

Tenth
Annual Report
ARKANSAS RIVER COMPACT
ADMINISTRATION
(1958)

For the Report-Year November 1, 1957, to October 31, 1958

LAMAR, COLORADO

December 9, 1958

THE ADMINISTRATION

CARL G. PAULSEN, *Chairman and Representative of the United States*
HACKET SMARTT, *Secretary and Treasurer*

FELIX L. SPARKS, DAVID JENKINS AND HACKET SMARTT
for Colorado

R. V. SMRHA, LOGAN N. GREEN AND CARL E. BENTRUP
for Kansas

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Annual Report of
ARKANSAS RIVER COMPACT ADMINISTRATION
(1958)

Report-Year November 1, 1957, to October 31, 1958

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

Sirs:

Pursuant to Article VIII of the Arkansas River Compact, the
Arkansas River Compact Administration submits its report for the
report-year November 1, 1957, through October 31, 1958 as follows:

1. Members of the Administration

Representative of the United States:

Carl G. Paulsen

Colorado Representatives:

Ivan C. Crawford, Denver, Colorado (Nov. 1, 1957-June 11,
1958)

Robert M. Gildersleeve, Denver, Colorado (June 12, 1958-
July 14, 1958)

Felix L. Sparks, Denver, Colorado (July 15, 1958-October 31,
1958)

David Jenkins, Las Animas, Colorado

Hacket Smartt, Lamar, Colorado

Kansas Representatives:

Carl E. Bentrup, Deerfield, Kansas

Logan N. Green, Garden City, Kansas

R. V. Smrha, Topeka, Kansas

2. Officers of the Administration

Chairman:

Carl G. Paulsen

Vice-Chairman:

Logan N. Green of Garden City, Kansas

Secretary:

Harry C. Nevius of Lamar, Colorado (Nov. 1, 1957-Dec. 10,
1957)

Hacket Smartt of Lamar, Colorado (Dec. 10, 1957-Oct. 31,
1958)

Treasurer:

Harry C. Nevius of Lamar, Colorado (Nov. 1, 1957-Dec. 10,
1957)

Hacket Smartt of Lamar, Colorado (Dec. 10, 1957-Oct. 31,
1958)

3. *Standing Committees*

Administrative and Legal Committees:

Logan N. Green of Kansas (Chairman)

David Jenkins of Colorado

Engineering Committee:

R. V. Smrha of Kansas, (Chairman)

Ivan C. Crawford of Colorado (Nov. 1, 1957-June 11, 1958)

Felix L. Sparks (Oct. 28, 1958-Oct. 31, 1958)

Operations Committee:

Carl E. Bentrup of Kansas (Chairman)

Hacket Smartt of Colorado

Carl G. Paulsen, Representative of the United States, is ex-officio member of all standing committees.

4. *Meetings*

December 10, 1957	Lamar, Colorado	Annual Meeting
March 18, 1958	Lamar, Colorado	Regular Meeting
July 8, 1958	Lamar, Colorado	Special Meeting
July 22, 1958*	Lamar, Colorado	Regular Meeting
October 28, 1958	Lamar, Colorado	Special Meeting

*Quorum not present—meeting not held.

5. *Fiscal*

(a) Balance on hand October 31, 1957, Auditor's Report..\$1,299.20

(b) Receipts

State of Colorado, Dec. 2, 1957.....\$1,800.00

State of Kansas, Dec. 31, 1957..... 1,200.00

State of Colorado, Aug. 26, 1958..... 1,800.00

State of Kansas, Sept. 4, 1958..... 1,200.00

6,000.00

\$7,299.20

(c) Disbursements by the Administration—November 1, 1957 to October 31, 1958:

Voucher No.	Date	Payee and Purpose	Amount
227	12-31-57	U. S. Geological Survey, Cooperative Agreement....	\$ 125.00
228		R. W. Rollins, Audit and Service.....	65.00
229		Schoenith Office Equipment, Supplies.....	9.74
230		H. C. Nevius, Secy., Mileage.....	19.60
231		Secretary Salary, November and December (less \$3.00 O.A.S.I.)	130.33
232		Secretary Salary, December (less \$1.50 O.A.S.I.)..	65.17
233		Treasurer of U. S., Deposits by States.....	9.00
234		Mtn. States T. & T. Co., November and December Service and Tolls.....	24.56
235	1- 3-58	Lamar Daily News, Stationery.....	10.50
236	3- 1-58	Secretary Salary, January and February (less \$4.50 O.A.S.I.)	195.50
237		Treasurer of U. S., Deposits by States.....	9.00
238		U. S. Geological Survey, Cooperative Agreement....	125.00
239		Peerless Printing Co., Annual Reports.....	554.00
240	3- 5-58	Mtn. States T. & T. Co., January and February Service and Tolls.....	23.30
241	5- 3-58	Lamar Daily News, Printing & Cards.....	23.31
242		U. S. Geological Survey, Cooperative Agreement....	125.00
243		Secretary Salary, March and April (less \$4.50 O.A.S.I.)	195.50
244	5- 6-58	Mtn. States T. & T. Co., March and April Service and Tolls	25.65
245	7- 1-58	Mtn. States T. & T. Co., May and June Service and Tolls	30.35
246	6-30-58	Treasurer of U. S., Deposits by States.....	18.00
247	7- 1-58	Secretary Salary, May & June (less \$4.50 O.A.S.I.)	195.50
248	8- 8-58	U. S. Geological Survey, Cooperative Agreement....	125.00
249	9- 2-58	Mtn. States T. & T. Co., July and August Service and Tolls	33.45
250		Secretary Salary, July and August (less \$4.50 O.A.S.I.)	195.50
251		Treasurer of U. S., Deposits by States.....	9.00
252	10-31-58	Secretary Salary, September and October (less \$4.50 O.A.S.I.)	195.50
253		Mtn. States T. & T. Co., September and October Service and Tolls.....	35.16
254		U. S. Geological Survey, Cooperative Agreement....	125.00
255		Valley Agency, Inc. — Premium due on Bond #1203007	25.00
256		Treasurer of U. S., Deposits by States.....	9.00
257		Hacket Smartt, Secy., Mileage \$34.72, Postage \$5.00, & Typing \$15.00.....	54.72
Total Disbursements			\$2,786.34

(d) Balance on hand October 31, 1958.....\$4,512.86

(e) On July 8, 1958, the Administration approved a budget for the fiscal year July 1, 1959 to June 30, 1960, for transmittal to the Governor of each of the States of Colorado and Kansas in accordance with Article VII-E (2) of the Compact as follows:

Personal Service		\$3,825.00
Secretary Salary	\$1,200.00	
Social Security	50.00	
Gage Reports	2,500.00	
Audit of Accounts.....	75.00	
Capital Outlay		300.00
Maintenance and Operation.....		1,675.00
Bond	25.00	
Printing	600.00	
Official Publication	100.00	
Travel	150.00	
Typing and Mailing.....	200.00	
Investigation and Inspection.....	150.00	
Telephone and Telegraph.....	300.00	
Office Supplies	150.00	
Total Budget proposed for 1959-60.....		5,800.00
Estimated Carry-over as of June 30, 1959.....		1,800.00
Total to be appropriated by Colorado and Kansas.....		\$4,000.00
To be appropriated by Colorado (60%).....		2,400.00
To be appropriated by Kansas (40%).....		1,600.00
		<u>\$4,000.00</u>

- (f) 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 have been audited for the period commencing November 1, 1957 through October 31, 1958, the end of the Report-year. The report of such audit is hereto attached as Appendix "A".

6. 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 waters 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 Engineers, United States Army, to cooperate and collaborate with the Administration and with appropriate State officials in such determinations and correlations of streamflow 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 Corps of Engineers has continued to operate John Martin Reservoir in

accordance with the provisions of the Compact. A new capacity table of John Martin Reservoir, adopted as of June 1, 1958, has been provided by the Corps of Engineers as a result of its resurvey of the sediment contents of the reservoir by sonic methods in 1957, but a complete analyses and report of this resurvey and study has not yet been made because of insufficient funds for such purposes. The United States Geological Survey has also continued the operation of the Compact gaging stations and the analyses and compilation of hydrologic data presented in this report and used in the administration of the Compact. To assist that agency in defraying the costs of operating the Compact gaging stations and performing other hydrologic work required in the administration of the Compact, the Administration entered into a cooperative agreement with the Geological Survey for the fiscal year ending June 30, 1959. Under the terms of this agreement, \$1,000 was provided by the Administration and an equal amount by the Geological Survey for the above purposes. To facilitate the operation of the John Martin Reservoir by the Corps of Engineers, the Geological Survey has provided a Stevens telemark recording gage at the gaging station below the dam which provides an instantaneous record at the dam of the stages of the river at this gaging station. This instrument is of advantage in determining water releases from the reservoir, especially when changes in such releases are requested by the Administration. The Geological Survey has also made other improvements to some of the Compact gaging stations during the current year, including the installation of a bubbler recording gage at the gaging station on the Arkansas River at Las Animas above the reservoir.

7. Water Supply, Reservoir Operation and Hydrologic Data

At the beginning of the Compact Year on November 1, 1957, John Martin Reservoir contained 220,054 acre feet of stored water. At the beginning of the irrigation season on April 1, 1958, the reservoir storage had increased to 278,724 acre feet.

On June 1, 1958, the Corps of Engineers published a revised capacity table for the reservoir based upon a survey of August 1957. This revised table evidences that substantial sedimentation has occurred in the reservoir since it was placed in operation in 1943. The new capacity table computes the total capacity of the reservoir at 645,512 acre feet. Of this total capacity, 366,969 acre feet is allocated to the conservation pool with the remaining 278,543 acre feet allocated to flood control.

Above normal rains in the summer and fall of 1957, together with favorable snowfall during the winter months, accomplished an all-time high for storage in John Martin Reservoir, both at the close of the irrigation season on October 31, 1957 and at the beginning of the irriga-

tion year on April 1, 1958. Storage on October 31, 1957, reached 220,054 acre feet and by April 1, 1958, storage had increased to 278,724 acre feet.

Melting snows from the mountains brought the reservoir up to the 360,293 acre foot mark by July 27, 1958, the highest point in the history of the reservoir. With normal summer precipitation at this point the reservoir should have reached the top of the conservation pool at 366,969 acre feet. However, the summer of 1958 was both unusually hot and dry. Normal summer rains did not occur and releases of water for irrigation were correspondingly quite heavy. Storage in the reservoir had been reduced to 230,999 acre feet at the close of the irrigation season on October 31, 1958. Despite the dry summer, however, storage on October 31, 1958, again established an all-time high since the reservoir was first placed in operation in January 1943.

The reservoir operations progressed smoothly all season. Neither Colorado nor Kansas demanded any river flow in addition to stored water. Colorado made its first demand on the reservoir on April 23, 1958, and with the exception of five days in May, this demand existed for the balance of the irrigation season.

The stateline flow, with the exception of the first three days in July, took care of the Kansas needs until August 8. At that time Kansas required stored water for the balance of the season with the exception of the last four days of August and the period October 2-17.

In summary the outstanding storage success in John Martin reservoir for the past compact year is best illustrated by a compilation of historic storage in the reservoir, as follows:

Historic Storage in John Martin Reservoir (in acre feet)

April 1, 1943.....	48,803	October 31, 1943.....	0
April 1, 1944.....	26,163	October 31, 1944.....	5,522
April 1, 1945.....	52,264	October 31, 1945.....	24,500
April 1, 1946.....	55,700	October 31, 1946.....	0
April 1, 1947.....	63,917	October 31, 1947.....	0
April 1, 1948.....	107,968	October 31, 1948.....	100,003
April 1, 1949.....	142,797	October 31, 1949.....	128,676
April 1, 1950.....	158,411	October 31, 1950.....	58,522
April 1, 1951.....	81,504	October 31, 1951.....	22,826
April 1, 1952.....	46,499	October 31, 1952.....	0
April 1, 1953.....	21,266	October 31, 1953.....	0
April 1, 1954.....	15,853	October 31, 1954.....	0
April 1, 1955.....	6,033	October 31, 1955.....	47,413
April 1, 1956.....	48,363	October 31, 1956.....	0
April 1, 1957.....	3,891	October 13, 1957.....	220,054
April 1, 1958.....	278,724	October 31, 1958.....	230,999

8. *Gaging Stations*

Stream-flow records were obtained at all of the Compact gaging stations. However, shifting of the channels on the Arkansas River and Purgatoire River near Las Animas and the Arkansas River near Coolidge, Kansas has increased the difficulty of maintaining current stage-discharge relations for operation.

At the July, 1958 meeting the U. S. Geological Survey submitted a report of the repairs or rehabilitation needed at the Compact gaging stations. This report included (1) a description of the proposed work, (2) estimate of costs and (3) that Agency's recommended priority based on the importance of the station and the necessity or urgency of the work. The total cost of this program was \$3,050. It was recommended that this work not be started until after July 1, 1959.

The radio equipment at the gage on the Arkansas River below John Martin Reservoir was replaced with a Telemark with a receiver in the Corps of Engineers office at Caddoa. Serviceable parts of this radio will be used to make temporary field repairs to the other radios. The two radios at the State-line stations will be sent to Denver during the 1958-59 non-irrigation season for complete testing and repairs as required.

For the fiscal year beginning July 1, 1958 and ending June 30, 1959, the Administration contributed \$1,000, matched by an equal amount by the U. S. Geological Survey, to assist that Agency in operating the Compact gaging stations. This was an increase of \$500 by each party over previous years and was to provide for increased costs, additional work required in preparing current records and to permit more intensive field work during critical periods.

9. *Findings of Fact by the Administration*

The Administration has had no occasion, during the period covered by this report, to make any Findings of Fact under the provisions of the Arkansas River Compact.

10. *Changes in Personnel*

Effective June 11, 1958, Dean Ivan C. Crawford resigned as Director of the Colorado Water Conservation Board and thereby vacated his position on the Arkansas River Compact Administration. Mr. Crawford had served on the Administration since March 1, 1953, and a resolution expressing appreciation for his services was adopted by the Administration at a meeting October 28, 1958. A copy of the resolution is included in this report as Appendix "C".

Mr. R. M. Gildersleeve was appointed Acting Director of the Colorado Water Conservation Board and by virtue of such appointment served as a member of the Compact Administration for the period June 12, 1958 through July 14, 1958.

On July 15, 1958, Mr. Felix L. Sparks was appointed Director of the Colorado Water Conservation Board and has served as a member of the Administration since that date.

Respectfully submitted,

ARKANSAS RIVER COMPACT ADMINISTRATION

BY:

CARL G. PAULSEN,
Representative of the United States and
Chairman of the Administration

FELIX L. SPARKS
DAVID JENKINS
HACKET SMARTT
Colorado Members of the Administration

R. V. SMRHA
LOGAN N. GREEN
CARL E. BENTRUP
Kansas Members of the Administration

Lamar, Colorado
December 9, 1958.

APPENDICES

for

Annual Report of the Arkansas River Compact Administration

For the Report-Year November 1, 1957 to October 31, 1958

- APPENDIX "A" —Auditor's Report.
- APPENDIX "B-1" —Daily Discharges, Arkansas River near Pueblo, Colorado.
- APPENDIX "B-2" —Daily Discharges, Arkansas River at Las Animas, Colorado.
- APPENDIX "B-3" —Daily Discharges, Purgatoire River near Las Animas, Colorado.
- APPENDIX "B-4" —Inflow into John Martin Reservoir.
- APPENDIX "B-5" —Daily Contents, John Martin Reservoir.
- APPENDIX "B-6" —Outflow from John Martin Reservoir.
- APPENDIX "B-7" —Daily Discharges, Arkansas River at Colorado-Kansas Stateline.
- APPENDIX "B-8" —Daily Discharges, Arkansas River at Garden City, Kansas.
- APPENDIX "B-9" —Demands by Colorado for Water.
- APPENDIX "B-10" —Demands by Kansas for Water.
- APPENDIX "B-11" —Stateline Flow on Days of Kansas Demand.
- APPENDIX "B-12" —Divisions by Ditches in Colorado Water Districts 14 and 17.
- APPENDIX "B-13" —Divisions by Ditches in Colorado Water District 67.
- APPENDIX "B-14" —Divisions by Ditches in Kansas, Stateline to Garden City.
- APPENDIX "B-15" —Summary Tabulation.
- APPENDIX "C" —Resolution concerning Ivan C. Crawford.
- APPENDIX "D" —By-Laws of Arkansas River Compact Administration as amended.
- PLATE I —Graphs showing inflow, outflow and storage at John Martin Reservoir and Stateline Flow for Report-Year.

APPENDIX "A"

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AUDITOR'S REPORT

ROBERT W. ROLLINS

* * * *

Certified Public Accountant

La Junta, Colorado

December 6, 1958

To the Representatives
Arkansas River Compact Administration
Lamar, Colorado

Gentlemen:

In accordance with your request, an examination has been made of the financial transactions of the Arkansas River Compact Administration for its "Report-Year" — November 1, 1957 to October 31, 1958. The results of the audit are expressed in the attached statement of cash receipts and disbursements, Schedule I, Page No. 17. The remarks which follow are offered as additional information and tend to describe the extent of the audit work performed.

General Comments

Schedule I, reflects the beginning balance of cash in bank, revenue assessments received from the States of Colorado and Kansas, expenditures by classification and the ending balance of cash in bank.

As provided for in the budget of the Administration's Meeting of October 26, 1956 and authorized for call in the Minutes of the Meeting of October 22, 1957, funds due from Colorado (60% share) of \$1,800.00 and Kansas (40% share) of \$1,200.00 were received for the budget year ending June 30, 1958 and placed on deposit with the First National Bank in Lamar, Colorado on the respective dates of December 2, 1957 and December 31, 1957. In like manner, per request of the Representatives in their Minutes of the July 8, 1958 Meeting, budget contributions for the year ended June 30, 1959, were received from Colorado and Kansas in the respective amounts of \$1,800.00 and \$1,200.00. According to the Administration's records, Colorado funds were deposited on August 26, 1958, while monies received from Kansas were put in the bank on September 4, 1958.

All disbursements were made by checks drawn on the Administration's account at the First National Bank in Lamar, Colorado. The individual checks were examined for amount, signature, and endorsement. Amounts so expended were substantiated by verification to payees' state-

ments, authorization of payment as evidenced in minutes of the Com-
pacts' meeting, or other supporting documents.

Consistent with prior years' practices, the Secretary's salary for the
current year of \$1,200.00 has been reduced by the Old-Age and Sur-
vivor's Insurance deductions amounting to \$27.00. This figure of \$27.00
together with the Administration's contribution of like amount are
shown under the classification of taxes on Schedule I.

Travel expense of the Secretary for the fiscal year ending October
31, 1958 amounted to \$54.32 or 679 miles at \$0.08 per mile.

Payments made to the U. S. Treasurer totaling \$54.00 during the
year were accompanied by related returns referring to Old-Age and
Survivor's Insurance information on the Secretary.

Cash in bank at October 31, 1958, per Schedule I, amounting to
\$4,512.86 was reconciled to the amount directly confirmed by the First
National Bank in Lamar, Colorado.

The following summary compares the Administration's financial
position at October 31, 1958 with that of a year ago.

ARKANSAS RIVER COMPACT ADMINISTRATION

Lamar, Colorado

COMPARATIVE BALANCE SHEET

ASSETS

	October 31, 1958	October 31, 1957	Increase (Decrease)
Cash in Bank.....	\$4,512.86	\$1,299.20	\$3,213.66
Equipment (Portable typewriter).....	92.50	92.50	—o—
Total Assets	<u>\$4,605.36</u>	<u>\$1,391.70</u>	<u>\$3,213.66</u>

CAPITAL

Unexpended fund balance.....	\$4,512.86	\$1,299.20	\$3,213.66
Expended fund balance for equipment	92.50	92.50	—o—
TOTAL CAPITAL	<u>\$4,605.36</u>	<u>\$1,391.70</u>	<u>\$3,213.66</u>

Because the "Budget Year" covers the period July 1, 1957 to June
30, 1958, it has been necessary to combine related months of the last
two "Report Years" in order to compare actual expenditures with the
related budgeted items. Such a comparison is set forth for year review
in the following summary.

COMPARISON OF DISBURSEMENTS WITH BUDGET

Budget Year July 1, 1957 to June 30, 1958

Classification	Disbursements	Budget
PERSONAL SERVICES		
Secretary's salary	\$1,000.00 (*)	\$1,200.00
Taxes—O.A. and S.I.—Administration's share	18.00	50.00
Gage Reports	375.00 (**)	500.00
Professional services (audit of accounts) ..	65.00	75.00
CAPITAL OUTLAY	—0—	300.00
MAINTENANCE AND OPERATION		
Bond—Treasurer	25.00	25.00
Printing	565.65	600.00
Office publications	—0—	100.00
Travel expense—Secretary	55.04	150.00
Typing and mailing	11.50	200.00
Investigation and inspection	—0—	150.00
Telephone and telegraph	169.41	300.00
Office supplies and repairs	37.65	150.00
TOTALS	<u>\$2,322.25</u>	<u>\$3,800.00</u>

NOTES

(*) Secretary's salary for May and June 1958 totaling \$200.00 paid on July 1, 1958.

(**) Balance of \$125.00 paid Geological Survey on August 8, 1958.

According to the Minutes of the Meeting of July 23, 1957, the budgeted expenditures for the fiscal year ended June 30, 1959 were approved in the amount of \$3,800.00. Of this amount, \$800.00 is to come from an unexpended balance carry over at June 30, 1958, supplemented by an appropriation of \$3,000.00 from the States of Colorado and Kansas in the respective amounts of \$1,800.00 and \$1,200.00. You are reminded, these sums have been called and received and are discussed in detail on page no. 14 of this report. The Administration anticipates, as evidenced in the Meeting of July 8, 1958, budgeted expenditures for the period July 1, 1959 to June 30, 1960 will total some \$5,800.00. Of this figure, \$1,800.00 will come from unexpended funds of the Compact as of June 30, 1959, while the remaining balance of \$4,000.00 will be requested from the States of Colorado and Kansas on a 60%-40% basis.

Respectfully submitted,
ROBERT W. ROLLINS,
Certified Public Accountant

ARKANSAS RIVER COMPACT ADMINISTRATION
Lamar, Colorado

STATEMENT OF CASH RECEIPTS AND DISBURSEMENTS
NOVEMBER 1, 1957 TO OCTOBER 31, 1958
(Refer to comments in text of audit)

CASH IN BANK AT NOVEMBER 1, 1957 (per audit).....\$1,299.20
RECEIPTS

Revenue from assessments:	
Colorado portion 60%.....	\$3,600.00 ⁽¹⁾
Kansas portion 40%.....	2,400.00 ⁽¹⁾
TOTAL RECEIPTS	6,000.00
TOTAL AVAILABLE FUNDS.....	7,299.20

DISBURSEMENTS

Salary of secretary.....	\$1,200.00
Less: O.A. and S.I. deductions..	27.00
Sub-total	1,173.00
Printing—Annual report	565.65
Telephone and telegraph.....	172.47
Travel expense of secretary.....	54.32
Audit fee (fiscal year ended October 31, 1957).....	65.00
Premium on secretary's bond.....	25.00
Typing and mailing.....	20.00
Office supplies, stationery, etc.....	31.90
Taxes—O.A. and S.I. payments	
Deduction from Employees....	\$27.00
Administration portion	27.00
54.00	
Stream-gaging expense of the U.S.	
Geological Survey	625.00
TOTAL DISBURSEMENTS	2,786.34

CASH IN BANK AT OCTOBER 31, 1958.....\$4,512.86

CASH ON DEPOSIT AT FIRST NATIONAL BANK, LAMAR, COLORADO

Per direct confirmation at October 31, 1958 \$4,736.74	
Less: Outstanding checks of:	
No. 253 Mountain States Tel. and Tel.	\$ 35.16
254 U. S. Geological Sur- vey	125.00
256 Treasurer of U. S.....	9.00
257 Hacket Smartt	54.72
223.88	
ADJUSTED BANK BALANCE.....	\$4,512.86

NOTE

⁽¹⁾ Receipts include States' respective contributions for the budget years ended June 30, 1958 and 1959.

SCHEDULE I

APPENDIX "B-1"

* * * *

ARKANSAS RIVER NEAR PUEBLO, COLORADO

ARKANSAS RIVER NEAR PUEBLO, COLORADO

Report-Year Ending October 31, 1958

U S G S Records—Provisional, subject to revision

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	398	485	509	382	395	302	716	3540	614	234	349	154
2	495	509	564	396	402	285	689	2820	665	190	269	158
3	573	484	545	389	395	279	757	2800	658	187	235	163
4	591	476	563	410	374	242	561	2880	709	367	230	141
5	609	485	545	439	374	248	807	3270	927	455	235	134
6	644	493	572	404	374	231	837	2960	812	484	182	140
7	769	485	545	376	360	223	837	3580	992	423	65	126
8	600	469	487	369	381	223	1030	3840	1000	395	169	104
9	527	493	433	369	375	229	1760	3740	842	400	156	96
10	495	509	419	405	396	232	1320	2940	658	485	151	134
11	545	543	462	432	353	276	974	2280	572	538	243	190
12	562	534	581	470	339	268	923	1490	602	554	295	136
13	571	509	617	446	304	268	972	1420	593	572	235	125
14	554	508	479	439	274	281	951	1150	538	518	493	95
15	554	500	446	410	280	287	1210	1020	520	509	485	83
16	545	533	462	382	292	297	1260	1090	565	658	489	121
17	487	500	439	376	292	320	1100	1180	622	801	500	114
18	536	476	417	389	292	370	1210	1350	574	760	512	129
19	510	468	425	388	286	503	997	1340	750	820	506	138
20	510	460	439	389	286	554	975	1400	740	1080	470	129
21	510	468	444	403	280	479	1060	1340	730	959	446	108
22	571	524	461	410	274	447	1200	1470	668	779	411	148
23	578	507	494	439	286	447	1560	1270	780	820	222	181
24	598	452	485	486	274	486	2580	1110	938	758	138	181
25	617	440	492	535	303	470	3500	1090	677	667	121	182
26	599	455	431	502	324	433	3450	1140	647	562	138	209
27	571	447	432	453	304	440	3620	1040	801	526	180	232
28	526	468	432	389	285	398	4010	603	874	508	146	256
29	453	479	383		317	511	4280	494	760	508	139	281
30	500	511	383		367	662	4250	567	388	499	139	306
31		526	382		374		4080		278	508		283
TOTAL												
sec. ft.	16598	15196	14768	11677	10212	10711	53476	56214	21494	17524	8349	4977
ac. ft.	32920	30140	29290	23160	20260	21240	106100	111500	42630	34760	16560	9870
(a) ac. ft.	0	0	0	0	0	2310	5150	6770	21800	22450	5810	0
(b) ac. ft.	32920	30140	29290	23160	20260	18930	100950	104730	20830	12310	10750	9870

THE YEAR 478,400 Acre Feet.

(a) Less upstream reservoir and transmountain water.

(b) Corrected total Ac. Ft.

APPENDIX "B-2"

* * * *

ARKANSAS RIVER AT LAS ANIMAS, COLORADO

ARKANSAS RIVER AT LAS ANIMAS, COLORADO

Report Year Ending October 31, 1958

U S G S Records—Provisional, subject to revision

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	76	96	129	132	54	56	29	2980	58	28	22	16
2	93	230	152	218	58	79	19	1790	58	29	18	12
3	131	330	170	126	44	86	25	984	52	27	16	12
4	90	325	162	108	45	86	29	714	65	18	14	13
5	58	315	135	129	48	61	14	510	330	20	16	13
6	56	310	135	108	56	75	13	728	2630	16	801	14
7	65	350	77	117	97	89	14	735	801	16	92	16
8	96	424	97	135	94	117	15	904	310	17	29	18
9	61	442	156	135	92	103	12	1030	108	17	22	20
10	65	412	145	145	94	81	362	1000	60	20	20	20
11	113	526	152	135	97	89	81	540	40	18	20	20
12	63	472	166	177	97	77	55	210	858	18	18	21
13	52	478	117	148	97	65	49	55	406	21	18	19
14	93	508	170	159	65	53	52	27	84	21	18	16
15	99	466	138	145	50	42	450	25	38	22	19	20
16	63	260	114	135	65	69	600	55	25	23	25	19
17	78	210	148	145	86	41	417	138	593	27	26	18
18	80	128	159	173	77	57	159	75	105	26	27	14
19	67	134	129	159	67	25	214	46	20	32	22	14
20	69	110	177	142	55	22	81	138	34	30	18	13
21	107	152	170	177	49	20	58	199	16	546	18	13
22	107	173	129	77	56	20	132	84	112	395	14	14
23	67	123	108	60	67	22	880	55	342	40	12	15
24	61	117	218	58	58	14	395	27	16	28	12	16
25	82	152	238	100	58	20	1750	44	621	22	11	16
26	56	132	123	58	75	20	2160	38	300	19	10	14
27	54	145	148	50	71	17	1780	38	114	16	10	16
28	69	132	166	84	65	20	1970	33	31	18	12	18
29	61	126	166		71	22	2100	20	19	18	12	18
30	58	132	195		75	34	2530	14	18	19	14	16
31		130	132		65		2830		18	24		16
TOTAL												
sec. ft.	2290	8040	4621	3535	2148	1582	19275	13236	8282	1591	1386	500
ac. ft.	4540	15950	9170	7010	4260	3140	38230	26250	16430	3160	2750	992
								THE YEAR 131,900 Acre Feet.				

APPENDIX "B-3"

* * * *

PURGATOIRE RIVER NEAR LAS ANIMAS, COLORADO

PURGATOIRE RIVER NEAR LAS ANIMAS, COLORADO

Report-Year Ending October 31, 1958

U S G S Records—Provisional, subject to revision

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	32	28	9.0	38	45	34	51	220	4.5	868	18	4.2
2	35	31	8.0	35	44	25	56	214	6.7	688	12	4.5
3	17	28	8.0	40	37	29	49	195	6.7	324	11	4.0
4	24	35	8.0	40	30	25	64	189	22	122	7.2	4.0
5	43	40	7.0	37	25	25	69	142	537	94	6.7	4.0
6	47	29	8.0	32	23	29	43	105	3,410	142	884	4.2
7	53	25	16	23	26	45	32	1,370	1,390	901	68	4.5
8	62	27	20	20	30	53	33	628	456	80	30	4.2
9	58	35	35	17	28	60	33	830	633	43	10	3.8
10	56	28	30	16	31	50	51	420	688	38	8.4	3.8
11	55	21	24	20	27	53	248	335	390	39	8.4	4.0
12	49	23	17	26	25	51	189	234	1,770	22	5.6	5.0
13	49	28	6.5	32	27	51	116	83	1,110	16	4.5	4.0
14	60	30	6.0	35	29	55	189	47	237	15	4.0	3.8
15	55	30	9.0	34	33	39	430	32	136	14	4.2	6.2
16	58	31	13	31	38	24	900	41	110	11	5.6	4.2
17	64	43	16	29	35	17	234	153	92	13	5.6	5.6
18	47	48	15	31	47	23	248	137	167	10	5.6	4.5
19	56	50	13	33	49	69	255	220	360	86	5.6	5.6
20	44	38	14	32	49	248	183	2,370	282	1,190	4.2	12
21	51	40	19	25	49	201	153	220	2,450	220	5.6	16
22	45	32	24	22	49	220	248	254	1,770	2,280	4.5	18
23	51	33	23	22	45	220	400	170	920	1,440	3.5	16
24	53	36	21	19	40	132	371	108	270	294	3.5	18
25	51	40	20	18	34	220	1,850	68	306	254	3.5	8.4
26	51	45	19	23	29	126	1,270	64	440	130	3.8	10
27	53	47	24	37	31	121	430	41	721	148	4.5	16
28	35	35	25	46	35	91	480	19	133	80	4.2	3.6
29	25	33	25		39	58	440	11	192	60	4.5	4.8
30	28	15	43		37	53	504	6.7	119	42	4.0	41
31		16	45		40		380		104	28		32
TOTAL												
sec. ft.	1,407	1,020	570.5	813	1,106	2,447	9,999	8,926.7	19,232.9	9,692	1,150.2	355.7
ac. ft.	2,790	2,020	1,130	1,610	2,190	4,850	19,830	17,710	38,150	19,220	2,280	706

THE YEAR 112,500 Acre Feet.

❁ ❁ ❁ ❁

INFLOW INTO JOHN MARTIN RESERVOIR

Report-Year Ending October 31, 1958

U S G S Records—Provisional, subject to revision

[illegible]

* * *

CONTENTS OF JOHN MARTIN RESERVOIR

CONTENTS OF JOHN MARTIN RESERVOIR

Report-Year Ending October 31, 1958
 Corps of Engineers records—Provisional, subject to revision
 Midnight contents in Acre Feet from capacity table dated March 1, 1956 (Nov. 1-May 31)
 and
 Midnight contents in Acre Feet from capacity table dated June 1, 1958 (June 1-Oct. 31)

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	220143	227261	245730	261789	270990	278828	282066	338111	340854	357193	314731	264990
2	220232	227534	246112	262390	271092	278932	281856	341312	338454	357193	312980	263916
3	220411	228264	246686	262791	271297	279036	281751	342913	336739	356954	310901	262940
4	220589	228812	247453	263092	272014	279140	281647	343720	336510	356001	308737	261867
5	220947	229544	247837	263393	272218	279244	281437	344188	337768	355047	306596	260890
6	221126	230278	248607	263795	272936	279349	281238	344655	349442	354580	306061	260011
7	221483	231197	248800	264096	273449	279453	281123	346756	351544	353879	304456	259231
8	221842	231842	249090	264298	273758	279765	280914	348858	352011	352245	302316	258454
9	222111	232765	249476	264700	274170	280183	281123	351077	351894	350610	300389	257311
10	222380	233504	249862	265003	274273	280496	281542	352128	351894	348391	298477	256453
11	222740	234896	250250	265406	274376	280705	281437	352478	351544	345939	295965	255786
12	222920	236292	250540	265810	274582	281018	281238	351778	354813	343370	293662	255024
13	223099	237694	250831	266315	274995	281228	281123	350376	355643	340854	291777	254261
14	223369	238725	251220	266618	275304	281437	283430	349208	355405	338340	289684	253499
15	223459	239759	251511	267124	275511	281647	284272	348041	354813	335824	288126	252736
16	224090	240512	251804	267631	275614	281751	287443	348274	353879	333309	286181	251974
17	224360	240983	252194	267936	275821	281856	289037	348625	353529	330818	284544	250545
18	224631	241550	252779	268240	276028	282066	290744	348274	353062	328357	283112	248743
19	224902	241644	253268	268646	276441	282276	291706	347457	352945	327462	281475	246882
20	224993	241928	253758	269053	276648	282485	292028	349558	352712	326567	279837	245207
21	225174	242402	253954	269460	276752	282695	292349	349558	354113	325224	278205	243533
22	225445	242875	254249	269664	276959	282905	293959	349442	356239	327014	276805	242323
23	225626	243065	254642	269868	277063	282905	296656	348858	357073	326343	275806	241113
24	225717	243350	255528	270071	277270	282695	297848	348041	359101	325560	274606	239811
25	226170	243825	256812	270275	277478	282590	305158	347223	359220	324105	273006	238358
26	226352	244110	258001	270479	277685	282695	310559	346406	360054	322987	271406	237086
27	226534	244300	259393	270786	277893	282800	314998	345705	360293	321868	270107	235451
28	226715	244776	259991	270888	278101	282695	319466	345005	359578	320749	268807	234179
29	226806	245062	260590		278308	282485	323851	344071	358862	319436	267431	232998
30	226988	245348	261089		278516	282171	328040	342684	358028	318123	266064	231817
31		245539	261388		278724	282171	331915		357312	316810		230999

APPENDIX "B-6"

* * * *

OUTFLOW FROM JOHN MARTIN RESERVOIR

OUTFLOW FROM JOHN MARTIN RESERVOIR
 Report-Year Ending October 31, 1958
 U S G S Records—Provisional, subject to revision

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	11	5.8	5.8	5.8	6.0	6.0	2.40	55	758	530	764	578
2	6.6	5.5	6.0	5.8	6.0	5.8	222	91	1,060	535	846	440
3	6.0	5.5	6.6	6.0	6.0	5.8	159	124	800	535	868	395
4	20	5.5	7.2	6.0	5.8	5.5	103	196	640	535	940	371
5	7.2	5.5	7.2	6.0	5.8	6.0	134	280	373	540	1,020	367
6	5.8	6.0	26	6.0	5.8	6.0	159	356	233	545	1,090	339
7	5.5	5.8	16	6.0	5.8	6.0	181	364	368	545	1,110	347
8	5.0	5.5	13	6.0	5.8	6.0	196	368	452	700	1,130	355
9	4.8	5.5	8.4	6.0	5.8	6.0	184	396	476	975	1,090	363
10	4.8	5.2	7.8	6.0	5.8	6.0	216	424	500	1,120	1,050	367
11	4.8	5.2	7.2	6.0	6.0	5.8	268	500	490	1,220	982	383
12	5.0	5.0	7.2	6.0	6.0	6.0	252	580	485	1,200	916	387
13	5.5	5.0	7.2	5.8	6.0	5.8	248	640	490	1,190	892	367
14	6.6	5.0	7.2	6.0	6.0	5.8	204	670	490	1,180	853	359
15	6.6	5.0	6.6	6.0	5.8	5.8	16	676	495	1,140	832	355
16	6.6	5.2	6.6	5.8	5.8	5.5	11	682	490	1,160	804	351
17	6.0	5.2	6.6	5.8	5.8	5.8	9.6	376	490	1,170	725	566
18	5.8	5.0	6.6	5.8	5.8	5.8	9.6	295	490	1,180	701	853
19	5.5	5.2	6.6	5.8	5.8	6.0	9.0	444	490	1,180	701	876
20	5.5	5.2	6.0	5.8	5.8	5.8	40	444	490	1,170	701	744
21	5.2	5.5	6.0	5.8	5.8	5.8	85	440	490	1,180	701	659
22	5.0	5.2	6.6	5.8	5.5	5.5	95	436	490	1,180	629	588
23	5.2	5.5	6.6	5.5	5.2	74	95	432	490	1,080	534	611
24	5.0	5.5	6.0	5.5	5.5	97	95	404	525	1,000	534	617
25	5.8	5.2	5.5	5.5	5.5	72	97	376	555	991	594	623
26	6.0	5.5	5.5	5.5	5.5	66	56	368	570	811	600	659
27	6.6	5.5	5.8	5.8	5.5	64	9.6	372	565	629	594	671
28	6.0	5.8	5.8	6.0	5.8	163	14	376	540	641	617	659
29	5.8	5.8	5.8	6.0	6.0	260	36	392	530	641	653	635
30	5.5	6.0	5.8	5.8	6.0	260	52	485	535	641	683	629
31		6.0	5.8		5.8		54		535	635		594
TOTAL	190.7	168.3	237.0	163.8	179.7	1,185.1	3,549.8	12,042	16,385	27,779	24,154	16,108
sec. ft.	378	334	470	325	356	2,350	7,040	23,880	32,500	55,100	47,910	31,950
ac. ft.								THE YEAR	202,600	Acre Feet.		

APPENDIX "B-7"

* * * *

ARKANSAS RIVER AT THE COLORADO-KANSAS
STATELINE

ARKANSAS RIVER AT THE COLORADO-KANSAS STATELINE

Report Year Ending October 31, 1958
U S G S Records—Provisional, subject to revision

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	140	153	106	157	153	125	134	125	59	394	124	394
2	156	134	106	157	139	125	166	125	58	192	117	437
3	157	110	117	157	143	125	188	294	286	163	139	359
4	143	102	114	143	134	125	176	220	489	137	186	272
5	135	98	106	148	153	130	171	166	1620	111	218	232
6	124	98	106	143	125	117	134	157	2410	156	333	221
7	116	95	106	143	139	98	121	157	535	304	363	201
8	125	91	91	148	134	110	215	162	334	165	397	192
9	113	91	102	166	139	130	171	130	349	130	422	186
10	111	102	106	188	134	117	188	130	301	148	454	177
11	109	106	110	193	110	110	166	110	239	226	475	185
12	120	95	110	157	114	110	139	95	256	370	470	173
13	122	79	106	134	114	106	166	108	239	410	416	188
14	127	91	110	121	114	110	2110	119	209	428	448	195
15	130	102	125	139	114	110	1790	150	464	436	458	188
16	135	110	110	139	130	106	878	181	291	472	469	196
17	149	110	114	130	139	102	1000	1000	222	479	474	199
18	145	110	110	125	130	110	492	588	183	508	464	204
19	145	98	98	121	134	114	412	359	177	470	434	319
20	118	98	74	121	130	106	299	212	181	646	424	537
21	112	106	61	125	139	102	265	221	190	541	417	530
22	104	130	110	125	139	91	210	218	178	505	420	422
23	95	134	180	117	134	98	198	249	136	545	396	395
24	95	125	190	121	117	95	215	759	90	565	326	388
25	95	121	180	134	114	98	232	305	90	518	279	367
26	114	121	171	171	114	130	282	203	352	472	274	341
27	114	143	171	148	114	125	442	158	296	438	299	341
28	106	134	171	166	125	134	282	136	286	312	299	335
29	110	134	148	166	139	125	188	84	264	231	317	333
30	121	130	153	130	130	121	148	62	237	177	339	316
31		125	157	125	125		143		159	143		328
TOTAL												
sec. ft.	3686	3476	3819	4037	4012	3405	11721	6983	11180	10792	10651	9151
ac. ft.	7310	6890	7570	8010	7960	6750	23250	13850	22180	21410	21130	18150

THE YEAR 164,500 Acre Feet.

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

APPENDIX "B-8"

* * * *

ARKANSAS RIVER AT GARDEN CITY, KANSAS

ARKANSAS RIVER AT GARDEN CITY, KANSAS

Report-Year Ending October 31, 1958

U S G S Records—Provisional, subject to revision

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	86	127	144	159	142	176	57	265	119	668	22	25
2	83	135	132	155	146	165	57	382	104	989	22	17
3	86	122	139	163	159	157	80	313	117	700	21	17
4	88	125	128	172	163	150	102	174	88	389	20	20
5	92	130	130	172	176	150	102	172	280	313	20	20
6	93	127	137	169	189	146	83	178	378	272	33	24
7	87	124	139	169	194	142	75	174	1590	252	45	19
8	109	118	137	167	198	152	92	169	1280	228	30	16
9	114	119	137	167	200	172	107	172	625	200	29	16
10	114	114	135	155	203	182	124	180	417	150	23	14
11	118	114	135	132	203	182	187	182	368	127	18	15
12	118	112	137	130	198	174	205	191	331	111	13	15
13	113	114	142	132	191	176	212	176	292	81	14	15
14	113	120	142	146	178	169	218	167	270	56	11	16
15	118	118	142	163	176	163	298	161	252	51	18	15
16	125	122	140	139	174	159	2070	200	235	49	22	16
17	134	124	139	139	167	159	1390	194	289	47	28	15
18	139	125	144	148	163	159	1160	218	242	43	25	16
19	142	125	152	176	165	172	975	429	191	51	29	14
20	146	127	152	167	169	172	772	476	172	76	32	18
21	146	125	150	157	167	284	646	378	220	90	25	18
22	139	127	114	155	172	215	545	313	182	62	20	56
23	130	130	99	150	176	125	796	289	286	49	21	28
24	127	137	103	150	176	96	971	222	382	47	21	30
25	130	137	109	152	174	83	535	200	228	42	18	26
26	130	140	118	152	172	75	421	364	222	47	20	20
27	127	139	140	148	169	70	386	286	344	33	15	20
28	128	139	163	152	180	66	375	218	354	37	15	21
29	130	140	176	205	205	62	421	159	295	38	18	21
30	127	146	174	200	200	59	372	130	265	26	23	22
31		140	159		191		307		260	24		21
TOTAL												
sec. ft.	3532	3942	4288	4336	5536	4412	14141	7132	10678	5348	671	626
ac. ft.	7010	7820	8510	8600	10980	8750	28050	14150	21180	10610	1330	1240
THE YEAR 128,200 Acre Feet.												

APPENDIX "B-9"

* * * *

DEMANDS BY COLORADO FOR WATER

DEMANDS BY COLORADO FOR WATER

Report-Year Ending October 31, 1958

(Arkansas River Compact Administration Records)

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1							240	50	615	550	660	400
2							225	100	680	550	680	400
3							150	125	670	550	680	400
4							110	205	325	550	680	400
5							140	305	215	550	680	400
6							160	375	250	550	680	385
7							185	375	360	550	680	375
8							200	375	455	550	680	375
9							180	400	490	550	655	375
10							230	415	500	705	680	375
11							260	530	500	800	660	375
12							260	600	500	800	630	375
13							260	650	500	800	620	360
14							190	670	500	800	590	350
15								670	500	775	590	350
16								670	500	720	570	350
17								315	500	700	515	350
18								260	500	700	480	350
19								400	500	700	460	350
20							40	400	500	700	450	350
21							80	400	500	700	450	350
22							90	400	500	700	430	350
23						60	90	400	500	670	410	350
24						70	90	370	530	650	410	350
25						60	90	360	580	650	410	350
26						60	40	360	600	650	410	400
27						60	0	360	600	650	410	435
28						190	20	360	570	650	410	435
29						265	40	360	550	650	410	435
30						265	50	485	550	650	410	435
31							50		550	650		435
TOTAL												
sec. ft.		1,030					3,470	11,745	15,590	20,420	16,480	11,770
ac. ft.		2,045					6,880	23,300	30,920	40,500	32,690	23,345
								THE YEAR	159,680	Ac. Ft.		

APPENDIX "B-10"

* * * *

DEMANDS BY KANSAS FOR WATER

DEMANDS BY KANSAS FOR WATER

Report-Year Ending October 31, 1958

(Arkansas River Compact Administration Records)

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1									170		200	195
2									400		300	
3									140		300	
4											300	
5											365	
6											400	
7											400	
8										150	400	
9										400	400	
10										400	400	
11										400	400	
12										400	400	
13										400	400	
14										400	400	
15										400	400	
16										465	400	
17										500	400	325
18										500	400	500
19										500	400	500
20										500	400	400
21										500	400	350
22										500	355	350
23										435	300	350
24										400	300	350
25										400	330	350
26										175	350	350
27											350	350
28											350	350
29											350	350
30											350	350
31											320	320
TOTAL									710	7,825	10,900	5,740
sec. ft.									1,410	15,520	21,620	11,390
ac. ft.									THE YEAR	49,940	Ac. Ft.	

APPENDIX "B-11"

* * * *

STATELINE FLOW ON DAYS OF KANSAS DEMAND*

STATELINE FLOW ON DAYS OF KANSAS DEMAND*

Report-Year Ending October 31, 1958

U S G S Records—Provisional, subject to revision

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1												394
2												437
3												359
4												272
5									489		186	
6									1620		218	
7									2410		333	
8											363	
9											397	
10											422	
11											454	
12										226	475	
13										370	470	
14										410	416	
15										428	448	
16										436	458	
17										472	469	
18										479	474	
19										508	464	
20										470	434	
21										646	424	
22										541	417	537
23										505	420	530
24										545	396	422
25										565	326	395
26										518	279	388
27										472	274	367
28										438	299	341
29										312	299	341
30										231	317	335
31											339	333
TOTAL									4,519	8,572	10,271	328
sec. ft.									8,960	17,000	20,370	6,095
ac. ft.									THE YEAR	58,420	Acre Feet.	12,090

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

APPENDIX "B-12"

* * * *

DIVERSIONS BY DITCHES IN COLORADO WATER DISTRICTS 14 AND 17

Report-Year Ending October 31, 1958
Source of Information, A.V.D.A. Reports—Reservoir Water is that from Upstream Reservoirs above Pueblo
(Acre Feet)

	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	THE YEAR
Bessemer (River)	3,435	349	258	849	2,049	7,934	11,212	18,099	6,236	3,269	4,526	4,366	62,582
Res. or Imported	0	0	0	0	0	0	0	0	1,964	2,995	20	0	4,979
Total	3,435	349	258	849	2,049	7,934	11,212	18,099	8,200	6,264	4,546	4,366	67,561
West Pueblo (River)	0	0	0	0	0	141	184	178	184	184	178	184	1,233
Booth-Orchard Gr. (Riv.)	0	0	0	0	313	1,020	1,154	1,172	1,107	1,107	1,071	1,107	8,051
Excelsior (River)	0	0	0	0	0	879	1,488	2,440	307	139	38	0	5,291
Colorado Canal (Riv.)	27,850	6,803	2,406	1,018	799	2,747	10,391	14,384	510	321	0	0	67,229
Res. or Imported	0	0	0	0	0	2,281	4,122	5,950	20,140	16,116	5,578	0	54,187
Total	27,850	6,803	2,406	1,018	799	5,028	14,513	20,334	20,650	16,437	5,578	0	121,416
Highline (River)	4,840	5,482	3,725	4,151	5,008	6,387	14,884	15,479	7,555	4,796	3,685	3,671	79,663
Res. or Imported	0	0	0	0	0	0	938	722	1,240	2,152	147	0	5,199
Total	4,840	5,482	3,725	4,151	5,008	6,387	15,822	16,201	8,795	6,948	3,832	3,671	84,862
Oxford Canal (River)	908	698	682	778	522	2,313	2,485	5,861	5,000	2,374	1,252	859	23,732
Otero Canal (River)	0	0	0	0	0	0	1,468	1,868	99	0	0	0	3,435
Catlin Canal (River)	6,476	6,254	4,191	3,927	7,091	10,163	12,125	16,905	13,563	6,077	2,638	1,269	90,679
Res. or Imported	0	0	0	0	0	0	0	0	0	3,703	0	0	3,703
Total	6,476	6,254	4,191	3,927	7,091	10,163	12,125	16,905	13,563	9,780	2,638	1,269	94,382
Holbrook (River)	3,773	6,002	7,117	6,839	2,898	2,819	8,660	10,324	5,304	952	294	0	54,982
Rocky Ford (River)	2,690	2,567	631	89	1,726	4,217	5,000	6,192	4,834	6,147	3,800	4,451	42,344
Ft. Lyon Storage (River)	0	635	0	0	0	0	7,500	0	6,768	2,729	0	0	17,632
Ft. Lyon Canal (River)	23,180	19,113	31,210	27,388	32,321	16,153	45,062	49,521	28,161	13,303	11,230	10,621	307,263
Las Animas Cons. (River)	1,432	1,289	258	0	244	2,249	3,669	5,708	5,558	2,638	2,426	1,609	26,780
Las Animas Town (River)	343	0	0	0	0	250	1,250	1,484	1,587	1,638	1,454	875	8,881
TOTAL	74,927	49,192	50,478	45,039	52,971	57,272	126,532	149,615	86,473	45,674	32,592	29,012	799,777
River	0	0	0	0	0	2,281	5,060	6,672	23,344	24,966	5,745	0	68,068
Res. or Imported	74,927	49,192	50,478	45,039	52,971	59,553	131,592	156,287	109,817	70,640	38,337	29,012	867,845

APPENDIX "B-13"

* * * * *

DIVERSIONS BY DITCHES IN COLORADO WATER DISTRICT 67

Report-Year Ending October 31, 1958
Source of Information A.V.D.A. Reports
(Acre Feet)

	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	THE YEAR
Ft. Bent Canal.....	543	236	0	0	0	0	928	3,043	3,993	5,425	4,780	2,747	21,695
Keesee Ditch	0	0	0	0	0	0	133	504	1,079	1,168	797	579	4,260
Amity Canal	214	0	0	0	0	756	1,853	15,162	20,751	24,143	19,827	17,532	100,238
Lamar Canal	1,749	1,109	764	613	0	742	2,771	4,030	6,192	9,094	7,533	4,786	39,383
Hyde Ditch	121	71	0	0	0	0	103	301	399	424	298	307	2,024
Manvel Canal	0	0	0	0	0	0	290	0	526	823	833	486	2,958
X. Y. & Graham Canal...	722	198	0	0	0	28	438	424	1,849	1,944	1,622	1,109	8,334
Buffalo Canal	1,303	1,107	1,067	379	0	0	900	1,936	1,787	3,235	2,733	2,255	16,702
Sisson Canal	0	0	0	0	0	0	0	0	0	486	89	0	575
TOTAL	4,652	2,721	1,831	992	0	1,526	7,416	25,400	36,576	46,742	38,512	29,801	196,169

APPENDIX "B-14"

* * * * *

DIVERSIONS BY DITCHES IN KANSAS

Report-Year Ending October 31, 1958

(Acre-Feet)

Frontier Ditch, U.S.G.S. Records

Other Ditches, Kansas Division of Water Resources Records

	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	THE YEAR
Frontier Ditch	720	0	0	0	0	0	0	852	1,270	2,350	1,650	1,190	8,032
Alamo Canal	0	0	0	0	0	0	0	0	0	0	0	0	0
Ft. Aubrey Canal	0	0	0	0	0	36	0	0	165	369	393	672	1,635
Total Stateline to Syracuse	720	0	0	0	0	36	0	852	1,435	2,719	2,043	1,862	9,667
Amazon Canal	0	0	0	0	0	0	0	1,220	819	5,730	4,630	4,910	17,309
South Side Ditch	6,570	817	0	0	0	0	0	3,430	2,300	2,970	2,490	6,500	25,077
Great Eastern Canal	0	0	0	0	0	1,990	2,450	0	0	1,430	5,190	1,040	12,100
Farmers Ditch	478	0	0	0	0	0	0	0	2,030	5,500	4,140	3,500	15,648
Garden City Canal	415	0	0	0	0	0	0	0	232	651	626	857	2,781
Total Syracuse to Garden City	7,463	817	0	0	0	1,990	2,450	4,650	5,381	16,281	17,076	16,807	72,915
Total Stateline to Garden City	8,183	817	0	0	0	2,026	2,450	5,502	6,816	19,000	19,119	18,669	82,582

APPENDIX "B-15"

* * * *

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.....	4540	15950	9170	7010	4260	3140	38230	26250	16430	3160	2750	992	131900	B- 2
Purgatoire River near Las Animas, Colo.....	2790	2020	1130	1610	2190	4850	19830	17710	38150	19220	2280	706	112500	B- 3
Inflow to John Martin Reservoir	7330	17990	10300	8620	6450	7990	58060	43940	54590	22390	5020	1690	244400	B- 4*
Reservoir contents at end of month.....	226988	245539	261388	270888	278724	282171	331915	342684	357312	316810	266064	230999	230999	B- 5
Net change in reservoir storage	+6935	+18551	+15849	+9500	+7836	+3447	+49744	+10769	+14628	-40502	-50746	-35065	+10946	B- 5
Outflow from John Martin Reservoir	378	334	470	325	356	2350	7040	23880	32500	55100	47910	31950	202600	B- 6
Diversions in District 67, Colo. Flow at Colorado-Kansas	4652	2721	1831	992	0	1526	7416	25400	36576	46742	38512	29801	196169	B-13
State line	7310	6890	7570	8010	7960	6750	23250	13850	22180	21410	21130	18150	164500	B- 7
Diversions in Kansas	8183	817	0	0	0	2026	2450	5502	6816	19000	19119	18669	82582	B-14
Arkansas River at Garden City, Kansas.....	7010	7820	8510	8600	10980	8750	28050	14150	21180	10610	1330	1240	128200	B- 8

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

APPENDIX "C"

* * * *

RESOLUTION

It is always a source of regret when any organization loses the services and association of a faithful and efficient member.

With this in mind, this administration wishes to express such regret occasioned by the absence of Dean Ivan C. Crawford from our deliberations.

Dean Crawford has served long and well and will be remembered by each of us as a proficient, cooperative and understanding public servant, as well as a cordial and pleasant personality.

He leaves us with the best wishes of each member of this administration for his future health and happiness.

This resolution shall be spread upon the minutes of this administration and the secretary is directed to send a copy thereof to Dean Crawford.

APPENDIX "D"

BY-LAWS

OF

ARKANSAS RIVER COMPACT ADMINISTRATION

(As Amended to October 31, 1958)

* * * * *

PREAMBLE

Pursuant to Article VIII B (1) of the Arkansas River Compact, these by-laws were adopted by the Arkansas River Compact Administration on the 14th day of November, 1949, namely:

ARTICLE I

THE ADMINISTRATION

1. The Arkansas River Compact Administration is herein referred to as "the Administration".

2. Membership of the Administration shall consist of three representatives from each of the States of Colorado and Kansas, designated or appointed as provided by the Arkansas River Compact and the law of each of such States, and, if designated by the President, one representative of the United States of America.

3. The credentials of each such representative shall be filed with the Secretary of the Administration.

4. Each representative shall advise in writing the Secretary of the Administration as to his address, to which all official notices and other

communications of the Administration shall be sent and shall further promptly advise in writing the Secretary as to any change in such address.

ARTICLE II

OFFICERS

1. The officers of the Administration shall be:

Chairman
Vice Chairman
Secretary
Treasurer

2. The representative of the United States of America shall be the Chairman of the Administration. The Chairman shall preside at meetings of the Administration. His duties shall be such as are usually imposed on such an officer and such as may be assigned to him by these by-laws or by the Administration from time to time.

3. The Vice-Chairman shall be a member of the Administration. He shall be elected at the annual meeting of the Administration, and shall hold office until the next annual meeting of the Administration and until his successor is elected. In the case of a vacancy in the office of Vice-Chairman, the Administration at its next meeting, whether regular or special, shall elect a Vice-Chairman to serve for the unexpired term; and the election of a Vice-Chairman may be made at any meeting of the Administration prior to the holding of its first annual meeting, and in such case he shall hold office until such annual meeting. The Vice-Chairman shall perform all duties of the Chairman when the latter is unable for any reason to act or when, for any reason, there is a vacancy in the office of the Chairman. In addition, the Vice-Chairman shall perform such other duties as may be assigned to him by these by-laws or by the Administration from time to time.

4. The Secretary may or may not be a member of the Administration. He shall be elected by the Administration at its annual meeting and shall serve until the next annual meeting and until his successor is elected, except that he may be elected at any meeting of the Administration prior to the holding of the first annual meeting, and in such case shall hold office until such annual meeting. In the case of a vacancy in the office of Secretary, the Administration shall, at its next meeting, whether regular or special, elect a Secretary to serve for the unexpired term. The Secretary shall perform such duties as are usually imposed on such an officer and such as may be assigned to him by these by-laws or by the Administration from time to time. He shall furnish a bond for the faithful performance of his duties if the Administration so directs. The cost of such bond shall be paid by the Administration.

5. The Treasurer may or may not be a member of the Administration; and the office of Secretary and Treasurer may be held by the same person if directed by the Administration. He shall be elected at the

annual meeting of the Administration and shall hold office until his successor is elected and shall have qualified, except a treasurer may be elected prior to the first annual meeting of the Administration and in such case shall hold office until such annual meeting. He shall receive, hold, disburse and keep records of all funds of the Administration; and he shall furnish a bond for the faithful performance of his duties in such amount as the Administration may direct. The cost of such bond shall be paid by the Administration. In the case of a vacancy in the office of Treasurer, the Administration shall, at its next meeting, whether regular or special, appoint a successor to serve for the unexpired term.

6. The Administration may employ such engineering, legal, clerical, and other personnel as, in its judgment, may be necessary. They shall receive such compensation and perform such duties as may be fixed by the Administration. Such employees shall not be considered as employees of either Colorado or Kansas.

ARTICLE III

PRINCIPAL OFFICE

1. The principal office and place of business of the Administration shall be located in the City of Lamar, Colorado.

2. The principal office shall be open for business on such hours and days as the Administration may from time to time direct.

3. All books and records of the Administration shall be kept in the principal office of the Administration.

ARTICLE IV

MEETINGS

1. The annual meeting of the Administration shall be held on the second Tuesday in December of each year.

2. The Administration shall hold regular meetings on the fourth Tuesdays in March and July of each year.¹

3. (a) Special meetings of the Administration may be called by the Chairman or, in the case of a vacancy in the office of Chairman or inability of the Chairman to act, by the Vice-Chairman. Upon the written request of two or more representatives, it shall be the duty of the Chairman, or Vice-Chairman, as the case may be, to call such a meeting.

(b) Special telephonic meetings of the Administration may be held by telephonic communications between the several members of the Administration in respect to all matters arising under Article VF of the Compact: Provided that such special telephonic meetings may be called by the Chairman, Vice-Chairman or any member of the Operations Committee, and in any case at least two representatives of each State shall participate personally in such special telephonic meetings and con-

¹ As amended March 24, 1950.

cur in the action taken as a result of any such meeting. And provided further, that the Secretary of the Administration shall prepare minutes of any special telephonic meeting and such minutes shall be acted upon by the Administration at the next regular meeting or special meeting held under sub-section (a) hereof.²

4. Notices of all annual and regular meetings of the Administration shall be sent by the Secretary, or in the case of a vacancy in the office of Secretary, or the inability of the Secretary to act, by the Chairman or Vice-Chairman, as the case may be, to the members of the Administration by ordinary mail at least ten days in advance of such annual or regular meetings. Notices of special meetings shall be given by the Secretary to the members of the Administration by the most expeditious method so as to allow as much time prior to such special meetings as conditions permit.

5. All annual and regular meetings of the Administration shall be held at the principal office of the Administration. Unless otherwise agreed to in advance by all members of the Administration, special meetings shall be held at the office of the Administration.

6. The Administration shall keep a record of the proceedings of all its meetings. The minutes of such proceedings shall be preserved in a suitable manner as directed by the Administration. Minutes of proceedings until approved by the Administration shall not be official and shall be furnished only to members of the Administration, its employees, and committees. Distribution of official minutes shall be made by the Secretary in accordance with directives of the Administration.

7. A quorum for any meeting of the Administration and the casting of votes by representatives of the States on the Administration shall be in accord with Paragraph D of Article VIII of the Arkansas River Compact; and any action by the Administration shall be determined by vote as required by such Paragraph D of Article VIII of the Compact.

8. At each meeting of the Administration, the order of business, unless otherwise agreed, shall be as follows:

- Call to order;
- Reading of minutes of last meeting;
- Approval of minutes of last meeting;
- Report of Chairman;
- Report of Secretary;
- Report of Treasurer;
- Report of Committees;
- Unfinished business;
- New business;
- Adjournment.

9. All meetings of the Administration, except executive sessions, shall be open to the public.

² As amended December 22, 1953.

10. Any meeting of the Administration may be adjourned or continued from time to time and from the place set for the meeting to another place.

11. Public notice of all annual, regular, and special meetings shall be given in an appropriate manner, determined by the Administration, except in cases where the Administration determines to hold an executive session.

ARTICLE V

COMMITTEES

1. There shall be the following standing committees:

Administrative and Legal Committee
Engineering Committee
Operations Committee

2. Each of such committees shall be made up of two representatives of the Administration and the Chairman shall be ex-officio member of all committees. In all committee action a vote shall be taken by States with each State having one vote.

3. The standing committees shall have the following duties:

- (a) The Administrative and Legal Committee shall advise the Administration with respect to budgets and accounting, office personnel, equipment, records, and legal matters; and shall prepare the draft of the annual report of the Administration.
- (b) The Engineering Committee shall advise the Administration on all engineering matters; and shall compile all pertinent engineering data and records.
- (c) The Operations Committee shall advise the Administration concerning, and shall have direct supervision over, rules and regulations governing the storage and releases of water from John Martin Reservoir and over such other Arkansas River interstate administration and operation between the States of Colorado and Kansas as come within the purview of the Arkansas River Compact, subject at all times to the provisions of such compact and the directives of the Administration thereunder. This committee shall be responsible for maintaining appropriate relations, under the direction of the Administration, with the chief officials of each of the States of Colorado and Kansas charged with the administration of water rights, and for maintaining appropriate relations with interested Federal agencies. The Operations Committee shall also be responsible, under directives and orders of the Administration, for supervision over the employees of the Administration engaged in the interstate administration of the waters of the Arkansas River pursuant to the Arkansas River Compact.

4. The Chairman of each Committee shall be designated by the Administration.

5. The Administration may, from time to time, create special committees composed of such members of the Administration and others as it may determine and assign to such committees such tasks as the Administration may designate.

6. Each committee shall make a report to the Administration at each annual and regular meeting and shall make such further reports as may be directed by the Administration. Unless otherwise authorized, all such reports shall be in writing and filed with the Secretary of the Administration.

ARTICLE VI

RULES AND REGULATIONS

1. The Administration shall adopt Rules and Regulations necessary for the administration of the Arkansas River Compact, consistent therewith and with these by-laws.

2. All proposals for Rules and Regulations, or for changes in them, shall be presented to the Administration in writing and shall not be acted on at the meeting when first presented, but shall go over for action at a designated subsequent meeting of the Administration.

3. Following the presentation to the Administration, public notice of all proposed Rules and Regulations and changes in Rules and Regulations shall be given by two publications, at least one week apart, in some newspaper of general circulation in the area of each State affected by the Arkansas River Compact. The representatives on the Administration from each State shall designate the newspaper in their State in which such publication shall be made. No Rule or Regulation and no change in any Rule or Regulation shall be effective until a date specifically stated in the published notice, which date shall be at least ten days after the last publication.

4. The provisions, contained in this Article, for Rules and Regulations and notice thereof shall not be effective in the case of any notice which is otherwise required under the Arkansas River Compact or in any case where, in the judgment of the Administration, effective administration and the public interest under the Arkansas River Compact, require more expeditious action.

5. It shall be the duty of the Secretary to see that the necessary notices are published as herein required.

6. It shall be the duty of the Secretary to compile the Rules and Regulations of the Administration and to prepare copies for distribution to the public under such terms and conditions as the Administration may prescribe.

ARTICLE VII

FISCAL

1. All funds of the Administration shall be received by the Treasurer and deposited by him to the credit of the Administration in a depository or depositories designated by the Administration.

2. Disbursement of such Administration funds shall be made by check signed by the Treasurer and countersigned by the Chairman or Vice-Chairman of the Administration.

3. The Administration shall annually adopt and transmit to the Governor of each State its budget covering anticipated expenses for the ensuing fiscal year, and the amount thereof payable by each State.³

4. The fiscal accounts of the Administration and its employees shall not be subject to the auditing and accounting procedures of either the States of Colorado or Kansas; provided, that each State shall have the right to make an examination and audit of the accounts of the Administration at any time.

5. All receipts and disbursements of the Administration shall be audited yearly by a certified public accountant to be selected by the Administration, and the report of audit shall be included in the annual report of the Administration.

6. The Treasurer shall prepare and keep an up-to-date inventory of all the property of the Administration.

7. The fiscal year of the Administration shall begin July 1 of each year and end June 30 of the next succeeding year.

ARTICLE VIII

ANNUAL REPORT

1. The report year referred to in this Article for the making of the annual report shall commence on November 1 and end on the succeeding October 31.

2. The Administration shall make and transmit on or before January first of each year to the Governors of the States of Colorado and Kansas and to the President of the United States a report covering its activities for the preceding report year. The annual report shall include, among other things, the following:

- (a) The receipts and expenditures of all funds of the Administration and all pertinent financial data.
- (b) All hydrologic data relating to the Arkansas River which the Administration deems pertinent.
- (c) Statements as to cooperative studies of water supplies made during the preceding year, including cooperative studies and activities with any Federal agency.

³ As amended December 11, 1956.

- (d) All findings of fact made by the Administration during the preceding year.
- (e) Such other pertinent matters as the Administration may deem advisable.

ARTICLE IX

SEAL

1. The official seal of the Administration shall be circular in form with the words "Arkansas River Compact Administration" imprinted around the border and the word "Seal" in the center thereof.
2. The Secretary of the Administration shall have custody of the seal of the Administration.

ARTICLE X

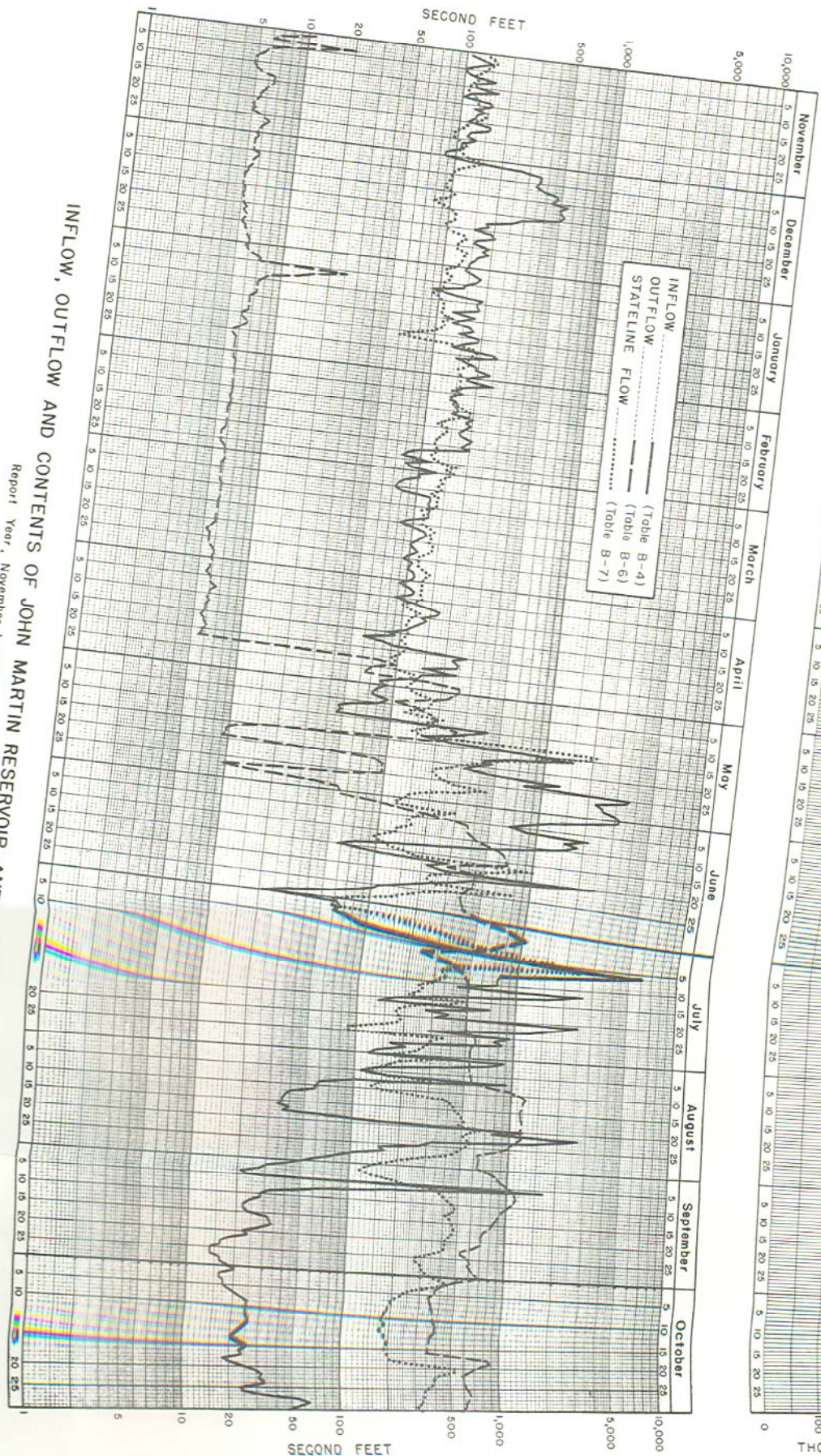
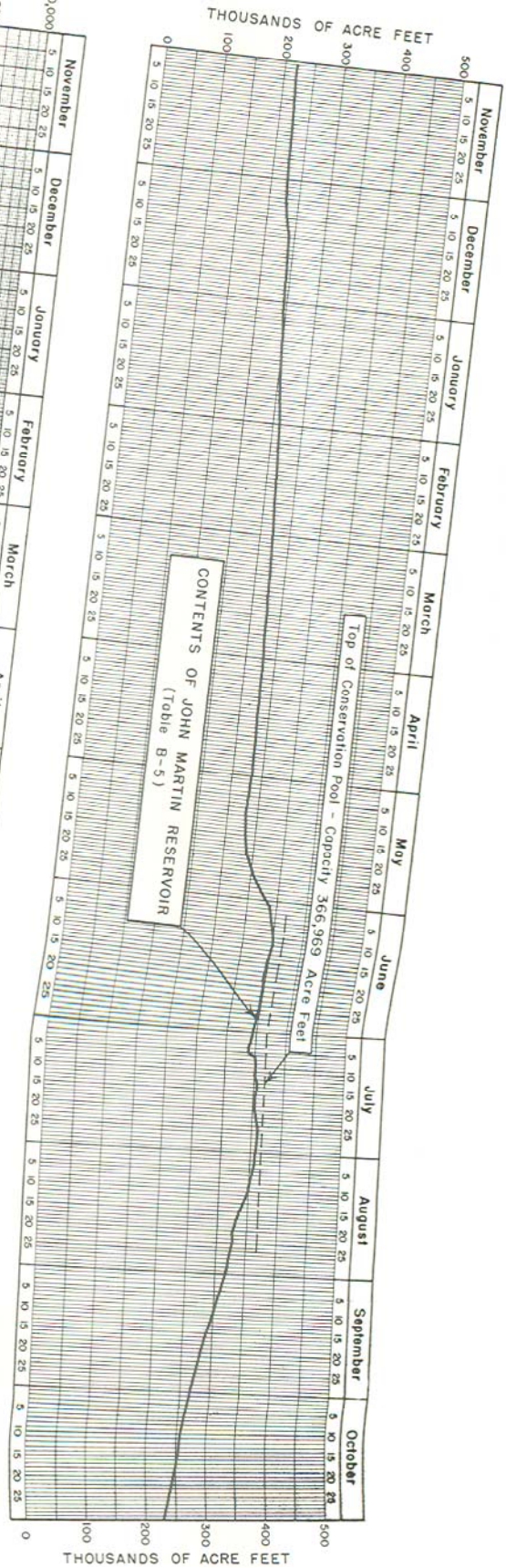
MISCELLANEOUS

1. The Administration and its Secretary on request shall furnish to the Governor of each of the States of Colorado and Kansas any information within its possession at any time, and shall always provide free access by the public to its records. Except in the case of the Governor of each of the States of Colorado and Kansas, or interested Federal agencies, the cost of furnishing information shall be paid by the person seeking it at such rates as may be fixed by the Administration.
2. All contracts and other instruments in writing required to be signed for and on behalf of the Administration, except matters relating to the receipt and disbursement of funds, shall be signed by the Chairman or Vice-Chairman and Secretary. The seal of the Administration shall be affixed thereto.

ARTICLE XI

AMENDMENTS TO BY-LAWS

1. Amendments to the By-Laws may be made at any meeting of the Administration, provided notice of the proposed amendment shall have been given in the notice of the meeting.



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

Report Year, November 1, 1957 - October 31, 1958

