SEVENTEENTH ANNUAL REPORT

ARKANSAS RIVER COMPACT ADMINISTRATION

(1965)

For the Report-Year November 1, 1964
to October 31, 1965

LAMAR, COLORADO

December 21, 1965

Seventeenth
Annual Report

ARKANSAS RIVER COMPACT ADMINISTRATION

(1965)

For the Report Year November 1, 1964, to October 31, 1965

LAMAR, COLORADO

December 21, 1965

THE ADMINISTRATION

FRANCIS M. BELL, *Chairman and Representative of the United States*
HACKET SMARTT, *Secretary and Treasurer*

FELIX L. SPARKS, GEORGE F. REYHER and ERNEST HOFMEISTER
for Colorado

ROBERT V. SMRHA, LOGAN N. GREEN and CARL E. BENTRUP
for Kansas

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Annual Report of

ARKANSAS RIVER COMPACT ADMINISTRATION

(1965)

Report-Year November 1, 1964 to October 31, 1965

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, 1964 through October 31, 1965 as follows:

1. Members of the Administration

Representative of the United States:

Francis M. Bell

Colorado Representatives:

Felix L. Sparks, Denver, Colorado
Hacket Smartt, Lamar, Colorado
(November 1, 1964-October 3, 1965)
Ernest Hofmeister, Lamar, Colorado
(October 4, 1965-October 31, 1965)
George F. Reyher, McClave, Colorado

Kansas Representatives:

Carl E. Bentrup, Deerfield, Kansas
Logan N. Green, Garden City, Kansas
Robert V. Smrha, Topeka, Kansas

2. Officers of the Administration

Chairman:

Francis M. Bell

Vice-Chairman:

Logan N. Green of Garden City, Kansas

Secretary:

Hacket Smartt of Lamar, Colorado

Treasurer:

Hacket Smartt of Lamar, Colorado

3. Standing Committees

Administrative and Legal Committees:

Logan N. Green of Kansas (Chairman)
George F. Reyher of Colorado

Engineering Committee:

Robert V. Smrha of Kansas (Chairman)
Felix L. Sparks of Colorado

Operations Committee:

Carl E. Bentrup of Kansas (Chairman)
Hacket Smartt of Colorado

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

4. Meetings

December 8, 1964	Lamar, Colorado	Annual Meeting
April 1, 1965		Telephonic Meeting
June 2, 1965	Denver, Colorado	Special Meeting
June 14, 1965		Telephonic Meeting
July 23, 1965	Lamar, Colorado	Special Meeting

5. Fiscal

(a) Balance on Hand October 31, 1964.....$ 8,885.30

(b) Receipts

State of Colorado, August 25, 1965..$4,332.00
State of Kansas, August 30, 1965..... 2,888.00

7,220.00

(c) Total Funds available.....$16,105.30

(d) Disbursements by the Administration—November 1, 1964 to October 31, 1965:

Date	Voucher No.	Payee and Purpose	Amount
1- 2-65	416	Telephone Co.—November and December Service	$ 29.70
1- 4-65	417	Treasurer of U.S.A. O.A.S.I. Fourth Quarter	21.75
1-11-65	418	Lamar Daily News—Printing 500 Letterheads	9.20
1-14-65	419	U.S.G.S., 2nd Qtr., Cooperative Agreement	2,450.00
12-31-64	420	Hacket Smartt salary for quarter ending 12-31-64 less $10.88 Social Security	289.12
2-11-65	421	A. Marvin Strait—Auditing 1964 accounts	75.00
2-23-65	422	Peerless Printing Co.—16th Annual Report	648.00
2-23-65	423	Telephone Co.—January and February Service	26 91
4- 5-65	424	Telephone Co.—March Service	13.95
4- 5-65	425	Hacket Smartt salary for First Quarter, 1965 less $10.88 Social Security	289.12
4- 5-65	426	Treasurer of U.S.A. O.A.S.I., First Quarter	21.75
4-20-65	427	U.S.G.S., 3rd Qtr., Cooperative Agreement	2,450.00
5- 3-65	428	Telephone Co.—April Service	21.42
6-30-65	429	U.S.G.S., 4th Qtr., Cooperative Agreement	450.00
6-30-65	430	Treasurer of U.S.A. O.A.S.I., Second Quarter	21.75
6-30-65	431	Hacket Smartt Salary for Second Quarter, 1965 less $10.88 Social Security	289.12
6-30-65	432	Telephone Co.—May and June Service	41.39
6-30-65	433	Hacket Smartt—Reimbursement for cash paid by Secretary to Merchants Office Furniture for filing cabinet for office of Administration in Lamar.	75.00
8- 1-65	434	Telephone Co.—July Service	20.11
9-10-65	435	Telephone Co.—August Service	29.50
10- 7-65	436	Milne-Hill Agency, Inc.—Treasurer's Bond	15.00
10- 7-65	437	Telephone Co.—September Service	25.26
10- 7-65	438	Treasurer of U.S.A. O.A.S.I., Third Quarter	21.75
10- 7-65	439	Hacket Smartt salary for Third Quarter, 1965 less $10.88 Social Security	289.12
10-24-65	440	U.S.G.S. 1st Qtr. Cooperative Agreement	500.00
10-31-65	441	Telephone Co.—October Service	18.88
10-31-65	442	Hacket Smartt reimbursement—Typing and Postage $15.00; Mileage $12.25	27.25
		Total Disbursements	$8,170.05

(e) Balance on hand October 31, 1965 ..... $7,935.25

(f) At the special meeting held July 23, 1965 the Compact Administration adopted the following budget for the fiscal year July 1, 1966 through June 30, 1967 and copies of this budget were duly transmitted to the States of Colorado and Kansas:

Personal Services		$3,350.00
Secretary Salary	$1,200.00	
Social Security	75.00	
Gage Reports	2,000.00	
Professional Services (Audit of Accounts)	75.00	
Capital Outlay		300.00
Maintenance and Operation		1,665.00
Bond, Treasurer	15.00	
Printing	700.00	
Official Publications	100.00	
Travel Expense—Secretary Employees	200.00	
Typing and Mailing	100.00	
Investigation and Inspection	100.00	
Telephone and Telegraph	300.00	
Office Supplies	150.00	
Total Proposed Budget 1966-1967		$5,315.00
Estimated Carry-over as of June 30, 1966		— 0 —
Total to be appropriated by Colorado and Kansas		$5,315.00

In accordance with Article VIII E (1), the amount of such budget payable by the State of Colorado is sixty percent thereof, or $3,189.00, and the amount payable by the State of Kansas is forty percent thereof, or $2,126.00.

(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 have been audited for the period commencing November 1, 1964 through October 31, 1965 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 continued to operate the conservation pool of John Martin Reservoir in accordance with the terms of the Compact and the orders of the Administration. The United States Geological Survey has 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.

7. Water Supply, Reservoir Operation and Hydrologic Data

John Martin Reservoir was empty at the end of the irrigation season 1964. When winter storage started on November 1, 1964, Colorado called for 100 c.f.s. of river flow. Therefore, no storage was actually accomplished until December 15, 1964, when the demand was cancelled and the gates closed. The gates remained closed until 3:00 P.M. February 3, 1965 when they were adjusted to release 14 c.f.s. of river flow on demand of the Lamar Canal. Storage at the beginning of the 1965 irrigation season was 3,790 acre-feet. The gates were opened at 8:00 A.M. on April 1, 1965 to release 1,000 c.f.s. on demand of Colorado and Kansas. The reservoir was declared empty on April 3, 1965 at 9:00 A.M. and administration of the river was returned to the Colorado State Engineer at that time.

River flow only was administered until 12:45 A.M. on June 14, 1965, when it appeared that the river flow was sufficient to begin storage and the gates were closed. They were opened at 5:00 P.M. on that same day to release 400 c.f.s. demand by Colorado. On June 15, 1965 the demand was increased to 1,000 c.f.s. — 600 c.f.s. by Colorado and 400 c.f.s. by Kansas. On June 16, 1965 at 8:30 A.M. Colorado cut its demand to 500 c.f.s. and releases were therefore cut to 900 c.f.s.; on June 17, 1965, heavy rains caused floods throughout the Arkansas Basin and the gates were closed at 7:30 A.M. Storage continued from that time until 8:30 A.M. on July 6, 1965, when Colorado demanded 200 c.f.s. release. The demand was cancelled at 3:00 P.M. on July 8, 1965, since the demand was being met by flood water released on order of the U. S. Corps of Engineers. On July 13th, flood water releases were discontinued and Colorado demanded release of 300 c.f.s. from conservation storage at 4:00 P.M. Kansas demands started on July 15th at 8:00 A.M. for 500 c.f.s. Colorado's demands were for 550 c.f.s. at this time making a total release of 1050 c.f.s. Demands varied frequently until August 21, 1965, at 10:30 P.M. when the demand was cancelled and irrigation requirements were being met by flood water releases ordered by the U. S. Corps of Engineers.

Demand for conservation pool releases began again at 2:00 P.M. on September 7, 1965, and varied frequently in volume through the balance of the irrigation season. The demands during this period were made by Colorado, as Kansas requirements were met by sufficient flows being available at the Stateline.

This was the first year in the history of John Martin Reservoir that water has invaded the flood pool. Maximum storage was recorded on August 25, 1965, at 429,557 acre-feet. Water in storage at the end of the irrigation season was 375,433 acre-feet at elevation 3851.91, of which 364,443 acre-feet was conservation storage.

Water released from the reservoir for irrigation demand was 108,899 acre-feet and flood water released was 138,392 acre-feet, for a total of 247,291 acre-feet, as illustrated in appendices B-6A, B-10 and B-11. River flow during the irrigation season when the reservoir was empty was in excess of 35,000 acre-feet.

After many months of study of proposed operating criteria and construction plans in which no agreement could be reached between the states of Colorado and Kansas, the Colorado Game, Fish and Parks Department awarded a contract for construction of a 2,900 acre-foot recreation reservoir on Clay Creek. This Creek is an intermittent tributary of the Arkansas River below John Martin Reservoir. It was the contention of Kansas that the proposed reservoir on Clay Creek would result in a material depletion of water available for use in Kansas under the terms of the Compact. Based on this contention, in late May, Kansas filed with the Supreme Court of the United States a Motion for Leave to File a Complaint and the Complaint. Colorado denied that the reservoir materially depleted the water available for Kansas under the Compact. In the later part of July, Colorado filed with the Court a Brief in Opposition to Motion for Leave to File a Complaint.

The general floods mentioned above washed out the nearly completed Clay Creek Dam on June 17, 1965, and with the subject of the controversy removed, at a Special Meeting of the Administration on July 23, 1965, an agreement was arrived at between Colorado and Kansas on reconstruction plans and supervision of operation. The two states then filed with the United States Supreme Court an Agreement of Parties to Dismiss Plaintiffs Motion for Leave to File Complaint and Complaint.

8. Gaging Stations

Streamflow records of satisfactory accuracy were obtained at the Compact stations. Emphasis was continued on performing additional field work and providing streamflow data to the Administration and to State officials as required.

It will be noted that the computed daily demands by Colorado and Kansas in Appendices B-10 and B-11 do not always agree with the

actual measured releases at the gaging station, as shown in Appendix B-6. Part of this discrepancy is the result of the lag in time involved in adjusting the outlet gates in the dam and when the outflow is measured at the gage. The rest of the discrepancy is due primarily to the rating table changes, caused by a shifting channel, being unavailable at the time of changes in releases. Relocating the gage nearer to the dam and installation of an artificial control section would minimize the variations in the records.

Torrential rains June 15 to 18, caused floods in the Arkansas River basin in eastern Colorado and western Kansas that were major hydrologic events. Many maximum discharges were exceeded, some several fold. John Martin Reservoir held the entire flood runoff from the basin above it. However, the uncontrolled tributary inflow below the reservoir was so outstanding that extensive damage occurred in many urban and rural areas. Damage was particularly severe in Lamar and Holly, Colorado.

A tabulation of provisional maximum discharges for the June 1965 flood at selected sites in the Arkansas River basin is given in Appendix "C". The table includes data for previously known maxima at sites where the information is available.

Gaging stations on Purgatoire River near Las Animas and Arkansas River near Coolidge were destroyed in the flood. The stations have been put back in operation including replacement of the radio equipment at the Purgatoire River station. The old AM radio transmitter at the Coolidge station was lost in the flood and will be replaced with new FM equipment that is now on order.

Conditions at the gaging station on the Arkansas River at Las Animas remained unfavorable because of the varying percentages of flow in the by-pass channel. Efforts to arrange for a stabilizing section in the channel between piers of the new highway bridge were not successful because of lack of a source of financing the construction.

The Administration approved a cooperative agreement with the U. S. Geological Survey for fiscal year July 1, 1965, to June 30, 1966, in the amount of $12,000; $6,000 for each party. Four thousand dollars of the total is for operation of the gaging stations and $8,000 for procurement and installation of new FM radio equipment for the Arkansas River and Frontier ditch stations near Coolidge.

9. Findings of Fact by the Administration

(a) A special Telephonic Meeting was held by the Administration on April 1, 1965 in accordance with Article IV, 3B of the By-Laws of the Administration for the purpose of finding the reservoir empty. As a result of this meeting, the reservoir was declared to become empty on April 3, 1965. Notice was given to the State Engineer of Colorado and Division Engineer J. W. Patterson of Pueblo, Colorado. The reservoir became empty at 9:00 A.M. on April 3, 1965.

(b) Due to heavy rains in the Purgatoire watershed and also excess water reported in the Arkansas near La Junta, Colorado and other tributaries to the Arkansas being in flood stage, a special Telephonic Meeting was held June 14, 1965 in accordance with Article IV, 3B of the By-Laws of the Administration for the purpose of declaring water available for storage. Water was declared available and the gates were ordered closed at 12:45 P. M. on June 14, 1965 and storage began. The State Engineer for Colorado was notified; also J. W. Patterson, Division Engineer of Pueblo.

Respectfully submitted,

ARKANSAS RIVER COMPACT ADMINISTRATION
BY:

FRANCIS M. BELL
Representative of the United States and
Chairman of the Administration

FELIX L. SPARKS
GEORGE F. REYHER
ERNEST HOFMEISTER
Colorado Members of the Administration

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

Lamar, Colorado
December 21, 1965

APPENDICES

for

Annual Report of the
Arkansas River Compact Administration

For the Report-Year November 1, 1965 to October 31, 1965

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-6A"—Releases of Flood Storage.

APPENDIX "B-7" —Daily Discharges; Arkansas River at Lamar, Colorado.

APPENDIX "B-8" —Daily Discharges, Arkansas River at Colorado-Kansas Stateline.

APPENDIX "B-9" —Daily Discharges, Arkansas River at Garden City, Kansas.

APPENDIX "B-10"—Demands by Colorado for Water.

APPENDIX "B-11"—Demands by Kansas for Water.

APPENDIX "B-12"—Stateline Flow on Days of Kansas Demand.

APPENDIX "B-13"—Diversions by Ditches in Colorado Water Districts 14 and 17.

APPENDIX "B-14"—Diversions by Ditches in Colorado Water District 67.

APPENDIX "B-15"—Diversions by Ditches in Kansas, Stateline to Garden City.

APPENDIX "B-16"—Summary Tabulation.

APPENDIX "C" —Flood Stages and Discharges at Selected Sites.

APPENDIX "D" —Resolution concerning Leonard R. Kuiper.

APPENDIX "E" —Resolution concerning George S. Knapp.

APPENDIX "F" —Resolution concerning Harry B. Mendenhall.

PLATE I—Graphs showing inflow, outflow and contents of John Martin Reservoir and Stateline Flow for Report-Year.

APPENDIX "A"

* * * *

AUDITOR'S REPORT

A. MARVIN STRAIT

* * * *

Certified Public Accountant
Johnson-Strait Building
Lamar, Colorado 81052

December 6, 1965

To the Representatives
Arkansas River Compact Administration
Lamar, Colorado

Gentlemen:

We have examined the receipts and disbursements and changes in fund balances, of the Arkansas River Compact Administration for the fiscal year ended October 31, 1965. Our examination was made in accordance with generally accepted auditing standards and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

We submit herewith the following financial statements:

EXHIBIT A—Statement of Receipts and Disbursements and Changes in Fund Balances for the Fiscal Year ended October 31, 1965.

SCHEDULE 1—Statement of Receipts and Disbursements compared with Budget for the Budget Year July 1, 1964 to June 30, 1965.

COMMENTS

EXHIBIT A

The receipts and disbursements, on a cash basis, are shown in Exhibit A. The assessments for the current year were received in August of 1965.

The disbursements were all supported by vouchers, cancelled checks, and authorization for payment in the minutes of the Compact's meetings.

Schedule 1

The receipts and disbursements for the budget year of July 1, 1964, to June 30, 1965, as compared with budgeted items for that year are shown in Schedule 1. This differs from the report year of November 1, 1964, to October 31, 1965, and is the result of combining the receipts and disbursements for the appropriate months of the current and previous report years. The capital outlay of $300.00 and gage replacement and rehabilitation of $3,700.00 authorized in the budget for the budget year ended June 30, 1965, were paid in January and April of 1965. These transactions caused the cash disbursements to exceed the current years budget, but were in conformity with budgeted items when compared with their respective years budgets.

Financial position of the Administration as compared with last year is shown below:

COMPARATIVE BALANCE SHEET

ASSETS	October 31, 1964	October 31, 1965
Cash in Bank	$8,885.30	$7,934.25
Equipment	392.50	767.50
Total Assets	$9,277.80	$8,701.75
LIABILITIES AND FUND BALANCES		
Expended Fund Balance, Equipment	$ 392.50	$ 767.50
Unexpended Fund Balance	8,885.30	7,934.25
Total Liabilities and Fund Balances	$9,277.80	$8,701.75

OPINION

In our opinion the Statement of Receipts and Disbursements and Changes in Fund Balances presents fairly the financial position of the Arkansas River Compact Administration at October 31, 1965, and the results of operations for the fiscal year then ended on a basis consistent with that of the previous year.

Respectfully submitted,

A. MARVIN STRAIT

EXHIBIT A

ARKANSAS RIVER COMPACT ADMINISTRATION

STATEMENT OF RECEIPTS AND DISBURSEMENTS AND CHANGES IN FUND BALANCE FOR THE FISCAL YEAR ENDED OCTOBER 31, 1965

CASH IN BANK, NOVEMBER 1, 1964		$ 8,885.30
FUND BALANCE, NOVEMBER 1, 1964		$ 8,885.30
RECEIPTS:		
Revenue from Assessments:		
Colorado	$ 4,332.00	
Kansas	2,888.00	
TOTAL RECEIPTS		7,220.00
TOTAL AVAILABLE		$16,105.30
DISBURSEMENTS:		
Surface Water Investigations:		
U. S. Geological Survey	$ 1,850.00	
Cooperative Gage Replacement and Rehabilitation	3,700.00	
Secretary Salary	1,200.00	
Printing of Annual Report	648.00	
Capital Outlay	375.00	
Telephone and Telegraph	227.12	
Auditing	75.00	
Payroll Tax—Employer's Share	43.48	
Typing and Mailing	15.00	
Treasury Bond	15.00	
Office Supplies	9.20	
Travel—Secretary	12.25	
Bank Charges	1.00	
TOTAL DISBURSEMENTS		8,171.05
FUND BALANCE, OCTOBER 31, 1965		$ 7,934.25
REPRESENTED BY:		
Cash on Deposit—First National Bank in Lamar		$ 8,480.38
LESS: Outstanding Checks		
No. 440—U. S. Geological Survey	$ 500.00	
No. 441—Mountain States Tel. & Tel...	18.88	
No. 442—Hacket Smartt	27.25	546.13
		$ 7,934.25

SCHEDULE 1

ARKANSAS RIVER COMPACT ADMINISTRATION

STATEMENT OF RECEIPTS AND DISBURSEMENTS COMPARED WITH BUDGET FOR BUDGET YEAR
JULY 1, 1964 TO JUNE 30, 1965

		Actual	Budgeted
CASH IN BANK, JULY 1, 1964		$4,967.22	$1,580.00
RECEIPTS:			
Revenue from Assessments:			
Colorado Portion—60%	$4,332.00		4,332.00
Kansas Portion—40%	2,888.00		2,888.00
TOTAL RECEIPTS		7,220.00	$7,220.00
TOTAL TO ACCOUNT FOR		$12,187.22	$8,800.00
DISBURSEMENTS:			
Surface Water Investigations:			
U. S. Geological Survey	$2,250.00		$1,800.00
Secretary Salary	1,200.00		1,200.00
Printing of Annual Report	648.00		600.00
Telephone and Telegraph	192.42		300.00
Auditing	75.00		75.00
Payroll Tax—Employer's Share	43.48		50.00
Travel—Secretary and Employees			150.00
Typing and Mailing	17.00		200.00
Treasurer's Bond	15.00		25.00
Bank Charges	1.00		
Cooperative Gage Replacement and Rehabilitation	5,400.00		3,700.00
Capital Outlay	675.00		300.00
Official Publications			100.00
Investigation and Inspection			150.00
Office Supplies	9.20		150.00
TOTAL DISBURSEMENTS		10,526.10	$8,800.00
CASH IN BANK—JUNE 30, 1965		$ 1,661.12	$ —0—

ARKANSAS RIVER NEAR PUEBLO, COLORADO

Report-Year ending October 31, 1965
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	131	174	239	212	190	409	926	964	3060	4900	1360	789
2	137	166	239	234	187	414	1020	1160	3690	5260	1320	767
3	134	164	244	232	184	448	1200	1300	4280	3680	1210	701
4	137	164	231	239	179	409	1240	1450	5000	2870	1190	667
5	133	154	228	251	172	389	1460	1590	5000	2590	1260	612
6	122	139	232	251	188	372	1400	1590	4640	2270	1210	588
7	121	138	243	262	175	347	1260	1640	4360	1990	1200	567
8	125	159	239	270	182	332	1120	1540	4300	1590	1190	547
9	119	204	225	270	170	291	1030	1720	3820	1430	1160	507
10	113	279	222	287	167	302	954	1940	3460	1260	1070	459
11	112	284	223	306	164	300	881	2290	3320	1310	991	477
12	110	255	218	280	172	290	823	2720	3080	1260	961	527
13	101	257	223	273	170	264	830	2800	3560	1200	878	477
14	113	235	209	274	167	223	881	2480	3960	1350	843	431
15	138	222	201	274	162	196	692	2090	3490	1430	810	422
16	192	238	208	284	162	171	622	2700	2640	1360	786	413
17	232	187	201	302	160	150	568	5460	2440	1360	802	422
18	252	228	198	271	159	143	541	5020	2280	3210	826	632
19	275	243	195	245	158	144	625	4120	2320	3850	940	688
20	275	222	198	252	160	139	712	3950	3400	2960	1200	678
21	263	197	195	248	157	149	799	3980	2670	5490	1370	667
22	267	201	195	233	167	175	929	3780	2350	9960	1190	666
23	267	256	189	225	236	205	1370	3600	2250	3770	1040	644
24	277	303	168	218	260	246	1810	3920	2550	2270	1030	621
25	275	246	186	215	276	323	1720	4040	3350	2030	974	610
26	271	233	201	211	310	646	1620	3560	2830	1820	899	599
27	263	230	183	207	292	821	1480	3110	3010	1590	855	570
28	252	227	172	194	255	747	1320	2650	2890	1440	815	538
29	232	236	187		360	782	1090	2370	2990	1330	794	527
30	189	231	196		385	846	899	2300	2470	1350	742	517
31		205	196		389		872		3470	1370		468
TOTAL												
sec. ft.	5628	6677	6484	7020	6515	10673	32694	81834	102930	79550	30916	17798
ac. ft.	11160	13240	12860	13920	12920	21170	64850	162300	204200	157800	61320	35300
(a) ac. ft.	0	0	0	0	0	2930	8890	0	6190	7040	7010	0
(b) ac. ft.	11160	13240	12860	13920	12920	18240	55960	162300	198000	150800	54310	35300

(a) Less upstream reservoir and transmountain water
(b) Corrected total Ac. Ft.

THE YEAR 771,000 Acre-feet
CORRECTED 738,900 Acre-feet

ARKANSAS RIVER AT LAS ANIMAS, COLORADO

Report-Year ending October 31, 1965
U S G S Records—Provisional, subject to revision

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	4.0	10	28	10	11	13	14	262	806	6630	272	54
2	5.0	6.0	24	6.0	10	26	1.5	199	925	3080	199	49
3	5.0	6.0	18	14	11	105	30	204	1980	2320	222	47
4	5.0	8.0	12	19	8.0	105	35	415	1710	1450	190	45
5	4.0	8.0	13	20	11	123	166	474	1910	875	151	30
6	4.0	8.0	8.0	19	9.0	72	186	584	1830	440	133	28
7	4.0	6.0	6.0	11	10	28	235	441	1070	376	121	28
8	6.0	7.0	6.0	10	10	40	258	350	712	300	90	28
9	5.0	8.0	6.0	10	8.0	26	276	345	712	226	86	30
10	4.0	16	6.0	4.0	8.0	12	199	496	367	163	88	30
11	4.0	12	6.0	2.4	8.0	12	127	446	218	109	84	36
12	4.0	8.0	5.0	3.0	9.0	6.0	138	512	140	78	86	35
13	5.0	6.0	7.0	9.0	9.0	8.0	86	529	115	70	78	35
14	5.0	5.0	10	19	7.0	6.0	63	1720	1010	68	84	70
15	5.0	6.0	10	60	7.0	6.0	28	595	806	54	88	107
16	7.0	4.0	14	86	6.0	60	96	758	410	40	107	320
17	7.0	4.0	12	80	8.0	6.0	86	4990	559	32	157	605
18	8.0	6.0	13	89	3.0	7.0	89	12200	137	30	78	540
19	7.0	9.0	13	52	10	7.0	52	15100	82	2500	98	382
20	5.0	7.0	9.0	18	10	7.0	16	8360	61	8140	115	360
21	5.0	8.0	9.0	14	10	11	7.0	3240	50	2790	74	347
22	5.0	8.0	8.0	18	9.0	24	35	2900	50	3020	68	324
23	5.0	6.0	4.0	14	13	16	127	1880	53	11000	109	316
24	6.0	6.0	3.0	19	24	7.0	430	1780	1280	8310	78	316
25	7.0	6.0	9.0	30	10	7.0	365	1690	768	2160	62	296
26	8.0	6.0	10	42	13	8.0	186	1740	470	1450	76	260
27	8.0	6.0	19	12	12	8.0	425	1300	1300	1120	76	268
28	9.0	11	14	9.0	9.0	13	474	825	1530	702	60	268
29	6.0	11	7.0		7.0	77	405	395	1580	409	49	252
30	5.0	11	7.0		6.0	69	375	218	559	540	49	248
31		20	6.0		11		390		2240	438		233
TOTAL												
sec. ft.	167.0	249.0	322.0	699.4	297.0	861.0	5400.5	64948	25440	58920	3228	5987
ac. ft.	331	494	639	1390	589	1710	10710	128800	50460	116900	6400	11880

THE YEAR 330,300 acre-feet

PURGATOIRE RIVER NEAR LAS ANIMAS, COLORADO

Report-Year ending October 31, 1965
U S G S Records—Provisional, subject to revision

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	1.5	2.1	2.8	4.6	7.0	3.8	3.4	4.2	1500	1150	297	49
2	1.5	1.9	2.7	5.8	7.6	4.6	2.6	4.6	1000	770	254	44
3	1.5	1.7	4.5	4.2	7.0	5.4	3.4	4.6	700	460	156	42
4	1.5	1.5	7.0	2.6	5.8	5.4	3.0	5.0	600	1120	92	30
5	1.9	1.2	5.0	2.1	5.8	5.8	2.1	6.6	500	2020	60	28
6	1.9	2.5	7.6	1.9	5.0	17	2.6	8.8	309	960	35	25
7	1.7	1.6	6.2	2.6	5.0	15	4.2	8.2	250	716	29	24
8	1.7	3.0	3.8	5.0	7.6	7.0	2.6	11	200	392	52	20
9	1.5	5.4	6.2	5.4	4.2	5.8	5.0	6.2	500	165	1200	17
10	1.2	4.2	5.0	3.4	3.8	15	3.0	7.6	2000	103	1000	14
11	1.0	3.0	5.0	2	3.8	6.2	2.8	6.6	400	60	289	14
12	1.2	2.2	3.8	1	5.4	4.6	2.6	5.4	268	56	121	12
13	1.2	2.2	3.8	7	5.4	4.6	4.6	11	700	43	79	12
14	1.2	2.3	3.4	20	5.4	3.8	3.0	3400	1000	31	92	14
15	1.5	2.5	2.6	8	4.6	4.2	3.0	196	201	26	80	17
16	1.9	2.9	2.6	9	5.4	3.8	2.8	166	119	32	63	23
17	2.1	3.5	2.3	10	6.6	3.4	2.6	3280	97	33	61	710
18	3.8	3.2	2.1	11	6.2	3.4	4.6	35700	108	30	58	516
19	2.6	3.0	1.7	8.2	9	3.0	3.0	20000	63	512	56	156
20	4.2	2.9	1.5	3.4	13	3.0	2.3	7000	43	2400	53	148
21	4.6	2.8	1.5	5.0	14	3.0	3.0	5000	34	3000	63	103
22	2.6	3.4	2.1	3.8	19	3.0	3.0	3500	77	4000	86	75
23	2.1	4.2	2.6	15	17	3.4	4.2	2000	121	2500	153	58
24	4.6	3.4	5.0	5	15	3.4	376	600	711	1500	101	47
25	1.7	3.0	12	6	9.4	3.4	522	200	264	700	80	43
26	1.7	3.4	12	6	15	3.8	224	300	140	400	82	43
27	1.7	3.4	8.2	2.6	12	3.4	110	2000	946	300	61	43
28	1.9	2.8	4.6	6.2	7.0	3.4	73	616	1270	250	52	43
29	6.2	2.6	12		4.6	3.4	37	500	896	500	53	43
30	1.7	2.8	5.0		3.8	2.8	15	40	388	700	49	43
31		4.5	3.8		3.8		8.2		1020	1100		43
TOTAL												
sec. ft.	65.4	89.1	148.4	166.8	244.2	157.8	1438.6	84587.8	16425	26029	4907	2497
ac. ft.	130	177	294	331	484	313	2850	167800	32580	51630	9730	4950

THE YEAR 271,300 acre-feet

INFLOW INTO JOHN MARTIN RESERVOIR

Report-Year ending October 31, 1965

U S G S Records—Provisional, subject to revision

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	5.5	12	31	15	18	17	17	266	2310	7780	569	103
2	6.5	7.9	27	12	18	31	4.1	204	1920	3850	453	93
3	6.5	7.7	22	18	18	110	33	209	2680	2780	378	89
4	6.5	9.5	19	22	14	110	38	420	2310	2570	282	75
5	5.9	9.2	18	22	17	129	168	481	2410	2900	211	58
6	5.9	10	16	21	14	89	189	593	2140	1400	168	51
7	5.7	7.6	12	14	15	43	239	449	1320	1090	150	52
8	7.7	10	9.8	15	18	47	261	361	912	692	142	48
9	6.5	13	12	15	12	32	281	351	1210	391	1290	47
10	5.2	20	11	7.4	12	27	202	504	2370	266	1090	44
11	5.0	15	11	4.4	12	18	130	453	618	169	373	50
12	5.2	10	8.8	4.0	14	11	141	517	408	134	207	47
13	6.2	8.2	11	16	14	13	91	540	815	113	157	47
14	6.2	7.3	13	39	12	10	66	5120	2010	99	176	84
15	6.5	8.5	13	68	12	10	31	791	1010	80	168	124
16	8.9	6.9	17	95	11	9.8	99	924	529	72	170	343
17	9.1	7.5	14	90	15	9.4	89	8270	656	65	218	1320
18	12	9.2	15	100	9.2	10	94	47900	245	60	136	1060
19	9.6	12	15	60	19	10	55	35100	145	3010	154	538
20	9.2	9 9	10	21	23	10	18	15400	104	10500	168	508
21	9.6	11	10	19	24	14	10	8240	84	5790	137	450
22	7.6	11	10	22	28	27	38	6400	127	7020	154	399
23	7.1	10	6.6	29	30	19	131	3880	174	13500	262	374
24	11	9.4	8.0	24	39	10	806	2380	1990	9810	179	363
25	8.7	9.0	21	36	19	10	887	1890	1030	2860	142	339
26	9.7	9.4	22	48	28	12	410	2040	610	1850	158	303
27	9.7	9.4	27	15	24	11	535	3300	2250	1420	137	311
28	11	14	19	15	16	16	547	1440	2800	952	112	311
29	12	14	19		12	80	442	895	2480	909	102	295
30	6.7	14	12		10	72	390	258	947	1240	98	291
31		24	9.8		15		398		3260	1540		276
TOTAL												
sec. ft.	232.9	336.6	470.0	866.8	542.2	1017.2	6840.1	149576	41874	84912	8141	8493
ac. ft.	462	668	932	1720	1080	2020	13570	296700	83060	168400	16150	16850

THE YEAR 601,600 acre-feet

CONTENTS OF JOHN MARTIN RESERVOIR

Report-Year ending October 31, 1965
Corps of Engineers records—Provisional, subject to revision
Midnight contents in Acre Feet from capacity table dated Nov. 1, 1962

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	0	0	393	1368	2937	2428	0	0	338348	387869	406850	369032
2	0	0	420	1403	2937	642	0	0	344068	390746	401451	369032
3	0	0	438	1425	2937	0	0	0	368066	390368	396287	369032
4	0	0	459	1448	2937	0	0	0	372655	388116	391249	368912
5	0	0	485	1477	2937	0	0	0	375312	385402	386142	369032
6	0	0	506	1499	2947	0	0	0	379851	381330	381331	368912
7	0	0	534	1521	2966	0	0	0	381454	376643	378864	368670
8	0	0	561	1538	2986	0	0	0	381454	374708	378371	368549
9	0	0	601	1556	3005	0	0	0	381084	373622	377754	368066
10	0	0	622	1567	3025	0	0	0	380714	371327	375432	367462
11	0	0	635	1573	3044	0	0	0	379604	368912	375071	366979
12	0	0	655	1573	3054	0	0	0	378001	366375	374709	366617
13	0	0	677	1595	3102	0	0	0	375071	363616	373622	366134
14	0	0	702	1634	3131	0	0	1055	375312	361133	372897	365651
15	0	14	727	1705	3151	0	0	6368	375916	358534	371810	365047
16	0	30	756	1935	3189	0	0	6300	374588	356170	370965	364805
17	0	37	782	2039	3209	0	0	15336	373380	353806	369999	367704
18	0	48	809	2253	3228	0	0	179425	371689	351930	369153	369878
19	0	69	843	2436	3248	0	0	222978	369636	355224	368549	370723
20	0	98	881	2549	3354	0	0	259918	367704	374588	368549	371327
21	0	135	915	2588	3413	0	0	277554	365651	386019	369032	372051
22	0	171	942	2646	3442	0	0	285582	363261	393894	368791	372655
23	0	210	968	2646	3494	0	0	295316	361488	410063	368791	373018
24	0	234	1002	2656	3527	0	0	307912	363143	428087	369032	373622
25	0	253	1032	2714	3560	0	0	313309	363734	429557	369153	373743
26	0	278	1066	2820	3614	0	0	320916	364207	429156	369153	374105
27	0	296	1108	2879	3713	0	0	329756	368549	429290	369274	374588
28	0	312	1171	2918	3746	0	0	333035	376158	425976	369274	374829
29	0	325	1222		3768	0	0	334278	378987	420862	369274	375312
30	0	339	1278		3779	0	0	335409	376767	416141	369032	375433
31		362	1318		3790		0		378124	411477		375433

* * * *

OUTFLOW FROM JOHN MARTIN RESERVOIR

OUTFLOW FROM JOHN MARTIN RESERVOIR

Report-Year ending October 31, 1965
U S G S Records—Provisional, Subject to Revision

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	31	28	1.8	1.6	15	604	81	354	4.3	2320	3250	45
2	29	28	1.8	1.6	14	982	46	246	5.7	2560	2660	46
3	23	26	1.8	3.6	14	515	38	221	5.2	3160	2580	46
4	28	25	1.8	16	15	136	59	331	5.7	3080	2520	45
5	29	26	1.8	14	14	144	128	516	52	3170	2430	45
6	28	26	1.8	14	14	165	252	696	147	2990	2370	81
7	24	26	1.8	14	15	149	318	577	474	3090	1680	134
8	23	24	1.8	14	14	120	372	433	756	1460	527	154
9	25	29	1.8	14	15	81	345	310	1070	994	543	194
10	26	33	1.8	15	14	65	268	423	1230	1240	1410	227
11	25	33	1.8	14	15	43	216	490	1430	1280	543	233
12	24	33	1.8	16	15	51	175	464	1480	1270	538	227
13	26	17	1.8	19	15	45	138	660	1270	1230	538	227
14	24	19	1.8	16	16	48	108	438	469	1180	501	262
15	22	17	1.8	16	16	45	81	678	979	1180	485	272
16	25	9.0	1.5	17	16	38	69	900	1050	1160	527	280
17	28	7.6	1.5	17	16	35	133	307	1050	1150	454	227
18	29	2.6	1.5	16	22	36	102	17	1060	1070	428	162
19	31	2.8	1.5	16	16	35	112	17	1030	956	428	122
20	30	2.3	1.5	16	16	34	69	16	1030	846	230	113
21	28	2.3	1.5	16	16	33	40	17	1070	738	132	124
22	25	2.3	1.5	16	14	40	30	6.2	1060	1820	124	115
23	30	2.3	1.5	18	15	43	75	6.6	1060	3250	127	107
24	26	2.3	1.5	17	22	34	408	7.6	525	3320	113	107
25	30	2.0	1.6	15	16	30	935	5.2	712	3830	107	113
26	28	2.0	1.6	15	16	30	618	4.8	858	2730	104	127
27	29	2.0	1.6	15	15	31	538	4.8	652	1640	102	127
28	28	2.0	1.6	15	15	36	600	4.8	521	2810	100	127
29	28	1.8	1.6		16	46	549	4.3	1380	3680	98	122
30	28	1.8	1.6		16	112	501	4.3	2140	3210	63	122
31		1.8	1.5		15		459		2010	3520		124
TOTAL												
sec. ft.	810	436.9	51.6	397.8	483	3806	7863	8159.6	26585.9	65934	25712	4457
ac. ft.	1610	867	102	789	958	7550	15600	16180	52730	130800	51000	8840

THE YEAR 287,000 acre-feet

JOHN MARTIN RESERVOIR — RELEASES OF FLOOD STORAGE — FLOOD POOL

Report Ending October 31, 1965

(U.S.G.S. and U.S. Army Corps of Engineers Records—Provisional, Subject to revision)

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1										1220	3250	
2	Note:									1460	2660	
3	Reports from U. S. Geological Survey and U. S.									2060	2580	
4	Corps of Engineers, Data from both reports was									1980	2520	
5	adjusted to agree with the recording chart at the									2070	2430	
6	gage. Adjustment was also necessary to compensate									1890	2370	
7	for the shifting channel during periods of high						Opened: 11:00 A.M.		274	1990	1491	Closed:
8	flow.								632	360*		4:00 P.M.
9									1070			
10									1230			
11									1430			
12									1480			
13							Closed: 3:00 P.M.		1170			
14												
15												
16												
17												
18												
19												
20												
21												
22										1820	Opened: 9:00 A.M.	
23										3250		
24										3320		
25										3830		
26										2730		
27										1640		
28										2810		
29							Opened: 11:00 A.M.		412	3680		
30									1040	3210		
31									910	3520**		
TOTAL												
sec. ft.									9648	42840	17301	
ac. ft.									19132	84952	34308	

THE YEAR: 138,392 Ac. Ft.

* Release discontinued at reservoir gage elevation of 3851.91 by Corps of Engineers order of 7-13-65

** Measured flow by U. S. Geological Survey.

ARKANSAS RIVER AT LAMAR, COLORADO

Report-Year ending October 31, 1965
U S G S Records—Provisional, Subject to Revision

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	4.0	2.1	0.5	0.7	0.7	18	52	31	127	1780	2940	44
2	4.3	2.1	.5	.9	.5	330	40	15	117	1930	2510	36
3	2.9	1.4	.5	.9	.5	323	24	14	1190	2440	2230	33
4	2.1	1.4	.5	.9	.7	33	22	22	290	2510	2160	30
5	3.2	2.3	.6	.9	.6	63	31	313	160	2460	2140	25
6	4.3	2.6	.5	.7	.7	65	53	117	131	2320	2120	26
7	2.1	1.6	.5	.9	.7	73	59	106	131	2330	2200	21
8	1.6	1.1	.5	.9	.7	53	55	50	247	1680	698	15
9	1.6	2.0	.4	.9	.9	41	41	32	328	504	328	12
10	1.4	3.5	.3	.7	1.1	38	36	20	752	639	750	15
11	2.6	6.6	.2	.9	1.3	34	36	32	991	674	427	18
12	1.8	17	.1	1.1	1.3	25	38	22	1060	656	244	17
13	1.6	4.0	.2	1.1	1.1	24	53	34	1180	644	211	14
14	1.6	2.0	.2	1.1	.9	22	40	215	272	590	190	11
15	1.6	5.2	.2	.6	.9	20	41	63	253	570	158	9.5
16	1.6	5.7	.3	.7	1.3	17	32	381	570	560	148	9.0
17	1.4	1.1	.4	.6	1.1	13	41	598	518	560	154	44
18	1.6	.8	.5	.5	.9	8.1	42	25000	473	550	108	102
19	1.6	.8	.5	.4	1.3	6.6	36	5990	464	460	112	37
20	2.0	.7	.5	.4	1.3	7.1	42	383	443	419	198	11
21	1.6	.7	.6	.5	1.3	5.7	31	220	423	262	127	20
22	2.9	.7	.7	.6	1.4	4.6	20	160	411	681	93	35
23	3.2	.5	.7	.5	1.3	9.5	16	129	387	2350	65	33
24	3.2	.4	.7	1.1	1.3	11	975	3700	324	2820	59	33
25	2.1	.5	.7	.5	1.4	8.6	420	1210	81	2860	54	32
26	2.6	.6	.7	.3	1.3	7.1	277	969	307	2940	54	32
27	1.6	.6	.7	.4	1.6	6.2	50	415	167	1350	53	35
28	.7	.6	.7	.6	1.6	4.0	37	220	125	1680	48	36
29	2.3	.6	.9		1.6	7.1	46	162	300	3030	48	17
30	4.0	.7	.7		1.6	16	18	137	1230	2710	50	7.5
31		.6	.7		1.4		25		1430	3010		7.0
TOTAL												
sec. ft.	69.1	70.5	15.7	20.3	34.3	1293.6	2729	40760	14882	47969	20677	817.0
ac. ft.	137	140	31	40	68	2570	5410	80850	29520	95150	41010	1620

THE YEAR 256,500 acre-feet

ARKANSAS RIVER AT THE COLORADO-KANSAS STATELINE

Report-Year ending October 31, 1965
U S G S Records—Provisional, Subject to Revision

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	20	20	18	28	27	26	24	71	415	1150	3280	245
2	19	18	19	30	25	26	25	34	378	1430	3590	239
3	24	18	20	36	24	86	26	40	347	1800	3050	228
4	29	20	19	34	25	176	24	33	3090	2300	2530	223
5	18	20	19	34	28	65	24	37	850	2650	2390	210
6	20	23	18	32	36	45	22	37	445	2660	2250	183
7	19	23	17	30	32	38	22	68	369	2380	2140	159
8	19	23	18	29	33	38	20	80	335	2190	2000	155
9	21	20	18	30	32	34	22	47	567	1140	1080	149
10	21	19	18	30	29	33	23	44	805	721	814	147
11	19	20	18	30	28	33	23	52	1080	746	976	150
12	18	21	18	28	29	32	19	49	1140	746	761	151
13	19	23	19	26	30	30	24	48	1150	737	626	139
14	18	23	18	24	29	30	24	74	1140	713	521	130
15	18	20	18	23	26	28	24	77	534	653	474	136
16	20	21	20	23	27	30	28	157	440	652	450	159
17	19	23	21	24	32	28	26	65000	606	633	430	283
18	18	25	20	29	26	27	17	101000	560	605	464	447
19	18	23	19	30	25	26	17	50000	503	581	467	401
20	19	20	18	29	30	26	22	8000	503	2080	580	289
21	18	19	18	27	37	26	18	2000	491	2640	733	263
22	19	19	19	27	36	26	20	1500	509	4560	491	230
23	20	19	22	8.0	30	26	21	1000	485	2270	396	210
24	19	20	24	15	26	26	39	1500	479	5020	360	198
25	18	19	28	24	24	26	669	6600	445	5300	380	198
26	18	19	22	26	24	26	456	4700	554	3840	343	178
27	19	18	22	30	28	24	300	2700	1010	2770	310	168
28	20	18	21	28	32	24	151	790	1860	1460	267	165
29	21	19	21		30	24	122	612	522	1870	255	170
30	22	18	29		29	26	111	445	430	3000	244	170
31		18	28		30		92		940	2510		168
TOTAL												
sec. ft.	590	629	627	764.0	899	1111	2455	246795	22982	61807	32652	6341
ac. ft.	1170	1250	1240	1520	1780	2200	4870	489500	45580	122600	64760	12580

THE YEAR 749,000 acre-feet

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

ARKANSAS RIVER AT GARDEN CITY, KANSAS

Report-Year Ending October 31, 1965
U S G S Records—Provisional, Subject to Revision

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	9.0	10	7.5	2.8	6.0	15	3.2	12	1350	146	2320	415
2	8.5	10	7.0	3.2	6.5	14	1.6	11	1140	264	2340	397
3	7.5	10	7.0	3.2	7.0	14	.1	14	974	490	2340	392
4	8.5	9.5	7.5	3.6	7.0	12	.3	14	848	600	2140	379
5	7.0	9.0	8.0	3.9	7.5	13	.5	11	1110	836	1880	342
6	6.0	8.0	8.0	4.6	7.5	12	0	7.7	1200	968	1760	309
7	7.0	9.0	8.5	4.6	6.0	14	13	7.4	902	1030	1710	306
8	6.0	9.0	8.0	5.3	6.0	13	20	8.4	705	1060	1700	298
9	6.5	9.0	5.6	5.0	7.0	12	12	7.7	595	1590	1730	288
10	7.5	10.0	3.9	5.0	6.5	8.4	12	8.0	545	1240	1430	281
11	9.0	9.0	3.6	3.9	6.5	2.8	11	7.4	635	722	993	267
12	9.5	7.5	3.2	2.8	7.0	5.0	11	9.0	740	390	794	257
13	10	7.0	3.6	2.5	7.0	4.1	11	7.1	818	281	818	248
14	10	8.0	3.6	3.2	7.0	7.4	8.4	6.8	818	224	656	236
15	9.0	8.0	3.6	4.2	6.5	6.5	7.4	7.7	758	203	540	230
16	12	8.5	3.9	6.0	8.0	4.5	7.1	7.7	590	151	470	224
17	10	8.0	4.2	6.0	8.0	4.7	7.1	7.7	346	124	415	242
18	8.5	8.5	3.9	5.6	8.0	3.2	7.4	11300	245	91	379	2250
19	9.0	8.0	3.6	6.5	6.5	2.0	7.1	104000	215	71	379	3400
20	8.0	7.5	3.9	7.0	7.0	2.2	7.7	46700	194	344	535	1140
21	7.5	8.0	3.6	6.0	9.0	2.2	8.0	16400	169	1080	782	966
22	7.5	7.5	2.8	6.0	13	3.4	8.4	5300	139	824	874	861
23	8.0	8.0	3.6	6.0	12	2.2	8.4	2360	114	1870	770	708
24	8.0	8.5	2.8	5.3	8.0	3.9	13	1940	104	1720	656	620
25	7.0	7.0	2.8	5.6	6.0	5.9	7.7	2510	89	2410	578	575
26	7.0	7.0	2.8	5.6	9.5	5.6	7.7	3870	85	3720	535	551
27	7.5	7.0	2.8	6.0	15	5.9	7.4	4810	68	3370	515	528
28	8.0	7.5	2.8	5.6	16	6.5	8.4	2920	151	3000	490	502
29	7.0	7.0	2.8		16	5.9	9.0	1930	455	1950	465	462
30	9.0	7.0	2.8		18	5.3	10	1590	480	1630	438	418
31		7.5	3.2		19		10		200	2200		394
TOTAL												
sec. ft.	245.0	255.5	140.9	135.0	280.0	216.6	245.9	205784.6	16782	34599	31432	18486
ac. ft.	486	507	279	268	555	430	488	408200	33290	68630	62340	36670

THE YEAR 612,100 acre-feet

DEMANDS BY COLORADO FOR WATER

Report-Year ending October 31, 1965
(Arkansas River Compact Administration Records)

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1				Open: 8:00 A.M.		402				600		50
2						600				600		50
3				Empty: 9:00 A.M.		222				600		50
4										600		50
5										600		50
6							Open: 8:30 A.M.		130	600		83
7									200	600	189*	132
8							Closed: 3:00 P.M.		124	600	516	150
9										663	550	184
10										700	550	200
11									Open:	700	550	200
12									4:00 P.M.	700	550	200
13									99	650	550	226
14						Open: 5.00 P.M.		116	434	600	517	279
15								526	533	600	500	300
16								535	550	600	500	300
17						Closed: 7:30 A.M.		155	550	600	467	235
18									550	537	450	178
19									550	500	450	134
20									550	400	223	125
21	Note: Variations in discharge represent release								550	282*	100	131
22	changes by order of the Compact Secretary. Forty-								550		100	134
23	One change orders were issued during the year.								550		100	125
24									182		100	125
25									469		100	125
26									365		100	125
27									192		100	125
28									132		100	125
29									468		100	125
30									600		67	125
31									609		Closed: Midnight	125
TOTALS												
Sec. ft.						1224		1332	8474	12332	7529	4576
Ac. Ft.						2427		2641	16804	24454	14930	9074

THE YEAR: 70,330

*Colorado demand was supplied by flood water released from the flood pool from 10:30 P.M. 8-21 to 2:00 P.M. on 9-7-65. Secy's order No. 25.

* * * *

DEMANDS BY KANSAS FOR WATER

DEMANDS BY KANSAS FOR WATER

Report-Year ending October 31, 1965
(Arkansas River Compact Administration Records)

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1					Open: 8:00 A.M.	268				500		
2						400				500		
3					Empty: 9:00 A.M.	148				500		
4										500		
5										500		
6										500		
7										500		
8										500		
9										500		
10										500		
11										500		
12										500		
13									Open:	500		
14									8:00 A.M.	500		
15						Open: 9:00 A.M.		252	335	500		
16								400	500	500		
17						Closed: 7:30 A.M.		124	500	500		
18									500	500		
19									500	437		
20									500	400		
21	Note: Variations in discharge represent release								500	*376	Closed: 10:30 P.M.	
22	changes by order of the Compact Secretary. Forty-								500			
23	one change orders were issued during the year.								500			
24									165			
25									335			
26									500			
27									480			
28									330			
29									500			
30									500			
31									500			
TOTALS												
Sec. Ft.						816		776	7645	10213		
Ac. Ft.						1618		1539	15160	20252		

THE YEAR: 38,569 Ac. Ft.

*Kansas demand was supplied by flood water released out of the flood pool from 8-21-65 to 9-7-65. Secy's order No. 25. Demand for the remainder of the irrigation season was available from river flow at the state line.

STATELINE FLOW ON DAYS OF KANSAS DEMAND*

Report-Year ending October 31, 1965
U S G S Records—Provisional, subject to revision

DAY	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1										1150		
2										1430		
3										1800		
4						176				2300		
5						65				2650		
6						45				2660		
7										2380		
8										2190		
9										1140		
10										721		
11										746		
12										746		
13										737		
14										713		
15										653		
16										652		
17										633		
18								101000	560	605		
19								50000	503	581		
20								8000	503	2080		
21									491	2640		
22									509	4560		
23									485	2270		
24									479	5020		
25									445			
26									554			
27									1010			
28									1860			
29									522			
30									430			
31									940			
TOTAL												
sec. ft.						286		159000	9291	41057		
ac. ft.						567		315400	18430	81440		

THE YEAR 100,400 Acre-feet

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

APPENDIX "B-13"

* * * *

DIVERSIONS BY DITCHES IN COLORADO WATER DISTRICTS 14 AND 17

Report-Year ending October 31, 1965

Source of Information, A.V.D.A. Reports and Reports from the Fort Lyon Canal Co.
Reservoir Water is that from Upstream Reservoirs above Pueblo
(Units in Acre-Feet)

	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	THE YEAR
Bessemer (River)	4,224	4,025	4,365	147	3,312	4,224	5,128	12,356	16,465	10,897	7,966	8,404	81,513
Res. or Imported	0	0	0	0	0	0	0	0	0	0	0	0	0
Total: Bessemer	4,224	4,025	4,365	147	3,312	4,224	5,128	12,356	16,465	10,897	7,966	8,404	81,513
West Pueblo (River)	56	0	0	0	20	69	286	525	601	375	10	0	1,942
Booth-Orchard Gr. (Riv)	750	0	0	0	480	1,065	1,118	845	1,180	1,069	1,083	1,087	8,677
Excelsior (River)	0	0	0	0	0	0	56	930	2,516	807	553	135	4,997
Collier (River)	0	0	0	0	0	0	176	393	218	216	0	0	1,003
Colorado Canal (River)	0	0	0	2,041	0	0	0	24,552	39,257	19,784	9,748	9,618	105,000
Res. or Imported	0	0	0	0	0	2,804	8,140	0	6,068	6,435	6,647	0	30,094
Total: Colo. Canal	0	0	0	2,041	0	2,804	8,140	24,552	45,325	26,219	16,395	9,618	135,094
Highline (River)	3,123	4,829	5,184	4,428	4,708	3,972	5,941	12,925	17,742	11,593	6,816	3,851	85,112
Res. or Imported	0	0	0	0	0	70	579	0	0	472	222	0	1,343
Total: Highline	3,123	4,829	5,184	4,428	4,708	4,042	6,520	12,925	17,742	12,065	7,038	3,851	86,455
Oxford Canal (River)	833	1,027	1,444	601	942	871	2,132	2,770	5,445	4,603	4,331	1,063	26,062
Otero Canal (River)	0	0	0	0	0	0	100	2,148	2,068	416	0	0	4,732
Catlin Canal (River)	2,869	7,617	8,150	3,240	5,554	7,034	15,245	9,348	12,616	12,552	8,333	4,646	97,204
Res. or Imported	0	0	0	0	0	0	0	0	0	0	0	0	0
Total: Catlin	2,869	7,617	8,150	3,240	5,554	7,034	15,245	9,348	12,616	12,552	8,333	4,646	97,204
Holbrook (River)	0	393	0	2,562	0	0	460	20,578	18,448	6,427	4,759	1,370	54,997
Rocky Ford (River)	4,579	2,782	3,030	593	2,215	5,160	6,137	4,739	4,916	3,554	2,818	3,345	43,868
Ft. Lyon Storage (River)	0	0	0	0	0	0	0	16,000 E	1,000 E	28,000 E	0	0	E 45,000
Ft. Lyon Canal (River)	8,828	15,352	15,510	13,035	16,554	8,609	16,134	24,252	52,742	41,621	43,636	37,156**	293,429
Las Animas Cons. (Riv.)	1,071	1,166	894	728	1,208	1,533	3,214	2,604	5,939	4,319	3,659	1,551	27,886
Las Animas Town (River)	720	6	0	0	0	1,227	1,860	942	652*	1,255*	984*	561*	8,207
TOTAL													
River	27,053	37,197	38,577	27,375	34,993	33,764	57,987	135,907	181,805	147,488	94,696	72,787	889,629
Res. or Imported	0	0	0	0	0	2,874	8,719	0	6,068	6,907	6,869	0	31,437
GRAND TOTAL	27,053	37,197	38,577	27,375	34,993	36,638	66,706	135,907	187,873	154,395	101,565	72,787	921,066

E: Estimated

* Transported by the Las Animas Consolidated Canal for the Las Animas Town Canal.

** 16012 Transported by the Fort Lyon Storage Canal for the Fort Lyon Canal during repairs on the Horse Creek Flume.

APPENDIX "B-14"

* * * *

DIVERSIONS BY DITCHES IN COLORADO WATER DISTRICT 67

Report-Year ending October 31, 1965

Source of Information A.V.D.A. Reports

(Acre-Feet)

	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	THE YEAR
Fort Bent Canal	395*	129	0	0	0	527	1,364	[1] 958	[2] 1,658	3,591	2,118	424	11,164
Keesee Ditch	176	0	0	0	393	817	847	[1] 442	[2] 371	793	311	0	4,150
Amity Canal	0	0	0	0	0	1,313	6,149	[1] 9,064	[2] 18,341	27,282	13,163	6,835	82,147
Lamar Canal	847	607	286	496	450	1,337	3,020	[1] 2,635	[2] 3,498	6,058	3,387	2,171	24,792
Hyde Ditch	0	0	0	0	0	101	184	[1] 212	73	674	492	375	2,111
Manvel Canal	0	0	0	0	0	0	0	[1] 38	0	0	0	0	38
X. Y. and Graham Canals	0	0	0	0	0	0	361	[1] 599	0	0	0	0	960
Buffalo Canal	853	86	0	0	0	2,042	2,941	[1] 1,777	708	2,980	1,360	363	13,110
Sisson-Stubbs Canal	0	0	0	0	0	38	8	[1] 149	0	0	0	0	195
TOTAL	2,271	822	286	496	843	6,175	14,874	[1] 15,874	24,649	41,378	20,831	10,168	138,667

* Includes 186 A. F. carried for Keesee while ditch was being repaired.

[1] Totals for first 17 days of month only; flood conditions for balance of month with no ditch diversions reported.

[2] Totals comprise diversions for latter two thirds of month as a result of flood damages.

APPENDIX "B-15"

* * * *

DIVERSIONS BY DITCHES IN KANSAS

Report-Year ending October 31, 1965
(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	131	0	0	0	0	1,080	1,200	325	0	887	539	288	4,450*
Alamo Canal	0	0	0	0	0	168	359	76	0	0	75	0	678
Ft. Aubrey Canal	29	0	0	0	0	65	377	543	0	154	739	31	1,938
Total Stateline to Syracuse	160	0	0	0	0	1,313	1,936	944	0	1,041	1,353	319	7,066
Amazon Canal	0	0	0	0	0	0	0	813	10,988	9,243	6,392	0	27,436
Great Eastern Canal	0	0	0	0	0	0	1,466	5,256	6,502	11,298	1,190	0	25,712
South Side Ditch	0	0	0	0	73	1,240	0	0	274	4,905	3,600	0	10,092
Farmers Ditch	0	0	0	0	0	0	0	1,861	7,188	6,022	746	978	16,795
Garden City Canal	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Syracuse to Garden City	0	0	0	0	73	1 240	1,466	7,930	24,952	31,468	11,928	978	80,035
Total Stateline to Garden City	160	0	0	0	73	2,553	3,402	8,874	24,952	32,509	13,281	1,297	87,101

* 550 acre-feet returned directly to river.

APPENDIX "B-16"

* * * *

SUMMARY TABULATION

(Acre-Feet)

	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	THE YEAR	FROM APP. NO.
Arkansas River at Las Animas, Colo.	331	494	639	1390	589	1710	10710	128800	50460	116900	6400	11880	330300	B- 2
Purgatoire River near Las Animas, Colo. ..	130	177	294	331	484	313	2850	167800	32580	51630	9730	4950	271300	B- 3
Inflow to John Martin Reservoir	462	668	932	1720	1080	2020	13570	296700	83060	168400	16150	16850	601600	B- 4*
Reservoir contents at end of month	0	362	1318	2918	3790	0	0	335409	378124	411477	369032	375433	375433	B- 5
Net change in reservoir storage	0	+362	+956	+1600	+872	−3790	0	+335409	+42715	+33353	−42445	+6401	+375433	B- 5
Outflow from John Martin Reservoir	1610	867	102	789	958	7550	15600	16180	52730	130800	51000	8840	287000	B- 6
Diversions in District 67, Colo.	2271	822	286	496	843	6175	14874	15874	24649	41378	20831	10168	138667	B-14
Flow at Colorado-Kansas Stateline	1170	1250	1240	1520	1780	2200	4870	489500	45580	122600	64760	12580	749000	B- 8
Diversions in Kansas ..	160	0	0	0	73	2553	3402	8874	24952	32509	13281	1297	87101	B-15
Arkansas River at Garden City, Kansas	486	507	279	268	555	430	488	408200	33290	68630	62340	36670	612100	B- 9

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

APPENDIX "C"

* * * *

SUMMARY OF FLOOD STAGES AND DISCHARGES AT SELECTED SITES

Report-Year ending October 31, 1965
U S G S Records—Provisional, Subject to Revision

Stream and place of determination	Drainage area (sq mi)	Maximum previously known				Provisional maximum June 1965			
		Prior to June 1965		Gage		Day	Time	Gage	Discharge
		Period	Year	Height (ft)	Discharge (cfs)		(hr)	Height (ft)	(cfs)
Arkansas River near Pueblo, Colo.	4,686	1885-87 1889, 1894-1965	1921	[1] 24.66	103,000	17	2130	6.31	[6] 9,270
Arkansas River at Las Animas, Colo.	14,417	1939-65	1955	15.03	44,000	19	1630	14.72	22,100
Purgatoire River near Las Animas, Colo.	3,503	1889, 1922-31, 1948-65	1955	17.00	[2] 70,000	18	1730	15.94	62,500
Rule Creek near Toonerville, Colo.	363	1941-46	1955	17.15	[3] 4,680	17		—	276,000
Arkansas River below John Martin Reservoir, Colo.	18,917	1938-65	1942	[1] 10.46	40,000	18	0545	[7] 10.62	[8]
Caddoa Creek at Caddoa, Colo.	131	1941-46	1945	8.20	[4] 4,200	18	0900	14.1	26,900
Mud Creek near Caddoa, Colo.	186	1942-43	1942	5.30	[5] 718	18	0900	—	53,400
Dry Creek near Lamar, Colo.		—	—	—	—	18	—	—	28,300
Willow Creek near Lamar, Colo.		—	—	—	—	18	—	—	24,300
Arkansas River at Lamar, Colo.	19,780	1913-55, 1959-65	1921	17.0	130,000	18	0800	18.90	72,800
Clay Creek near Lamar, Colo.	228	1951, 1956, 1964	1952	—	27,500	18	—	—	158,000
Big Sandy Creek near Lamar, Colo.		—	—	—	—	17	0900	—	3,600
Smith Arroyo near Granada, Colo.		—	—	—	—	17	—	—	10,600
Wolf Creek near Granada, Colo.		—	—	—	—	17	0900	—	35,300
Granada Creek near Granada, Colo.		—	—	—	—	17	—	—	12,600
Two Buttes Creek near Holly, Colo.	817	1942-46	1944	4.77	1,800	17	0900	—	182,000
Wild Horse Creek at Holly, Colo.	272	1922-35, 1938-50	1935	—	22,000	17	—	—	10,600
Arkansas River near Coolidge, Kans.	25,410	1903, 1950-65	1951	10.67	60,000	17	1200	13.20	158,000
Arkansas River at Syracuse, Kans.	25,763	1902-65	1908	14.7	87,000	17	1900	21.8	—
				—	—	17	2000	—	174,000
Arkansas River at Garden City, Kans.	27,071	1922-65	1951	12.57	33,500	18	2300	16.58	—
				—	—	19	0300	—	130,000

[1] Site and datum then in use.
[2] Greatest flood known occurred Oct. 1, 1904.
[3] At site 9 miles southwest of Caddoa; drainage area, 435 sq mi.
[4] Flood in June 1949 reached a stage of 9.42 ft (discharge, 6,840 cfs).
[5] Flood in June 1949 reached a stage of 23.36 ft (discharge, 38,400 cfs).
[6] Includes diversion to north-side waterworks.
[7] Backwater from Caddoa Creek.
[8] Gates closed 0730 June 17.

APPENDIX "D"

* * * *

RESOLUTION

Leonard Russell Kuiper was born at Lusk, Wyoming, on April 5, 1915, one of eight children, and attended the University of Wyoming, obtaining a degree in Chemical Engineering and starring on the University's basketball team. He served in the Army in the European theatre during World War II, and attained the rank of Lieutenant Colonel.

Mr. Kuiper was City Manager of Delta, Colorado, from 1953 to 1956, and Manager of Public Works for Aurora, Colorado, from 1956 to 1958 when he joined the staff of the Colorado Water Conservation Board.

He first served as Chief Engineer, and was Acting Director of the Colorado Water Conservation Board from September 1961 to July 1963 when Director Sparks served as Natural Resources Director. He was appointed Deputy Director early in 1964 and was serving in that position when he died suddenly on November 4, 1964, in Denver.

Mr. Kuiper directed the technical studies which were instrumental in settling the bitter controversies involving public and private power interests over the Colorado River Storage Project transmission system and was active in working out the plans of the Committee of Fourteen, composed of 14 water officials of the Colorado River Basin, looking toward the solution of a water salinity problem in the basin.

Mr. Kuiper is survived by his widow, Marion; a daughter, Mrs. Cathyann Wear of Beeville, Texas; two sons, Steven and William, of Aurora; and two brothers and three sisters.

WHEREAS, The Arkansas River Compact Administration, the Colorado Water Conservation Board, and the State of Colorado have lost an able, dedicated public servant in the person of Leonard R. Kuiper, a man who, by his calm, reasoning personality, was able to resolve differences of opinion between protagonists to the lasting benefit of the people of the State of Colorado; and

WHEREAS, his services will be seriously missed by the people of the State of Colorado,

NOW, THEREFORE, BE IT RESOLVED, by the Arkansas River Compact Administration that it expresses a deep sense of loss upon the untimely death of Leonard R. Kuiper, and directs that a copy of this resolution be spread upon the minutes of this Administration, and a copy be sent to his widow and family.

APPENDIX "E"

* * * *

RESOLUTION

BE IT RESOLVED BY THE ARKANSAS RIVER COMPACT ADMINISTRATION:

As members of the Arkansas River Compact Administration, we note with sorrow the death of George S. Knapp who passed away on September 20, 1965, at an age lacking three days of 81 years.

He is remembered by the Administration as one of its first members appointed on June 7, 1949, and serving until 1951, when he elected to retire as Chief Engineer, Division of Water Resources, Kansas State Board of Agriculture.

Prior to the establishment of the Administration, Mr. Knapp was a member of the Colorado-Kansas Arkansas River Compact Commission and participated in all of its deliberations beginning with his appointment on March 7, 1945 and continuing to the signing of the Compact on December 14, 1948.

In his work, as a member of the Commission and subsequently during the early period of establishment of the Administration, he applied himself diligently to the solution of numerous complex problems which were encountered. He was truly a gentleman and a scholar attaining eminence in his profession as an engineer and held in high esteem by all who had the privilege of knowing him.

Members of the Arkansas River Compact Administration herewith extend their deepest sympathy to the family of George S. Knapp. It is directed that this resolution be spread upon the minutes of this Administration and that a copy thereof be sent to them.

APPENDIX "F"

* * * *

RESOLUTION

Harry B. Mendenhall, one of the first members of this Administration, served as Commissioner from Colorado from the period 1949 to 1957.

One of the leading citizens of the Arkansas Valley, Mr. Mendenhall was a substantial force in the negotiation and subsequent adoption of the Arkansas River Compact between the States of Colorado and Kansas.

For over a half century, Mr. Mendenhall was a respected and revered citizen of the Arkansas Valley of Colorado. With very little formal education be became a successful banker, cattleman and rancher, while at the same time devoting a great amount of attention to community betterment.

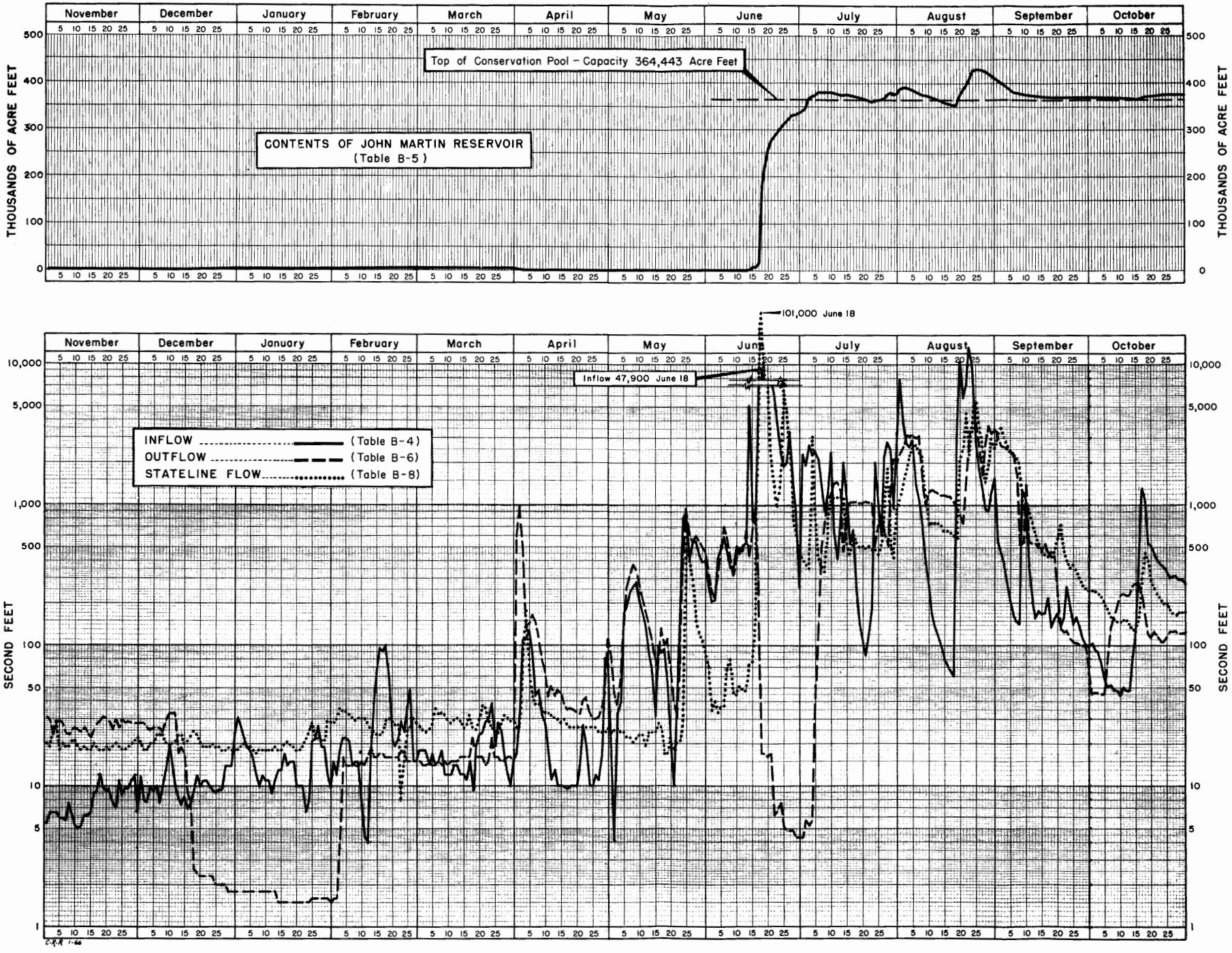
Born at Fairbury, Nebraska, on February 24, 1888, he moved to Rocky Ford, Colorado, in 1908 and resided in that community until his death on September 13, 1965.

Surviving Mr. Mendenhall are his widow, Evelyn C. Mendenhall, two sons, Cover and H. H. Mendenhall of Rocky Ford, Colorado, and a daughter, Mrs. Virginia Pennella of Redlands, California.

WHEREAS, the State of Colorado has lost one of its foremost citizens in the death of Harry B. Mendenhall; and

WHEREAS, both the States of Colorado and Kansas are greatly indebted to him for his outstanding contribution in the successful negotiation of the Arkansas River Compact and for his subsequent services as a member of the Compact Administration,

NOW, THEREFORE, BE IT RESOLVED by the Arkansas River Compact Administration in annual session assembled at Lamar, Colorado, this 21st day of December, 1965, that it expresses its deep regret at the death of Harry B. Mendenhall and directs that a copy of this Resolution be spread upon the minutes of the Administration and that a copy be sent to his widow, sons and daughter.



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

Report Year, November 1, 1964 – October 31, 1965

PLATE I