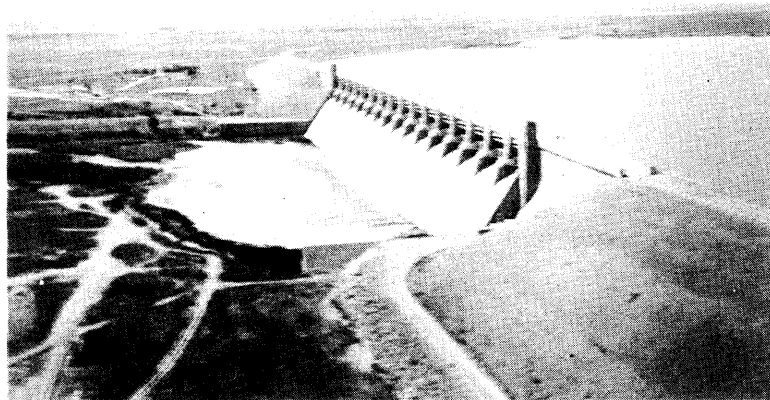


TWENTY-FIFTH
ANNUAL REPORT
**ARKANSAS RIVER
COMPACT
ADMINISTRATION**
(1973)

For the Report Year
November 1, 1972 to October 31, 1973



LAMAR, COLORADO
December 11, 1973

TWENTY-FIFTH ANNUAL REPORT

Arkansas River

Compact

Administration

(1973)

**For the Report Year
November 1, 1972 to October 31, 1973**

LAMAR, COLORADO

December 11, 1973

THE ADMINISTRATION

COLONEL GUSTAV L. SELIGMANN
Chairman and Representative of the United States

J. T. REEDY, GEORGE F. REYHER and FELIX L. SPARKS
for Colorado

CARL E. BENTRUP, M. P. REEVE and GUY E. GIBSON
for Kansas

800 South Eighth Street
Lamar, Colorado 81052

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**Annual Report Of
ARKANSAS RIVER COMPACT
ADMINISTRATION**

(1973)

Report-Year November 1, 1972 to October 31, 1973

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, 1972 through October 31, 1973, as follows:

1. Members of the Administration

Representative of the United States:

Colonel Gustav L. Seligmann, USA, Ret.

Colorado Representatives:

J. T. Reedy, Hartman, Colorado
George F. Reyher, McClave, Colorado
Felix L. Sparks, Denver, Colorado

Kansas Representatives:

Carl E. Bentrup, Deerfield, Kansas
Logan N. Green, Garden City, Kansas (November 1,
1972-September 19, 1973)
M. P. Reeve, Garden City, Kansas (September 19,
1973-October 31, 1973)
Guy E. Gibson, Topeka, Kansas

2. Officers of the Administration

Chairman:

Colonel Gustav L. Seligmann

Vice Chairman:

Carl E. Bentrup

Secretary:

Lane L. Hackett

Treasurer:

J. T. Reedy

3. Standing Committee

Administrative and Legal Committee:

Felix L. Sparks (Chairman)
Logan N. Green (November 1, 1972-September 19, 1973)
M. P. Reeve (September 19, 1973-October 31, 1973)

Engineering Committee:

Guy E. Gibson (Chairman)
George F. Reyher

Operations Committee:

J. T. Reedy (Chairman)
Carl E. Bentrup

The Representative of the United States is an ex-officio member of all standing committees.

4. Meetings

December 12, 1972	Annual Meeting
June 22, 1973	Telephonic Meeting
July 23, 1973	Telephonic Meeting
August 2, 1973	Telephonic Meeting

5. Fiscal

(a)	Balance on hand, November 1, 1972	\$ 4,849.94
(b)	Receipts:	
	State of Kansas	3,192.00
	State of Colorado (this includes assessments for F.Y. 1971-72 and F.Y. 1972-73)	9,534.00
(c)	Total Funds available	12,726.00
		<u>\$17,575.94</u>

(d) Disbursements by the Administration:

Date	Voucher No.	Payee & Purpose	Amount
12/11/72	164	Federal Reserve Bank-FICA	\$ 39.00
12/11/72	165	Mountain Bell-November service	21.11
12/11/72	166	Joetta Hackett-Typing	25.00
12/13/72	167	El Mar Restaurant-Annual meeting room	19.68
1/ 2/73	168	Strait & Crimond-Audit	125.00
1/ 2/73	169	Sears & Roebuck-office equipment & supplies	46.51
1/ 2/73	170	Mountain Bell-December service	20.45
1/27/73	171	Lane Hackett-salary travel, and postage	556.83
1/27/73	172	USGS-1st half	2,000.00
1/27/73	173	Mountain Bell-January service	16.04
3/ 3/73	174	Schoenith Office Equipment-office supplies	8.79
3/ 3/73	175	Mountain Bell-February service	22.15
3/22/73	176	Mountain Bell-March service	13.70
4/ 2/73	177	Federal Reserve Bank-FICA	52.65

4/ 2/73	178	Land Hackett-salary	
		travel, and postage	565.95
5/ 2/73	179	Lamar Daily News-printing	447.40
5/ 2/73	180	Mountain Bell-April service	17.60
5/31/73	181	Schoenith Office Equipment-office	
		supplies	6.20
5/31/73	182	Mountain Bell-May service	27.60
6/29/73	183	USGS-2nd half	2,000.00
6/29/73	184	Federal Reserve Bank-FICA	52.65
6/29/73	185	Mountain Bell-June service	54.43
7/ 2/73	186	Lane Hackett-salary	
		travel, and postage	572.38
7/31/73	187	Mountain Bell-July service	33.19
8/31/73	188	Mountain Bell-August service	62.02
8/31/73	189	Milne Agents, Inc.-Treasurer	
		Bond	25.00
9/29/73	190	Federal Reserve Bank-FICA	52.65
9/29/73	191	Walker Typewriter-office supplies	
		& service	22.50
9/29/73	192	Mountain Bell-September service	34.02
10/ 1/73	193	Lane Hackett-salary	423.68
10/31/73	194	Mountain Bell-October service	33.45
10/31/73	195	Lane Hackett-travel and postage	185.36
		TOTAL DISBURSEMENTS	\$7,582.99

- (e) Balance on hand, October 31, 1973 \$ 9,992.95
- (f) At the annual meeting on December 12, 1972 the Administration tentatively adopted the following budget for the fiscal year, July 1, 1974 to June 30, 1975, and it was formally adopted by correspondence in July 1973.

PROPOSED BUDGET

Fiscal Year July 1, 1974-June 30, 1975

Personal Services	\$2,045.00
Secretary's Salary	\$1,800.00
Social Security	105.00
Professional Services (Audit)	140.00
U. S. Geological Survey	4,400.00
Cooperative Services	4,400.00
Capital Outlay	100.00
Office Equipment	100.00
Maintenance and Operation	1,925.00
Bond (Treasurer)	25.00
Printing	500.00
Official Publications	100.00
Travel Expense	600.00
Typing and Mailing	125.00
Investigation and Inspection	100.00
Telephone and Telegraph	375.00
Office Supplies	100.00
Total Budget 1974-1975	\$8,470.00
Estimated Carryover June 30, 1974	100.00
To Be Appropriated	\$8,370.00

Colorado (60%)	\$5,022.00
Kansas (40%)	3,348.00
	\$8,370.00

- (g) Pursuant to provisions of the Compact (Article VIII-E(3)) and of the By-Laws of the Administration (Article VII (5)), the receipts and disbursements of the Administration during the compact year have been audited, and the report of the audit is hereto attached as Appendix "A."

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. William L. Lindsey has been the resident superintendent of the project since April 1, 1968.

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 261,000 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 360,100 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 350,100 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	618,600
Flood control storage, acre-feet	261,000
Conservation (irrigation) and recreation, storage, acre-feet	357,600
Water surface at spillway crest, acres	9,000
Water surface at top of conservation pool, acres	11,800
Water surface at top of flood control pool, acres	17,900
Drainage area, square miles	18,915

A ½-mile of the historic Santa Fe Trail north of the reservoir has been inclosed 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 structures. 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 river flow into John Martin Reservoir during compact year 1973 amounted to 145,200 acre-feet, which was less than the compact year 1949-73 average of 174,761 acre-feet. River flow during the winter storage season, November 1, 1972, through March 31, 1973, was 16,800 acre-feet, and during the summer storage, April 1, 1973, through October 31, 1973, it was 128,400 acre-feet. Ditch diversions during compact year 1973 in Colorado Water District 67 were 159,400 acre-feet, which were near the compact year 1949-73 average of 160,600 acre-feet. Ditch diversions in Kansas during the same period amounted to 69,600 acre-feet.

At the beginning of the winter storage season John Martin Reservoir was empty, and the reservoir regulating gates were closed for storage. Colorado irrigators did not make demands for release of river flow during the entire winter storage season; however, the storage accrued in John Martin Reservoir at the end of this period amounted to only 24,090 acre-feet.

Rains and snows early in the summer storage period satisfied the irrigation requirements in both Colorado and Kansas so releases from John Martin Reservoir were not required until May 7, 1973. Conservation storage more than doubled during this period and reached a peak of 55,671 acre-feet on May 15, 1973. On May 7, 1973, Colorado began demands for release of reservoir water, and these demands continued until the reservoir was emptied on June 25, 1973. Colorado did not demand release of river flow concurrently with the release of reservoir water. On May 16, 1973, Kansas made demands, which continued until the reservoir was emptied, for release of reservoir water. Small freshets occurred on July 21, 1973, and July 30-31, 1973, that justified closing of the reservoir gates for storage and regulation and that provided small amounts of reservoir water for irrigators in Colorado and Kansas. John Martin Reservoir was empty at midnight on October 31, 1973.

Colorado demands for reservoir water, Kansas demands, and the corresponding stateline flow during compact year 1973 are shown in the following tabulation in acre-feet. The tabulation shows that Colorado demands amounted to 53,490 acre-feet.

Demand period	Colorado demands	Kansas demands	Stateline flow
May 16-June 26	45,135	32,833	34,000
July 21-26	4,466	4,164	3,990
August 1-4	3,889	2,776	3,330
Total	53,490	39,773	41,320

Kansas demands, which totaled 39,773 acre-feet, were met during the periods of May 16-June 26 and August 1-4, but the demands of July 21-26 were not quite satisfied. The total of stateline flow during these periods is slightly larger than the total of Kansas demands.

9. GAGING STATIONS

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. In general, streamflow records of satisfactory accuracy were obtained at the Compact stations, except at the station on the Arkansas River at Las Animas where construction of a new bridge caused much interference with stage-discharge relationships.

It will be noted that there are differences in the releases from the reservoir, as measured at the gaging station, and the daily demands by Colorado and Kansas. Perfect agreement cannot be obtained, but the differences could be minimized by relocating the gaging station nearer to the dam and installing an artificial control. This would stabilize the rating and also reduce the time involved in adjusting the gates to the required release.

The Parshall flume on Frontier ditch was found to be in bad shape so the construction of new stilling wells was delayed until a new flume could be installed. A new flume has been received and will be installed in December 1973. The stilling wells will be rebuilt at the same time.

The Administration approved a cooperative agreement with the U. S. Geological Survey for the fiscal year July 1, 1973 to June 30, 1974, in the amount of \$8,000; \$4,000 for each party. These funds are for the operation of the Compact station at Lamar, the additional field work at the other Compact stations, the maintenance of the radio equipment, the providing of current streamflow data, and the preparation of records for the Annual Report.

10. Findings of fact by the Administration

SPECIAL TELEPHONIC MEETING JUNE 22, 1973

A special telephonic meeting was held on June 22, 1973 in accordance with Article V F of the Compact, for the purpose of declaring that the reservoir would become empty on June 25, 1973. Mr. C. J. Kuiper, Colorado State Engineer, and Rudy Styduhar, Division Engineer, were notified of the action and that administration of decreed water rights for Colorado would commence on June 25, 1973, unless a change of conditions justified cancellation or modification of this notice.

The reservoir became empty at 6:00 p.m., June 25, 1973.

Participating members:

For Colorado — Mr. Reedy and Mr. Reyher

For Kansas — Mr. Bentrup and Mr. Green

SPECIAL TELEPHONIC MEETING JULY 23, 1973

A special telephonic meeting was held on July 23, 1973 in accordance with Article V F of the Compact, for the purpose of declaring that the reservoir would become empty on July 26, 1973. Mr. C. J. Kuiper, Colorado State Engineer, and Mr. Rudy Styduhar, Division Engineer, were notified of the action and that administration of decreed water rights for Colorado would commence on July 26, 1973, unless a change of conditions justified cancellation or modification of this notice.

The reservoir became empty at 12:01 a.m. July 26, 1973.

Participating members:

For Colorado — Mr. Reedy and Mr. Reyher

For Kansas — Mr. Bentrup and Mr. Green

**SPECIAL TELEPHONIC MEETING
AUGUST 2, 1973**

A special telephonic meeting was held on August 2, 1973, in accordance with Article V F of the Compact, for the purpose of declaring that the reservoir would become empty August 4, 1973. Mr. C. J. Kuiper, Colorado State Engineer, and Mr. Rudy Styduhar, Division Engineer, were notified of the action and that administration of decreed water rights for Colorado would commence on August 4, 1973, unless a change of conditions justified cancellation or modification of this notice.

The reservoir became empty at 9:00 p.m. August 4, 1973.

Participating members:

For Colorado — Mr. Reedy and Mr. Reyher

For Kansas — Mr. Bentrup and Mr. Green

APPENDICES FOR ANNUAL REPORT OF THE ARKANSAS RIVER COMPACT ADMINISTRATION

For the Report-Year
November 1, 1972 to October 31, 1973

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APPENDIX "A"

AUDITOR'S REPORT

STRAIT & CRIMOND

CERTIFIED PUBLIC ACCOUNTANTS

Johnson-Strait Building
Lamar, Colorado 81052

To the Representatives
Arkansas River Compact Administration
Lamar, Colorado 81052

Gentlemen:

We have examined the Statement of Assets and Liabilities arising from Cash Transactions of the Arkansas River Compact Administration as of October 31, 1973, and the Statement of Cash Receipts and Disbursements and Changes in Cash Balance for the fiscal year then ended. Our examination was conducted in accordance with generally accepted auditing standards, and included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

The receipts and disbursements for the budget year July 1, 1972, to June 30, 1973, compared with budget are presented in Exhibit C. This schedule is the result of the receipts and disbursements for the appropriate months of the current and previous report years.

In our opinion, Exhibits A and B, present fairly the Assets and Liabilities arising from Cash Transactions of the Arkansas River Compact Administration at October 31, 1973, and the results of Cash Transactions of the fiscal year then ended, on a basis consistent with that of the previous year.

Respectfully submitted,
Strait, Crimond & Co.

Lamar, Colorado
November 29, 1973

EXHIBIT A

ARKANSAS RIVER COMPACT ADMINISTRATION

STATEMENT OF ASSETS & LIABILITIES ARISING FROM CASH TRANSACTIONS OCTOBER 31, 1973

ASSETS:

Cash	\$ 9,993
Equipment	1,635
TOTAL ASSETS	<u>\$11,628</u>

LIABILITIES & CASH BASIS EQUITY:	
Liabilities	\$ ---
CASH BASIS EQUITY:	
Expended — Equipment	\$1,635
Unexpended	9,993
TOTAL CASH BASIS EQUITY	<u>11,628</u>
TOTAL LIABILITIES & CASH BASIS EQUITY	<u><u>\$11,628</u></u>

EXHIBIT B

ARKANSAS RIVER COMPACT ADMINISTRATION STATEMENT OF CASH RECEIPTS & DISBURSEMENTS & CHANGES IN CASH BALANCE FOR THE FISCAL YEAR ENDED OCTOBER 31, 1973

CASH BALANCE, NOVEMBER 1, 1972	\$ 4,850
RECEIPTS	
REVENUE FROM ASSESSMENTS:	
Colorado — Note 1	\$9,534
Kansas	<u>3,192</u>
TOTAL RECEIPTS	\$12,726
DISBURSEMENTS:	
U.S. Geological Survey — Gauging	\$4,000
Secretary's Salary — Net	1,695
Travel	524
Printing	447
Telephone	356
Payroll Tax	197
Legal & Audit	125
Typing & Mailing	110
Office Supplies	54
Office Equipment	30
Insurance	25
Annual Meeting Expenses	<u>20</u>
TOTAL DISBURSEMENTS	<u>\$ 7,583</u>
EXCESS OF RECEIPTS OVER DISBURSEMENTS	<u>\$ 5,143</u>
CASH BALANCE, OCTOBER 31, 1973	<u><u>\$ 9,993</u></u>

Note 1 — The Colorado assessment for 1971-1972 was not received until November, 1972, and is reflected in this cash basis statement.

EXHIBIT C

ARKANSAS RIVER COMPACT ADMINISTRATION STATEMENT OF RECEIPTS & DISBURSEMENTS WITH BUDGET FOR BUDGET YEAR JULY 1, 1972 TO JUNE 30, 1973

	ACTUAL	BUDGET
CASH IN BANK, JULY 1, 1972	\$ 2,892	\$ 155
RECEIPTS		
REVENUE FROM ASSESSMENTS:		
Colorado Portion — 60%	4,746	4,746
Kansas Portion — 40%	3,164	3,164
TOTAL RECEIPTS	\$ 7,910	\$ 7,910
TOTAL TO ACCOUNT FOR	\$10,802	\$ 8,065
DISBURSEMENTS:		
U. S. Geological Survey — Gauging	4,000	4,400
Secretary's Salary	1,650	1,500
Travel	496	500
Printing	447	500
Telephone	320	350
Payroll Tax	91	75
Legal & Audit	125	100
Typing & Mailing	95	125
Office Supplies	46	200
Office Equipment	30	100
Insurance	25	15
Annual Meeting Expense	20	---
Official Publications	---	100
Investigation & Inspection	---	100
TOTAL DISBURSEMENTS	\$ 7,345	\$ 8,065
CASH IN BANK, JUNE 30, 1973	\$ 3,457	\$ ---

Report-Year ending October 31, 1973
USGS Records--Provisional, Subject to Revision
(Colorado State Engineer)

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	379	348	225	233	218	167	384	820	3300	1530	1220	204
2	363	333	284	221	200	147	418	1010	2950	1420	1190	190
3	370	302	229	182	184	175	229	1220	2420	1290	1180	180
4	339	344	259	182	175	161	235	1400	2480	1020	1120	180
5	370	272	209	221	151	125	361	1430	2530	1060	1090	155
6	339	140	264	251	104	112	530	1150	2350	1030	908	160
7	323	131	214	244	107	147	869	1040	2240	1020	748	139
8	316	192	181	227	95	226	917	1070	2180	922	716	139
9	296	222	147	188	119	202	1080	1460	2320	863	1110	139
10	296	252	162	199	164	171	941	2260	2300	828	861	152
11	275	231	238	204	144	175	953	3340	2320	805	769	239
12	303	263	305	227	131	214	1270	4170	2280	1100	790	251
13	362	283	305	239	168	266	1470	4040	2200	1110	460	251
14	331	294	351	218	173	419	1490	4040	2740	994	307	239
15	331	304	367	207	153	550	1440	4380	2980	933	260	198
16	310	300	359	176	144	384	1200	3720	2920	885	235	189
17	307	316	323	161	153	252	1030	2860	2580	885	242	209
18	305	452	306	155	153	245	1180	2150	2160	862	223	203
19	312	505	253	196	205	321	1340	1960	2180	993	218	179
20	306	605	347	190	307	293	1800	1690	2760	1000	201	168
21	300	567	309	176	337	329	2200	1680	2820	993	191	192
22	271	539	267	185	426	286	2900	1650	2700	1140	174	198
23	245	548	206	184	383	252	2770	1790	2540	1220	165	203
24	231	505	194	196	352	221	2200	2100	2180	1190	154	192
25	249	451	194	224	258	258	1850	2460	1920	1150	154	188
26	255	425	188	224	181	398	1660	2590	1610	1230	194	183
27	342	433	183	213	172	433	1520	2700	2280	1260	215	213
28	408	466	228	224	214	328	1290	3770	1630	1220	232	219
29	297	440	168		209	259	994	3740	1550	1220	232	213
30	335	396	183		237	307	924	3720	2430	1210	228	213
31		312	227		226		888		2160	1280		231
TOTAL												
sec. ft.	9466	11171	7675	5747	6243	7823	38333	71410	74010	33663	15787	6009
ac. ft.	18780	22160	15220	11400	12380	15520	76030	141600	146800	66770	31310	11920
a) ac.ft.	0	0	0	0	0	0	0	3140	19691	25728	13467	0
b) ac.ft.	18780	22160	15220	11400	12380	15520	76030	138500	127100	41140	17840	11920
a) Less upstream reservoir and transmountain water.												
b) Corrected total ac. ft.												

THE YEAR 569,900 ac-ft
CORRECTED 507,900 ac-ft

APPENDIX 'B.1'
Arkansas River
Near Pueblo, Colorado

APPENDIX 'B-2'

Arkansas River

At Las Animas, Colorado

Report-Year ending October 31, 1973
USGS Records—Provisional, Subject to Revision

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	47	25	41	54	31	345	31	56	800	484	27	100
2	39	25	37	47	30	98	54	58	600	509	51	122
3	16	25	42	47	29	47	90	62	723	484	106	158
4	11	25	30	41	26	47	51	70	330	452	54	186
5	8.2	20	20	39	25	63	49	58	450	428	30	150
6	9.4	15	20	36	22	39	70	53	600	392	19	125
7	7.5	15	20	34	21	29	85	60	450	371	19	180
8	6.9	15	20	34	21	70	130	50	430	378	16	180
9	6.6	15	20	34	21	44	77	40	480	378	16	150
10	6.0	15	25	34	21	31	143	34	581	452	19	112
11	6.0	15	25	34	20	29	70	32	509	460	19	75
12	6.2	15	25	34	23	31	68	31	460	460	126	125
13	102	15	25	34	34	27	150	100	518	468	114	200
14	144	15	30	34	60	24	92	500	484	444	44	250
15	70	20	39	34	25	24	89	200	452	350	14	225
16	49	22	41	34	20	23	50	400	509	296	54	150
17	36	26	34	34	30	23	40	100	406	230	81	180
18	29	29	94	34	57	22	180	70	527	100	63	120
19	25	40	106	34	47	24	40	100	536	90	41	140
20	25	50	41	34	25	25	50	69	509	70	41	140
21	25	50	34	33	26	23	120	60	452	60	34	130
22	25	54	30	34	26	21	219	72	581	40	27	125
23	25	54	28	34	23	19	500	80	300	30	22	100
24	25	54	26	36	26	18	20	200	197	35	15	116
25	25	51	23	36	26	23	180	300	197	70	15	115
26	25	27	20	41	22	22	280	700	280	90	55	100
27	25	24	18	42	37	16	150	500	290	75	77	100
28	25	19	30	33	54	14	140	400	452	45	100	120
29	25	24	65		49	12	45	800	518	21	28	100
30	25	30	134		94	16	65	700	476	19	80	100
31		40	77		186		80		518	19		125
TOTAL												
sec.ft.	899.8	869	1220	1029	1157	1249	3408	5955	14615	7800	1407	4299
ac.ft.	1780	1720	2420	2040	2290	2480	6760	11810	28990	15470	2790	8530

THE YEAR 87,080 acre-ft

APPENDIX 'B-3'

Purgatoire River

Near Las Animas, Colorado

Report-Year ending October 31, 1973
USGS Records--Provisional, Subject to Revision

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	31	22	28	23	9.4	99	409	78	16	750	2.2	57
2	8.8	28	28	22	10	99	426	73	32	328	1.5	42
3	20	20	23	23	14	110	380	64	12	168	1.5	32
4	22	18	18	19	14	90	280	67	7.6	86	.90	29
5	8.8	18	15	27	19	88	252	60	24	63	2.2	28
6	13	13	15	20	17	82	318	52	6.8	38	1.5	27
7	10	10	15	27	15	90	325	44	4.4	35	1.5	10
8	11	8.0	15	27	22	69	230	26	4.4	22	1.5	13
9	15	8.0	12	19	27	80	450	15	4.4	15	1.5	32
10	22	8.0	15	21	26	115	289	5.2	6.0	12	1.5	35
11	16	8.0	15	29	24	88	252	4.4	3.6	8.4	2.8	35
12	14	8.0	15	21	21	84	252	5.2	2.8	9.2	2.2	38
13	10	8.0	19	27	27	74	268	14	3.6	6.8	2.2	37
14	10	8.0	19	32	12	84	245	10	6.8	8.4	2.2	35
15	19	8.0	19	30	15	1330	180	4.4	60	8.4	2.2	34
16	21	9.0	24	30	12	1380	205	40	143	6.8	2.2	34
17	21	10	31	31	10	593	159	95	44	4.4	2.2	33
18	16	9.8	37	28	5.2	340	116	75	17	3.6	2.8	36
19	17	10	30	23	12	418	80	30	18	2.8	2.2	40
20	18	10	28	10	31	543	75	12	177	2.2	2.2	34
21	17	15	19	6.4	27	390	57	6.8	1430	.90	2.2	38
22	15	26	16	6.4	31	283	69	7.6	909	2.8	2.2	33
23	14	23	21	4.0	32	222	235	7.6	295	2.2	2.2	30
24	14	28	14	3.6	38	205	117	6.8	144	2.2	2.2	30
25	18	29	17	3.6	66	291	164	5.2	144	2.2	2.2	29
26	28	28	20	3.2	90	462	118	5.2	95	2.8	44	31
27	30	28	17	3.2	69	747	112	5.2	95	3.6	167	30
28	20	26	20	4.0	88	488	116	8.4	46	4.4	338	27
29	19	34	22		97	408	88	13	50	3.6	162	27
30	19	36	17		108	342	88	12	362	3.6	90	29
31		42	23		70		84		1420	3.6		29
TOTAL												
sec.ft.	517.6	556.8	627	523.4	1058.6	9694	6439	852.0	5583.4	1609.9	851.0	994
ac.ft.	1030	1100	1240	1040	2100	19230	12770	1690	11070	3190	1690	1970

THE YEAR 58,120 acre-ft

APPENDIX 'B-4'

River Flow Into

John Martin Reservoir

Report-Year ending October 31, 1973
USGS Records—Provisional, Subject to Revision

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	78	47	69	77	40	444	440	134	816	1230	29	157
2	48	53	65	69	40	197	480	131	632	837	52	164
3	36	45	65	70	43	157	470	126	735	652	108	190
4	33	43	48	60	40	137	331	137	338	538	55	215
5	17	38	35	66	44	151	301	118	474	491	32	178
6	22	28	35	56	39	121	388	105	607	430	20	152
7	18	25	35	61	36	119	410	104	454	406	20	190
8	18	23	35	61	43	139	360	76	434	400	18	193
9	22	23	32	53	48	124	527	55	484	393	18	182
10	28	23	40	55	47	146	432	39	587	464	20	147
11	22	23	40	63	44	117	322	36	513	468	22	110
12	20	23	40	55	44	115	320	36	463	469	128	163
13	112	23	44	61	61	101	418	114	522	475	116	237
14	154	23	49	66	72	108	337	510	491	452	46	285
15	89	28	58	64	40	1350	269	204	512	358	16	259
16	70	31	65	64	32	1400	255	440	652	303	56	184
17	57	36	65	65	40	616	199	195	450	234	83	213
18	45	39	131	62	62	362	296	145	544	104	66	156
19	42	50	136	57	59	442	120	130	554	93	43	180
20	43	60	69	44	56	568	125	81	686	72	43	174
21	42	65	53	39	53	413	177	67	1880	61	36	168
22	40	80	46	40	57	304	288	80	1490	43	29	158
23	39	77	49	38	55	241	735	88	595	32	24	130
24	39	82	40	40	64	223	137	207	341	37	17	146
25	43	80	40	40	92	314	344	305	341	72	17	144
26	53	55	40	44	112	484	398	705	375	93	99	131
27	55	52	35	45	106	763	262	505	385	79	244	130
28	45	45	50	37	142	502	256	408	498	49	438	147
29	44	58	87		146	420	133	813	568	25	190	127
30	44	66	151		202	358	153	712	838	23	170	129
31		82	100		256		164		1940	23		154
TOTAL												
sec.ft.	1418	1426	1847	1552	2215	10936	9847	6806	20199	9406	2255	5293
ac.ft.	2810	2830	3660	3080	4390	21690	19530	13500	40060	18660	4470	10500

THE YEAR 145,200 acre-ft.

APPENDIX 'B-5'

Contents Of

John Martin Reservoir

Report-Year ending October 31, 1973
Corps of Engineers records-Provisional, Subject to Revision
Midnight contents in acre-feet from capacity table dated Jan. 1, 1969

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	417	5004	9011	14313	18473	24679	48148	31037	0	0	0	0
2	705	5148	9123	14512	18583	25178	49020	29718	0	0	0	0
3	857	5369	9285	14711	18671	25609	49899	28264	0	0	0	0
4	972	5494	9382	14910	18780	26019	50605	27092	0	0	0	0
5	1055	5544	9480	15112	18979	26459	51316	26044	0	0	0	0
6	1141	5620	9578	15314	19089	26985	52210	24978	0	0	0	0
7	1197	5747	9611	15456	19178	27360	52930	23846	0	0	0	0
8	1289	5837	9710	15619	19267	27658	54274	22741	0	0	0	0
9	1373	5928	9826	15783	19356	27932	55117	21564	0	0	0	0
10	1470	6006	9925	15989	19445	28236	55486	20413	0	0	0	0
11	1548	6138	9992	16196	19624	28544	55486	19245	0	0	0	0
12	1631	6191	10076	16404	19714	28911	55449	17758	0	0	0	0
13	1735	6298	10177	16550	19826	29197	55449	16362	0	0	0	0
14	2073	6378	10296	16696	20005	29486	55671	15681	0	0	0	0
15	2359	6459	10449	16843	20186	31540	55671	14711	0	0	0	0
16	2656	6541	10621	16990	20300	34746	54750	13513	0	0	0	0
17	2830	6623	10795	17117	20413	36111	53292	12581	0	0	0	0
18	3013	6705	11092	17202	20573	37053	51852	11269	0	0	0	0
19	3180	6816	11483	17351	20687	38004	50074	9859	0	0	0	0
20	3317	6928	11898	17479	20801	38804	48496	8156	0	0	0	0
21	3486	7027	12265	17586	20962	39608	46594	6664	1104	0	0	0
22	3652	7183	12451	17672	21101	40255	44892	4873	3022	0	0	0
23	3813	7356	12638	17780	21332	40907	43748	3083	2846	0	0	0
24	3968	7545	12769	17887	21564	41398	42882	1556	2145	0	0	0
25	4128	7781	12939	18038	21681	42220	41989	0	1440	0	0	0
26	4303	7945	13129	18125	21985	43015	40842	0	0	0	0	0
27	4459	8126	13282	18277	22386	44554	39157	0	0	0	0	0
28	4584	8324	13416	18364	22717	45638	37369	0	0	0	0	0
29	4710	8478	13552		23099	46457	35706	0	0	0	0	0
30	4850	8633	13823		23774	47282	34009	0	0	0	0	0
31		8821	14097		24090		32286		1815	0		0

APPENDIX 'B-6'

Outflow From

John Martin Reservoir

Report-Year ending October 31, 1973
USGS Records—Provisional, Subject to Revision

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	3.1	2.1	2.0	2.0	2.3	2.8	2.0	828	642	698	42	155
2	3.0	2.1	2.0	1.8	1.8	2.8	1.8	822	630	959	45	208
3	3.0	2.2	2.0	1.7	1.8	3.0	2.0	822	556	903	49	215
4	2.8	2.3	2.0	1.8	1.8	2.6	2.0	780	702	822	81	246
5	2.8	2.0	2.0	1.8	1.8	2.6	2.0	696	573	440	57	238
6	2.8	1.8	2.0	1.8	1.8	2.8	1.8	708	556	460	45	234
7	2.7	2.0	2.0	2.3	1.8	3.0	180	726	642	422	43	230
8	2.7	2.3	2.0	2.3	2.0	3.0	303	720	475	418	43	234
9	2.6	2.3	2.0	1.8	1.8	2.6	310	714	465	391	40	211
10	2.9	2.0	2.0	1.7	1.8	2.6	314	708	518	445	45	204
11	2.9	2.0	2.0	1.8	1.8	2.3	329	762	550	450	43	173
12	2.8	2.0	2.0	2.0	1.8	2.6	348	804	534	485	56	162
13	2.9	2.0	2.6	1.8	1.8	2.3	348	834	556	422	135	204
14	2.6	2.0	2.8	1.8	1.7	2.6	352	834	550	422	117	287
15	2.4	2.0	2.8	2.0	1.8	2.6	352	847	496	365	67	299
16	2.2	2.0	2.8	2.8	2.0	2.3	694	868	606	325	57	276
17	2.3	2.0	3.0	2.6	1.8	2.3	952	868	523	284	106	223
18	2.2	2.0	2.8	2.6	1.8	2.0	973	854	485	208	117	204
19	2.1	1.8	2.0	2.3	2.0	2.0	966	861	485	162	81	215
20	2.2	1.8	2.0	2.3	2.0	2.0	959	896	436	131	56	238
21	2.3	1.8	2.0	2.8	2.0	2.3	994	896	798	108	53	215
22	2.2	1.8	2.0	2.8	2.8	2.3	1020	924	810	90	46	215
23	2.1	2.0	2.0	2.8	4.0	2.0	1040	938	816	75	43	211
24	1.9	2.0	2.0	2.6	4.8	2.3	1060	924	792	63	39	192
25	1.8	2.0	2.0	2.6	3.6	2.6	1050	726	768	54	33	173
26	2.0	1.8	2.0	2.3	2.3	2.3	1060	322	732	51	48	173
27	2.5	1.8	2.0	2.3	2.8	2.0	1060	440	397	49	131	173
28	2.3	2.0	2.0	2.0	2.6	2.0	1060	470	329	57	567	170
29	2.1	2.0	2.0		2.6	2.0	1060	460	586	54	369	173
30	2.1	2.0	2.3		3.3	2.3	1070	702	571	51	215	177
31		2.0	2.3		3.3		924		837	46		185
TOTAL												
sec.ft.	74.3	61.9	67.4	61.2	71.3	72.9	18,789.6	22,754	18,416	9,910	2,869	6,513
ac.ft.	147	123	134	121	141	145	37,270	45,130	36,530	19,660	5,690	12,920

THE YEAR 158,000 acre-ft

Report-Year ending October 31, 1973
USGS Records—Provisional, Subject to Revision

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	21	20	24	38	21	50	18	391	164	110	31	26
2	21	20	24	35	21	56	41	388	162	346	29	25
3	21	20	24	34	23	54	25	367	173	361	27	21
4	24	17	24	32	23	48	19	377	145	294	35	20
5	21	14	24	31	21	50	17	292	168	122	44	19
6	22	28	24	31	20	49	16	249	100	37	35	18
7	18	25	24	30	20	48	15	274	77	29	34	17
8	7.3	20	24	29	20	47	20	266	93	20	36	16
9	6.7	15	24	28	20	45	34	264	77	9.2	32	19
10	6.7	15	24	27	21	44	30	256	66	9.9	30	37
11	5.7	15	25	26	20	43	22	249	75	37	30	20
12	5.7	15	26	25	19	44	14	352	35	47	32	16
13	6.2	15	28	23	17	54	13	358	44	39	44	15
14	3.8	15	30	21	19	62	16	391	57	14	42	12
15	12	15	30	19	18	62	6.7	380	42	12	45	16
16	26	15	32	18	17	52	24	367	48	15	29	6.7
17	23	15	34	18	19	45	323	391	104	42	27	6.7
18	21	15	35	18	18	42	440	391	24	54	21	6.7
19	21	15	35	16	18	39	461	364	43	48	39	6.7
20	19	15	35	17	17	38	472	384	52	41	35	6.2
21	19	16	35	16	18	42	482	374	32	20	39	5.7
22	20	18	35	16	21	38	520	340	475	16	35	5.7
23	30	20	35	45	27	26	517	355	454	15	42	5.7
24	29	22	35	19	39	19	534	355	402	44	45	5.7
25	27	24	35	19	56	105	520	337	300	32	39	5.7
26	24	26	35	19	39	68	552	135	313	27	25	5.7
27	20	25	36	19	37	39	552	135	300	21	63	5.7
28	16	23	37	21	47	25	584	149	297	22	116	5.7
29	16	23	38		41	15	600	145	16	36	126	5.7
30	16	23	38		48	15	584	168	96	35	29	5.7
31		23	37		52		548		325	35		5.7
TOTAL												
sec. ft.	529.1	587	946	690	817	1364	8019.7	9244	4759	1990.1	1236	392.7
ac. ft.	1050	1160	1880	1370	1620	2710	15910	18340	9440	3950	2450	779

THE YEAR 60,660 acre-ft.

APPENDIX 'B-7'
Arkansas River
At Lamar, Colorado

APPENDIX 'B-B'

Arkansas River At The

Colorado-Kansas Stateline

Report-Year ending October 31, 1973
USGS Records—Provisional, Subject to Revision

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	80	128	100	125	95	232	139	488	267	442	55	184
2	81	142	100	119	92	254	156	393	215	383	46	136
3	85	80	100	113	104	249	150	384	275	514	47	122
4	76	40	87	107	101	236	125	395	254	517	269	104
5	82	23	70	107	92	220	95	429	211	512	71	122
6	96	23	50	107	110	220	89	413	213	385	39	116
7	102	23	50	110	98	220	110	390	161	267	43	119
8	103	23	50	104	80	216	98	398	173	176	42	132
9	114	23	50	104	80	212	104	362	197	164	45	122
10	96	23	50	101	80	204	172	309	138	181	51	119
11	86	23	70	101	74	204	236	331	115	172	51	139
12	76	23	85	101	71	196	204	717	122	143	62	146
13	73	25	100	101	77	192	160	407	137	129	65	142
14	60	29	100	92	80	196	160	420	374	114	63	128
15	76	30	100	89	68	192	136	432	207	93	68	125
16	98	40	101	92	68	172	111	429	195	72	80	146
17	98	45	100	101	57	180	87	414	182	70	84	166
18	107	56	100	95	62	164	256	424	188	70	67	150
19	116	70	100	98	74	184	361	404	168	72	47	136
20	110	75	100	98	74	164	396	393	146	67	42	122
21	110	80	100	98	86	180	425	374	154	69	41	126
22	113	100	100	95	101	196	453	362	247	68	42	113
23	100	100	100	98	107	176	481	329	627	77	42	86
24	104	100	100	98	216	164	470	315	359	70	83	77
25	116	100	100	92	172	153	478	321	430	67	67	83
26	132	110	100	92	150	204	502	309	383	58	89	101
27	128	120	100	92	139	200	523	218	365	55	101	89
28	107	110	110	95	150	168	556	203	289	54	158	104
29	104	110	125		164	146	576	299	184	51	213	98
30	113	110	125		184	125	573	224	184	55	238	77
31		110	125		196		583		904	58		86
TOTAL												
sec.ft.	2942	2094	2848	2825	3302	5819	8965	11286	8064	5225	2411	3726
ac. ft.	5840	4150	5650	5600	6550	11540	17780	22390	15990	10360	4780	7380

THE YEAR 118,000 acre-ft.

The daily discharges are the sum of the flows of the Arkansas River near Coolidge, Kansas, and the Frontier ditch.

APPENDIX 'B-9' **Demands By Colorado** **For Reservoir Water**

Report Ending October 31, 1973
 Data Source: U. S. Corps of Engineers and Orders by the Secretary
 of the Arkansas River Compact Administration (Provisional, Subject to Revision)
 Units In Cubic Feet Per Second

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1								500		495		
2								500		550		
3								500		503		
4								435		413	Empty: 9:00 P.M.	
5								369				
6								320				
7					Open: 8:30 A.M.		195	300				
8							300	300				
9							300	300				
10							300	300				
11							325	390				
12							350	450				
13							350	450				
14							350	450				
15							350	482				
16							448	500				
17							563	500				
18							600	500				
19							600	500				
20							600	500				
21							569	500	100	Regulate: 6:00 P.M.		
22							550	533	400			
23							550	550	400			
24							550	550	400			
25					Empty 6:00 P.M.		550	413	400			
26							550		400	Empty: 24:00 P.M.		
27							550					
28							550					
29							550					
30							550					
31							519		152	Regulate: 3:00 P.M. X Closed: 2400 for		
Totals												
sec.ft.							11669	11092	2252	1961		
ac.ft.							23140	21995	4466	3889		Winter Storage

The Year: 53,490 A.F.

APPENDIX 'B-10' Demands By Colorado For River Flow Operation Of Reservoir

Report-year ending October 31, 1973
 Data Source: U. S. Corps of Engineers and Orders by the Secretary
 of the Arkansas River Compact Administration (Provisional, Subject to Revision)
 Units in Cubic Feet Per Second

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	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	Closed										Closed	
Totals											The Year	
sec.ft.	0	0	0	0	0	0						0
	0	0	0	0	0	0						0

APPENDIX 'B-11'

Demand By Kansas

For Reservoir Water

Report ending October 31, 1973
Data Source: Kansas State Board of Agriculture and by Orders of
the Secretary-Arkansas River Compact Administration (Provisional, Subject to Revision)
Units in Cubic Feet Per Second

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1								300		252	Regulate: 9:00 A.M.	
2								300		400		
3								300		400		
4								300			Empty: 9:00 P.M.	
5								300				
6								360				
7								400				
8								400				
9								400				
10								400				
11								400				
12								400				
13								400				
14								400				
15								400				
16					Open: 8:30 A.M.		260	400				
17							400	400				
18							400	400				
19							400	400				
20							400	400				
21							463	400	100	Regulate: 6:00 P.M.		
22							500	400	400			
23							500	400	400			
24							500	400	400			
25					Empty: 6:00 P.M.		500	300	400			
26							500		400	Empty: 24:00 P.M.		
27							500					
28							500					
29							500					
30							500					
31							374	X Regulate: 3:00 P.M.		X Closed: 2400 for		
Totals							7197	9360	2100	1400	(River Flow) Winter Storage	
sec.ft.							14272	18561	4164	2776		
ac.ft.												

The Year: 39773 A.F.

APPENDIX 'B-12'

Stateline Flow On Days Of Kansas Demand*

Report-Year ending October 31, 1973
USGS Records—Provisional, Subject to Revision

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1								488				
2								393				
3								384				
4								395		517		
5								429		512		
6								413		385		
7								390		267		
8								398				
9								362				
10								309				
11								331				
12								717				
13								407				
14								420				
15								432				
16								429				
17								414				
18								424				
19							361	404				
20							396	393				
21							425	374				
22							453	362				
23							481	329				
24							470	315	359			
25							478	321	430			
26							502	309	383			
27							523	218	365			
28							556	203	289			
29							576		184			
30							573					
31							583					
TOTAL												
sec.ft.							6377	10763	2010	1681		
ac.ft.							12650	21350	3990	3330		

THE YEAR 41,320 acre-ft

*Three days' time is allowed for water released from John Martin Reservoir to reach State line.

WATER DISTRICTS NO. 14 and NO. 17 — DIVISION NO. 2
 Report-Year ending October 31, 1972
 Source of Information: Water Commissioners Special Reports to Division Engineer
 Units In Acre Feet (Provisional Subject To Revision)

Name of Ditch	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	YEAR
Bessemer (River)	3131	0	0	0	4144	4224	9973	14775	12215	4559	4216	4269	61506
Res. or Imported	220	0	0	0	167	143	184	178	440	3674	813	72	5891
TOTAL: Bessemer	3351	0	0	0	4311	4367	10157	14953	12655	8233	5029	4341	67397
Minnequa-Union Res.	0	0	0	0	0	0	0	0	635	1107	1071	28	2841
West Pueblo River	0	0	0	0	0	42	347	452	431	204	133	60	1669
Booth-Orchard Grove*	666	0	0	0	0	0	0	0	0	0	0	0	666
Excelsior	0	0	0	0	0	0	783	1471	1690	113	0	0	4057
Res. or Imported	0	0	0	0	0	0	0	0	0	65	30	0	95
TOTAL: Excelsior	0	0	0	0	0	0	783	1471	1690	178	30	0	4152
Collier	0	0	0	0	0	0	694	1065	1045	67	0	0	2871
Colorado Canal (Riv.)	8632	14763	16629	1612	0	761	20621	15402	7555	270	0	0	86245
Res. or Imported	0	0	0	0	0	0	0	3078	16356	16150	9913	0	45497
TOTAL: Colorado Canal	8632	14763	16629	1612	0	761	20621	18480	23911	16420	9913	0	131742
Highline (River)	2205	1109	1537	2407	4275	6284	14016	18803	14103	7706	6490	6110	85045
Res. or Imported	0	0	0	0	0	0	0	0	2380	2320	738	0	5438
TOTAL: Highline	2205	1109	1537	2407	4275	6284	14016	18803	16483	10026	7228	6110	90483
Oxford Farmers (Riv.)	286	0	34	295	1303	2336	3502	4906	5780	2118	857	0	21417
Res. or Imported	0	0	0	0	0	0	0	0	0	569	192	0	761
TOTAL: Oxford Farmers	286	0	34	295	1303	2336	3502	4906	5780	2687	1049	0	22178
TOTAL: District No. 14	14920	15872	18200	4314	9722	13647	49936	56874	42819	15037	11696	10439	263476
Otero	678	902	635	1160	69	62	2875	2790	1216	87	0	0	10474
Catlin (River)	3391	1672	1392	1350	4896	8220	13060	18505	18059	13116	5945	4890	94451
Res. or Imported	0	0	0	0	0	0	0	0	569	3546	343	0	4458
TOTAL: Catlin	3391	1672	1392	1350	4896	8220	13060	18505	18628	16662	6288	4890	98909
Holbrook (River)	4018	1309	1687	10371	855	906	8834	12019	8263	977	0	0	49239
Res. or Imported	0	0	0	0	0	0	0	0	0	2574	1987	0	4561
TOTAL: Holbrook	4018	1309	1687	10371	855	906	8834	12019	8263	3551	1987	0	53800
Rocky Ford	2697	1150	535	892	2215	3581	5642	6235	5975	6096	4525	2471	42014
Fort Lyon Storage	0	0	0	0	0	0	23286	18620	4624	0	0	0	46530
Fort Lyon	14006	841	2536	940	23787	14031	38673	45163	48524	20677	11630	11406	232214
Kicking Bird	5929	17861	14813	12146	1339	10195	12086	5376	1146	0	0	0	80891
TOTAL: Ft. Lyon & K.B.	19935	18702	17349	13086	25126	24226	50759	50539	49670	20677	11630	11406	313105
Las Animas Consol.	815	442	300	236	1101	1299	3734	5733	5931	3268	2640	2148	27647
TOTAL: District No. 17	31534	24177	21898	27050	34262	38294	108190	114441	93738	44221	24740	20915	583460
TOTAL: Dists. No. 14 & No. 17	46454	40049	40098	31364	43984	51941	158126	171315	136557	59258	36436	31354	846936
Res. or Imported	220	0	0	0	167	143	184	3256	20380	30005	15087	100	69542
GRAND TOTAL	46674	40049	40098	31364	44151	52084	158310	174571	156937	89263	51523	31454	916478

* Transfer to city of Pueblo for Municipal use in 1974.

APPENDIX 'B-13'
 Diversion In Ditches
 By Colorado

APPENDIX B-14'
Diversions By Ditches In
Colorado Water District 67
Division #2

REPORT YEAR ENDING OCTOBER 31, 1973
 SOURCE OF INFORMATION: WATER COMMISSIONERS SPECIAL REPORTS TO DIVISION ENGINEER
 (Provisional: Subject to Revision)
 Units in Acre-Feet

NAME OF DITCH	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	COMPACT
													YEAR
Fort Bent Canal	26	0	0	0	0	87	2437	3419	4281	2009	990	1097	14346
Keesee Ditch	40	0	0	0	0	0	623	805	799	607	631	646	4151
Amity Canal	0	0	0	0	0	0	15529	18700	18349	9344	1380	7736	71038
Lamar Canal	1412	1071	1134	867	1164	1360	5271	7896	7968	4686	1834	4458	39121
Hyde Ditch	121	0	0	0	0	0	454	307	315	248	0	0	1445
Manvel Canal	0	0	0	0	0	0	277	520	313	95	16	0	1221
X,Y,& Graham Canals	0	0	0	0	0	0	1549	1927	1295	882	0	502	6155
Buffalo Canal	1668	0	0	0	0	0	3097	3982	4043	3621	3200	1933	21544
Sisson Stubbs Canal	40	0	0	0	0	0	0	40	197	61	0	0	338
GRAND TOTAL	3307	1071	1134	867	1164	1447	29237	37596	37560	21553	8051	16372	159359

APPENDIX 'B-15'

Diversions By Ditches

In Kansas

Report-Year ending October 31, 1973
Source of Information: Frontier Ditch: U.S.G.S. Records
Other Ditches, Kansas Division of Water Resources Records
Units in Acre-Feet (Subject to Revision)

NAME OF DITCH	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	YEAR
Frontier Ditch	887	0	0	0	0	0	1000	2180	2240	2410	1600	0	10317*
Alamo Canal	0	0	0	0	0	0	0	0	0	0	0	0	0
Ft. Aubrey Canal	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Stateline to Syracuse	887	0	0	0	0	0	1000	2180	2240	2410	1600	0	10317
Amazon Canal	583	0	0	0	0	0	3382	6151	1688	1916	1484	1398	16602
Great Eastern Canal	0	0	0	282	1652	0	1932	5548	4578	1069	1394	4193	20648
South Side Ditch	0	0	0	0	0	0	1910	1406	2834	0	827	0	6977
Farmers Ditch	85	0	0	0	0	0	3183	3892	2709	3124	791	71	13855
Garden City Canal	0	0	0	0	0	0	0	414	107	597	46	0	1164
Total Syracuse to Garden City	668	0	0	282	1652	0	10407	17411	11916	6706	4542	5662	59246
TOTAL STATELINE TO GARDEN CITY	1555	0	0	282	1652	0	11407	19591	14156	9116	6142	5662	69563

* 4310 Acre-feet returned directly to river

APPENDIX 'B-16'

Summary

Tabulation

(Acre-feet)

	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	YEAR	FROM APP. NO.
Arkansas River at Las Animas, Colo.	1780	1720	2420	2040	2290	2480	6760	11810	28990	15470	2790	8530	87080	B-2
Purgatoire River near Las Animas, Colo.	1030	1100	1240	1040	2100	19230	12770	1690	11070	3190	1690	1970	58120	B-3
Inflow to John Martin Reservoir	2810	2830	3660	3080	4390	21690	19530	13500	40060	18660	4470	10500	145200	B-4*
Reservoir contents at end of month	4850	8821	14097	18364	24090	47282	32286	0	1815	0	0	0	0	B-5
Net change in reservoir storage	+4850	+3971	+5276	+4267	+5726	+23192	-14996	-32286	+1815	-1815	0	0	0	B-5
Outflow from John Martin Reservoir	147	123	134	121	141	145	37270	45130	36520	19660	5690	12920	15800	B-6
Diversions in District 67, Colo.	3307	1071	1134	867	1164	1447	29237	37596	37560	21553	8051	16372	159359	B-14
Flow at Colorado-Kansas Stateline	5840	4150	5650	5600	6550	11540	17780	22390	15990	10360	4780	7380	118000	B-8
Diversions in Kansas	1555	0	0	282	1652	0	11407	19591	14156	9116	6142	5662	69563	B-15

*Because of computation rules, figures in B-4 are not necessarily the exact sum of B-2 and B-3.

APPENDIX "C"
Resolution Concerning
LOGAN GREEN

(adopted December 11, 1973)

BE IT RESOLVED BY THE ARKANSAS RIVER COMPACT
ADMINISTRATION:

WHEREAS, Logan Green has served as a Kansas Commissioner on
the Arkansas River Compact Administration for 16 years from June 7,
1957 to June 7, 1973; and

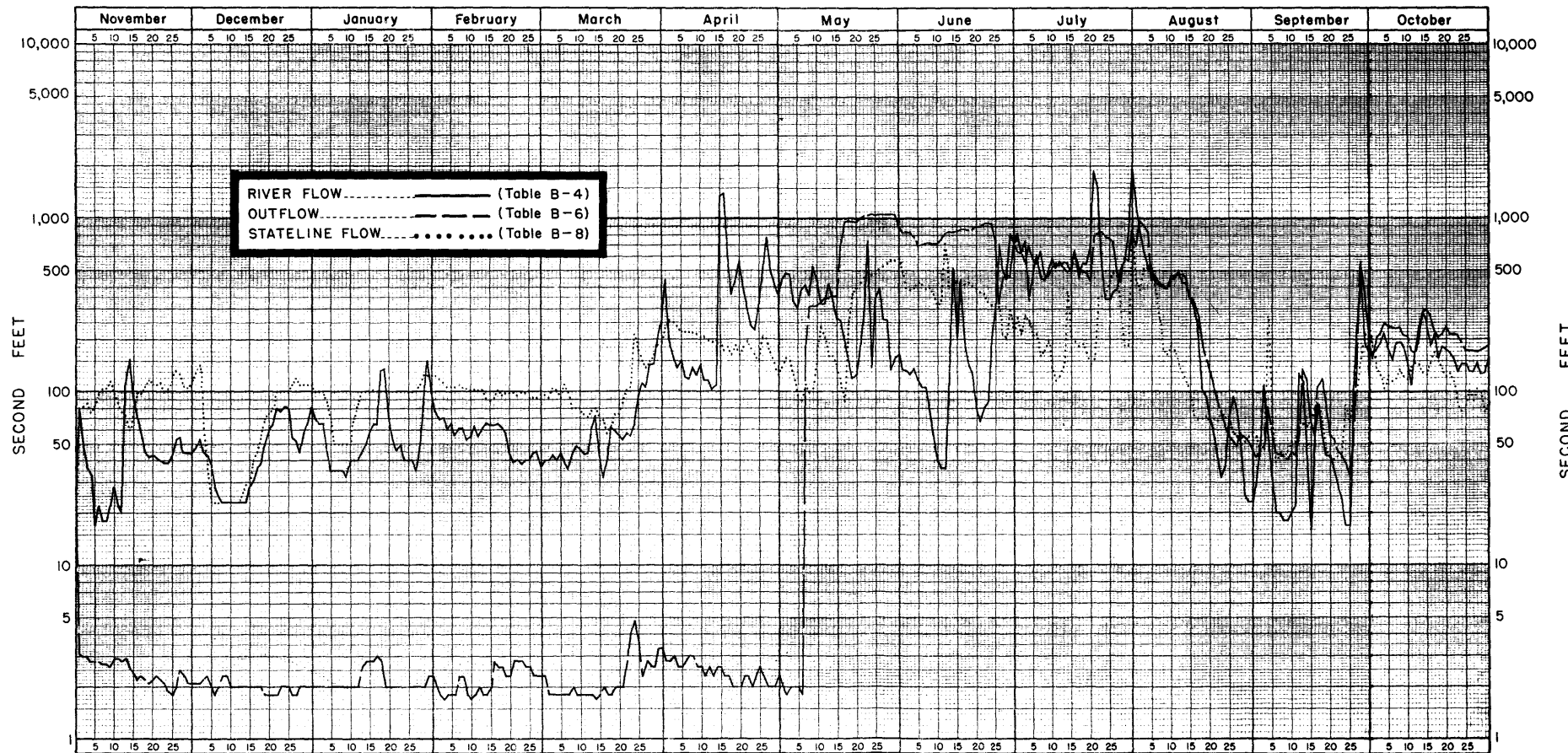
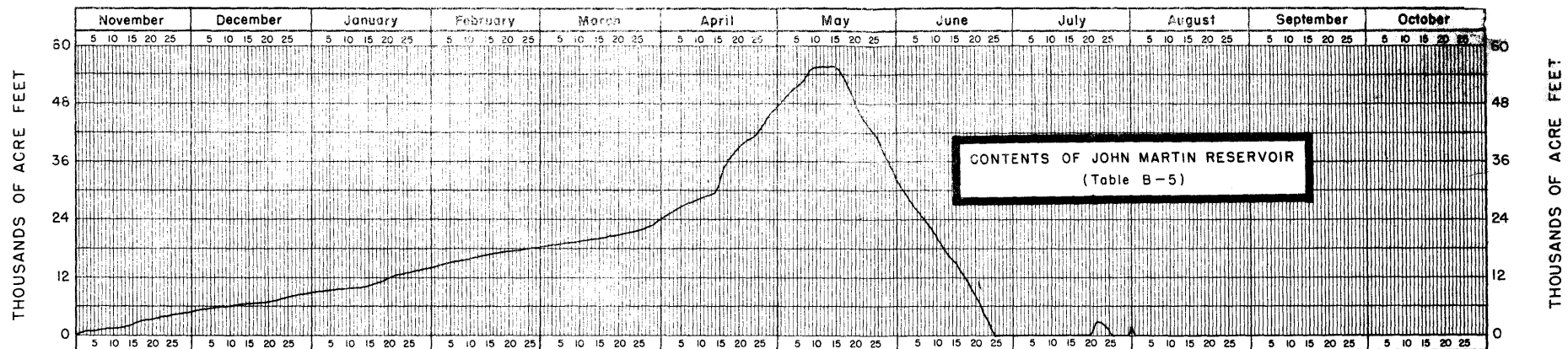
WHEREAS, Logan Green has conscientiously devoted his ability
and energy to the administration and conservation of the water
resources of the Arkansas River; and

WHEREAS, Logan Green by his devotion to duty and his good
judgment has earned the respect and affection of all members of the
Arkansas River Compact Administration; and

WHEREAS, Logan Green has relinquished his position as
commissioner of the Arkansas River Compact Administration;

NOW THEREFORE BE IT RESOLVED by the Arkansas River
Compact Administration that the said Administration desires to express
its thanks and gratitude to Logan Green for his loyal and faithful
service, his fine cooperation, and his aid in solving the administrative
problems confronting the Administration during his tenure as
commissioner, and that the Administration sincerely wishes him the
best of everything and continued health and happiness in all of his
future endeavors;

BE IT FURTHER RESOLVED, that this resolution be entered
into the records of this Administration and that the Secretary be
instructed to send a copy to Mr. Green.



RIVER FLOW, OUTFLOW AND CONTENTS OF JOHN MARTIN RESERVOIR AND STATELINE FLOW

Report Year, November 1, 1972 - October 31, 1973