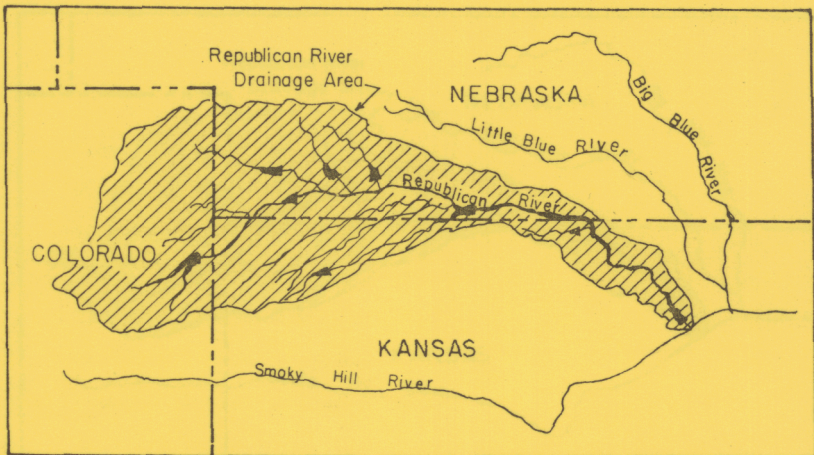


REPUBLICAN RIVER COMPACT ADMINISTRATION

TWENTY-SECOND ANNUAL REPORT



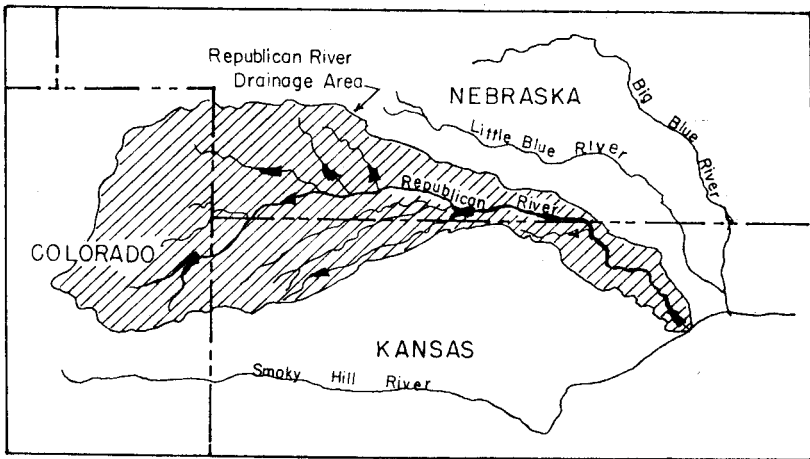
For The Year 1981

Topeka Kansas

August 19, 1982

REPUBLICAN RIVER COMPACT ADMINISTRATION

TWENTY-SECOND ANNUAL REPORT



For The Year 1981

Topeka Kansas

August 19, 1982

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TWENTY-SECOND ANNUAL REPORT

REPUBLICAN RIVER COMPACT ADMINISTRATION

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

1. Pursuant to Rule 12, as amended, this report covers the period from July 3, 1981 to August 19, 1982.
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:
 - Jeris A. Danielson, State Engineer, Colorado
 - Michael Jess, Director, Department of Water Resources, Nebraska
 - Guy E. Gibson, Chief Engineer-Director, Division of Water Resources, State Board of Agriculture, Kansas
3. The Twenty-Third Annual Meeting of the Administration was held on August 19, 1982, at Topeka, Kansas. The minutes of the meeting are included in this report.
4. During the period covered by this report, two meetings of the Engineering Committee were held. The minutes and a report from that committee together with summary tabulations of the computed annual water supply and consumptive use for the 1981 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 and on the Republican River Water Management Study.
6. Rules and Regulations constituting the Republican River Compact Administration, as amended to July 20, 1976, are published as a part of this report.
7. Michael Jess, Nebraska member of the Administration, was elected to serve as Chairman until the next annual meeting.

MINUTES

23rd Annual Meeting Republican River Compact Administration August 19, 1982

The meeting was called to order by Guy E. Gibson, Chairman, at 10:05 a.m. on August 19, 1982, in the Conference Room of the Kansas State Board of Agriculture, 109 S.W. 9th Street, Topeka, Kansas.

Those in attendance were as follows:

<u>Name</u>	<u>Agency</u>	<u>Location</u>
Guy E. Gibson	Kansas Commissioner	Topeka, Kansas
Michael Jess	Nebraska Commissioner	Lincoln, Nebraska
Jeris A. Danielson	Colorado Commissioner	Denver, Colorado
Gerald E. Hilmes	Division of Water Resources	Topeka, Kansas
David L. Pope	Division of Water Resources	Topeka, Kansas
Leland E. Rolfs	Division of Water Resources	Topeka, Kansas
Denise J. Waters	Division of Water Resources	Topeka, Kansas
Fred Zabel	Department of Water Resources	Cambridge, Nebraska
Robert Bishop	Department of Water Resources	Lincoln, Nebraska
Hal D. Simpson	Colorado Engineer Advisor	Denver, Colorado
Bob Kutz	U. S. Bureau of Reclamation	Grand Island, Nebraska
Darrell Ewing	U. S. Bureau of Reclamation	Denver, Colorado
Lon Knapp	U. S. Bureau of Reclamation	Denver, Colorado
Dennis Lacock	U. S. Geological Survey	Lawrence, Kansas
Lowell Ploss	U. S. Bureau of Reclamation	Denver, Colorado
Glen Kirk	U. S. Bureau of Reclamation	Topeka, Kansas

Mr. Gibson stated that this meeting constitutes the regular annual meeting of the Administration in accordance with the rules and regulations which provide that such meeting will be held prior to August 1 of each year. By a conference call on June 25, 1982, the Secretaries of each of the Compact Members determined that due to conflicts of schedules the annual meeting could not be held prior to August 1. All Compact Members at that time agreed that the meeting could be held on August 19, 1982.

Approval of Minutes of the previous meeting:

There was discussion of the Minutes of the last meeting which had been circulated to each Compact Member and previously approved. Mr. Danielson moved to formally approve the Minutes of the 22nd Annual meeting. Mr. Jess seconded. The motion passed unanimously.

Report of Chairman:

Mr. Gibson reported that the 1982 Legislature introduced a bill regarding interbasin transfer of water. The Kansas Water Authority is also addressing this matter. He indicated a bill would be introduced in the 1983 Legislative Session involving not only interbasin transfer involving federal reservoirs but will also address the matter of appropriation of water from streams involving interbasin transfer.

The Division is presently working on a study concerning the amount of water available in the Republican River in Kansas. The U. S. Corps of Engineers is studying reservoirs in Kansas regarding allocation of storage space for flood control or other allocations.

Report of Official Members:

Mr. Jess, State of Nebraska, reported on a new activity assigned by the 1982 Legislature which involves permitting of geothermal resource uses. He stated the manner in which it will be administered, the Act will primarily affect the western part of Nebraska. In order to exempt small volume, home heat pump users the State Geologist recommended an administrative distinction be made between shallow ground-water and deeper geothermal formations. The Legislature also appropriated \$100,000 for geothermal research and pilot projects in the State.

The Legislature modified the Ground Water Management and Protection Act to allow for the creation of local management areas without State-level approval.

Mr. Jess reported on the Sporhase case. Briefly, Mr. Sporhase owns adjoining land in Nebraska and across the stateline in Colorado. He installed a well in Nebraska and transported water for irrigation of his Colorado land. Nebraska enjoined him. The decision was sustained. Mr. Sporhase appealed to the Nebraska Supreme Court and the decision was sustained. It was appealed to the U. S. Supreme Court which overturned the previous decisions.

In the Ground Water Control Area in the Upper Republican Natural Resources District an annual 22 acre inch per irrigated acre allocation has been implemented. The district reports that 95% of the wells in the area are now equipped with flow meters.

An application was filed by three irrigation districts in the Republican River Basin to divert and transport water from the South Platte River into the Frenchman River Basin to be impounded in Enders Reservoir. A controversy followed with over 20 days of hearings resulting.

Mr. Jess reported that Nebraska, Kansas and Missouri brought suit against the Department of the Interior for entering a water sales contract and against the Corps of Engineers for granting a Section 404 permit in connection with the ETSI coal slurry line from Oahe Reservoir in South Dakota.

A related court ruling from an interbasin transfer dispute resulted in a new requirement that all State agencies and political subdivisions consult with the State Game and Parks Commission to comply with the Non-Game and Endangered Species Act.

Mr. Jess introduced Fred Zabel, Division Engineer in the Republican River Basin. Mr. Zabel stated that above normal precipitation within the basin caused surplus water in Trenton, Harlan County and Medicine Creek Reservoirs. At times each was in the flood pool. He closed junior rights on the Frenchman River the 13th of July and closed pumps on Medicine Creek on the 2nd of August which was considerably later in the year than usual. Mr. Zabel released these last week and at the present time junior pumps are closed only on the Frenchman.

Mr. Danielson, State of Colorado, reported that Colorado was within her Compact allocations for 1981 and that no water issues were considered by the Colorado Legislature.

Mr. Danielson stated the Bonny Reservoir sale has been completed. He also spoke of the Sporhase decision appearing to allow federal intervention or control of water resources interest which is a shift of opinion. He stated the State of Colorado has an absolute prohibition on the export of water.

He further reported that the Water Conservation Board approved a small amount of money for a feasibility study on the Trans-County project. It is a proposal by various people in the Republican River Basin, Ogallala Aquifer, to import water from the South Half of Morgan County into the High Plains area of Easter Colorado.

The State Engineer's Office received a favorable decision from the Federal District Court regarding a case with the Department of the Interior regarding the Arkansas River Basin. The court referred it back to the State Water Court since the State has a well developed system to handle these problems.

Report of Engineering Committee:

Mr. Bishop, Chairman of the Engineering Committee, stated the Engineering Committee held its regular meeting in May in Topeka, Kansas, to carry out assignments which included the computation of the 1981 virgin water supply and 1981 consumptive use including M&I uses in the computations. They held a special meeting in Lincoln, Nebraska, in January to consider the revisions of the formulae. Mr. Bishop distributed copies of the Engineering Committee Report and copies of the Minutes of their special meeting held in January. Mr. Bishop referred to Items 1, 2 and 3 of the Minutes as conclusions of the Engineering Committee as to how they were to include M&I uses. Mr. Jess asked that the Committee note on the next report, in pertinent tables, that groundwater, is from alluvial stream deposits. There was discussion regarding how it is determined whether to include certain uses in the computations (set back from stream). There was discussion regarding the identification of M&I users. Most industrial water users purchase their water from municipalities and the return flow is included in the municipalities return flows.

Mr. Bishop stated they will be putting the formulas into an Apple computer and will keep the Compact Members informed if computations can be made by computer.

Mr. Jess moved that the Compact receive the Committee report on consumptive use and virgin water supply and have the formulas published. Mr. Danielson seconded. The motion passed unanimously.

Mr. Jess moved that the Compact receive the revised formulas and that they be published by the Administration as a separate booklet to be available upon request. Mr. Danielson seconded and added that the booklet show that the revised formulas were adopted at the 23rd Annual Meeting of the Republican River Compact Administration on August 19, 1982, for the Republican River Basin. The motion passed unanimously.

Unfinished Business:

Mr. Jess moved that the Administration instruct the Engineering Committee in future computations of the virgin water supply and consumptive use to include in its geographical scope the entire Republican River Basin to Junction City, Kansas, and that the computations include the lower section of Kansas in the basin. Mr. Danielson seconded. After discussion of the past procedures, Nebraska voted yes on the motion, Colorado voted yes and Kansas voted yes with the reservation that the instruction to the Engineering Committee on the new procedure will be given at the time of assignments to the Engineering Committee.

Assignment to the Engineering Committee:

Mr. Jess moved that the Engineering Committee of the Compact Administration at the next annual meeting report how they can accomplish the inclusion of the lower portion of the basin into the computations with consideration given to computation revisions, need of additional data from gaging stations, accounting for evaporation, data needed from federal agencies and downstream reservoir information. This is in addition to the routine assignments to the Committee. Mr. Danielson seconded. All states voted yes.

New Business:

Mr. Gibson reported that as of this date Kansas has not installed a gaging station at the South Fork of the Republican River near the stateline. The Division is taking measurements relating to low flows and intends to pursue the matter of installing a stateline gaging station.

Mr. Danielson requested that the plate showing the Republican River Basin be reproduced in each annual report. All Compact Members agreed it would be useful to have this in each report.

Mr. Lon Knapp gave an explanation of the Republican River Water Management Study. This study includes the entire basin in all three states. The purpose of this report is to: 1. Define and quantify the present and potential future water related problems and needs of the basin; 2. Attempt to determine causes of the problems; 3. Evaluate potential solutions to the problems. Problems they will be looking at are defining groundwater, disappearing surface water and changes in wildlife habitat and recreation opportunities and overall economy of the area. Results of the study are not yet available. The final report should be out in December 1984. Other things being given consideration is the importation of water from one county to another.

Mr. Kutz reported that the sale of Bonny Reservoir has been completed with the contract signed on June 23, 1982, for \$3.17 million. This sale involved the conservation capacity of the reservoir. The contract provides a share of O&M cost be paid by Colorado. Operating plans may be revised on this reservoir from time to time and Mr. Kutz suggested that each state review the annual operating plan when it is submitted each year.

Mr. Kutz stated that most reservoirs in the Republican Basin are well above normal stages for this time of year. The U. S. Bureau of Reclamation will be repairing the rip rap on Lovewell this winter and will be obligated to hold the reservoir stage down while this repair work is being done.

The U. S. Bureau of Reclamation is completing re-surveys of Harry Strunk and Swanson Reservoirs because silt accumulation has been more rapid than anticipated.

They are changing the cable on Trenton Dam below the gates. He stated a bulkhead will be installed in front of the gates since water is above the gates.

Under the new operating plan for Harlan County there will be no releases other than prevention of stilling basin stagnation. The Government Accounting Office has been looking at operations and determined that on most projects charges have not been made for O&M to the beneficiaries for water supplies as required by federal law. They now must start charging for O&M. \$1.32 per irrigated acre will be charged to Nebraska Bostwick Irrigators and \$1.85 for Kansas Bostwick irrigators. Kansas' charge involves two reservoirs: Harlan and Lovewell.

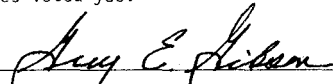
The Bureau of Reclamation through the Department of the Interior has introduced a bill for relief of the irrigators below Enders. This would set a precedent because it relieves the district of repayment obligations and changes their contract to a water supply contract if water is available. One other provision in the contract is the O&M charges which will be prorated. He stated there has been discussion among House and Senate members that the State of Nebraska should pick up this obligation. This type of contract may have impact on other projects as well. Mr. Kutz stated he would send copies of the proposed bill to each of the Members of the Compact.

Mr. Kutz stated in their FY 1983 budget, if approved, they will have funds for a pipe lateral study. Kansas Bostwick drainage study report indicated they will need about \$10 million for more drainage protection. Also in the FY 1983 budget, if approved, they will have funds for a pipe lateral study where Nebraska Bostwick is wanting them to make a study to give them the numbers and guidance for a R&B type loan to convert open ditch laterals to pipe.

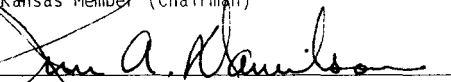
Mr. Danielson moved that the Chairman of the Compact for the next two years be Michael Jess, State of Nebraska. Kansas Seconded. All states voted yes.

The Compact Members agreed that on July 7, 1983, the Administration will hold the next annual meeting. Mr. Jess stated he intends to hold the meeting within the basin area of Nebraska.

Mr. Jess moved that the meeting adjourn at 12:35 p.m. after there being no further business before them. All states voted yes.



Kansas Member (Chairman)



Colorado Member



Nebraska Member

Report of Engineering Committee
Republican River Compact Administration
For the 1981 Water Year

The meeting of the Engineering Committee was held in the office of the Kansas Division of Water Resources on May 5 and 6, 1982.

Committee members present were:

Robert F. Bishop, Nebraska Department of Water Resources
Harold D. Simpson, Colorado State Engineer's Office
Gerald E. Hilmes, Kansas Division of Water Resources

Others in attendance were:

H. Lee Becker, Nebraska Department of Water Resources

Computation of Virgin Water Supplies and Consumptive Uses

The Committee completed its annual assignment of computing the virgin water supply and consumptive uses by states. The procedures utilized were similar to those used in previous years, however, in accordance with revised formulas which now include municipal and industrial uses.

Shown in Table 1 are the 1981 computed virgin water supply by ground water and surface water components shown together with the original computed virgin water supply and the original allocations to each state by sub-basin along with the 1981 adjusted allocations. Adjusted allocations for each state were computed for each sub-basin. A state's allocation is adjusted when the computed annual virgin water supply varies "more than ten percent from the virgin water supply" as set forth originally in the Compact. The allocations made from such a source are "increased or decreased in the relative proportions that the future computed virgin water supply of such source bears to the computed virgin water supply" as set forth originally in the Compact.

Annual consumptive use computations were made for each state and for each sub-basin. Table 2 summarizes those quantities. Annual consumptive use was computed for diversions from surface and ground water sources. Both measured and estimated data were utilized. Allowance was made for reservoir evaporation, return flow and other losses.

Other exhibits not included in this report, but available to the Administration are:

Form 10c: Average annual virgin water supply for five year running averages for 1977-1981 and ten year running averages for 1972-1981

Form 10d: Adjusted allocations by five year and ten year running averages for same years as on Form 10c.

Additional Assignment

Compact officials at their annual meeting on July 2, 1981 directed the Engineering Committee to revise the formulas for computing annual virgin water supply and annual consumptive use to include municipal and industrial uses in excess of 50 acre-feet. The formulas have been revised and are included with this report. Revisions are shown by lining through words to be deleted and underlining words to be added.

The committee has interpreted "in excess of 50 acre-feet" to mean the total gross diversion by each entity user. Municipal and industrial diversions for Kansas and Colorado were obtained from 1981 reported uses. M and I uses in Nebraska were estimated on the basis of 1980 use reports. Return flows were computed as 50% for municipal and 75% for industrial diversions.

A summary of municipal and industrial diversions by sub-basin in 1981 is shown below in acre-feet:

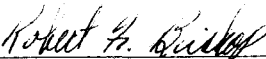
<u>Sub-basin</u>	<u>Kansas</u>	<u>Nebraska</u>	<u>Colorado</u>
S.F. Rep. R.	510	0	0
Beaver Crk.	380	280	0
Sappa Crk.	430	0	0
Prairie Dog Crk.	850	0	0
Main Stem Rep. R.	0	8,010	0
Frenchman Crk.	0	500	0
Medicine Crk.	0	380	0
Total	<u>2,170</u>	<u>9,170</u>	<u>0</u>

Last year the committee revised certain formulas to account for use by a Wilson No. 1 Ditch which proposed a diversion from the North Fork of the Republican River in Colorado for irrigation of land in Nebraska. The committee was informed by Nebraska that Mr. Ashton Wilson did file an application with Nebraska for this project, however, he allowed his permit to be forfeited by reason of his failure to file a project map as required by Nebraska statutes.


The Engineering Committee agreed that their next annual meeting shall be held on the first Wednesday in May 1983 at Lincoln, Nebraska in the office of the Nebraska Department of Water Resources.

Respectfully submitted,

Engineering Committee, Republican River Compact



Robert F. Bishop



Harold D. Simpson



Gerald E. Himes

COMPUTED ANNUAL VIRGIN
WATER SUPPLY AND
CONSUMPTIVE USE, 1981

Table 1

1981 Computed Annual Virgin Water Supply and
Original and Annual Adjusted Allocations

Sub-basin and the Original Compact Virgin Water Supply		Computed Annual Virgin Water Supply Republican River Basin 1981 (Acre-Feet)			Comparison of Original Compact Allocations and 1981 Adjusted Allocations (Acre-Feet)							
		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.	27,600	13,210	3,010	16,220			12,600	7,410	2,100	1,230	14,700	8,640
Sappa Cr.	21,400	11,540	30	11,570			8,800	4,760	8,800	4,760	17,600	9,520
Beaver Cr.	16,500	13,120	1,380	14,500	3,300	2,900	6,400	5,630	6,700	5,890	16,400	14,420
Medicine Cr.	50,800	6,510	41,080	47,590					4,600	4,600	4,600	4,600
Red Willow Cr.	21,900	3,170	20,840	24,010					4,200	4,200	4,200	4,200
Driftwood Cr.	7,300	790	1,720	2,510			500	170	1,200	410	1,700	580
Frenchman Rv.	98,500	25,680	67,040	92,720					52,800	52,800	52,800	52,800
South Fork of the Republican Rv.	57,200	10,780	37,220	48,000	25,400	21,310	23,000	19,300	800	670	49,200	41,280
Rock Cr.	11,000	100	9,100	9,200					4,400	3,680	4,400	3,680
Buffalo Cr.	7,890	410	5,520	5,930					2,600	1,960	2,600	1,960
Arikaree Rv.	19,610	5,080	13,930	19,010	15,400	15,400	1,000	1,000	3,300	3,300	19,700	19,700
N.F. Republican Rv. in Colorado	44,700	380	41,280	41,660	10,000	10,000			11,000	11,000	21,000	21,000
*N.F. and Main Stem of Republican Rv. plus Blackwood Cr. in Nebraska	94,500	38,980	147,000	185,980			138,000	171,630	132,000	164,890	270,000	336,520
TOTALS	478,900	129,750	389,150	518,900	54,100	49,610	190,300	209,900	234,500	259,390	478,900	518,900

*Main Stem
Blackwood Creek

87,700

6,800

Computed Consumptive Water Use for 1981 within the
Republican River Basin (Acre-Feet)

Table 2

Sub-basin	Colorado			Kansas			Nebraska			Total Basin		
	Ground Water	Surface Water	Total	Ground Water	Surface Water	Total	Ground Water	Surface Water	Total	Ground Water	Surface Water	Total
Prairie Dog Creek				13,210	1,560	14,770	330	220	550	13,540	1,780	15,320
Sappa Creek				8,020	70	8,090	4,820	230	5,050	12,840	300	13,140
Beaver Creek	0	0	0	8,740	680	9,420	4,380	150	4,530	13,120	830	13,950
Medicine Creek							6,730	2,440	9,170	6,730	2,440	9,170
Red Willow Creek							3,170	5,380	8,550	3,170	5,380	8,550
Driftwood Creek							790	80	870	790	80	870
Frenchman River							25,680	19,450	45,130	25,680	19,450	45,130
South Fork of the Republican River	2,150	10,880	13,030	8,630	400	9,030	0	0	0	10,780	11,280	22,060
Rock Creek							100	120	220	100	120	220
Buffalo Creek							410	600	1,010	410	600	1,010
Arikaree River	4,060	0	4,060	300	0	300	720	0	720	5,080	0	5,080
N.F. Republican Rv. in Colorado	380	5,380	5,760				0	4,520	4,520	380	9,900	10,280
N.F. & Main Stem of the Republican Rv. plus Blackwood Cr. in Ne.				120	37,270*	37,390	37,010	57,170*	94,180	37,130	94,440	131,570
TOTALS	6,590	16,260	22,850	39,020	39,980	79,000	84,140	90,360	174,500	129,750	146,600	276,350

*Evaporation from Harlan County Reservoir apportioned to Kansas (64%) 6,080 and to Nebraska (36%) 3,420 AF.

MINUTES

Republican River Compact
Engineering Committee Meeting
January 7, 1982

The following members of the Engineering Committee met in Lincoln, Nebraska to discuss modifying the formulas used to calculate annual virgin water supply and annual consumptive use:

- | | |
|------------------|----------|
| 1. Robert Bishop | Nebraska |
| 2. Lee Becker | Nebraska |
| 3. Gerald Hilmes | Kansas |
| 4. Hal Simpson | Colorado |

In the previous annual Compact meeting, the Engineering Committee had been given the assignment to include municipal and industrial uses in excess of 50 acre-feet in the computation of annual virgin water supply and annual consumptive use. It was agreed that the directive needed interpretation and after discussion the Engineering Committee decided to adopt the following criteria so that each state could proceed with the assignment.

1. Uses would include all diversions or withdrawals by each entity and not just consumptive use.
2. The use in excess of 50 acre-feet would be by each entity and not by sub-basin or state.
3. The withdrawal or diversion would include the total if in excess of 50 acre-feet and not just the amount over 50 acre-feet.

With respect to return flows from industrial and municipal uses, it was agreed if site specific data are not available, that return flows would be computed on the basis of 50 percent for municipal use and 75 percent for industrial use. Industrial use is to be defined as diversions relating to manufacturing and commercial practices.

It was agreed that since time was available to modify the formulas to account for the above discussion and to adopt them for municipal, industrial, and irrigation diversions. The formulas were revised and Nebraska agreed to re-type them to show the old formulas as well as the revisions made. (See pages 17-36 of this report.)

It was agreed that if better data on municipal and industrial return flows is acquired before the next Engineering Committee meeting in May, it would be considered.

The location of the next Engineering Committee meeting was discussed and Kansas and Nebraska agreed to meet in Denver on May 5 provided travel is authorized.

PROPOSED REVISED
FORMULAS FOR THE COMPUTATION
OF
ANNUAL VIRGIN WATER SUPPLY
AND CONSUMPTIVE USE
REPUBLICAN RIVER COMPACT BASIN

Computation of Virgin Water Supply
Republican River Compact Administration

INTRODUCTION

Article III of the Republican River Compact designates the drainage basins, or parts thereof, from which specific allocations are made to the States of Colorado, Kansas and Nebraska.

The annual virgin water supply for each of those designated drainage basins shall be computed by the formulas given herein.

GAGING STATIONS

The stream-gaging stations necessary to the virgin water supply formulas are described in U. S. Geological Survey Water-Supply Papers, Part 6-B, and are listed below:

<u>Station Number</u>	<u>Station Name</u>
6B-8215.00	Arikaree River at Haigler, Nebr.
6B-8230.00	North Fork Republican River at Colorado-Nebraska State line
6B-8235.00	Buffalo Creek near Haigler, Nebr.
6B-8240.00	Rock Creek at Parks, Nebr.
6B-8275.00	South Fork Republican River near Benkelman, Nebr.
6B-8355.00	Frenchman Creek at Culbertson, Nebr.
6B-8365.00	Driftwood Creek near McCook, Nebr.
6B-8380.00	Red Willow Creek near Red Willow, Nebr.
6B-8425.00	Medicine Creek below Harry Strunk Lake, Nebr.
6B-8470.00	Beaver Creek near Beaver City, Nebr.
6B-8475.00	Sappa Creek near Stamford, Nebr.
6B-8485.00	Prairie Dog Creek near Woodruff, Kans.
6B-8525.00	Courtland Canal at Nebraska-Kansas State line
6B-8535.00	Republican River near Hardy, Nebr.

DRAINAGE BASINS

The drainage basins designated in Article II, Republican River Compact, are defined for use in the formulas as those drainage areas above the gaging stations at or near the mouths of the streams, with the following exceptions:

Prairie Dog Creek drainage basin is that drainage area above the gaging station near Woodruff;

Sappa Creek drainage basin is that drainage area above the gaging station, Sappa Creek near Stamford, and below the gaging station, Beaver Creek near Beaver City;

Beaver Creek drainage basin is that drainage area above the gaging station near Beaver City;

Medicine Creek drainage basin is that drainage area above the gaging station below Harry Strunk Lake;

The main stem of the Republican River is that area between the junction of the North Fork and the Arikaree River and the gaging station near Hardy and includes (1) those areas below the gaging stations of the designated drainage basins and (2) all of Blackwood Creek drainage basin.

BASIC DATA

Basic data for use in the formulas shall be obtained from the following sources:

1. Stream discharges from surface water records as compiled by the U. S. Geological Survey;
2. Total monthly reservoir evaporation records as computed by the U. S. Corps of Engineers;
3. Precipitation records as compiled by the U. S. Weather Bureau;
4. Reservoir elevations, surface areas and storage contents from records as compiled by the operating agency;
5. Irrigation diversions or irrigated acreages from records as furnished by each State.
6. Municipal and industrial diversions as furnished by each State.

GENERAL PROCEDURES

Net reservoir evaporation shall be the total evaporation corrected for the precipitation upon the reservoir surface area.

Average monthly reservoir surface areas shall be computed by applying the average of the daily reservoir elevations to the most recent area table.

Depletions of stream flows due to erosion control practices and, stock-water ponds, and municipal and industrial diversions of less than 50 acre-feet have not been included in the present virgin water supply formulas.

Diversions from surface water for this computation shall include diversion for irrigation, municipal and industrial uses.

~~Irrigation~~ diversions from groundwater shall be limited to those by wells pumping from the alluvium along the stream channels. for municipal, industrial and irrigation uses. The determination of the effect of pumping by upland wells on the flows of the streams in the Republican River Basin must await considerably more research and data. The wells in the Frenchman Creek drainage basin in Colorado have been considered as upland wells.

Return flows from the lands irrigated by major project developments flowing into two or more designated drainage basins shall be divided in the ratio of the irrigated lands from which the water returns to each drainage basin.

Return flows are considered to be reflected in stream discharge records during the same year the ~~irrigation~~ diversions are made.

Industrial uses shall include diversions relating to manufacturing and commercial practices.

EVALUATION OF FACTORS

Computations of virgin water supply by the formulas are based upon the following factors:

1. The ~~irrigation~~ diversions by canals, stream pumps and wells for which recorded diversions are not available shall be computed by each State based upon the best information available.
2. Return flows from the lands irrigated by small canals, stream pumps and wells shall be computed as 25 percent of the annual diversions.
3. Return flows from the lands irrigated by major project development shall be computed as percent of annual diversions based on data furnished by the U. S. Bureau of Reclamation. Return flows from the lands irrigated by the Hale Ditch and the Haigler Canal shall be computed as 38 percent of annual diversions.
4. Return flows from municipal and industrial uses shall be computed as a percent of annual diversion based upon data furnished by each State. If data are not available then return flow shall be computed as 50 percent of annual municipal and 75 percent of annual industrial diversions.

FORMULAS FOR THE COMPUTATION
OF
ANNUAL VIRGIN WATER SUPPLY

Prairie Dog Creek Drainage Basin

Annual Virgin Water Supply equals

- the recorded discharge near Woodruff;
- plus, the net evaporation from Norton Reservoir;
- plus, or minus, the change in storage in Norton Reservoir;
- plus, the diversions by the Almena Canal;
- plus, the other ~~irrigation~~ diversions of surface water in Kansas;
- plus, the ~~irrigation~~ diversions from groundwater in Kansas;
- minus, the return flows from the Almena Irrigation District;
- minus, the return flows from ~~the lands irrigated by other diversions from surface water in Kansas;~~ diversions in Kansas;
- minus, the return flows from ~~the lands irrigated by diversions from groundwater in Kansas;~~ diversions in Kansas.

Sappa Creek Drainage Basin

Annual Virgin Water Supply equals

- the recorded discharge near Stamford;
- minus, the recorded discharge of Beaver Creek near Beaver City;
- plus, the ~~irrigation~~ diversions of surface water from Sappa Creek in Kansas and Nebraska and from Beaver Creek downstream from the gaging station, Beaver Creek near Beaver City;
- plus, the ~~irrigation~~ diversions from groundwater along Sappa Creek in Kansas and Nebraska and from groundwater along Beaver Creek downstream from the gaging station, Beaver Creek near Beaver City;
- minus, the return flows ~~from the lands irrigated by diversions from surface water;~~ diversions;
- minus, the return flows ~~from the lands irrigated by diversions from groundwater;~~ diversions.

Beaver Creek Drainage Basin

Annual Virgin Water Supply equals

- the recorded discharge near Beaver City;
- plus, the ~~irrigation~~ diversions of surface water in Colorado, Kansas and Nebraska;
- plus, the ~~irrigation~~ diversions from groundwater in Colorado, Kansas and Nebraska;
- minus, the return flows from ~~the lands irrigated by diversions from~~ surface water; diversions;
- minus, the return flows from ~~the lands irrigated by diversions from~~ groundwater; diversions.

Medicine Creek Drainage Basin

Annual Virgin Water Supply equals

- the recorded discharge below Harry Strunk Lake;
- plus, the net evaporation from Harry Strunk Lake;
- plus, or minus, the change in storage in Harry Strunk Lake;
- plus, the ~~irrigation~~ diversions of surface water;
- plus, the ~~irrigation~~ diversions from groundwater;
- minus, the return flows from ~~the lands irrigated by diversions from~~ surface water; diversions;
- minus, the return flows from ~~the lands irrigated by diversions from~~ groundwater; diversions.

Red Willow Creek Drainage Basin

Annual Virgin Water Supply equals

- the recorded discharge near Red Willow;
- plus, the net evaporation from Red Willow Reservoir;
- plus, or minus, the change in storage in Red Willow Reservoir;
- plus, the diversions by the Red Willow Canal;
- plus, the other ~~irrigation~~ diversions of surface water;
- plus, the ~~irrigation~~ diversions from groundwater;
- minus, the return flows from those lands adjacent to Red Willow Creek and served by the Red Willow Canal;
- minus, the return flows from ~~the lands irrigated by~~ other diversions from surface water; diversions;
- minus, the return flows from ~~the lands irrigated by~~ diversions from groundwater. diversions.

Driftwood Creek Drainage Basin

Annual Virgin Water Supply equals

- the recorded discharge near McCook;
- plus, the ~~irrigation~~ diversions of surface water in Kansas and Nebraska;
- plus, the ~~irrigation~~ diversions from groundwater in Kansas and Nebraska;
- minus, the return flows from ~~the lands irrigated by~~ diversions from surface water; diversions;
- minus, the return flows from ~~the lands irrigated by~~ diversions from groundwater; diversions;
- minus, the return flows from the lands upstream from the gaging station that are adjacent to Driftwood Creek and served by the Meeker-Driftwood Canal.

Frenchman Creek Drainage Basin in Nebraska

Annual Virgin Water Supply equals

- the recorded discharge at Culbertson;
- plus, the net evaporation from Enders Reservoir;
- plus, or minus, the change in storage in Enders Reservoir;
- plus, the diversions by the Culbertson Canal;
- plus, the diversions by the Champion and Riverside Canals;
- plus, the other ~~irrigation~~ diversions of surface water in Nebraska;
- plus, the ~~irrigation~~ diversions from groundwater in Nebraska;
- minus, the return flows from the lands within the Frenchman Creek drainage basin served by the Culbertson Canal;
- minus, the return flows from the lands irrigated by the Champion and Riverside Canals;
- minus, the return flows from ~~the lands irrigated by other diversions from surface water in Nebraska;~~ diversions in Nebraska;
- minus, the return flows ~~from the lands irrigated by~~ from groundwater diversions in Nebraska.

South Fork of the Republican River Drainage Basin

Annual Virgin Water Supply equals

- the recorded discharge near Benkelman;
- plus, the net evaporation from Bonny Reservoir;
- plus, or minus, the change in storage in Bonny Reservoir;
- plus, the diversions by the Hale Ditch;
- plus, the other ~~irrigation~~ diversions of surface water in Colorado, Kansas and Nebraska;
- plus, the ~~irrigation~~ diversions from groundwater in Colorado, Kansas and Nebraska;
- minus, the return flows from the lands irrigated by the Hale Ditch;
- minus, the return flows from ~~the lands irrigated by other diversions from surface water;~~ diversions;

South Fork of the Republican River Drainage Basin (Continued)

minus, the return flows ~~from the lands irrigated by diversions~~ from groundwater. diversions.

Rock Creek Drainage Basin

Annual Virgin Water Supply equals

the recorded discharge at Parks;

plus, the ~~irrigation~~ diversions of surface water;

plus, the ~~irrigation~~ diversions from groundwater;

minus, the return flows ~~from the lands irrigated by diversions~~ from surface water; diversions;

minus, the return flows ~~from the lands irrigated by diversions~~ from groundwater. diversions.

Buffalo Creek Drainage Basin

Annual Virgin Water Supply equals

the recorded discharge near Haigler;

plus, the ~~irrigation~~ diversions of surface water;

plus, the ~~irrigation~~ diversions from groundwater;

minus, the return flows ~~from the lands irrigated by diversions~~ from surface water; diversions;

minus, the return flows ~~from the lands irrigated by diversions~~ from groundwater. diversions.

Arikaree River Drainage Basin

Annual Virgin Water Supply equals

the recorded discharge at Haigler;

plus, the ~~irrigation~~ diversions of surface water in Colorado, Kansas and Nebraska;

plus, the diversions from groundwater in Colorado, Kansas and Nebraska;

Arikaree River Drainage Basin (Continued)

minus, the return flows ~~from the lands irrigated by diversions~~ from surface water; diversions;

minus, the return flows ~~from the lands irrigated by the diversions~~ from groundwater. diversions.

North Fork of the Republican River Drainage Basin
in Colorado

Annual Virgin Water Supply equals

the recorded discharge at the Colorado-Nebraska state line;

plus, the diversions by the Haigler Canal and Wilson No. 1 Ditch;

plus, the other ~~irrigation~~ diversions of surface water in Colorado;

plus, the ~~irrigation~~ diversions from groundwater in Colorado;

minus, the return flows from the lands within the North Fork of the Republican River drainage basin in Colorado that are irrigated by the Haigler Canal and Wilson No. 1 Ditch;

minus, the return flows ~~from the lands irrigated by other diversions~~ from surface water ~~in Colorado;~~ diversions in Colorado;

minus, the return flows ~~from the lands irrigated by diversions~~ from groundwater ~~in Colorado.~~ diversions in Colorado.

The North Fork of the Republican River in Nebraska and the main stem of the Republican River between the junction of the North Fork and the Arikaree River and the lowest crossing of the river at the Nebraska-Kansas state line and the small tributaries thereof.

Annual Virgin Water Supply equals

the recorded discharge of the Republican River near Hardy;

plus, the diversions by the Courtland Canal;

minus, the return flows from the lands in Kansas above Hardy irrigated by the Courtland Canal;

minus, the return flows from the lands in Nebraska irrigated by the Courtland Canal;

The North Fork of the Republican River in Nebraska
and the main stem of the Republican River
(Continued)

plus, the diversions by the Superior Canal;
minus, the return flows from the lands irrigated by the Superior Canal;
plus, the diversions by the Franklin Pump Canal;
minus, the return flows from the lands irrigated by the Franklin Pump Canal;
plus, the diversions by the Franklin Canal;
minus, the return flows from the lands irrigated by the Franklin Canal;
plus, the diversions by the Naponee Canal;
minus, the return flows from the lands irrigated by the Naponee Canal;
plus, the net evaporation from Harlan County Reservoir;
plus, or minus, the change in storage in Harlan County Reservoir;
minus, the recorded discharge of Prairie Dog Creek near Woodruff;
plus, the ~~irrigation~~ diversions of surface water from Prairie Dog Creek in Nebraska;
minus, the return flows ~~from-the-lands-irrigated~~ from surface water diversions of Prairie Dog Creek in Nebraska;
plus, the ~~irrigation~~ diversions from groundwater along Prairie Dog Creek in Nebraska;
minus, the return flows ~~from-the-lands-irrigated~~ from groundwater diversions along Prairie Dog Creek in Nebraska;
minus, the recorded discharge of Sappa Creek near Stamford;
plus, the ~~irrigation~~ diversions of surface water from Sappa Creek downstream from the gaging station near Stamford;
minus, the return flows ~~from-the-lands-irrigated~~ from surface water diversions downstream from the gaging station near Stamford;
plus, the ~~irrigation~~ diversions from groundwater along Sappa Creek downstream from the gaging station near Stamford;
minus, the return flows ~~from-the-lands-irrigated~~ from groundwater diversions along Sappa Creek downstream from the gaging station near Stamford;

The North Fork of the Republican River in Nebraska
and the main stem of the Republican River
(Continued)

- plus, the diversions by the Cambridge Canal;
- minus, the return flows from the lands irrigated by the Cambridge Canal;
- minus, the recorded discharge of Medicine Creek below Harry Strunk Lake;
- plus, the ~~irrigation~~ diversions of surface water from Medicine Creek downstream from Harry Strunk Lake;
- minus, the return flows ~~from the lands irrigated~~ from surface water diversions downstream from Harry Strunk Lake;
- plus, the ~~irrigation~~ diversions from groundwater along Medicine Creek downstream from Harry Strunk Lake;
- minus, the return flows ~~from the lands irrigated~~ from groundwater diversions along Medicine Creek downstream from Harry Strunk Lake;
- plus, the diversions by the Bartley Canal;
- minus, the return flows from the lands irrigated by the Bartley Canal;
- minus, the return flows to the Republican River from the lands irrigated by the Red Willow Canal;
- minus, the recorded discharge of Red Willow Creek near Red Willow;
- minus, the recorded discharge of Driftwood Creek near McCook;
- plus, the diversions by the Meeker-Driftwood Canal;
- minus, the return flows to the Republican River from the lands irrigated by the Meeker-Driftwood Canal;
- minus, the return flows to the Republican River from the lands irrigated by the Culbertson Canal;
- minus, the recorded discharge of Frenchman Creek at Culbertson;
- plus, the net evaporation from Swanson Lake;
- plus, or minus, the change in storage in Swanson Lake;
- minus, the recorded discharge of the South Fork of the Republican River near Benkelman;
- minus, the recorded discharge of Rock Creek at Parks;
- minus, the recorded discharge of Buffalo Creek near Haigler;

The North Fork of the Republican River in Nebraska
and the main stem of the Republican River
(Continued)

- minus, the recorded discharge of the Arikaree River at Haigler;
- minus, the return flows to the North Fork of the Republican River in Nebraska from the lands irrigated by the Haigler Canal and Wilson No. 1 Ditch;
- minus, the recorded discharge of the North Fork of the Republican River at the Colorado-Nebraska state line;
- plus, the other ~~irrigation~~ diversions of surface water in Nebraska and Kansas above the gaging station near Hardy;
- minus, the return flows from ~~the lands irrigated by~~ other surface water diversions from surface water in Nebraska and Kansas above the gaging station near Hardy;
- plus, the ~~irrigation~~ diversions from groundwater in Nebraska and Kansas above the gaging station near Hardy;
- minus, the return flows from ~~the lands irrigated by diversions from~~ groundwater diversions in Nebraska and Kansas above the gaging station near Hardy.

FORMULAS FOR THE COMPUTATION
OF
ANNUAL CONSUMPTIVE USE
REPUBLICAN RIVER BASIN

Prairie Dog Creek Drainage Basin

Annual Consumptive Use in Kansas equals
the irrigation diversions in Kansas;
minus, the return flows from those diversions;
plus, the net evaporation from Norton Reservoir.

Annual Consumptive Use in Nebraska equals
the irrigation diversions in Nebraska;
minus, the return flows from those diversions.

Sappa Creek Drainage Basin

Annual Consumptive Use in Kansas equals
the irrigation diversions in Kansas;
minus, the return flows from those diversions.

Annual Consumptive Use in Nebraska equals
the irrigation diversions in Nebraska;
minus, the return flows from those diversions.

Beaver Creek Drainage Basin

Annual Consumptive Use in Colorado equals
the irrigation diversions in Colorado;
minus, the return flows from those diversions.

Annual Consumptive Use in Kansas equals
the irrigation diversions in Kansas;
minus, the return flows from those diversions.

Beaver Creek Drainage Basin (Continued)

Annual Consumptive Use in Nebraska equals
the ~~irrigation~~ diversions in Nebraska;
minus, the return flows from those diversions.

Medicine Creek Drainage Basin

Annual Consumptive Use in Nebraska equals
the ~~irrigation~~ diversions in Nebraska;
minus, the return flows from those diversions including the return
flows to the main stem of the Republican River;
plus, the net evaporation from Harry Strunk Lake.

Red Willow Creek Drainage Basin

Annual Consumptive Use in Nebraska equals
the ~~irrigation~~ diversions in Nebraska;
minus, the return flows to Red Willow Creek from those diversions;
minus, the return flows to the main stem of the Republican River from
the Red Willow Canal;
plus, the net evaporation from Hugh Butler Lake.

Driftwood Creek Drainage Basin

Annual Consumptive Use in Kansas equals
the ~~irrigation~~ diversions in Kansas;
minus, the return flows from those diversions.

Annual Consumptive Use in Nebraska equals
the ~~irrigation~~ diversions in Nebraska;
minus, the return flows from those diversions.

Frenchman Creek Drainage Basin in Nebraska

Annual Consumptive Use in Nebraska equals

the ~~irrigation~~ diversions in Nebraska;

minus, the return flows to Frenchman Creek from those diversions;

minus, the return flows to the main stem of the Republican River from the Culbertson Canal;

plus, the net evaporation from Enders Reservoir.

South Fork of the Republican River Drainage Basin

Annual Consumptive Use in Colorado equals

the ~~irrigation~~ diversions in Colorado;

minus, the return flows from those diversions;

plus, the net evaporation from Bonny Reservoir.

Annual Consumptive Use in Kansas equals

the ~~irrigation~~ diversions in Kansas;

minus, the return flows from those diversions.

Annual Consumptive Use in Nebraska equals

the ~~irrigation~~ diversions in Nebraska;

minus, the return flows from those diversions.

Rock Creek Drainage Basin

Annual Consumptive Use in Nebraska equals

the ~~irrigation~~ diversions in Nebraska;

minus, the return flows from those diversions.

Buffalo Creek Drainage Basin

Annual Consumptive Use in Nebraska equals
the ~~irrigation~~ diversions in Nebraska;
minus, the return flows from those diversions.

Arikaree River Drainage Basin

Annual Consumptive Use in Colorado equals
the ~~irrigation~~ diversions in Colorado;
minus, the return flows from those diversions.

Annual Consumptive Use in Kansas equals
the ~~irrigation~~ diversions in Kansas;
minus, the return flows from those diversions.

Annual Consumptive Use in Nebraska equals
the ~~irrigation~~ diversions in Nebraska;
minus, the return flows from those diversions.

North Fork of the Republican River Drainage Basin
in Colorado

Annual Consumptive Use in Colorado equals
the ~~irrigation~~ diversions for uses in Colorado;
minus, the return flows from those diversions.

Annual Consumptive Use in Nebraska equals
the irrigation diversions ~~in Nebraska~~ from the Haigler Canal and Wilson
No. 1 Ditch for lands within Nebraska;
minus, the return flows to the main stem of the Republican River from
the Haigler Canal and Wilson No. 1 Ditch in Nebraska.

The North Fork of the Republican River in Nebraska and the main stem of the Republican River between the junction of the North Fork and the Arikaree River and the lowest crossing of the river at the Nebraska-Kansas state line and the small tributaries thereof.

Annual Consumptive Use in Nebraska equals

the irrigation diversions from the main stem of the Republican River by irrigation districts in Nebraska;

plus, the ~~irrigation~~ diversions from surface water by others in Nebraska;

plus, the ~~irrigation~~ diversions from groundwater in Nebraska;

minus, the return flows from the diversions from the main stem of the Republican River by the irrigation districts in Nebraska including return flows to Driftwood Creek;

minus, the return flows from the ~~irrigation~~ diversions from surface water by others in Nebraska excluding the return flows to the main stem of the Republican River from tributary diversions;

minus, the return flows ~~from the irrigation diversions~~ from groundwater diversions in Nebraska;

plus, the net evaporation from Swanson Lake;

plus, that part of the net evaporation from Harlan County Reservoir charged to Nebraska;

plus, a prorated share of the transportation loss of the Courtland Canal through Nebraska.

Annual Consumptive Use in Kansas equals

the recorded discharge of the Courtland Canal at the Nebraska-Kansas state line;

minus, the deliveries of Republican River water to Lovewell Reservoir by the Courtland Canal;

minus, the return flows to the Republican River from the Courtland Canal above Lovewell Reservoir;

plus, the diversions of Republican River water from Lovewell Reservoir by the Courtland Canal;

minus, the return flows from Republican River water diverted by the Courtland Canal below Lovewell Reservoir;

The North Fork of the Republican River in
Nebraska and the main stem of the
Republican River (Continued)

- plus, that part of the net evaporation from Harlan County Reservoir charged to Kansas;
- plus, the prorated share of the net evaporation from Lovewell Reservoir chargeable to Republican River water;
- plus, a prorated share of the transporation loss of the Courtland Canal through Nebraska;
- plus, the other ~~irrigation~~ diversions of surface water in Kansas above the gaging station near Hardy;
- minus, the return flows from those diversions of surface water in Kansas above the gaging station near Hardy;
- plus, the ~~irrigation~~ diversions from groundwater in Kansas above the gaging station near Hardy;
- minus, the return flows from those groundwater diversions in Kansas above the gaging station near Hardy.

RULES AND REGULATIONS

Republican River Compact Administration (As Amended to July 20, 1976)

1. The State Engineer of the State of Colorado; the Director of Water Resources of Nebraska; and the Chief Engineer, Division of Water Resources, State Board of Agriculture of the State of Kansas, being officials in their respective states charged with the duty of administering public water supplies, shall be the official members of and together they shall constitute an administrative body hereby designated, "The Republican River Compact Administration".
2. The Republican River Compact, hereinafter referred to as the "Compact", shall be administered by the Republican River Compact Administration, hereinafter referred to as the "Administration".
3. The terms of office of official members of the Administration shall be concurrent with their respective terms of office as officials of each state charged with the duty of administering the public water supplies.
4. Each official member of the Administration shall be recognized in that capacity upon furnishing to the other official members satisfactory evidence that he is the official in his state charged with the duty of administering the public water supplies.
5. If an official member shall be unable to serve personally at any meeting of the Administration, he may appoint a personal representative, other than another official member of the Administration, to serve in his place at said meeting. Such personal representative shall be recognized in that capacity upon furnishing to the official members from the other states or their personal representatives a certificate showing that he has been duly

appointed by the official member whom he is to represent. All actions taken in the transaction of business of the Administration by any such duly appointed representative shall be made in the name of the official member whom he represents and shall be binding on such official member.

6. The Chairman of the Administration shall be an official member of the Administration and shall be elected at the annual meeting for a term of office continuing to the close of the annual meeting the following year. In the absence of the Chairman at any meeting, the official members of the Administration and any duly appointed and acting personal representatives present at that time shall select one of them to serve as temporary Chairman. In the event of a vacancy in the office of the Chairman, his successor as the official member from his state shall be temporary Chairman until the next meeting of the Administration at which time, as the first order of business, the vacancy shall be filled by election of an official member of the Administration who shall thereupon be Chairman for the unexpired term.
7. The Chairman shall preside at all meetings of the Administration and may initiate or second motions and vote on all matters coming before the Administration. He shall issue notice of meeting to all official members as to time, place, and purpose in advance of each meeting of the Administration. The Chairman shall keep a record of the proceedings of all meetings and of all transactions of the Administration during his term of office and shall furnish copies thereof concurrently to the other official members to the end that each official member shall have and preserve a complete file of the records of the Administration.

8. The Administration may, from time to time, create committees composed of such official members of the Administration and others as it may determine and assign to such committees such tasks as the Administration may designate.
9. A regular annual meeting of the Administration shall be held prior to August 1 each year with the exception that the Chairman may waive an annual meeting upon unanimous written consent of all official members. Other meetings of the Administration shall be held upon call of the Chairman or upon written request to the Chairman by any official member of the Administration.
10. A quorum for the purpose of transacting official business at any meeting of the Administration shall be at least two official members of the Administration or their duly appointed representatives. In all matters coming before the Administration any action shall be determined by vote. Each state shall have one vote and every decision, authorization or other action shall require a unanimous vote of the official members or their duly appointed and acting personal representatives present at a meeting.
11. At each meeting of the Administration, the order of business, except as provided by rule No. 6 herein, shall be as follows:
 - Reading, correction, and approval of minutes of last meeting
 - Report of Chairman
 - Reports of official members or representatives
 - Unfinished business
 - New business
 - Adjournment

12. The administration, following each annual meeting, shall adopt and enter upon its records a report covering a summary of its transactions and proceedings for the preceding year, the current status of its affairs and including such other matters as may be deemed appropriate by the official members. Copies of the report may be furnished to the President of the United States; the Governors of the States of Colorado, Nebraska and Kansas; officials of state and federal agencies and others as determined by the Administration.
13. Amendments, revisions, deletions or additions to these Rules and Regulations may be made at any meeting of the Administration, provided that official members or duly appointed and acting personal representatives from all three states are present. Such changes may also be made at any meeting at which a quorum is present, provided that a statement of the proposed changes is sent by the Chairman to all official members of the Administration by ordinary mail at least fifteen (15) days in advance of the meeting at which they are to be considered.