

November 27, 1964

NOTICE OF ANNUAL MEETING

ARKANSAS RIVER COMPACT ADMINISTRATION

December 8, 1964
Court House
Lamar, Colorado

The Arkansas River Compact Administration will hold an Annual Meeting in the Court House at Lamar, Colorado, on Tuesday, December 8, 1964 at 9:30 A.M.

ANNUAL RIVER COMPACT ADMINISTRATION

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MINUTES OF
ARKANSAS RIVER COMPACT ADMINISTRATION
ANNUAL MEETING

December 8, 1964

Court House

Lamar, Colorado

RECEIVED

JUN 15 1965

DIVISION OF WATER RESOURCES
GARDEN CITY

Attendance:

For Colorado:

Hacket Smartt, Lamar
George F. Reyher, McClave
Felix L. Sparks, Denver

For Kansas:

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

For the United States:

Francis M. Bell, Denver

Others Attending:

Fred L. Boydston, Jr.	Colo. Water Cons. Board	Denver, Colo.
Ralph L. Strother	Corps of Engineers	Albuquerque, N.M.
Howard C. Corrigan	Kansas Water Comm.	Garden City, Ks.
Robert A. Buchhagen	Corps of Engineers	John Martin Res.
J. W. Odell	U.S.G.S.	Denver, Colo.
Ross W. Morr	U.S.G.S.	Lamar, Colo.
William Howland	Amity Canal	Holly, Colo.
Leo Pollart	Amity Canal	Holly, Colo.
L. J. Eddy	Frontier Ditch Co.	Coolidge, Ks.
Paul D. McGrath	Amity Canal	Bristol, Colo.
Sisto Guidotti	Amity Canal	Bristol, Colo.
Lane L. Hackett	Water Comm. #66 & 67	Las Animas, Colo.

Others Attending: (Continued)

Harry C. Nevius		Lamar, Colorado
George H. Russell	City Engineer	Lamar, Colorado
Leo Gamble	Bur. of Reclamation	Pueblo, Colorado
Perry Hill	Fort Lyon Canal Co.	Las Animas, Colorado
Harry Bates, Jr.	Buffalo Mutual	Holly, Colorado
Lance Crittindin	Frontier Ditch	Coolidge, Kansas
Bernard Wagner	Frontier Ditch	Coolidge, Kansas
Ralph E. Eaton		Lamar, Colorado
R. E. Northrup	Mayor	Lamar, Colorado
W. P. Randle	City Water Supt.	Lamar, Colorado
Roy Eakles	Game, Fish & Parks	Lamar, Colorado
Robert R. Wolford	Councilman	Lamar, Colorado
C. L. Nickelson	Fort Bent Ditch	Lamar, Colorado
William Pattie	Water Comm. Dist. 17.	La Junta, Colorado
G. L. Carrico	Fort Bent Ditch	Lamar, Colorado
W. E. Quinn		Lamar, Colorado
Keith L. Rising		Lamar, Colorado
William Harsch	Aide to Cong. Frank Evans	Pueblo, Colorado

Chairman Bell called the meeting to order at 9:35 A.M. He noted that for a change there was a full attendance of the members.

In considering the minutes of the last meeting. Mr. Smrha and Mr. Bell had minor corrections to make. There being no further corrections, Mr. Bell said the minutes would be approved as corrected.

The Chairman said he had no report to make and that he had had no correspondence except that he had received copies of routine matters.

Mr. Smartt said that he had no written report to make as Secretary, but read a letter from Col. Homann as follows:

U. S. ARMY ENGINEER DISTRICT, ALBUQUERQUE
CORPS OF ENGINEERS
Federal Building, 517 Gold Avenue, S. W.
Albuquerque, New Mexico 87103

20 November 1964

Mr. Hacket Smartt, Secretary-Treasurer
Arkansas River Compact Administration
Lamar, Colorado

Reference is made to your letter of 12 November 1964 relative to the possibility of obtaining phreatophyte control on Arkansas

River in Colorado and Kansas.

As you know, this District is currently conducting two separate investigations of the Arkansas River in Colorado and Kansas. One relates to the subbasin above John Martin Dam and the other covers the Arkansas River and tributaries from Great Bend, Kansas, to John Martin Dam. The report on the reach above John Martin Dam is scheduled for completion in 1965, and the report on the reach below the dam is tentatively scheduled for completion in 1966.

Included in the plans being considered for flood control and allied purposes above John Martin Dam is a channel improvement project extending from a point just downstream from Pueblo to the upper limits of the reservoir, near Las Animas. As an initial step in this particular study, a test reach has been selected extending from about one mile above the mouth of the Apishapa River to about one mile above the mouth of Timpas Creek to determine the feasibility of such a project. The plan of improvement under consideration consists of a cleared floodway about 1,500 feet wide flanked by levees to provide a reasonably high degree of protection. Within the cleared portion of the floodway there would be a low-flow channel with a capacity of about 2,000 cubic feet per second. The floodway and low-flow channel would cut off some of the existing river bends and reduce the overall length of the river about six miles in this reach. These studies have not yet reached the point necessary to determine feasibility. However, it appears that by confining all river flows up to 2,000 cubic feet per second in the low-flow channel and flows in excess of this amount to the cleared floodway that significant water salvage and flood control benefits could be obtained. If feasibility can be shown for the test reach, the entire reach from Pueblo to John Martin Reservoir and the reach below the dam will be further considered for improvement.

Sincerely yours,

/s/ GERALD W. HOMANN
Colonel, CE
District Engineer

Mr. Smartt then read a letter from the Manvel Canal Company as follows:

Granada, Colorado
November 16, 1964

Mr. Hacket Smartt, Secretary-Treasurer
Arkansas River Compact Administration
Lamar, Colorado

Dear Mr. Smartt:

To support our verbal approval of the proposed Clay
Creek Dam the following is extracted from our minutes of
January 20, 1964.

"Lee A. Davis moved, seconded by Carl Jensen, that
the Manvel Canal & Irrigation Company go on record as being in
favor of the recreation dam on Clay Creek being proposed by
the City of Lamar due to anticipated benefits to be derived by
the stockholders through flood water retention. Passed." -
Minutes of Annual Stockholders meeting of the Manvel Canal &
Irrigation Company, January 20, 1964.

Very truly yours,

THE MANVEL CANAL & IRRIGATION CO.

/s/ C. B. Kennedy, Secretary

Mr. Smartt said that this concluded his report and Mr. Bell
said it would be accepted if there were no objections.

Mr. Smartt then gave the Treasurer's report as follows:

TREASURERS REPORT

From Oct. 31, 1963 to Nov. 1, 1964

Balance on Hand Oct. 31, 1963	\$7,977.01
Deposits Sept. 11, 1964 from Colorado	4,332.00
Sept. 25, 1964 from Kansas	<u>2,888.00</u>
Total Deposits for year ending October 31, 1964	\$15,197.01

Date	Voucher No.	Payee and Purpose	Amount
11/12/63	384	Telephone Co.--Nov. Service	\$ 14.00
11/12/63	385	U.S.G.S. First Quarter Agreement	450.00
1/ 8/64	386	386, 387, 388 and 389 were lost in in mailing and voided. Bank was notified to stop payment.	2.00 *
1/21/64	390	Telephone Co.--Dec. Service	11.25
1/21/64	391	Treas. 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 Co.--Jan. Service	16.80
4/ 2/64	396	Printing of Annual Report by Peerless Printing.	635.00
4/ 2/64	397	Telephone Co.--Feb. & March Service.	22.60
4/ 2/64	398	Treas. U.S.	21.75
4/ 2/64	399	Secretarys salary for Jan., Feb., and March.	289.12
5/ 3/64	400	Telephone Co.--April 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	Secretarys salary for quarter ending June 30.	289.13
6/30/64	404	Telephone Co.--May 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 Co.--July Service	21.45
10/ 3/64	407	Telephone Co.--Aug. & Sept. Service.	25.80
10/ 3/64	408	Milne-Hill Agency - Treasurers Bond.	15.00
10/ 3/64	409	Treas. U.S. Social Security	21.75
10/ 3/64	410	Secretarys salary less \$10.88	289.12
	411	Void--Lost in mailing.	
	412	Void--Lost in mailing.	
10/22/64	413	Telephone Co.--October Service	11.80
10/22/64	414	U.S.G.S. 1st Qtr. 1965 Agreement	450.00
10/31/64	415	Treasurer--Typing and mailing	17.00
		Total disbursements this year	\$6,311.71
		Balance on Hand, Oct. 31, 1964	\$8,885.30

* Bank Charges for stopped checks.

Mr. Sparks moved, and Mr. Green seconded the motion that the Treasurers report be filed. The motion passed.

Mr. Smartt submitted and explained various items in the Auditors report, and Mr. Sparks questioned if the mileage to read the gage next year can be anticipated. Mr. Smartt replied that there should be no cause to read the gage since now there is a water commissioner.

Mr. Green said he had no report to make for the Administrative and Legal Committee and said he would draft a resolution concerning Mr. John Martin and mail it to the members of the Administration for their approval.

Mr. Bentrup said he had no report for the Operations Committee since there had been no water in the reservoir.

Mr. Smrha, reporting for the Engineering Committee said that they had had no meeting, and submitted a letter from Mr. Boydston as follows:

November 25, 1964

Mr. R. V. Smrha, Chief Engineer
1026 - S State Office Building
Topeka, Kansas 66612

Dear Bob:

Enclosed herewith are revised operation studies on Clay Creek Reservoir, and a summary table of the results.

Study "A" was made to reflect your suggestion that flows up to 500 c.f.s. at the dam site could probably be stored under Colorado rights without materially depleting the available flows to Kansas. Also when flows at the Stateline were 1800 c.f.s. or greater, all flows at Clay Creek dam site were considered as storable. Flows at the dam site in excess of 500 c.f.s. were to be bypassed except when Stateline flows were greater than 1800 c.f.s.

Study "B" was made to revise the earlier studies with a single criterion that all flows at the dam site would be considered storable.

Study "C" was made to demonstrate the reservoir operation after initial filling and after seepage losses have become nil. For this

purpose it was assumed that the series of years used in Studies "A" and "B" repeated.

Included herewith are two correlation curves with an accompanying table. Plate I was prepared to attempt to discover if flows of 500 c.f.s. and greater at Clay Creek dam site would be at times when the Stateline flow was sufficient to take care of Kansas irrigation requirements. Plate II was prepared to see if contributions of other tributaries in the area when Clay Creek exceeds 500 c.f.s. are enough to supply Kansas irrigation needs. Although both curves are not conclusive, the indications are that when Clay Creek flows are in excess of 500 c.f.s., other tributaries are contributing from three to six times as much, while stateline flows are about two to three times greater than Clay Creek. These two curves may also be an indication that flood channel losses are much larger than we have assumed on Clay Creek.

Also enclosed is a discharge diagram for an eight-foot round outlet tube. present plans call for a 24-inch CMP outlet tube, and it is estimated that the eight-foot tube would increase the cost of the dam by \$15,000 or \$5.00 per acre-feet of storage. This seems to be an excessive burden to place on this reservoir when it is considered that in Operation "A" during the initial filling it was necessary to bypass on only one occasion when 200 acre-feet were bypassed in June 1960. In May 1962, 1000 acre-feet were bypassed, but this was unnecessary since 787 acre-feet were spilled in addition to the bypassed flow. In Operation "C", no bypasses were required. The 200 acre-feet bypassed in June 1960 could have been passed through a 24-inch outlet tube in about one and one-half days. In normal operations the Game, Fish and Parks Department hopes to be able to maintain the minimum level of the reservoir within three feet of spillway crest after initial filling and after seepage losses are retarded. This can probably be accomplished, since precipitation records indicate there were periods of runoff in addition to those when measurements were made. The top three feet of the reservoir would contain about 775 acre-feet which could be filled in 24 hours with an average flow of 390 c.f.s.

In the operation studies the spot measurement records are assumed to be mean daily flows. It is unknown when the measurements were taken, but any error resulting from this assumption would probably be compensated for by periods when there was heavy precipitation which undoubtedly resulted in runoff which was not measured.

From the summary sheet, the operation studies show that on the average very little difference would be found in either method of

operation - either "A" or "B" during the filling period, and after the filling period there would be no difference; because of this, and the extreme additional cost of construction for an eight-foot outlet tube, and since at most times the Stateline flow is sufficient to meet Kansas irrigation requirements when Clay Creek flows exceed 500 c.f.s., Colorado requests that the Engineering Committee recommend approval of the Clay Creek project as designed with the 24-inch outlet tube to the Arkansas River Compact Administration at the Annual Meeting, December 8, 1964.

If you care to have a meeting on this prior to December 8, please let me know what dates you have available and I will try to schedule one.

You have probably heard that Len Kuiper passed away suddenly on November 4. We shall all miss him and his abilities very much.

Very truly yours,

/s/ FRED L. BOYDSTON, Jr.
Sr. Water Resource Engineer

Mr. Smrha also submitted his letter of acknowledgment as follows:

December 2, 1964

Mr. Fred L. Boydston, Jr.
Sr. Water Resource Engineer
Colorado Water Conservation Board
Denver, Colorado

Dear Fred:

Your letter of November 25, 1964, together with enclosures pertaining to the proposed Clay Creek Reservoir Project was received in this office on November 30, 1964.

As I told you in our telephone conversation this morning, because of prior commitments and appointments, I will have no time to review this material before the meeting of the Administration at Lamar on December 8th. I regret that these circumstances will prevent consideration of the matter at that time.

Yours very truly,

/s/ R. V. Smrha, Chief Engineer

He said this concluded his report so far as Clay Creek is concerned. He next referred to page 14 of the October minutes in which the committee had been assigned the duty of making a charge to the Special Committee on the delivery of reservoir water. He submitted the proposed charge to the Special Committee and further explained it. The charge follows:

Pursuant to action of the Arkansas River Compact Administration at their meeting on October 7, 1964, The Engineering Committee sets forth the following assignment to the Special Committee on Releases, Losses and Delivery of Reservoir Water. The Committee consists of Mr. Lane L. Hackett, Chairman, and Mr. Howard C. Corrigan.

The Committee is directed to explore all phases of Administration operations including, but not limited to, (1) the releases of stored water from John Martin Reservoir to satisfy the separate and joint demands of Colorado and Kansas, (2) the releases of water equivalent to river flow from John Martin Reservoir, (3) procedures to insure the delivery of water to the stateline, (4) the preparation of a report to be submitted to the Administration.

/s/ Felix Sparks, Member
Engineering Committee
Arkansas River Compact Administration
/s/ R. V. Smrha, Chairman

Mr. Green moved that the Engineering Committee report be received and accepted. Mr. Smartt seconded the motion, and it was passed by a vote of the states.

Mr. Sparks remarked that Colorado has been making extensive studies in the Arkansas River and the results of these studies will be available to the Special Committee in their considerations. Mr. Smartt submitted a card showing the percentage of distribution of water to Colorado ditches below John Martin Reservoir as follows:

WATER DISTRICT 67

Ft. Bent Canal	9.9%
Keesee Ditch	2.3
Amity Canal	50.2
Lamar Canal	21.1
Hyde Canal	1.3
Manvel Canal	2.9
XY Canal	5.1
Buffalo Canal	6.0
Sisson Canal	1.2

A discussion ensued. Mr. Smrha asked if these percentages are in the records of the Administration. Mr. Nevius, when called upon to answer the question, said that the agreements are on file in the Administration offices and are also in some of the earlier minutes. Mr. Smrha suggested that the earlier minutes be investigated to find where these agreements are listed.

Under unfinished business, Mr. Sparks said that Colorado now has a large task force studying the Arkansas River, and an electric analog model is being constructed of the Arkansas River from Canon City to the Colorado-Kansas state line. They will be looking into the maximum use of the water in Colorado. He said the task force consists of representatives of the Colorado Water Conservation Board, the U.S.G.S., Corps of Engineers, Southeastern Colorado Water Conservancy District, U.S. Bureau of Reclamation and the State Engineer. They will study the river losses, uses, and everything concerned with the river including deliveries to Kansas under the Compact Administration. He also said that tomorrow, (December 9, 1964), a major meeting of the Water Conservation Board will be held to discuss integration of ground and surface waters in Colorado, as recommended by the staff of the Colorado Water Conservation Board. Mr. Sparks said that as far as they are concerned, there is no objection to construction of the reservoir.

Mr. Smrha asked Mr. Sparks when the meetings of the task force will be held. Mr. Sparks replied that he will advise Mr. Smrha on all future meetings, and give him a copy of the recommendations of the Water Board staff. Mr. Bell asked if construction has been started yet on the Analog model. Mr. Sparks replied, 'yes'. He said the model will be for the benefit of those using the water, but the consumptive use and all facets of water use are being explored. The analog is being constructed in Phoenix, Arizona and maps have been completed showing surface and sub-surface facilities. It is intended that eventually for the area we will have an Analog plus a Digital Computer.

A discussion ensued on the scales being used and how the Analog computer would be handled. Mr. Sparks said that the South-east district, the State of Colorado and the U.S.G.S. are footing the bill which incidentally is very expensive. This will be an ideal model for basic research for the whole state. Mr. Smrha remarked that Analog models have great potential for solving problems on the river. More discussion ensued.

Mr. Smartt asked Mr. Sparks if he had any information on the suit concerning the canals and ditches on the Arkansas River. Mr. Sparks replied that the State thinks the people are entitled to a statute policy which will follow the appropriation doctrine. He said the thing is that ground and surface water are continuous and that advise on the best use of water is hoped for. The need for local control of water distribution was emphasized. Mr. Sparks explained that in the Arkansas Valley especially, wells are considerably overdesigned and money is being spent foolishly. He hopes that soon the water board can tell people where to drill and how to design their pumps, casings, etc.

Mr. Smartt said that in some areas, the water levels in wells have not declined. Mr. Sparks replied that recharge is rapid throughout the Arkansas Valley and that most wells depend on surface irrigation for their recharge. Further discussion was held concerning the wells drilled in the Alluvium.

Under new Business, Mr. Bell handed out copies of the proposed Annual Report. After some inspection, Mr. Sparks moved, Mr. Smrha seconded that the Annual Report be accepted, subject to any revisions proposed before January 10, 1965. Motion was passed by a vote of the states. It was further agreed that a photograph would not be included in the report this year.

Mr. Sparks then said that the final copy on the Trinidad Project Irrigation Features has recently been issued and he can furnish limited numbers of the reports to ditch companies and others who are interested. He continued by saying that the Water Conservation Board formal comments will not be made before February.

Mr. Smrha asked if the litigation on the Trinidad Project had been settled. Mr. Sparks answered that it had not. The litigation concerns the model reservoir transfer. The project has been restudied at the insistence of the Water Conservation Board in order to satisfy the Board that there will be no depletion to the Arkansas River. The new report makes this clear, and hydrologic studies have indicated that there will be a slight accretion to John Martin Reservoir. Mr. Smrha then asked if the Colorado Water Conservation Board can take action while the litigation is pending. Mr. Sparks said he did not think that they could, and discussed comments made earlier in 1956 in which the authorizing legislature approved a 55,000 acre-foot reservoir and that Colorado has since insisted that this be cut to 20,000 acre-feet.

Mr. Bell said that election of officers is necessary at the Annual Meeting and called for nominations for Vice-Chairman. Mr.

Smrha moved that the present officers be re-elected, and that members of the Standing Committees be retained the same for next year. Mr. Bentrup seconded the motion, and it was passed by a vote of the states. The Officers and Committee Members are as follows:

Vice-Chairman:

Logan N. Green

Secretary:

Hacket Smartt

Treasurer:

Hacket Smartt

Administrative & Legal Committee:

Logan N. Green (Chairman)
George F. Reyher

Engineering Committee:

Robert V. Smrha (Chairman)
Felix L. Sparks

Operations Committee:

Carl E. Bentrup (Chairman)
Hacket Smartt

Mr. Bell said that the Administration should take official notice of the passing of Leonard R. Kuiper, who had been a valuable member of the Administration for Colorado, and had served the Administration in an admirable manner. Mr. Smrha moved, and Mr. Smartt seconded the motion that Mr. Sparks be asked to draft a resolution concerning Mr. Kuipers passing, and that it be included in the minutes of this meeting. Motion carried. The resolution is included as Appendix A. Mr. Sparks accepted the charge to draft the resolution and said he wished to make it known that he had not only lost a valuable member of the Water Board staff, but had also lost a great personal friend. Mr. Green said that the Kansas members of the Administration wished to express the high regard they held for Mr. Kuiper.

Mr. Smartt said that the U.S.G.S. office is being moved, and he needs files for the Compact Business. He wished to know if he had authority to purchase some. He was assured by other members that small purchases would be approved. Mr. Smartt said that the new stationery would be ordered by the next meeting. Mr. Bell asked members of the audience if they had any remarks.

Mr. Strother was asked what the status of the Trinidad Project was. He remarked that there would be a meeting of the Bureau of Reclamation, and Corps of Engineers very soon, and as soon as operating conditions are settled, they will ask for bids for construction. Mr. Odell said that construction of a control section at the Las Animas gaging station is being considered to coincide with the new bridge being built over the Arkansas River. He gave details of the construction of a curtain wall as high as present river bed to be constructed between the piers of the new bridge. The gage would then be moved to the bridge.

Mr. Sparks moved and Mr. Smrha seconded that as part of the floodway improvements near Las Animas, a permanent type of control be established for the gauging station at the new bridge site at Las Animas. The motion passed.

After some discussion, Mr. Green moved that the Administration adjourn subject to call. Mr. Smartt seconded the motion, and it passed.

The meeting adjourned at 11:30 A.M.

APPENDIX A

R E S O L U T I O N

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

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

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

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

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

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

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

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