc.

C:\L101080897.TAW  
Enclosure 5 (cont)

H.C.  
**HIGHLAND CANAL**  
**WATER BUDGET SUMMARY FOR 3,600 SHARES**  
**USING KANSAS H-I MODEL PARAMETERS**  
**AVERAGE FOR 1960-1993**  
(values in acre-feet)

Enclosure 5 (cont)

Row	Component	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Total
<b>Ditch Operation</b>														
1)	Prorata Diversion	316	122	52	214	403	646	782	1,061	1,353	1,502	812	368	7,711
2)	Canal Loss	32	12	5	21	40	65	78	108	135	156	81	37	770
3)	Lateral Loss	11	4	2	7	14	23	27	38	47	55	28	13	269
4)	Secondary Evaporation	4	1	1	4	12	26	37	61	82	82	32	10	352
<b>On-Farm Operation</b>														
5)	Farm Delivery	273	106	45	186	349	558	677	935	1,171	1,351	703	318	6,672
6)	Farm Lateral Loss	10	4	2	7	12	20	24	33	41	47	25	11	236
7)	Deep Percolation	67	25	10	40	76	122	152	211	267	297	153	69	1,489
8)	Tailwater	26	10	4	18	34	54	65	90	113	130	68	31	643
9)	Crop Consumptive Use	4	0	0	0	576	235	440	738	896	878	441	92	4,300
10)	EOM Storage	398	465	494	615	266	393	389	252	106	105	121	236	---
11)	Soil Storage Change	166	67	29	121	-349	127	-4	-137	-146	-1	16	115	4
12)	Secondary Evaporation	4	1	1	3	10	22	31	52	70	68	27	8	297
13)	Total Consumptive Use	12	2	2	7	598	283	508	851	1,048	1,028	500	110	4,949
14)	Consumptive Use and Soil Storage Change as % of Diversion	56.3%	56.6%	59.6%	59.8%	61.8%	63.5%	64.5%	66.0%	66.7%	65.7%	63.5%	61.1%	64.2%
15)	Consumptive Use and Soil Storage Change as % of Farm Delivery	63.7%	64.2%	66.7%	66.7%	67.9%	68.8%	69.0%	69.8%	70.0%	69.9%	66.8%	67.6%	69.0%
<b>Return Flow</b>														
16)	Surface Water	23	9	4	16	27	38	42	52	62	80	48	25	428
17)	Ground Water	197	198	198	198	193	190	188	187	186	188	191	195	2,307
18)	Total	220	207	202	212	220	228	230	239	248	268	239	220	2,733
<b>Stream Depletion with respect to the River Headgate Diversions</b>														
19)	Stream Depletion	96	-85	-150	2	183	418	552	842	1,105	1,294	573	148	4,978
20)	Stream Depletion as % of Diversion	30.4%	---	---	0.9%	45.4%	64.7%	70.6%	77.9%	81.7%	82.8%	70.6%	40.2%	64.6%

**Row Description:**

- 1) Prorata share (3569/3800) of the average monthly diversion.
- 2) Row 1 x 10 percent.
- 3) Row 1 x 3.5 percent.
- 4) Sum of Rows 2 & 3 x Secondary evaporation rates
- 5) Row 1 - Row 2 - Row 3.
- 6) Row 5 x 3.5 percent.
- 7) (Row 5 - Row 6) x 22.6 percent plus excess field deliveries.
- 8) (Row 5 - Row 6) x 10 percent.
- 9) Crop consumptive use using modified Blaney-Criddle and water budget procedure.
- 10) Previous month's storage + Row 5 - the sum of Rows 6, 7, 8 & 9.

- 11) Previous month storage - present month storage.
- 12) Sum of Rows 6 & 8 x Secondary evaporation rates.
- 13) Row 4 + Row 9 + Row 12
- 14) Sum of Rows 11 & 13 / Row 1 x 100 percent.
- 15) Sum of Rows 9 & 12 / Row 5 x 100 percent.
- 16) Row 8 x (1 - Secondary evaporation rate)
- 17) Delayed return flow from canal and lateral seepage and deep percolation.
- 18) Row 16 + Row 17.
- 19) Row 1 - Row 18.
- 20) Row 19 / Row 1 x 100 percent.

Note: The maximum farm efficiency is 65 percent. This value relates to farm lateral



## **SECTION 4**

## STATE OF COLORADO

WATER DIVISION 2  
 OFFICE OF THE STATE ENGINEER  
 310 East Abriendo, Suite B  
 Pueblo, CO 81004  
 Phone (719) 542-3368  
 FAX (719) 544-0800



January 7, 1999

David L. Pope  
 Kansas Chief Engineer  
 Kansas Board of Agriculture  
 901 S. Kansas Avenue, 2nd Floor  
 Topeka, KS 66612-1283

Roy Romer  
 Governor  
 Wade Buchanan  
 Executive Director  
 Hal D. Simpson  
 State Engineer  
 Steven J. Witte, PE  
 Division Engineer

Ms. Mary Louise Clay  
 Recording Secretary  
 Arkansas River Compact Administration  
 307 South Fifth Street  
 Lamar, CO 81052

RE: Monthly Report of Colorado Pumping and Offset Account Operations for November, 1998

Dear Mr. Pope and Ms. Clay:

The purpose of this letter is to provide the monthly report required by paragraph 12 of the **Resolution Concerning an Offset Account in John Martin Reservoir for Colorado Pumping As Amended March 30, 1998** ("Resolution"). This letter reports the monthly pumping in excess of Colorado's pre-Compact entitlement, Colorado's monthly accounting of Compact compliance, and the status of water delivered to the Offset Account, all during the month of November, 1998.

Table 1, shows the amount of pumping during the month of November, 1998 by irrigation wells pumping from the Valley Fill Aquifer and surficial aquifers along the Arkansas River between Pueblo and the Stateline, as well as the corresponding wellhead depletions, by user group. The wellhead depletions were computed using the presumptive stream depletions in Rule 4.2 of the **AMENDED RULES AND REGULATIONS GOVERNING THE DIVERSION AND USE OF TRIBUTARY GROUND WATER IN THE ARKANSAS RIVER BASIN, COLORADO** ("Rules") approved in Case No. 95CW211.

Table 2 shows the wellhead depletions due to pumping by irrigation wells in the user groups below John Martin Reservoir that are in excess of the pre-Compact entitlements.

Since the depletions caused by pumping above John Martin Reservoir were fully replaced, and that accounting has been provided to Kansas, and the depletions caused by pumping below John Martin Reservoir which affect senior surface water rights in Colorado were fully replaced, and that accounting has been provided to Kansas, the accounting in this report shows only remaining depletions caused by irrigation pumping in excess of the pre-Compact entitlements for those

river reaches where no replacements or only partial replacements were made to replace out-of-priority depletions to senior surface water rights in Colorado.

Table 3 shows the remaining stream depletions caused by irrigation pumping in excess of the pre-Compact entitlements which were not replaced by making replacements to senior surface water rights in Colorado. These stream depletions were computed using the wellhead depletions shown in Table 2 with the Ground Water Accounting Model. Please note that in Reaches 11, 12, and 13, replacements to senior surface water rights in Colorado replaced 0% of the stream depletions caused by pumping affecting those reaches. Also note that in Reaches 14, 15, and 16, replacements to senior surface water rights in Colorado replaced 0% of the stream depletions caused by pumping affecting those reaches. These percentages reflect the fact that there was a call by a Colorado surface water right in those reaches on none of the days during November. The remaining depletions shown in Table 3 are the estimated stream depletions caused by irrigation pumping in excess of the pre-Compact entitlements remaining after replacements were made to senior surface water rights in Colorado. Table 3 also shows the estimated depletions to usable Stateline flow which were calculated using the assumptions in paragraph 5.B of the Resolution, and the replacements to Stateline flows which were made during the month.

As indicated in Table 3, 585.6 acre-feet of fully consumable water has been made available to Kansas under the provisions of paragraph 5B of the Resolution. Under those provisions, 585.6 acre-feet will be moved from the Colorado Consumable Water subaccount to the Kansas Consumable Water subaccount of the Offset Account 30 days after the date of this notification letter in order that evaporation be charged as provided for by paragraph 5B of the Resolution. As of November 30, 1998, there were 5116.87 acre-feet being stored in the offset account.

Please contact me if you have any questions or require additional information.

Sincerely,



Steven J. Witte  
Division Engineer  
Colorado Division of Water Resources

cc: Mark Rude  
John Draper  
Dale Book  
Hal Simpson  
Dennis Montgomery  
Bill Howland

Larry E. Trujillo, Sr.  
Randy Hayzlett  
David Brenn  
Peter Evans  
Thomas R. Pointon  
James G. Rogers

**TABLE 1**  
**Pumping By Rule 3 Irrigation Wells**  
**November, 1998**

USER NO.	DITCH NAME	AF PUMPED	WELLHEAD DEPL
1	Bessemer	34	29
2	Booth Orchard	9	7
3	Excelsior	24	19
4	Collier	0	0
5	Colorado	72	31
6	Rocky Ford Highline	24	7
7	Oxford	49	16
8	Otero	10	3
9	Catlin	10	9
10	Fort Lyon Up Stream	63	24
11	Rocky Ford	6	2
12	Holbrook	0	0
13	Las Animas Consolidated	23	8
14	Baldwin-Stubbs	0	0
15	Fort Bent	34	10
16	Keese	18	5
17	Amity	96	46
18	Lamar/Manvel	52	22
19	Hyde	2	0
20	Fort Lyon Down Stream	189	57
21	XY Graham	28	10
22	Buffalo	274	84
23	Sisson	0	0
24	Stateline Sole Source	327	230
600	LAWMA APOD	0	0
601	LAWMA APOD	0	0
602	LAWMA APOD	0	0
	Totals	1344	619

**TABLE 2**  
**Wellhead Depletions From Irrigation Wells Below John Martin Reservoir (Acre-Feet)**  
**(Reduced By Pre-Compact Entitlements)**  
**November, 1998**

USER NUMBER										
15	16	17	18	19	20	21	22	23	24	Total
10	5	23	22	0	57	10	84	0	230	441

**TABLE 3**  
**Remaining Depletions To Usable Stateline Flow (Acre-Feet)**  
**November, 1998**

REACH NUMBER										
	11	12	13	14	15	16	17	18	21	Sum
Remaining Depletion	23	94	134	131	84	96	233	1075	44	1914
Depletion to Usable SL Flow	8.0	32.8	46.8	45.7	29.3	33.5	81.3	375.2	15.4	668
Replacements										
FRY-ARK Return Flows	7.7	28.6	29.0	22.0						87.3
LAWMA-CO Beef Credit										
LAWMA-Ft Bent Ditch Shrs										
LAWMA-Stubbs Direct Flow										
LAWMA-XY Direct Flow										
LAWMA-Manvel Direct Flow										
Offset Account Water	585.6									585.6
Total Replacements	593.3	28.6	29.0	22.0						672.9



## STATE OF COLORADO

WATER DIVISION 2  
OFFICE OF THE STATE ENGINEER310 East Abriendo, Suite B  
Pueblo, CO 81004  
Phone (719) 542-3368  
FAX (719) 544-0800

January 29, 1999

David L. Pope  
Kansas Chief Engineer  
Kansas Board of Agriculture  
901 S. Kansas Avenue, 2nd Floor  
Topeka, KS 66612-1283

Bill Owens  
Governor

Greg Walcher  
Executive Director

Hal D. Simpson  
State Engineer

Steven J. Witt, P E  
Division Engineer

Ms. Mary Louise Clay  
Recording Secretary  
Arkansas River Compact Administration  
307 South Fifth Street  
Lamar, CO 81052

RE: Report of Colorado Pumping and Offset Account Operations by Substitute Water Supply Plans for the Period April 1, 1998 to November 30, 1998

Dear Mr. Pope and Ms. Clay:

The purpose of this letter is to provide a report of the operations of five Substitute Water Supply Plans (SWSP) approved by the Colorado State Engineer which have been required to deliver a portion of their replacement water to the Offset Account created by the **Resolution Concerning an Offset Account in John Martin Reservoir for Colorado Pumping As Amended March 30, 1998** ("Resolution"). This requirement is based on the fact that the depletions caused by the operations covered by these plans are estimated to produce depletions to usable Stateline flow during some months of the year. This letter reports the monthly estimated depletions to usable Stateline flow caused by the operations covered by each plan and accounts for the replacement of these estimated depletions by making fully consumable water available to Kansas in the Offset Account.

The following table shows the estimated depletions for each of the SWSPs which the Colorado State Engineer has required be replaced using water delivered to the Offset Account.

Month	Brad Cummings Irrigation	Carder, Inc Gravel Pit	Midwestern Farms Gravel Pit	Prowers County Gravel Pit	Justin Young Wildlife Ponds
April	35	1.99		1.1	
May	42	2.43	3.305	1.3	
June	57	2.73	3.466	1.6	
July	81	2.66	4.269	1.8	
August	111	4.20	4.528	1.7	
September	125	2.32	5.785	1.5	46.09

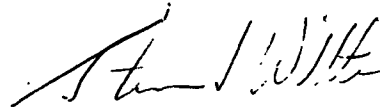
October	105	2.33	7.134	1.2	3.82
November	*	*	*	*	*
TOTAL	556	18.66	28.487	10.2	49.91

\* No replacements were required by the Colorado State Engineer because there were substantial flows past Garden City during November, 1998 (See Enclosure 7).

Enclosure 1 through Enclosure 3 provide the accounting for three of the SWSPs summarized in the above table. Enclosure 4 and Enclosure 5 provide the stream depletion amounts that were approved for the other two SWSP's which are also summarized in the above table. The total depletions from the above table are 663.257 acre-feet. The replacement of 663.257 acre-feet in the required reaches of the Arkansas River would require a release of 668.4 acre-feet from the Offset Account. These computations are summarized in the table in Enclosure 6. As indicated in Enclosure 6, 668.4 acre-feet of fully consumable water has been made available to Kansas under the provisions of paragraph 5B of the Resolution. Under those provisions, 668.4 acre-feet will be moved from the Colorado Consumable Water subaccount to the Kansas Consumable Water subaccount of the Offset Account 30 days after the date of this notification letter in order that evaporation be charged as provided for by paragraph 5B of the Resolution. As of November 30, 1998, there were 5116.87 acre-feet being stored in the offset account.

Please contact me if you have any questions or require additional information.

Sincerely,



Steven J. Witte  
Division Engineer  
Colorado Division of Water Resources

7 Enclosures

cc: Mark Rude  
John Draper  
Dale Book  
Hal Simpson  
Dennis Montgomery  
Bill Howland  
Jim Slattery

Larry E. Trujillo, Sr.  
Randy Hayzlett  
David Brenn  
Peter Evans  
Thomas R. Pointon  
James G. Rogers



Enclosure 1

**Water Accounting Form**  
**Brad Cummings - SEO ID Nos. 6705529 & 6705531**  
**Granada, Colorado**  
**Year: 1998**

Month (1)	Well ID 6705529				Well ID 6705531		Total Pumpage (ac-ft) (8)	Well Head Depletion Rate (9)	Well Head Depletion (ac-ft) (10)	Stream Depletion (ac-ft) (11)
	Reading (Kwh) (2)	Usage (Kwh) (3)	PCC (Kwh / ac-ft) (4)	Total (ac-ft) (5)	Reading (ac-ft) (6)	Pumpage (ac-ft) (7)				
April	88229	0	345	0.00	114,487	0.00	0.00	100%	0.00	35
May	8351	20,122	345	58.32	161,050	46.56	104.89	100%	104.89	42
June	46339	37,988	345	110.11	161,050	0.00	110.11	100%	110.11	57
July	74960	66,609	345	193.07	196,138	35.09	228.16	100%	228.16	81
August	84003	75,652	345	219.28	241,594	45.46	264.74	100%	264.74	111
September	41431	57,428	345	166.46	241,594	0.00	166.46	100%	166.46	125
October	41431	0	345	0.00	241,594	0.00	0.00	100%	0.00	105
November	41431	0	345	0.00	249,862	8.27	8.27	100%	8.27	80
December			345	0.00			0.00	100%	0.00	
January			345	0.00			0.00	100%	0.00	
February			345	0.00			0.00	100%	0.00	
March			345	0.00			0.00	100%	0.00	
<b>Total</b>	---		---	747.24	---	135.38	882.62	---	882.62	636

Replacement supply purchased from Colorado Springs and delivered to the Offset Account.

- Col 1: Present month.
- Col 2: The meter reading at the end of the present month.
- Col 3: The total amount of kilowatt hours for the month (Present - Previous month).
- Col 4: This column contains the power consumption coefficient to calculate monthly pumping.
- Col 5: Col 3 / Col 4
- Col 6: Flow meter reading at the end of the present month.
- Col 7: Present month's meter reading - previous month.
- Col 8: Col 5 + Col 7
- Col 9: Well head depletion rate.
- Col 10: Col 8 X Col 9
- Col 11: Calculated from State's accounting model.

Note: Monthly send copies to:

Dale Straw	Bill Howland	Dan Neuhold	Don Higbee	Brad Cummings	Tom Jagers
CDWR	CDWR	Water Commissioner	LAWMA	24299 Rd 62	4260 Rd MM
PO Box 5728	1640 W. 6th	30240 Co Rd 12	PO Box 1161	Moffat, CO 81143	Lamar, CO 81052
Pueblo, CO 81002	Las Animas, CO 81054	Lamar, CO 81052	Lamar, CO 81052		

Enclosure 2

**Water Accounting Form  
CARDER, INC  
J&S GRAVEL PIT  
Lamar, Colorado**

Year: 1998

Row	Item	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Annual Total
1	Evap rate, ac-ft/ac	0.38	0.45	0.60	0.62	0.56	0.44	0.31	0.17	0.13	0.12	0.16	0.22	4.15
2	Pit area, ac	3	3	3	3	3	3	3	3					---
3	Evaporation, ac-ft	1.13	1.36	1.80	1.87	1.67	1.31	0.92	0.50	0.00	0.00	0.00	0.00	10.56
4	Aggregate sales, ton	29,510.09	37,816.70	40,594.56	35,124.83	94,935.90	36,086.14	44,677.92	39,488.14					358,234.28
5	Factor, % by weight	4	4	4	4	4	4	4	4	4	4	4	4	---
6	Moisture Loss in Material, ac-ft	0.87	1.11	1.20	1.03	2.79	1.06	1.32	1.16	0.00	0.00	0.00	0.00	10.54
7	Aggregate washed, ton	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00
8	Factor, % by weight	2	2	2	2	2	2	2	2	2	2	2	2	---
9	Moisture Loss in Washing, ac-ft	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	Water for Dust Suppression, gal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
11	Water for Dust Suppression, ac-ft	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	Moisture Loss in Material + Moisture Loss in Washing + Water for Dust Suppression, ac-ft	0.87	1.11	1.20	1.03	2.79	1.06	1.32	1.16	0.00	0.00	0.00	0.00	10.54
13	Consumptive Use, ac-ft	2.00	2.47	2.99	2.90	4.47	2.38	2.24	1.66	0.00	0.00	0.00	0.00	21.10
14	Depletion Factor, %	99.2%	98.2%	91.3%	91.5%	94.1%	97.5%	104.3%	113.1%	122.0%	123.7%	114.1%	107.3%	---
15	Depletion, ac-ft	1.99	2.43	2.73	2.66	4.20	2.32	2.33	1.87	0.00	0.00	0.00	0.00	20.53
16	Year to Date Depletion, ac-ft	1.99	4.41	7.14	9.80	14.00	16.32	18.65	20.53	20.53	20.53	20.53	20.53	---

Replacement Source: Purchased from Colorado Springs and delivered to the Offset Account.

Row 3: Pond evaporation in acre-feet (Row 1) X (Row 2).

Row 6: Moisture loss in material in acre-feet ((Row 4) X 2000 X ((Row 5)/100) / 62.4) / 43560.

Row 9: Moisture loss in washing aggregate in acre-feet ((Row 7) X 2000 X ((Row 8)/100) / 62.4) / 43560.

Row 10: End of month meter readings for water pumped for dust suppression in gallons (Row 10) - (Previous Row 10)

Row 11: Total gallons pumped for dust suppression in acre-feet (Row 10) / 325851.

Row 12: Totals water consumed in operations (Row 6) + (Row 9) + (Row 11)

Row 13: Total consumptive use (Row 3) + (Row 12).

Row 15: Depletion based on Glover Depletion factors (Row 13) X (Row 14)

Row 16: Year to date depletions (Row 15) + (Previous Row 16).

Note: Monthly send copies to:

Dale Straw  
CDWR  
PO Box 5728  
Pueblo, CO 81002

Dan Neuhold  
Water Commissioner  
30240 Co Rd 12  
Lamar, CO 81052

Bill Howland  
CDWR  
1640 W. 6th  
Las Animas, CO 81054

Don Higbee  
LAWMA  
PO Box 1161  
Lamar, CO 81052

Ira Paulin  
Carder, Inc.  
PO Box 721  
Lamar, CO 81052

Enclosure 3

**Water Accounting Form  
HOLLY ROCK GRAVEL PIT  
Holly, Colorado**

Year: 1998

Row	Item	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	Annual Total
1	Evap rate, ac-ft/ac	0.31	0.54	0.71	0.67	0.55	0.38	0.25	0.16	0.13	0.15	0.19	0.29	---
2	Pit area, ac	9	9	9	9	9	9	9	9					---
3	Evaporation, ac-ft	2.790	4.860	6.390	6.030	4.950	3.420	2.250	1.440	0.000	0.000	0.000	0.000	32.130
4	Sand & Gravel Sales, tons	48,092	36,200	45,659	33,652	52,912	32,134	34,119	30,854					313,622
5	Factor, % by weight	4	4	4	4	4	4	4	4	4	4	4	4	---
6	Moisture Loss, ac-ft	1.415	1.065	1.344	0.990	1.557	0.946	1.004	0.908	0.000	0.000	0.000	0.000	9.229
7	Concrete Production, cy	0	0	0	0	0	0	0	0					0
8	Concrete Batching, ac-ft	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	Pump meter, gal	0	0	0	0	0	0	0	0					0
10	Total pumped, ac-ft	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11	Moisture Loss + Concrete Batching + Pump, ac-ft	1.415	1.065	1.344	0.990	1.557	0.946	1.004	0.908	0.000	0.000	0.000	0.000	9.229
12	Consumptive Use, ac ft	4.205	5.925	7.734	7.020	6.507	4.366	3.254	2.348	0.000	0.000	0.000	0.000	41.359
13	Depletion Factor, %	78.6%	58.5%	55.2%	64.5%	88.9%	163.4%	237.7%	259.8%	278.8%	205.2%	154.2%	89.5%	---
14	Depletion, ac-ft	3.305	3.466	4.269	4.528	5.785	7.134	7.735	6.100	0.000	0.000	0.000	0.000	42.322
15	Year to Date Depletion, ac-ft	3.305	6.771	11.040	15.568	21.353	28.487	36.222	42.322	42.322	42.322	42.322	42.322	---

**Replacement Source:** Purchased from Colorado Springs and delivered to the Offset Account.

Row 3 Pond evaporation in acre-feet (Row 1) X (Row 2).

Row 6. Moisture loss in material in acre-feet [(Row 4) X 2000 X ((Row 5)/100) / 62.4] / 43560.

Row 8: Water consumed in concrete batching in acre-feet [(Row 7) X 38 / 7.48] / 43560.

Row 9 End of month meter readings for water pumped for dust suppression in gallons (Row 9) -(Previous Row 9)

Row 10: Total gallons pumped for dust suppression in acre-feet (Row 9) / 325851.

Row 11. Totals water consumed in operations (Row 6) + (Row 8) + (Row 10)

Row 12 Total consumptive use (Row 3) + (Row 11)

Row 14. Depletion based on Glover Depletion factors (Row 12) X (Row 13).

Row 15 Year to date depletions (Row 14) + (Previous Row 15)

Note: Monthly send copies to.

Dale Straw  
CDWR  
PO Box 5728  
Pueblo, CO 81002

Dan Neuhold  
Water Commissioner  
30240 Co Rd 12  
Lamar, CO 81052

Bill Howland  
CDWR  
1640 W. 6th  
Las Animas, CO 81054

Don Higbee  
LAWMA  
PO Box 1161  
Lamar, CO 81052

Dwayne Turner  
Holly Rock  
31340 US Highway 50  
Holly, CO 81047

110.2

# STATE OF COLORADO

RECEIVED

OFFICE OF THE STATE ENGINEER  
Division of Water Resources  
Department of Natural Resources  
1313 Sherman Street, Room 819  
Denver, Colorado 80203  
Phone (303) 866-3581  
FAX (303) 866-3589

JAN - 6 1999

December 30 1998



Roy Romer  
Governor  
James S. Lochhead  
Executive Director  
Hal D. Simpson  
State Engineer

Mr. Frank C. Healy  
Helton & Williamsen, P.C.  
384 Inverness Drive South, Suite 144  
Englewood, Colorado 80112

Re: Prowers County Gravel Pit, Substitute Water Supply Plan  
DMG File No. M-97-016  
SE 1/4 NW 1/4 Section 26, T22S, R46W, 6th P.M.  
Water Division 2, Water District 67

Dear Mr. Healy:

We have reviewed your request for renewal of the Prowers County Gravel Pit substitute water supply plan for the plan year April 1, 1998 through March 31, 1999. The required fee of \$217 has been paid.

It is anticipated that at the end of mining operations the maximum exposed ground water surface of the gravel pit will be 3 acres. The anticipated maximum annual depletion to the Arkansas River will be 13.58 acre-feet per year, consisting of 12.1 acre-feet of net evaporation from 3 acres of ground water exposure, 0.48 acre-foot of water lost in product, and 1.0 acre-foot of water used for dust suppression. Below is a monthly breakdown of this consumption with lagged depletions to the Arkansas River.

Month	Net Evaporation (af)	Lost in Product (af)	Dust Suppression (af)	Total Consumption (af)	Lagged Depletion (af)
April	1.1	0.04	0.11	1.25	1.1
May	1.3	0.04	0.15	1.49	1.3
June	1.7	0.04	0.18	1.92	1.6
July	1.7	0.04	0.19	1.93	1.8
August	1.6	0.04	0.17	1.81	1.7
September	1.3	0.04	0.12	1.46	1.5
October	0.9	0.04	0.08	1.02	1.2
November	0.5	0.04	0.00	0.54	0.8
December	0.4	0.04	0.00	0.44	0.7
January	0.4	0.04	0.00	0.44	0.6
February	0.5	0.04	0.00	0.54	0.6
March	0.7	0.04	0.00	0.74	0.7
Total	12.1	0.48	1.00	13.58	13.6

This year's source of replacement water is to be administered by LAWMA. LAWMA has contacted with Colorado Springs for 1,677 acre-feet of reusable water for the plan year, 17 acre-feet of which will be dedicated to this plan to cover stream depletions and transit and storage charges. Mr. Jim Rogers, from whom the County is leasing the pit, is paying LAWMA for the

Enclosure 4

subject 17 acre-feet. The water is to be put into the Offset Account in John Martin Reservoir and then regulated on behalf of this plan.

Taek Hui Jensen and Andy Jensen, owners of the pit site, have dedicated 50 shares from the Hyde Ditch as an additional source of long term renewable supply of replacement water. You estimate the yield of these shares to average about 35 acre-feet of consumption annually.

This substitute water supply plan is hereby approved pursuant to Section 37-80-120, C.R.S., subject to the following conditions:

1. The pit's well permit, no. 49444-F, is due to expire on January 30, 1999. Either a statement of beneficial use, a request for extension, or an application for a new permit must be submitted by that date.
2. The total surface area of the groundwater exposed must not exceed 3.0 acres. The combined consumption due to evaporation, pumping for dust suppression, and water lost in product may not exceed 13.6 acre-foot annually.
3. LAWMA shall cause water to be delivered and credited to the Offset Account in John Martin Reservoir (or make releases from its Article II Storage Account in John Martin Reservoir) to replace the gravel pit's current depletions. Releases or deliveries of all water shall be coordinated with and under the direction of the Division Engineer and the Augmentation Coordinator.
4. Adequate accounting of depletions and replacements must be provided to the Water Commissioner and/or Division Engineer on a monthly basis or other interval acceptable to both of them, on forms acceptable to them. The accounting form must show, at a minimum:
  - The three categories of consumption.
  - Total actual monthly lagged depletions to be replaced (monthly and cumulative year-to-date),
  - The amounts of replacement water released to the Arkansas River or credited to the Offset Account in John Martin Reservoir, respectively, to replace the depletions due to the Prowers County Gravel Pit (monthly and cumulative year-to-date).
5. The accounting form shall be sufficient to demonstrate that the net effective replacement equaled or exceeded the total depletion on a monthly basis. All replacement water must be concurrent with depletions in quantity, timing and location, except that credits to the Offset Account may precede the depletions.
6. In accordance with amendments to Section 25-8-202-(7), C.R.S. and "Senate Bill 89-181 Rules and Regulations" adopted on February 4, 1992, the State Engineer shall determine whether or not the substitute supply is of a quality to meet requirements of use to senior appropriators. As such, water quality data or analysis may be requested at any time to determine if the water quality is appropriate for downstream water users.
7. Prowers County must make application to the Water Court for a permanent plan for augmentation within three years before completion of mining, to ensure the permanent replacement of all depletions, including long-term evaporation losses after the gravel mining operations have ceased.

8. This plan is valid through March 31, 1999, unless otherwise revoked or modified. If a plan for augmentation is not obtained in the Water Court by the expiration date, an annual renewal of this plan is required. Any request for renewal of this plan must be submitted with the statutory fee of \$217 at least 45 days prior to the date of expiration. Should this substitute water supply plan expire without renewal or be revoked prior to adjudication of a permanent plan for augmentation, all operations at the gravel pit must cease immediately.
9. This substitute water supply plan may be revoked or modified at any time should it be determined that injury to other water rights has or will occur as a result of this plan.
10. Acceptance of these conditions must be made in writing to this office, the Division Engineer (310 E. Abriendo Ave., Suite B, Pueblo, CO 81004), and the Water Commissioner (Dan Neuhold, 30240 County Road 12, Lamar, CO 81052) within two weeks of your receipt of this letter. The name, address, and phone number of a contact person who will be responsible for the operation and accounting of this plan must be provided with the acceptance.

This office does not condone the eradication of native wetland vegetation. Likewise, approval of this plan does not satisfy any federal laws or regulations or liability resulting therefrom. Please contact Keith Vander Horst of this office or Steve Witte, Division Engineer, in Pueblo at (719) 542-3368 if you have any questions concerning this approval.

Sincerely,



Kenneth W. Knox  
Assistant State Engineer

cc: Steven J. Witte, Division 2 Engineer  
Dan Neuhold, Water Commissioner, Water District 67

KWK/KVH/m-97-16.doc

# STATE OF COLORADO

RECEIVED

OFFICE OF THE STATE ENGINEER  
Division of Water Resources  
Department of Natural Resources  
1313 Sherman Street, Room 818  
Denver, Colorado 80203  
Phone (303) 866-3581  
FAX (303) 866-3589

JUL 02 1998

DIVISION ENGINEER  
PUEBLO, COLORADO



June 25, 1998

Roy Romer  
Governor

James S. Lochhead  
Executive Director

Hal D. Simpson  
State Engineer

Frank C. Healy  
Helton & Williamsen, P.C.  
384 Inverness Dr. South, # 144  
Englewood, CO 80112

RE: Justin Young Jr. Substitute Water Supply Plan  
Sections 29 & 30, T22S, R44W, 6<sup>th</sup> P.M.  
Water Division 2, Water District 67

Dear Mr. Healy:

We have reviewed your March 30, 1998 request for a substitute water supply plan on behalf of Justin Young Jr. to allow construction and operation of a number of wildlife ponds and "terraces". The structures will consist of one 13.5 acre-feet (9 surface acres) terrace in section 30, and two terraces totaling 3.2 acre-feet (2.31 surface acres) and one pond of 4.13 acre-feet (1.64 surface acres) in section 29. The source of water will be surface flows originating as tail waters from irrigation under the Amity Canal, and the structures will be constructed so as to be drainable. While the pond will contain water year round the terraces will only contain water during the months September through February.

Stream depletions will be caused by filling of all structures in September, and by subsequent surface evaporation. Your estimates of monthly depletions, detailed on Attachment A, also include amounts for saturation of the soil underlying the pond and terraces to a depth of 3 feet. This year's initial operations are estimated to create an annual depletion of about 62 acre-feet. With the pond not having to be filled, subsequent year's depletions are anticipated to be about 55 acre-feet. It is noted that contrary to the note on the proposed accounting form, ice cover of a pond will not reduce the chargeable evaporation.

At the end of February the 3 terraces will be drained. Your submittal stated LAWMA would want credit for this drainage, including "release" of water stored in the soil which is greater than the available water holding capacity. Prior to receiving any credits for soil moisture drainage, additional explanation and documentation of how such storage and drainage is determined and measured must be provided.

Replacement of stream depletions is proposed by use of 74 acre-feet of consumable water Mr. Young has purchased from Colorado Springs Utilities (CSU) via the Lower Arkansas Water Management Association (LAWMA). The 74 acre-feet will cover filling, evaporation, an estimated 20% transit and storage losses, and according to an April 17, 1998 agreement between CSU and LAWMA will be delivered into John Martin Reservoir's Kansas Offset account in June. LAWMA has agreed to provide accounting services for this plan.

Enclosure 5

The State and Division Engineers have reviewed the plan and the adequacy of each source of water provided for use as augmentation water, including, where necessary, the historical consumptive use of each water right, and return flows from diversion of waters imported into the Arkansas River Basin or other fully consumable waters proposed for use as augmentation water. In accordance with Section 25-8-202(7), C.R.S. and Senate Bill 89-181 Rules and Regulations adopted on February 4, 1992, the State Engineer has determined that subject to the terms and conditions below, the replacement supply is of a quality to meet the requirements of use to senior appropriators.

Based on stream depletions determined in accordance with the Amended 1996 Well Use Rules decreed in case no. 95CW211, and consistent with other provisions of the Rules, the State and Division Engineers have determined that, subject to the terms and conditions set forth below, it appears the plan to divert tributary ground water will provide sufficient augmentation water in amount, time, and location to replace out-of-priority depletions to senior surface water rights in Colorado, to the extent required by Rule 11, and all depletions to usable Stateline flow caused by such diversions and may therefore be approved pursuant to Rule 7.

This substitute water supply plan is hereby approved pursuant to Section 37-80-120, C.R.S., subject to the following conditions:

1. Accounting of water in this plan, including diversions into, out of, and storage within the pond and terraces, and replacement water deliveries must be provided to the Water Commissioner and Division Engineer on forms and at times acceptable to them.
2. The 3 storage terraces must be drained of water by the end of February.
3. This approval is of a temporary nature where as the uses approved in this plan are of a permanent nature that will require a court decreed plan for augmentation. Any request for renewal of this plan must include a description of progress made toward obtaining a permanent source of replacement water, and a target date for filing an application for a permanent plan with the water court.
4. Should a request for renewal of this plan be needed, such renewal request must be submitted to this office at least 45 days prior to the expiration date of this plan.
5. This plan shall be valid through August 31, 1999, unless otherwise revoked or modified.
6. This plan may be revoked or modified at any time should it be determined that injury to other vested water rights has or will occur as a result of the operation of this plan.
7. Should this substitute water supply plan expire without renewal or be revoked prior to adjudication of a permanent plan for augmentation, all water must be immediately drained from all structures.
8. In accordance with amendments to Section 25-8-202-(7), C.R.S. and "Senate Bill 89-181 Rules and Regulations" adopted on February 4, 1992, the State Engineer shall determine whether or not the substitute supply is of a quality to meet requirements of use to senior appropriators. As such, water quality data or analysis may be requested at any time to determine if the water quality is appropriate for downstream water users.



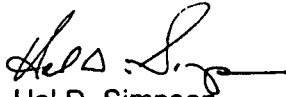
Frank C. Healy  
June 25, 1998

Page 3

9. Acceptance of these conditions must be made in writing to this office, the Division Engineer (310 E. Abriendo, Suite B, Pueblo CO 81004), and the Water Commissioner (Dan Neuhold, 30240 County Road 12, Lamar, CO 81052) within two weeks of your receipt of this letter. The name, address, and phone number of a contact person who will be responsible for the operation and accounting of this plan must be provided with the acceptance.

Should you have any questions, please contact Keith Vander Horst of this office or Steve Witte, Division Engineer, in our Division 2 office in Pueblo at (719) 542-3368.

Sincerely,

  
Hal D. Simpson  
State Engineer

cc: Steve Witte, Division Engineer  
Dan Neuhold, Water Commissioner

HDS/KVH:young.doc

Justin Young Jr. Substitute Water Supply Plan

Depletions in Acre-Feet

<u>Month</u>	<u>West Terrace</u>		<u>South Dam</u>		<u>South Terraces</u>		<u>Total Depletion</u>
	<u>Fill</u>	<u>Evaporation</u>	<u>Fill</u>	<u>Evaporation</u>	<u>Fill</u>	<u>Evaporation</u>	
September	27.71	3.77	6.39	0.69	6.64	0.89	46.09
October		2.69		0.49		0.64	3.82
November		1.45		0.26		0.34	2.05
December		1.17		0.21		0.28	1.66
January		1.13		0.21		0.27	1.61
February		1.40		0.26		0.33	1.99
March				0.37			0.37
April				0.62			0.62
May				0.69			0.69
June				0.92			0.92
July				1.01			1.01
<u>August</u>				<u>0.89</u>			<u>0.89</u>
Annual	<u>27.71</u>	<u>11.61</u>	<u>6.39</u>	<u>6.62</u>	<u>6.64</u>	<u>2.75</u>	61.72

West Terrace and South Terraces drained at end of February

SWSP Stateline

Enclosure 6

AUGMENTATION PLAN IMPLEMENTATION SPREADSHEET										
USER	R11	R12	R13	R14	R15	R16	R17	R18	R21	SUM
LAWMA										
TOTAL DEPLETIONS			18.66	10.2		49.91	556	28.487		663.257
REPLACEMENTS										
FRY-ARK RETURN FLOWS										0
COLORADO BEEF										0
FORT BENT DITCH SHARES										0
STUBBS DIRECT FLOW										0
X-Y DIRECT FLOW										0
MANVEL DIRECT FLOW										0
OFFSET ACCOUNT WATER	668.4									668.4
	-668.4	-667.52	-647.99	-636.94	-636.11	-585.36	-28.597	-0.0721		
BALANCE FORWARDED	0	0	0	0	0	0	0	0	0	0

River and Ditch Station	Date	Inflows	Outflow	Remarks
Arkansas at Garden City, KS	11/1/98	318		
Arkansas at Garden City, KS	11/2/98	349		
Arkansas at Garden City, KS	11/3/98	354		
Arkansas at Garden City, KS	11/4/98	372		
Arkansas at Garden City, KS	11/5/98	367		
Arkansas at Garden City, KS	11/6/98	386		
Arkansas at Garden City, KS	11/7/98	367		
Arkansas at Garden City, KS	11/8/98	349		
Arkansas at Garden City, KS	11/9/98	367		
Arkansas at Garden City, KS	11/10/98	377		
Arkansas at Garden City, KS	11/11/98	367		
Arkansas at Garden City, KS	11/12/98	363		
Arkansas at Garden City, KS	11/13/98	344		
Arkansas at Garden City, KS	11/14/98	358		
Arkansas at Garden City, KS	11/15/98	354		
Arkansas at Garden City, KS	11/16/98	354		
Arkansas at Garden City, KS	11/17/98	335		
Arkansas at Garden City, KS	11/18/98	322		
Arkansas at Garden City, KS	11/19/98	305		
Arkansas at Garden City, KS	11/20/98	280		
Arkansas at Garden City, KS	11/21/98	292		
Arkansas at Garden City, KS	11/22/98	305		
Arkansas at Garden City, KS	11/23/98	314		
Arkansas at Garden City, KS	11/24/98	314		
Arkansas at Garden City, KS	11/25/98	296		
Arkansas at Garden City, KS	11/26/98	280		
Arkansas at Garden City, KS	11/27/98	280		
Arkansas at Garden City, KS	11/28/98	264		
Arkansas at Garden City, KS	11/29/98	264		
Arkansas at Garden City, KS	11/30/98	245		

Enclosure 7



## STATE OF COLORADO

WATER DIVISION 2  
OFFICE OF THE STATE ENGINEER

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<http://water.state.co.us/default.htm>

David L. Pope  
Kansas Chief Engineer  
Kansas Board of Agriculture  
901 S. Kansas Avenue, 2nd Floor  
Topeka, KS 66612-1283

Ms. Mary Louise Clay  
Recording Secretary  
Arkansas River Compact Administration  
307 South Fifth Street  
Lamar, CO 81052

RE: Monthly Report of Colorado Pumping and Offset Account Operations for December, 1998

Dear Mr. Pope and Ms. Clay:

The purpose of this letter is to provide the monthly report required by paragraph 12 of the **Resolution Concerning an Offset Account in John Martin Reservoir for Colorado Pumping As Amended March 30, 1998** ("Resolution"). This letter reports the monthly pumping in excess of Colorado's pre-Compact entitlement, Colorado's monthly accounting of Compact compliance, and the status of water delivered to the Offset Account, all during the month of December, 1998.

Table 1 shows the amount of pumping during the month of December, 1998 by irrigation wells pumping from the Valley Fill Aquifer and surficial aquifers along the Arkansas River between Pueblo and the Stateline, as well as the corresponding wellhead depletions, by user group. The wellhead depletions were computed using the presumptive stream depletions in Rule 4.2 of the **AMENDED RULES AND REGULATIONS GOVERNING THE DIVERSION AND USE OF TRIBUTARY GROUND WATER IN THE ARKANSAS RIVER BASIN, COLORADO** ("Rules") approved in Case No. 95CW211.

Table 2 shows the wellhead depletions due to pumping by irrigation wells in the user groups below John Martin Reservoir that are in excess of the pre-Compact entitlements.

Since the depletions caused by pumping above John Martin Reservoir were fully replaced, and that accounting has been provided to Kansas, and the depletions caused by pumping below John Martin Reservoir which affect senior surface water rights in Colorado were fully replaced, and that accounting has been provided to Kansas, the accounting in this report shows only remaining depletions caused by irrigation pumping in excess of the pre-Compact entitlements for those



Bill Owens  
Governor  
Greg E. Walcher  
Executive Director  
Hal D. Simpson, P.E.  
State Engineer  
Steven J. Witte, P.E.  
Division Engineer

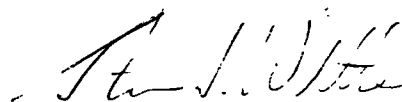
river reaches where no replacements or only partial replacements were made to replace out-of-priority depletions to senior surface water rights in Colorado.

Table 3 shows the remaining stream depletions caused by irrigation pumping in excess of the pre-Compact entitlements which were not replaced by making replacements to senior surface water rights in Colorado. These stream depletions were computed using the wellhead depletions shown in Table 2 with the Ground Water Accounting Model. Please note that in Reaches 11, 12, and 13, replacements to senior surface water rights in Colorado replaced 0% of the stream depletions caused by pumping affecting those reaches. Also note that in Reaches 14, 15, and 16, replacements to senior surface water rights in Colorado replaced 0% of the stream depletions caused by pumping affecting those reaches. These percentages reflect the fact that there was a call by a Colorado surface water right in those reaches on none of the days during December. The remaining depletions shown in Table 3 are the estimated stream depletions caused by irrigation pumping in excess of the pre-Compact entitlements remaining after replacements were made to senior surface water rights in Colorado. Table 3 also shows the estimated depletions to usable Stateline flow which were calculated using the assumptions in paragraph 5.B of the Resolution, and the replacements to Stateline flows which were made during the month.

As indicated in Table 3, 476.8 acre-feet of fully consumable water has been made available to Kansas under the provisions of paragraph 5B of the Resolution. Under those provisions, 476.8 acre-feet will be moved from the Colorado Consumable Water subaccount to the Kansas Consumable Water subaccount of the Offset Account 30 days after the date of this notification letter in order that evaporation be charged as provided for by paragraph 5B of the Resolution. As of December 31, 1998, there were 5087.90 acre-feet being stored in the offset account.

Please contact me if you have any questions or require additional information.

Sincerely,



Steven J. Witte  
Division Engineer  
Colorado Division of Water Resources

cc: Mark Rude  
John Draper  
Dale Book  
Hal Simpson  
Dennis Montgomery  
Bill Howland

Larry E. Trujillo, Sr.  
Randy Hayzlett  
David Brenn  
Peter Evans  
Thomas R. Pointon  
James G. Rogers

**TABLE 1**  
**Pumping By Rule 3 Irrigation Wells**  
**December, 1998**

<b>USER NO.</b>	<b>DITCH NAME</b>	<b>AF PUMPED</b>	<b>WELLHEAD DEPL</b>
1	Bessemer	23	22
2	Booth Orchard	0	0
3	Excelsior	6	6
4	Collier	0	0
5	Colorado	8	3
6	Rocky Ford Highline	1	0
7	Oxford	0	0
8	Otero	0	0
9	Catlin	7	7
10	Fort Lyon Up Stream	29	9
11	Rocky Ford	0	0
12	Holbrook	1	0
13	Las Animas Consolidated	1	0
14	Baldwin-Stubbs	0	0
15	Fort Bent	14	4
16	Keese	0	0
17	Amity	47	23
18	Lamar/Manvel	24	13
19	Hyde	2	1
20	Fort Lyon Down Stream	149	45
21	XY Graham	1	0
22	Buffalo	39	12
23	Sisson	0	0
24	Stateline Sole Source	28	21
600	LAWMA APOD	0	0
601	LAWMA APOD	0	0
602	LAWMA APOD	0	0
	Totals	380	166



**TABLE 2**  
**Wellhead Depletions From Irrigation Wells Below John Martin Reservoir (Acre-Feet)**  
**(Reduced By Pre-Compact Entitlements)**  
**December, 1998**

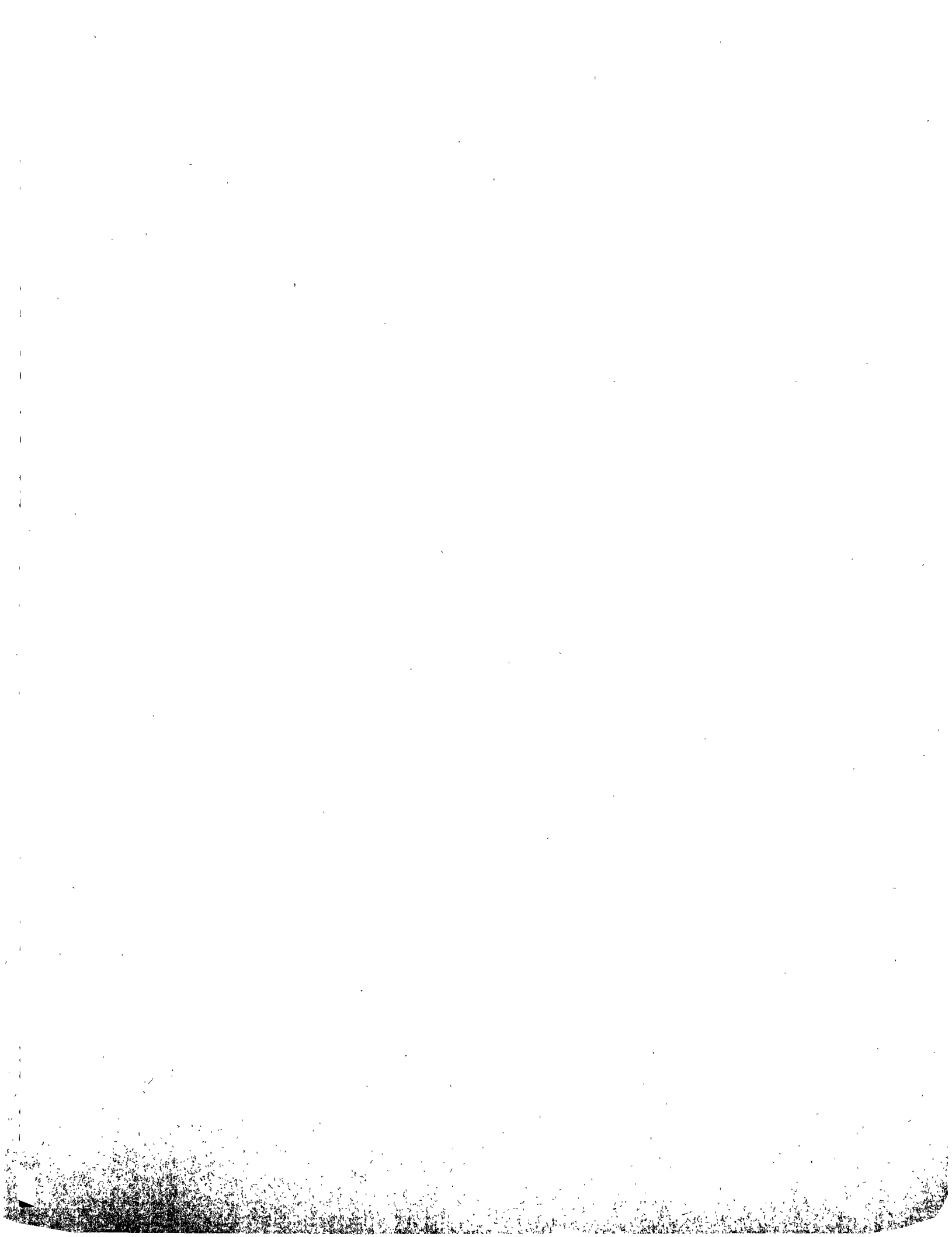
**USER NUMBER**

15	16	17	18	19	20	21	22	23	24	Total
4	0	0	13	1	45	0	12	0	21	96

**TABLE 3**  
**Remaining Depletions To Usable Stateline Flow (Acre-Feet)**  
**December, 1998**

**REACH NUMBER**

	11	12	13	14	15	16	17	18	21	Sum
Remaining Depletion	21	58	114	115	72	84	195	853	47	1559
Depletion to Usable SL Flow	7.33	20.24	39.79	40.14	25.13	29.32	68.06	297.70	16.40	544.11
Replacements										
FRY-ARK Return Flows	7.33	18.15	26.18	19.54						71.2
LAWMA-CO Beef Credit										
LAWMA-Ft Bent Ditch Shrs										
LAWMA-Stubbs Direct Flow										
LAWMA-XY Direct Flow										
LAWMA-Manvel Direct Flow										
Offset Account Water	476.8									476.8
Total Replacements	484.13	18.15	26.18	19.54						548



## STATE OF COLORADO

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OFFICE OF THE STATE ENGINEER

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March 15, 1999

<http://water.state.co.us/default.htm>

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Kansas Chief Engineer  
Kansas Board of Agriculture  
901 S. Kansas Avenue, 2nd Floor  
Topeka, KS 66612-1283

Bill Owens  
Governor

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Executive Director

Hal D. Simpson, P.E.  
State Engineer

Steven J. Witte, P.E.  
Division Engineer

Ms. Mary Louise Clay  
Recording Secretary  
Arkansas River Compact Administration  
307 South Fifth Street  
Lamar, CO 81052

RE: Monthly Report of Colorado Pumping and Offset Account Operations for January, 1999

Dear Mr. Pope and Ms. Clay:

The purpose of this letter is to provide the monthly report required by paragraph 12 of the **Resolution Concerning an Offset Account in John Martin Reservoir for Colorado Pumping As Amended March 30, 1998** ("Resolution"). This letter reports the monthly pumping in excess of Colorado's pre-Compact entitlement, Colorado's monthly accounting of Compact compliance, and the status of water delivered to the Offset Account, all during the month of January, 1999.

Table 1 shows the amount of pumping during the month of January, 1999 by irrigation wells pumping from the Valley Fill Aquifer and surficial aquifers along the Arkansas River between Pueblo and the Stateline, as well as the corresponding wellhead depletions, by user group. The wellhead depletions were computed using the presumptive stream depletions in Rule 4.2 of the **AMENDED RULES AND REGULATIONS GOVERNING THE DIVERSION AND USE OF TRIBUTARY GROUND WATER IN THE ARKANSAS RIVER BASIN, COLORADO** ("Rules") approved in Case No. 95CW211.

Table 2 shows the wellhead depletions due to pumping by irrigation wells in the user groups below John Martin Reservoir that are in excess of the pre-Compact entitlements.

Since the depletions caused by pumping above John Martin Reservoir were fully replaced, and that accounting has been provided to Kansas, and the depletions caused by pumping below John Martin Reservoir which affect senior surface water rights in Colorado were fully replaced, and that accounting has been provided to Kansas, the accounting in this report shows only remaining depletions caused by irrigation pumping in excess of the pre-Compact entitlements for those

river reaches where no replacements or only partial replacements were made to replace out-of-priority depletions to senior surface water rights in Colorado.

Table 3 shows the remaining stream depletions caused by irrigation pumping in excess of the pre-Compact entitlements which were not replaced by making replacements to senior surface water rights in Colorado. These stream depletions were computed using the wellhead depletions shown in Table 2 with the Ground Water Accounting Model. Please note that in Reaches 11, 12, and 13, replacements to senior surface water rights in Colorado replaced 0% of the stream depletions caused by pumping affecting those reaches. Also note that in Reaches 14, 15, and 16, replacements to senior surface water rights in Colorado replaced 0% of the stream depletions caused by pumping affecting those reaches. These percentages reflect the fact that there was a call by a Colorado surface water right in those reaches on none of the days during January. The remaining depletions shown in Table 3 are the estimated stream depletions caused by irrigation pumping in excess of the pre-Compact entitlements remaining after replacements were made to senior surface water rights in Colorado. Table 3 also shows the estimated depletions to usable Stateline flow which were calculated using the assumptions in paragraph 5.B of the Resolution, and the replacements to Stateline flows which were made during the month.

As indicated in Table 3, 391.7 acre-feet of fully consumable water has been made available to Kansas under the provisions of paragraph 5B of the Resolution. Under those provisions, 391.7 acre-feet will be moved from the Colorado Consumable Water subaccount to the Kansas Consumable Water subaccount of the Offset Account 30 days after the date of this notification letter in order that evaporation be charged as provided for by paragraph 5B of the Resolution. Also, a transfer of 165.33 acre-feet of return flow water was made from the Offset Account to conservation storage during the month of January, 1999. This transfer was described in my letter dated February 8, 1999. As of January 31, 1999, there were 4896.39 acre-feet being stored in the offset account.

Please contact me if you have any questions or require additional information.

Sincerely,



Steven J. Witte  
Division Engineer  
Colorado Division of Water Resources

cc: Mark Rude  
John Draper  
Dale Book  
Hal Simpson  
Dennis Montgomery  
Bill Howland

Randy Hayzlett  
David Brenn  
Peter Evans  
Thomas R. Pointon  
James G. Rogers

**TABLE 1**  
**Pumping By Rule 3 Irrigation Wells**  
**January, 1999**

USER NO.	DITCH NAME	AF PUMPED	WELLHEAD DEPL
1	Bessemer	5	3
2	Booth Orchard	1	1
3	Excelsior	7	5
4	Collier	0	0
5	Colorado	0	0
6	Rocky Ford Highline	0	0
7	Oxford	0	0
8	Otero	0	0
9	Catlin	36	17
10	Fort Lyon Up Stream	20	9
11	Rocky Ford	1	0
12	Holbrook	2	1
13	Las Animas Consolidated	1	1
14	Baldwin-Stubbs	0	0
15	Fort Bent	16	5
16	Keese	0	0
17	Amity	63	31
18	Lamar/Manvel	19	9
19	Hyde	0	0
20	Fort Lyon Down Stream	119	36
21	XY Graham	0	0
22	Buffalo	0	0
23	Sisson	0	0
24	Stateline Sole Source	0	0
600	LAWMA APOD	0	0
601	LAWMA APOD	0	0
602	LAWMA APOD	0	0
	Totals	290	118

**TABLE 2**  
**Wellhead Depletions From Irrigation Wells Below John Martin Reservoir (Acre-Feet)**  
**(Reduced By Pre-Compact Entitlements)**  
**January, 1999**

<b>USER NUMBER</b>										
<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>	<b>Total</b>
5	0	0	9	0	36	0	0	0	0	50

**TABLE 3**  
**Remaining Depletions To Usable Stateline Flow (Acre-Feet)**  
**January, 1999**

<b>REACH NUMBER</b>										
	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>21</b>	<b>Sum</b>
Remaining Depletion	19	46	100	102	62	74	166	681	45	1295
Depletion to Usable SL Flow	6.63	16.05	34.90	35.60	21.64	25.83	57.93	237.67	15.70	451.95
Replacements										
FRY-ARK Return Flows	6.82	14.66	24.43	18.15						64.06
LAWMA-CO Beef Credit										
LAWMA-Ft Bent Ditch Shrs										
LAWMA-Stubbs Direct Flow										
LAWMA-XY Direct Flow										
LAWMA-Manvel Direct Flow										
Offset Account Water	391.7									391.7
Total Replacements	398.52	14.66	24.43	18.15						455.76



## STATE OF COLORADO

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Recording Secretary  
Arkansas River Compact Administration  
307 South Fifth Street  
Lamar, CO 81052

RE: Monthly Report of Colorado Pumping and Offset Account Operations for February, 1999

Dear Mr. Pope and Ms. Clay:

The purpose of this letter is to provide the monthly report required by paragraph 12 of the **Resolution Concerning an Offset Account in John Martin Reservoir for Colorado Pumping As Amended March 30, 1998** ("Resolution"). This letter reports the monthly pumping in excess of Colorado's pre-Compact entitlement, Colorado's monthly accounting of Compact compliance, and the status of water delivered to the Offset Account, all during the month of February, 1999.

Table 1 shows the amount of pumping during the month of February, 1999 by irrigation wells pumping from the Valley Fill Aquifer and surficial aquifers along the Arkansas River between Pueblo and the Stateline, as well as the corresponding wellhead depletions, by user group. The wellhead depletions were computed using the presumptive stream depletions in Rule 4.2 of the **AMENDED RULES AND REGULATIONS GOVERNING THE DIVERSION AND USE OF TRIBUTARY GROUND WATER IN THE ARKANSAS RIVER BASIN, COLORADO** ("Rules") approved in Case No. 95CW211.

Table 2 shows the wellhead depletions due to pumping by irrigation wells in the user groups below John Martin Reservoir that are in excess of the pre-Compact entitlements.

Since the depletions caused by pumping above John Martin Reservoir were fully replaced, and that accounting has been provided to Kansas, and the depletions caused by pumping below John Martin Reservoir which affect senior surface water rights in Colorado were fully replaced, and that accounting has been provided to Kansas, the accounting in this report shows only remaining depletions caused by irrigation pumping in excess of the pre-Compact entitlements for those



Bill Owens  
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Division Engineer



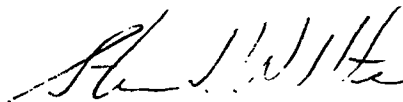
river reaches where no replacements or only partial replacements were made to replace out-of-priority depletions to senior surface water rights in Colorado.

Table 3 shows the remaining stream depletions caused by irrigation pumping in excess of the pre-Compact entitlements which were not replaced by making replacements to senior surface water rights in Colorado. These stream depletions were computed using the wellhead depletions shown in Table 2 with the Ground Water Accounting Model. Please note that in Reaches 11, 12, and 13, replacements to senior surface water rights in Colorado replaced 0% of the stream depletions caused by pumping affecting those reaches. Also note that in Reaches 14, 15, and 16, replacements to senior surface water rights in Colorado replaced 0% of the stream depletions caused by pumping affecting those reaches. These percentages reflect the fact that there was a call by a Colorado surface water right in those reaches on none of the days during February. The remaining depletions shown in Table 3 are the estimated stream depletions caused by irrigation pumping in excess of the pre-Compact entitlements remaining after replacements were made to senior surface water rights in Colorado. Table 3 also shows the estimated depletions to usable Stateline flow which were calculated using the assumptions in paragraph 5.B of the Resolution, and the replacements to Stateline flows which were made during the month.

As indicated in Table 3, 315.4 acre-feet of fully consumable water has been made available to Kansas under the provisions of paragraph 5B of the Resolution. Under those provisions, 315.4 acre-feet will be moved from the Colorado Consumable Water subaccount to the Kansas Consumable Water subaccount of the Offset Account 30 days after the date of this notification letter in order that evaporation be charged as provided for by paragraph 5B of the Resolution. As of February 28, 1999, there were 4859.89 acre-feet being stored in the offset account.

Please contact me if you have any questions or require additional information.

Sincerely,



Steven J. Witte  
Division Engineer  
Colorado Division of Water Resources

cc: Mark Rude  
John Draper  
Dale Book  
Hal Simpson  
Dennis Montgomery  
Bill Howland

Randy Hayzlett  
David Brenn  
Peter Evans  
Thomas R. Pointon  
James G. Rogers

**TABLE 1**  
**Pumping By Rule 3 Irrigation Wells**  
**February, 1999**

<b>USER NO.</b>	<b>DITCH NAME</b>	<b>AF PUMPED</b>	<b>WELLHEAD DEPL</b>
1	Bessemer	26	13
2	Booth Orchard	4	3
3	Excelsior	57	41
4	Collier	0	0
5	Colorado	1	0
6	Rocky Ford Highline	0	0
7	Oxford	6	6
8	Otero	0	0
9	Catlin	14	12
10	Fort Lyon Up Stream	36	25
11	Rocky Ford	0	0
12	Holbrook	3	1
13	Las Animas Consolidated	2	1
14	Baldwin-Stubbs	0	0
15	Fort Bent	17	5
16	Keese	0	0
17	Amity	77	38
18	Lamar/Manvel	151	45
19	Hyde	0	0
20	Fort Lyon Down Stream	185	55
21	XY Graham	42	13
22	Buffalo	0	0
23	Sisson	0	0
24	Stateline Sole Source	0	0
600	LAWMA APOD	4	1
601	LAWMA APOD	0	0
602	LAWMA APOD	0	0
	<b>Totals</b>	<b>625</b>	<b>259</b>

**TABLE 2**  
**Wellhead Depletions From Irrigation Wells Below John Martin Reservoir (Acre-Feet)**  
**(Reduced By Pre-Compact Entitlements)**  
**February, 1999**

**USER NUMBER**

15	16	17	18	19	20	21	22	23	24	Total
5	0	1	45	0	55	13	0	0	0	119

**TABLE 3**  
**Remaining Depletions To Usable Stateline Flow (Acre-Feet)**  
**February, 1999**

**REACH NUMBER**

	11	12	13	14	15	16	17	18	21	Sum
Remaining Depletion	17	39	91	93	54	67	147	563	41	1112
Depletion to Usable SL Flow	5.9	13.6	31.8	32.5	18.8	23.4	51.3	196.5	14.3	388.1
Replacements										
FRY-ARK Return Flows	5.93	12.91	23.03	16.75						58.62
LAWMA-Justin Young Credit						16.7				16.7
LAWMA-Ft Bent Ditch Shrs										
LAWMA-Stubbs Direct Flow										
LAWMA-XY Direct Flow										
LAWMA-Manvel Direct Flow										
Offset Account Water	315.4									315.4
Total Replacements	321.33	12.91	23.03	16.75		16.7				390.72



## STATE OF COLORADO

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May 14, 1999

<http://water.state.co.us/default.htm>David L. Pope  
Kansas Chief Engineer  
Kansas Board of Agriculture  
901 S. Kansas Avenue, 2nd Floor  
Topeka, KS 66612-1283Bill Owens  
GovernorGreg E. Walcher  
Executive DirectorHal D. Simpson, P.E.  
State EngineerSteven J. Witte, P.E.  
Division EngineerMs. Mary Louise Clay  
Recording Secretary  
Arkansas River Compact Administration  
307 South Fifth Street  
Lamar, CO 81052

RE: Monthly Report of Colorado Pumping and Offset Account Operations for March, 1999

Dear Mr. Pope and Ms. Clay:

The purpose of this letter is to provide the monthly report required by paragraph 12 of the **Resolution Concerning an Offset Account in John Martin Reservoir for Colorado Pumping As Amended March 30, 1998** ("Resolution"). This letter reports the monthly pumping in excess of Colorado's pre-Compact entitlement, Colorado's monthly accounting of Compact compliance, and the status of water delivered to the Offset Account, all during the month of March, 1999.

Table 1 shows the amount of pumping during the month of March, 1999 by irrigation wells pumping from the Valley Fill Aquifer and surficial aquifers along the Arkansas River between Pueblo and the Stateline, as well as the corresponding wellhead depletions, by user group. The wellhead depletions were computed using the presumptive stream depletions in Rule 4.2 of the **AMENDED RULES AND REGULATIONS GOVERNING THE DIVERSION AND USE OF TRIBUTARY GROUND WATER IN THE ARKANSAS RIVER BASIN, COLORADO** ("Rules") approved in Case No. 95CW211.

Table 2 shows the wellhead depletions due to pumping by irrigation wells in the user groups below John Martin Reservoir that are in excess of the pre-Compact entitlements.

Since the depletions caused by pumping above John Martin Reservoir were fully replaced, and that accounting has been provided to Kansas, and the depletions caused by pumping below John Martin Reservoir which affect senior surface water rights in Colorado were fully replaced, and that accounting has been provided to Kansas, the accounting in this report shows only remaining depletions caused by irrigation pumping in excess of the pre-Compact entitlements for those

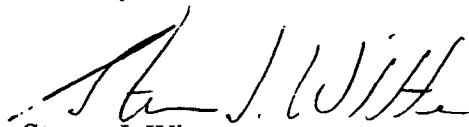
river reaches where no replacements or only partial replacements were made to replace out-of-priority depletions to senior surface water rights in Colorado.

Table 3 shows the remaining stream depletions caused by irrigation pumping in excess of the pre-Compact entitlements which were not replaced by making replacements to senior surface water rights in Colorado. These stream depletions were computed using the wellhead depletions shown in Table 2 with the Ground Water Accounting Model. Please note that in Reaches 11, 12, and 13, replacements to senior surface water rights in Colorado replaced 35% of the stream depletions caused by pumping affecting those reaches. Also note that in Reaches 14, 15, and 16, replacements to senior surface water rights in Colorado replaced 0% of the stream depletions caused by pumping affecting those reaches. These percentages reflect the fact that there was a call by a Colorado surface water right in those reaches on 11 and 0 days respectively out of the 31 days during March. The remaining depletions shown in Table 3 are the estimated stream depletions caused by irrigation pumping in excess of the pre-Compact entitlements remaining after replacements were made to senior surface water rights in Colorado. Table 3 also shows the estimated depletions to usable Stateline flow which were calculated using the assumptions in paragraph 5.B of the Resolution, and the replacements to Stateline flows which were made during the month.

As indicated in Table 3, 288.7 acre-feet of fully consumable water has been made available to Kansas under the provisions of paragraph 5B of the Resolution. Under those provisions, 288.7 acre-feet would have been moved from the Colorado Consumable Water subaccount to the Kansas Consumable Water subaccount of the Offset Account 30 days after the date of this notification letter in order that evaporation be charged as provided for by paragraph 5B of the Resolution. However, the Offset Account was spilled after the March, 1999 replacement operations took place but before this accounting could be made. As of March 31, 1999, there were 5626.10 acre-feet being stored in the offset account.

Please contact me if you have any questions or require additional information.

Sincerely,



Steven J. Witte  
Division Engineer  
Colorado Division of Water Resources

cc: Mark Rude

John Draper

Dale Book

Hal Simpson

Dennis Montgomery

Bill Howland

Randy Hayzlett

David Brenn

Peter Evans

Thomas R. Pointon

James G. Rogers

**TABLE 1**  
**Pumping By Rule 3 Irrigation Wells**  
**March, 1999**

USER NO.	DITCH NAME	AF PUMPED	WELLHEAD DEPL
1	Bessemer	451	197
2	Booth Orchard	52	35
3	Excelsior	114	79
4	Collier	23	7
5	Colorado	81	45
6	Rocky Ford Highline	73	29
7	Oxford	52	23
8	Otero	61	20
9	Catlin	341	127
10	Fort Lyon Up Stream	205	65
11	Rocky Ford	13	6
12	Holbrook	25	8
13	Las Animas Consolidated	1	1
14	Baldwin-Stubbs	0	0
15	Fort Bent	15	5
16	Keese	7	2
17	Amity	73	36
18	Lamar/Manvel	254	79
19	Hyde	0	0
20	Fort Lyon Down Stream	196	61
21	XY Graham	0	0
22	Buffalo	0	0
23	Sisson	0	0
24	Stateline Sole Source	55	42
600	LAWMA APOD	122	39
601	LAWMA APOD	0	0
602	LAWMA APOD	0	0
	Totals	2214	906

**TABLE 2**  
**Wellhead Depletions From Irrigation Wells Below John Martin Reservoir (Acre-Feet)**  
**(Reduced By Pre-Compact Entitlements)**  
**March, 1999**

USER NUMBER										
15	16	17	18	19	20	21	22	23	24	Total
5	2	1	79	0	60	0	0	0	42	189

**TABLE 3**  
**Remaining Depletions To Usable Stateline Flow (Acre-Feet)**  
**March, 1999**

REACH NUMBER										
	11	12	13	14	15	16	17	18	21	Sum
Remaining Depletion	10.4	22.1	55.25	87	51	60	133	482	36	936.75
Depletion to Usable SL Flow	3.63	7.71	19.28	30.36	17.80	20.94	46.42	168.22	12.56	326.92
Replacements										
FRY-ARK Return Flows	3.40	7.49	14.06	15.70						40.65
LAWMA-Justin Young Credit										
LAWMA-Ft Bent Ditch Shrs										
LAWMA-Stubbs Direct Flow										
LAWMA-XY Direct Flow										
LAWMA-Manvel Direct Flow										
Offset Account Water	288.7									288.7
Total Replacements	292.1	7.49	14.06	15.70						329.35





## STATE OF COLORADO

WATER DIVISION 2  
OFFICE OF THE STATE ENGINEER310 East Abriendo, Suite B  
Pueblo, Colorado 81004  
Phone: (719) 542-3368  
FAX: (719) 544-0800<http://water.state.co.us/default.htm>

June 21, 1999

Bill Owens  
GovernorGreg E. Walcher  
Executive DirectorHal D. Simpson, P.E.  
State EngineerSteven J. Witte, P.E.  
Division EngineerDavid L. Pope  
Kansas Chief Engineer  
Kansas Board of Agriculture  
901 S. Kansas Avenue, 2nd Floor  
Topeka, KS 66612-1283Ms. Mary Louise Clay  
Recording Secretary  
Arkansas River Compact Administration  
307 South Fifth Street  
Lamar, CO 81052

RE: Monthly Report of Colorado Pumping and Offset Account Operations for April, 1999

Dear Mr. Pope and Ms. Clay:

The purpose of this letter is to provide the monthly report required by paragraph 12 of the **Resolution Concerning an Offset Account in John Martin Reservoir for Colorado Pumping As Amended March 30, 1998** ("Resolution"). This letter reports the monthly pumping in excess of Colorado's pre-Compact entitlement, Colorado's monthly accounting of Compact compliance, and the status of water delivered to the Offset Account, all during the month of April, 1999.

Table 1 shows the amount of pumping during the month of April, 1999 by irrigation wells pumping from the Valley Fill Aquifer and surficial aquifers along the Arkansas River between Pueblo and the Stateline, as well as the corresponding wellhead depletions, by user group. The wellhead depletions were computed using the presumptive stream depletions in Rule 4.2 of the **AMENDED RULES AND REGULATIONS GOVERNING THE DIVERSION AND USE OF TRIBUTARY GROUND WATER IN THE ARKANSAS RIVER BASIN, COLORADO** ("Rules") approved in Case No. 95CW211.

Table 2 shows the wellhead depletions due to pumping by irrigation wells in the user groups below John Martin Reservoir that are in excess of the pre-Compact entitlements.

Since the depletions caused by pumping above John Martin Reservoir were fully replaced, and that accounting has been provided to Kansas, and the depletions caused by pumping below John Martin Reservoir which affect senior surface water rights in Colorado were fully replaced, and that accounting has been provided to Kansas, the accounting in this report shows only remaining depletions caused by irrigation pumping in excess of the pre-Compact entitlements for those

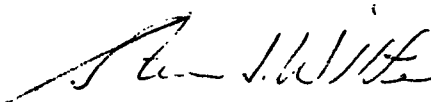
river reaches where no replacements or only partial replacements were made to replace out-of-priority depletions to senior surface water rights in Colorado.

Table 3 shows the remaining stream depletions caused by irrigation pumping in excess of the pre-Compact entitlements which were not replaced by making replacements to senior surface water rights in Colorado. These stream depletions were computed using the wellhead depletions shown in Table 2 with the Ground Water Accounting Model. Please note that in Reaches 11, 12, and 13, replacements to senior surface water rights in Colorado replaced 33% of the stream depletions caused by pumping affecting those reaches. Also note that in Reaches 14, 15, and 16, replacements to senior surface water rights in Colorado replaced 37% of the stream depletions caused by pumping affecting those reaches. These percentages reflect the fact that there was a call by a Colorado surface water right in those reaches on 10 and 11 days respectively out of the 30 days during April. The remaining depletions shown in Table 3 are the estimated stream depletions caused by irrigation pumping in excess of the pre-Compact entitlements remaining after replacements were made to senior surface water rights in Colorado. Table 3 also shows the estimated depletions to usable Stateline flow which were calculated using the assumptions in paragraph 5.B of the Resolution, and the replacements to Stateline flows which were made during the month.

A delivery of water to the Offset Account was initiated during the month of April, 1999 by LAWMA using consumptive use credits from their ownership in the Highland Canal. This delivery netted 418.67 acre-feet of fully consumable water and 18.8 acre-feet of return flow water into the Offset Account by the end of April, 1999. As of April 30, 1999, there were 5989.63 acre-feet being stored in the offset account. The entire contents of the Offset Account on May 3, 1999, 5985.95 acre-feet, were spilled by the end of that day. Accounting spreadsheets for the Offset Account are enclosed for both April and May.

Please contact me if you have any questions or require additional information.

Sincerely,



Steven J. Witte  
Division Engineer  
Colorado Division of Water Resources

2 Enclosures

cc: Mark Rude

John Draper

Dale Book

Hal Simpson

Dennis Montgomery

Bill Howland

Randy Hayzlett

David Brenn

Peter Evans

Thomas R. Pointon

James G. Rogers

**TABLE 1**  
**Pumping By Rule 3 Irrigation Wells**  
**April, 1999**

USER NO.	DITCH NAME	AF PUMPED	WELLHEAD DEPL
1	Bessemer	641	241
2	Booth Orchard	91	61
3	Excelsior	122	82
4	Collier	6	3
5	Colorado	190	87
6	Rocky Ford Highline	252	76
7	Oxford	185	56
8	Otero	183	56
9	Catlin	712	257
10	Fort Lyon Up Stream	421	136
11	Rocky Ford	171	57
12	Holbrook	106	32
13	Las Animas Consolidated	4	2
14	Baldwin-Stubbs	703	351
15	Fort Bent	6	2
16	Keese	252	76
17	Amity	469	256
18	Lamar/Manvel	422	139
19	Hyde	15	7
20	Fort Lyon Down Stream	322	137
21	XY Graham	126	56
22	Buffalo	49	18
23	Sisson	0	0
24	Stateline Sole Source	139	82
600	LAWMA APOD	1086	348
601	LAWMA APOD	0	0
602	LAWMA APOD	0	0
	Totals	6673	2618

**TABLE 2**  
**Wellhead Depletions From Irrigation Wells Below John Martin Reservoir (Acre-Feet)**  
**(Reduced By Pre-Compact Entitlements)**  
**April, 1999**

**USER NUMBER**

15	16	17	18	19	20	21	22	23	24	Total
2	76	211	139	7	99	24	17	0	82	657

**TABLE 3**  
**Remaining Depletions To Usable Stateline Flow (Acre-Feet)**  
**April, 1999**

**REACH NUMBER**

	11	12	13	14	15	16	17	18	21	Sum
Remaining Depletion	9.33	38.67	57.33	54.47	31.03	36.73	128	434	31	820.56
Depletion to Usable SL Flow	7.64	31.67	46.96	44.61	25.42	30.08	104.83	355.45	25.39	672.05
Replacements										
FRY-ARK Return Flows	7.64	27.85	33.85	23.34						92.68
LAWMA-CO Beef Credit				8.14						8.14
LAWMA-Ft Bent Ditch Shrs				99.2						99.2
LAWMA-Stubbs Direct Flow								67.6		67.6
LAWMA-XY Direct Flow					6.1					6.1
LAWMA-Manvel Direct Flow					400					400
Offset Account Water										
Total Replacements	7.64	27.85	33.85	130.68	406.1			67.6		673.72

RECEIVED

MAY 20 1999

DIVISION ENGINEER  
PUEBLO, COLORADO

PG 1

APR 1999:	OFFSET ACCOUNT				CONSUMABLE WATER				RETURN FLOW			
	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN
1	0.00	0.00	3.52	5626.10	0.00	0.00	3.31	5292.50	0.00	0.00	0.21	333.60
2	0.00	0.00	1.02	5622.58	0.00	0.00	0.96	5289.19	0.00	0.00	0.06	333.39
3	0.00	0.00	1.02	5621.56	0.00	0.00	0.96	5288.23	0.00	0.00	0.06	333.33
4	0.00	0.00	1.14	5620.54	0.00	0.00	0.96	5287.27	0.00	0.00	0.06	333.27
5	0.00	0.00	1.82	5619.40	0.00	0.00	1.07	5286.20	0.00	0.00	0.07	333.20
6	0.00	0.00	2.61	5617.58	0.00	0.00	1.71	5284.49	0.00	0.00	0.11	333.09
7	0.00	0.00	5.33	5614.97	0.00	0.00	2.46	5282.03	0.00	0.00	0.15	332.94
8	0.00	0.00	4.77	5609.64	0.00	0.00	5.01	5277.02	0.00	0.00	0.32	332.62
9	0.00	0.00	4.99	5599.88	0.00	0.00	4.49	5272.53	0.00	0.00	0.28	332.34
10	0.00	0.00	4.99	5594.89	0.00	0.00	4.69	5267.84	0.00	0.00	0.30	332.04
11	0.00	0.00	4.99	5589.90	0.00	0.00	4.69	5263.15	0.00	0.00	0.30	331.74
12	0.00	0.00	3.73	5586.17	0.00	0.00	4.69	5258.46	0.00	0.00	0.30	331.44
13	0.00	0.00	0.56	5585.61	0.00	0.00	3.51	5254.95	0.00	0.00	0.22	331.22
14	0.00	0.00	1.13	5584.48	0.00	0.00	0.53	5254.42	0.00	0.00	0.03	331.19
15	0.00	0.00	2.82	5581.66	0.00	0.00	1.06	5253.36	0.00	0.00	0.07	331.12
16	0.00	0.00	3.05	5578.61	0.00	0.00	2.65	5250.71	0.00	0.00	0.17	330.95
17	0.00	0.00	3.05	5575.56	0.00	0.00	2.87	5247.84	0.00	0.00	0.18	330.77
18	0.00	0.00	3.05	5572.51	0.00	0.00	2.87	5244.97	0.00	0.00	0.18	330.59
19	0.00	0.00	3.05	5569.46	0.00	0.00	2.87	5242.10	0.00	0.00	0.18	330.41
20	0.00	0.00	3.73	5565.73	0.00	0.00	2.87	5239.23	0.00	0.00	0.18	330.23
21	49.14	0.00	0.00	5614.87	47.03	0.00	3.51	5235.72	0.00	0.00	0.22	330.01
22	43.66	0.00	1.25	5657.28	41.78	0.00	0.00	5282.75	2.11	0.00	0.00	332.12
23	39.93	0.00	0.34	5696.87	38.21	0.00	1.18	5323.35	1.88	0.00	0.07	333.93
24	41.25	0.00	0.34	5737.78	39.48	0.00	0.32	5361.24	1.72	0.00	0.02	335.63
25	40.07	0.00	0.34	5777.51	38.35	0.00	0.32	5400.40	1.77	0.00	0.02	337.38
26	43.66	0.00	2.46	5818.71	41.78	0.00	0.32	5438.43	1.72	0.00	0.02	339.08
27	55.21	0.00	3.31	5870.61	52.84	0.00	2.32	5477.89	1.88	0.00	0.14	340.82
28	69.09	0.00	3.95	5935.75	66.12	0.00	3.12	5527.61	2.37	0.00	0.19	343.00
29	55.46	0.00	1.58	5989.63	53.08	0.00	3.72	5590.01	2.97	0.00	0.23	345.74
30	0.00	0.00	0.00	5989.63	0.00	0.00	1.49	5641.60	2.38	0.00	0.09	348.03
OT	437.47	0.00	73.94		418.67	0.00	69.57		18.80	0.00	4.37	

CONSUMABLE WATER

PR 999:	COLORADO UPSTREAM				COLORADO DOWNSTREAM				KANSAS			
	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN
1	0.00	0.00	0.00	0.00	0.00	0.00	1.65	2643.27	0.00	0.00	1.07	1705.50
2	0.00	0.00	0.00	0.00	0.00	0.00	0.48	2641.62	0.00	0.00	0.31	1704.43
3	0.00	0.00	0.00	0.00	0.00	0.00	0.48	2641.14	0.00	0.00	0.31	1704.12
4	0.00	0.00	0.00	0.00	0.00	0.00	0.53	2640.66	0.00	0.00	0.35	1703.81
5	0.00	0.00	0.00	0.00	0.00	0.00	0.85	2640.13	0.00	0.00	0.35	1703.46
6	0.00	0.00	0.00	0.00	0.00	0.00	1.23	2639.28	0.00	0.00	0.55	1702.91
7	0.00	0.00	0.00	0.00	0.00	0.00	2.50	2638.05	0.00	0.00	0.79	1702.12
8	0.00	0.00	0.00	0.00	0.00	0.00	2.24	2635.55	0.00	0.00	1.62	1700.50
9	0.00	0.00	0.00	0.00	0.00	0.00	2.34	2633.31	0.00	0.00	1.45	1699.05
10	0.00	0.00	0.00	0.00	0.00	0.00	2.34	2630.97	0.00	0.00	1.51	1697.54
11	0.00	0.00	0.00	0.00	0.00	0.00	2.34	2628.63	0.00	0.00	1.51	1696.03
12	0.00	0.00	0.00	0.00	0.00	0.00	1.75	2626.29	0.00	0.00	1.51	1694.52
13	0.00	0.00	0.00	0.00	0.00	0.00	0.27	2624.54	0.00	0.00	1.13	1693.39
14	0.00	0.00	0.00	0.00	0.00	0.00	0.27	2624.27	0.00	0.00	0.17	1693.22
15	0.00	0.00	0.00	0.00	0.00	391.70	0.53	2232.04	391.70	0.00	0.34	2084.58
16	0.00	0.00	0.00	0.00	0.00	0.00	1.13	2230.91	0.00	0.00	1.05	2083.53
17	0.00	0.00	0.00	0.00	0.00	0.00	1.22	2229.69	0.00	0.00	1.14	2082.39
18	0.00	0.00	0.00	0.00	0.00	0.00	1.22	2228.47	0.00	0.00	1.14	2081.25
19	0.00	0.00	0.00	0.00	0.00	0.00	1.22	2227.25	0.00	0.00	1.14	2080.11
20	0.00	0.00	0.00	0.00	0.00	0.00	1.22	2226.03	0.00	0.00	1.14	2078.97
21	0.00	0.00	0.00	0.00	0.00	0.00	1.49	2224.54	0.00	0.00	1.39	2077.58
22	0.00	0.00	0.00	0.00	47.03	0.00	0.00	2271.57	0.00	0.00	0.00	2077.58
23	0.00	0.00	0.00	0.00	41.78	0.00	0.51	2312.84	0.00	0.00	0.46	2077.12
24	0.00	0.00	0.00	0.00	38.21	0.00	0.14	2350.91	0.00	0.00	0.12	2077.00
25	0.00	0.00	0.00	0.00	39.48	0.00	0.14	2390.25	0.00	0.00	0.12	2076.88
26	0.00	0.00	0.00	0.00	38.35	0.00	0.14	2428.46	0.00	0.00	0.12	2076.76
27	0.00	0.00	0.00	0.00	41.78	0.00	1.04	2469.20	0.00	0.00	0.88	2075.88
28	0.00	0.00	0.00	0.00	52.84	0.00	1.41	2520.63	0.00	0.00	1.18	2074.70
29	0.00	0.00	0.00	0.00	66.12	0.00	1.70	2585.05	0.00	0.00	1.39	2073.31
30	0.00	0.00	0.00	0.00	53.08	0.00	0.69	2637.44	0.00	0.00	0.55	2072.76
OT	0.00	0.00	0.00		418.67	391.70	32.80		391.70	0.00	24.44	

Enclosure 1

CONSUMABLE WATER

APR 1999:	KANSAS STORAGE CHARGE				:	TOTAL				:				
	INFLOW	RELEASE	EVAP	OWN		INFLOW	RELEASE	EVAP	OWN		INFLOW	RELEASE	EVAP	OWN
1	0.00	0.00	0.59	943.73	:				5292.50	:				
2	0.00	0.00	0.17	943.14	:	0.00	0.00	3.31	5289.19	:				
3	0.00	0.00	0.17	942.97	:	0.00	0.00	0.96	5288.23	:				
4	0.00	0.00	0.19	942.80	:	0.00	0.00	0.96	5287.27	:				
5	0.00	0.00	0.31	942.61	:	0.00	0.00	1.07	5286.20	:				
6	0.00	0.00	0.44	942.30	:	0.00	0.00	1.71	5284.49	:				
7	0.00	0.00	0.89	941.86	:	0.00	0.00	2.46	5282.03	:				
8	0.00	0.00	0.80	940.97	:	0.00	0.00	5.01	5277.02	:				
9	0.00	0.00	0.84	940.17	:	0.00	0.00	4.49	5272.53	:				
10	0.00	0.00	0.84	939.33	:	0.00	0.00	4.69	5267.84	:				
11	0.00	0.00	0.84	938.49	:	0.00	0.00	4.69	5263.15	:				
12	0.00	0.00	0.63	937.65	:	0.00	0.00	4.69	5258.46	:				
13	0.00	0.00	0.09	937.02	:	0.00	0.00	3.51	5254.95	:				
14	0.00	0.00	0.19	936.93	:	0.00	0.00	0.53	5254.42	:				
15	0.00	0.00	0.47	936.74	:	0.00	0.00	1.06	5253.36	:				
16	0.00	0.00	0.51	936.27	:	0.00	0.00	2.65	5250.71	:				
17	0.00	0.00	0.51	935.76	:	0.00	0.00	2.87	5247.84	:				
18	0.00	0.00	0.51	935.25	:	0.00	0.00	2.87	5244.97	:				
19	0.00	0.00	0.51	934.74	:	0.00	0.00	2.87	5242.10	:				
20	0.00	0.00	0.63	934.23	:	0.00	0.00	2.87	5239.23	:				
21	0.00	0.00	0.00	933.60	:	0.00	0.00	3.51	5235.72	:				
22	0.00	0.00	0.21	933.60	:	47.03	0.00	0.00	5282.75	:				
23	0.00	0.00	0.06	933.39	:	41.78	0.00	1.18	5323.35	:				
24	0.00	0.00	0.06	933.33	:	38.21	0.00	0.32	5361.24	:				
25	0.00	0.00	0.06	933.27	:	39.48	0.00	0.32	5400.40	:				
26	0.00	0.00	0.40	933.21	:	38.35	0.00	0.32	5438.43	:				
27	0.00	0.00	0.53	932.81	:	41.78	0.00	2.32	5477.89	:				
28	0.00	0.00	0.63	932.28	:	52.84	0.00	3.12	5527.61	:				
29	0.00	0.00	0.25	931.65	:	66.12	0.00	3.72	5590.01	:				
30	0.00	0.00	0.00	931.40	:	53.08	0.00	1.49	5641.60	:				
TOT	0.00	0.00	12.33	931.40	:	418.67	0.00	69.57	5641.60	:				

RETURN FLOW

APR 1999:	INSTATE				:	STATE LINE				:	TOTAL			
	INFLOW	RELEASE	EVAP	OWN		INFLOW	RELEASE	EVAP	OWN		INFLOW	RELEASE	EVAP	OWN
1	0.00	0.00	0.00	0.00	:				333.60	:				333.60
2	0.00	0.00	0.00	0.00	:	0.00	0.00	0.21	333.39	:	0.00	0.00	0.21	333.39
3	0.00	0.00	0.00	0.00	:	0.00	0.00	0.06	333.33	:	0.00	0.00	0.06	333.33
4	0.00	0.00	0.00	0.00	:	0.00	0.00	0.06	333.27	:	0.00	0.00	0.06	333.27
5	0.00	0.00	0.00	0.00	:	0.00	0.00	0.07	333.20	:	0.00	0.00	0.07	333.20
6	0.00	0.00	0.00	0.00	:	0.00	0.00	0.11	333.09	:	0.00	0.00	0.11	333.09
7	0.00	0.00	0.00	0.00	:	0.00	0.00	0.15	332.94	:	0.00	0.00	0.15	332.94
8	0.00	0.00	0.00	0.00	:	0.00	0.00	0.32	332.62	:	0.00	0.00	0.32	332.62
9	0.00	0.00	0.00	0.00	:	0.00	0.00	0.28	332.34	:	0.00	0.00	0.28	332.34
10	0.00	0.00	0.00	0.00	:	0.00	0.00	0.30	332.04	:	0.00	0.00	0.30	332.04
11	0.00	0.00	0.00	0.00	:	0.00	0.00	0.30	331.74	:	0.00	0.00	0.30	331.74
12	0.00	0.00	0.00	0.00	:	0.00	0.00	0.30	331.44	:	0.00	0.00	0.30	331.44
13	0.00	0.00	0.00	0.00	:	0.00	0.00	0.22	331.22	:	0.00	0.00	0.22	331.22
14	0.00	0.00	0.00	0.00	:	0.00	0.00	0.03	331.19	:	0.00	0.00	0.03	331.19
15	0.00	0.00	0.00	0.00	:	0.00	0.00	0.07	331.12	:	0.00	0.00	0.07	331.12
16	0.00	0.00	0.00	0.00	:	0.00	0.00	0.17	330.95	:	0.00	0.00	0.17	330.95
17	0.00	0.00	0.00	0.00	:	0.00	0.00	0.18	330.77	:	0.00	0.00	0.18	330.77
18	0.00	0.00	0.00	0.00	:	0.00	0.00	0.18	330.59	:	0.00	0.00	0.18	330.59
19	0.00	0.00	0.00	0.00	:	0.00	0.00	0.18	330.41	:	0.00	0.00	0.18	330.41
20	0.00	0.00	0.00	0.00	:	0.00	0.00	0.18	330.23	:	0.00	0.00	0.18	330.23
21	2.11	0.00	0.00	0.00	:	0.00	0.00	0.22	330.01	:	0.00	0.00	0.22	330.01
22	1.88	0.00	0.00	2.11	:	0.00	0.00	0.00	330.01	:	2.11	0.00	0.00	332.12
23	1.72	0.00	0.00	3.99	:	0.00	0.00	0.07	329.94	:	1.88	0.00	0.07	333.93
24	1.77	0.00	0.00	5.71	:	0.00	0.00	0.02	329.92	:	1.72	0.00	0.02	335.63
25	1.72	0.00	0.00	7.48	:	0.00	0.00	0.02	329.90	:	1.77	0.00	0.02	337.38
26	1.88	0.00	0.00	9.20	:	0.00	0.00	0.02	329.88	:	1.72	0.00	0.02	339.08
27	2.37	0.00	0.01	11.08	:	0.00	0.00	0.14	329.74	:	1.88	0.00	0.14	340.82
28	2.97	0.00	0.01	13.44	:	0.00	0.00	0.18	329.56	:	2.37	0.00	0.19	343.00
29	2.38	0.00	0.00	16.40	:	0.00	0.00	0.22	329.34	:	2.97	0.00	0.23	345.74
30	0.00	0.00	0.00	18.78	:	0.00	0.00	0.09	329.25	:	2.38	0.00	0.09	348.03
TOT	18.80	0.00	0.02	18.78	:	0.00	0.00	4.35	329.25	:	18.80	0.00	4.37	348.03







CONSUMABLE WATER

MAY 1999:	KANSAS STORAGE CHARGE				TOTAL				OWN
	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	
1	0.00	0.00	0.00	931.40				5641.60	
2	0.00	0.00	0.57	931.40	0.00	0.00	0.00	5641.60	
3	0.00	930.83	0.00	930.83	0.00	0.00	3.47	5638.13	
4	0.00	0.00	0.00	0.00	0.00	5638.13	0.00	0.00	
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
TOT	0.00	930.83	0.57		0.00	5638.13	3.47		

RETURN FLOW

MAY 1999:	INSTATE				STATE LINE				TOTAL			
	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN
1	0.00	0.00	0.00	18.78				329.25				348.03
2	0.00	0.00	0.01	18.78	0.00	0.00	0.00	329.25	0.00	0.00	0.00	348.03
3	0.00	18.77	0.00	18.77	0.00	0.00	0.20	329.05	0.00	0.00	0.21	347.82
4	0.00	0.00	0.00	0.00	0.00	329.05	0.00	0.00	0.00	347.82	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOT	0.00	18.77	0.01		0.00	329.05	0.20		0.00	347.82	0.21	

INSTATE

MAY 1999:	UPSTREAM				DOWNSTREAM				TOTAL			
	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN
1	0.00	0.00	0.00	18.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.78
2	0.00	0.00	0.01	18.78	0.00	0.00	0.00	0.00	0.00	0.00	0.01	18.78
3	0.00	18.77	0.00	18.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.77
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.77	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOT	0.00	18.77	0.01	18.78	0.00	0.00	0.00	0.00	0.00	18.77	0.01	18.78

MAY 1999:	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
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21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												
TOT												



# STATE OF COLORADO

## WATER DIVISION 2 OFFICE OF THE STATE ENGINEER

310 East Abriendo, Suite B  
Pueblo, Colorado 81004  
Phone: (719) 542-3368  
FAX: (719) 544-0800

July 12, 1999

<http://water.state.co.us/default.htm>

David L. Pope  
Kansas Chief Engineer  
Kansas Board of Agriculture  
901 S. Kansas Avenue, 2nd Floor  
Topeka, KS 66612-1283

Ms. Mary Louise Clay  
Recording Secretary  
Arkansas River Compact Administration  
307 South Fifth Street  
Lamar, CO 81052

RE: Monthly Report of Colorado Pumping and Offset Account Operations for May, 1999

Dear Mr. Pope and Ms. Clay:

The purpose of this letter is to provide the monthly report required by paragraph 12 of the **Resolution Concerning an Offset Account in John Martin Reservoir for Colorado Pumping As Amended March 30, 1998** ("Resolution"). This letter reports the monthly pumping in excess of Colorado's pre-Compact entitlement, Colorado's monthly accounting of Compact compliance, and the status of water delivered to the Offset Account, all during the month of May, 1999.

Table 1 shows the amount of pumping during the month of May, 1999 by irrigation wells pumping from the Valley Fill Aquifer and surficial aquifers along the Arkansas River between Pueblo and the Stateline, as well as the corresponding wellhead depletions, by user group. The wellhead depletions were computed using the presumptive stream depletions in Rule 4.2 of the **AMENDED RULES AND REGULATIONS GOVERNING THE DIVERSION AND USE OF TRIBUTARY GROUND WATER IN THE ARKANSAS RIVER BASIN, COLORADO** ("Rules") approved in Case No. 95CW211.

Table 2 shows the wellhead depletions due to pumping by irrigation wells in the user groups below John Martin Reservoir that are in excess of the pre-Compact entitlements.

Since the depletions caused by pumping above John Martin Reservoir were fully replaced, and that accounting has been provided to Kansas, and the depletions caused by pumping below John Martin Reservoir which affect senior surface water rights in Colorado were fully replaced, and that accounting has been provided to Kansas, the accounting in this report shows only remaining depletions caused by irrigation pumping in excess of the pre-Compact entitlements for those



Bill Owens  
Governor

Greg E. Walcher  
Executive Director

Hal D. Simpson, P.E.  
State Engineer

Steven J. Witte, P.E.  
Division Engineer

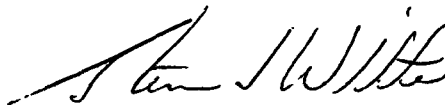
river reaches where no replacements or only partial replacements were made to replace out-of-priority depletions to senior surface water rights in Colorado.

Table 3 shows the remaining stream depletions caused by irrigation pumping in excess of the pre-Compact entitlements which were not replaced by making replacements to senior surface water rights in Colorado. These stream depletions were computed using the wellhead depletions shown in Table 2 with the Ground Water Accounting Model. Please note that in Reaches 11, 12, and 13, replacements to senior surface water rights in Colorado replaced 0% of the stream depletions caused by pumping affecting those reaches. Also note that in Reaches 14, 15, and 16, replacements to senior surface water rights in Colorado replaced 0% of the stream depletions caused by pumping affecting those reaches. These percentages reflect the fact that there was a call by a Colorado surface water right in those reaches on none of the days out of the 31 days during May. The remaining depletions shown in Table 3 are the estimated stream depletions caused by irrigation pumping in excess of the pre-Compact entitlements remaining after replacements were made to senior surface water rights in Colorado. Table 3 also shows the estimated depletions to usable Stateline flow which were calculated using the assumptions in paragraph 5.B of the Resolution, and the replacements to Stateline flows which were made during the month.

On May 3, 1999, the entire contents of the Offset Account, 5985.95 acre-feet, were spilled. Accounting spreadsheets for the Offset Account are enclosed for May.

Please contact me if you have any questions or require additional information.

Sincerely,



Steven J. Witte  
Division Engineer  
Colorado Division of Water Resources

1 Enclosure

cc: Mark Rude  
John Draper  
Dale Book  
Hal Simpson  
Dennis Montgomery  
Bill Howland

Larry E. Trujillo, Sr.  
Randy Hayzlett  
David Brenn  
Peter Evans  
Thomas R. Pointon  
James G. Rogers

**TABLE 1**  
**Pumping By Rule 3 Irrigation Wells**  
**May, 1999**

USER NO.	DITCH NAME	AF PUMPED	WELLHEAD DEPL
1	Bessemer	646	267
2	Booth Orchard	45	27
3	Excelsior	127	90
4	Collier	51	15
5	Colorado	304	124
6	Rocky Ford Highline	210	65
7	Oxford	305	96
8	Otero	92	34
9	Catlin	645	256
10	Fort Lyon Up Stream	220	72
11	Rocky Ford	104	36
12	Holbrook	239	72
13	Las Animas Consolidated	13	6
14	Baldwin-Stubbs	528	308
15	Fort Bent	50	35
16	Keese	264	79
17	Amity	652	270
18	Lamar/Manvel	228	83
19	Hyde	15	12
20	Fort Lyon Down Stream	717	388
21	XY Graham	33	17
22	Buffalo	265	117
23	Sisson	5	4
24	Stateline Sole Source	741	428
600	LAWMA APOD	551	176
601	LAWMA APOD	0	0
602	LAWMA APOD	0	0
	Totals	7050	3077

**TABLE 2**  
**Wellhead Depletions From Irrigation Wells Below John Martin Reservoir (Acre-Feet)**  
**(Reduced By Pre-Compact Entitlements)**  
**May, 1999**

USER NUMBER										
15	16	17	18	19	20	21	22	23	24	Total
2	79	234	83	12	320	5	99	0	365	1199

**TABLE 3**  
**Remaining Depletions To Usable Stateline Flow (Acre-Feet)**  
**May, 1999**

	REACH NUMBER									
	11	12	13	14	15	16	17	18	21	Sum
Remaining Depletion	15.83	93.07	102.13	96.75	51.07	59.35	142.23	451.9	26.05	1038.38
Depletion to Usable SL Flow	0	0	0	0	0	0	0	0	0	0
Replacements										
FRY-ARK Return Flows										
LA WMA-CO Beef Credit										
LA WMA-Ft Bent Ditch Shrs										
LA WMA-Stubbs Direct Flow										
LA WMA-XY Direct Flow					393.9					393.9
LA WMA-Manvel Direct Flow										
Offset Account Water										
Total Replacements					393.9					393.9

163,600 acre-feet crossed the Stateline during May, 1999. This flow exceeded both the monthly usability caps for irrigation and aquifer recharge.



# RECEIVED

## MAY 20 1999

OFFSET ACCOUNT  
CONSUMABLE WATER

DIVISION ENGINEER  
PUEBLO, COLORADO

RETURN FLOW

PG 1

MAY 1999	OFFSET ACCOUNT				OWN :	CONSUMABLE WATER				OWN :	RETURN FLOW			
	INFLOW	RELEASE	EVAP	OWN		INFLOW	RELEASE	EVAP	OWN		INFLOW	RELEASE	EVAP	OWN
1	0.00	0.00	0.00	5989.63	0.00	0.00	0.00	5641.60	0.00	0.00	0.00	348.03		
2	0.00	0.00	3.68	5989.63	0.00	0.00	0.00	5641.60	0.00	0.00	0.00	348.03		
3	0.00	5985.95	0.00	5985.95	0.00	0.00	3.47	5638.13	0.00	0.00	0.21	347.82		
4	0.00	0.00	0.00	0.00	0.00	5638.13	0.00	0.00	0.00	347.82	0.00	0.00		
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
TOT	0.00	5985.95	3.68		0.00	5638.13	3.47		0.00	347.82	0.21			

### CONSUMABLE WATER

MAY 1999	COLORADO UPSTREAM				OWN :	COLORADO DOWNSTREAM				OWN :	KANSAS			
	INFLOW	RELEASE	EVAP	OWN		INFLOW	RELEASE	EVAP	OWN		INFLOW	RELEASE	EVAP	OWN
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2637.44	0.00	0.00	0.00	2072.76	
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.62	2637.44	0.00	0.00	1.28	2072.76	
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2635.82	0.00	0.00	0.00	2071.48	
4	0.00	0.00	0.00	0.00	0.00	2635.82	0.00	0.00	0.00	0.00	2071.48	0.00	0.00	
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
TOT	0.00	0.00	0.00		0.00	2635.82	1.62		0.00	2071.48	1.28			

*Enclosure 1*

CONSUMABLE WATER

AY 999:	KANSAS STORAGE CHARGE				TOTAL				OWN
	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	
1	0.00	0.00	0.00	931.40				5641.60	
2	0.00	0.00	0.57	931.40	0.00	0.00	0.00	5641.60	
3	0.00	930.83	0.00	930.83	0.00	0.00	3.47	5638.13	
4	0.00	0.00	0.00	0.00	0.00	5638.13	0.00	0.00	
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
T	0.00	930.83	0.57		0.00	5638.13	3.47		

RETURN FLOW

MAY 999:	INSTATE				STATE LINE				TOTAL			
	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN	INFLOW	RELEASE	EVAP	OWN
1	0.00	0.00	0.00	18.78				329.25				348.03
2	0.00	0.00	0.01	18.78	0.00	0.00	0.00	329.25	0.00	0.00	0.00	348.03
3	0.00	18.77	0.00	18.77	0.00	0.00	0.20	329.05	0.00	0.00	0.21	347.82
4	0.00	0.00	0.00	0.00	0.00	329.05	0.00	0.00	0.00	347.82	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
T	0.00	18.77	0.01		0.00	329.05	0.20		0.00	347.82	0.21	





# STATE OF COLORADO

**WATER DIVISION 2  
OFFICE OF THE STATE ENGINEER**

310 East Abriendo, Suite B  
Pueblo, Colorado 81004  
Phone: (719) 542-3368  
FAX: (719) 544-0800

August 18, 1999



<http://water.state.co.us/default.htm>

David L. Pope  
Kansas Chief Engineer  
Kansas Board of Agriculture  
901 S. Kansas Avenue, 2nd Floor  
Topeka, KS 66612-1283

Ms. Mary Louise Clay  
Recording Secretary  
Arkansas River Compact Administration  
307 South Fifth Street  
Lamar, CO 81052

Bill Owens  
Governor

Greg E. Walcher  
Executive Director

Hal D. Simpson, P.E.  
State Engineer

Steven J. Witte, P.E.  
Division Engineer

RE: Monthly Report of Colorado Pumping and Offset Account Operations for June, 1999

Dear Mr. Pope and Ms. Clay:

The purpose of this letter is to provide the monthly report required by paragraph 12 of the **Resolution Concerning an Offset Account in John Martin Reservoir for Colorado Pumping As Amended March 30, 1998** ("Resolution"). This letter reports the monthly pumping in excess of Colorado's pre-Compact entitlement, Colorado's monthly accounting of Compact compliance, and the status of water delivered to the Offset Account, all during the month of June, 1999.

Table 1 shows the amount of pumping during the month of June, 1999 by irrigation wells pumping from the Valley Fill Aquifer and surficial aquifers along the Arkansas River between Pueblo and the Stateline, as well as the corresponding wellhead depletions, by user group. The wellhead depletions were computed using the presumptive stream depletions in Rule 4.2 of the **AMENDED RULES AND REGULATIONS GOVERNING THE DIVERSION AND USE OF TRIBUTARY GROUND WATER IN THE ARKANSAS RIVER BASIN, COLORADO** ("Rules") approved in Case No. 95CW211.

Table 2 shows the wellhead depletions due to pumping by irrigation wells in the user groups below John Martin Reservoir that are in excess of the pre-Compact entitlements.

Since the depletions caused by pumping above John Martin Reservoir were fully replaced, and that accounting has been provided to Kansas, and the depletions caused by pumping below John Martin Reservoir which affect senior surface water rights in Colorado were fully replaced, and that accounting has been provided to Kansas, the accounting in this report shows only remaining depletions caused by irrigation pumping in excess of the pre-Compact entitlements for those

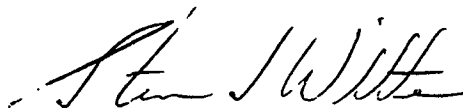
river reaches where no replacements or only partial replacements were made to replace out-of-priority depletions to senior surface water rights in Colorado.

Table 3 shows the remaining stream depletions caused by irrigation pumping in excess of the pre-Compact entitlements which were not replaced by making replacements to senior surface water rights in Colorado. These stream depletions were computed using the wellhead depletions shown in Table 2 with the Ground Water Accounting Model. Please note that in Reaches 11, 12, and 13, replacements to senior surface water rights in Colorado replaced 0% of the stream depletions caused by pumping affecting those reaches. Also note that in Reaches 14, 15, and 16, replacements to senior surface water rights in Colorado replaced 0% of the stream depletions caused by pumping affecting those reaches. These percentages reflect the fact that there was a call by a Colorado surface water right in those reaches on none of the days out of the 30 days during June. The remaining depletions shown in Table 3 are the estimated stream depletions caused by irrigation pumping in excess of the pre-Compact entitlements remaining after replacements were made to senior surface water rights in Colorado. Table 3 also shows the estimated depletions to usable Stateline flow which were calculated using the assumptions in paragraph 5.B of the Resolution, and the replacements to Stateline flows which were made during the month.

Since May 3, 1999, when the entire contents of the Offset Account spilled, through the end of June, 1999, there were no operations involving the Offset Account. John Martin Reservoir continued to spill through the entire month of June, 1999.

Please contact me if you have any questions or require additional information.

Sincerely,



Steven J. Witte  
Division Engineer  
Colorado Division of Water Resources

1 Enclosure

cc: Mark Rude  
John Draper  
Dale Book  
Hal Simpson  
Dennis Montgomery  
Bill Howland

Larry E. Trujillo, Sr.  
Randy Hayzlett  
David Brenn  
Peter Evans  
Thomas R. Pointon  
James G. Rogers

**TABLE 1**  
**Pumping By Rule 3 Irrigation Wells**  
**June, 1999**

<b>USER NO.</b>	<b>DITCH NAME</b>	<b>AF PUMPED WELLHEAD DEPL</b>	
1	Bessemer	1169	469
2	Booth Orchard	165	105
3	Excelsior	286	192
4	Collier	23	12
5	Colorado	589	247
6	Rocky Ford Highline	118	38
7	Oxford	45	17
8	Otero	132	47
9	Catlin	710	338
10	Fort Lyon Up Stream	1045	357
11	Rocky Ford	72	24
12	Holbrook	61	19
13	Las Animas Consolidated	37	16
14	Baldwin-Stubbs	777	439
15	Fort Bent	174	57
16	Keese	827	266
17	Amity	1787	820
18	Lamar/Manvel	403	203
19	Hyde	196	59
20	Fort Lyon Down Stream	827	394
21	XY Graham	238	121
22	Buffalo	411	123
23	Sisson	79	55
24	Stateline Sole Source	2094	1386
600	LAWMA APOD	1113	356
601	LAWMA APOD	0	0
602	LAWMA APOD	23	17
	<b>Totals</b>	<b>13401</b>	<b>6177</b>

**TABLE 2**  
**Wellhead Depletions From Irrigation Wells Below John Martin Reservoir (Acre-Feet)**  
**(Reduced By Pre-Compact Entitlements)**  
**June, 1999**

USER NUMBER										
15	16	17	18	19	20	21	22	23	24	Total
45	266	770	202	59	385	52	108	0	1331	3218

**TABLE 3**  
**Remaining Depletions To Usable Stateline Flow (Acre-Feet)**  
**June, 1999**

	REACH NUMBER									
	11	12	13	14	15	16	17	18	21	Sum
Remaining Depletion	17.4	169.56	135.57	118.4	56.18	62.11	162.41	644.18	18.83	1384.64
Depletion to Usable SL Flow	1.72	16.79	13.42	11.72	5.56	6.15	16.08	63.77	1.86	137.07
Replacements										
FRY-ARK Return Flows										
LAWMA-CO Beef Credit										
LAWMA-Ft Bent Ditch Shrs				25.1						25.1
LAWMA-Stubbs Direct Flow								67.6		67.6
LAWMA-XY Direct Flow					100					100
LAWMA-Manvel Direct Flow					100					100
Offset Account Water										
Total Replacements				25.1	200			67.6		292.7

134,600 acre-feet crossed the Stateline during June, 1999. This flow exceeded the monthly usability cap for irrigation.





Dale

# STATE OF COLORADO

## WATER DIVISION 2 OFFICE OF THE STATE ENGINEER

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September 29, 1999

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Kansas Chief Engineer  
Kansas Board of Agriculture  
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Topeka, KS 66612-1283

Ms. Mary Louise Clay  
Recording Secretary  
Arkansas River Compact Administration  
307 South Fifth Street  
Lamar, CO 81052

RE: Monthly Report of Colorado Pumping and Offset Account Operations for July, 1999

Dear Mr. Pope and Ms. Clay:

The purpose of this letter is to provide the monthly report required by paragraph 12 of the **Resolution Concerning an Offset Account in John Martin Reservoir for Colorado Pumping As Amended March 30, 1998** ("Resolution"). This letter reports the monthly pumping in excess of Colorado's pre-Compact entitlement, Colorado's monthly accounting of Compact compliance, and the status of water delivered to the Offset Account, all during the month of July, 1999.

Table 1 shows the amount of pumping during the month of July, 1999 by irrigation wells pumping from the Valley Fill Aquifer and surficial aquifers along the Arkansas River between Pueblo and the Stateline, as well as the corresponding wellhead depletions, by user group. The wellhead depletions were computed using the presumptive stream depletions in Rule 4.2 of the **AMENDED RULES AND REGULATIONS GOVERNING THE DIVERSION AND USE OF TRIBUTARY GROUND WATER IN THE ARKANSAS RIVER BASIN, COLORADO** ("Rules") approved in Case No. 95CW211.

Table 2 shows the wellhead depletions due to pumping by irrigation wells in the user groups below John Martin Reservoir that are in excess of the pre-Compact entitlements.

Since the depletions caused by pumping above John Martin Reservoir were fully replaced, and that accounting has been provided to Kansas, and the depletions caused by pumping below John Martin Reservoir which affect senior surface water rights in Colorado were fully replaced, and that accounting has been provided to Kansas, the accounting in this report shows only remaining depletions caused by irrigation pumping in excess of the pre-Compact entitlements for those



Bill Owens  
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Executive Director

Hal D. Simpson, P.E.  
State Engineer

Steven J. Witte, P.E.  
Division Engineer

river reaches where no replacements or only partial replacements were made to replace out-of-priority depletions to senior surface water rights in Colorado.

Table 3 shows the remaining stream depletions caused by irrigation pumping in excess of the pre-Compact entitlements which were not replaced by making replacements to senior surface water rights in Colorado. These stream depletions were computed using the wellhead depletions shown in Table 2 with the Ground Water Accounting Model. Please note that in Reaches 11, 12, and 13, replacements to senior surface water rights in Colorado replaced 84% of the stream depletions caused by pumping affecting those reaches. Also note that in Reaches 14, 15, and 16, replacements to senior surface water rights in Colorado replaced 71% of the stream depletions caused by pumping affecting those reaches. These percentages reflect the fact that there was a call by a Colorado surface water right in those reaches on 26 and 22 days respectively out of the 31 days during July. The remaining depletions shown in Table 3 are the estimated stream depletions caused by irrigation pumping in excess of the pre-Compact entitlements remaining after replacements were made to senior surface water rights in Colorado. Table 3 also shows the estimated depletions to usable Stateline flow which were calculated using the assumptions in paragraph 5.B of the Resolution, and the replacements to Stateline flows which were made during the month.

Since May 3, 1999, when the entire contents of the Offset Account spilled, through the end of July, 1999, there were no operations involving the Offset Account in John Martin Reservoir. As of July 31, 1999, there was no water being stored in the Offset Account.

Please contact me if you have any questions or require additional information.

Sincerely,



Steven J. Witte  
Division Engineer  
Colorado Division of Water Resources

cc: Mark Rude  
John Draper  
Dale Book  
Hal Simpson  
Dennis Montgomery  
Bill Howland

Larry E. Trujillo, Sr.  
Randy Hayzlett  
David Brenn  
Peter Evans  
Thomas R. Pointon  
James G. Rogers

**TABLE 1**  
**Pumping By Rule 3 Irrigation Wells**  
**July, 1999**

<b>USER NO.</b>	<b>DITCH NAME</b>	<b>AF PUMPED</b>	<b>WELLHEAD DEPL</b>
1	Bessemer	2065	826
2	Booth Orchard	201	131
3	Excelsior	335	212
4	Collier	115	43
5	Colorado	756	355
6	Rocky Ford Highline	528	171
7	Oxford	391	127
8	Otero	187	63
9	Catlin	1053	406
10	Fort Lyon Up Stream	1607	559
11	Rocky Ford	162	58
12	Holbrook	321	104
13	Las Animas Consolidated	147	50
14	Baldwin-Stubbs	1145	620
15	Fort Bent	205	75
16	Keese	485	152
17	Amity	2239	1021
18	Lamar/Manvel	774	308
19	Hyde	330	99
20	Fort Lyon Down Stream	1562	735
21	XY Graham	295	145
22	Buffalo	201	60
23	Sisson	192	133
24	Stateline Sole Source	2276	1510
600	LAWMA APOD	1094	350
601	LAWMA APOD	0	0
602	LAWMA APOD	5	3
	<b>Totals</b>	<b>18671</b>	<b>8316</b>

**TABLE 2**  
**Wellhead Depletions From Irrigation Wells Below John Martin Reservoir (Acre-Feet)**  
**(Reduced By Pre-Compact Entitlements)**  
**July, 1999**

**USER NUMBER**

15	16	17	18	19	20	21	22	23	24	Total
33	152	956	299	99	734	324	60	0	1485	4142

**TABLE 3**  
**Remaining Depletions To Usable Stateline Flow (Acre-Feet)**  
**July, 1999**

**REACH NUMBER**

	11	12	13	14	15	16	17	18	21	Sum
Remaining Depletion	3.59	34.69	29.72	45.57	20.03	21.94	207.73	902.17	14.52	1279.96
Depletion to Usable SL Flow	0.35	3.43	2.94	4.51	1.98	2.17	20.57	89.31	1.44	126.7
Replacements										
FRY-ARK Return Flows										
LAWMA-CO Beef Credit										
LAWMA-Ft Bent Ditch Shrs				9.5						9.5
LAWMA-Stubbs Direct Flow								67.6		67.6
LAWMA-XY Direct Flow					19					19
LAWMA-Manvel Direct Flow					100					100
Offset Account Water										
Total Replacements				9.5	119			67.6		196.1

42,857 acre-feet crossed the Stateline during July, 1999. This flow exceeded the monthly usability cap for irrigation.



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October 27, 1999



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Hal D. Simpson, P.E.  
State Engineer  
Steven J. Witte, P.E.  
Division Engineer

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Topeka, KS 66612-1283

Ms. Mary Louise Clay  
Recording Secretary  
Arkansas River Compact Administration  
307 South Fifth Street  
Lamar, CO 81052

RE: Monthly Report of Colorado Pumping and Offset Account Operations for August, 1999

Dear Mr. Pope and Ms. Clay:

The purpose of this letter is to provide the monthly report required by paragraph 12 of the **Resolution Concerning an Offset Account in John Martin Reservoir for Colorado Pumping As Amended March 30, 1998** ("Resolution"). This letter reports the monthly pumping in excess of Colorado's pre-Compact entitlement, Colorado's monthly accounting of Compact compliance, and the status of water delivered to the Offset Account, all during the month of August, 1999.

Table 1 shows the amount of pumping during the month of August, 1999 by irrigation wells pumping from the Valley Fill Aquifer and surficial aquifers along the Arkansas River between Pueblo and the Stateline, as well as the corresponding wellhead depletions, by user group. The wellhead depletions were computed using the presumptive stream depletions in Rule 4.2 of the **AMENDED RULES AND REGULATIONS GOVERNING THE DIVERSION AND USE OF TRIBUTARY GROUND WATER IN THE ARKANSAS RIVER BASIN, COLORADO** ("Rules") approved in Case No. 95CW211.

Table 2 shows the wellhead depletions due to pumping by irrigation wells in the user groups below John Martin Reservoir that are in excess of the pre-Compact entitlements.

Since the depletions caused by pumping above John Martin Reservoir were fully replaced, and that accounting has been provided to Kansas, and the depletions caused by pumping below John Martin Reservoir which affect senior surface water rights in Colorado were fully replaced, and that accounting has been provided to Kansas, the accounting in this report shows only remaining depletions caused by irrigation pumping in excess of the pre-Compact entitlements for those

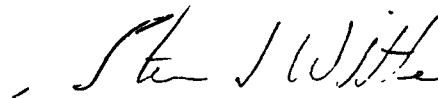
river reaches where no replacements or only partial replacements were made to replace out-of-priority depletions to senior surface water rights in Colorado.

Table 3 shows the remaining stream depletions caused by irrigation pumping in excess of the pre-Compact entitlements which were not replaced by making replacements to senior surface water rights in Colorado. These stream depletions were computed using the wellhead depletions shown in Table 2 with the Ground Water Accounting Model. Please note that in Reaches 11, 12, and 13, replacements to senior surface water rights in Colorado replaced 74% of the stream depletions caused by pumping affecting those reaches. Also note that in Reaches 14, 15, and 16, replacements to senior surface water rights in Colorado replaced 13% of the stream depletions caused by pumping affecting those reaches. These percentages reflect the fact that there was a call by a Colorado surface water right in those reaches on 23 and 4 days respectively out of the 31 days during August. The remaining depletions shown in Table 3 are the estimated stream depletions caused by irrigation pumping in excess of the pre-Compact entitlements remaining after replacements were made to senior surface water rights in Colorado. Table 3 also shows the estimated depletions to usable Stateline flow which were calculated using the assumptions in paragraph 5.B of the Resolution, and the replacements to Stateline flows which were made during the month.

A delivery of water to the Offset Account was initiated during the month of August, 1999 by LAWMA using consumptive use credits from their ownership in the Highland Canal. This delivery netted 284.11 acre-feet of fully consumable water into the Offset Account by the end of August, 1999. As of August 31, 1999, there were 284.11 acre-feet being stored in the offset account.

Please contact me if you have any questions or require additional information.

Sincerely,



Steven J. Witte  
Division Engineer  
Colorado Division of Water Resources

cc: Mark Rude  
John Draper  
Dale Book  
Hal Simpson  
Dennis Montgomery  
Bill Howland

Larry E. Trujillo, Sr.  
Randy Hayzlett  
David Brenn  
Peter Evans  
Thomas R. Pointon  
James G. Rogers



**TABLE 1**  
**Pumping By Rule 3 Irrigation Wells**  
**August, 1999**

<b>USER NO.</b>	<b>DITCH NAME</b>	<b>AF PUMPED</b>	<b>WELLHEAD DEPL</b>
1	Bessemer	1130	434
2	Booth Orchard	62	45
3	Excelsior	285	180
4	Collier	98	30
5	Colorado	720	305
6	Rocky Ford Highline	552	174
7	Oxford	315	98
8	Otero	119	38
9	Catlin	519	198
10	Fort Lyon Up Stream	1123	380
11	Rocky Ford	70	23
12	Holbrook	104	36
13	Las Animas Consolidated	89	29
14	Baldwin-Stubbs	880	483
15	Fort Bent	200	76
16	Keese	489	163
17	Amity	2170	991
18	Lamar/Manvel	633	261
19	Hyde	192	62
20	Fort Lyon Down Stream	1253	566
21	XY Graham	587	289
22	Buffalo	426	128
23	Sisson	205	143
24	Stateline Sole Source	2112	1386
600	LAWMA APOD	984	315
601	LAWMA APOD	0	0
602	LAWMA APOD	35	26
	<b>Totals</b>	<b>15352</b>	<b>6859</b>

**TABLE 2**  
**Wellhead Depletions From Irrigation Wells Below John Martin Reservoir (Acre-Foot)**  
**(Reduced By Pre-Compact Entitlements)**  
**August, 1999**

USER NUMBER										
15	16	17	18	19	20	21	22	23	24	Total
13	163	933	260	62	566	255	128	0	1361	3741

**TABLE 3**  
**Remaining Depletions To Usable Stateline Flow (Acre-Foot)**  
**August, 1999**

	REACH NUMBER									
	11	12	13	14	15	16	17	18	21	Sum
Remaining Depletion	7.46	52.21	56.28	159.85	72.16	81.82	253.89	1054.6	16.66	1754.93
Depletion to Usable SL Flow	0.74	5.17	5.57	15.82	7.14	8.10	25.14	104.41	1.65	173.74
Replacements										
FRY-ARK Return Flows										
LAWMA-CO Beef Credit										
LAWMA-Ft Bent Ditch Shrs										
LAWMA-Stubbs Direct Flow								67.6		67.6
LAWMA-XY Direct Flow					6.4					6.4
LAWMA-Manvel Direct Flow					100					100
Offset Account Water										
Total Replacements					106.4			67.6		174

67,720 acre-feet crossed the Stateline during August, 1999. This flow exceeded the monthly usability cap for irrigation.



## STATE OF COLORADO

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November 10, 1999

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Ms. Mary Louise Clay  
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307 South Fifth Street  
Lamar, CO 81052

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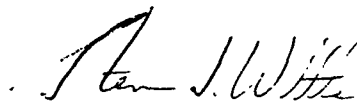
river reaches where no replacements or only partial replacements were made to replace out-of-priority depletions to senior surface water rights in Colorado.

Table 3 shows the remaining stream depletions caused by irrigation pumping in excess of the pre-Compact entitlements which were not replaced by making replacements to senior surface water rights in Colorado. These stream depletions were computed using the wellhead depletions shown in Table 2 with the Ground Water Accounting Model. Please note that in Reaches 11, 12, and 13, replacements to senior surface water rights in Colorado replaced 100% of the stream depletions caused by pumping affecting those reaches. Also note that in Reaches 14, 15, and 16, replacements to senior surface water rights in Colorado replaced 0% of the stream depletions caused by pumping affecting those reaches. These percentages reflect the fact that there was a call by a Colorado surface water right in those reaches on 30 and 0 days respectively out of the 30 days during September. The remaining depletions shown in Table 3 are the estimated stream depletions caused by irrigation pumping in excess of the pre-Compact entitlements remaining after replacements were made to senior surface water rights in Colorado. Table 3 also shows the estimated depletions to usable Stateline flow which were calculated using the assumptions in paragraph 5.B of the Resolution, and the replacements to Stateline flows which were made during the month.

A delivery of water to the Offset Account was initiated during the month of August, 1999 by LAWMA using consumptive use credits from their ownership in the Highland Canal. This operation delivered 1022.27 acre-feet of fully consumable water into the Offset Account during the month of September, 1999. As of September 30, 1999, there were 1296.88 acre-feet being stored in the Offset Account.

Please contact me if you have any questions or require additional information.

Sincerely,



Steven J. Witte  
Division Engineer  
Colorado Division of Water Resources

cc: Mark Rude  
John Draper  
Dale Book  
Hal Simpson  
Dennis Montgomery  
Bill Howland

Larry E. Trujillo, Sr.  
Randy Hayzlett  
David Brenn  
Peter Evans  
Thomas R. Pointon  
James G. Rogers

**TABLE 1**  
**Pumping By Rule 3 Irrigation Wells**  
**September, 1999**

USER NO.	DITCH NAME	AF PUMPED	WELLHEAD DEPL
1	Bessemer	946	386
2	Booth Orchard	74	48
3	Excelsior	331	206
4	Collier	0	0
5	Colorado	474	188
6	Rocky Ford Highline	852	265
7	Oxford	355	109
8	Otero	31	11
9	Catlin	972	418
10	Fort Lyon Up Stream	1137	379
11	Rocky Ford	78	29
12	Holbrook	259	80
13	Las Animas Consolidated	141	55
14	Baldwin-Stubbs	884	484
15	Fort Bent	102	33
16	Keese	607	193
17	Amity	1896	920
18	Lamar/Manvel	524	218
19	Hyde	250	95
20	Fort Lyon Down Stream	867	441
21	XY Graham	245	118
22	Buffalo	262	79
23	Sisson	262	182
24	Stateline Sole Source	3072	2078
600	LAWMA APOD	668	214
601	LAWMA APOD	0	0
602	LAWMA APOD	43	32
	Totals	15332	7261

**TABLE 2**  
**Wellhead Depletions From Irrigation Wells Below John Martin Reservoir (Acre-Feet)**  
**(Reduced By Pre-Compact Entitlements)**  
**September, 1999**

<b>USER NUMBER</b>										
<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>	<b>Total</b>
21	193	858	218	95	440	118	47	0	2013	4003

**TABLE 3**  
**Remaining Depletions To Usable Stateline Flow (Acre-Feet)**  
**September, 1999**

<b>REACH NUMBER</b>										
	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>21</b>	<b>Sum</b>
Remaining Depletion	0	0	0	192.92	93.28	103.54	261.01	1233.2	18.96	1902.91
Depletion to Usable SL Flow	0	0	0	19.1	9.23	10.25	25.84	122.09	1.88	188.39
Replacements										
FRY-ARK Return Flows										
LAWMA-CO Beef Credit				140.5						140.5
LAWMA-Ft Bent Ditch Shrs				108.4						108.4
LAWMA-Stubbs Direct Flow								67.6		67.6
LAWMA-XY Direct Flow					100					100
LAWMA-Manvel Direct Flow					100					100
Offset Account Water										
Total Replacements				248.9	200			67.6		516.5

20,770 acre-feet crossed the Stateline during September, 1999. 72% of the total of the usable monthly flows during the irrigation season is 146,186 acre-feet. This exceeds the seasonal irrigation usability cap of 140,000 acre-feet.





# STATE OF COLORADO

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November 26, 1999



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Governor  
Greg E. Walcher  
Executive Director  
Hal D. Simpson, P.E.  
State Engineer  
Steven J. Witte, P.E.  
Division Engineer

Ms. Mary Louise Clay  
Recording Secretary  
Arkansas River Compact Administration  
307 South Fifth Street  
Lamar, CO 81052

RE: Monthly Report of Colorado Pumping and Offset Account Operations for October, 1999

Dear Mr. Pope and Ms. Clay:

The purpose of this letter is to provide the monthly report required by paragraph 12 of the **Resolution Concerning an Offset Account in John Martin Reservoir for Colorado Pumping As Amended March 30, 1998** ("Resolution"). This letter reports the monthly pumping in excess of Colorado's pre-Compact entitlement, Colorado's monthly accounting of Compact compliance, and the status of water delivered to the Offset Account, all during the month of October, 1999.

Table 1 shows the amount of pumping during the month of October, 1999 by irrigation wells pumping from the Valley Fill Aquifer and surficial aquifers along the Arkansas River between Pueblo and the Stateline, as well as the corresponding wellhead depletions, by user group. The wellhead depletions were computed using the presumptive stream depletions in Rule 4.2 of the **AMENDED RULES AND REGULATIONS GOVERNING THE DIVERSION AND USE OF TRIBUTARY GROUND WATER IN THE ARKANSAS RIVER BASIN, COLORADO** ("Rules") approved in Case No. 95CW211.

Table 2 shows the wellhead depletions due to pumping by irrigation wells in the user groups below John Martin Reservoir that are in excess of the pre-Compact entitlements.

Since the depletions caused by pumping above John Martin Reservoir were fully replaced, and that accounting has been provided to Kansas, and the depletions caused by pumping below John Martin Reservoir which affect senior surface water rights in Colorado were fully replaced, and that accounting has been provided to Kansas, the accounting in this report shows only remaining depletions caused by irrigation pumping in excess of the pre-Compact entitlements for those

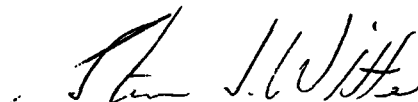
river reaches where no replacements or only partial replacements were made to replace out-of-priority depletions to senior surface water rights in Colorado.

Table 3 shows the remaining stream depletions caused by irrigation pumping in excess of the pre-Compact entitlements which were not replaced by making replacements to senior surface water rights in Colorado. These stream depletions were computed using the wellhead depletions shown in Table 2 with the Ground Water Accounting Model. Please note that in Reaches 11, 12, and 13, replacements to senior surface water rights in Colorado replaced 100% of the stream depletions caused by pumping affecting those reaches. Also note that in Reaches 14, 15, and 16, replacements to senior surface water rights in Colorado replaced 0% of the stream depletions caused by pumping affecting those reaches. These percentages reflect the fact that there was a call by a Colorado surface water right in those reaches on 31 and 0 days respectively out of the 31 days during October. The remaining depletions shown in Table 3 are the estimated stream depletions caused by irrigation pumping in excess of the pre-Compact entitlements remaining after replacements were made to senior surface water rights in Colorado. Table 3 also shows the estimated depletions to usable Stateline flow which were calculated using the assumptions in paragraph 5.B of the Resolution, and the replacements to Stateline flows which were made during the month.

A delivery of water to the Offset Account was initiated during the month of August, 1999 by LAWMA using consumptive use credits from their ownership in the Highland Canal. This operation delivered 716.65 acre-feet of fully consumable water into the Offset Account during the month of October, 1999. As of October 31, 1999, there were 1997.89 acre-feet being stored in the Offset Account.

Please contact me if you have any questions or require additional information.

Sincerely,



Steven J. Witte  
Division Engineer  
Colorado Division of Water Resources

cc: Mark Rude  
John Draper  
Dale Book  
Hal Simpson  
Dennis Montgomery  
Bill Howland

Larry E. Trujillo, Sr.  
Randy Hayzlett  
David Brenn  
Peter Evans  
Thomas R. Pointon  
James G. Rogers

**TABLE 1**  
**Pumping By Rule 3 Irrigation Wells**  
**October, 1999**

<b>USER NO.</b>	<b>DITCH NAME</b>	<b>AF PUMPED</b>	<b>WELLHEAD DEPL</b>
1	Bessemer	295	126
2	Booth Orchard	46	33
3	Excelsior	328	212
4	Collier	96	29
5	Colorado	246	111
6	Rocky Ford Highline	454	149
7	Oxford	104	33
8	Otero	30	9
9	Catlin	96	45
10	Fort Lyon Up Stream	376	127
11	Rocky Ford	51	20
12	Holbrook	27	10
13	Las Animas Consolidated	60	22
14	Baldwin-Stubbs	89	46
15	Fort Bent	29	12
16	Keese	23	18
17	Amity	717	306
18	Lamar/Manvel	243	94
19	Hyde	43	14
20	Fort Lyon Down Stream	470	260
21	XY Graham	197	99
22	Buffalo	22	7
23	Sisson	50	35
24	Stateline Sole Source	761	554
600	LAWMA APOD	1072	343
601	LAWMA APOD	0	0
602	LAWMA APOD	0	0
	<b>Totals</b>	<b>5925</b>	<b>2714</b>

**TABLE 2**  
**Wellhead Depletions From Irrigation Wells Below John Martin Reservoir (Acre-Feet)**  
**(Reduced By Pre-Compact Entitlements)**  
**October, 1999**

**USER NUMBER**

15	16	17	18	19	20	21	22	23	24	Total
5	18	235	94	14	259	99	7	0	549	1280

**TABLE 3**  
**Remaining Depletions To Usable Stateline Flow (Acre-Feet)**  
**October, 1999**

**REACH NUMBER**

	11	12	13	14	15	16	17	18	21	Sum
Remaining Depletion	0	0	0	181.87	94.39	102.15	236.48	1212.2	26.76	1853.85
Depletion to Usable SL Flow	0	0	0	18.01	9.34	10.11	23.41	120.0	2.65	183.52
Replacements										
FRY-ARK Return Flows										
LAWMA-CO Beef Credit				56.9						56.9
LAWMA-Ft Bent Ditch Shrs				198.1						198.1
LAWMA-Stubbs Direct Flow								65.4		65.4
LAWMA-XY Direct Flow					100.0					100.0
LAWMA-Manvel Direct Flow										
Offset Account Water										
Total Replacements				255.0	100.0			65.4		420.4

As of September, 1999, 72% of the total of the usable monthly flows during the irrigation season exceeded the seasonal irrigation usability cap of 140,000 acre-feet.

