## MINUTES OF

# ARKANSAS RIVER COMPACT ADMINISTRATION

SPECIAL MEETING October 7, 1964 Court House

**RECEIVED** 

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Lamar, Colorado

## Attendance:

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For Colorado:

Hacket Smartt, Lamar George F. Reyher, McClave

### For Kansas:

Robert V. Smrha, Topeka Carl E. Bentrup, Deerfield

For the United States:

Francis M. Bell, Denver

Members Absent:

Felix L. Sparks, Denver, Colorado Logan N. Green, Garden City, Kansas

Others Attending:

Fred L. Boydston, Jr.	Colo. Water Cons. Board	Denver, Colo.
L. R. Kuiper	Colo. Water Cons. Board	Denver, Colo.
J. W. Odell	U.S. Geological Survey	Denver, Colo.
R. A. Buchhagen	Corps of Engineers	John Martin Res.
Paul D. McGrath	Amity Canal	Bristol, Colo.
Sisto Guidotti	Amity Canal	Bristol, Colo.
Howard Corrigan	Division of Water Res.	Garden City, Ks.
Ralph L. Strother	Corps of Engineers	Albuquerque, N.M.
Lane L. Hackett	Water Comm. #66 & 67.	Lamar, Colo.
William Howland	Amity Mutual	Holly, Colo.

Others Attending: (Continued)

Leo Pollart	Amity Mutual	Holly, Colo.
Harry C. Nevius	Amity Mutual	Lamar, Colo.
Leo Gamble	U.S.B.R.	Pueblo, Colo.
John W. Patterson	Division Engineer	Pueblo, Colo.
George Russell	Lamar City Engineer	Lamar, Colo.
Robert Northrup	Mayor of Lamar	Lamar, Colo.
Fred M. Betz	Lamar Daily News	Lamar, Colo.

Chairman Bell called the meeting to order at 9:30 A.M. and noted that there was a quorum present although Mr. Felix L. Sparks for Colorado and Mr. Logan Green for Kansas were not present.

The minutes of the December 13, 1963 meeting were considered and Chairman Bell had one small correction to make on the time of starting the meeting. No further corrections were made and Chairman Bell stated that the minutes would be approved as corrected.

The Chairman then said that he had no official report to make as Chairman, but for the record he wished to state that he had received a letter from the Corps of Engineers relative to the Las Animas flood control project. Submitted with the letter was an interim report on the project.

Mr. Smartt gave the Secretary's report and presented the memorial to Judge Tate written by Mr. Nevius. Mr. Bell thanked Mr. Nevius for his efforts.

Mr. Smartt's report as secretary is as follows:

ARKANSAS RIVER COMPACT ADMINISTRATION

10/7/64

Secretary's Report

From December 13, 1963 - October 7, 1964

The Secretary distributed the 1963 Annual Reports to ditch boards below the dam and mailed 25 copies to the Arkansas Valley Ditch Assn. at Pueblo; and also mailed several other copies.

On April 7th the Secretary ordered the gates at the dam open at 8:30 A.M. in order to furnish Colorado and Kansas

with 1000 c.f.s. of water which was requested at this date.

On April 8th, the Secretary accompanied Mr. Corrigan and Mr. Jessup to the gaging stations below the reservoir. We checked their location as well as the amount of water being diverted.

A special telephonic meeting was called on April 7th for the purpose of declaring the reservoir empty which was April 11th, 1964.

Also, the Secretary ordered the gates closed at the dam at 4:20 P.M., May 29th, notifying the State Engineer that storage began on that date, and that water was available for both Colorado and Kansas. The gates were again opened on June 18th, to supply the demands of Colorado and Kansas.

On June 22, a special telephonic meeting was held for the purpose of finding the reservoir empty which date was set to be June 24th, 1964. Findings and notifications were prepared and filed with the proper officials immediately after both telephonic meetings.

The Secretary received reports of some high water in the Purgatoire, August 8th. Prospects were promising that there may be water available for storage, but with information furnished by Mr. Fuller and Mr. Lane Hackett, the local water commissioner, it was decided that there was not enough water in sight to justify declaring storage. The Secretary was in Denver September 12th, and conferred with Mr. Boydston regarding a proposed budget for 1964-65.

The Secretary, on August 28th, made a call on the two states of Colorado and Kansas for funds for the 1964-65 fiscal year. Also received and deposited in the First National Bank were the remittances from both Colorado and Kansas.

Other than answering correspondence and paying bills as they became due, this concludes my report.

Respectfully Submitted,

Hacket Smartt, Secretary Arkansas River Compact Administration Mr. Smrha commenting on the Secretary's report said that letters were sent to the Secretary from Mr. Corrigan concerning the delivery of water. He wanted to be sure that it was understood that these were properly included in the general correspondence referred to in the Secretary's report. Chairman Bell said that if there were no further comments on the Secretary's report, it would be received.

Minutes of the Telephonic meetings held April 7, and June 22, 1964 were read by the Secretary as follows:

#### SPECIAL TELEPHONIC MEETING

#### April 7, 1964

A special Telephonic meeting was held on April 7, 1964 in accordance with Article IV, Section 3B of the by-laws of the Compact, for the purpose of declaring the reservoir empty. As a result of the meeting, the reservoir was declared to become empty on April 11, 1964. The State Engineer for Colorado, Mr. J.E. Whitten was notified, as was Mr. John O. Patterson, Division Engineer.

The reservoir became empty at 11:30 P.M. on April 11, 1964.

Members participating were:

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For Colorado - Mr. Smartt and Mr. Reyher. For Kansas - Mr. Green and Mr. Bentrup.

#### SPECIAL TELEPHONIC MEETING

June 22, 1964

A special Telephonic meeting was held on June 22, 1964 in accordance with Article IV, Section 3B of the by-laws of the Compact, for the purpose of declaring the reservoir empty. As a result of this meeting, the reservoir was declared to become empty on June 24th, 1964. The State Engineer for Colorado, Mr. J.E. Whitten was notified, as was Mr. John O. Patterson, Division Engineer of Pueblo.

The reservoir was declared empty at 7:00 P.M., June 24, 1964.

Members participating were:

For Colorado - Mr. Smartt and Mr. Reyher. For Kansas - Mr. Bentrup and Mr. Green. On motion by Mr. Bentrup, seconded by Mr. Reyher, the minutes of the telephonic meetings were approved by vote of the states.

Mr. Smartt gave the Treasurer's report as of October 7, 1964. The report is as follows:

#### TREASURERS REPORT

From Dec. 13, 1963 to Oct. 7, 1964

- Balance on Hand Oct. 31, 1963 \$ 7,977.01
- Deposits Sept. 11, 1964 from Colorado
   4,332.00

   Sept. 25, 1964 from Kansas
   2,888.00
- Total Deposits for year ending Oct. 31, 1964 \$15,197.01

Date	Voucher No.	Payee and Purpose	Amount	F
11/12/63 11/12/63	384 385	Telephone CoNov. Service U.S.G.S. First Quarter Agreement	\$ 14.00 450.00	
11/ 12/ 00		0.0.0.0. First Quarter Agreement	430.00	
1/ 8/64		388, and 389 were lost in mailing d; The bank was notified to stop		
1/21/64	390	Telephone CoDec. Service	11.25	
1/21/64	391	Treas. of the U.S. 4th Quarter Social Security, 1963.	21.75	
1/21/64	392	Secretary's Nov. & Dec. Salary	192.74	
1/21/64	393	Marvin Strait (Auditing		
		1963 Accounts)	65.00	
2/ 3/64	394	U.S.G.S. Second Quarter Agreement	450.00	
2/ 3/64	395	Telephone CoJan. Service	16.80	
4/ 2/64	396	Printing of Annual Report by		
		Peerless Printing	635.00	

Date	Voucher No.	Payee and Purpose	Amount
4/ 2/64	397	Telephone Co Feb. & March	
		Service.	\$ 22.60
4/ 2/64	398	Treas. of the U.S.	21.75
4/ 2/64	399	Secretary's salary for Jan.	
		Feb., and March.	289.12
5/ 3/64	400	Telephone CoApril Service	23.15
5/ 3/64	401	U.S.G.S. third quarter agreement	450.00
6/30/64	402	Treas. of the U.S. 2nd Quarter	
		Social Security	21.75
6/30/64	403	Secretary's salary for quarter	
		ending June 30.	289.13
6/30/64	404	Telephone CoMay and June	
		Service.	33.75
8/ 1/64	405	U.S.G.S. balance on 1963-64	
		Fiscal Year	2,450.00
8/ 1/64	406	Telephone CoJuly Service	21.45
10/ 3/64	407	Telephone CoAugust and	
		September Service	25.80
10/ 3/64	408	Milne-Hill Agency - Treasurer	
		Bond.	15.00
10/ 3/64	409	Treas. of the U.S. Social	
		Security	21.75
10/ 3/64	410	Secretary's salary less \$10.88	289.12
		Total disbursements this year	\$5,830.91
		Balance on Hand Oct. 7, 1964	\$9,366.10
He	then gave the	report of the Treasurer for the Fi	scal year

ending June 30, 1964 as follows:

### TREASURERS REPORT

From Oct. 31, 1963 to June 30, 1964

Balance on Hand Oct. 31, 1963 \$7,977.01

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Date	Voucher No.	Payee and Purpose	Amount
11/12/63	384	Telephone CoNov. Service	\$ 14.00
11/12/63	385	U.S.G.S. First Quarter	
		Agreement.	450.00
1/ 8/64	•	388 and 389 were lost in the	
2 /02 /04	,	yment was stopped at the Bank.	11.05
1/21/64	390	Telephone CoDec. Service.	11.25
1/21/64	391	Treasurer of the U.S.	
		Fourth Quarter Social Security.	21.75
1/21/64	392	Hacket Smartt - Nov., Dec.	
		Salary.	192.74
1/21/64	393	Marvin Strait (Auditing	
- 4 - 4 - 4		1963 Accounts).	65.00
2/ 3/64	394	U.S.G.S. Second Quarter Agreement	450.00
2/ 3/64	395	Telephone CoJan. Service	16.80
4/ 2/64	396	Printing of Annual Report by	
		Peerless Printing.	635.00
4/ 2/64	397	Telephone CoFeb. & March	
		Service.	22.60
4/ 2/64	398	Treasurer of the U.S.	21.75
4/ 2/64	399	Hacket Smartt - First Quarter	
		1964 Salary.	289.12
5/ 3/64	400	Telephone CoApril Service	23.15
5/ 3/64	401	U.S.G.S. Third Quarter Agreement	450.00
6/30/64	402	Treas. of the U.S. 2nd Quarter	
		Social Security	21.75
6/30/64	403	Hacket Smartt - Salary for Quarter	
		ending June 30.	289.13
6/30/64	404	Telephone CoMay and June	
		Service.	33.75
		Total Disbursements for Fiscal	
		Year ending June 30, 1964	\$3,007.79
		Balance in bank June 30, 1964	4,969.22
		Committed but not paid to U.S.G.S.	2,450.00
		Leaving a balance of funds available	e 2,513.62

The Chairman said if there were no comments on the two reports, they would be accepted. Mr. Smrha said that Mr. Green had given him no report for the legal committee.

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Mr. Smrha then reported for the Engineering Committee by saying that he had no formal report, but wished to make certain things a part of the record. He said that the Chairman of the Engineering Committee had met March 13, 1964 with Mr. Kuiper and Mr. Boydston in Topeka. The result of which was the following memorandum:

### ENGINEERING COMMITTEE - ARKANSAS RIVER COMPACT

#### ADMINISTRATION

# M E M O R A N D U M

### March 16, 1964

Representatives of the States of Colorado and Kansas met in Topeka, Kansas, March 13, 1964 to discuss the proposed Lamar Reservoir on Clay Creek, and the operation study which had been made previously for the Engineering Committee.

As a result of the discussions, Kansas felt that additional operation studies were necessary, and that additional statements should be contained in a proposal to be submitted by the City of Lamar. Colorado concurred. The proposal should be composed to set forth the following items and be supplemented with tables, charts and maps as appendices wherever possible:

1. Statement of the purpose of the project - refer to the connection of the City of Lamar and the Fish and Game Department.

2. Description of the project - reproduce the filing maps, and show entire drainage area of Clay Creek (probably traced from 1/250,000 Corps of Engineer's map). Include test holes of dam site with logs and "Lamar East" quad sheet with location of dam and well field indicated.

3. Discuss the surface water supply of Clay Creek with good description of the terrain, plant life, soil characteristics, etc. Refer to all runoff records, charts and tables available including Amsley's records. Give tables of precipitation at Lamar, John Martin Reservoir, Holly and Springfield. (Show only wet year, dry year, average and peak precipitation). Give a flood frequency analysis if one is available (there may be one made for Springfield). Include S.C.S. land characteristics analysis for runoff. Show peak hydrograph for the 27,000 c.f.s. peak runoff. Give evaporation table (pan) at John Martin Reservoir, (probably only averages).

4. Discuss ground water in the area - include movement to and from the well field, water levels in the wells, static water level hydrographs. Give pumping records for those years of the operation study (monthly if available). Refer to the profile of the well field to be included in the appendix.

5. Relate how and where pumping has been substituted for surface water rights. Give projections of population and results by studies on increased municipal and industrial uses.

6. Channel loss discussion on Clay Creek as well as seepage loss estimates in the reservoir area.

7. Make reservoir operation study. Use same period of years as in previous study and same inflows, evaporation rates and channel seepage losses below the dam. Modify the study by estimated seepage losses in the reservoir area as a result of sealants through fish culture and siltation, and show what pumping operations will be made to replace evaporation and seepage losses as well as estimated use of pumping to assist in initial filling of the reservoir (if any). Give historical diversions of ditches below the mouth of Clay Creek to State Line, and estimated increase of diversions in this area (if any) by regulated stream flow with reservoir in operation.

He then submitted a letter dated July 1, 1964 to Mr. Kuiper from the Mayor of Lamar and the Director of the Game, Fish & Parks Department. The letter is as follows:

July 1, 1964

Mr. L. R. Kuiper Engineering Committee, Arkansas River Compact Administration 215 State Services Building Denver, Colorado 80203

Dear Mr. Kuiper:

As requested in a memorandum dated March 16, 1964, herewith submitted is a proposal for a reservoir to be constructed on Clay Creek about four miles southeast of Lamar.

The City of Lamar filed (No. 20581) with the State Engineer of Colorado for construction of a dam and reservoir at the site mentioned above by commencing construction on November 14, 1955. In 1962 the Colorado Game and Fish Commission (Later called the Game, Fish and Parks Department) made a filing (No. 22074) for a dam and reservoir at the same site. By Agreement with the City of Lamar, November 14, 1955, was claimed as the date of start of construction. Copies of the filing maps are attached.

Purpose of the reservoir as described in the Game, Fish and Parks Department filing is "for fish propagation, waterfowl habitat, production of fur bearing mammals and other recreational uses". Since the City of Lamar believed that a reservoir at this site will seep sufficiently to recharge the well-field north of the reservoir, the Game Fish & Parks Department engaged a consulting engineer (Mr. Harold E. Eyrich) to determine the feasibility of constructing such a reservoir. The engineer reported to the Game, Fish and Parks Department on April 27, 1964 that "The construction of this installation is feasible for the intended use of recreation and propagation of fish without reverting to artificially maintained high water lines".

The same engineer reported on May 28, 1964, that in his opinion high seepage losses would occur the first year, but also said "After the first year's operation, I do not anticipate high seepage losses to continue".

Based upon the engineer's reports, the Colorado Game, Fish and Parks Department proposes to build, at state expense, on land owned by the City of Lamar a reservoir as described in filing No. 22074. The City of Lamar has agreed to an easement for this construction and has agreed not to make claims on any water stored in the reservoir. The Game, Fish and Parks Department has in turn agreed not to call on the City of Lamar to pump water from the municipal water supply wells to maintain a high water level. Any recharge to the City's well-field is expected to be minor after the first year of operation.

Design of the dam has not been finally determined but will meet all requirements of the Colorado State Engineer as to free-board and spillway capacity. The State Engineer must approve all plans prior to construction. A report to the Game Fish and Parks Department by the same consulting engineer, dated February 1963, gives an analysis of test borings at the damsite and also recommends that a spillway section over the central portion of the dam is preferable to one in the right abutment. Present plans are for a ten foot free-board above the spillway crest. From Filing No. 20581 the surcharge above the spillway crest would be about 4,300 acre-feet.

Attached hereto are copies of runoff records of Clay Creek as well as some estimates as noted. Also attached are precipitation records at Lamar, Springfield and Holly. A flood frequency analysis and a flood hydrograph for the peak runoff of 27,000 c.f.s. on Clay Creek have been prepared and are included as appendices to this proposal. Evaporation records at John Martin Reservoir are reproduced here along with estimates for winter months and months of partial record as well as the curve developed for making these estimates.

Static levels and pumping levels for each of the City of Lamar's municipal wells are attached as well as a table of water pumped for years 1956 through 1963. A graph showing population trends to 1980 is included.

A "Report on Domestic Water Supply Investigations" prepared for the City of Lamar in January, 1954, by R. J. Tipton and Associates, Inc., Engineers, found that the velocity of the underflow in the vicinity of the well-field is about 70 feet per day. It was also stated in this report that no more than 130 gallons per minute of underflow is escaping through the damsite to the Arkansas River. It is anticipated that this small flow will be sealed off at the damsite and will contribute to reduction of reservoir evaporation losses. Any recharge to the City's well-field by seepage from the reservoir will probably change the pattern of accretions to the river since this is the principal source of municipal water supply. However, probably 65 to 70 percent of the water pumped by the City is returned to the river through the sanitary sewer system. This estimate of return is based on the fact that in 1963 Lamar and Denver both delivered about 0.25 acre-foot per person to consumers, and although no figures are available on return flows that year, Denver averaged 67.6 percent return flow for the 31 year period 1927 through 1957. It is thus assumed that returns from the Lamar sanitary system would be approximately the same percentage as for Denver.

After consultation with ground water personnel of the U.S. Geological Survey, and other engineers having experience with similar channel conditions, the infiltration rate of the channel below the damsite was estimated to be 5 c.f.s. per acre wetted. Inspection of stereo pair aerial photographs discloses that the flood plain for flows exceeding 100 c.f.s. would average over 100 feet in width. Therefore, although some higher flows would cover a much larger area, for operation study purposes it was assumed that flows in excess of 100 c.f.s. would have a wetted width of 100 feet for the four-mile distance from the damsite to the mouth, covering a total area of at least 48.5 acres. An infiltration rate of 5 c.f.s. per wetted acre would therefore mean that flows of less than 480 acre-feet per day at the damsite would probably not reach the mouth.

An operation study was made for the water years 1957 through 1962 (1958 omitted because no records were made of Clay Creek runoff that year) using the reservoir infiltration losses developed by consulting engineer Eyrich. Infiltration losses below the damsite were assumed as described above. If it is as assumed that a flow of 500 c.f.s. at the stateline (as computed in compact negotiations) is usable and all flows in excess of this amount were historically wasted, then the effect on the stateline flow can be computed as the amounts that the stateline flow would be decreased below 500 c.f.s. by the dam across Clay Creek. The results of the operation study show an average annual loss to the usable flows at the stateline of 48 acre-feet.

City of Lamar

Colorado Game, Fish & Parks Dept.

By\_

R. E. Northrup, Mayor

By .

Harry R. Woodward

Mr. Smrha, in commenting on his analysis of the proposal suggested that a study be made of the water which did not reach the stateline and therefore could be stored. Mr. Bentrup commented that he felt obliged to object to statements in the letter that flows in excess of 500 c.f.s. at the stateline are not useable. Mr. Smartt questioned if further studies are to be made, and asked Mr. Smrha if he cared to comment on the 48 acre-feet average annual loss of useable flows. Mr. Smrha said that personally he thinks the figure has no meaning. New studies were discussed and are to be made before the next meeting. Mayor Northrup addressed the administration and said that he still thinks that recharge by the reservoir will be accomplished, and related that strict rationing had been in effect in Lamar most of the summer season. He said that this appeared to be the best and cheapest source of water for the City of Lamar. He commented that he did not think the effect on the stateline flow would be very great. In his opinion, he thinks the benefits would far outweigh the depletions to the Arkansas River. He said Lamar is in critical condition and must have more water, and he would certainly appreciate approval of the project by the Administration.

Mr. Smrha asked Mayor Northrup if his views are different from those of the engineer of the Game, Fish & Parks Department on recharge. Mayor Northrup said his views differ as to the amount of recharge, and went on to say that the summer use of water in Lamar is about 4,300,000 gallons per day and winter use is about 1,000,000 gallons. He said that they do not need complete recharge, but any small amount of recharge would help the well system. Mr. Smrha asked to what extent the computations had been made that the reservoir will not seep. He reiterated that Kansas can not approve the project until he knows how it will operate. Mayor Northrup said the city needs the reservoir for benefits of both recharge and recreation. He said that from test drills they know they will get some recharge for the Lamar well system. Mr. Smrha said that he thinks that recharge will be greater than is shown in the letter, but must have an estimate of it before the committee can made a recommendation. He then again read the statement in the letter concerning recharge. Mr. Kuiper said that for purposes of the engineering committee they must base the study on statements by the consulting engineer retained by the Game, Fish and Parks Department since he is a qualified engineer, and the operation as indicated in the letter is a worse condition than if seepage occurs. The difference in losses one way over another does not seem to be material so far as the letter is concerned. Mr. Smrha said that they must determine finally what the purpose of the project would be, whether it is recharge or recreation. Mayor Northrup said that he always thought that it would be a joint operation. Mr. Russell said he feels as the Mayor does that this will be a beneficial source of recharge for the He said he thinks his personal knowledge of the area supercedes wells. any that the consulting engineer may have determined. Mr. Bell asked if the committee will have an answer in time for the December meeting. Mr. Smrha said that that would be the aim of the committee. He said that this ended his report for the engineering committee.

Mr. Bentrup gave the report for the Operations Committee as follows:

OPERATIONS COMMITTEE REPORT

From Dec. 13, 1963 to Oct. 7, 1964

Water was ordered released from John Martin Reservoir at 8:30 A.M. on April 7th to supply Colorado and Kansas demands of 600 and 400 c.f.s. Storage at this time was 9,665 acre feet; the gate continued to discharge this amount until the Reservoir became empty at 11:30 P.M. on April 11th.

The gates at that time were ordered left open for river flow. They remained open and under the administration of the State Engineer until 4:20 P.M., May 29th. At this time they were closed due to heavy rains throughout the valley.

Storage began at this time. The gates remained closed until 8:00 A.M. on June 18th, at which time they were ordered open to discharge 1000 c.f.s. to supply Colorado and Kansas. The amount of water in storage at the beginning of this period was 13,014 acre feet. This amount continued to be discharged until the reservoir was empty at 7:00 P.M. on June 24th. At this time the gates were ordered left open for river flow; they are still open at the present.

Respectfully submitted,

Carl E. Bentrup, Chairman

Hacket Smartt, Member

Mr. Bell ruled that the report will be accepted. No old business was brought before the administration. Under new business, Mr. Bentrup said that Kansas is very dissatisfied with stateline flows on days of their demand for reservoir water when small amounts of storage are concerned. He said that on no one of the ten days they had demanded water did Kansas get their full amount. Mr. Smartt commented that he had asked Lane Hackett to make a study on the releases, and that measurements had been made and the losses were quite great. He said there are only two things to do: (1) Turn out more water.

(2) Cut the diversion in Colorado. Mr. Bentrup said that Kansas was willing to allow for some error, but should get most of the water they demand. A discussion of the losses and the period of the demand ensued. Mr. Nevius commented that the only way to get water to the stateline was to have enough water in the reservoir. He said that they need a five days supply to get water to Kansas, and that the river sands delivered the seeped water at a slower rate.

Mr. Bell asked Mr. Bentrup if he wanted the letters from Mr. Corrigan entered in the records. Mr. Bentrup said "Yes" and commented that he did not know why the error always had to be in favor of Colorado. He discussed the delivery on short runs of water. Mr. Smrha asked how the distribution of reservoir water in Colorado is checked upon. Mr. Smartt replied that each ditch gets a percentage of the water and is checked on by the Water Commissioner in Water District 67. Mr. Smrha read from the Compact on where the deliveries of water shall be measured and asked Mr. Smartt to furnish him with copies of what percentage each ditch gets of reservoir water. He said that he would like to have a special committee set up to study the releases from the Reservoir so that Kansas can be assured of getting delivery of their demanded share of reservoir water. Mr. Lane Hackett said that in April, there was a run of five days and a study showed that Colorado used 49 %, and Kansas got 31 % at the stateline, showing that 20 % was lost in the river. Mr. Smrha discussed the kinds of operations that can be explored and suggested that the methods of distribution of water now may be obsolete. Mr. Reyher commented that after a dry period, the whole river bed has to be recharged before the flows will get to the stateline. He discussed methods of making up transit losses. Mr. Bentrup moved that Mr. Hackett and Mr. Corrigan be appointed as a special committee to study releases and losses, and possible actions to be taken for delivery of reservoir water. Mr. Smartt seconded the motion, and after some discussion during which Chairman Bell said that the special committee could ask the engineering committee for help as needed and he thinks the Engineering committee should spell out the charge to the special committee. The motion passed on vote of the states, and the chairman designated Mr. Hackett as chairman of the special committee.

Mr. Smartt presented a proposed budget for 1964-65 as follows:

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#### BUDGET

### 1965-1966 Fiscal Year

### ARKANSAS RIVER COMPACT ADMINISTRATION

Personal Services		\$7,325.00
Secretary Salary	\$1,200.00	
Social Security	50.00	
Gauge Reports	2,000.00	
Professional Services (Audit		
of Accounts)	75.00	
Cooperative gage replacement and		
rehabilitation	4,000.00	
Capital Outlay		300.00
Maintenance and Operation		1,475.00
Bond, Treasurer	15.00	
Printing	650.00	
Official Publications	50.00	
Travel ExpenseSecretary and		
Employees	150.00	
Typing and Mailing	100.00	
Investigation and Inspection	60.00	
Telephone and Telegraph	300.00	
Office Supplies	150.00	
Total Proposed Budget, 1965-1966		9,100.00
Estimated Carry-over as of June 30, 1965	i i i i i i i i i i i i i i i i i i i	1,880.00
Total to be appropriated by Colorado and		\$7,220.00

In accordance with Article VIII E (I), the amount of such budget payable by the State of Colorado is sixty percent thereof, or \$4,332.00, and the amount payable by the State of Kansas is forty percent thereof, or \$2,888.00.

A discussion followed on costs of the new gauges and cost of new receivers for Kansas. Mr. Bentrup moved, and Mr. Reyher seconded the motion that the proposed budget for 1964-65 Compact Year be adopted.

Mr. Odell gave the status of the installation of the new radio equipment as follows:

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## STATUS OF INSTALLATION OF RADIO EQUIPMENT AT INFLOW STATIONS FOR JOHN MARTIN RESERVOIR

The cooperative agreement between the Arkansas River Compact Commission and the Geological Survey covering the 1964 and 1965 fiscal years included funds for the procurement and installation of radio equipment at the gaging stations on the Arkansas River at Las Animas and the Purgatoire River near Las Animas. Funds available for the 1964 fiscal year limited the procurement of instruments to somewhat less than half of those required.

Bids for furnishing one transmitter and the printout receiver were obtained last fiscal year and the equipment was ordered in June. This equipment is now available and ready for delivery. However, the second contract, covering the rest of the equipment, was not awarded until the middle of August and this equipment will not be available until late December. Inasmuch as all of the equipment must be available to be usable, it appears that January 1965 is the earliest that we can complete the installation.

I discussed delivery dates with the contractor this week and he assured me that they would make delivery as socm as practicable. When the equipment is tested and delivered, the actual installation can be accomplished in a few days.

> J. W. Odell 10-6-64

Mr. Smartt wanted to know how to arrive at the river inflow without gauges in operation on November first. Mr. Bell commented that he would just have to go up and read the gauges. A discussion ensued on the inflows, outflows, closing gates and adjustment of gates. Mr. Bentrup said that he felt the administration should take some notice that Mr. John Martin had retired and therefore moved, and Mr. Smartt seconded that a resolution be adopted in appreciation of Mr. Martin's service to the Administration. The motion passed and Mr. Bell directed the legal committee to draft a suitable resolution. Mr. Struthers was introduced and commented that he would attempt to carry on the work of Mr. Martin with the Administration.

Mr. Kuiper said that a report on the irrigation features of the Trinidad Project would be available this week, and Mr. Gamble said that the irrigation phases of the Trinidad Project had been transferred from Mr. Greer's office in Denver to Mr. Ogilivies office in Pueblo. Mr. Nevius said that the ditches below the dam feel entitled to all water up to 100 c.f.s. in the winter. Mr. Kuiper then read the definition of "river flow", and of "releases" from the Compact. A discussion ensued on operation of winter flows under the compact. It was generally agreed in the discussion that the administration of the river in the winter would be as stated in the Compact. The use of the water for stock water and irrigation in the winter was further discussed. Mr. Smrha stated that he noticed in the minutes of the December meeting that the Salt Cedars growing in the reservoir area of John Martin Reservoir had been considered and wondered if a letter had been directed concerning this to the Corps of Engineers. Mr. Smartt said that no letter had been sent and after some discussion, it was agreed that Mr. Kuiper would draft a letter to the Corps of Engineers.

Chairman Bell said that the annual meeting would be held December 8, 1964 at which time the annual report would be considered; and requested that the Engineering Committee have available at that time a report on the Lamar Reservoir.

There being no further business, Mr. Smrha moved that the Administration adjourn its meeting, which it did at 11:50 A.M.