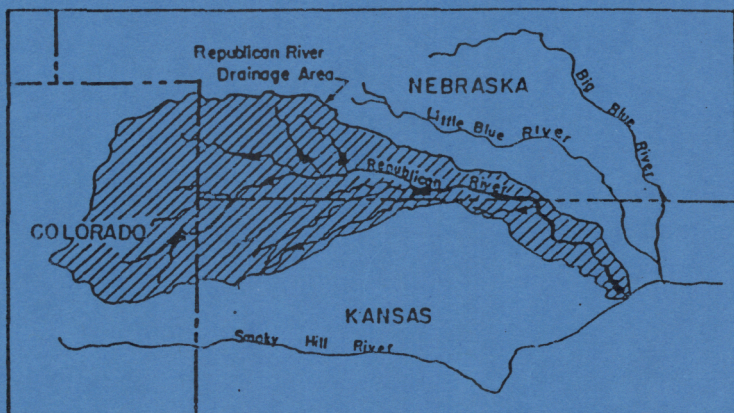


REPUBLICAN RIVER COMPACT ADMINISTRATION

THIRTY-SECOND ANNUAL REPORT



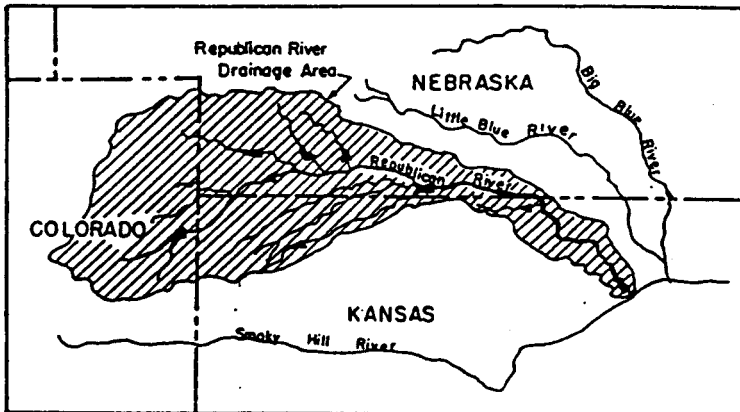
For The Year 1991

Denver, Colorado

July 13, 1992

REPUBLICAN RIVER COMPACT ADMINISTRATION

THIRTY-SECOND ANNUAL REPORT



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THIRTY-SECOND ANNUAL REPORT

REPUBLICAN RIVER COMPACT ADMINISTRATION

In conformity with the Rules and Regulations of the Republican River Compact Administration, the Thirty-Second Annual Report is submitted as follows:

1. Pursuant to Rule 12, as amended, this report covers the period from July 20, 1991 to July 13, 1992.
2. Members of the Republican River Compact Administration are the officials of each of the states who are charged with the duty of administering the public water supplies and are as follows:
 - Hal D. Simpson, State Engineer, Colorado
 - J. Michael Jess, Director, Department of Water Resources, Nebraska
 - David L. Pope, Chief Engineer-Director, Division of Water Resources, State Board of Agriculture, Kansas
3. The Thirty-Third Annual Meeting of the Administration was held on July 13, 1992 at Denver, Colorado. The minutes of the meeting are included in this report.
4. During the period covered by this report, one meeting of the Engineering Committee was held. A report from that committee together with summary tabulations of the computed annual water supply and consumptive use for the 1991 water year in the Republican River Basin were presented and accepted by the Administration and are included in this report.
5. Reports were received from the Bureau of Reclamation on operation and administration of their projects in the basin of the Republican River and by the U. S. Geological Survey on their gaging stations in the same basin.
6. By consensus, Jeris A. Danielson, Colorado member of the Administration, served as Chairman from July 19, 1991 to February 14, 1992; and Hal D. Simpson, Colorado member of the Administration, served as Chairman from February 14, 1992 to July 13, 1992.

MINUTES
33rd ANNUAL MEETING
REPUBLICAN RIVER COMPACT ADMINISTRATION

The meeting was called to order by Chairman Simpson at 8:30 am, July 13, 1992 in the conference room of the Colorado Division of Water Resources, Denver, Colorado. Those in attendance were:

<u>Name</u>	<u>Representing</u>	<u>Location</u>
Hal D. Simpson	Colorado Commissioner	Denver, Colorado
J. Michael Jess	Nebraska Commissioner	Lincoln, Nebraska
David L. Pope	Kansas Commissioner	Topeka, Kansas
Bob Kutz	U.S. Bureau of Reclamation	Grand Island, Nebraska
William Kastner	U.S. Geological Survey	Evergreen, Colorado
Michael Bart	U.S. Corps of Engineers	Kansas City, Kansas
Alan Berryman	Colorado Div. of Water Resources	Greeley, Colorado
Keith Vander Horst	Colorado Div. of Water Resources	Denver, Colorado
Reiner Haubold	Colorado Div. of Water Resources	Denver, Colorado
Purushottam Dass	Colorado Div. of Water Resources	Denver, Colorado
Crystal Carter	Colorado Div. of Water Resources	Denver, Colorado
Cindy Howard	Colorado Div. of Water Resources	Wray, Colorado
Cliff Seigneur	Colorado Attorney General's Office	Denver, Colorado
Anne S. Bleed	Nebraska Dept. of Water Resources	Lincoln, Nebraska
Don Blankenau	Nebraska Dept. of Water Resources	Lincoln, Nebraska
Russell Oaklund	Nebraska Dept. of Water Resources	Cambridge, Nebraska
Leland E. Rolfs	Kansas Div. of Water Resources	Topeka, Kansas
Gerald Hilmes	Kansas Div. of Water Resources	Topeka, Kansas
James Bagley	Kansas Div. of Water Resources	Topeka, Kansas
Scott E. Ross	Kansas Div. of Water Resources	Stockton, Kansas

Chairman Simpson asked for introductions of those present.

Approval of Minutes

The minutes of the 32nd Annual Meeting stood as previously circulated, approved, and published in the 31st annual report.

Report of the Chairman

Chairman Simpson reported Colorado's portion of the Republican basin had a relatively good year in terms of water supply and crop production in 1991. The spring of 1992 started with dry freezing weather followed by hail, all of which have been hard on crops. A new one-half time water commissioner is working in the basin out of Wray. Due to shortfalls in state funding of education, the Division is operating under severe budgetary constraints which are affecting both hiring and operations.

The Colorado legislature passed two bills of interest during the last session. House Bill 1131 authorized the State Engineer to step in to perform emergency work on unsafe dams when the dam owner is unable or unwilling to take the required action. A \$50,000 fund was established to fund any work required with the state allowed to seek reimbursement from the owner after the action has been taken. Senate Bill 87 expanded the use of the Colorado Water Conservation

Board construction funds to allow non-construction uses such as a water resources decision support system in the Colorado River basin, basin of origin studies for transfer of waters from the west slope to the east slope, and an artificial recharge demonstration project in the San Luis Valley.

The Colorado Ground Water Commission adopted rules and regulations in March dealing with the use of ground water from the Ogallala Aquifer. These rules were based upon policies the board had been operating under since 1965.

Report of the Kansas Commissioner

Commissioner Pope reported that the Kansas legislature was primarily preoccupied with changing school funding from a local to a statewide base in 1992. They considered but did not pass amendments to the Kansas Water Transfer Act which is triggered any time water of over 1000 acre-feet per year is moved a distance of over 10 miles. This act has been controversial and a recent decision under the act is being challenged in court.

Under the Kansas Water Assurance Program, large municipal and industrial diverters within the Kansas River basin joined together to form an assurance district for purposes of contracting with the state to obtain reservoir storage space. The district is now in full operation with all agreements and contracts signed and in place. The district has a contract for storage in Milford Reservoir.

The Republican River basin was one of the most administratively active in Kansas last year due to 1991 being a low water year. The river had record low flows at Concordia and Clay Center, possibly going dry in other spots. The Bostwick irrigation projects received short supplies and minimum streamflows were not met during the last winter. In January of 1992, administrative call notices went out to 17 junior surface water users and 84 junior ground water users. While recent rainfall events have allowed those calls to be removed, it is not known whether the whole system has recovered. Milford Reservoir has not yet recovered to conservation pool level. The 1990 moratorium on new appropriations of both surface and ground water continues in the lower Republican basin. The upper basin has been closed to new permits since the mid 1980's. All available water in the lower Republican basin was put to beneficial use.

Administrative actions limiting both senior and junior diversions of ground water and surface water in the Walnut Creek Basin in west central Kansas were initially challenged in the courts, but opposers settled after having a chance to review all the alternatives.

Report of the Nebraska Commissioner

Commissioner Jess and staff reported that the past legislative session was dominated by property tax matters. State tax revenues have been flat which threaten to reduce the budget of the water resources department by 10%. The legislature did pass L.B.49 which dealt with the protection of water transported via natural channels. A bill which did not pass was L.B.306, which was an attempt by cities to allow diversion of their surface water rights by ground water pumping. A water user in the Ground Water Control area of the Upper Republican Natural Resources District was shut down upon reaching his 5-year diversion allocation after the first 4 years. A Special Protection Area has been created in the McCook area of the Middle Republican Natural Resources District for purposes of regulating the use of pesticides and nitrates.

Nebraska reports that drought conditions are affecting the basin in Nebraska. Low water supplies in Harlan County Reservoir have caused controversy between irrigators and recreationalists. Administration for 1992 began on June 25 with all 113 mainstem permits between Harlan County Dam and the Guide Rock Diversion Dam being regulated. Around the 1st of July, other standard regulations in the basin went into affect. On Red Willow Creek 10 senior permits were regulated and 23 junior permits were closed. On Medicine Creek 15 senior permits were regulated and 52 junior permits were closed. On the mainstem from Trenton to the Cambridge diversion, the senior canal permits were regulated and 11 junior permits were closed. On Frenchman Creek, all the permits above Culbertson Canal diversion (38) were closed and permits downstream from Culbertson Canal diversion (8) were regulated. Approximately 100 acres of water rights under the Franklin Canal have been cancelled.

Upon question by Commissioner Pope, Commissioner Jess indicated that while wells are not given priority dates, owners are required to register their wells within 30 days of construction. Nebraska indicated that junior permits totaling approximately 50 cfs between Harlan County Dam and Guide Rock are only regulated, and are not being closed, due to the inability of the Courtland diversion structure to efficiently divert all water which is available to it.

Report of the Bureau of Reclamation

Mr. Bob Kutz handed out information summarizing the Bureau's activities in the Great Plains Region. On the legislative scene, budget limitations may limit future Bureau activities. The House version of the Water Omnibus Bill contains attempts to eliminate double subsidies to farmers involving both water pricing and crop supports. A \$569,000 contract has been awarded for vinyl lining of 1.2 miles of the upper Courtland Canal. An R & B loan for the Sargent Irrigation District may not go through.

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Precipitation within the basin during 1991 varied from a low of 77% of normal at Lovewell Reservoir to a high of 150% of normal at Bonny Reservoir. The Almena Irrigation District received no water, Frenchman Valley and H&RW District received 3.5 inches of water, the Frenchman-Cambridge District received 12 inches of water, and the two Bostwick projects received 9 inches of water. Water year 1991 started with good rainfall and reservoir inflows, but as the irrigation season progressed inflows declined drastically. Both Enders and Harlan County Reservoirs experienced new historic low inflows, Bonny Reservoir received normal-to-wet year forecasted inflows, and all remaining reservoirs received dry-to-normal forecasted inflows. This spring was the first time Medicine Creek Dam did not fill to the top of the conservation pool.

All dams were inspected in 1991. Trenton Dam's spillway gates are being painted and its outlet pipe is to be replaced. Early warning systems are planned to be installed on most dams. Bonny Dam may receive more toe drains. The Corps of Engineers has installed riprap down to 1920 feet elevation on Harlan County Dam.

Mr. Kutz indicated some of the problems experienced at the Courtland diversion dam were due to fluctuations in streamflow caused by unpredictable upstream ground water pumping. Areas below Harlan County Dam are expected to receive 7 inches of water this year as compared to an average of 14 inches in the past.

Report of the Engineering Committee

Alan Berryman, this year's chairman of the committee, presented the committee's report and Tables 1 and 2 summarizing computations of the virgin water supply, adjusted allocations, and consumptive use.

Nebraska stated that this year they had revised their method of reporting alluvial well use from considering all wells within one mile of the thread of the stream to considering registered wells which were actually producing from the alluvium.

Commissioner Pope noted that this was the first year that the computed virgin water supply for the basin was below the original compact allocations. Mr. Berryman stated that the committee had not identified a cause for this occurrence.

Commissioner Pope wished to note for the record the number of subbasins in which consumptive use was in excess of adjusted allocations, and that the report showed Nebraska's total consumptive use of 263,220 AF exceeded its adjusted allocation of 210,960 AF. Commissioner Jess took exception to the characterization of including ground water in the allocations.

Commissioner Jess moved the report be accepted with the exception of the last sentence of the first paragraph of page 2,

which begins with the phrase, "Table 2 indicates ...", because that sentence envisions a legal conclusion the committee is not capable of making. Commissioner Simpson pointed out that the computations followed the recommendations of the administration. Mr. Blankenau stated that it was Nebraska's position that the tables speak for themselves and that the committee should not go beyond performing the computations, but should leave any conclusions to other parties. Commissioner Pope objected to the removal of the sentence, believing the report should not be amended but should be received as submitted. There was no second to Commissioner Jess' motion. Commissioner Pope moved the report be received with the understanding that Commissioner Jess objects to the sentence under discussion. Commissioner Simpson seconded and the motion passed.

Unfinished Business

The first item under unfinished business was the use of ground water in the virgin water supply computations.

Commissioner Jess indicated that at the 1990 annual meeting each state had agreed to research their files to determine what they could find on this subject. Mr. Blankenau had searched Nebraska's files and reported that after reviewing the items found, including minutes of the commissioner's meetings during the negotiations forming the compact, with the exception of a presentation by Mr. Harry Burreigh, there was no discussion of ground water. In addition, Mr. Blankenau stated that computations for the virgin water supply appear to have been derived by figures presented by a Mr. Shaffer of Nebraska, which he believes were based upon records of streamflow. He stated that at a meeting of commissioners in 1954 Colorado indicated they believed they still had the original computations. Mr. Blankenau concluded that ground water was not an element within the original compact and that present inclusion of ground water in the virgin water supply calculations may be a violation of the compact.

Commissioner Pope noted that the compact definition of virgin water supply consisted of that supply within the basin undepleted by the activities of man, and asked how the pumping of ground water could be concluded as not being an activity of man. Mr. Blankenau responded that the definition could not be looked at without viewing the compact as a whole, including how the original allocations were arrived at.

Commissioner Pope asked if it was Nebraska's position that ground water use has no affect on stream flow. Mr. Blankenau responded by stating it was Nebraska's position ground water is not included within the compact. Commissioner Pope failed to see how, irrespective of the method in which allocations were determined, it was illegal to include ground water in the computations. Mr. Blankenau reiterated that one must look at the compact as a whole including how the original allocations were arrived at, which he believes were derived from surface runoff records. Commissioner

Pope believed that while the method in which allocations were arrived at may be of interest, the final allocations are of more importance.

Commissioner Pope referred to an explanatory statement to the Colorado Legislature from Colorado Commissioner Hinderlider, which spoke of consideration of Mr. Harry Burleigh's report and to the total virgin water supplies of the basin specifically being both surface water and ground water. He also referenced a letter from Mr. Hinderlider to Messrs. Knapp and Scott, the commissioners from Kansas and Nebraska, dated January 31, 1941 and a follow-up letter from Mr. Knapp to Mr. Burleigh, both of which indicated that all the commissioners were in agreement that ground water was within the tentative allocations. Commissioner Pope concluded that the original commissioners did consider ground water, and that they were allocating a total supply whether it be from surface or ground sources.

Commissioner Simpson stated that much of the streamflow originates from ground water baseflows. Commissioner Pope stated that there was a nominal amount of ground water development at the time of the signing of the compact and its affect did not have to be accounted for at that time. Mr. Blankenau stated that the issue was not hydraulic but legal, based upon the source for the numbers of the original allocations.

Commissioner Simpson read from the minutes of a commissioners' meeting of July 15, 1943 in which all commissioners agreed ground water records at stateline stations would be of value. He indicated this was evidence that the commissioners anticipated ground water development and included it in the allocation of consumptive use. Mr. Blankenau questioned why, if the commissioners intended to include ground water, they did not include this in their minutes leading up to the signing of the compact.

Commissioner Jess asked whether everyone had reviewed all of their files for relevant documents. Mr. William Kastner of the U.S.G.S. offered that records of when the ground water observation well network was initiated might be helpful. Mr. Kutz offered that the Congressional record might contain useful information. It was moved and carried that the states and the federal agencies develop and provide to each other within 90 days a list of compact documents they have on file. Items which a state does not have available are to be made available by the state which has the document.

The second item under unfinished business was discussion on Kansas' concern regarding administration and enforcement of the compact.

Commissioner Pope expressed concern that the existing procedures and mechanisms are not adequate to enforce the compact when consumptive uses exceed adjusted allocations. He observed

that this concern has been expressed since the 1970's and is becoming more important as water shortages are beginning to be felt and downstream users are beginning to be injured. He reiterated the proposals Kansas had put forth in 1989 in relation to this issue; namely, to change the administration of the compact in terms of limiting allocations and that each state live within their allocations. Commissioner Pope said that in 1991 and thus far in 1992 Kansas had not gotten its allocation under the compact and this was unacceptable. In Nebraska, use upstream exceeded allocations by about 50,000 acre-feet. Kansas was over in two subbasins, but it closed those areas to new appropriations years ago. Kansas is also willing to take additional actions to deal with the matter, if Nebraska is also willing to do so. Most excess diversions appear to be above Harlan County Reservoir and without that occurring there would undoubtedly have been more inflow to Harlan County Reservoir. He stated that the engineering report calculations which showed Kansas not using all of the upper basin allocation is not reflective of Kansas' water use because much of this water is used in the lower basin below the Kansas-Nebraska stateline. When the 92,500 AF of upper basin consumption is added to approximately 70,000 AF of lower basin consumption which Kansas calculated for itself in 1991, Kansas is close to consuming its total adjusted allocation. Kansas surface water use in 1991 of about 46,000 acre-feet would have been larger if the surface water supply had been greater. Last year Kansas' Bostwick Irrigation District got less than 9 acre-inches per acre for its irrigated land, if more water had been available to the Bostwick project they would have taken it. Part of the lack of supply for Kansas is due to Nebraska's over use upstream and that is intolerable. He requested the other members of the compact support changes in the way the compact is administered and enforced, in order to provide for relief. He officially requested Nebraska take the appropriate administrative actions necessary to get within their compact allocations, and questioned how Nebraska intends to make Kansas whole for prior year's shortages. He stated Kansas would be open to changes as appropriate in the methodology of accounting for ground water use or to a change from after-the-fact accounting. Kansas does not feel the virgin water supply has grown as the computations would seem to indicate.

Commissioner Jess stated that Nebraska has also experienced reductions in supplies during the past year. Commissioners Pope and Jess discussed the amounts available to, allocated to, and consumed by each state. Commissioner Jess stated that in Nebraska's opinion they had not over used their allocated supplies, as Nebraska believed they were allocated 210,960 AF and had consumed 104,770 AF, values obtained from the 1991 water year engineering report.

Commissioner Simpson asked what authority Commissioner Jess had to regulate use of either surface or ground water if there was an over use in Nebraska. Commissioner Jess responded that while he could now only regulate surface water if there was an over use, if ground water had clearly been included in the compact, that also

could be regulated. Commissioner Simpson stated that if there was a consistent over use of water to the detriment of other users, something should be done. Commissioner Jess agreed but stated it was Nebraska's opinion they were not over using water.

Commissioner Pope repeated his request as to what Nebraska intends to do about past shortages to Kansas and what they intend to do to bring themselves into compliance. Commissioner Jess responded that the concerns brought up in this meeting will be conveyed to the Nebraska legislators. Commissioner Pope wished to state for the record that Kansas felt Nebraska was in violation of the compact due to Nebraska's combined surface and ground water consumptive uses being above their adjusted allocations.

Commissioner Pope made a motion that the compact administration ask each of the states to take whatever measures are necessary to stay within their annual adjusted allocations of beneficial consumptive use of the waters of the Republican River. Commissioner Simpson seconded for discussion purposes. Commissioner Jess stated that the motion appeared to be redundant to the compact which already intends this. Commissioner Pope replied that the intent of the motion was to show the administration was in agreement and to provide additional emphasis for dealing with the issue. Kansas voted yes, Nebraska voted no, Colorado voted yes; the motion failed.

Commissioner Pope, noting that Article 4 of the compact allocates specific amounts of water for annual beneficial consumptive use to each of the states and stating that those adjusted allocations computed each year have been exceeded in some instances, made a second motion that the Republican River Compact Administration resolve that the state of Nebraska make a proposal at the next annual meeting as to how Nebraska will repay Kansas for any annual beneficial use of water by Nebraska in excess of its adjusted allocation in any year prior to 1993. Commissioner Simpson seconded for discussion purposes. Commissioner Jess stated Nebraska felt no liability for alleged depletions. Commissioner Pope stated Kansas feels a smaller water supply was available in 1991 to the Bostwick project, and other downstream diverters, than would have been the case had compact allocations been adhered to. Commissioner Simpson asked whether Kansas had done any studies to prove the cause and effect nature of the allegation. Commissioner Pope responded that after looking at precipitation records and the decreased runoff into Harlan County Reservoir, he believes reduced supplies are due to more than just a short term drought situation. He also referred to a 1985 Bureau report which identified ground water use as one of the causes of decreased reservoir inflows, and to previous work done by the engineering committee which show trends of ground water consumptive use increasing in sub-basins while surface water use went down. Kansas voted yes, Nebraska voted no, Colorado voted no; the motion failed.

The third and fourth items under unfinished business were the current status of Harlan County Reservoir operations and the role of the Compact Administration in the operation of the reservoir.

Commissioner Pope stated that last year the commission had sent a letter dated July 25, 1991 to the Corps of Engineers expressing concern over whether the operation of Harlan County Reservoir was consistent with the compact. The Corps in cooperation with the Bureau is now proceeding with a review of future operations of the lake, with input from Kansas and Nebraska. He asked what role the compact commission should take in this procedure.

Mr. Mike Bart of the Corps stated that he was in attendance simply as an observer, but could offer that for 1992 the reservoir would be drawn down to 1,927 feet which is 5.8 feet below the top of the sediment pool. The plan for 1992 is based upon sharing the inflow and rising pool level with multiple purposes.

Commissioner Pope expressed concern that the administration have more of a role in deciding how much water is to be released from the reservoir than just providing comments to the Corps. He sees a potential for users receiving less water under Corps distribution than if the compact administration determined releases under compact provisions. Commissioner Jess believed that participation of each individual state may have as much effect as a compact administration effort. Commissioner Pope requested that the letter from the compact administration to the Corps concerning last year's operation of Harlan County Reservoir be appended to this year's report.

The resolution to Bob Bishop approved at last year's meeting is to be included in this year's report.

New Business

Commissioner Pope expressed thanks to Colorado for hosting this year's meeting.

Commissioner Pope moved the engineering committee be given their normal assignment of computing virgin water supply, adjusted allocations, and consumptive uses as they have in past years. Commissioner Jess offered an amendment that the engineering committee eliminate all computations related to ground water use. Commissioner Jess's amendment was not seconded. Commissioner Simpson seconded Commissioner Pope's original motion. The motion passed.

Commissioner Jess moved that the compact administration create a legal committee whose sole task is to accumulate the historical files and records with regard to whether ground water was intended to be included within the compact, compile those materials, and

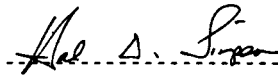
make that material available to the commissioners 90 days prior to the next meeting. Commissioner Pope seconded the motion with the provision that the scope of what the committee looks at be broadened to include all historical compact documents rather than just documents relating to inclusion of ground water. Commissioner Jess accepted that provision and the motion passed. Commissioner Jess appointed Don Blankenau and Commissioner Pope appointed Leland Rolfs as their committee members. Commissioner Simpson stated he would have to confer with the Attorney General's office before naming Colorado's member.

Commissioner Simpson proposed a resolution recognizing Jeris Danielson's service to both Colorado and the compact commission and moved for its adoption. The motion passed and the resolution is to be incorporated into the annual report.

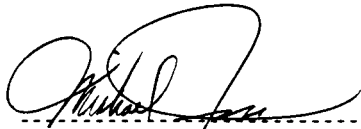
A tentative date for next year's meeting was set for Thursday, June 10, 1993, and will be hosted by Kansas.

In response to earlier discussions Mr. Kutz stated that because 5-year average inflows to upstream reservoirs were at or above normal it was the Bureau's opinion that Harlan County Reservoir was not experiencing drought related affects. Also related to Harlan County operations was the fact that new water supply contracts for the Bostwick and Frenchman-Cambridge projects had to be in place by January 1, 1997. Mr. Kutz stated that since he is considering retirement this may be the last Republican River Compact Administration meeting he attends.

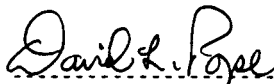
Upon motion and second the meeting was adjourned at 1:15 p.m.



Hal D. Simpson
Colorado Commissioner (Chairman)



J. Michael Jess
Nebraska Commissioner



David L. Pope
Kansas Commissioner

REPORT OF THE ENGINEERING COMMITTEE
TO THE
REPUBLICAN RIVER COMPACT ADMINISTRATION
FOR THE 1991 WATER YEAR

The engineering committee met via phone conference on June 5, 1992 to complete the work assignment made by the Compact Administration at the July 19, 1991 annual meeting. The phone conference included the following:

Ann Bleed	Nebraska Department of Water Resources
Jerry Hilmes	Kansas Division of Water Resources
Alan Berryman	Colorado Division of Water Resources
Keith Vander Horst	Colorado Division of Water Resources

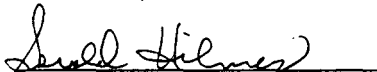
No special assignments were required by the Compact Administration for the year. The Engineering Committee performed the normal computations for Virgin Water Supply, Original and Annual Adjusted Allocations, and 1991 Consumptive Use within the Republican River Basin. Computations were made using the computer program developed by the committee which incorporates the revised formulae published by the Compact Administration in 1990. Some minor changes in the data provided by each state were made during the meeting. Additionally, Nebraska changed its method of reporting ground water use by including only those wells constructed in the alluvial aquifer. Nebraska evaluated well depths, river valley changes and topographical maps to identify the wells considered as pumping compact water.

The results of the computations are presented on the attached tables. Table 1 is a summary of the results of the virgin water supply computations and adjusted allocations. Table 2 is a summary of consumptive uses by each state from the mainstem and sub-basins. The total annual computed virgin water supply for the Republican River basin for 1991 is down from 1990 levels and is less than the original compact allocation. Eleven of the thirteen sub-basins had adjusted allocations lower than the original compact allocation. Consumptive use for 1991 is also reduced from 1990 levels. Table 2 indicates that Colorado did not exceed its allocation of consumptive use in any basin, Kansas exceeded its allocation in 2 basins, and Nebraska exceeded its consumptive use allocation in 9 sub-basins.

The next meeting of the Engineering Committee will be held in May of 1993 unless special assignments by the Compact Administration necessitate additional meetings.

Respectively Submitted,


Ann Bleed, Nebraska


Gerald Hilmes, Kansas


Alan Berryman, Colorado

Table 1

1991 Computed Annual Virgin Water Supply and
Original and Annual Adjusted Allocations

Computed Annual Virgin Water
Supply Republican River Basin
1991 (Acre Feet)

Comparison of Original Compact Allocations and
1991 Adjusted Allocation (Acre Feet)

Sub-basin and the Original Compact Virgin Water Supply	Ground Water	Surface Water	Total Basin	Colorado		Kansas		Nebraska		Total Basin		
				Compact Alloc.	Adj. Alloc.	Compact Alloc.	Adj. Alloc.	Compact Alloc.	Adj. Alloc.	Compact Alloc.	Adj. Alloc.	
Prairie Dog Cr.	27600	15720	3300	19020		12600	8680	2100	1450	14700	10130	
Sappa Cr.	21400	26230	1790	28020		8800	11520	8800	11520	17600	23040	
Beaver Cr.	16500	19780	390	20170	3300	4030	6400	7820	6700	8190	16400	20040
Medicine Cr.	50800	4360	31750	36110				4600	3270	4600	3270	
Red Willow Cr.	21900	3190	14630	17820				4200	3420	4200	3420	
Driftwood Cr.	7300	2220	1970	4190			500	290	1200	690	1700	980
Frenchman Rv.	98500	35960	47860	83820				52800	44930	52800	44930	
South Fork of the Republican Rv.	57200	15240	24670	39910	25400	17730	23000	16050	800	560	49200	34340
Rock Cr.	11000	0	8030	8030				4400	3210	4400	3210	
Buffalo Cr.	7890	630	4080	4710				2600	1550	2600	1550	
Arikaree Rv.	19610	5480	6410	11890	15400	9330	1000	610	3300	2000	19700	11940
N.F. Republican Rv in Colorado	44700	710	36410	37120	10000	8300			11000	9130	21000	17430
N.F. and Main Stem of Republican Rv. incl. Blackwood Cr. in Nebraska*	94500	82230	28260	110490			138000	125980	132000	121040	270000	247020
TOTALS	478900	211750	209550	421300	54100	39390	190300	170950	234500	210960	478900	421300

Table 2

1991 Computed Consumptive Use within the
Republican River Basin (Acre Feet)

Sub-basin	Colorado		Total	Kansas		Total	Nebraska		Total	Total Basin		Total
	Ground Water	Surface Water		Ground Water	Surface Water		Ground Water	Surface Water		Ground Water	Surface Water	
Prairie Dog Cr.				15720	3420	19140 8680 *	1310	270	1580 1450 *	17030	3690	20720 10130 *
Sappa Cr.				9060	70	9130 11520 *	17170	1280	18450 11520 *	26230	1350	27580 23040 *
Beaver Cr.	0	0	0 4030 *	8050	180	8230 7820 *	11730	0	11730 8190 *	19780	180	19960 20040 *
Medicine Cr.							4970	960	5930 3270 *	4970	960	5930 3270 *
Red Willow Cr.							3190	950	4140 3420 *	3190	950	4140 3420 *
Driftwood Cr.				0	0	0 290 *	2220	20	2240 690 *	2220	20	2240 980 *
Frenchman Rv.							35960	13160	49120 44930 *	35960	13160	49120 44930 *
South Fork of the Republican Rv.	5850	6440	12290 17730 *	8800	220	9020 16050 *	590	0	590 560 *	15240	6660	21900 34340 *
Rock Cr.							0	0	0 3210 *	0	0	0 3210 *
Buffalo Cr.							630	370	1000 1550 *	630	370	1000 1550 *
Arikaree Rv.	4930	0	4930 9330 *	130	0	130 610 *	420	0	420 2000 *	5480	0	5480 11940 *
N.F. Republican Rv in Colorado	710	3130	3840 8300 *				0	3200	3200 9130 *	710	6330	7040 17430 *
N.F. and Main Stem of Republican Rv. incl. Blackwood Cr. in Nebraska*				50	46800	46850 125980 *	80260	84560	164820 121040 *	80310	131360	211670 247020 *
TOTALS	11490	9570	21060 39390 *	41810	50690	92500 170950 *	158450	104770	263220 210960 *	211750	165030	376780 421300 *

(* indicates adjusted allocations from Table 1)

*RESOLUTION
OF THE
REPUBLICAN RIVER COMPACT ADMINISTRATION*

July 13, 1992

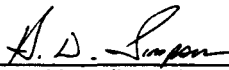
to
Robert F. Bishop

WHEREAS, Robert F. Bishop has worked with other members of the Republican River Compact for nearly two decades; and

WHEREAS, Mr. Bishop has faithfully carried out his duties as a member of the Engineering Committee and, in turn, as Chair of the Engineering Committee; and

WHEREAS, Mr. Bishop's dedication to objectivity and the correctness of compilations have earned the respect of fellow committee members and of the full membership of the compact;

NOW, THEREFORE, BE IT RESOLVED that the Republican River Compact Administration would like to acknowledge its gratitude and appreciation to Robert Bishop for his service not only to the citizens of the State of Nebraska but also, through his work for the compact, to the citizens of the states of Colorado and Kansas as well.



Harold (Hal) D. Simpson
State Engineer and Chairman
Republican River Compact Administration

**RESOLUTION
OF THE
REPUBLICAN RIVER COMPACT ADMINISTRATION**

July 13, 1992

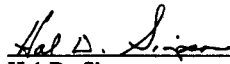
to
DR. JERIS A. DANIELSON

WHEREAS, Dr. Jeris A. Danielson was for 12 years Commissioner for Colorado to the Republican River Compact Administration; and

WHEREAS, during that time Dr. Danielson did faithfully carry out the duties of State Engineer and Compact Commissioner for the State of Colorado; and

WHEREAS, during his tenure as Commissioner, the commissioners of the states of Kansas and of Nebraska did develop great admiration and respect for Dr. Danielson;

NOW, THEREFORE, BE IT RESOLVED that the Republican River Compact Administration assembled in the annual meeting in Denver, Colorado this 13th day of July 1992 acknowledges the devoted service of Dr. Jeris A. Danielson to the citizens of Colorado and to the Republican River Compact Administration and this Administration extends to Dr. Danielson its best wishes for a prosperous and enjoyable future.



Hal D. Simpson
State Engineer and Chairman
Republican River Compact Administration