

Thirty-first Annual Report

Arkansas River

Compact

Administration

(1979)

For the Report-Year

November 1, 1978 to October 31, 1979

LAMAR, COLORADO

December 11, 1979

THE ADMINISTRATION

FRANK G. COOLEY

Chairman and Representative of the United States

LEO IDLER, KENT REYHER, and J. WILLIAM McDONALD
for Colorado

CARL E. BENTRUP, GUY E. GIBSON, and W. F. STOECKLY
for Kansas

1000 South Main Street
Lamar, Colorado 81052

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**Annual Report Of
ARKANSAS RIVER COMPACT
ADMINISTRATION
1979**

Report-Year November 1, 1978 to October 31, 1979

TO: THE PRESIDENT OF THE UNITED STATES AND THE
GOVERNORS OF THE STATES OF COLORADO AND KANSAS

Sirs:

Pursuant to Article VII of the Arkansas River Compact, the Arkansas River Compact Administration submits its report for the Report-year November 1, 1978 through October 31, 1979, as follows:

1. Members of the Administration

Representative of the United States:

Frank G. Cooley

Colorado Representatives:

Leo Idler, Lamar, Colorado
Kent Reyher, Las Animas, Colorado
J. William McDonald, Denver, Colorado

Kansas Representatives:

Carl E. Bentrup, Deerfield, Kansas
Guy E. Gibson, Topeka, Kansas
W. F. Stoeckly, Garden City, Kansas

2. Officers of the Administration

Chairman:

Frank G. Cooley

Vice Chairman:

Carl E. Bentrup

Secretary:

Lane L. Hackett

Treasurer:

Leo Idler

3. Standing Committees:

Administrative and Legal Committee:

J. William McDonald (Chairman)
Carl E. Bentrup

Engineering Committee:

Guy E. Gibson (Chairman)
Kent Reyher

Operations Committee:

Leo Idler
W. F. Stoeckly

The Representative of the United States and the chairman of each standing committee are ex-officio members of all standing committees.

4. Meetings:

December 12, 1978	Annual Meeting, Lamar, Colorado
March 30, 1979	Special Meeting, La Junta, Colorado
August 15, 1979	Special Meeting, Copper Mountain, Colorado

5. Fiscal:

TREASURER'S REPORT

July 1, 1979 through December 11, 1979

Balance on hand July 1, 1979.....\$12,157.58

RECEIPTS: Colorado

Kansas	\$ 8,058.00
Interest	143.13

Total funds available

\$20,358.71

DISBURSEMENTS:

Geological Survey	\$ 4,900.00
Professional Fees	200.00
Office Expense	153.12
Printing	104.17
Secretary's Salary	874.43
Payroll Taxes	110.34
Telephone	648.47
Travel and Meetings	291.76
Office Equipment	627.12

TOTAL DISBURSEMENTS..... 7,909.41

Balance on hand.....\$12,449.30

Checking Account

\$ 663.06

Pass Book Savings

11,786.24

\$12,449.30

PROPOSED BUDGET
Fiscal Year July 1, 1980-June 30, 1981

Personal Services	\$ 4,570.00
Secretary's Salary	\$ 3,600.00
Social Security	220.00
Professional Services	750.00
U.S. Geological Survey	\$ 4,900.00
Cooperative Agreement	\$ 4,900.00
Data Acquisition Improvement Plan	\$ 5,000.00
Maintenance and Operation	\$ 3,925.00
Bond (Treasurer)	\$ 75.00
Printing	1,000.00
Travel and Meetings	1,350.00
Telephone and Telegraph	1,000.00
Office Expense	500.00
Contingency	\$ 2,000.00
TOTAL BUDGET 1980-1981	\$20,395.00
To be appropriated	\$20,395.00
Colorado (60%)	\$12,237.00
Kansas (40%)	\$ 8,158.00

Treasurer's Report for full year of 1979

6. Facts about John Martin Project:

The John Martin Reservoir Project was built by the Corps of Engineers, United States Army. The project was authorized by Congress in the Flood Control Act of June 22, 1936, when the federal responsibility for flood control throughout the country was assigned to the Corps of Engineers. It is located on the Arkansas River, 58 miles upstream from the Colorado-Kansas stateline and 18 miles upstream from the city of Lamar, Colorado. Construction of the project began in the fall of 1939, but work was suspended by World War II from the spring of 1943 to the spring of 1946. The project was completed in October 1948 at a cost of about \$15 million. The War Department Civil Appropriation Act of June 24, 1940, changed the name of the project from Caddoa Reservoir Project to John Martin Reservoir Project, in honor of the late Congressman John A. Martin of Colorado. It is operated by the United States Army Engineer District, Albuquerque, New Mexico. Mr. Russell Smith has been the resident superintendent of the project since October, 1976.

The John Martin Reservoir Project is part of the comprehensive plan for the control of floods and the development of the water resources of the entire Arkansas River basin. The reservoir provides 270,375 acre-feet of storage capacity for flood control. It protects the fertile Arkansas River Valley below the dam from floods originating in

the 18,915 square miles of the Arkansas River basin above the dam. It provides 350,951 acre-feet of storage space for conservation and recreation. John Martin Reservoir supplies water to the irrigated lands below the dam as far as Garden City, Kansas. The top of the conservation pool is 3,851 feet above mean sea level, which provides 350,951 acre-feet of storage for irrigation. The release of stored flood waters in excess of the conservation and recreation pools and above elevation 3,851 feet is planned so that, when combined with flows originating downstream from the dam, the capacity of the channel will not be exceeded. Upon request of the Arkansas River Compact Administration, irrigation water for downstream water users is released through the outlet works in the base of the dam. Downstream flood damages prevented by John Martin dam already exceed the cost of the project. Benefits have already passed the \$92 million mark.

Recreation and favorable fish and wildlife habitats are derived from this project. With reservoir lands open to all, there are many attractive public use areas for outdoor recreation, water sports, fishing and boating, or just relaxed living. During construction some embankment material was obtained from a 75-acre tract of land immediately downstream of the dam. This excavated area, averaging 12 feet deep, filled with water and formed Lake Hasty, the center of year-round recreation.

John Martin Dam consists of a concrete gravity structure 1,644 feet long and 120 feet high, and an earthfill structure 2,600 feet long. The concrete gravity structure contains a gated spillway provided with sixteen 30 feet by 64 feet tainter gates with their operating machinery. There are earthen wing dams on either side of the main dam. The north wing dam is 3,880 feet long, connecting to the earthfill structure of the main dam at the north abutment. The south wing dam is 5,807 feet long and connects to the south end of the concrete structure of the main dam. A bituminous-surfaced roadway, 21 feet wide, extends along the crest of the north wing dam, main dam, and south wing dam. The overall length of the structure is 2.6 miles. Detailed project data are shown below.

DAM

Total length, feet	13,945
Maximum height above streambed, feet	118
Width of roadway on dam, feet	21

SPILLWAY

Total length, including piers, feet	1,174
Crest gates, 30' x 64'	16
Discharge capacity, cubic feet per second	639,200

OUTLET WORKS

Sluicing conduits, 6' x 7½'	4
Regulating conduits, 4' x 4'	2

RESERVOIR

Capacity, acre-feet	621,326
Flood control storage, acre-feet	270,375
Conservation (irrigation) and recreation, storage, acre-feet	350,951
Water surface at spillway crest, acres	8,960

Water surface at top of conservation pool, acres 11,655
 Water surface at top of flood control pool, acres 17,630
 Drainage area, square miles 18,915
 A ½-mile of the historic Santa Fe Trail north of the reservoir has been enclosed by a fence. An appropriate sign perpetuates this bit of Americana for posterity.

7. Cooperative Studies and Activities:

- (a) Article VIII G (1) of Arkansas River Compact requires the Administration to cooperate with the Chief Official of each of the states of Colorado and Kansas charged with the administration of water rights in their respective States, and with the Federal agencies in systematically determining and correlating the facts pertaining to the flow and diversion of the water of the Arkansas River and to the operation and siltation of John Martin Reservoir and other related structure. Article VIII G (2) requests the Director of the United States Geological Survey, the Commissioner of the United States Bureau of Reclamation, and the Chief of the Engineers, United States Army, to cooperate and collaborate with the Administration and with appropriate State officials in such determinations and correlations of stream flow and related data. Under the By-Laws of the Administration, these cooperative studies and activities are assigned to the Engineering Committee of the Administration.
- (b) During the year covered by this report the Administration has received excellent cooperation from all agencies referred to in the foregoing provisions of the Compact. The United States Geological Survey has continued the operation of the compact gaging stations and the analysis and compilation of the hydrologic data presented in this report and used in the administration of the Compact. The Corps of Engineers continued to operate the conservation pool of John Martin Reservoir in accordance with the terms of the Compact and the orders of the Administration.

8. Water Supply, Reservoir Operation, and Hydrologic Data:

The winter storage began at 12:00 p.m. October 31, 1978 with the reservoir being empty since July 15, 1978. A Colorado demand for river flow of 7 cfs was released November 1, 1978 and maintained until January 12, 1979. A river flow release was made April 12, 1979 of 20 cfs on Colorado demand and canceled April 13, 1979 as weather conditions below John Martin and inflow justified closing the gates for summer storage.

Winter Compact storage ended at 2400 hours April 8, 1979 with 7,109 acre feet accumulated and Amity's winter water storage of 8,675 for a total of 15,784 acre-feet in John Martin. Pursuant to the 1979 Colorado-Kansas storage resolution adopted by the Administration in March, 1979 and the distribution agreement of ditches in Water District No. 67, transfer of this water into various accounts began April 8, 1979 and ended April 12, 1979.

Under the resolution, water collected in conservation storage was released into accounts at a rate of 1,000 cfs and apportioned 60% for

Colorado and 40% for Kansas. The ditch companies in Colorado water district 67 had their own agreement as to the apportionment of Colorado's 60%. Operation of the reservoir under the storage agreement was not intended to change any Compact directive and allowed the operation to simulate that occurring in previous years. When all the water was transferred, the conservation pool was declared empty and the priority administration of water rights in Colorado upstream and downstream of John Martin reservoir came into effect. This administration would then continue until another storage event occurred. Adjustments for evaporation during storage are prorated amongst the accounts and each of the parties in the agreement was responsible for the transit losses it incurred when calling for a release of water from its account.

The operation of the reservoir under the 1979 Colorado-Kansas storage resolution during the summer storage period of this water year resulted in a greater beneficial and more efficient use of water for people in Colorado water district 67. This is the first year since 1968 the reservoir has not been vacated most of the summer season. However, some upstream people felt they were injured because of the timing associated with the anticipation phase of the "opening" and "closing" of the reservoir outlet works. This occurred as the reservoir was being regulated for conservation storage and subsequent releases.

Ten summer storage periods occurred this year as follows:

Began	Ended	Accumulated
1100 Hours April 13, 1979	0001 hours April 16, 1979	543 A.F.
1030 Hours May 30, 1979	1200 hours June 1, 1979	1,128 A.F.
1030 Hours June 3, 1979	1030 hours June 4, 1979	2,204 A.F.
0930 Hours June 9, 1979	1300 hours June 12, 1979	7,057 A.F.
1600 Hours June 24, 1979	0900 hours June 26, 1979	3,689 A.F.
2100 Hours July 16, 1979	0900 hours July 17, 1979	1,019 A.F.
1000 Hours July 18, 1979	1000 hours July 20, 1979	2,161 A.F.
1000 Hours Aug. 1, 1979	2400 hours Aug. 2, 1979	2,205 A.F.
2400 Hours Aug. 15, 1979	0900 hours Aug. 17, 1979	3,295 A.F.
0600 Hours Oct. 22, 1979	2400 hours Oct. 31, 1979	1,362 A.F.

In general, for the year, the reservoir was empty at the beginning of winter storage on November 1, 1978 and at the end of winter storage, the contents of the reservoir were 15,210 acre-feet. At the end of the summer storage period and the end of the water year, October 31, 1979, there were 5,040 acre-feet of water impounded.

9. GAGING STATIONS

The Administration approved a cooperative agreement with the U.S. Geological Survey for the fiscal year October 1, 1978 to September 30, 1979, in the amount of \$9,800 — \$4,900 for each party. These funds are for the operation of the compact stations, the providing of current streamflow data, maintenance of radio equipment, and the preparation of records for the Annual Report.

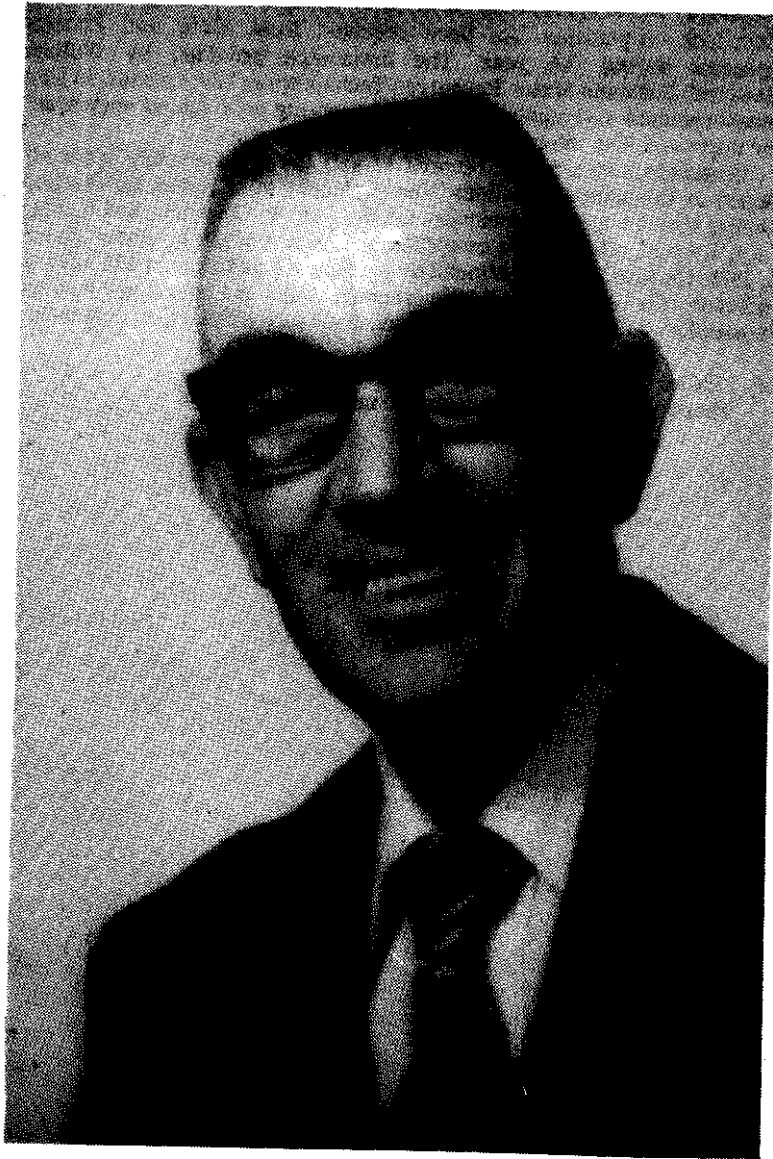
The measurement of the flows for Purgatoire River near Las Animas continues to be a problem, but the expense of a permanent control is probably not justified. The problem is caused by the changing of the stage-discharge relationship due to beavers building brush dams just downstream from several of the gages.

Compact measuring stations, radio transmitters and print out

receivers were operational with few exceptions during the year. Excellent cooperation has been received from State and Federal agencies during the year. The assistance provided by William Howland, Colorado Water Resources Technician at Las Animas, in flow measurements and equipment trouble shooting contributed very much for improved flow information and records this year.

In general, streamflow records of satisfactory accuracy were obtained at the compact stations. The replacement of radios for the four gaging stations and the receivers for the Lamar, Colorado, and Garden City, Kansas, offices were completed and in operation by about March 1, 1978. Emphasis was continued on performing additional field work to increase the accuracy of the records and on providing current streamflow data to the Administration and State officials, as required.

10. Findings of Fact by the Administration
There were no special telephonic meetings this year.



Lane L. Hackett, pictured above, resigned as secretary of the Compact Administration after 14 years of service in that capacity. A resident of Lamar, Colorado, Mr. Hackett has been the Colorado Water Commissioner for District 67 since 1964. At its annual meeting, December 11, 1979, the Compact Administration passed a resolution expressing "its deep gratitude and appreciation for the untiring service and assistance" rendered by Mr. Hackett during his long years of service to the Compact Administration.

APPENDICES FOR ANNUAL REPORT OF THE ARKANSAS RIVER COMPACT ADMINISTRATION

For the Report-Year
November 1, 1978 to October 31, 1979

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APPENDIX "A"

AUDITOR'S REPORT

Crimond, Schemahorn & Co.

CERTIFIED PUBLIC ACCOUNTANTS
203 East Oak
Lamar, Colorado 81052

To the Representatives
Arkansas River Compact Administration
Lamar, Colorado 81052

We have examined the Statement of Assets and Liabilities Arising from Cash Transactions of the Arkansas River Compact Administration as of June 30, 1979, and the Statement of Cash Receipts and Disbursements, Changes in Cash Balance and the Statement of Cash Receipts and Disbursements with Budget Comparison for the year ended June 30, 1979. Our examination was conducted in accordance with generally accepted auditing standards, and accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, Exhibits A, B and C present fairly the Assets and Liabilities Arising from Cash Transactions of the Arkansas River Compact Administration as of June 30, 1979, and the results of Cash Transactions for the year then ended on a basis consistent with the previous year.

Crimond, Schemahorn & Co.
Certified Public Accountants

July 30, 1979
Lamar, Colorado

EXHIBIT A

ARKANSAS RIVER COMPACT ADMINISTRATION STATEMENT OF ASSETS AND LIABILITIES ARISING FROM CASH TRANSACTIONS JUNE 30, 1979

ASSETS:

Cash and Savings	\$12,157
Equipment	1,714
Concrete Control	8,000

TOTAL ASSETS	<u>\$21,871</u>
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LIABILITIES:
CASH BASIS EQUITY:

Expended:	
Equipment	\$ 1,714
Concrete Control	8,000
Unexpended	\$12,157
TOTAL CASH BASIS EQUITY — NOTE 1a	\$21,871
TOTAL LIABILITIES AND CASH BASIS EQUITY	\$21,871

EXHIBIT B

ARKANSAS RIVER COMPACT ADMINISTRATION
STATEMENT OF CASH RECEIPTS AND DISBURSEMENTS
AND CHANGES IN CASH BALANCE
FOR YEAR ENDED JUNE 30, 1979

CASH IN BANK, JULY 1, 1978\$18,075

RECEIPTS:

Revenue from Assessments:	
Colorado	\$11,019
Kansas	7,346
Interest	741
Miscellaneous Income	4
TOTAL RECEIPTS	\$19,110

DISBURSEMENTS:

Geological Survey	\$19,400
Insurance	75
Professional Fees	425
Office Supplies	77
Printing	650
Secretary's Salary — Net	2,255
Payroll Taxes	290
Telephone	933
Typing and Mailing	137
Travel and Meetings	759
Moving Expense — Office	27
TOTAL DISBURSEMENTS	\$25,028

EXCESS OF RECEIPTS OVER DISBURSEMENTS(5,918)

CASH BALANCE, JUNE 30, 1979\$12,157

EXHIBIT C

ARKANSAS RIVER COMPACT ADMINISTRATION STATEMENT OF CASH RECEIPTS AND DISBURSEMENTS WITH BUDGET COMPARISON FOR THE BUDGET YEAR JULY 1, 1978 TO JUNE 30, 1979

	BUDGET	ACTUAL	ACTUAL OVER (UNDER)
CASH IN BANK, JULY 1, 1978.....	\$ 250	\$18,075	\$17,825
RECEIPTS:			
Revenue from Assessments:			
Colorado — 60%	11,019	11,019	—
Kansas — 40%	7,346	7,346	—
Interest	—	741	741
Miscellaneous	—	4	4
TOTAL RECEIPTS	18,365	19,110	745
TOTAL TO ACCOUNT FOR	18,615	37,185	18,570
DISBURSEMENTS:			
U.S. Geological Survey — Gauging ...	9,800	19,400	9,600
Secretary's Salary — Net	2,400)	2,255	(145)
Bond and Insurance	25	75	50
Telephone	650	933	283
Payroll Taxes	140	290	150
Typing and Mailing	—	137	137
Travel and Meetings	1,350)	759)	(591)
Professional Fees	1,000)	425)	(575)
Office Supplies	300)	77)	(223)
Printing	850	650)	(200)
Contingency	2,000	—	(2,000)
Office Equipment	100	—	(100)
Moving Expense — Office	—	27	27
TOTAL DISBURSEMENTS	\$18,615	\$25,028	\$ 6,413
CASH IN BANK, JUNE 30, 1979	\$ —	\$12,157	\$12,157

Note 1 — Summary of significant accounting policies:

- a. The Administration maintains financial records using the cash basis of accounting. By using the cash basis of accounting certain key accounts needed to present financial position and results of operations are omitted; examples of these accounts are accounts receivable and accounts payable.

APPENDIX 'B-1'

Arkansas River Above Pueblo, Colorado

ARKANSAS RIVER ABOVE PUEBLO, COLORADO
YEARLY REPORT ENDING OCTOBER 31, 1979

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	82	57	62	55	56	271	943	3250	2870	937	535	313
2	101	57	61	56	112	264	992	2550	3070	734	605	286
3	110	57	61	56	268	247	1030	2430	2950	668	560	288
4	92	60	67	55	268	233	1030	2540	2750	640	540	299
5	90	60	58	55	229	223	979	2830	2730	615	585	324
6	84	60	58	55	182	202	823	3110	2570	640	565	316
7	79	60	57	55	160	186	766	3330	2330	766	530	427
8	81	60	57	55	144	210	766	4250	2210	841	472	535
9	84	60	57	56	144	265	766	4460	2070	1180	436	580
10	84	60	57	56	144	340	772	3100	1820	1180	436	580
11	84	60	56	56	144	250	540	1950	1790	1180	505	555
12	84	60	56	56	144	205	450	2120	2010	1120	744	560
13	118	60	55	56	142	205	409	2980	1870	1080	739	560
14	158	60	54	56	142	180	334	3580	1910	1130	744	555
15	140	60	54	56	144	142	144	4130	1830	1330	440	540
16	55	60	55	56	192	178	158	4250	2770	1320	110	320
17	55	60	55	56	238	208	160	3560	1830	1720	106	226
18	55	61	55	56	247	235	208	3740	1970	1270	103	208
19	55	61	56	56	282	250	257	3580	1730	1340	97	218
20	55	60	56	56	400	229	409	3750	1470	1200	138	220
21	54	60	56	56	445	178	931	3200	1460	1160	198	218
22	56	61	56	56	409	156	865	2890	1430	1180	210	238
23	56	61	56	56	306	154	931	2690	1410	1430	220	336
24	56	61	56	56	268	235	1470	2920	1350	1520	229	306
25	56	62	56	56	235	320	1690	3280	1330	1000	235	285
26	57	62	56	56	215	336	1960	1820	1340	907	241	285
27	57	62	56	57	244	332	2160	2780	1250	772	260	257
28	57	62	56	56	285	404	2480	3340	1070	620	285	247
29	57	62	56	56	320	931	3260	3220	1010	615	324	247
30	57	62	55	56	324	931	3580	2870	973	585	336	229
31	57	62	55	56	296		3680		955	515		223
TOTAL												
cfs	2311	1870	1756	1564	7129	8531	34943	94480	58368	31785	7129	10781
ac-ft.	4580	3710	3480	3100	14140	16920	69310	187400	115800	63070	14410	21380

THE YEAR - 517,300 acre-feet

APPENDIX 'B-2'

Arkansas River At Las Animas, Colorado

ARKANSAS RIVER AT LAS ANIMAS, COLORADO

Report Year ending October 31, 1979

USGS Records—Provisional; Subject to Revision

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	8.0	12	77	140	68	13	12	461	465	529	106	11
2	7.6	13	67	150	67	13	14	453	620	388	81	10
3	6.2	13	60	150	71	16	15	371	713	174	64	10
4	5.6	13	50	140	66	15	12	249	610	80	54	9.3
5	5.3	13	45	130	72	24	12	178	603	129	52	10
6	5.3	14	36	120	67	18	10	255	697	160	38	10
7	5.3	14	27	117	99	17	9.1	437	650	93	43	9.5
8	4.8	14	20	119	100	16	9.4	657	452	50	47	12
9	5.3	14	19	122	58	15	12	1190	528	45	45	11
10	4.3	14	22	138	45	17	10	1440	424	41	37	11
11	4.3	14	25	156	41	18	10	1190	424	47	36	12
12	5.3	14	26	160	40	34	10	305	435	85	35	11
13	5.3	14	18	170	37	156	11	150	354	110	36	11
14	5.4	13	15	180	34	80	12	134	317	113	39	12
15	4.8	13	31	170	33	31	14	117	388	122	47	14
16	4.3	16	44	139	27	25	9.8	237	445	64	70	20
17	4.8	18	46	80	23	22	9.6	614	343	42	155	19
18	8.0	18	44	100	19	19	10	494	513	111	127	24
19	12	20	47	110	18	18	11	609	352	249	65	24
20	13	30	59	107	18	16	10	453	332	332	40	28
21	18	56	56	102	20	16	10	585	130	273	31	26
22	13	75	55	96	19	15	12	683	395	273	24	34
23	14	66	38	84	19	15	417	624	488	218	16	35
24	13	62	48	95	18	15	402	1770	527	275	14	40
25	14	74	80	102	18	16	425	952	590	356	13	38
26	12	85	90	94	18	15	528	240	467	534	14	39
27	12	85	85	100	18	15	463	196	439	495	12	26
28	12	85	80	91	18	14	486	94	363	439	12	31
29	12	100	81	100	14	13	475	506	447	470	11	29
30	12	100	91	100	13	12	664	406	400	284	11	30
31	12	81	110	15	15	12	298	406	500	154	154	30
TOTAL	256.9	1167	1594	3455	1193	732	4406.9	16030	14119	6809	1378	637.8
sec.ft.	510	2310	3180	6830	2570	1450	8740	31800	29010	13510	2730	1270
THE YEAR	162,700 acre-ft.											

APPENDIX 'B-3'

Purgatoire River Near Las Animas, Colorado

PURGATOIRE RIVER NEAR LAS ANIMAS, COLORADO												
Report-Year ending October 31, 1979												
USGS Records—Provisional; Subject to Revision												
DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	2.1	2.7	2.2	4.8	4.7	4.7	3.2	313	8.5	986	22	1.2
2	2.2	2.7	2.2	4.7	5.1	4.7	3.2	303	9.2	579	16	3.2
3	1.7	2.7	2.2	4.4	7.0	12	3.7	785	13	168	9.4	4.5
4	1.7	2.7	2.1	3.6	5.7	6.2	4.2	281	14	83	7.0	2.9
5	1.7	2.2	2.0	3.2	4.7	5.7	4.2	119	35	41	6.4	2.0
6	1.7	2.2	1.9	3.4	5.0	5.5	3.7	72	13	22	4.8	1.8
7	1.7	2.7	1.8	4.1	4.5	5.0	3.7	48	26	12	4.9	1.7
8	1.7	2.7	1.8	4.4	5.2	5.0	3.7	33	12	8.2	5.7	2.5
9	1.7	2.7	2.0	4.5	6.0	5.0	4.7	825	17	8.7	4.2	1.9
10	1.7	1.7	2.5	5.7	4.6	5.0	14	689	11	132	3.4	18
11	1.7	2.2	3.0	8.1	4.7	5.0	10	450	5.5	685	4.4	16
12	1.2	2.2	4.0	11	4.7	4.7	5.7	185	3.5	157	4.8	11
13	1.2	2.2	4.0	11	4.7	5.3	5.2	113	2.2	65	4.7	7.7
14	1.7	2.2	3.0	10	5.2	5.1	4.7	74	2.2	37	4.5	9.8
15	1.7	2.2	3.5	9.0	6.2	3.7	4.7	51	1.7	909	5.2	8.5
16	1.7	2.2	4.0	6.0	5.2	3.7	4.2	32	572	1380	169	6.6
17	1.7	2.2	5.0	5.5	4.7	3.7	4.3	17	249	379	99	17
18	1.7	2.2	6.0	5.1	7.7	3.7	4.6	13	539	255	45	12
19	1.7	2.7	7.0	4.7	4.7	3.7	3.7	7.1	1129	98	22	9.7
20	1.7	3.2	8.0	5.0	12	3.7	3.4	5.2	297	342	9.1	11
21	1.7	2.7	9.0	5.0	25	3.7	4.3	4.4	113	182	5.7	16
22	1.7	2.2	9.0	5.2	6.7	3.7	103	3.7	51	94	5.9	27
23	1.7	2.7	8.5	4.9	6.2	4.2	191	2.2	22	101	3.6	27
24	1.7	2.2	8.0	4.4	6.2	4.7	104	137	14	70	4.3	24
25	2.7	2.2	8.0	4.3	4.2	4.2	56	747	16	100	4.3	24
26	2.7	2.2	7.0	5.9	4.2	3.7	80	87	340	124	4.2	28
27	2.7	2.2	5.9	5.5	4.2	3.7	116	36	141	95	2.9	22
28	2.7	2.2	5.5	4.8	4.2	3.7	79	13	48	138	2.2	16
29	2.7	2.2	5.2	4.7	4.7	3.7	64	7.3	27	75	1.7	22
30	2.7	2.2	5.9	5.7	5.7	3.7	26	14	38	44	1.7	35
31	2.7	2.2	6.2	5.2	5.2	3.7	16	26	30	30	47	47
TOTAL												
sec.ft.	56.9	73.7	146.4	159.2	188.8	140.1	938.1	5468.9	3786.8	7409.9	488.0	484.1
ac.ft.	113	146	290	314	374	276	1860	10940	7510	14700	968	901
THE YEAR 38,290 acre-ft.												

APPENDIX 'B-4'

River Flow Into John Martin Reservoir

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	10	15	79	145	73	18	15	774	474	1520	130	12
2	9.8	16	69	155	72	18	17	756	629	967	97	13
3	7.9	16	62	154	78	28	19	1170	726	342	73	14
4	7.3	18	52	144	72	21	16	510	624	163	61	12
5	7.0	15	47	133	77	30	16	297	638	170	58	12
6	7.0	16	38	123	72	24	14	327	710	182	43	12
7	7.0	17	23	121	104	22	13	485	676	105	48	11
8	6.5	17	22	123	105	21	13	690	464	58	53	14
9	7.0	17	21	126	64	20	17	2020	545	54	49	30
10	6.0	16	24	144	50	22	26	2140	435	173	40	29
11	6.0	16	28	164	46	23	20	1640	430	732	40	28
12	6.5	16	30	171	45	39	16	490	438	242	40	22
13	6.5	16	22	181	42	161	16	263	356	175	41	19
14	7.1	15	18	190	39	85	16	191	319	150	44	22
15	6.5	15	34	179	39	35	17	185	390	1030	52	22
16	6.0	18	48	136	32	29	18	289	1020	1440	239	27
17	6.5	31	51	86	28	26	14	631	592	421	254	36
18	9.7	20	50	105	27	23	14	497	1050	366	172	36
19	14	23	54	115	23	23	14	616	1470	347	87	34
20	15	33	67	112	30	22	14	458	489	674	49	40
21	20	59	67	107	45	20	14	569	243	552	37	42
22	15	77	64	103	26	19	115	697	446	367	30	61
23	16	69	46	89	25	19	608	626	510	319	20	62
24	15	64	56	99	24	20	506	1910	541	345	18	64
25	17	76	88	106	22	20	461	1700	586	456	17	62
26	15	70	97	100	22	19	608	327	807	636	18	67
27	15	87	91	106	22	18	579	232	395	590	15	52
28	15	87	86	96	22	18	585	107	431	577	14	42
29	15	102	86		22	17	540	513	497	522	14	53
30	15	102	97		19	16	690	420	438	328	13	64
31	15	83	116		20		314		536	184		77
TOTAL												
sec.ft.	317.3	1240	1739	3613	1384	877	5345	21510	17905	14209	1866	1091
ac.ft.	629	2460	3450	7170	2750	1740	10600	42870	35510	28180	3700	2160
THE YEAR	141,000 acre-ft.											

APPENDIX 'B-5'

Contents Of

John Martin Reservoir

CONTENTS OF JOHN MARTIN RESERVOIR												
Report Year ending October 31, 1979												
Corps of Engineers records—Provisional; Subject to Revision												
Midnight contents in acre-feet from capacity table dated Nov. 1, 1973												
DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	18	885	1920	6310	12450	15250	3990	3030	9160	5020	6220	4030
2	36	905	1960	6530	12600	15270	3350	2890	9160	5020	6220	3990
3	63	924	2010	6800	12790	15440	3320	2860	9110	7210	6120	3990
4	108	961	2060	7060	12920	15460	3310	3160	8920	6850	6120	4000
5	176	978	2150	7260	13050	15480	3250	3150	9000	5970	6060	4000
6	205	986	2200	7430	13170	15590	3170	2880	8980	5650	6100	4010
7	236	992	2250	7620	13360	15620	3150	2590	8910	5540	6030	4020
8	264	1010	2320	7780	13550	15660	3110	2540	8870	5340	5900	3960
9	287	1020	2390	7960	13800	15680	3210	3990	8880	5220	5730	3960
10	312	1040	2460	8200	13900	15720	3230	6980	8680	4960	5320	3960
11	338	1060	2550	8430	14000	15780	3220	8670	8460	4860	5060	3970
12	368	1070	2660	8690	14120	15790	3180	9190	7960	4660	5060	3930
13	392	1080	2750	8880	14180	15910	3150	8760	6930	4530	4910	3920
14	423	1100	2850	9270	14230	16110	3080	8250	5820	4320	4790	3920
15	458	1110	2900	9610	14310	16240	3050	7690	4610	4930	4570	3880
16	498	1120	3010	9910	14390	15870	3010	7160	4240	7460	4440	3840
17	534	1130	3100	10180	14450	15310	2970	6910	5020	7470	4500	3830
18	560	1150	3200	10470	14530	14790	2970	7060	4690	7390	4580	3840
19	609	1190	3320	10710	14690	13440	2960	6910	6220	7060	4570	3860
20	623	1220	3510	10930	14770	12860	2960	6870	6570	7280	4360	3850
21	644	1260	3670	11130	14870	11770	2950	6910	6300	7240	4230	3830
22	672	1320	3850	11290	14970	10830	2940	6780	5980	6980	4280	3990
23	693	1360	4000	11470	14970	10010	2950	8010	5790	6600	4260	4120
24	733	1430	4150	11610	14950	9030	3020	7650	5700	6340	4200	4230
25	764	1500	4370	11880	14980	8010	2850	10250	5730	6210	4190	4360
26	792	1610	4480	12080	15090	7010	2800	10400	6070	6320	4200	4420
27	814	1650	4710	12270	15130	6100	2850	10060	5670	6320	4190	4580
28	833	1760	5330		15130	5330	2820	9630	5360	6430	4170	4640
29	862	1840	5620		15170	4630	3390	9320	5250	6310	4130	4700
30	877	1860	5980		15170			9220	5090	6310	4080	4960
31		1870	6100		15210				4890	6310		5040

APPENDIX 'B-6'

Outflow From

John Martin Reservoir

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	6.3	9.8	7.3	1.2	1.4	1.2	337	502	519	532	187	30
2	8.3	8.8	7.3	1.2	1.4	1.2	338	1190	618	546	139	24
3	9.5	9.0	6.8	1.2	1.4	1.2	79	1080	727	548	103	19
4	9.3	8.2	6.8	1.2	1.4	1.2	40	552	686	541	88	21
5	9.2	8.4	6.7	1.2	1.4	1.2	54	373	633	524	75	23
6	10	8.3	6.8	1.2	1.4	1.2	55	371	619	343	50	23
7	10	7.5	6.7	1.2	1.4	1.2	31	557	740	185	91	25
8	10	8.1	7.0	1.2	1.4	1.2	14	706	672	188	123	34
9	10	7.8	7.1	1.2	1.5	1.4	14	735	642	186	125	40
10	10	8.0	7.1	1.2	1.5	1.4	22	630	603	186	145	43
11	9.8	8.0	7.3	.86	1.8	1.2	38	804	534	629	150	44
12	10	7.8	4.8	.73	1.5	12	44	573	795	441	129	45
13	10	8.2	1.7	.73	2.1	13	45	530	986	331	118	46
14	10	7.4	1.4	.73	2.3	1.2	51	480	986	256	125	49
15	11	7.4	1.4	.73	1.9	1.2	49	425	983	176	144	49
16	11	7.4	1.4	.73	1.9	311	37	421	986	530	174	48
17	11	7.7	1.4	.73	1.6	331	30	530	514	527	256	46
18	11	7.5	1.2	.73	1.7	323	20	546	670	514	229	46
19	11	7.7	1.2	.73	1.6	344	16	587	795	483	186	47
20	11	8.2	1.2	.73	1.6	387	23	531	632	530	188	46
21	11	7.8	1.2	1.2	1.7	401	40	487	501	615	119	46
22	11	7.6	1.2	1.4	1.7	418	41	645	502	626	28	33
23	11	8.0	1.2	1.4	1.6	462	364	613	506	498	41	27
24	11	8.0	1.2	1.4	1.6	513	467	715	483	444	45	27
25	12	7.7	1.2	1.4	1.6	513	470	506	484	385	25	26
26	12	7.7	1.2	1.4	1.6	539	809	502	579	549	24	24
27	11	7.8	1.2	1.4	1.6	532	585	502	695	552	28	23
28	11	7.5	1.2	1.4	1.6	503	463	477	589	521	30	23
29	11	7.5	1.2	1.4	1.6	381	394	566	516	543	33	29
30	11	7.7	1.2	1.4	1.4	342	432	572	532	372	35	18
31	11	7.6	1.2	1.4	1.4	432	432	572	529	235	35	2.3
TOTAL	310.4	246.3	106.8	31.19	49.5	6310.0	5781	17568	20418	13516	3231	1026.3
sec.ft.	616	489	210	62	98	12320	11470	34850	40500	28610	6410	2040
THE YEAR 195,900 acre-ft.												

APPENDIX 'B-7'

Arkansas River At Lamar, Colorado

ARKANSAS RIVER AT LAMAR, COLORADO												
Report-Year ending October 31, 1979												
USGS Records—Provisional; Subject to Revision												
DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	4.0	1.2	0.20	0.70	5.7	0.90	22	348	90	96	75	7.2
2	4.3	1.1	.30	1.0	5.4	1.1	17	346	50	93	92	9.2
3	4.3	.70	.30	1.5	5.5	1.3	15	788	65	105	71	9.7
4	3.8	.70	.50	2.0	7.0	1.4	19	280	93	101	52	10
5	3.9	3.1	.50	2.2	6.6	.97	7.8	42	90	98	48	12
6	4.0	.90	.40	2.6	6.5	.29	10	13	50	76	42	10
7	4.0	.70	.30	2.8	6.3	.49	11	13	50	75	25	13
8	4.3	.70	.30	3.0	6.2	.56	9.8	78	101	65	19	14
9	4.3	.50	.50	2.8	6.8	.87	9.0	247	77	35	7.2	14
10	4.3	.40	.50	4.4	6.6	1.1	11	128	80	27	8.9	17
11	3.7	.40	.50	6.2	6.7	1.2	11	95	74	110	19	17
12	3.4	.50	.50	5.0	6.7	2.1	9.8	83	112	70	21	14
13	3.4	.60	.30	5.1	6.0	5.1	9.8	67	444	70	11	19
14	3.4	.70	.30	5.9	5.9	12	9.4	57	507	80	14	19
15	3.1	.80	.30	5.8	5.3	8.0	8.6	48	499	108	21	15
16	2.8	1.0	.30	1.1	2.0	8.0	8.6	53	561	126	29	16
17	2.8	1.1	.40	2.3	1.3	23	4.0	57	305	131	36	17
18	2.8	1.2	.50	3.8	.82	10	5.8	98	180	59	58	18
19	3.1	1.2	.70	6.0	.56	10	4.9	75	405	365	59	18
20	3.7	.80	.90	5.3	1.6	11	5.5	92	310	52	52	14
21	2.8	.30	1.0	4.9	1.9	30	7.4	61	127	66	50	14
22	2.8	1.1	1.0	5.0	1.9	39	11	89	110	105	22	17
23	2.8	1.3	1.0	5.4	.90	56	20	114	98	76	24	11
24	4.0	.30	1.0	5.2	.50	62	54	142	90	61	18	9.2
25	4.7	.90	1.0	4.6	.50	43	34	90	78	89	17	11
26	3.7	.90	.70	5.7	.50	61	106	80	95	90	15	18
27	2.4	.50	.50	5.5	.70	64	116	70	120	129	12	18
28	1.8	.70	.50	5.7	.70	61	40	60	110	54	9.8	22
29	2.1	.70	.40	5.7	.50	50	122	75	82	67	7.8	18
30	1.3	.20	.40	.30	.30	44	428	75	104	69	7.8	22
31		.20	.50	.70	.70		171		103	62		19
TOTAL	101.3	25.60	16.20	111.50	108.58	609.38	1318.4	4090	5264	2837	943.5	462.3
sec.ft.	202	51	32	221	215	1210	2620	8110	10440	5630	1870	917
ac.ft.												
THE YEAR 31,530 acre-ft.												

APPENDIX 'B-8'

Arkansas River At The Colorado-Kansas State Line

USGS RECORDS—PROVISIONAL; SUBJECT TO REVISION												Report Year ending October 31, 1979		ARKANSAS RIVER AT THE COLORADO-KANSAS STATE LINE		
DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.				
1	2.5	3.5	4.5	5.4	9.6	8.7	11	146	40	48	22	6.8				
2	2.5	3.3	4.0	5.0	9.6	8.4	12	201	35	54	21	7.2				
3	2.4	4.0	4.0	4.5	10	8.7	13	317	23	43	24	7.1				
4	2.1	4.1	4.0	4.5	9.8	9.0	11	517	21	31	23	8.7				
5	2.0	3.5	4.0	4.5	8.4	7.9	10	241	136	28	21	8.7				
6	2.0	3.4	3.5	4.5	8.6	7.5	9.0	118	82	25	18	8.1				
7	1.9	3.2	3.5	4.5	9.4	7.1	7.2	75	59	25	18	9.8				
8	1.9	3.0	3.5	4.0	8.6	7.6	7.7	64	49	18	14	6.4				
9	1.9	2.8	3.5	5.0	8.4	8.0	7.9	78	62	18	14	6.4				
10	2.0	2.5	3.5	5.5	8.8	8.5	9.6	154	65	22	13	5.2				
11	2.0	2.0	3.0	5.4	8.4	9.5	9.2	98	47	20	13	5.2				
12	2.1	3.5	3.0	5.6	7.9	10	8.2	80	42	18	13	4.1				
13	2.1	3.5	2.5	5.7	7.2	11	7.2	66	32	31	15	5.2				
14	2.2	4.0	2.0	6.0	6.6	11	7.5	45	153	31	19	5.1				
15	2.4	4.5	1.7	5.6	6.5	11	6.6	34	227	35	18	4.8				
16	2.4	5.0	1.8	5.6	7.0	13	6.3	26	300	38	19	4.4				
17	2.3	5.0	2.0	5.2	6.4	13	6.3	26	300	42	17	4.6				
18	2.3	5.3	2.5	4.5	5.9	13	5.7	18	327	61	14	6.6				
19	1.9	5.1	3.5	3.5	5.5	14	5.3	16	375	39	15	6.3				
20	1.6	5.0	4.5	4.3	5.7	15	6.4	19	251	105	18	5.4				
21	3.8	6.3	5.4	6.0	9.2	15	7.0	13	222	55	24	5.0				
22	3.4	4.5	5.7	8.7	11	11	6.1	16	121	37	24	6.1				
23	3.2	4.5	5.8	7.4	9.0	9.5	6.3	12	91	31	19	5.6				
24	3.2	4.5	5.8	8.3	8.4	8.5	6.3	13	75	34	11	5.0				
25	3.9	4.5	5.1	8.5	8.6	11	7.9	35	67	25	9.0	6.0				
26	3.8	4.5	5.2	9.2	8.2	12	6.3	56	57	34	8.1	6.0				
27	3.6	4.5	5.0	9.5	9.1	9.6	10	30	47	55	8.4	4.5				
28	3.6	4.6	5.0	11	9.5	9.5	16	20	47	55	7.8	4.7				
29	3.6	5.4	5.0	9.5	12	14	75	75	47	36	8.4	5.5				
30	3.5	5.0	5.0	8.3	12	147	61	61	47	29	8.1	6.8				
31	5.4	5.0	5.4	10	555	12	555	40	40	30	12	12				
TOTAL	78.0	128.6	122.9	165.4	260.4	313.0	949.0	2675	3447	1153	481.8	192.2				
sec.ft.	155	257	244	328	517	621	1880	5310	6840	2290	956	381				
													THE YEAR 19780 acre-ft.			

APPENDIX 'B-9'

Demands By Colorado For Reservoir Water (CFS)

DEMANDS BY COLORADO FOR RESERVOIR WATER (CFS)												
YEARLY REPORT ENDING OCTOBER 31, 1979												
DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1							334		19	52		
2							329		0	52		
3							54		0	73.5		
4									0	304.5		
5								38	4	295		
6								101	5	140		
7								38	5	37	47	
8								0	5	86	75.5	
9								0	5	105	75.5	
10								50	5	105	75.5	
11								101	5	46	75.5	
12								157.5	16	20	81	
13								252	23	27.5	91	
14								218.5	23	22	81	
15								151	23	22	76	
16						189		151	17	22	50	
17						302.5		57	13	22	0	
18						302.5		25	13	98	0	
19						321		28	13	110	0	
20						352		0	13	55	9.5	
21						363			13	0	54	
22						363			220	0		
23						363			9	166		
24						405			11	89		
25						460		0	15			
26						471.5		94.5	9			
27						480		151	5			
28						456		205	82			
29						354		0	78			
30						331		30.5	52			
31									52			
TOTALS						5513.5	717	1849.0	753	1948.5	791.5	
CFS						10936.0	1422	3669.0	1494	3867.0	1570.0	
AC-FT												
THE YEAR 22,958 acre-ft.												

APPENDIX 'B-10A'

Demands By Colorado For River Flow Under Articles VA And VB (CFS)

DEMANDS BY COLORADO FOR RIVER FLOW UNDER ARTICLES VA & VB (CFS)												
Yearly Report Ending October 31, 1979												
DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	7	7	7					200		500		15
2	7	7	7					500		500		15
3	7	7	7					500				15
4	7	7	7									15
5	7	7	7									15
6	7	7	7									15
7	7	7	7									15
8	7	7	7					500				15
9	7	7	7					500				15
10	7	7	7					500				15
11	7	7	7					500				15
12	7	7	7					500				15
13	7	7	7									15
14	7	7	7							500		15
15	7	7	7						475	500		15
16	7	7	7						500	500		15
17	7	7	7						500			15
18	7	7	7						500			15
19	7	7	7									15
20	7	7	7									15
21	7	7	7									15
22	7	7	7									15
23	7	7	7					500				15
24	7	7	7					500				15
25	7	7	7					500				15
26	7	7	7									15
27	7	7	7									15
28	7	7	7									15
29	7	7	7									15
30	7	7	7				225					15
31	7	7	7				216					15
TOTALS	210	217	84	0	0	0	441	4700	1975	2000	0	135
CFS	417	430	167	0	0	0	875	9322	3917	3967	0	268
AC-FT												
THE YEAR 19,363 acre-feet												

APPENDIX 'B-10B'

Demands By Kansas For River Flow Under Article V B (CFS)

DEMANDS BY KANSAS FOR RIVER FLOW UNDER ARTICLE VB (CFS)											
YEARLY REPORT ENDING OCTOBER 31, 1960											
DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	OCT.
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											
TOTALS											
CFS									146	100	
AC-FT									250	100	
THE YEAR 1,208 acre-feet									104	216	

APPENDIX 'B-11'

Demands By Kansas For Reservoir Water (CFS)

DEMANDS BY KANSAS FOR RESERVOIR WATER (CFS) YEARLY REPORT ENDING OCTOBER 31, 1979												
DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1								403				
2								403				
3								403				
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												
TOTALS							344					
CFS							1279					
AC-FT							244					
THE YEAR 7,917 acre-feet							483					

315 Release at 0900
504
504
504
438 Empty at 2050
0 Release at 1000
204 Empty at 2210

2469
2337
4897

Release at 0830 244
244
483

APPENDIX 'B-12'

Diversion In Ditches By Colorado (Acre Feet)

DIVERSION IN DITCHES BY COLORADO (Acre-Feet)												
DISTRICT NO. 14, NO. 17 - DIVISION NO. 2												
SOURCE: WATER COMMISSIONER'S MONTHLY REPORTS												
REPORT YEAR ENDING OCTOBER 31, 1979												
NAMES OF CANAL	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
Res. or Imported	2130											YEAR
Bessemer (Riv.)					2214	4194	5684	11596	10164	4590	4288	49190
Total: Bessemer					2214	4194	5684	11596	10164	4590	4288	49190
Minnequa-Ft. Union	2130											24
West Pueblo (Riv.)	7424											7130
Excelsior (Riv.)	8											56320
Res. or Imported												86946
Total: Excelsior												1394
Collier												3116
Colorado Canal (Riv.)												80
Res. or Imported												3196
Total: Colo. Canal												1116
Higley (Riv.)												43354
Res. or Imported	1656											36110
Total: Higley												79464
Oxford Farmers (Riv.)	1656											5528
Res. or Imported	446											5228
Total: Oxford Farmers												66784
Total District No. 14	446											12208
Isaport District No. 14												528
Otero												528
Res. or Imported												834
Total: Otero												17298
Catlin Canal (Riv.)												2444
Res. or Imported												19742
Total: Catlin												327170
Holbrook (Riv.)												57972
Res. or Imported												3370
Total: Holbrook												350
Rocky Ford												3720
Ft. Lyon Storage												64170
Ft. Lyon (Riv.)												8586
Res. or Imported												72755
Total: Kicking Bird												36698
Total: Ft. Lyon-K.B.												26050
Las Animas Consol.												62736
Total: Dist. No. 17												5252
Total: Dist. No. 14-No. 17												28290
Res. or Imp. No. 14-No. 17												183374
												9616
												2776
												16186
												243466
												26106
												457294
												784464
												102574

APPENDIX 'B-13'

Diversions By Ditches In Colorado Water District No. 67—Division 2

	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	YEAR
Fort Bent Canal	224	46	0	0	0	498	1037	0	3158	3219	1519	603	10304
Keesee Ditch	329	284	117	0	0	309	817	766	1121	988	813	770	6284
Amiky Canal	0	0	0	0	0	7991	4711	16963	19309	12817	280	0	61770
Lamar Canal	143	143	32	0	127	1210	1214	4898	5163	4816	3211	246	21194
Hyde Ditch	0	0	0	0	0	0	0	0	204	52	0	0	256
Manvel Ditch	0	0	0	0	0	95	32	105	123	216	0	0	571
X. Y. and Graham Canal	0	0	0	0	0	64	210	649	984	494	0	0	2381
Buffalo Canal	14	0	0	0	137	1805	2598	3507	4023	4701	3166	1718	21669
Total: District	710	473	149	0	264	11972	10619	26778	34065	27103	8989	3287	
Trans-Mtn. Diversions	0	0	0	0	0	0	0	0	0	0	0	0	
Grand Total	124409												

APPENDIX 'B-14'

Diversions By Ditches

In Kansas

DIVERSIONS BY DITCHES IN KANSAS													
Report-Year ending October 31, 1979													
(Acre Feet)													
Frontier Ditch, USGS Records													
Other Ditches, Kansas Division of Water Resources Records													
	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	YEAR
Frontier Ditch	64	6	0	0	0	58	442	769	1661	1418	722	219	5359
Ft. Aubrey Canal	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Stateline	64	6	0	0	0	58	442	769	1661	1418	722	219	5359
To Syracuse													
Amazon Canal	0	0	0	0	0	0	0	0	0	0	0	0	0
Great Eastern Canal	0	0	0	0	0	0	0	1805	0	0	0	0	1805
South Side Ditch	0	0	0	0	0	0	0	0	0	0	0	0	0
Farmers Ditch	0	0	0	0	0	0	0	0	0	0	0	0	0
Garden City Canal	0	0	0	0	0	0	0	0	1051	0	0	0	1051
Total Syracuse													
To Garden City	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Stateline								1805	1051	0	0	0	2856
To Garden City	64	6	0	0	0	58	442	2574	2712	1418	722	219	8215

APPENDIX 'B-15'

Summary Tabulation

	SUMMARY TABULATION (ACRE-FEET)												YEAR
	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	
Arkansas River at Las Animas, Colo.	510	2310	3160	6850	2370	1450	8740	31800	28010	13510	2730	1270	102700
Purgatoire River near Las Animas, Colo.	113	140	290	314	374	278	1860	10840	7510	14700	968	901	38290
Inflow to John Martin Reservoir	629	2460	3460	7170	2750	1740	10600	42660	35510	28180	3700	2160	141009
Reservoir Contents at End of Month	877	1870	6100	12270	15210	4630	3390	9220	4890	6310	4080	5040	
Net Change in Reservoir Contents	+877	+993	+5230	+6170	+2940	+10560	-1240	+5830	-4330	+1420	-2230	+960	
Outflow from John Martin Reservoir	616	489	210	82	98	12320	11470	34850	40500	26810	6410	2040	135900
Diversions in District 67 Colorado	710	473	149	0	264	11972	10619	26778	34065	27103	8969	3287	124409
Flow at the Colorado-Kansas Station	155	257	244	328	517	621	1880	5310	6840	2290	956	381	19780
Diversions in Kansas	64	6	0	0	0	58	442	2574	2712	1418	722	219	8215