

ARKANSAS RIVER COMPACT ADMINISTRATION  
Special Meeting  
October 28, 1955  
Court House  
Garden City, Kansas

Attendance -

For Colorado:

Harry B. Mendenhall, Rocky Ford; Chairman of Colorado  
Representatives  
Harry C. Nevius, Lamar; Administration Secretary and  
Treasurer

For Kansas:

Wm. E. Leavitt, Garden City  
R. V. Smrha, Topeka  
Roland H. Tate, Garden City, Vice Chairman and Chairman  
of Kansas Representatives

For the United States:

Brig. Gen. Hans Kramer, San Francisco, Calif.; Chairman of  
the Administration

Absent:

Ivan C. Crawford, Denver; Director Colorado Water Conservation  
Board

Others Attending:

Francis M. Bell,	U.S.G.S.	Denver, Colorado
Guy M. Vincent,	Kansas Div. Water Res.	Garden City, Kansas
Ben. F. Powell	U.S.B.R.	Pueblo, Colorado
Dwight Waters	U.S.B.R.	Pueblo, Colorado
J. M. Barrett	U.S.B.R.	Pueblo, Colorado
Ross W. Moor	U.S.G.S.	Lamar, Colorado
James E. Bone	Corps of Engineers	Caddoa, Colorado
E. M. Crozier		Garden City, Kansas
R. M. Gildersleeve	Chief Engineer, C.W.C.B.	Denver, Colorado

The meeting was called to order by General Kramer, Chairman and Representative of the United States, at 10:00 A. M. in the Court Room at Garden City, Kansas.

The Chairman stated that Mr. Crawford of Colorado was not present because of an urgent commitment. He noted that Mr. Gildersleeve was representing Mr. Crawford as an observer, and would also act as recorder for the meeting, unless there were objections.

The minutes of the regular meeting held at Colorado Springs on July 12, 1955, were considered and corrections suggested. It was moved by Mr. Smrha and seconded by Judge Tate that the minutes, as so corrected, stand approved. The motion passed.

There were no telephonic meetings to be reported at this meeting.

General Kramer made the following report as Chairman:

He had notified the Chief of Engineers, by telegram dated July 12, 1955, of the action taken by the Administration at the Colorado Springs meeting relative to the flood control project for the Purgatoire River. Receipt of the telegram was acknowledged by letter dated July 27, 1955. Copies of the telegram and letter are entered in the record:

WESTERN  
UNION

July 12, 1955

To Major General S. D. Sturgis  
Chief of Engineers, U. S. Army  
Washington, D. C.

Arkansas River Compact Administration meeting today adopted following motion quote - The Arkansas River Compact Administration approves the flood control project for the Purgatoire River subject to an operating procedure to be approved by the affected water users in Colorado and Kansas, the State of Kansas and the Administration - Unquote. This action supercedes previous motion reported in my letter to you December 27, 1954.

HANS KRAMER - Chairman and Representative of the United States  
Arkansas River Compact Administration

DEPARTMENT OF THE ARMY  
OFFICE OF THE CHIEF OF ENGINEERS  
WASHINGTON 25, D. C.

ENCLWD

27 July 1955

Brigadier General Hans Kramer, USA, Ret.  
Chairman and Representative of the United States  
Arkansas River Compact Administration  
417 Montgomery Street  
San Francisco 4, California

Dear General Kramer:

Receipt is acknowledged of your telegram of 12 July 1955 advising that the Arkansas River Compact Administration now approves the flood control project for the Purgatoire River subject to certain conditions.

Since the Purgatoire River report is now under review by the Bureau of the Budget, a copy of your telegram has been furnished for the information of that office.

Sincerely yours,

S. D. STURGIS, JR.  
Lieutenant General, USA  
Chief of Engineers

He acknowledged receipt of a copy of a letter to the Chief of Engineers, U. S. Army, from the Governor of Kansas, dated July 28, 1955 concurring in the action of the Administration on the Purgatoire River flood control project, and offered it for the record:

COPY

July 28, 1955

Major General S. D. Sturgis, Jr.  
Chief of Engineers  
U. S. Army  
Washington 25, D. C.

Dear General Sturgis:

Reference is made to the letter of August 5, 1954, addressed to you by former Governor Edward F. Arn, expressing the official comments of the State of Kansas regarding the "Review Report on Survey for Flood Control, Purgatoire (Picket Wire) River in Colorado, June 1953."

The project includes storage capacity for both flood control and irrigation purposes. It was concluded then that its operation would at times materially deplete the water supply which would otherwise be available to Kansas water users through the John Martin Reservoir. Under those conditions the State of Kansas was opposed to the project as proposed. All three Kansas representatives and two of the three Colorado representatives on the Arkansas River Compact Administration concurred in this view as reflected in the action taken by the Administration at its meeting on December 14, 1954, reported to you by Brig. Gen. Hans Kramer in his letter to you of December 27, 1954.

This matter subsequently has been given further consideration by both the State of Kansas and the Arkansas River Compact Administration. It is recognized that there is a serious flood control problem at Trinidad and an urgent need for measures to deal with it. The problems remaining to be resolved with respect to the proposed reservoir project pertain to the effect that its operation would have on water supplies which otherwise would be available for storage in the John Martin Reservoir and for use in Colorado and Kansas under the terms of their Compact.

Major General S. D. Sturgis, Jr.  
July 28, 1955  
Page Two

At their meeting on July 12, 1955, the Arkansas River Compact Administration adopted the following Motion:

"That the Arkansas River Compact Administration approves the Flood Control Project on the Purgatoire River subject to an Operating Procedure to be approved by the affected water users in Colorado and Kansas, the State of Kansas and the Administration."

I concur in the action taken by the Administration and hereby modify the position of the State of Kansas with respect to the proposed Purgatoire River project to conform to the views of the Arkansas River Compact Administration, as expressed in the Motion quoted above.

Sincerely yours,

FRED HALL  
fh:lg

cc: 8 Congressional Members

The Chairman reported that he had received a communication from the District Engineer at Albuquerque transmitting copies of a report on sedimentation for John Martin Reservoir. Copies of this report were sent to members of the Administration.

Chairman Kramer also stated that it had come to his attention that legislation had been passed in Congress to permit negotiation of a compact between the States of Kansas and Oklahoma with respect to the Arkansas River. He noted that the Administration would have only an academic interest in the matter, but offered to be available if his assistance might be helpful to the compact commissioners.

Mr. Nevius, as Secretary, gave his report as follows:

He has been furnished a copy of the cooperative agreement with the United States Geological Survey by Mr. Bell. This is the second of such agreements and is for the fiscal year 1955-56. It was ordered to be entered in the record:

Surface  
..... Water

COOPERATIVE AGREEMENT  
FOR INVESTIGATION OF WATER RESOURCES

- - - - -

THIS AGREEMENT is entered into as of the 1st day of July, 1955, by the GEOLOGICAL SURVEY, UNITED STATES DEPARTMENT OF THE INTERIOR, party of the first part, and the Arkansas River Compact Administration party of the second part.

1. The parties hereto agree that subject to the availability of appropriations and in accordance with their respective authorities there shall be maintained in cooperation an investigation of the water resources of the Arkansas River Basin in Colorado and Kansas.

2. The following amounts shall be contributed to cover all of the cost of the necessary field and office work directly related to this investigation, but excluding any general administrative or accounting work in the office of either party and excluding the cost of publication by either party of the results of the investigation:

(a) \$ 500.00 by the party of the first part during the period July 1, 1955 to June 30, 1956 of which amount a portion may be held in reserve, for later release if funds permit, in order that the available Federal funds may be distributed proportionately among the cooperating States and municipalities.

(b) \$ 500.00 by the party of the second part during the period July 1, 1955 to June 30, 1956.

(c) Additional amounts by each party during the above period or succeeding periods as may be determined by mutual agreement and set forth in an exchange of letters between the parties.

3. Expenses incurred in the performance of this investigation may be paid by either party in conformity with the laws and regulations respectively governing each party, provided that so far as may be mutually agreeable all expenses shall be paid in the first instance by the party of the first part with appropriate reimbursement thereafter by the party of the second part. Each party shall furnish to the other party such statements or reports of expenditures as may be needed to satisfy fiscal requirements.

4. The field and office work pertaining to this investigation shall be under the direction of an authorized representative of the party of the first part.

5. The areas to be investigated and the scope of the investigation shall be determined by mutual agreement between the parties hereto or their authorized representatives. The methods of investigation shall be those usually followed by the party of the first part subject to modification by mutual agreement.

6. During the progress of the work all operations of either party pertaining to this investigation shall be open to the inspection of the other party, and if the work is not being carried on in a mutually satisfactory manner, either party may terminate this agreement upon 60 days written notice to the other party.

7. The records and reports resulting from this investigation shall be released for public inspection as promptly as possible. Both parties shall have the privilege of publishing the reports, provided that the reports published by either party shall contain a statement of the cooperative relations between the parties.

GEOLOGICAL SURVEY  
UNITED STATES DEPARTMENT OF THE INTERIOR

By /s/ Thomas E. Nolan  
Acting Director

ARKANSAS RIVER COMPACT ADMINISTRATION

By /s/ Harry C. Nevius  
Secretary-Treasurer

Secretary Nevius mentioned that it would be necessary to arrange for the annual audit of the financial transactions of the Administration.

It was moved by Judge Tate and seconded by Mr. Nevius that the Administration authorize the Secretary-Treasurer to arrange for the annual audit by Mr. Rollins, Certified Public Accountant of La Junta, on suitable terms. Upon vote by States, the motion passed.

Mr. Nevius then presented a tentative budget for the fiscal year 1956-1957. He estimated a carry-over of about \$800.00 on June 30, 1956. Following discussion of budget items it was moved by Judge Tate and seconded by Mr. Leavitt that a budget on that basis be adopted, which would call for appropriations from Colorado of \$1,800.00 and from Kansas \$1,200.00. Upon vote by States, the motion was carried. The budget is entered in the record:

BUDGET  
 ARKANSAS RIVER COMPACT ADMINISTRATION  
 For Fiscal Year July 1, 1956 to June 30, 1957

	1955-56 Budget	Expenditures 10-31-54 - 10-28-55	1956-57 Budget
Personal Services			
Secretary Salary	\$1,200.00	\$1,078.00	\$1,200.00
Social Security	50.00	40.00	50.00
Gage Reports	500.00	500.00	500.00
Auditor Report	75.00	65.00	75.00
Capital Outlay	300.00	-	300.00
Maintenance and Operation			
Bond	25.00	25.00	25.00
Printing	600.00	476.00	600.00
Official Publication	100.00	-	100.00
Travel	150.00	71.75	150.00
Typing & Mailing	200.00	8.00	200.00
Investigation & Inspection	150.00	-	150.00
Telephone & Telegraph	300.00	183.95	300.00
Office Supplies	<u>150.00</u>	<u>49.44</u>	<u>150.00</u>
Total	\$3,800.00	\$2,497.14	<u>\$3,800.00</u>
			\$ 800.00
			<u>\$3,000.00</u>

State proportions:

60% Colorado - - - - -	\$ <u>1,800.00</u>
40% Kansas - - - - -	<u>1,200.00</u>
Total:	<u>\$ 3,000.00</u>

The Chairman noted that it is the duty of the Secretary to transmit the budget to the proper authorities in the two States.

A motion by Mr. Nevius, seconded by Judge Tate, passed on vote by States, directed the Secretary to make a call on the States for their quotas of the budget for fiscal 1955-1956.

The Treasurer's report was presented by Mr. Nevius and placed in the record as follows:



ARKANSAS RIVER COMPACT ADMINISTRATION  
Report of the Treasurer, October 28, 1955

Balance on hand October 31, 1954, Auditor's Report		\$1,514.62
Receipts:		
Colorado 60% on 12/31/'54	\$1,440.00	
Kansas 40% on 2/16/'55	<u>960.00</u>	2,400.00
Disbursements:		
Vouchers		
140-143 12-31-54		
144-146 3/10/55 Reported 3-22-55	\$ 990.45	
147-150 4-29-55		
151-152 6-10-55		
153-156 6-30-55 Reported 7-12-55	<u>1,106.35</u>	2,096.80
		<u>1,817.82</u>
157 9-30-55 Schoeneth Office Equip. Co. Service & Supplies		9.89
158 J. L. Wade, Agt. Nat. Surety Co., Treasurers Bond		25.00
159 Mt. States T & T Co., July, Aug. & Sept., Service & Tolls		59.45
160 Secretary Salary (Less \$6.00 F.I.C.A. July, Aug. & Sept.)		294.00
161 Treasurer of U. S.		<u>12.00</u>
		<u>400.34</u>
Balance on hand, October 28, 1955		\$1,417.48

Mr. Smrha, Chairman of the Engineering Committee, made the following report:

The Committee met in Denver on September 27, 1955 regarding its assignments to review data furnished by the Albuquerque office of the Corps of Engineers on sediment in John Martin Reservoir, and to make a report on the floods of May, 1955 on the Purgatoire and Arkansas Rivers. It was agreed at that time that the Committee Chairman would make the review of sedimentation data and that Mr. Crawford would prepare the flood report.

Mr. Smrha presented copies of a review of "Summary of Sediment and Discharge Contribution, Arkansas River and Tributaries above John Martin Dam for Water Years 1940-1952", Corps of Engineers, U. S. Army Albuquerque District.

General Kramer suggested that it be received for the record and left open for study and discussion at the next meeting of the Administration.

The report follows:

Report of Engineering Committee  
Arkansas River Compact Administration

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Review of

"Summary of Sediment and Discharge Contribution,  
Arkansas River and Tributaries above John Martin Dam for  
Water Years 1940-1952"

Corps of Engineers, U. S. Army  
Albuquerque District

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In his report to the Administration at their meeting in Colorado Springs on July 12, 1955, Chairman Kramer noted receipt from the District Engineer, Corps of Engineers, Albuquerque, New Mexico, of a tabulation showing sediment accumulation in John Martin Reservoir. This matter was referred to the Engineering Committee for study and report to the Administration. The Committee reports as follows:

During the year 1952, a total of 696 acre-feet of sediment entered John Martin Reservoir on the Arkansas River near Caddoa, Colorado. Of this amount, 554 acre-feet were deposited there and 142 acre-feet were carried out with releases of water. These quantities were determined by methods involving sampling of the flow at various points along the stream. The last actual survey of sediment accumulation in John Martin Reservoir was made in September 1951. The correlation between the amount of sediment found in the reservoir by surveys and the amount computed on the basis of sediment sampling has been good.

A number of stream-flow and sediment-measuring stations are located on the main stem of the Arkansas River and on its important tributaries, upstream from John Martin Reservoir. On the basis of the data collected at these stations it is possible to determine the origin and amount of the sediments carried into the reservoir.

During the year 1952, the Purgatoire River contributed almost as much sediment as all the rest of the drainage area combined. The bar diagrams in Figure I show the total sediment load at each station and the amount of that load which reached the reservoir. The map, Figure 2, shows the location of streams and the quantity of sediment which they carried to the reservoir. It was estimated that 75% of the sediment in the water at any diversion point was diverted from the stream with water diverted for irrigation purposes.

In Figure I it is apparent that the major portion of the sediment that was carried past the upper gaging stations did not reach John Martin Reservoir. An amount of 21 acre-feet of the total silt load in 1952 was deposited along the river. A large part was diverted from the river with diversions of irrigation water. The amount of sediment diverted is shown in Figure I. For example; at Nepesta, sampling indicated a total of 707 acre-feet of sediment had passed that station during 1952. However, 336 acre-feet had passed Pueblo, Fountain Creek added 114 A. F., St. Charles 85 A. F., Huerfano 75 A. F. with other inflow adding 447 A. F. for a total of 1,057 acre-feet. Since only 707 acre-feet reached Nepesta, 350 acre-feet was removed between the two stations. Deposition in the stream accounted for 21 acre-feet, leaving 329 acre-feet to be accounted for by diversions from the stream. A similar computation was made at La Junta which indicated that 775 acre-feet of sediment were diverted from the river between Nepesta and La Junta. Between La Junta and Las Animas additional diversions of irrigation water were made which accounted for the 62 acre-feet of sediment which passed the La Junta gage but did not enter John Martin Reservoir.

Sediment surveys of the reservoir were made in April and July 1942, December 1943, September 1944, May 1948 and September 1951. The earlier measurements were only partial surveys. The 1951 survey covered the entire area. The sampling program is maintained on a continuing basis.

The following table gives a comparison of quantities of sediment as determined by actual survey and as computed from suspended sediment sampling:

Date of Survey	Computed from Sediment Surveys	Computed from Susp. Sedmt. Sampling
1942 Apr.	0	0
1942 Jul.	11,430	14,009
1943 Dec.	13,225	14,934
1944 Sep.	18,518	17,902
1948 May	26,688	26,401
1951 Sep.	38,905	37,000

Engineering Committee  
Arkansas River Compact Administration

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Ivan C. Crawford

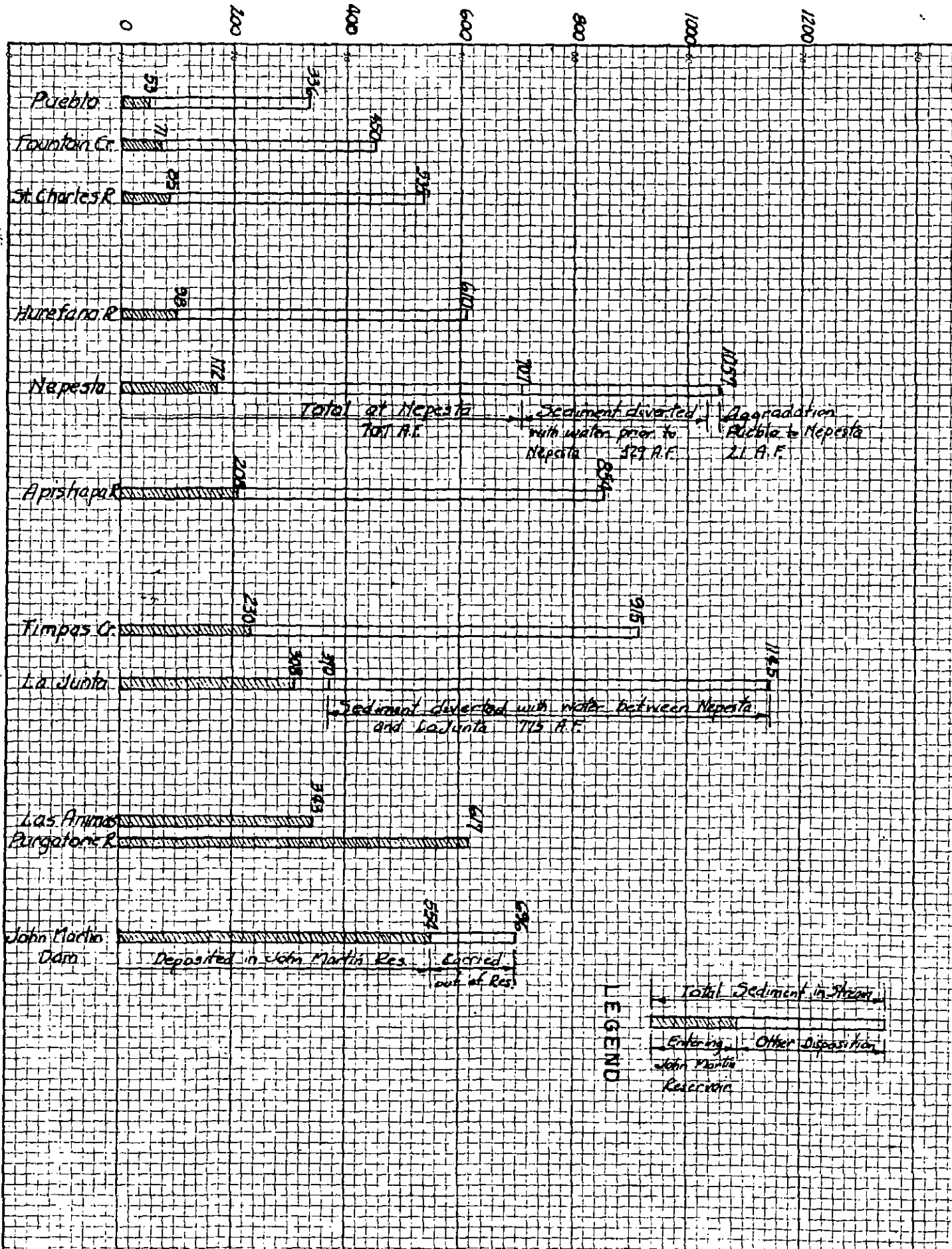
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R. V. Smrha, Chairman

# Sediment - Acre Feet

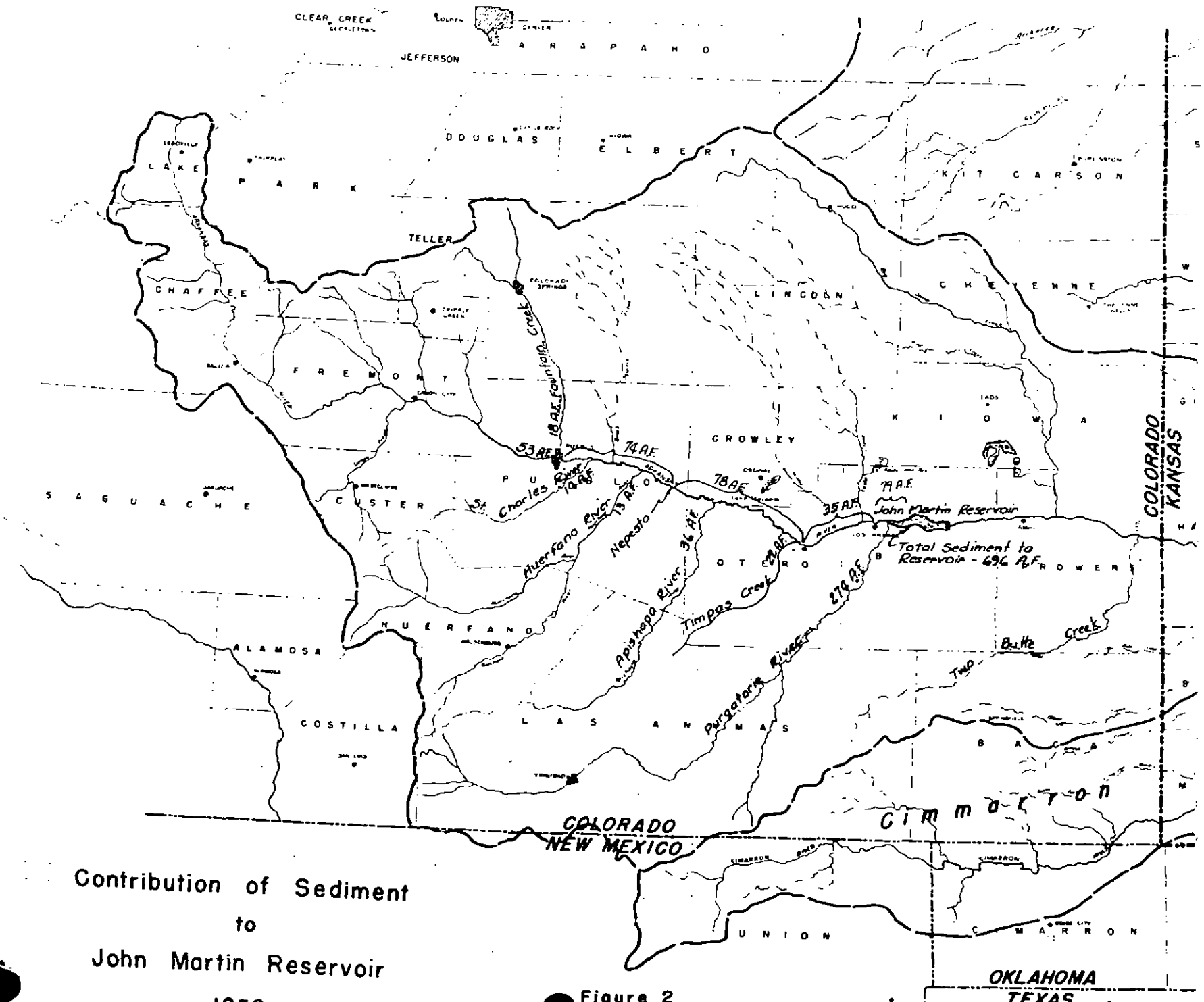
## Source and Disposition of Sediment

### Arkansas River above John Martin Reservoir



LEGEND

- Total Sediment in Stream
- Entering John Martin Reservoir
- Other Disposition



Contribution of Sediment  
to  
John Martin Reservoir  
1952

Figure 2

OKLAHOMA  
TEXAS

Upon question, Mr. Bone said that he had no definite knowledge as to the plans of the Albuquerque District for making another silt survey. General Kramer emphasized the need for such a survey, and declared that he was now notifying the Corps of Engineers, through Mr. Bone, that it is the sense of the Administration that a new silt survey should be made.

At Mr. Smrha's request, Mr. Gildersleeve stated that data on the floods of May, 1955 were being assembled in a report by the Albuquerque District, Corps of Engineers, which would be completed about December 1. Mr. Crawford had thought it advisable to use this report as a source of information, in order to avoid duplication of effort, and present a review of the data at the next Administration meeting. No objection was raised to such a procedure.

As Chairman of the Operations Committee, Mr. Mendenhall made the following report:

At the start of the period covered by this report, namely - July the 12th, 1955, there was 195,377 acre feet of water impounded in John Martin Reservoir. Releases were started on the basis of 1,200 c f s. These continued during the balance of month of July on this basis.

There were light rains on both the main stems of the Arkansas and the Purgatoire on July the 27th and 29th, but there was no material change until the 7th day of August when there was a peak of 3,300 c f s by Pueblo, 12,000 c f s out of the St. Charles, 2,000 c f s out of the Fountain with a peak of 11,600 c f s over the Oxford Dam and a peak inflow of 5,000 c f s from Chico Creek.

On August the 5th the gates of John Martin Reservoir were closed to a release of 500 c f s, but at 4:30 that afternoon it was increased to 1,150 c f s. August the 6th it was again increased to 1,250 c f s.

On August the 8th there was a peak of 14,000 c f s passing La Junta with 5,000 down the Picketwire and this declined to 2,000 down the Picketwire on the 9th, but increased again on the 11th to 9,500 c f s feet and 2,500 c f s from the same source on the 12th which at that time left 152,773 acre feet in the reservoir. During the balance of the month of August there was satisfactory inflow from the Picketwire. The releases fluctuated around approximately 1,200 c f s for the balance of the month.

During the month of September they varied from 1,200 down to 500 feet and during the month of October they ranged from 450 feet to 250 feet.

As of this date there is 50,760 acre feet impounded which looks as though the gates of the reservoir would close at midnight, October the 31st, with approximately 47,000 acre-feet to carry over into next year.

Chairman Kramer inquired whether there had been any new developments with respect to the Purgatoire project, such as meetings between water users.

Mr. Nevius replied that there had been no recent ditch association meetings relative to the project. He stated that Judge Chenoweth and Colonel Cron, the District Engineer at Albuquerque, had visited him. General flood conditions only were discussed at the time. Mr. Mendenhall said that he had had a similar visit.

Chairman Kramer extended an invitation through Mr. Bone to Colonel Cron, the new District Engineer at Albuquerque, to attend the next meeting of the Administration.

General Kramer then asked if there was any new business to consider prior to the report of the Administrative and Legal Committee.

Judge Tate said that it had been reported to him that a new diversion dam was being constructed by the Catlin Canal, and that it probably could divert more water than the old dam. He stated that, in his opinion, this was a matter of greater concern to the water administrative officials in Colorado than to Kansas.

Mr. Mendenhall described the location of the new dam, which is about 1,200 feet below the old dam. He said that legal proceedings had been initiated to obtain a change in point of diversion, but that there would be no changes in priority date or amount of decree. He also explained that the Catlin was carrying Rocky Ford water to the Sugar Company which would be repaid from reservoir water in a regular manner under present rights. Mr. Mendenhall further described the new dam for the Fort Lyon Canal, which is at the same location as the old dam.

As Chairman of the Administrative and Legal Committee, Judge Tate distributed dummy copies of the annual report showing the required alterations for the current compact year.

These were discussed and assignments for their preparation made by Chairman Kramer. He directed the Committee to present a manuscript dummy of the annual report for consideration at the meeting at Lamar on December 13, 1955.

General Kramer observed that this has been a comparatively lush year with regard to availability of water. He wondered whether the Administration should give some thought to possible water conserving practices.



He understood that Colorado A. & M. College was one of several colleges which made investigations of water uses. He thought that the Administration might consider enlisting the services of such an organization to make a study, even to the extent of financial cooperation.

Mr. Mendenhall said that in his district the annual reports of ditch companies show the acre feet diverted each year. This might not be an accurate basis for determining use, however, since some water is returned to the river as waste without being used on the land.

Mr. Nevius stated that his company also had records of the water delivered to each lateral. He noted that a considerable amount of water had been released to Colorado and Kansas, and that the record of flow at Garden City indicated that all the water had been used on the lands.

Mr. Leavitt said that the only water passing Garden City was due to local storms, and that a sewage problem existed because of the low flows at that point. He also said that diversion statistics were available for the ditches in Kansas which divert from the Arkansas River.

Chairman Kramer stated that the time may come when an appraisal on a broader scale might be made by A. & M. College or the Soil Conservation Service, and that it would probably have to be underwritten by the Administration.

The meeting was adjourned at 11:35 A. M.

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The above minutes were approved by action of the Administration  
December 13, 1955.

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Roland H. Tate  
Administration Vice-Chairman

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Harry C. Nevius,  
Administration Secretary