

TWENTY-FOURTH ANNUAL REPORT

**ARKANSAS RIVER
COMPACT
ADMINISTRATION
(1972)**

For the Report Year November 1, 1971 to October 31, 1972

LAMAR, COLORADO

December 12, 1972

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, LOGAN N. GREEN and GUY E. GIBSON
for Kansas

800 South Eighth Street
Lamar, Colorado 81052

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PLATE 1	River Flow, Outflow, and Contents of John Martin Reservoir and Stateline Flow
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**Annual Report of
ARKANSAS RIVER COMPACT
ADMINISTRATION**

(1972)

Report-Year November 1, 1971 to October 31, 1972

**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, 1971 through October 31, 1972, 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
Robert V. Smrha, Topeka, Kansas (November 1, 1971-May 1, 1972)
Guy E. Gibson, Topeka, Kansas (May 1, 1972-October 31, 1972)

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

Engineering Committee:

Robert V. Smrha (Chairman from November 1, 1971 to May 1, 1972)
Guy E. Gibson (Chairman from May 1, 1972 to October 31, 1972)
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 14, 1971	Lamar, Colorado	Annual Meeting
April 12, 1972		Telephonic Meeting
May 30, 1972		Telephonic Meeting
July 7, 1972		Telephonic Meeting
July 23, 1972		Telephonic Meeting
September 19, 1972		Telephonic Meeting

5. Fiscal

- (a) Balance on hand, November 1, 1971 \$ 7,817.16
- (b) Receipts:
 - State of Kansas 3,164.00
 - (The Colorado warrant was not received until after the conclusion of the compact year)
- (c) Total Funds available \$10,981.16
- (d) Disbursements by the Administration:

Date	Voucher No.	Payee & Purpose	Amount
12/ 2/71	134	Joetta Hackett—Typing	\$ 25.00
12/ 2/71	135	Mountain Bell—November service	30.60
12/14/71	136	Strait & Crimond—audit	125.00
1/ 4/72	137	Federal Reserve Bank—FICA	39.00
1/ 4/72	138	Mountain Bell—December service	35.07
1/27/72	139	USGS—2nd quarter	1,000.00
1/27/72	140	Mountain Bell—January service	8.52
1/27/72	141	Lane Hackett—3rd quarter salary travel, and postage	480.00
2/28/72	142	Mountain Bell—February service	23.59
2/28/72	143	Jackson & Company—moving expenses ...	21.00
3/ 3/72	144	Lamar Typewriter Company—office supplies	15.36

3/ 3/72	145	Lamar Daily News—annual reports	448.45
3/ 3/72	146	Mountain Bell—March service	19.66
3/ 3/72	147	Federal Reserve Bank—FICA	39.00
5/ 2/72	148	USGS—3rd quarter	1,000.00
5/ 2/72	149	Mountain Bell—April service	30.76
5/30/72	150	Lane Hackett—4th quarter salary travel, and postage	488.30
5/30/72	151	Mountain Bell—May service	19.96
6/30/72	152	USGS—4th quarter	1,000.00
6/30/72	153	Mountain Bell—June service	36.46
6/30/72	154	Federal Reserve Bank—FICA	39.00
7/28/72	155	Lane Hackett—1st quarter salary travel, and postage	494.20
7/28/72	156	Mountain Bell—July service	32.93
9/ 2/72	157	Mountain Bell—August service	32.76
9/ 6/72	158	Milne Agents, Inc.—Treasurer Bond	25.00
10/ 2/72	159	Mountain Bell—September service	37.79
10/ 2/72	160	Lamar Daily News—envelopes	14.30
10/ 2/72	161	Federal Reserve Bank—FICA	39.00
10/27/72	162	Lane Hackett—2nd quarter salary travel, and postage	507.00
10/27/72	162	Mountain Bell—October service	23.51
		Total Disbursements	\$6,131.22

(e) Balance on hand, October 31, 1972 4,849.94
(f) At the annual meeting on December 14, 1971 the
Administration tentatively adopted the following budget
for the fiscal year, July 1, 1973 to June 30, 1974, and it
was formally adopted by correspondence in July 1972.

PROPOSED BUDGET

Fiscal Year July 1, 1973—June 30, 1974

Personal Services	\$1,680.00
Secretary's Salary	\$1,500.00
Social Security	80.00
Professional Services (Audit)	100.00

U. S. Geological Survey	4,400.00
Cooperative Services	4,400.00

Capital Outlay	100.00
Office Equipment	100.00

Maintenance and Operation	1,900.00
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	350.00
Office Supplies	100.00

Total Budget 1973-1974	\$8,080.00
Estimated Carryover June 30, 1972	100.00
To Be Appropriated	\$7,980.00

Colorado (60%)	\$4,788.00
Kansas (40%)	3,192.00
	\$7,980.00

- (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 357,600 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 347,600 acre-feet of storage for irrigation. (Congress has authorized use of an additional 10,000 acre-feet of flood control storage space for recreation purposes. This was intended to allow the establishment of a 10,000 acre-foot permanent recreation pool, but this has not been done to date.) 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. (Demand for irrigation water often results in emptying the conservation pool, limiting the recreational uses of the reservoir.) 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 the 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 winter storage period, November 1, 1971, through March 31, 1972, during compact year 1972 did not produce large amounts of storage in John Martin Reservoir. The reservoir was empty on November 1, and the storage amounted to only 25,642 acre-feet on March 31. During the winter storage period, river flow into the reservoir amounted to 16,500 acre-feet, which was about 7,000 acre-feet less than the 1949-72 average of 23,385 acre-feet; and outflow amounted to 3,577 acre-feet, which was about 2,600 acre-feet less than the 1949-72 average of 6,206 acre-feet. An estimate of the unmeasured inflow into the reservoir was prepared by deducting the river flow from the sum of the accumulated storage and the outflow, and it was 12,719 acre-feet. The actual amount of unmeasured inflow exceeded this amount by the amount of the evaporation. Colorado irrigators made demands for release of 2,979 acre-feet of river flow during the winter storage period.

The accumulated storage in John Martin Reservoir was rapidly depleted during the summer storage period or irrigation season, April 1, 1972, through October 31, 1972. Colorado demands, which began on April 3, for release of 15,025 acre-feet of stored water and 240 acre-feet of river flow and Kansas demands, which also began on April 3, for release of 10,976 acre-feet of stored water emptied the reservoir on April 16. Small freshets provided small amounts of storage during May, July, and September. Colorado demands for release of water stored during these events amounted to 10,375 acre-feet, and Kansas demands amounted to 3,016 acre-feet. Colorado again made demands for release of river flow beginning on October 31, which amounted to 20 acre-feet. The stateline flow during the days of Kansas demand in April was 11,230 acre-feet and exceeded the amount of the demands. Kansas demands for water stored during the May freshet were for 621 acre-feet while the stateline flow was 1,680 acre-feet. Kansas demands resulting from the July freshet were 2,395 acre-feet and the stateline flow was 2,480 acre-feet. The reservoir was empty at the close of the compact year on October 31.

The total river flow into the reservoir during the summer storage period was 97,352 acre-feet, which was about 55,000 acre-feet less than the 1949-72 average of 152,608 acre-feet. Diversions by the ditches in Colorado Water District 67 amounted to 129,360 acre-feet during this period, which was about 22,000 acre-feet less than the average of 151,068 acre-feet. Ditch diversions in Kansas during the same period amounted to 58,332 acre-feet. The stateline flow during the summer storage period was 80,000 acre-feet, which is about 58,000 acre-feet less than the average.

An estimate of the accretions, which includes tributary inflow and returnflow, into the Arkansas River between John Martin Dam and the stateline was prepared by deducting the outflow from John Martin Reservoir from the sum of diversions in Colorado Water District 67 and the stateline flow. The accretions during the compact year were 145,430 acre-feet, of which 45,761 acre-feet occurred during the winter storage period.

9. Gaging Stations

In general, streamflow records of satisfactory accuracy were obtained at the compact 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.

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 divider between the stilling wells at the gaging station on Frontier ditch has rusted out and was temporarily patched with concrete in 1972. Prior to the 1973 irrigation season, the metal stilling wells will be replaced with concrete stilling wells.

The Administration approved a cooperative agreement with the U. S. Geological Survey for the fiscal year July 1, 1972 to June 30, 1973, 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

- (a) A special telephonic meeting of the Administration was held on April 12, 1972 for the purpose of finding that the reservoir would become empty on April 15, 1972. The Colorado State Engineer was notified of the action and that the priority administration of decreed water rights would commence on that date unless a change of conditions justified cancellation or modification of the notice. The reservoir was emptied at 1500 MST on April 16, 1972.
- (b) Rains in the Arkansas River valley caused sufficient inflow into John Martin Reservoir for the gates to be closed for storage at 0900 MDT on May 29, 1972. The Secretary notified The Colorado State Engineer that water was available for storage in John Martin Reservoir.
- (c) A special telephonic meeting of the Administration was held on May 30, 1972 for the purpose of finding that the reservoir would become empty on May 30, 1972. The Colorado State Engineer was notified of the action and that the priority administration of decreed water rights would commence on that date unless a change of conditions justified cancellation or modification of the notice. The reservoir was emptied at 1500 MDT on May 30, 1972.
- (d) Rains in the Arkansas River valley caused sufficient inflow into John Martin Reservoir for the gates to be closed for storage at 0700 MDT on July 3, 1972. The Secretary notified the Colorado State Engineer that water was available for storage in John Martin Reservoir.
- (e) A special telephonic meeting of the Administration was held on July 7, 1972 for the purpose of finding that the reservoir would become empty on July 8, 1972. The Colorado State Engineer was notified of the action and that the priority administration of decreed water rights would commence on that date unless a change of conditions

- justified cancellation or modification of the notice. The reservoir was emptied at 0900 MDT on July 8, 1972.
- (f) Rains in the Arkansas River valley caused sufficient inflow into John Martin Reservoir for the gates to be closed for storage at 1800 MDT on July 22, 1972. The Secretary notified the Colorado State Engineer that water was available for storage in John Martin Reservoir.
 - (g) A special telephonic meeting of the Administration was held on July 23, 1972 for the purpose of finding that the reservoir would become empty on July 23, 1972. The Colorado State Engineer was notified of the action and that the priority administration of decreed water rights would commence on that date unless a change of conditions justified cancellation or modification of the notice. The reservoir was emptied at 1100 MDT on July 23, 1972.
 - (h) Rains in the Arkansas River valley caused sufficient inflow into John Martin Reservoir for the gates to be closed for storage at 0900 MDT on September 15, 1972. The Secretary notified the Colorado State Engineer that water was available for storage in John Martin Reservoir.
 - (i) A special telephonic meeting of the Administration was held on September 19, 1972 for the purpose of finding that the reservoir would become empty on September 20, 1972. The Colorado State Engineer was notified of the action and that the priority administration of decreed water rights would commence on that date unless a change of conditions justified cancellation or modification of the notice. The reservoir was emptied at 0830 MDT on September 21, 1972.

APPENDICES

for

ANNUAL REPORT OF THE ARKANSAS RIVER COMPACT ADMINISTRATION

For the Report-Year
November 1, 1971 to October 31, 1972

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PLATE 1	River Flow and Contents of John Martin Reservoir and Stateline Flow
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APPENDIX "A"

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AUDITOR'S REPORT

STRAIT & CRIMOND

CERTIFIED PUBLIC ACCOUNTANTS

Johnson Strait Building
Lamar, Colorado 81052

November 21, 1972

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, 1972, and the Statement of Cash Receipts and Disbursements 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, 1971, to June 30, 1972, 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, 1972, 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

jt

EXHIBIT A

ARKANSAS RIVER COMPACT ADMINISTRATION

STATEMENT OF ASSETS & LIABILITIES ARISING FROM CASH TRANSACTIONS OCTOBER 31, 1972

ASSETS:	
Cash	\$4,850
Equipment	1,604
TOTAL ASSETS	\$6,454

LIABILITIES & FUND BALANCE:	
Liabilities	\$ ---
FUND BALANCE:	
Expended — Equipment	\$1,604
Unexpended	4,850
TOTAL FUND BALANCE	6,454
TOTAL LIABILITIES & FUND BALANCE	\$6,454

EXHIBIT B

ARKANSAS RIVER COMPACT ADMINISTRATION STATEMENT OF RECEIPTS & DISBURSEMENTS & CHANGES IN FUND BALANCE FOR THE FISCAL YEAR ENDED OCTOBER 31, 1972

FUND BALANCE, NOVEMBER 1, 1971	\$7,817
RECEIPTS	
REVENUE FROM ASSESSMENTS:	
Kansas	\$3,164
TOTAL RECEIPTS	\$3,164
DISBURSEMENTS:	
U.S. Geological Survey-Gauging	\$3,000
Secretary Salary	1,422
Travel	483
Printing	448
Telephone	332
Payroll Tax	156
Typing & Mailing	89
Legal & Audit	125
Office Supplies	30
Insurance	25
Moving Expense	21
TOTAL DISBURSEMENTS	\$6,131
EXCESS OF DISBURSEMENTS OVER RECEIPTS	\$(2,967)
FUND BALANCE, OCTOBER 31, 1972	\$4,850

Note: The Colorado assessment for 1972-73 was not received until November, 1972, and is not reflected in this cash basis statement.

EXHIBIT C

ARKANSAS RIVER COMPACT ADMINISTRATION STATEMENT OF RECEIPTS & DISBURSEMENTS WITH BUDGET FOR BUDGET YEAR JULY 1, 1971 TO JUNE 30, 1972

	ACTUAL	BUDGET
CASH IN BANK, JULY 1, 1971	\$ 4,747	\$3,000
RECEIPTS		
REVENUE FROM ASSESSMENTS:		
Colorado Portion — 60%	\$ 3,174	\$3,174
Kansas Portion — 40%	2,116	2,116
TOTAL RECEIPTS	\$ 5,290	\$5,290
TOTAL TO ACCOUNT FOR	\$10,037	\$8,290

DISBURSEMENTS:		
U. S. Geological Survey — Gauging	\$ 4,000	\$4,000
Secretary Salary	1,419	\$ 1,500
Capital Outlay — Equipment	---	500
Travel	483	500
Printing	469	700
Telephone	320	300
Payroll Tax	156	75
Legal & Audit	125	100
Typing & Mailing	111	100
Office Supplies	16	300
Insurance	25	15
Moving Expense	21	---
Investigation & Inspection	---	100
Official Publications	---	100
TOTAL DISBURSEMENTS	\$ 7,145	\$8,290
CASH IN BANK, JUNE 30, 1972	\$ 2,892	\$ --

APPENDIX 'B-1'

ARKANSAS RIVER NEAR PUEBLO, COLORADO

U S G S Records—Provisional, Subject to Revision
(Colorado State Engineer)

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	411	385	294	250	319	133	134	2150	1140	1110	888	104
2	420	370	289	243	297	112	118	2390	1080	1220	427	104
3	429	370	269	232	257	141	106	2490	1130	1070	346	107
4	472	362	247	239	263	132	85	2400	989	1020	295	91
5	508	338	226	282	242	128	98	2380	1080	1030	272	96
6	488	339	340	291	219	145	228	2590	1180	970	249	96
7	445	323	348	294	242	128	346	2780	1140	934	221	120
8	402	337	350	248	225	237	377	2820	1090	922	217	116
9	387	320	351	254	213	553	307	2820	1060	886	234	124
10	411	329	341	275	180	591	279	2760	1020	739	279	160
11	454	329	336	289	175	677	259	2670	1010	628	228	128
12	436	324	318	227	174	677	252	2510	1040	589	228	124
13	434	339	328	254	184	741	238	2550	989	580	204	104
14	431	345	367	248	190	751	181	2570	885	379	457	109
15	429	325	247	248	201	795	151	2380	786	370	177	174
16	421	321	301	241	190	741	121	2140	856	386	153	194
17	430	312	351	234	149	730	140	1970	822	416	131	193
18	437	299	375	248	164	600	220	1950	822	345	128	233
19	428	313	365	268	178	516	342	1880	880	362	138	244
20	428	321	318	248	184	507	557	2100	987	281	155	277
21	426	308	307	246	164	498	1030	2030	1120	236	151	310
22	428	310	301	263	125	480	1290	1920	592	237	218	304
23	430	333	301	270	110	471	1340	1870	556	572	180	310
24	428	364	294	284	131	402	1240	1420	519	607	155	250
25	402	364	287	270	164	188	1110	1400	491	597	120	250
26	393	387	261	284	119	168	1170	1360	642	607	97	255
27	385	364	244	277	128	216	1390	1300	636	597	95	251
28	385	356	242	297	213	222	1690	1330	552	607	98	237
29	385	307	261	319	254	193	1780	1410	910	716	122	303
30	385	297	252		165	167	1780	1140	1090	684	106	323
31	304	304	236		121		1920	1070	587			370
TOTAL												
sec. ft.	12748	10395	9347	7623	5940	12040	20279	63480	28164	20284	6769	6061
ac. ft.	25290	20620	18540	15120	11780	23880	40220	125900	55860	40230	13430	12020
a) ac. ft.	0	0	0	0	811	13237	7387	6786	19537	25700	1350	22
b) ac. ft.	25290	20620	18540	15120	10970	10640	32830	119100	36320	14530	12080	12000
a) Less upstream reservoir and transmountain water.												
b) Corrected total ac. ft.												
THE YEAR 402,900 acre-ft.												
CORRECTED 328,100 acre-ft.												

APPENDIX 'B-2'

ARKANSAS RIVER AT LAS ANIMAS, COLORADO

Report-Year ending October 31, 1972
U S G S Records—Provisional, Subject to Revision

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	73	50	28	80	26	21	13	320	609	13	16	12
2	44	59	27	30	25	19	14	302	476	15	23	13
3	39	50	28	34	26	19	14	308	903	231	152	13
4	37	32	30	42	25	20	13	406	399	1290	157	12
5	31	36	32	51	29	20	15	364	208	893	144	12
6	30	51	31	45	23	18	16	350	70	581	90	12
7	41	60	28	38	23	18	18	350	41	428	81	12
8	39	51	23	31	23	18	20	406	119	230	49	11
9	33	31	22	28	23	18	17	572	320	134	25	11
10	36	30	24	25	23	17	114	572	350	102	22	11
11	47	30	20	30	24	17	98	399	302	70	62	10
12	40	30	15	39	21	18	42	536	242	44	60	11
13	23	31	20	45	24	18	26	705	98	39	37	10
14	40	40	21	50	22	20	23	590	134	31	82	10
15	27	67	24	51	21	23	20	618	166	21	180	11
16	39	44	26	51	22	25	18	490	114	17	29	11
17	49	31	28	63	23	41	16	806	77	15	20	11
18	66	28	20	70	22	36	14	638	70	14	16	11
19	59	29	21	70	21	21	14	563	31	13	14	11
20	33	29	24	66	22	20	13	385	29	12	14	11
21	39	29	30	49	21	19	14	428	24	12	14	11
22	31	30	40	31	19	18	14	527	118	10	15	12
23	32	32	48	29	16	17	16	1540	20	90	15	12
24	34	33	40	29	16	16	59	676	17	12	13	12
25	37	33	31	31	16	15	208	545	15	13	13	11
26	40	32	28	31	16	15	272	436	14	11	13	11
27	39	34	33	31	14	13	236	406	18	11	13	11
28	40	35	40	30	19	13	266	385	53	12	12	12
29	39	34	30	29	23	16	413	378	169	13	12	12
30	37	32	45	45	24	14	102	695	34	12	12	14
31		30	66	22	22	22	214		14	12		
TOTAL	1194	1161	923	1229	674	583	2352	15696	5254	4320.0	1405	354
sec. ft.	2370	2300	1830	2440	1340	1160	4670	31130	10420	8570	2790	702
ac. ft.												
THE YEAR 69,720 acre-ft.												

APPENDIX 'B-4'

RIVER FLOW INTO JOHN MARTIN RESERVOIR

Report-Year ending October 31, 1972
U S G S Records—Provisional, Subject to Revision

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	92	80	50	95	44	26	18	334	628	93	25	14
2	86	88	46	41	56	23	19	310	490	70	155	15
3	79	77	38	47	60	22	19	316	3500	302	202	15
4	73	56	39	64	59	24	20	415	559	1580	219	14
5	69	62	42	69	64	24	23	374	358	920	813	14
6	88	72	41	61	49	23	25	360	191	592	264	15
7	81	84	38	56	41	23	27	359	60	439	139	15
8	77	67	33	47	39	23	34	414	135	236	84	14
9	63	43	31	49	32	22	29	577	328	140	52	13
10	60	40	34	41	27	22	121	580	355	115	46	13
11	57	39	29	51	29	22	102	408	305	78	74	12
12	46	41	23	62	26	20	44	560	939	50	129	13
13	43	59	28	69	29	20	29	721	374	45	717	13
14	82	81	29	74	27	23	26	609	186	36	190	13
15	49	97	33	63	28	27	23	635	178	24	4920	14
16	50	77	36	66	30	33	21	498	123	19	652	14
17	94	62	39	72	29	46	19	814	84	17	240	13
18	108	57	29	79	26	40	17	644	75	15	108	14
19	100	67	35	77	26	25	17	572	35	14	66	14
20	76	63	47	69	27	24	15	387	32	14	56	15
21	73	78	62	54	26	24	15	430	27	14	43	15
22	68	71	75	54	23	23	15	530	1790	12	29	15
23	63	67	70	56	21	22	18	2320	415	11	24	16
24	68	69	62	52	22	19	60	1270	141	77	20	16
25	71	71	40	53	22	19	208	596	50	33	18	18
26	70	69	38	55	20	20	273	456	28	20	17	15
27	71	71	43	52	17	18	238	422	27	18	16	15
28	75	71	53	49	24	20	486	398	60	17	15	15
29	73	71	49	46	29	25	1700	390	265	15	15	16
30	68	63	62	35	35	23	195	741	166	15	14	23
31	57	57	82	27	27	23	238		43	16		24
TOTAL	2153	2070	1356	1723	1014	725	4094	17440	11947	5047	9362	465
sec. ft.	4270	4110	2690	3420	2010	1440	8120	34590	23700	10010	18570	922
ac. ft.	THE YEAR 113,900 acre-ft.											

APPENDIX 'B-5'

CONTENTS OF JOHN MARTIN RESERVOIR

Report-year ending October 31, 1972
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	0	5054	11355	18456	23867	25695	0	0	0	0	0	0
2	273	5291	11504	18573	23998	25695	0	0	0	0	0	0
3	318	5612	11653	18761	24129	24208	0	0	0	0	0	0
4	362	5876	11766	18950	24261	21763	0	0	3107	0	0	0
5	426	6011	11898	19116	24392	21763	0	0	4018	0	0	0
6	458	6188	12031	19354	24498	19402	0	0	3050	0	0	0
7	488	6395	12165	19594	24603	15336	0	0	1646	0	0	0
8	577	6577	12415	19787	24762	13321	0	0	508	0	0	0
9	667	6734	12668	20005	24868	11355	0	0	0	0	0	0
10	765	6906	12864	20224	24921	9428	0	0	0	0	0	0
11	872	7081	13022	20445	24974	7587	0	0	0	0	0	0
12	972	7257	13241	20666	25027	5691	0	0	0	0	0	0
13	1060	7436	13441	20913	25081	3822	0	0	0	0	0	0
14	1153	7663	13663	21112	25160	2018	0	0	0	0	0	0
15	1258	7862	13644	21311	25214*	588	0	0	0	0	0	0
16	1371	8033	13765	21512	25267	0	0	0	0	0	1306	0
17	1558	8221	13970	21688	25321	0	0	0	0	0	1692	0
18	1888	8395	14321	21864	25374	0	0	0	0	0	1394	0
19	2153	8587	14845	22041	25401	0	0	0	0	0	939	0
20	2392	8766	15422	22244	25427	0	0	0	0	0	501	0
21	2647	8945	15855	22448	25454	0	0	0	0	0	0	0
22	2918	9160	16316	22601	25477	0	0	0	0	0	0	0
23	3156	9378	16761	22780	25401	0	0	0	0	0	0	0
24	3404	9597	16986	22960	25427	0	0	0	0	0	0	0
25	3642	9820	17212	23140	25454	0	0	0	0	0	0	0
26	3844	10045	17371	23295	25427	0	0	0	0	0	0	0
27	4085	10290	17484	23477	25454	0	0	0	0	0	0	0
28	4334	10520	17644	23632	25588	0	0	0	0	0	0	0
29	4614	10753	17852	23737	25588	0	523	0	0	0	0	0
30	4831	10988	18036	23737	25642	0	0	0	0	0	0	0
31	11266	18269		25642								

APPENDIX 'B-6' **OUTFLOW FROM JOHN MARTIN RESERVOIR**

Report-Year ending October 31, 1972
U S G S Records—Provisional, Subject to Revision

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	73	2.0	2.8	3.3	3.8	31	43	382	496	83	563	31
2	91	1.8	3.0	3.0	3.8	31	51	374	440	106	219	31
3	84	1.8	2.6	3.0	12	616	49	314	622	90	246	33
4	73	1.8	2.6	3.3	13	1160	47	361	562	614	253	33
5	73	2.0	2.6	3.0	11	1100	46	426	726	1180	426	30
6	75	2.0	2.5	3.0	11	1010	55	360	891	726	291	28
7	75	1.8	2.6	3.0	20	1020	53	308	881	573	200	31
8	60	2.3	2.8	3.0	24	1040	59	384	520	475	142	33
9	33	2.6	2.8	2.8	25	1040	57	435	246	295	92	31
10	33	2.8	3.0	2.8	22	1020	64	550	322	173	71	33
11	33	2.8	2.9	3.0	22	938	143	486	350	106	51	31
12	33	2.6	2.9	2.8	20	896	105	404	257	77	126	31
13	32	2.6	2.6	3.0	20	896	75	577	635	63	540	33
14	34	2.6	2.6	3.0	20	896	60	570	200	58	267	31
15	34	2.8	2.4	2.8	19	889	54	501	186	52	521	33
16	35	2.8	2.4	2.8	19	562	48	451	162	44	431	31
17	35	2.6	2.5	2.8	19	83	46	513	124	40	378	31
18	17	2.6	2.5	3.0	19	81	45	554	98	38	378	30
19	2.4	2.6	2.7	3.0	19	70	46	469	79	37	365	31
20	2.1	2.6	3.0	3.3	18	59	42	427	61	34	356	33
21	2.1	2.8	2.9	3.3	22	61	39	378	56	33	85	32
22	2.2	2.3	2.9	3.3	24	55	37	408	202	34	43	31
23	1.9	2.6	3.1	3.3	25	52	38	1250	672	34	42	30
24	2.2	2.6	3.0	3.6	25	50	39	861	204	36	40	31
25	2.3	2.8	3.2	3.3	25	51	128	636	100	75	39	32
26	2.3	2.8	3.3	3.6	25	52	314	480	71	49	36	34
27	2.3	2.6	3.3	3.8	25	52	325	441	57	38	34	33
28	2.0	2.6	3.3	3.8	23	51	295	404	49	36	33	33
29	2.0	2.8	3.3	3.8	16	56	797	333	160	34	33	32
30	2.3	2.3	3.0	3.3	19	57	732	630	249	33	31	30
31		2.6	3.0		28		295		142	31		26
TOTAL	949.1	76.3	88.1	91.5	597.6	13975	4237	14667	9820	5297	6332	973
sec. ft.	1880	151	175	181	1190	27720	8400	29090	19480	10510	12560	1930

THE YEAR 113,300 acre-ft.

APPENDIX 'B-7'

ARKANSAS RIVER AT LAMAR, COLORADO

Report-Year ending October 31, 1972
USGS Records—Provisional, Subject to Revision

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	7.3	9.9	37	21	5.7	3.0	4.7	9.9	52	43	897	5.7
2	8.5	9.9	38	17	5.7	3.4	4.7	13	15	41	113	5.7
3	6.2	9.9	32	18	4.7	9.9	4.7	7.9	192	53	11	4.7
4	6.2	9.9	20	20	3.4	624	4.7	5.7	204	93	9.2	4.2
5	6.7	9.9	25	22	2.7	704	5.2	19	127	571	20	4.7
6	6.2	11	23	18	2.4	672	5.7	11	468	125	11	4.2
7	6.2	27	24	14	2.4	660	6.2	3.4	506	60	9.9	3.8
8	6.7	30	25	13	2.7	664	6.7	19	374	32	9.2	4.7
9	6.7	31	23	15	3.0	680	7.9	36	24	27	8.5	5.7
10	6.7	32	23	12	3.0	672	7.3	72	7.3	16	8.5	5.2
11	6.2	32	24	9.9	3.4	592	7.3	70	15	17	8.5	5.7
12	5.2	32	24	14	3.8	538	5.7	27	48	24	530	5.7
13	4.2	34	20	9.9	4.7	552	5.2	69	139	22	87	5.7
14	6.2	30	17	8.5	4.7	534	4.7	77	9.2	20	39	5.7
15	5.7	28	19	11	4.2	556	5.2	112	9.2	19	61	6.2
16	6.2	28	30	11	3.4	473	5.7	88	7.3	17	17	6.7
17	6.2	29	32	14	4.2	65	6.2	54	12	16	11	7.3
18	6.2	29	38	13	3.8	27	5.2	96	13	15	5.7	6.2
19	5.7	30	43	14	4.2	12	4.2	75	18	12	5.7	3.8
20	6.2	35	44	15	4.2	5.2	2.4	70	17	12	5.7	5.2
21	5.7	35	42	15	4.2	5.2	2.7	35	18	9.9	3.4	6.2
22	6.7	35	43	15	4.7	3.8	2.7	42	15	8.5	3.4	5.2
23	7.3	35	42	18	3.4	3.4	2.7	338	215	5.2	3.8	5.2
24	7.3	36	37	20	3.8	3.4	2.1	687	15	396	5.2	5.2
25	7.9	35	20	17	4.2	9.1	2.7	98	11	299	5.2	6.2
26	8.5	36	22	17	4.7	345	4.7	56	21	1.2	5.2	6.2
27	9.9	37	24	18	3.4	12	5.2	64	23	1.2	5.2	7.3
28	9.9	36	27	15	1.9	4.7	5.7	53	22	1.0	5.7	5.7
29	9.9	36	26	7.9	2.7	6.7	436	35	19	1.2	5.2	6.2
30	9.9	37	27		3.4	5.7	388	84	24	1.0	4.7	5.2
31		37	28		3.0	182			42	1.0		9.8
TOTAL												
sec.ft.	208.4	882.5	899	433.2	115.7	8534.6	1144.1	2426.9	2682.0	1960.2	1914.9	175.2
ac.ft.	413	1750	1780	859	229	16930	2270	4810	5320	3890	3800	348
THE YEAR 42,400 acre-ft.												

APPENDIX 'B-8'

ARKANSAS RIVER AT THE COLORADO-KANSAS STATELINE

Report-Year ending October 31, 1972
U S G S Records-Provisional, Subject to Revision

DAY	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT
1	151	140	119	125	136	52	84	500	200	70	183	69
2	169	140	122	117	125	44	84	349	176	109	744	63
3	131	130	96	140	125	60	96	237	132	367	391	53
4	121	150	80	180	125	76	107	137	180	228	254	58
5	130	140	80	200	125	380	97	74	310	133	212	72
6	122	160	82	190	128	465	154	61	204	414	192	63
7	133	150	84	170	128	425	131	48	424	272	184	78
8	138	140	86	140	119	422	101	41	470	248	188	71
9	127	150	94	128	113	462	70	38	440	169	136	64
10	115	164	119	132	110	475	81	47	228	135	98	86
11	114	180	125	145	101	462	96	95	113	112	72	74
12	100	192	132	146	107	410	102	476	106	107	219	51
13	96	176	120	153	95	404	94	98	120	87	691	48
14	90	156	80	150	95	445	100	104	170	66	266	43
15	98	156	100	153	86	457	89	95	161	62	195	47
16	128	146	120	153	86	477	77	98	141	59	149	65
17	136	132	125	150	98	390	80	174	145	55	134	62
18	130	146	125	142	92	210	75	86	102	49	129	71
19	128	164	125	156	98	155	76	150	62	44	117	84
20	131	160	125	150	86	148	83	200	62	49	108	87
21	128	156	125	146	74	145	83	113	59	46	99	88
22	131	153	130	136	77	121	71	101	56	45	89	85
23	134	150	120	136	80	92	64	125	51	44	82	91
24	149	139	105	136	77	88	49	403	184	3180	74	84
25	154	139	85	136	62	91	47	586	144	1830	68	91
26	143	150	90	128	55	180	48	324	88	656	64	87
27	143	139	105	136	49	344	54	212	112	365	50	78
28	147	119	120	150	57	155	76	176	761	240	61	75
29	140	116	110	142	60	102	93	176	419	186	63	68
30	141	116	120	57	82	347	347	180	295	240	61	66
31	113	113	130	62	62	601	601	99	155	155	66	66
TOTAL	3898	4562	3379	4267	2888	7820	3410	5504	6214	9822	5373	2188
sec. ft.	7730	9050	6700	8460	5730	15510	6760	10920	12330	19480	10660	4340
ac. ft.												

The daily discharges are the sum of the flows of the Arkansas River near Coolidge, Kansas, and the Frontier ditch.
THE YEAR 117,700 acre-ft.

APPENDIX B-9

DEMANDS BY COLORADO FOR RESERVOIR WATER

REPORT ENDING OCTOBER 31, 1972
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												
Totals												
sec. ft.												
ac. ft.												

APPENDIX 'B-10'

DEMANDS BY COLORADO FOR RIVER FLOW OPERATION OF RESERVOIR

REPORT YEAR ENDING OCTOBER 31, 1972
DATA SOURCE: U. S. CORPS OF ENGINEERS 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	62					25						
2	75					25						
3	75				9		**8:30 A.M. Closed					
4	75				15							
5	75				15							
6					15		10 8:30 A.M.***					
7					20		15					
8					56		22					
9					35		22					
10					35		22					
11					22		7 Noon Closed					
12					35		22					
13					35		22					
14					35		22					
15					35		22					
16					35		22					
17					35		22					
18					12 Closed 8:30 A.M.		22					
19							22					
20							22					
21							22					
22							22					
23							22					
24							22					
25							22					
26							22					
27							22					
28							22					
29							22					
30							24					
31							25					
Totals					607		121					
sec. ft.	895				1204		240					
ac. ft.	1775											

Closed: 4:00 P.M.
for winter storage and
limited river flow. 10

10
20
THE YEAR
3239 Ac. Ft.

*Opened: 00:01 A.M., Oct. 31, 1971
**8:30 A.M. Open to Colorado and Kansas Reservoir Demands
***To Supplement Colorado Reservoir Demand

APPENDIX 'B-11'

DEMANDS BY KANSAS FOR RESERVOIR WATER

REPORT ENDING OCTOBER 31, 1972
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												
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												
sec. ft.												
ac. ft.												

APPENDIX B-12

STATELINE FLOW ON DAYS OF KANSAS DEMAND*

Report Year ending October 31, 1972
U S G S Records--Provisional, Subject to Revision

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1								500				
2								349				
3												
4												
5												
6						465						
7						425						
8						422			470			
9						462			440			
10						475			228			
11						462			113			
12						410						
13						404						
14						446						
15						457						
16						477						
17						390						
18						210						
19						155						
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												
TOTAL						5660		849	1251			
sec. ft.						11230		1690	2480			
ac. ft.												

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

THE YEAR 15,390 acre-ft.

APPENDIX 'B-13'

DIVERSIONS BY DITCHES IN COLORADO DISTRICTS 14 AND 17 DIVISION #2

REPORT YEAR ENDING OCTOBER 31, 1972
SOURCE OF INFORMATION: WATER COMMISSIONERS SPECIAL REPORTS TO DIVISION ENGINEER
1971
Units in Acre Feet

NAME OF DITCH	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	YEAR	COMPACT
Bessemer (River)	1602	0	0	0	2435	4254	4630	11277	4382	4620	4563	4714	42177	
Res. or Imported	24	0	0	0	0	365	1414	593	2816	2524	220	369	8325	
TOTAL: Bessemer	1626	0	0	0	2435	4619	6044	11870	7198	7144	4783	4783	50502	
Minnequa-Union Res.	0	0	0	0	0	0	0	236	1124	18	0	0	1378	
West Pueblo River	12	0	0	0	109	167	191	623	218	196	14	4	1534	
West Pueblo Reservoir	0	0	0	0	0	0	10	0	0	0	0	0	10	
Booth-Orchard Grove	403	0	0	44	1033	1047	1118	1124	1101	1107	1043	1035	9055	
Excelsior	0	0	0	0	0	0	52	885	0	50	0	0	987	
Collier	0	0	0	0	0	0	90	589	0	50	0	0	729	
Colorado Canal (River)	0	7297	10032	4620	0	0	0	1590	52	551	335	0	24477	
Res. or Imported	0	0	0	0	0	11131	7067	5275	12961	15947	1093	0	53474	
TOTAL: Colorado Canal	0	7297	10032	4620	0	11131	7067	6865	13013	16498	1428	0	77951	
Hightline (River)	4844	3809	2861	3217	3714	5336	6016	14289	5997	5725	5782	3577	65167	
Res. or Imported	0	0	0	0	795	0	0	543	2604	2280	0	0	6222	
TOTAL: Hightline	4844	3809	2861	3217	4509	5336	6016	14832	8601	8005	5782	3577	71389	
Oxford Farmers (Riv)	2021	1144	415	1011	1333	781	1715	6249	2294	1216	1041	787	20007	
Res. or Imported	0	0	0	0	0	0	0	426	250	0	0	0	676	
TOTAL: Oxford Farmers	2021	1144	415	1011	1333	781	1715	6249	2720	1466	1041	787	20683	
TOTAL: Oxford Farmers	8862	12250	13308	8892	8624	11585	13812	36626	14044	13515	12778	9817	164133	
Otero	0	1081	1200	406	0	0	0	2163	444	0	75	0	5369	
Baldwin-Stubbs (Res.)	0	0	0	0	0	0	0	0	157	178	22	357	357	
Catlin (River)	4944	3268	1987	3879	5961	3353	8719	18303	12005	2848	5144	3278	74189	
Res. or Imported	0	0	0	0	0	1846	175	242	99	3207	0	0	5569	
TOTAL: Catlin	4944	3268	1987	3879	5961	5699	8894	18545	12104	6055	5144	3278	79758	
Holbrook (River)	2727	11666	6491	3266	0	0	309	4991	591	565	397	0	31003	
Res. or Imported	0	0	0	0	0	0	0	0	3064	3244	0	0	6308	
TOTAL: Holbrook	2727	11666	6491	3266	0	0	309	4991	3655	3809	397	0	37311	
Rocky Ford	2826	1672	658	1188	4755	5424	5654	5852	6419	5981	4351	49131	1266	
Fort Lyon Storage	0	0	0	0	0	0	0	0	0	978	288	0	1266	
Fort Lyon	31341	10886	1053	9851	12451	9296	11527	41316	16907	11614	11850	9358	177450	
Kicking Bird	0	6114	10811	4918	0	0	0	0	0	0	0	0	21843	
TOTAL: Ft. Lyon & K.B.	31341	17000	11864	14769	12451	9296	11527	41316	16907	11614	11850	9358	199293	
Las Animas Consol.	1832	250	184	593	1749	1979	2128	5267	3441	2391	2209	1350	23373	
TOTAL: District No. 17	43670	34937	22384	24101	24916	20552	28337	77892	39807	24377	24314	18337	383624	
TOTAL: Dists. No. 14 & No. 17	52552	47187	35692	32993	33540	32137	42149	114518	53851	37892	37092	28154	547757	
Res. or Imported	24	0	0	0	795	1342	8666	6889	23094	27627	1491	391	82319	
GRAND TOTAL	52576	47187	35692	32993	34335	45479	50815	121407	76945	65519	38583	28545	630076	

APPENDIX 'B-14'
DIVERSIONS BY DITCHES IN COLORADO
WATER DISTRICT 67
DIVISION #2

REPORT YEAR ENDING OCTOBER 31, 1972
 SOURCE OF INFORMATION: WATER COMMISSIONERS SPECIAL REPORTS TO DIVISION ENGINEER
 1971
 Units In Acre Feet

NAME OF DITCH	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	COMPACT YEAR
Fort Bent Canal	510	0	0	0	0	664	2750	1989	3115	2604	2344	1380	16621
Reservoir													
Keesee Canal	337	371	80	30	341	579	702	765	692	470	617	230	357
Amity Canal	950	0	0	0	0	8002	2723	19172	6443	4462	8551	575	5559
Lamar Canal	2590	1790	957	60	1601	5102	3466	6697	5154	3474	4664	1779	50303
Hyde Ditch	317	305	0	0	20	319	274	331	337	248	254	232	37334
Manvel Canal	0	0	0	0	0	303	32	84	186	50	38	0	2637
XY and Graham													
Canals	0	0	0	0	258	1358	91	880	678	535	0	0	693
Buffalo Canal	0	0	0	0	464	3466	3355	3718	3734	2711	3377	2328	3800
Sisson-Stubbs Canal	0	0	0	0	23	120	123	0	0	91	91	123	23153
Total	4704	2466	1037	90	3371	21999	12755	34762	19828	14385	18972	6302	571
Reservoir	0	0	0	0	0	0	0	0	0	127	230	0	140671
GRAND TOTAL	4704	2466	1037	90	3371	21999	12755	34762	19828	14512	19202	6302	141028

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.	2370	2300	1830	2440	1340	1160	4670	31130	10420	8570	2790	702	69720	B-2
Purgatoire River near Las Animas, Colo.	1900	1800	860	982	677	279	3460	3460	13280	1450	15780	219	44150	B-3
Inflow to John Martin Reservoir	4270	4110	2690	3420	2010	1440	8120	34590	23700	10010	18570	922	113900	B-4*
Reservoir contents at end of month	4831	11266	18269	23737	25642	0	0	0	0	0	0	0	0	B-5
Net change in reservoir storage	+4831	+6435	+7003	+5468	+1905	-25642	0	0	0	0	0	0	0	B-5
Outflow from John Martin Reservoir	1880	151	175	181	1190	27720	8400	29090	19480	10510	12560	1930	113300	B-6
Diversions in District 67, Colo.	4704	2466	1037	90	3371	21999	12755	34762	19828	14512	19202	6302	141028	B-14
Flow at Colorado-Kansas State line	7730	9050	6700	8460	5730	15510	6760	10920	12330	19480	10660	4340	117700	B-8
Diversions in Kansas	8654	1854	0	3015	4849	13819	6599	6593	7668	10852	7177	5624	76704	B-15

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

APPENDIX B-10

DIVERSIONS BY DITCHES IN KANSAS

REPORT YEAR ENDING OCTOBER 31, 1972
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	2110	111	0	0	0	1370	2050	694	1530	2010	647	1490	*12012
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	2110	111	0	0	0	1370	2050	694	1530	2010	647	1490	12012
Amazon Canal	1097	0	0	0	2114	1543	1468	101	2993	813	3277	3402	16808
Great Eastern Canal	5477	1743	0	3015	704	5580	190	5105	322	5824	0	0	27930
South Side Ditch	0	0	0	0	1700	1258	2216	0	1987	444	2394	0	9999
Farmers Ditch	0	0	0	0	331	3937	366	591	475	1761	859	732	9052
Garden City Canal	0	0	0	0	0	131	309	102	361	0	0	0	903
Total Syracuse to													
Garden City	6544	1743	0	3015	4849	12449	4549	5899	6138	8842	6530	4134	64692
TOTAL STATELINE TO													
GARDEN CITY	8654	1854	0	3015	4849	13819	6599	6593	7668	10852	7177	5624	76704

*4469 Acre-feet returned directly to river
Revised 12/14/72

APPENDIX "C"

RESOLUTION

BE IT RESOLVED BY THE ARKANSAS RIVER COMPACT ADMINISTRATION:

WHEREAS, R. V. Smrha, Chief Engineer, Division of Water Resources, Kansas State Board of Agriculture, has served as a Representative of the State of Kansas on the Arkansas River Compact Administration since 1951; and

WHEREAS, Mr. Smrha has voluntarily elected to retire from the office of Chief Engineer, Division of Water Resources, and from the Arkansas River Compact Administration; and

WHEREAS, Mr. Smrha has contributed his professional knowledge, ability and services to the Arkansas River Compact Administration;

NOW, THEREFORE, BE IT RESOLVED, that the Arkansas River Compact Administration does hereby acknowledge the outstanding contribution of R. V. Smrha to this Administration and to the States of Colorado and Kansas and express appreciation to Mr. Smrha and extend to him the best wishes of each member of this Administration for continued good health and happiness.

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. Smrha.

APPENDIX 'B-3'

PURGATOIRE RIVER

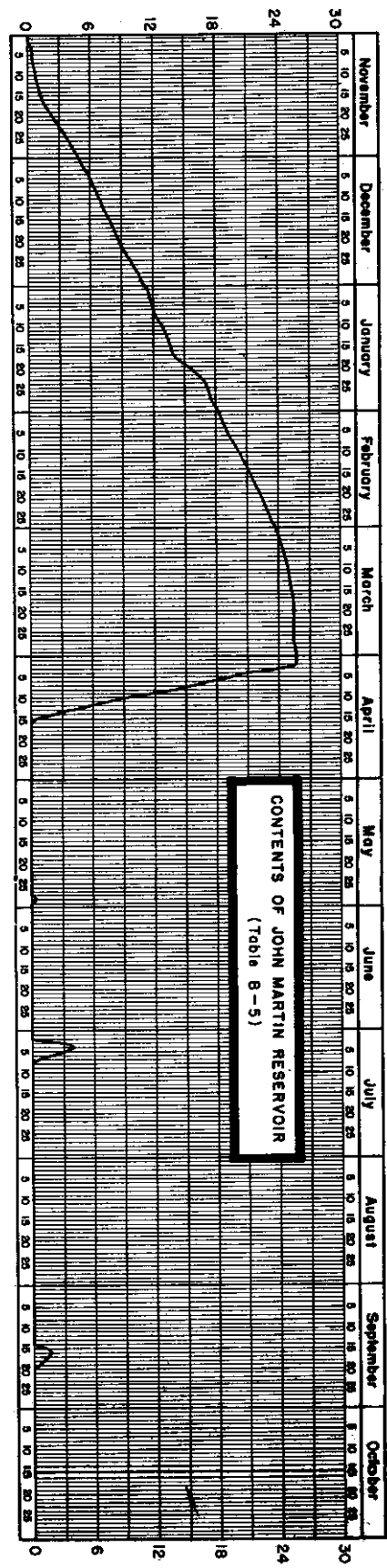
NEAR LAS ANIMAS, COLORADO

Report-Year ending October 31, 1972
U S G S Records—Provisional, Subject to Revision

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	19	30	22	15	18	5.2	5.2	14	19	80	132	2.4
2	42	29	19	11	31	3.6	4.6	8.0	14	55	132	2.4
3	40	27	10	13	34	3.2	5.2	8.5	2600	71	50	2.4
4	36	24	9.0	22	34	4.0	7.0	9.0	160	292	62	2.4
5	38	26	10	18	35	4.0	7.6	9.5	150	27	669	2.4
6	38	21	10	16	26	5.2	8.8	10	121	11	174	2.8
7	40	24	10	18	18	4.6	8.8	9.4	19	11	58	2.8
8	38	16	10	16	16	4.6	14	8.3	16	5.8	35	2.8
9	30	12	8.8	21	8.8	4.0	12	5.0	7.6	6.4	27	2.4
10	24	10	10	16	4.0	4.6	7.0	7.6	4.6	13	24	2.4
11	10	9.0	8.8	21	4.6	4.6	4.0	8.8	2.8	8.2	12	2.0
12	5.8	11	8.4	23	5.2	2.4	2.5	24	697	5.8	69	2.4
13	20	28	8.0	24	5.2	2.0	2.6	16	276	5.8	680	2.8
14	42	41	8.2	24	5.2	3.2	2.7	19	52	5.2	108	2.8
15	22	30	9.0	12	7.0	4.0	2.7	17	12	2.8	4740	2.8
16	11	33	10	15	8.2	8.4	2.8	8.2	8.8	2.4	623	2.8
17	45	31	11	8.8	6.4	5.2	2.8	7.7	7.0	1.6	220	2.4
18	42	29	9.4	8.8	4.0	3.6	3.2	6.2	5.2	1.2	92	2.8
19	41	38	14	7.6	4.6	3.6	3.2	9.2	3.6	1.2	52	3.2
20	43	34	23	3.2	5.2	4.0	2.4	2.4	3.2	1.6	42	3.6
21	34	49	32	5.5	5.2	4.6	1.2	2.4	3.2	2.0	29	4.0
22	37	41	35	23	4.0	5.2	1.2	3.2	1670	2.0	14	3.6
23	31	35	22	27	4.6	4.6	1.5	782	395	2.4	9.4	3.6
24	34	36	22	23	6.4	3.2	1.2	592	124	65	7.0	3.6
25	34	40	9.0	22	5.8	3.6	4.0	51	35	20	5.2	7.0
26	30	37	10	24	4.0	5.2	1.2	20	14	8.8	3.6	4.0
27	32	37	10	21	3.2	5.2	2.4	16	8.8	7.0	3.2	3.6
28	35	36	13	19	5.2	7.0	220	13	7.0	4.6	2.8	3.6
29	34	37	19	17	6.4	9.4	1290	12	96	2.4	2.8	3.6
30	31	31	17	11	11	8.8	93	46	132	3.2	2.4	11
31	27	27	16	5.2	5.2	2.4	24	29	4.0	4.0	10	10
TOTAL	958.8	909.0	433.6	494.9	341.4	140.8	1745.30	1745.4	6692.8	729.4	7957.2	110.4
sec. ft.	1900	1800	860	982	677	279	3460	3460	13280	1450	15780	219
ac. ft.												

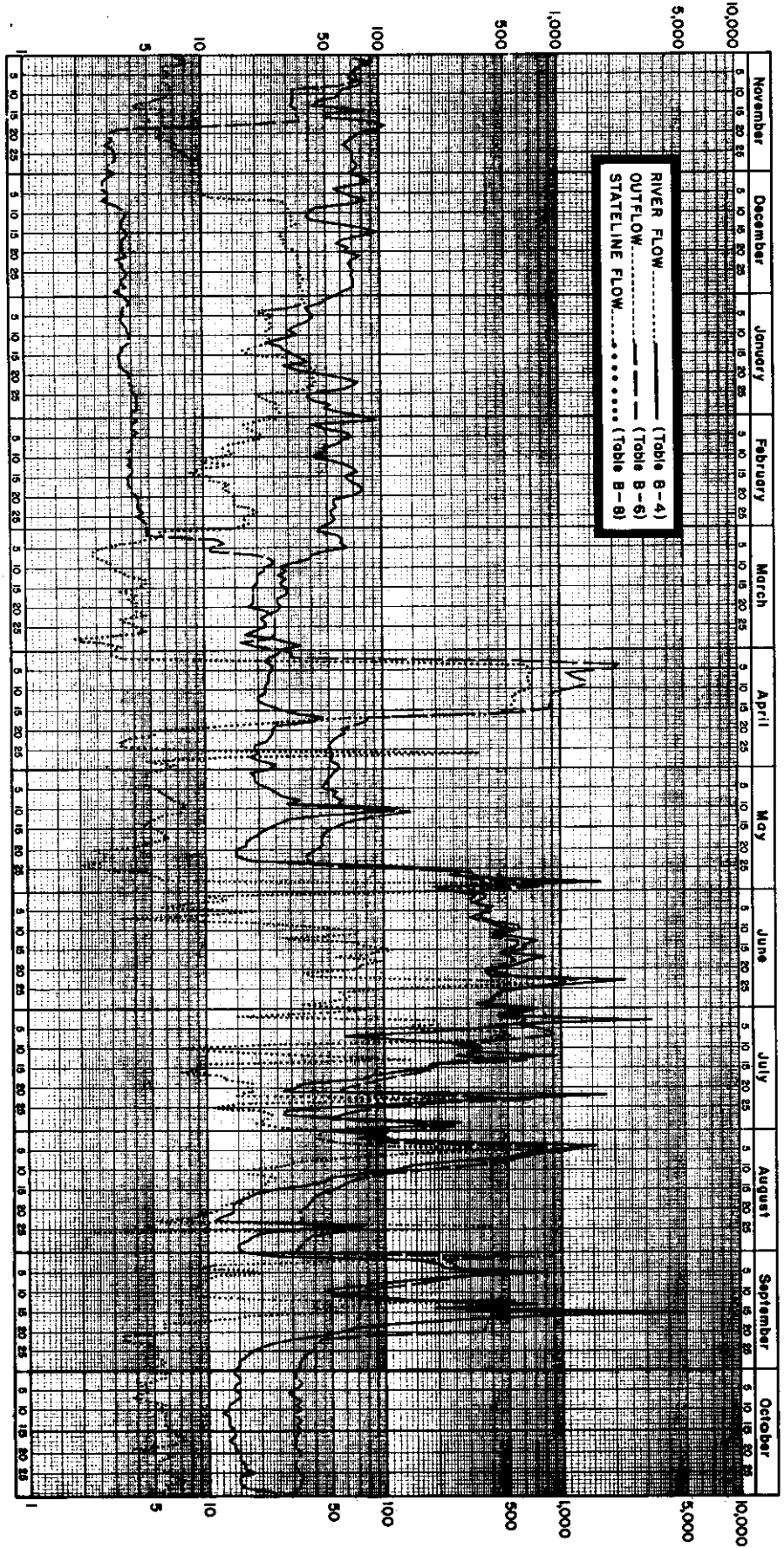
THE YEAR 44,150 acre-ft.

THOUSANDS OF ACRE FEET



THOUSANDS OF ACRE FEET

SECOND FEET



SECOND FEET

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

Report Year, November 1, 1971 - October 31, 1972