

Thirteenth
Annual Report
**ARKANSAS RIVER COMPACT
ADMINISTRATION**
(1961)

For the Report Year November 1, 1960, to October 31, 1961

LAMAR, COLORADO

December 12, 1961

THE ADMINISTRATION

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

L. R. KUIPER, DAVID JENKINS AND HACKET SMARTT
for Colorado

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

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TABLE OF CONTENTS

| | |
|---|----|
| Members of the Administration..... | 5 |
| Officers of the Administration..... | 5 |
| Standing Committees | 6 |
| Meetings | 6 |
| Fiscal | 6 |
| Cooperative Studies and Activities..... | 8 |
| Water Supply, Reservoir Operations and Hydrologic Data..... | 9 |
| Gaging Stations | 10 |
| Findings of Fact by the Administration..... | 11 |
| Appendices: | |
| Appendix "A" Auditor's Report | 14 |
| Appendix "B-1" Daily Discharges; Arkansas River near Pueblo, Colorado | 20 |
| Appendix "B-2" Daily Discharges; Arkansas River at Las Animas, Colorado..... | 21 |
| Appendix "B-3" Daily Discharges; Purgatoire River near Las Animas, Colorado..... | 22 |
| Appendix "B-4" Inflow into John Martin Reservoir..... | 23 |
| Appendix "B-5" Daily Contents, John Martin Reservoir..... | 24 |
| Appendix "B-6" Outflow from John Martin Reservoir..... | 25 |
| Appendix "B-7" Daily Discharges; Arkansas River at Lamar, Colorado..... | 26 |
| Appendix "B-8" Daily Discharges; Arkansas River at Colorado-Kansas Stateline | 27 |
| Appendix "B-9" Daily Discharges; Arkansas River at Garden City, Kansas..... | 28 |
| Appendix "B-10" Demands by Colorado for Water..... | 29 |
| Appendix "B-11" Demands by Kansas for Water..... | 30 |
| Appendix "B-12" Stateline Flows on Days of Kansas Demand | 31 |
| Appendix "B-13" Diversions by Ditches in Colorado Water Districts 14 and 17..... | 32 |
| Appendix "B-14" Diversions by Ditches in Colorado Water District 67 | 33 |
| Appendix "B-15" Diversions by Ditches in Kansas, Stateline to Garden City..... | 34 |
| Appendix "B-16" Summary Tabulation | 35 |
| Appendix "C" Resolution concerning Ivan C. Crawford.. | 36 |
| Appendix "D" Resolution concerning Carl G. Paulsen..... | 36 |
| Plate I: Inflow, Outflow and Contents of John Martin Reservoir and Stateline Flow. | |

Annual Report of
ARKANSAS RIVER COMPACT ADMINISTRATION
(1961)

Report Year November 1, 1960 to October 31, 1961

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, 1960 through October 31, 1961 as follows:

1. *Members of the Administration*

Representative of the United States:

Carl G. Paulsen (Nov. 1, 1960 - Feb. 2, 1961)

F. M. Bell (June 23, 1961 - October 31, 1961)

Colorado Representatives:

Felix L. Sparks, Denver, Colorado (Nov. 1, 1960 - Oct. 1, 1961)

L. R. Kuiper, Denver, Colorado (Oct. 24 - Oct. 31, 1961)

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 (Nov. 1, 1960 - Feb. 2, 1961)

F. M. Bell (June 23, 1961 - Oct. 31, 1961)

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)

David Jenkins of Colorado

Engineering Committee:

R. V. Smrha of Kansas (Chairman)

Felix L. Sparks of Colorado (Nov. 1, 1960 - Oct. 1, 1961)

L. R. Kuiper of Colorado (Oct. 24, 1961 - Oct. 31, 1961)

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 16, 1960 | Lamar, Colorado | Annual Meeting |
| March 28, 1961 | Lamar, Colorado | Regular Meeting |
| April 18, 1961 | | Telephonic Meeting |
| June 3, 1961 | | Telephonic Meeting |
| June 23, 1961 | | Telephonic Meeting |
| July 25, 1961 | Lamar, Colorado | Regular Meeting |
| August 12, 1961 | | Telephonic Meeting |
| August 16, 1961 | | Telephonic Meeting |
| October 24, 1961 | Lamar, Colorado | Special Meeting |

5. Fiscal

(a) Balance on Hand October 31, 1960, Auditor's Report..\$4,961.99

(b) Receipts

State of Colorado, September 29, 1961..\$2,970.00

State of Kansas, October 16, 1961..... 1,980.00

4,950.00

\$9,911.99

(c) Disbursements by the Administration—November 1, 1960 to October 31, 1961:

| <i>Voucher No.</i> | <i>Date</i> | <i>Payee and Purpose</i> | <i>Amount</i> |
|---------------------------|-------------|--|-------------------|
| 305 | 12- 2-60 | U. S. Geological Survey, Cooperative Agreement.... | \$ 375.00 |
| 306 | 1- 4-61 | Treasurer of the United States, O.A.S.I. Fund..... | 18.00 |
| 307 | 1- 4-61 | R. W. Rollins, Audit and Service..... | 65.00 |
| 308 | 1- 4-61 | Secretary Salary, Nov. & Dec..... | 195.00 |
| 309 | 1- 4-61 | Mtn. States T. & T. Co., Nov. & Dec. Service..... | 30.45 |
| 310 | 2-23-61 | U. S. Geological Survey, Cooperative Agreement.... | 375.00 |
| 311 | 2-23-61 | Peerless Printing Co., Print 12 Annual Report..... | 605.00 |
| 312 | 3- 7-61 | Mtn. States T. & T. Co., Jan. & Feb. Service..... | 25.20 |
| 313 | 4- 5-61 | Secretary Salary, Jan., Feb. & March..... | 291.00 |
| 314 | 4- 5-61 | Treasurer of the U.S.—Deposit by States..... | 18.00 |
| 315 | 5- 4-61 | Mtn. States T. & T. Co., March & April Service.... | 29.15 |
| 316 | 5- 4-61 | U. S. Geological Survey, Cooperative Agreement.... | 375.00 |
| 317 | 7- 3-61 | Mtn. States T. & T. Co., May & June Service..... | 51.75 |
| 318 | 7- 3-61 | Secretary Salary, April, May & June..... | 291.00 |
| 319 | 7- 3-61 | Treasurer of United States, O.A.S.I. Fund..... | 18.00 |
| 320 | 7- 3-61 | Secretary Mileage, Postage, Mail & Typing..... | 97.12 |
| 321 | 7-24-61 | U. S. Geological Survey, Cooperative Agreement.... | 375.00 |
| 322 | 9- 1-61 | Mtn. States T. & T. Co., July & August Service.... | 45.35 |
| 323 | 10- 5-61 | Valley Agency, Inc.—Secretary & Treasurer Bond.. | 25.00 |
| 324 | 10- 5-61 | Secretary Salary, July, Aug. & Sept. Salary..... | 291.00 |
| 325 | 10- 5-61 | Treasurer of the U.S.—Deposit by States..... | 18.00 |
| 326 | 10-24-61 | U. S. Geological Survey, Cooperative Agreement.... | 412.50 |
| 327 | 10-30-61 | The Star Journal Publishing Corp.—Advertising.... | 1.43 |
| 328 | 10-31-61 | Secretary Salary, Oct.—Typing, Stamps & Mail.... | 145.68 |
| 329 | 10-31-61 | Mtn. States T. & T. Co., Sept. & Oct. Service..... | 35.30 |
| Total Disbursements | | | <u>\$4,208.93</u> |

(d) Balance on hand October 31, 1961.....\$5,703.06

(e) At the regular meeting held July 25, 1961 the Compact Administration adopted the following budget for the fiscal year July 1, 1962 through June 30, 1963 and copies of this budget were duly transmitted to the States of Colorado and Kansas:

| | |
|--|------------|
| Personal Services | \$4,675.00 |
| Secretary Salary | \$1,200.00 |
| Social Security | 50.00 |
| Gage Reports | 1,650.00 |
| Professional Services (Audit of Accounts) | 75.00 |
| Cooperative Gage Replacement and Rehabilitation | 1,700.00 |
| Capital Outlay | 300.00 |
| Maintenance and Operation..... | 1,675.00 |
| Bond, Treasurer | 25.00 |
| Printing | 600.00 |
| Official Publications | 100.00 |
| Travel Expense—Secretary and Employees | 150.00 |
| Typing and Mailing..... | 200.00 |
| Investigation and Inspection..... | 150.00 |
| Telephone and Telegraph..... | 300.00 |
| Office Supplies | 150.00 |
| Total Proposed Budget, 1962-1963..... | \$6,650.00 |
| Estimated Carry-over as of June 30, 1962..... | 1,700.00 |
| Total to be appropriated by Colorado and Kansas..... | \$4,950.00 |

In accordance with Article VIII E (1), the amount of such budget payable by the State of Colorado is sixty percent thereof, or \$2,970.00, and the amount payable by the State of Kansas is forty percent thereof, or \$1,980.00.

- (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, 1960 through October 31, 1961, 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 correla-

tions 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 John Martin Reservoir in accordance with the terms of the Compact and the orders of the Administration. In addition, the Corps furnished members of the Administration with copies of the published report on sedimentation of John Martin Reservoir. 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 Operations and Hydrologic Data

At the beginning of the Compact year the reservoir was empty and it remained empty until 11 A.M. on December 1st, as during November, Colorado demanded the river flow up to 100 cfs as provided under Section A of Article V of the Arkansas River Compact.

The river flow below John Martin Dam during November averaged 57 cfs and Colorado diverted 5,966 acre feet and 3,610 acre feet crossed the stateline into Kansas.

At the end of the winter storage period on March 31st, 1961 the reservoir contained 22,168 acre feet, which was 25,335 acre feet less than the amount on hand on March 31st, 1960. On April 3rd, Kansas called for 200 cfs at which time the reservoir contained 22,556 acre feet. Colorado called for 350 cfs at 9 P.M. on April 11th. Both Colorado and Kansas increased their demands as more ditches started irrigating and at 7:30 P.M. on April 28th the reservoir was empty again.

Outside of the above storage the reservoir only contained water on 24 days in June and 4 days in August. This showed there were very few flash floods or prolonged periods of high water which the reservoir was built to constrain. During June, a flood occurred mostly below the dam and while Colorado was able to divert as much water as passed the dam, the stateline flow during the same time amounted to 21,200 Ac. Ft. or 160% of the flow through the reservoir.

Out of a total of 214 days in the irrigating season the reservoir was empty, and the Colorado ditches operated on priorities 159 days or 74% of the entire season. The quantities of water crossing the Stateline as compared with the flow at the station below the dam showed the following percents:

April 46%, May 54%, June 160%, July 46%, August 38%, September 27% and October 59%.

In closing this section of the report we might add that the Engineering Committee has been assigned to make two studies:

1. Reservoir operations criteria to meet Kansas demands.
2. Hydrologic data on the effect of small pond construction.

These studies will be released at a later date.

8. *Gaging Stations*

Stream-flow records were collected at all of the Compact gaging stations. During the year emphasis was placed on performing additional field work and providing provisional discharge data on a current basis to Administration and State officials. The stations on the Arkansas River at Las Animas and the Purgatoire River at Las Animas were discussed at the July 25, 1961, meeting. It was determined that the needed improvements would have to be delayed because they depended somewhat on bridge construction plans of the Colorado State Highway Department and dike construction and channel rectification plans of the Corps of Engineers.

The budget for the fiscal year July 1, 1961, to June 30, 1962, approved by the Administration contained \$1,650 for partial support of the Compact gaging stations. The final cooperative agreement with the U. S. Geological Survey is as follows:

| | ARCA | USGS | Total |
|---|---------|---------|---------|
| 1. Partial support of following | | | |
| Compact gaging stations..... | \$1,100 | \$1,100 | \$2,200 |
| a. Arkansas River at Las Animas | | | |
| b. Purgatoire River near Las Animas | | | |
| c. Arkansas River below John Martin Reservoir | | | |
| d. Arkansas River near Coolidge, Kansas | | | |
| e. Frontier Ditch near Coolidge, Kansas | | | |
| 2. Operation of Compact gaging station, | | | |
| Arkansas River at Lamar..... | 550 | 550 | 1,100 |
| Total..... | \$1,650 | \$1,650 | \$3,300 |

9. Findings of fact by the Administration

(a) A special Telephonic Meeting was held on April 18, 1961 in accordance with Article IV, Section 3B, of the By-Laws for the purpose of declaring the Reservoir empty and notice to the State Engineer of Colorado that priority administration would commence on April 28, 1961, unless a change of condition justified cancellation or modification of that notice. Priority administration should commence, and decreed rights of water users in Colorado would be administered by the State Engineer of Colorado. The Reservoir was empty at 7:30 P.M. April 28, 1961.

(b) Heavy rains and damaging hail storms occurred in the Valley on June 2, 1961, causing much damage to crops and property, also cancelling the need for irrigation in Colorado below the John Martin Reservoir. Therefore, a telephonic meeting was held on June 3, 1961, for the purpose of declaring water available for storage. The result was that water was available and the gates were closed at 10:30 A.M. at which time storage began and the State Engineer was notified in accordance with Article IV, Section 3B, of the By-Laws.

(c) A special telephonic meeting of the Administration was held on June 23, 1961, in accordance with Article IV, Section 3B, of the By-Laws for the purpose of declaring the Reservoir empty. Notice was given to the State Engineer of Colorado that priority administration would commence on June 28, 1961, unless a change of condition justified cancellation or modification of this notice. Priority administration should commence and decreed rights of water users in Colorado would be administered by the State Engineer. The Reservoir was empty at 10:00 P.M., June 27, 1961.

(d) Mr. McGrath notified the Secretary about 6:00 P.M. Saturday, August 12, 1961 that he had just received word from Mr. Dave Hieser that there was about 5,500 CFS of water passing La Junta.

Upon receiving this information, a telephonic meeting was held Saturday evening, August 12, 1961 for the purpose of finding water available for storage.

It was decided to wait until Sunday morning, August 13th, and if upon further investigation, the Secretary found enough water in sight to warrant closing the gates and declaring water available for storage, he would do so. The gates were closed at 8:30 A.M. on August 13, 1961 and Mr. Whitten, State Engineer, was notified, also Mr. F. C. Snyder, Division Engineer.

(e) A telephonic meeting of the administration was held on August 16, 1961 in accordance with Article IV, Section 3B of the By-Laws for the purpose of declaring the reservoir empty and giving notice to the State Engineer of Colorado.

As a result of said meeting, the reservoir was declared to become empty on August 18th. Unless a change of conditions justified cancellation or modification of that notice, that priority administration should commence, and decreed rights of water users in Colorado would be administered by the State Engineer.

The State Engineer was notified, and the reservoir became empty at 1:00 A.M. August 18, 1961. The river continued to be administered by the State Engineer until 8:00 A.M. November 1, 1961, at which time the gates were closed and winter storage started.

The above Findings and Notifications were in form similar to those published in the Fifth Annual Arkansas River Compact Administration Report of 1953, Appendix C.

Respectfully submitted,

ARKANSAS RIVER COMPACT ADMINISTRATION
BY:

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

L. R. KUIPER
DAVID JENKINS
HACKETT SMARTT
Colorado Members of the Administration

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

Lamar, Colorado
December 12, 1961

APPENDICES

for

Annual Report of the

Arkansas River Compact Administration

For the Report-Year November 1, 1960 to October 31, 1961

- 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 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" —Resolution concerning Ivan C. Crawford.
- APPENDIX "D" —Resolution concerning Carl G. Paulsen
- PLATE I —Graphs showing inflow, outflow and contents of John Martin Reservoir and Stateline Flow for Report-Year.

APPENDIX "A"

* * * *

AUDITOR'S REPORT
ALVIN LARSEN AND COMPANY

* * * *

Certified Public Accountants
Lamar, Colorado

December 14, 1961

To The Representatives
Arkansas River Compact Administration
Lamar, Colorado

Gentlemen:

We have examined the receipts and disbursements of the Arkansas River Compact Administration for the fiscal year ended October 31, 1961. 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 Balance for the Fiscal Year ended October 31, 1961.

Schedule 1—Statement of Receipts and Disbursements compared with Budget for the Budget Year July 1, 1960 to June 30, 1961.

The scope of our examination included the verification of receipts and the vouching of disbursements.

The requests for payment of funds to the administration for the budget year ended June 30, 1962 were sent to Colorado and Kansas on September 2, 1961. The amounts (Colorado—\$2,970.00 and Kansas—\$1,980.00) were received and placed on deposit in the First National Bank of Lamar on September 29, 1961 and October 16, 1961 respectively.

The disbursements, as listed, were all supported by cancelled checks drawn on the Compact's bank account. Amounts so expended were substantiated by verification of payee's statements, authorization of payment as evidenced in minutes of the Compact's meetings, or other supporting documents.

The Secretary's travel expense for the fiscal year ended October 31, 1961 was \$116.80. He drove 1060 miles at \$0.08 per mile for \$84.80 plus 32 days reading gage at Lamar at \$1.00 per day.

An analysis of the \$1,912.50 Surface Water Investigations by the U. S. Geological Survey is shown below.

| | |
|---|-------------------|
| December 21, 1960 (Period 7/1/60 to 12/31/60—1st Qtr.) | |
| Based on \$1,500 per annum..... | \$ 375.00 |
| February 23, 1961 (Period 10/1/60 to 12/31/60—2nd Qtr.) | |
| Based on \$1,500 per annum..... | 375.00 |
| May 4, 1961 (Period 1/1/61 to 3/31/61—3rd Qtr.) | |
| Based on \$1,500 per annum..... | 375.00 |
| July 24, 1961 (Period 4/1/61 to 6/30/61—4th Qtr.) | |
| Based on \$1,500 per annum..... | 375.00 |
| October 21, 1961 (Period 7/1/61 to 9/30/61—1st Qtr.) | |
| Based on \$1,650 per annum..... | 412.50 |
| | <u>\$1,912.50</u> |

Financial Position of the Administration compared with last year is shown below.

COMPARATIVE BALANCE SHEET

| | October 31, 1961 | October 31, 1960 |
|--|---------------------|---------------------|
| ASSETS | | |
| Cash in Bank..... | \$5,703.06 | \$4,961.99 |
| Equipment (Portable Typewriter)..... | 92.50 | 92.50 |
| Total Assets | <u>\$5,795.56</u> | <u>\$5,054.49</u> |
| LIABILITIES AND CAPITAL | | |
| O.A.S.I. Withheld but not remitted..... | \$ 3.00 | \$ 3.00 |
| Unexpended Fund Balance..... | 5,700.06 | 4,958.99 |
| Expended Fund Balance for Equipment..... | 92.50 | 92.50 |
| Total Liabilities and Capital..... | <u>\$5,795.56</u> | <u>\$5,054.49</u> |

OPINION

In our opinion the Statement of Receipts and Disbursements and Changes in Fund Balance presents fairly the cash balance of the Arkansas River Compact Administration at October 31, 1961 and the cash transactions for the fiscal year then ended on a basis consistent with that of the previous year.

Respectfully submitted,

ALVIN LARSEN AND COMPANY

By MARVIN STRAIT

Certified Public Accountant

EXHIBIT A

ARKANSAS RIVER COMPACT ADMINISTRATION

Lamar, Colorado

STATEMENT OF RECEIPTS AND DISBURSEMENTS AND CHANGES IN FUND BALANCE FOR THE FISCAL YEAR ENDED

OCTOBER 31, 1961

CASH IN BANK NOVEMBER 1, 1960.....\$4,961.99
LESS: Unremitted Payroll Deduction on Secretary's Salary..... 3.00

FUND BALANCE NOVEMBER 1, 1960.....\$4,958.99

RECEIPTS:

Revenue from assessments:

Colorado Portion 60%.....\$2,970.00
Kansas Portion 40%..... 1,980.00

TOTAL RECEIPTS 4,950.00

TOTAL AVAILABLE\$9,908.99

DISBURSEMENTS:

Surface Water Investigations

U. S. Geological Survey.....\$1,912.50

Salary of Secretary..... 1,200.00

Printing Annual Report..... 605.00

Telephone and Telegraph..... 217.20

Travel Expense of Secretary..... 116.80

Audit Fee 65.00

Payroll Taxes

Administrations Share of O.A.S.I..... 36.00

Typing and Mailing..... 25.00

Premium on Treasurer's Bond..... 25.00

Office Supplies and Postage..... 5.00

Advertising Special Meeting..... 1.43

TOTAL DISBURSEMENTS 4,208.93

FUND BALANCE OCTOBER 31, 1961.....\$5,700.06

REPRESENTED BY:

Cash in Bank—First National Bank of Lamar—

Per Direct Confirmation.....\$6,297.97

LESS: Outstanding Checks

No. 326 U. S. Geological Survey.....\$ 412.50

No. 327 Star Journal Publishing..... 1.43

No. 328 Hackett Smartt 145.68

No. 329 Mountain States Tel. & Tel... 35.30 594.91

\$5,703.06

October Payroll Deduction on Secretary's Salary..... 3.00

\$5,700.06

SCHEDULE 1

ARKANSAS RIVER COMPACT ADMINISTRATION

Lamar, Colorado

STATEMENT OF RECEIPTS AND DISBURSEMENTS COMPARED WITH BUDGET FOR THE BUDGET YEAR

JULY 1, 1960 TO JUNE 30, 1961

| | <u>Actual</u> | <u>Budget</u> |
|-----------------------------------|---------------|---------------|
| CASH IN BANK—JULY 1, 1960..... | \$1,549.10 | |
| RECEIPTS: | | |
| Revenue from Assessments | | |
| Colorado Portion 60%..... | \$2,880.00 | \$2,880.00 |
| Kansas Portion 40%..... | 1,920.00 | 1,920.00 |
| TOTAL RECEIPTS | 4,800.00 | 4,800.00 |
| TOTAL AVAILABLE | \$6,349.10 | \$4,800.00 |
| DISBURSEMENTS: | | |
| Surface Water Investigations | | |
| U. S. Geological Survey..... | \$1,850.00 | \$1,500.00 |
| Salary of Secretary..... | 1,200.00 | 1,200.00 |
| Printing Annual Report..... | 605.00 | 600.00 |
| Telephone and Telegraph..... | 222.15 | 300.00 |
| Travel | 199.04 | 150.00 |
| Audit Fee | 65.00 | 75.00 |
| Payroll Taxes | | |
| Administrations Share | 37.50 | 50.00 |
| Typing and Mailing..... | 25.00 | 200.00 |
| Premium on Treasurer's Bond..... | 25.00 | 25.00 |
| Office Supplies and Postage..... | 18.09 | 150.00 |
| Investigation and Inspection..... | | 150.00 |
| Official Publications | | 100.00 |
| Capital Outlay | | 300.00 |
| TOTAL DISBURSEMENTS | \$4,246.78 | \$4,800.00 |
| CASH IN BANK—JUNE 30, 1961..... | \$2,102.32 | |

NOTE 1—The Budget Year is for the period July 1, 1960 to June 30, 1961 which differs from the "Report Year" of November 1, 1960 to October 31, 1961. In order to compare actual operations with the budget it was necessary to combine the related months for the last two "Report Years."

NOTE 2—In order to make this statement comparable with prior years and with the budget and to keep from unintentionally shifting expenditures to different periods, we have, with the concurrence of the Secretary, included in this Schedule four checks dated July 3, 1961 that were intended to be dated June 30, 1961.

APPENDIX "B-1"

* * * *

ARKANSAS RIVER NEAR PUEBLO, COLORADO

ARKANSAS RIVER NEAR PUEBLO, COLORADO Report-Year Ending October 31, 1961 U.S.G.S Records—Provisional, Subject to Revision

| DAY | NOV. | DEC. | JAN. | FEB. | MAR. | APR. | MAY | JUNE | JULY | AUG. | SEPT. | OCT. |
|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 246 | 272 | 299 | 275 | 226 | 217 | 58 | 1840 | 977 | 1250 | 899 | 662 |
| 2 | 247 | 271 | 319 | 281 | 227 | 197 | 84 | 2260 | 910 | 1680 | 876 | 661 |
| 3 | 251 | 277 | 297 | 281 | 233 | 232 | 96 | 2380 | 788 | 2220 | 1200 | 578 |
| 4 | 248 | 290 | 304 | 287 | 237 | 264 | 123 | 2200 | 744 | 1510 | 1150 | 537 |
| 5 | 243 | 298 | 332 | 281 | 263 | 384 | 166 | 1080 | 711 | 1300 | 1100 | 518 |
| 6 | 232 | 255 | 309 | 281 | 251 | 384 | 204 | 813 | 744 | 1240 | 1210 | 527 |
| 7 | 232 | 274 | 288 | 263 | 239 | 367 | 184 | 889 | 843 | 1120 | 1230 | 527 |
| 8 | 237 | 287 | 302 | 257 | 232 | 339 | 210 | 1430 | 689 | 1060 | 1200 | 464 |
| 9 | 222 | 290 | 288 | 275 | 212 | 303 | 174 | 1660 | 1580 | 1080 | 1180 | 421 |
| 10 | 232 | 347 | 316 | 287 | 207 | 276 | 135 | 2000 | 744 | 1140 | 1340 | 682 |
| 11 | 232 | 347 | 374 | 301 | 192 | 302 | 121 | 2420 | 767 | 1180 | 1400 | 704 |
| 12 | 248 | 338 | 309 | 301 | 212 | 283 | 92 | 2200 | 876 | 2000 | 1500 | 577 |
| 13 | 236 | 331 | 295 | 294 | 217 | 193 | 97 | 1920 | 470 | 1390 | 1260 | 491 |
| 14 | 230 | 282 | 309 | 287 | 201 | 187 | 329 | 1790 | 488 | 1240 | 1240 | 557 |
| 15 | 246 | 278 | 302 | 281 | 212 | 202 | 430 | 1970 | 645 | 1260 | 1120 | 587 |
| 16 | 234 | 269 | 316 | 281 | 234 | 197 | 365 | 2130 | 533 | 842 | 1200 | 638 |
| 17 | 225 | 304 | 337 | 282 | 316 | 187 | 322 | 1830 | 394 | 734 | 1070 | 715 |
| 18 | 254 | 330 | 344 | 282 | 352 | 167 | 272 | 1530 | 326 | 833 | 1360 | 737 |
| 19 | 286 | 352 | 336 | 270 | 344 | 162 | 528 | 1440 | 280 | 888 | 1330 | 708 |
| 20 | 300 | 345 | 358 | 246 | 316 | 181 | 682 | 1480 | 264 | 711 | 1470 | 768 |
| 21 | 296 | 324 | 330 | 208 | 309 | 294 | 892 | 1780 | 282 | 766 | 1380 | 777 |
| 22 | 292 | 337 | 329 | 187 | 269 | 216 | 936 | 1470 | 337 | 667 | 1320 | 689 |
| 23 | 285 | 295 | 329 | 195 | 233 | 168 | 1140 | 1420 | 390 | 645 | 1030 | 700 |
| 24 | 286 | 289 | 322 | 210 | 222 | 172 | 1260 | 1370 | 351 | 633 | 1100 | 700 |
| 25 | 308 | 282 | 330 | 189 | 207 | 180 | 1240 | 1290 | 276 | 667 | 1080 | 689 |
| 26 | 301 | 302 | 346 | 210 | 212 | 198 | 1640 | 1170 | 510 | 899 | 950 | 645 |
| 27 | 320 | 323 | 339 | 249 | 202 | 111 | 1760 | 1150 | 794 | 1070 | 850 | 667 |
| 28 | 319 | 299 | 276 | 242 | 207 | 80 | 1880 | 965 | 1360 | 1390 | 762 | 700 |
| 29 | 291 | 311 | 283 | 233 | 233 | 55 | 1980 | 1000 | 892 | 977 | 684 | 755 |
| 30 | 254 | 330 | 287 | 227 | 227 | 47 | 1760 | 1010 | 1090 | 888 | 662 | 821 |
| 31 | | 320 | 269 | 217 | 217 | | 1700 | | 836 | 910 | | 766 |
| TOTAL | | | | | | | | | | | | |
| sec. ft. | 7843 | 9449 | 9774 | 7283 | 7501 | 6565 | 20840 | 47687 | 20871 | 34490 | 34153 | 19968 |
| ac. ft. | 15560 | 18740 | 19390 | 14450 | 14880 | 13020 | 41340 | 94790 | 41400 | 68410 | 67740 | 39610 |
| (a) ac. ft. | 0 | 0 | 0 | 0 | 0 | 0 | 4085 | 0 | 5710 | 14320 | 6430 | 0 |
| (b) ac. ft. | 15560 | 18740 | 19390 | 14450 | 14880 | 13020 | 37260 | 94790 | 35690 | 54090 | 61310 | 39610 |
| (a) Less upstream reservoir and transmountain water. | | | | | | | | | | | | |
| (b) Corrected total Ac. Ft. | | | | | | | | | | | | |
| THE YEAR 449,100 Acre Feet | | | | | | | | | | | | |
| CORRECTED 418,600 Acre Feet | | | | | | | | | | | | |

APPENDIX "B-2"

* * * *

ARKANSAS RIVER AT LAS ANIMAS, COLORADO

ARKANSAS RIVER AT LAS ANIMAS, COLORADO

Report-Year Ending October 31, 1961

U.S.G.S. Records—Provisional, Subject to Revision

| DAY | NOV. | DEC. | JAN. | FEB. | MAR. | APR. | MAY | JUNE | JULY | AUG. | SEPT. | OCT. |
|----------|------|------|------|------|------|-------|--------|-------|----------|---------|-----------|-------|
| 1 | 64 | 31 | 38 | 50 | 45 | 23 | 9.4 | 492 | 392 | 106 | 185 | 298 |
| 2 | 42 | 34 | 45 | 28 | 41 | 24 | 13 | 720 | 294 | 102 | 152 | 276 |
| 3 | 30 | 36 | 48 | 43 | 41 | 23 | 19 | 1080 | 385 | 268 | 152 | 302 |
| 4 | 23 | 39 | 52 | 38 | 43 | 20 | 33 | 920 | 450 | 537 | 244 | 316 |
| 5 | 20 | 43 | 54 | 38 | 41 | 20 | 33 | 254 | 450 | 304 | 302 | 294 |
| 6 | 50 | 39 | 56 | 38 | 41 | 20 | 20 | 172 | 299 | 385 | 365 | 260 |
| 7 | 52 | 19 | 60 | 34 | 38 | 21 | 12 | 226 | 335 | 404 | 402 | 355 |
| 8 | 39 | 20 | 56 | 31 | 38 | 23 | 12 | 113 | 998 | 345 | 424 | 380 |
| 9 | 27 | 21 | 52 | 30 | 38 | 26 | 10 | 76 | 192 | 335 | 380 | 528 |
| 10 | 24 | 24 | 56 | 31 | 30 | 24 | 10 | 48 | 360 | 411 | 360 | 512 |
| 11 | 24 | 30 | 58 | 33 | 31 | 23 | 8.8 | 41 | 340 | 506 | 397 | 316 |
| 12 | 21 | 38 | 52 | 36 | 24 | 26 | 7.0 | 41 | 254 | 607 | 414 | 355 |
| 13 | 18 | 41 | 45 | 39 | 33 | 21 | 8.8 | 45 | 210 | 2000 | 397 | 345 |
| 14 | 19 | 37 | 48 | 41 | 34 | 16 | 14 | 47 | 60 | 154 | 574 | 280 |
| 15 | 18 | 46 | 54 | 45 | 30 | 16 | 9.4 | 58 | 37 | 108 | 512 | 260 |
| 16 | 17 | 41 | 56 | 47 | 24 | 17 | 7.6 | 24 | 22 | 99 | 430 | 240 |
| 17 | 16 | 35 | 38 | 36 | 24 | 19 | 7.6 | 26 | 37 | 76 | 419 | 219 |
| 18 | 15 | 54 | 38 | 34 | 30 | 15 | 10 | 26 | 78 | 189 | 448 | 216 |
| 19 | 15 | 90 | 38 | 30 | 30 | 9.4 | 10 | 24 | 102 | 506 | 414 | 222 |
| 20 | 13 | 123 | 36 | 28 | 26 | 8.8 | 15 | 19 | 60 | 370 | 402 | 240 |
| 21 | 14 | 95 | 38 | 27 | 16 | 8.2 | 20 | 19 | 25 | 385 | 419 | 264 |
| 22 | 15 | 82 | 38 | 27 | 19 | 8.2 | 28 | 21 | 18 | 360 | 490 | 280 |
| 23 | 12 | 88 | 38 | 28 | 19 | 10 | 20 | 11 | 18 | 299 | 448 | 272 |
| 24 | 13 | 92 | 39 | 31 | 19 | 9.4 | 66 | 10 | 142 | 290 | 430 | 380 |
| 25 | 16 | 90 | 39 | 38 | 18 | 7.0 | 182 | 38 | 86 | 263 | 380 | 386 |
| 26 | 16 | 79 | 21 | 36 | 21 | 7.0 | 345 | 28 | 35 | 226 | 442 | 402 |
| 27 | 19 | 64 | 36 | 45 | 21 | 7.6 | 457 | 23 | 20 | 185 | 419 | 392 |
| 28 | 21 | 54 | 99 | 43 | 26 | 7.0 | 375 | 210 | 15 | 202 | 370 | 397 |
| 29 | 27 | 36 | 150 | | 21 | 8.8 | 245 | 392 | 16 | 280 | 289 | 386 |
| 30 | 27 | 43 | 222 | | 23 | 10 | 464 | 430 | 91 | 386 | 248 | 386 |
| 31 | | 39 | 131 | | 23 | | 380 | | 142 | 248 | | 355 |
| TOTAL | 727 | 1603 | 1831 | 1005 | 908 | 478.4 | 2851.6 | 5634 | 5963 | 10936 | 11308 | 10114 |
| sec. ft. | 1440 | 3180 | 3630 | 1990 | 1800 | 949 | 5660 | 11170 | 11830 | 21690 | 22430 | 20060 |
| ac. ft. | | | | | | | | | THE YEAR | 105,800 | Acre Feet | |

APPENDIX "B-3"

* * * *

PURGATOIRE RIVER NEAR LAS ANIMAS, COLORADO

PURGATOIRE RIVER NEAR LAS ANIMAS, COLORADO
Report-Year Ending October 31, 1961
U.S.G.S. Records—Provisional, Subject to Revision

| DAY | NOV. | DEC. | JAN. | FEB. | MAR. | APR. | MAY | JUNE | JULY | AUG. | SEPT. | OCT. |
|---------------------------|-------|------|-------|------|--------|--------|-------|-------|--------|--------|-------|-------|
| 1 | 9.9 | 22 | 12 | 59 | 27 | 55 | 9.5 | 0.9 | 8.5 | 4.2 | 16 | 13 |
| 2 | 8.9 | 20 | 11 | 44 | 24 | 47 | 7.5 | 4.6 | 9.0 | 4.2 | 13 | 20 |
| 3 | 7.8 | 31 | 11 | 28 | 22 | 47 | 8.5 | 57 | 3.6 | 18 | 9.8 | 28 |
| 4 | 7.3 | 53 | 10 | 18 | 19 | 45 | 14 | 23 | 2.8 | 100 | 15 | 30 |
| 5 | 6.2 | 53 | 8.9 | 14 | 21 | 45 | 10 | 42 | 2.5 | 175 | 7.6 | 29 |
| 6 | 4.0 | 29 | 7.3 | 12 | 19 | 53 | 9.0 | 27 | 3.9 | 129 | 5.5 | 29 |
| 7 | 2.0 | 24 | 7.8 | 18 | 20 | 53 | 30 | 34 | 5.0 | 111 | 12 | 26 |
| 8 | 5.7 | 19 | 8.9 | 19 | 20 | 44 | 41 | 70 | 833 | 92 | 15 | 23 |
| 9 | 20 | 24 | 9.9 | 17 | 18 | 67 | 27 | 45 | 63 | 105 | 8.0 | 26 |
| 10 | 22 | 28 | 9.9 | 26 | 21 | 85 | 15 | 48 | 35 | 32 | 4.2 | 32 |
| 11 | 22 | 30 | 9.4 | 52 | 24 | 87 | 7.0 | 42 | 24 | 111 | 4.6 | 34 |
| 12 | 20 | 12 | 7.3 | 57 | 16 | 95 | 1.7 | 36 | 95 | 198 | 4.2 | 36 |
| 13 | 15 | 10 | 6.8 | 39 | 11 | 171 | 5.0 | 36 | 430 | 135 | 3.2 | 32 |
| 14 | 17 | 11 | 17 | 69 | 8.4 | 154 | 5.3 | 29 | 1260 | 117 | 2.7 | 25 |
| 15 | 15 | 12 | 24 | 154 | 22 | 178 | 4.6 | 44 | 300 | 171 | 3.2 | 5.5 |
| 16 | 17 | 15 | 30 | 112 | 24 | 182 | 2.8 | 55 | 211 | 188 | 3.2 | 3.8 |
| 17 | 21 | 20 | 33 | 81 | 32 | 138 | 2.5 | 45 | 123 | 114 | 3.2 | 20 |
| 18 | 17 | 25 | 23 | 67 | 47 | 168 | 3.6 | 80 | 92 | 95 | 3.5 | 14 |
| 19 | 16 | 37 | 21 | 57 | 49 | 144 | 2.1 | 65 | 70 | 155 | 3.8 | 16 |
| 20 | 14 | 38 | 17 | 45 | 37 | 93 | 2.5 | 22 | 57 | 143 | 5.5 | 20 |
| 21 | 14 | 30 | 16 | 37 | 52 | 75 | 3.9 | 10 | 105 | 123 | 4.6 | 21 |
| 22 | 4.0 | 34 | 21 | 32 | 50 | 94 | 2.3 | 11 | 230 | 95 | 15 | 7.6 |
| 23 | 4.0 | 35 | 23 | 29 | 50 | 57 | 2.5 | 6.0 | 206 | 70 | 12 | 14 |
| 24 | 3.6 | 34 | 29 | 28 | 44 | 35 | 1.9 | 7.0 | 188 | 29 | 12 | 15 |
| 25 | 3.6 | 35 | 22 | 31 | 34 | 18 | 1.5 | 6.5 | 85 | 16 | 12 | 15 |
| 26 | 2.2 | 27 | 22 | 27 | 34 | 7.0 | 1.1 | 6.5 | 47 | 8.6 | 20 | 17 |
| 27 | 2.0 | 20 | 34 | 27 | 31 | 4.2 | .9 | 9.5 | 29 | 5.5 | 17 | 14 |
| 28 | 15 | 15 | 15 | 29 | 110 | 3.2 | .9 | 3.9 | 17 | 4.2 | 13 | 14 |
| 29 | 17 | 10 | 20 | | 93 | 3.9 | .7 | 2.3 | 9.8 | 19 | 11 | 15 |
| 30 | 16 | 11 | 16 | | 87 | 2.5 | .5 | 2.1 | 5.9 | 57 | 13 | 15 |
| 31 | | 13 | 15 | | 69 | | .7 | | 5.1 | 20 | | 16 |
| TOTAL | 349.2 | 777 | 521.2 | 1228 | 1135.4 | 2250.8 | 225.5 | 870.3 | 4556.1 | 2644.7 | 272.8 | 625.9 |
| sec. ft. | 693 | 1540 | 1030 | 2440 | 2250 | 4460 | 447 | 1730 | 9040 | 5250 | 541 | 1240 |
| ac. ft. | | | | | | | | | | | | |
| THE YEAR 30,660 Acre Feet | | | | | | | | | | | | |

* * * *

INFLOW INTO JOHN MARTIN RESERVOIR
Report-Year Ending October 31, 1961
U.S.G.S. Records—Provisional, Subject to Revision

| DAY | NOV. | DEC. | JAN. | FEB. | MAR. | APR. | MAY | JUNE | JULY | AUG. | SEPT. | OCT. |
|----------|------|------|------|------|------|------|--------|-------|----------|---------|------------|-------|
| 1 | 74 | 53 | 50 | 109 | 72 | 78 | 19 | 493 | 400 | 110 | 201 | 311 |
| 2 | 51 | 54 | 56 | 72 | 65 | 71 | 20 | 725 | 303 | 106 | 165 | 296 |
| 3 | 38 | 67 | 59 | 63 | 70 | 70 | 28 | 1140 | 389 | 286 | 162 | 330 |
| 4 | 30 | 92 | 62 | 65 | 62 | 65 | 47 | 943 | 453 | 637 | 259 | 346 |
| 5 | 26 | 96 | 63 | 52 | 62 | 65 | 43 | 296 | 452 | 479 | 310 | 323 |
| 6 | 54 | 68 | 63 | 50 | 60 | 73 | 29 | 199 | 303 | 514 | 370 | 289 |
| 7 | 54 | 43 | 68 | 52 | 58 | 74 | 42 | 260 | 340 | 515 | 414 | 381 |
| 8 | 45 | 39 | 65 | 50 | 58 | 67 | 53 | 183 | 1830 | 437 | 439 | 403 |
| 9 | 47 | 45 | 62 | 47 | 56 | 93 | 37 | 121 | 255 | 440 | 388 | 554 |
| 10 | 46 | 52 | 66 | 57 | 51 | 109 | 25 | 96 | 395 | 443 | 364 | 544 |
| 11 | 46 | 60 | 67 | 85 | 55 | 110 | 16 | 83 | 364 | 617 | 402 | 350 |
| 12 | 41 | 50 | 59 | 93 | 40 | 121 | 8.7 | 77 | 349 | 805 | 418 | 391 |
| 13 | 33 | 51 | 52 | 78 | 44 | 192 | 14 | 81 | 640 | 2140 | 400 | 377 |
| 14 | 36 | 48 | 65 | 110 | 42 | 170 | 19 | 76 | 1320 | 271 | 577 | 305 |
| 15 | 33 | 58 | 78 | 199 | 52 | 194 | 14 | 102 | 337 | 279 | 515 | 266 |
| 16 | 34 | 56 | 86 | 159 | 48 | 199 | 10 | 79 | 233 | 287 | 433 | 244 |
| 17 | 37 | 55 | 71 | 117 | 56 | 157 | 10 | 71 | 160 | 190 | 422 | 239 |
| 18 | 32 | 79 | 61 | 101 | 77 | 183 | 14 | 106 | 170 | 284 | 452 | 230 |
| 19 | 31 | 127 | 59 | 87 | 79 | 153 | 12 | 89 | 172 | 661 | 418 | 238 |
| 20 | 27 | 161 | 53 | 73 | 63 | 102 | 18 | 41 | 117 | 513 | 408 | 260 |
| 21 | 28 | 125 | 54 | 64 | 68 | 83 | 24 | 29 | 130 | 508 | 424 | 285 |
| 22 | 19 | 116 | 59 | 59 | 69 | 102 | 30 | 32 | 248 | 455 | 505 | 288 |
| 23 | 16 | 123 | 61 | 57 | 69 | 67 | 22 | 17 | 224 | 369 | 460 | 286 |
| 24 | 17 | 126 | 68 | 59 | 63 | 44 | 68 | 17 | 330 | 319 | 442 | 395 |
| 25 | 20 | 125 | 61 | 69 | 52 | 25 | 184 | 44 | 171 | 279 | 392 | 401 |
| 26 | 18 | 106 | 43 | 63 | 55 | 14 | 346 | 34 | 82 | 235 | 462 | 419 |
| 27 | 21 | 84 | 73 | 72 | 52 | 12 | 458 | 32 | 49 | 190 | 436 | 406 |
| 28 | 36 | 69 | 114 | 72 | 136 | 10 | 376 | 32 | 42 | 206 | 383 | 411 |
| 29 | 44 | 46 | 170 | | 114 | 13 | 246 | 394 | 26 | 299 | 300 | 401 |
| 30 | 43 | 54 | 238 | | 110 | 12 | 464 | 432 | 97 | 443 | 261 | 401 |
| 31 | | 52 | 146 | | 92 | | 381 | | 147 | 268 | | 371 |
| TOTAL | | | | | | | | | | | | |
| sec. ft. | 1077 | 2380 | 2352 | 2233 | 2043 | 2728 | 3077.7 | 6506 | 10518 | 13585 | 11582 | 10741 |
| ac. ft. | 2140 | 4720 | 4670 | 4430 | 4050 | 5410 | 6100 | 12900 | 20860 | 26950 | 22970 | 21300 |
| | | | | | | | | | THE YEAR | 136,500 | Acres Feet | |

APPENDIX "B-5"

* * * *

CONTENTS OF JOHN MARTIN RESERVOIR

CONTENTS OF JOHN MARTIN RESERVOIR

Report-Year Ending October 31, 1961

Corps of Engineers Records—Provisional, Subject to Revision

Midnight Contents in Acre Feet from Capacity Table Dated June 1, 1958

| DAY | NOV. | DEC. | JAN. | FEB. | MAR. | APR. | MAY | JUNE | JULY | AUG. | SEPT. | OCT. |
|-----|------|------|-------|-------|-------|-------|-----|------|------|------|-------|------|
| 1 | 0 | 253 | 6363 | 11121 | 17557 | 22374 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 664 | 6411 | 11461 | 17713 | 22556 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 1178 | 6484 | 11558 | 17853 | 22534 | 0 | 1417 | 0 | 0 | 0 | 0 |
| 4 | 0 | 1446 | 6548 | 11785 | 17977 | 22488 | 0 | 3835 | 0 | 0 | 0 | 0 |
| 5 | 0 | 1586 | 6677 | 11834 | 18142 | 22374 | 0 | 5459 | 0 | 0 | 0 | 0 |
| 6 | 0 | 1696 | 6832 | 12029 | 18328 | 22328 | 0 | 6258 | 0 | 0 | 0 | 0 |
| 7 | 0 | 1840 | 6986 | 12175 | 18451 | 22260 | 0 | 6870 | 0 | 0 | 0 | 0 |
| 8 | 0 | 2201 | 7088 | 12308 | 18555 | 22031 | 0 | 7474 | 0 | 0 | 0 | 0 |
| 9 | 0 | 2430 | 7243 | 12517 | 18658 | 21944 | 0 | 7731 | 0 | 0 | 0 | 0 |
| 10 | 0 | 2615 | 7410 | 12741 | 18762 | 21879 | 0 | 8080 | 0 | 0 | 0 | 0 |
| 11 | 0 | 2779 | 7538 | 12985 | 18906 | 21814 | 0 | 8317 | 0 | 0 | 0 | 0 |
| 12 | 0 | 2886 | 7666 | 13470 | 19030 | 21226 | 0 | 8540 | 0 | 0 | 0 | 0 |
| 13 | 0 | 3025 | 7801 | 13783 | 19133 | 20378 | 0 | 8708 | 0 | 1614 | 0 | 0 |
| 14 | 0 | 3164 | 7954 | 14194 | 19236 | 19609 | 0 | 8889 | 0 | 3041 | 0 | 0 |
| 15 | 0 | 3365 | 8150 | 14600 | 19340 | 18721 | 0 | 9056 | 0 | 3082 | 0 | 0 |
| 16 | 0 | 3478 | 8317 | 15061 | 19464 | 17895 | 0 | 9353 | 0 | 1798 | 0 | 0 |
| 17 | 0 | 3628 | 8498 | 15393 | 19629 | 16912 | 0 | 9578 | 0 | 0 | 0 | 0 |
| 18 | 0 | 3769 | 8694 | 15615 | 19794 | 15836 | 0 | 9805 | 0 | 0 | 0 | 0 |
| 19 | 0 | 3948 | 8847 | 15836 | 20009 | 14692 | 0 | 9654 | 0 | 0 | 0 | 0 |
| 20 | 0 | 4117 | 8958 | 16032 | 20204 | 13401 | 0 | 9126 | 0 | 0 | 0 | 0 |
| 21 | 0 | 4529 | 9126 | 16227 | 20400 | 11981 | 0 | 8708 | 0 | 0 | 0 | 0 |
| 22 | 0 | 4773 | 9277 | 16422 | 20552 | 10634 | 0 | 7870 | 0 | 0 | 0 | 0 |
| 23 | 0 | 4974 | 9458 | 16618 | 20639 | 9126 | 0 | 6574 | 0 | 0 | 0 | 0 |
| 24 | 0 | 5186 | 9638 | 16814 | 20879 | 7654 | 0 | 5388 | 0 | 0 | 0 | 0 |
| 25 | 0 | 5447 | 9729 | 16951 | 20987 | 6035 | 0 | 3976 | 0 | 0 | 0 | 0 |
| 26 | 0 | 5624 | 9805 | 17068 | 21096 | 4317 | 0 | 2312 | 0 | 0 | 0 | 0 |
| 27 | 0 | 5858 | 9865 | 17263 | 21204 | 2533 | 0 | 0 | 0 | 0 | 0 | 0 |
| 28 | 0 | 5941 | 9986 | 17400 | 21422 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 0 | 6059 | 10061 | 21705 | 21705 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30 | 0 | 6153 | 10332 | 21944 | 21944 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 31 | 0 | 6258 | 10634 | 22168 | 22168 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

APPENDIX "B-6"

* * * *

OUTFLOW FROM JOHN MARTIN RESERVOIR

OUTFLOW FROM JOHN MARTIN RESERVOIR

Report Year Ending October 31, 1961

U.S.G.S. Records—Provisional, Subject to Revision

| DAY | NOV. | DEC. | JAN. | FEB. | MAR. | APR. | MAY | JUNE | JULY | AUG. | SEPT. | OCT. |
|----------|------|------|------|-------|------|---------|------|--------|----------|---------|-----------|-------|
| 1 | 120 | 14 | 1.8 | 6.6 | 3.0 | 3.6 | 46 | 415 | 613 | 159 | 260 | 296 |
| 2 | 90 | 3.8 | 1.8 | 3.6 | 3.0 | 3.6 | 54 | 526 | 520 | 192 | 314 | 314 |
| 3 | 75 | 3.8 | 3.3 | 4.0 | 3.0 | 49 | 46 | 324 | 314 | 120 | 178 | 345 |
| 4 | 77 | 3.6 | 6.2 | 3.8 | 3.0 | 105 | 83 | 5.7 | 368 | 420 | 244 | 376 |
| 5 | 54 | 3.6 | 2.6 | 4.3 | 3.0 | 108 | 90 | 3.6 | 415 | 568 | 304 | 381 |
| 6 | 51 | 3.3 | 2.0 | 9.0 | 3.0 | 108 | 67 | 3.6 | 440 | 598 | 390 | 354 |
| 7 | 71 | 3.3 | 2.3 | 5.7 | 2.8 | 162 | 63 | 3.6 | 368 | 526 | 415 | 376 |
| 8 | 61 | 3.3 | 2.0 | 4.0 | 2.8 | 168 | 81 | 3.6 | 586 | 460 | 440 | 445 |
| 9 | 54 | 3.0 | 2.3 | 3.3 | 3.0 | 144 | 73 | 3.6 | 974 | 435 | 460 | 440 |
| 10 | 63 | 2.8 | 2.6 | 3.3 | 3.0 | 147 | 65 | 3.0 | 556 | 405 | 405 | 550 |
| 11 | 73 | 2.8 | 2.6 | 3.0 | 2.8 | 147 | 53 | 2.8 | 475 | 480 | 430 | 485 |
| 12 | 77 | 2.6 | 2.6 | 3.0 | 2.8 | 372 | 40 | 2.6 | 381 | 622 | 450 | 358 |
| 13 | 67 | 2.3 | 2.6 | 3.0 | 2.8 | 604 | 38 | 2.6 | 470 | 520 | 425 | 465 |
| 14 | 56 | 2.3 | 2.3 | 3.0 | 3.0 | 628 | 38 | 2.3 | 604 | 415 | 440 | 390 |
| 15 | 51 | 2.3 | 2.3 | 3.0 | 3.0 | 646 | 34 | 2.3 | 950 | 628 | 440 | 340 |
| 16 | 46 | 2.0 | 2.3 | 3.0 | 3.3 | 640 | 40 | 2.6 | 562 | 830 | 445 | 304 |
| 17 | 49 | 2.0 | 2.6 | 3.0 | 3.6 | 709 | 39 | 2.6 | 280 | 860 | 445 | 284 |
| 18 | 57 | 2.0 | 2.8 | 3.0 | 3.6 | 742 | 33 | 2.6 | 196 | 363 | 475 | 280 |
| 19 | 56 | 2.0 | 3.0 | 3.0 | 3.3 | 735 | 36 | 171 | 206 | 496 | 465 | 276 |
| 20 | 51 | 1.8 | 3.0 | 3.0 | 3.3 | 774 | 43 | 304 | 168 | 634 | 410 | 292 |
| 21 | 51 | 1.8 | 3.3 | 3.0 | 3.3 | 808 | 51 | 300 | 125 | 574 | 425 | 309 |
| 22 | 51 | 1.8 | 3.3 | 3.0 | 3.3 | 830 | 51 | 425 | 240 | 532 | 455 | 327 |
| 23 | 43 | 1.8 | 3.6 | 3.0 | 3.3 | 808 | 59 | 616 | 210 | 430 | 490 | 318 |
| 24 | 43 | 1.8 | 3.6 | 2.8 | 3.3 | 822 | 49 | 670 | 292 | 386 | 490 | 372 |
| 25 | 48 | 1.8 | 3.6 | 3.0 | 3.0 | 838 | 85 | 652 | 284 | 322 | 485 | 440 |
| 26 | 51 | 1.8 | 3.8 | 3.0 | 3.0 | 830 | 202 | 728 | 147 | 276 | 465 | 445 |
| 27 | 40 | 1.8 | 3.6 | 3.0 | 3.3 | 875 | 350 | 768 | 92 | 213 | 455 | 440 |
| 28 | 28 | 1.8 | 3.6 | 3.0 | 3.6 | 754 | 470 | 146 | 65 | 220 | 440 | 430 |
| 29 | 28 | 1.8 | 3.6 | 3.6 | 3.8 | 48 | 363 | 248 | 51 | 256 | 332 | 425 |
| 30 | 22 | 1.8 | 3.6 | 3.6 | 3.6 | 36 | 309 | 345 | 40 | 386 | 292 | 425 |
| 31 | 1.8 | 4.0 | 4.0 | 3.6 | 3.6 | 381 | 381 | 128 | 381 | 381 | 455 | 455 |
| TOTAL | 1704 | 86.4 | 92.6 | 101.4 | 98.0 | 13644.2 | 3432 | 6685.1 | 11120 | 13707 | 12042 | 11737 |
| sec. ft. | 3380 | 171 | 184 | 201 | 194 | 27060 | 6810 | 13260 | 22060 | 27190 | 23880 | 23280 |
| ac. ft. | | | | | | | | | THE YEAR | 147,700 | Acre Feet | |

* * * *

ARKANSAS RIVER AT LAMAR, COLORADO

Report-Year Ending October 31, 1961

U.S.G.S Records—Provisional, Subject to Revision

| DAY | JAN. | FEB. | MAR. | APR. | MAY | JUNE | JULY | AUG. | SEPT. | OCT. |
|----------|-------|-------|-------|-------|-------|------|--------|--------|-------|---------------------------|
| 1 | 4.5 | 3.9 | 4.2 | 3.6 | 20 | 17 | 12 | 3.9 | 5.5 | 5.5 |
| 2 | 4.2 | 3.9 | 4.2 | 3.6 | 5.5 | 18 | 162 | 6.5 | 5.5 | 5.0 |
| 3 | 4.2 | 3.9 | 4.5 | 3.6 | 22 | 11 | 984 | 14 | 5.5 | 4.7 |
| 4 | 4.5 | 4.2 | 4.2 | 4.2 | 22 | 57 | 11 | 370 | 5.0 | 4.5 |
| 5 | 4.5 | 3.9 | 3.9 | 4.5 | 18 | 91 | 10 | 32 | 5.0 | 4.2 |
| 6 | 3.9 | 4.2 | 3.6 | 4.5 | 19 | 95 | 11 | 36 | 4.7 | 4.2 |
| 7 | 3.6 | 4.2 | 3.4 | 4.7 | 20 | 110 | 8.0 | 26 | 4.7 | 3.9 |
| 8 | 3.6 | 4.5 | 3.9 | 4.7 | 22 | 197 | 7.5 | 45 | 4.7 | 4.5 |
| 9 | 3.6 | 4.5 | 4.7 | 5.0 | 22 | 167 | 7.5 | 41 | 4.7 | 5.2 |
| 10 | 3.6 | 4.5 | 4.5 | 4.7 | 22 | 162 | 22.6 | 51 | 4.7 | 9.7 |
| 11 | 3.6 | 4.5 | 4.5 | 5.0 | 23 | 160 | 6.5 | 32 | 5.0 | 12.3 |
| 12 | 3.1 | 4.2 | 4.5 | 5.2 | 22 | 78 | 6.0 | 32 | 5.0 | 4.2 |
| 13 | 3.1 | 4.2 | 4.5 | 4.8 | 21 | 151 | 8.0 | 22.6 | 4.7 | 4.4 |
| 14 | 3.1 | 4.5 | 3.9 | 4.3 | 22 | 207 | 31 | 44 | 4.7 | 5.8 |
| 15 | 2.8 | 4.2 | 3.9 | 4.1 | 21 | 234 | 103 | 34 | 4.7 | 18 |
| 16 | 2.8 | 4.2 | 3.9 | 4.0 | 22 | 202 | 153 | 265 | 5.0 | 5.0 |
| 17 | 3.4 | 4.5 | 3.9 | 3.7 | 30 | 216 | 7.0 | 330 | 5.0 | 5.0 |
| 18 | 3.4 | 4.5 | 3.9 | 3.5 | 34 | 278 | 7.0 | 325 | 7.5 | 5.0 |
| 19 | 3.4 | 4.2 | 3.9 | 3.7 | 31 | 284 | 5.5 | 51 | 11 | 5.0 |
| 20 | 3.1 | 4.5 | 3.9 | 3.9 | 24 | 270 | 5.5 | 82 | 7.5 | 4.7 |
| 21 | 3.6 | 4.2 | 3.9 | 3.9 | 22 | 281 | 4.7 | 69 | 5.5 | 4.7 |
| 22 | 3.9 | 4.2 | 3.6 | 3.9 | 19 | 297 | 5.0 | 41 | 5.0 | 4.7 |
| 23 | 4.2 | 4.2 | 3.6 | 4.2 | 17 | 295 | 5.0 | 162 | 3.2 | 11 |
| 24 | 4.2 | 4.5 | 4.5 | 4.5 | 18 | 292 | 3.4 | 23 | 18 | 5.5 |
| 25 | 4.2 | 4.5 | 3.4 | 3.6 | 18 | 311 | 3.6 | 12 | 23 | 20 |
| 26 | 4.2 | 4.5 | 3.1 | 3.6 | 19 | 319 | 3.4 | 7.5 | 10 | 34 |
| 27 | 3.9 | 4.5 | 2.6 | 3.9 | 22 | 336 | 3.1 | 7.5 | 17 | 17 |
| 28 | 5.5 | 4.5 | 2.8 | 3.9 | 21 | 341 | 3.6 | 7.5 | 11 | 8.5 |
| 29 | 3.6 | 4.2 | 3.1 | 22 | 20 | 12 | 3.1 | 6.0 | 7.5 | 6.0 |
| 30 | 3.9 | 4.2 | 3.4 | 21 | 9.5 | 15 | 3.1 | 5.0 | 4.5 | 4.5 |
| 31 | 4.5 | 4.5 | 3.6 | 20 | 9.0 | 2.8 | 6.0 | 6.0 | 7.5 | 7.5 |
| TOTAL | 113.2 | 133.2 | 118.4 | 116.8 | 645.1 | 5638 | 2253.2 | 1975.9 | 222.6 | 656.6 |
| sec. ft. | 225 | 264 | 235 | 232 | 495 | 6390 | 4470 | 3920 | 442 | 1300 |
| ac. ft. | | | | | | | | | | |
| | | | | | | | | | | THE YEAR 30,430 Acre Feet |

APPENDIX "B-8"

* * * *

ARKANSAS RIVER AT THE COLORADO-KANSAS STATELINE

ARKANSAS RIVER AT THE COLORADO-KANSAS STATELINE

Report-Year Ending October 31, 1961

U.S.G.S. Records—Provisional, Subject to Revision

| DAY | NOV. | DEC. | JAN. | FEB. | MAR. | APR. | MAY | JUNE | JULY | AUG. | SEPT. | OCT. |
|----------|------|------|------|------|------|-------|------|----------|---------|-----------|-------|-------|
| 1 | 79 | 58 | 90 | 160 | 114 | 100 | 127 | 32 | 64 | 29 | 58 | 230 |
| 2 | 62 | 65 | 90 | 124 | 104 | 106 | 106 | 160 | 75 | 34 | 51 | 149 |
| 3 | 62 | 65 | 90 | 118 | 124 | 104 | 103 | 1950 | 154 | 40 | 50 | 140 |
| 4 | 68 | 62 | 100 | 107 | 107 | 104 | 102 | 2650 | 111 | 36 | 54 | 159 |
| 5 | 68 | 68 | 104 | 140 | 100 | 97 | 94 | 887 | 72 | 32 | 48 | 171 |
| 6 | 62 | 65 | 100 | 104 | 100 | 114 | 85 | 638 | 86 | 34 | 46 | 186 |
| 7 | 62 | 65 | 100 | 114 | 114 | 124 | 83 | 412 | 122 | 41 | 46 | 199 |
| 8 | 62 | 76 | 100 | 110 | 114 | 155 | 87 | 480 | 423 | 37 | 52 | 188 |
| 9 | 65 | 100 | 110 | 118 | 104 | 190 | 84 | 293 | 572 | 76 | 46 | 201 |
| 10 | 72 | 95 | 118 | 114 | 104 | 190 | 81 | 239 | 391 | 68 | 48 | 550 |
| 11 | 62 | 86 | 107 | 104 | 100 | 185 | 68 | 194 | 363 | 59 | 51 | 281 |
| 12 | 54 | 79 | 94 | 100 | 100 | 175 | 63 | 166 | 495 | 63 | 64 | 335 |
| 13 | 58 | 65 | 100 | 104 | 100 | 180 | 59 | 161 | 287 | 555 | 60 | 322 |
| 14 | 58 | 65 | 110 | 121 | 110 | 190 | 61 | 161 | 193 | 414 | 66 | 308 |
| 15 | 62 | 72 | 114 | 124 | 121 | 270 | 60 | 151 | 155 | 224 | 65 | 295 |
| 16 | 62 | 65 | 118 | 121 | 121 | 246 | 59 | 161 | 179 | 173 | 62 | 310 |
| 17 | 58 | 62 | 107 | 121 | 121 | 234 | 51 | 141 | 238 | 271 | 64 | 310 |
| 18 | 54 | 62 | 110 | 118 | 114 | 212 | 53 | 131 | 193 | 480 | 66 | 275 |
| 19 | 58 | 72 | 107 | 104 | 110 | 258 | 52 | 130 | 133 | 498 | 88 | 245 |
| 20 | 51 | 95 | 110 | 100 | 107 | 246 | 52 | 117 | 105 | 302 | 127 | 189 |
| 21 | 54 | 100 | 110 | 100 | 107 | 244 | 93 | 107 | 96 | 250 | 121 | 190 |
| 22 | 65 | 95 | 104 | 104 | 100 | 246 | 64 | 104 | 100 | 266 | 113 | 175 |
| 23 | 68 | 95 | 97 | 107 | 110 | 257 | 51 | 73 | 82 | 253 | 113 | 156 |
| 24 | 62 | 95 | 94 | 107 | 100 | 288 | 42 | 96 | 72 | 216 | 132 | 156 |
| 25 | 54 | 91 | 100 | 104 | 100 | 263 | 40 | 153 | 61 | 194 | 201 | 141 |
| 26 | 51 | 82 | 100 | 104 | 100 | 268 | 38 | 173 | 59 | 171 | 241 | 148 |
| 27 | 49 | 82 | 84 | 114 | 94 | 299 | 35 | 220 | 49 | 138 | 259 | 175 |
| 28 | 51 | 79 | 60 | 114 | 94 | 324 | 35 | 218 | 42 | 96 | 291 | 189 |
| 29 | 58 | 72 | 114 | | 94 | 336 | 35 | 203 | 49 | 62 | 312 | 199 |
| 30 | 68 | 65 | 124 | | 94 | 226 | 39 | 87 | 48 | 59 | 283 | 174 |
| 31 | | 68 | 135 | | 94 | | 34 | | 32 | 57 | | 177 |
| TOTAL | 1819 | 2366 | 3201 | 3180 | 3296 | 6229 | 2036 | 10688 | 5101 | 5228 | 3278 | 6923 |
| sec. ft. | 3610 | 4690 | 6350 | 6310 | 6540 | 12360 | 4040 | 21200 | 10120 | 10370 | 6500 | 13730 |
| ac. ft. | | | | | | | | THE YEAR | 105,800 | 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-9"

* * * *

ARKANSAS RIVER AT GARDEN CITY, KANSAS

ARKANSAS RIVER AT GARDEN CITY, KANSAS
Report-Year Ending October 31, 1961
U.S.G.S. Records—Provisional, Subject to Revision

| DAY | NOV. | DEC. | JAN. | FEB. | MAR. | APR. | MAY | JUNE | JULY | AUG. | SEPT. | OCT. |
|----------|-------|------|------|------|------|-------|-------|---------------------------|-------|-------|-------|------|
| 1 | 13 | 15 | 39 | 72 | 27 | 15 | 9.0 | 9.0 | 12 | 11 | 8.0 | 12 |
| 2 | 13 | 14 | 28 | 66 | 24 | 15 | 12 | 6.5 | 38 | 12 | 8.0 | 12 |
| 3 | 13 | 20 | 29 | 45 | 24 | 15 | 11 | 9.0 | 16 | 8.0 | 7.6 | 13 |
| 4 | 13 | 44 | 30 | 29 | 24 | 14 | 15 | 163 | 9.4 | 22 | 6.8 | 11 |
| 5 | 12 | 49 | 29 | 19 | 25 | 11 | 14 | 595 | 13 | 12 | 7.6 | 11 |
| 6 | 11 | 34 | 29 | 39 | 24 | 14 | 11 | 1090 | 12 | 8.0 | 11 | 11 |
| 7 | 12 | 28 | 32 | 53 | 24 | 14 | 9.5 | 863 | 14 | 11 | 10 | 12 |
| 8 | 12 | 28 | 32 | 72 | 17 | 15 | 6.0 | 406 | 14 | 13 | 9.4 | 11 |
| 9 | 11 | 27 | 30 | 84 | 16 | 11 | 6.0 | 218 | 12 | 13 | 8.7 | 14 |
| 10 | 7.7 | 28 | 29 | 106 | 17 | 7.5 | 8.0 | 158 | 13 | 14 | 10 | 12 |
| 11 | 3.1 | 25 | 29 | 82 | 17 | 1.6 | 8.0 | 86 | 16 | 11 | 13 | 14 |
| 12 | 4.7 | 30 | 29 | 64 | 15 | 4.1 | 8.0 | 60 | 14 | 14 | 12 | 13 |
| 13 | 4.4 | 55 | 30 | 50 | 16 | 3.2 | 6.0 | 40 | 15 | 16 | 12 | 36 |
| 14 | 8.0 | 66 | 35 | 48 | 16 | 5.5 | 5.0 | 30 | 19 | 14 | 12 | 30 |
| 15 | 12 | 62 | 36 | 58 | 16 | 6.5 | 8.0 | 24 | 17 | 13 | 12 | 28 |
| 16 | 13 | 40 | 33 | 50 | 17 | 3.8 | 8.0 | 23 | 14 | 13 | 12 | 26 |
| 17 | 14 | 30 | 33 | 48 | 18 | 6.0 | 7.0 | 20 | 14 | 14 | 11 | 16 |
| 18 | 16 | 28 | 33 | 46 | 19 | 7.5 | 7.5 | 22 | 14 | 12 | 12 | 15 |
| 19 | 14 | 34 | 28 | 88 | 19 | 5.0 | 8.0 | 20 | 14 | 14 | 13 | 14 |
| 20 | 15 | 27 | 39 | 58 | 17 | 5.5 | 8.0 | 22 | 16 | 13 | 13 | 14 |
| 21 | 16 | 21 | 40 | 52 | 16 | 4.7 | 4.1 | 17 | 17 | 13 | 14 | 14 |
| 22 | 18 | 21 | 46 | 52 | 15 | 6.0 | 2.7 | 15 | 26 | 14 | 13 | 11 |
| 23 | 16 | 32 | 50 | 45 | 14 | 3.8 | 8.5 | 15 | 15 | 14 | 14 | 14 |
| 24 | 14 | 27 | 39 | 42 | 15 | 6.0 | 9.5 | 17 | 14 | 14 | 13 | 13 |
| 25 | 16 | 18 | 17 | 42 | 16 | 6.0 | 8.5 | 19 | 12 | 14 | 14 | 12 |
| 26 | 14 | 21 | 24 | 37 | 16 | 6.0 | 8.0 | 23 | 11 | 12 | 14 | 14 |
| 27 | 16 | 21 | 33 | 37 | 15 | 5.0 | 8.5 | 20 | 11 | 13 | 14 | 14 |
| 28 | 13 | 21 | 25 | 32 | 16 | 4.7 | 8.0 | 20 | 12 | 13 | 13 | 14 |
| 29 | 15 | 21 | 25 | | 16 | 4.1 | 8.5 | 17 | 13 | 12 | 13 | 14 |
| 30 | 16 | 32 | 39 | | 17 | 4.7 | 7.5 | 14 | 10 | 12 | 12 | 19 |
| 31 | | 42 | 52 | | 16 | | 8.0 | | 3.7 | 10 | | 19 |
| TOTAL | | | | | | | | | | | | |
| sec. ft. | 375.9 | 961 | 1022 | 1516 | 564 | 231.2 | 256.8 | 4041.5 | 451.1 | 399.0 | 343.1 | 483 |
| ac. ft. | 746 | 1910 | 2030 | 3010 | 1120 | 459 | 509 | 8020 | 895 | 791 | 681 | 958 |
| | | | | | | | | THE YEAR 21,130 Acre Feet | | | | |

* * * *

DEMANDS BY COLORADO FOR WATER
Report-Year Ending October 31, 1961
(Arkansas River Compact Administration Records)

[illegible]

APPENDIX "B-11"

* * * *

DEMANDS BY KANSAS FOR WATER

DEMANDS BY KANSAS FOR WATER Report-Year Ending October 31, 1961 (Arkansas River Compact Administration Records)

| DAY | NOV. | DEC. | JAN. | FEB. | MAR. | APR. | MAY | JUNE | JULY | AUG. | SEPT. | OCT. |
|----------|------|------|------|------|------|--------|-----------|------|-------|------------|-----------|-------------------------|
| 1 | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | |
| 3 | | | | | | 125 | 9:00 A.M. | | | | | |
| 4 | | | | | | 200 | | | | | | |
| 5 | | | | | | 200 | | | | | | |
| 6 | | | | | | 200 | | | | | | |
| 7 | | | | | | 200 | | | | | | |
| 8 | | | | | | 200 | | | | | | |
| 9 | | | | | | 200 | | | | | | |
| 10 | | | | | | 200 | | | | | | |
| 11 | | | | | | 200 | | | | | | |
| 12 | | | | | | 267 | 8:00 A.M. | | | | | |
| 13 | | | | | | 300 | | | | | | |
| 14 | | | | | | 300 | | | | | | |
| 15 | | | | | | 300 | | | | 260 | 8:30 A.M. | |
| 16 | | | | | | 300 | | | | 400 | | |
| 17 | | | | | | 300 | | | | 400 | | |
| 18 | | | | | | 300 | | | | 17 | 1:00 A.M. | |
| 19 | | | | | | 300 | | | | | Empty | |
| 20 | | | | | | 300 | | | | | | |
| 21 | | | | | | 300 | | | | | | |
| 22 | | | | | | 300 | | | 130 | 8:30 A.M. | | |
| 23 | | | | | | 300 | | | 200 | | | |
| 24 | | | | | | 300 | | | 200 | | | |
| 25 | | | | | | 300 | | | 200 | | | |
| 26 | | | | | | 300 | | | 200 | | | |
| 27 | | | | | | 300 | | | 183 | 10:00 P.M. | | |
| 28 | | | | | | 244 | 7:30 P.M. | | | Empty | | |
| 29 | | | | | | | Empty | | | | | |
| 30 | | | | | | | | | | | | |
| 31 | | | | | | | | | | | | |
| TOTAL | | | | | | 6,736 | | | 1,113 | | 1,077 | |
| sec. ft. | | | | | | 13,360 | | | 2,208 | | 2,137 | |
| ac. ft. | | | | | | | | | | | | |
| | | | | | | | | | | | | THE YEAR 17,705 Ac. Ft. |

APPENDIX "B-12"

* * * *

STATELINE FLOW ON DAYS OF KANSAS DEMAND*

STATELINE FLOW ON DAYS OF KANSAS DEMAND*

Report-Year Ending October 31, 1961

U.S.G.S. Records—Provisional, Subject to Revision

| DAY | NOV. | DEC. | JAN. | FEB. | MAR. | APR. | MAY | JUNE | JULY | AUG. | SEPT. | OCT. |
|----------|------|------|------|------|------|-------|-----|------|------|------|-------|------|
| 1 | | | | | | | 127 | | | | | |
| 2 | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | |
| 6 | | | | | | 114 | | | | | | |
| 7 | | | | | | 124 | | | | | | |
| 8 | | | | | | 155 | | | | | | |
| 9 | | | | | | 190 | | | | | | |
| 10 | | | | | | 190 | | | | | | |
| 11 | | | | | | 185 | | | | | | |
| 12 | | | | | | 175 | | | | | | |
| 13 | | | | | | 180 | | | | | | |
| 14 | | | | | | 190 | | | | | | |
| 15 | | | | | | 270 | | | | | | |
| 16 | | | | | | 246 | | | | | | |
| 17 | | | | | | 234 | | | | | | |
| 18 | | | | | | 212 | | | | 480 | | |
| 19 | | | | | | 258 | | | | 498 | | |
| 20 | | | | | | 246 | | | | 302 | | |
| 21 | | | | | | 244 | | | | 250 | | |
| 22 | | | | | | 246 | | | | | | |
| 23 | | | | | | 257 | | | | | | |
| 24 | | | | | | 288 | | | | | | |
| 25 | | | | | | 263 | | 153 | | | | |
| 26 | | | | | | 268 | | 173 | | | | |
| 27 | | | | | | 299 | | 220 | | | | |
| 28 | | | | | | 324 | | 218 | | | | |
| 29 | | | | | | 336 | | 203 | | | | |
| 30 | | | | | | 226 | | 87 | | | | |
| 31 | | | | | | | | | | | | |
| TOTAL | | | | | | 5720 | 127 | 1054 | | | 1530 | |
| sec. ft. | | | | | | 11350 | 252 | 2090 | | | 3030 | |
| ac. ft. | | | | | | | | | | | | |

THE YEAR 16,720 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, 1961
Source of Information, A.V.D.A. Reports and Report from the Fort Lyon Canal Co.
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) | 3,973 | 1,755 | 0 | 885 | 4,223 | 4,225 | 6,080 | 15,870 | 6,315 | 9,596 | 6,803 | 6,504 | 66,229 |
| Res. or Imported | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Bessemer | 3,973 | 1,755 | 0 | 885 | 4,223 | 4,225 | 6,080 | 15,870 | 6,315 | 9,596 | 6,803 | 6,504 | 66,229 |
| West Pueblo (River) | 0 | 0 | 0 | 0 | 0 | 165 | 214 | 448 | 214 | 266 | 179 | 139 | 1,625 |
| Booth-Orchard Gr. (Riv.) | 482 | 0 | 0 | 0 | 837 | 1,053 | 1,154 | 984 | 1,123 | 1,166 | 1,071 | 1,107 | 8,977 |
| Excelsior (River) | 0 | 0 | 0 | 250 | 65 | 0 | 339 | 851 | 186 | 480 | 329 | 1,230 | 3,730 |
| Collier (River) | 0 | 0 | 0 | 0 | 0 | 0 | 91 | 524 | 80 | 242 | 133 | 615 | 1,685 |
| Colorado Canal (River) .. | 0 | 7,462 | 4,637 | 4,167 | 0 | 0 | 0 | 19,530 | 890 | 6,028 | 0 | 0 | 42,714 |
| Res. or Imported | 0 | 0 | 0 | 0 | 0 | 0 | 3,846 | 0 | 4,970 | 13,070 | 6,309 | 0 | 28,195 |
| Total Colorado Canal | 0 | 7,462 | 4,637 | 4,167 | 0 | 0 | 3,846 | 19,530 | 5,860 | 19,098 | 6,309 | 0 | 70,909 |
| Highline (River) | 4,147 | 1,940 | 1,168 | 1,615 | 4,955 | 4,316 | 4,072 | 16,756 | 6,450 | 9,511 | 5,498 | 6,143 | 66,571 |
| Res. or Imported | 0 | 0 | 0 | 0 | 0 | 0 | 160 | 0 | 625 | 970 | 0 | 0 | 1,755 |
| Total Highline | 4,147 | 1,940 | 1,168 | 1,615 | 4,955 | 4,316 | 4,232 | 16,756 | 7,075 | 10,481 | 5,498 | 6,143 | 68,326 |
| Oxford Canal (River) | 1,174 | 702 | 290 | 284 | 867 | 1,085 | 1,990 | 4,616 | 2,654 | 3,741 | 3,166 | 2,003 | 22,572 |
| Otero Canal (River) | 0 | 117 | 555 | 0 | 0 | 0 | 0 | 1,630 | 256 | 530 | 0 | 117 | 3,205 |
| Catlin Canal (River) | 5,264 | 1,710 | 1,212 | 2,461 | 5,667 | 9,036 | 8,470 | 13,670 | 12,500 | 13,862 | 11,933 | 9,743 | 95,508 |
| Res. or Imported | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Catlin | 5,264 | 1,710 | 1,212 | 2,461 | 5,667 | 9,036 | 8,470 | 13,670 | 12,500 | 13,862 | 11,933 | 9,743 | 95,508 |
| Holbrook (River) | 0 | 4,199 | 4,683 | 2,773 | 0 | 236 | 800 | 10,985 | 1,370 | 4,810 | 1,466 | 5,655 | 36,977 |
| Rocky Ford (River) | 2,692 | 1,886 | 1,529 | 992 | 964 | 4,502 | 6,150 | 5,226 | 5,910 | 6,081 | 4,875 | 5,302 | 46,109 |
| Ft. Lyon Storage (River) .. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,670 | 940 | 4,782 | 0 | 0 | 7,392 |
| Ft. Lyon Canal (River) | 17,744 | 17,648 | 18,266 | 17,226 | 21,744 | 15,024 | 14,334 | 42,310 | 18,612 | 32,308 | 27,202 | 18,090 | 260,498 |
| Las Animas Cons. (River) .. | 1,827 | 274 | 46 | 119 | 912 | 1,833 | 2,550 | 5,325 | 3,568 | 4,239 | 2,960 | 2,694 | 26,347 |
| Las Animas Town (Riv.) .. | 70 | 0 | 0 | 0 | 0 | 369 | 1,510 | 1,527 | 1,864 | 1,829 | 1,674 | 1,232 | 10,075 |
| TOTAL | 37,373 | 37,693 | 32,386 | 30,772 | 40,234 | 41,844 | 47,724 | 141,922 | 62,932 | 99,471 | 67,289 | 60,574 | 700,214 |
| River | 37,373 | 37,693 | 32,386 | 30,772 | 40,234 | 41,844 | 47,724 | 141,922 | 62,932 | 99,471 | 67,289 | 60,574 | 700,214 |
| Res. or Imported | 0 | 0 | 0 | 0 | 0 | 0 | 4,006 | 0 | 5,595 | 14,040 | 6,309 | 0 | 29,950 |
| TOTAL | 37,373 | 37,693 | 32,386 | 30,772 | 40,234 | 41,844 | 51,730 | 141,922 | 68,527 | 113,511 | 73,598 | 60,574 | 730,164 |

APPENDIX "B-14"

* * * * *

DIVERSIONS BY DITCHES IN COLORADO WATER DISTRICT 67

Report Year Ending October 31, 1961
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 | 222 | 0 | 0 | 0 | 0 | 2,291 | 1,620 | 1,198 | 2,803 | 2,225 | 2,721 | 1,230 | 14,310 |
| Keesee Ditch | 0 | 0 | 0 | 0 | 0 | 107 | 633 | 202 | 303 | 660 | 484 | 262 | 2,651 |
| Amity Canal | 3,261 | 0 | 0 | 0 | 0 | 10,430 | 2,376 | 5,950 | 14,540 | 15,854 | 16,397 | 17,528 | 86,336 |
| Lamar Canal | 932 | 865 | 492 | 444 | 143 | 2,672 | 2,307 | 2,656 | 6,188 | 5,574 | 5,508 | 4,370 | 32,151 |
| Hyde Ditch | 103 | 0 | 0 | 0 | 0 | 155 | 220 | 305 | 428 | 262 | 240 | 192 | 1,905 |
| Manvel Canal | 0 | 0 | 0 | 0 | 0 | 347 | 89 | 407 | 258 | 0 | 0 | 0 | 1,101 |
| X. Y. & Graham Canals.. | 0 | 0 | 0 | 0 | 0 | 861 | 603 | 284 | 1,267 | 885 | 833 | 1,273 | 6,006 |
| Buffalo Canal | 1,448 | 1,020 | 583 | 0 | 75 | 2,553 | 2,192 | 2,227 | 3,025 | 3,025 | 1,825 | 1,291 | 19,264 |
| Sisson Canal | 0 | 0 | 0 | 0 | 0 | 0 | 160 | 56 | 206 | 0 | 0 | 0 | 422 |
| TOTAL | 5,966 | 1,885 | 1,075 | 444 | 218 | 19,416 | 10,200 | 13,285 | 29,018 | 28,485 | 28,008 | 26,146 | 164,146 |

APPENDIX "B-15"

* * * *

DIVERSIONS BY DITCHES IN KANSAS

Report-Year Ending October 31, 1961

(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 | 0 | 0 | 0 | 0 | 0 | 575 | 1,880 | 626 | 1,610 | 1,610 | 2,310 | 1,470 | 10,081* |
| Alamo Canal | 0 | 0 | 0 | 0 | 260 | 468 | 473 | 29 | 0 | 59 | 0 | 0 | 1,289 |
| Ft. Aubrey Canal | 401 | 0 | 0 | 0 | 0 | 919 | 901 | 79 | 214 | 155 | 441 | 1,410 | 4,520† |
| Total Stateline to Syracuse | 401 | 0 | 0 | 0 | 260 | 1,962 | 3,254 | 734 | 1,824 | 1,824 | 2,751 | 2,880 | 15,890 |
| Amazon Canal | 1,400 | 0 | 1,020 | 0 | 2,040 | 1,200 | 0 | 4,820 | 2,140 | 575 | 2,220 | 736 | 16,151 |
| Great Eastern Canal | 831 | 1,980 | 1,320 | 1,200 | 0 | 3,640 | 1,470 | 4,500 | 2,250 | 4,000 | 0 | 5,820 | 27,011 |
| South Side Ditch | 0 | 0 | 296 | 3,040 | 0 | 3,180 | 0 | 1,830 | 2,980 | 81 | 0 | 2,900 | 14,307 |
| Farmers Ditch | 0 | 0 | 0 | 34 | 4,220 | 1,110 | 1,450 | 1,920 | 1,220 | 2,750 | 1,800 | 750 | 15,254 |
| Garden City Canal | 101 | 0 | 0 | 0 | 0 | 0 | 272 | 682 | 168 | 150 | 0 | 97 | 1,470 |
| Total Syracuse to Garden City | 2,332 | 1,980 | 2,636 | 4,274 | 6,260 | 9,130 | 3,192 | 13,752 | 8,758 | 7,556 | 4,020 | 10,303 | 74,193 |
| Total Stateline to Garden City | 2,733 | 1,980 | 2,636 | 4,274 | 6,520 | 11,092 | 6,446 | 14,486 | 10,582 | 9,380 | 6,771 | 13,183 | 90,083 |

* Includes 5,020 acre-feet returned directly to river

† Includes 215 acre-feet returned directly to river

APPENDIX "B-16"

* * * * *

SUMMARY TABULATION

(Acre-Feet)

| | NOV. | DEC. | JAN. | FEB. | MAR. | APR. | MAY | JUNE | JULY | AUG. | SEPT. | OCT. | YEAR | FROM APP. NO. |
|---|------|-------|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|--------|---------------------|
| Arkansas River at Las Animas, Colo. | 1440 | 3180 | 3630 | 1990 | 1800 | 949 | 5660 | 11170 | 11830 | 21690 | 22430 | 20060 | 105800 | B- 2 |
| Purgatoire River near Las Animas, Colo. | 693 | 1540 | 1030 | 2440 | 2250 | 4460 | 447 | 1730 | 9040 | 5250 | 541 | 1240 | 30660 | B- 3 |
| Inflow to John Martin Reservoir | 2140 | 4720 | 4670 | 4430 | 4050 | 5410 | 6100 | 12900 | 20860 | 26950 | 22970 | 21300 | 136500 | B- 4* |
| Reservoir contents at end of month | 0 | 6258 | 10634 | 17400 | 22168 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | B- 5 |
| Net change in reservoir storage | 0 | +6260 | +4370 | +6770 | +4770 | -22170 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | B- 5 |
| Outflow from John Martin Reservoir | 3380 | 171 | 184 | 201 | 194 | 27060 | 6810 | 13260 | 22060 | 27190 | 23880 | 23280 | 147700 | B- 6 |
| Diversions in District 67, Colo. | 5966 | 1885 | 1075 | 444 | 218 | 19416 | 10200 | 13285 | 29018 | 28485 | 28008 | 26146 | 164146 | B-14 |
| Flow at Colorado-Kansas Stateline | 3610 | 4690 | 6350 | 6310 | 6540 | 12360 | 4040 | 21200 | 10120 | 10370 | 6500 | 13730 | 105800 | B- 8 |
| Diversions in Kansas | 2733 | 1980 | 2636 | 4274 | 6520 | 11092 | 6446 | 14486 | 10582 | 9380 | 6771 | 13183 | 90083 | B-15 |
| Arkansas River at Garden City, Kansas | 746 | 1910 | 2030 | 3010 | 1120 | 459 | 509 | 8020 | 895 | 791 | 681 | 958 | 21130 | B- 9 |

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

APPENDIX "C"

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RESOLUTION IN MEMORIAM

TO IVAN C. CRAWFORD

BE IT RESOLVED BY THE ARKANSAS RIVER COMPACT ADMINISTRATION:

We pause to express our profound grief caused by the passing of our former associate, Ivan C. Crawford.

Dean Crawford was an early member of our administration and through those years of service was a steady and guiding hand in its operation. His unusual attainments and devotion to purpose have been an invaluable aid to the accomplishment of our purposes.

Dean Crawford was possessed of those rare qualities of proficiency, affability and desire for helpfulness which has endeared him to all those with whom he was associated.

To his surviving wife we express our deepest sympathy. This resolution is ordered spread upon the minutes of this administration and the secretary is directed to send a copy thereof to Mrs. Crawford.

APPENDIX "D"

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RESOLUTION IN MEMORIAM

TO CARL G. PAULSEN

BE IT RESOLVED BY THE ARKANSAS RIVER COMPACT ADMINISTRATION:

That we were greatly grieved by the passing of our chairman, Carl G. Paulsen. The time seems short during which we were privileged to know and work with him. But, though the time was short, we learned to love and respect him for his many admirable qualities. He was always kind and considerate while performing those duties for which he was so eminently qualified. It was his rare mixture of common sense, efficiency and consideration for others that has endeared him to all of us.

To those of his family whom he left behind, we extend our deepest sympathy, knowing that they may obtain some solace by the memory of a life well lived.

It is directed that this resolution be spread upon the minutes of this administration and that a copy thereof be sent to his next of kin.