

TWENTY-FIRST  
ANNUAL REPORT

REPUBLICAN RIVER  
COMPACT  
ADMINISTRATION

FOR THE YEAR 1980

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TOPEKA KANSAS

JULY 2, 1981

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## TWENTY-FIRST ANNUAL REPORT

### REPUBLICAN RIVER COMPACT ADMINISTRATION

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

1. Pursuant to Rule 12, as amended, this report covers the period from June 27, 1980 to July 2, 1981.
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-Second Annual Meeting of the Administration was held on July 2, 1981, at 503 Kansas Avenue, Topeka, Kansas. 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 in Lincoln, Nebraska. A report from that committee together with summary tabulation of the computed annual water supply and consumptive use for the 1980 water year in the Republican River Basin was presented and accepted by the Administration.
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. Guy E. Gibson, Kansas member of the administration, was elected to serve as Chairman until the next annual meeting.

## MINUTES

22nd Annual Meeting  
Republican River Compact Administration  
July 2, 1981

The meeting was called to order by Guy E. Gibson, Chairman, at 9:25 a.m., on July 2, 1981, in the Conference Room of the Department of Economic Development, 503 Kansas Avenue, Sixth Floor, Topeka, Kansas.

Those in attendance were as follows:

<u>Name</u>	<u>Agency</u>	<u>Location</u>
Guy E. Gibson	Division of Water Resources	Topeka, Kansas
Michael Jess	Department of Water Resources	Lincoln, Nebraska
Jeris A. Danielson	Division of Water Resources	Denver, Colorado
Tim Aron	Department of Water Resources	Lincoln, Nebraska
Robert Bishop	Department of Water Resources	Lincoln, Nebraska
Robert Jesse	Division of Water Resources	Pueblo, Colorado
Hal Simpson	Division of Water Resources	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
Bob Kutz	Bureau of Reclamation	Grand Island, Nebr.
Glen E. Kirk	Bureau of Reclamation	Topeka, Kansas
Ken Brunson	Ks. Fish and Game Commission	Pratt, Kansas
Larry Hess	Kansas Water Office	Topeka, Kansas

Approval of the Minutes of the previous meeting:

There was discussion of the Minutes of the last meeting which had been approved by letter. However, Mr. Jess made a motion to formally approve the minutes of the last meeting. Mr. Danielson seconded. The motion passed unanimously.

Report of Chairman:

The Chairman reported to the Compact there was a major change in the office responsible for water resources planning for the State of Kansas effective July 1, 1981. The Kansas Water Authority is to begin operation

and the Kansas Water Resources Board was abolished. Further, he stated that the existing staff of the abolished office was transferred along with their responsibilities to the new Kansas Water Authority and the Kansas Water Office. The head of the new Office will be appointed by the Governor of Kansas.

The Chairman stated there are continuing to be studies on the reservoirs in Kansas as to the designation of the amount of water available for municipal and industrial use, etc.

Activities of the Division of Water Resources, Kansas State Board of Agriculture, are expanding under the Water Appropriation Act, such activities include appeals from orders of the Chief Engineer. Presently, a landmark case is in the Kansas Supreme Court challenging the penalty clause of the Act.

The Chairman also reported on vested right claims filed before the July 1, 1980, cut off time. These claims have received their hearings and we are now in the process of drafting the final orders of the Chief Engineer.

The Chairman further reported that under present statutes, if someone appeals an order of the Chief Engineer, the appeal must be filed in District Court within 60 days of the date of the order and provides for a trial de novo. The Division attempted to have this statute changed and the bill passed the House and Senate, but was vetoed by the Governor.

#### Report of Official Members:

Mr. Danielson, State of Colorado, stated that Colorado was within Compact allocation on each of the four streams this year. He also reported that Colorado does have a reciprocal agreement with Nebraska to allow Colorado water to be used in Nebraska and vice versa.

Also, he reported that the Colorado Water Conservation Board, which is charged with water resources development, had \$40 million allocated to it. The Board was dilatory in approaching expenditure of these funds so the legislature transferred \$30 million of the \$40 million out of the Water Board Construction Fund into the Water and Power Authority. Most of the remaining \$10 million is committed to small projects.

There was discussion about the Water Court System of Colorado which was created in 1969, with seven water judges throughout the State. The 1969 Act requires that all water matters must be heard before a Water Judge.

Mr. Michael Jess, State of Nebraska, reported to the Administration that only the Republican River Basin of Nebraska has received close to normal rainfall since fall, 1980. In addition, the small snow amounts received in the Rocky Mountains will probably cause water shortages during 1982 in the Platte River Basin (western portion).

He further reported that the Nebraska Supreme Court made a ruling on the transfer of water from one basin to another. Since 1936, it has been basically prohibited, but this new decision reversed the former position and stated that the constitution did not make transbasin diversions illegal. Also, the Nebraska Supreme Court ruled that groundwater may be controlled by the State and is dedicated to the public.

Mr. Jess stated that in late December, 1980, the Department received an application from three irrigation districts in Nebraska within the Republican River Basin: H. & R. W., Frenchman-Cambridge and Frenchman Valley Districts, to transfer up to 45,000 acre-feet of water from the South Platte River into Enders Reservoir. The matter is scheduled for hearing during the fall of 1981.

Nebraska has one groundwater control area within the Republican River Basin. Beginning in 1981, mandatory allocations are in effect and each well owner is required to install meters. There are approximately 2,500 wells. Each well is allocated 66 acre-inches per acre during a three year period.

Nebraska had its long legislative session (90 days) this year and numerous water bills were introduced. Those passed, deal with industrial groundwater wells where industrial groundwater wells that pump 3,000 acre-feet or more on an annual basis must first be granted a special permit. Another legislative bill passed allows for creation of groundwater control areas for the purpose of managing groundwater quality problems.

Mr. Jess stated that Mr. John Neuberger resigned from the Department of Water Resources, effective February 1, 1981, and that he was Acting Director until June 1st, when he was appointed Director.

#### Report of Engineering Committee:

Mr. Jess, as Chairman of the Engineering Committee, deferred the report to Bob Bishop for presentation. Mr. Bishop stated the Engineering Committee Report was previously circulated to the Administration. The committee performed its customary assignments in computing the virgin water supply and consumptive use by subbasins.

Last year, there were several special assignments given to the Committee. One was to correct two subbasin titles as shown on Table 1 and Table 2 of the Report. On Table 1, a column was added adjacent to each subbasin that shows the original Compact virgin water supply. The other special assignment was to revise computation formulas to include additional Colorado diversions. Those were provided on the last page of the Engineering Committee Report.

The Committee requested that the Administration authorize discontinuance of the annual computation of five and ten year averages and to consider making a special, separate report of any revised formulas. Mr. Hilmes then

stated that, since averages were used in making a study of Bonny Reservoir, the Administration should not discontinue the five and ten year averages. The Engineering Committee Members agreed to delete the phrase in the report dealing with discontinuing the computations of five and ten year averages.

Mr. Danielson moved that the Engineering Committee Report be accepted with the deletion of the request for discontinuance of the annual computation of five and ten year averages. Mr. Jess seconded. The motion passed unanimously.

There was discussion about the computation of virgin water supply wherein industrial and municipal uses are not used in the computations.

Mr. Danielson moved that all industrial and municipal uses of water in the basin be included in the computations and charged against the allocations of each state. Also, that the Engineering Committee be charged to develop recommendations for adjustments to the computation formula. Mr. Jess amended the motion by stating that the presently identified municipal and industrial uses be included in the computation and each state make an effort to identify other municipal and industrial uses to be included and the engineering advisors be directed to modify the formula as necessary.

Mr. Danielson withdrew his motion. Mr. Danielson then made a motion that the presently identified municipal and industrial uses be included in the computations and that each state make a determined effort to identify further municipal and industrial uses and as they are identified, to include them in the calculations and that the engineering advisors be directed to modify the formulas as needed. Mr. Jess seconded. Motion failed for lack of unanimous decision.

Mr. Gibson moved that the industrial and municipal uses stated in the previous motion should be included in the computations and charged against the allocations to each state and that those uses of less than  $1\frac{1}{2}$  acre-feet be exempt from the study. Mr. Jess seconded. There was discussion concerning the exempting phrase and it was decided to delete the phrase "those uses of less than  $1\frac{1}{2}$  acre-feet be exempt from the study" and insert "that during the first year, any uses in excess of 50 acre-feet will be included in the computations of virgin water supply and consumptive use." All states voted yes, and motion passed.

There was discussion regarding the scope of computations as they pertain to the lower reach of the Republican River Basin, downstream from the Kansas-Nebraska line. Mr. Jess moved that the Engineering Committee in the next computations of virgin water supply and consumptive use include the main stem of the Republican downstream to the confluence of the Smoky Hill River. Mr. Danielson seconded. Motion failed because of lack of unanimous vote. Mr. Gibson indicated Kansas will study the matter.



There was discussion by the Administration of the Compact gaging stations. Mr. Jess moved that the Chairman of the Compact write a letter to the District Chief, U.S. Geological Survey, Lincoln, Nebraska, advising that the Compact regards all stations, with the exception of the Blackwood Creek gage and the nine (9) observation wells, as necessary and essential in the administration of the Compact and recommending that the funds used in operating the Blackwood gage and the observation wells be transferred to the operation of the remaining stations. Mr. Danielson seconded. Motion carried unanimously.

There was discussion regarding the fiscal position of the Compact and whether the Compact should expend funds. Mr. Danielson moved that the Engineering Committee develop a cost allocation scheme should it be necessary that the states contribute funds for the cost of the Administration. Mr. Gibson seconded. Motion failed for lack of unanimous vote.

#### Report of Other Agencies:

Mr. Bob Kutz, Bureau of Reclamation, presented the Bureau report to the Administration. He stated that the Bureau decided to combine the functions of the two offices in Nebraska and he had been selected to head up the main office located in Grand Island, Nebraska. Also, there has been some lull in the Republican Water Management Study due to turnover of personnel and Mr. Long Knapp has now been designated as team leader for the Republican Water Management Study. The repayment analysis has been completed in the Frenchman-Cambridge District, specifically, to support the proposal to amend the contract to the irrigators below Enders Reservoir that are losing their water supply. An analysis has been completed concerning transbasin diversion from the South Platte and some reconnaissance level cost studies and schemes to assist those districts in Enders and Republican.

The Bureau has also gathered basic data through different agencies on groundwater changes through the U.S. Geological Survey and Fish and Game Agencies on needs and opportunities for fish and wildlife, and recreation in the basin. They requested flood control information from the Corps of Engineers. It is anticipated the Bureau will begin an active public involvement program this fall. Mr. Kutz distributed copies of the Information Sheets.

Regarding operations and water forecasts, Mr. Kutz reported that the only bright spot will be in the South Fork. The Bonny watershed last year was well above normal - 170% of normal precipitation fell above Bonny Reservoir and the reservoir was filling all winter. We are 150% above normal in the South Fork and Trenton Dam and Swanson Lake filled this year. Most of the irrigation districts in the basin do have problems and are looking at about five (5) inches of irrigation water supply. The Frenchman-Cambridge is full. The Kansas-Nebraska Bostwick is looking at an allocation that is

limited possibly to 15 acre-inches per acre. Almena is in drastic shape and no releases are available this year for the irrigator.

#### Unfinished Business:

Mr. Danielson moved for the adoption of the amended computation formulas as presented by the Engineering Advisors which would accommodate the application by Mr. Ashton Wilson of water diverted from Colorado for use in Nebraska under the Wilson #1 water right. Mr. Jess seconded. Motion passed with unanimous vote.

Mr. Gibson asked Mr. Hilmes to read a proposed resolution (Exhibit A) by Kansas concerning Bonny Reservoir and he distributed copies of this and a computation sheet. Mr. Hilmes gave further explanation of these. Mr. Gibson moved that the resolution be adopted as presented. Mr. Jess stated he would second for purpose of discussion.

Mr. Danielson stated he objected to the resolution not being circulated prior to the meeting for purpose of review and as to the purpose of it being presented at all. Mr. Gibson stated that before us is the transfer of storage from the federal government to state government and this, in Mr. Gibson's opinion, needs approval of the Compact. The plan of operation that was submitted stated that it would deplete the flow into Kansas by possibly 30%, which had been the natural flow of the stream for years. Another plan might be a little less. Kansas does not concur with a 30% depletion of stateline flow in the South Fork of the Republican. This resolution would assure Kansas of the natural flow due her. There was further discussion regarding guaranteed flows of Compact Rivers. There was also discussion on the various alternative operation plans of Bonny Reservoir and the need for studies based on monthly averages rather than annual averages. There was discussion concerning the fact that Kansas has never been charged for evaporation losses occurring at Bonny Reservoir. There was discussion regarding Kansas not being short in her Compact allocation at this time. There was difference of opinion as to whether the storage transfer and proposed operating procedure needed Compact approval. After a very lengthy discussion, the matter was called to a vote. Colorado voted no; Nebraska voted no; and Kansas voted yes on the resolution. The resolution failed for lack of unanimous approval.

Mr. Kutz distributed copies of the latest operation plan and copies of the contract regarding Bonny Reservoir that is still in a draft stage. Each of these documents provide for a yearly review of the operation plan by the State and Compact. Mr. Danielson assured those present that Colorado would not exceed its Compact allocation with the sale of Bonny Reservoir storage and that it is his statutory authority to see that Colorado does not exceed her Compact allocation. He further stated he did not see the need for Compact approval for this sale.

New Business:

Mr. Jess read a proposed resolution commending John W. Neuberger, past Director of the Nebraska Department of Water Resources, and moved that the resolution be included in the next Annual Report of the Administration and that a copy of this resolution be furnished to Mr. Neuberger. Mr. Danielson seconded. Motion passed with unanimous vote.

Mr. Danielson moved that the rules and regulations be published in each annual report of the Compact. Mr. Jess seconded. Motion passed with unanimous vote.

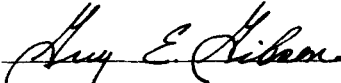
Committee Appointments:

Mr. Jess stated he wished to appoint Bob Bishop to the Engineering Committee.

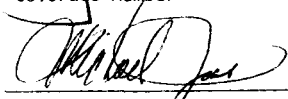
Special Assignments:

Mr. Jess moved that the Engineering Committee make the computation for water year 1981 of the virgin water supply and consumptive use and to include the municipal and industrial uses as discussed previously. Mr. Danielson seconded. Motion passed unanimously.

There being nothing further, the Compact meeting adjourned.

  
Kansas Member (Chairman)

  
Colorado Member

  
Nebraska Member

RESOLUTION CONCERNING BONNY RESERVOIR

WHEREAS, the Colorado Division of Wildlife proposes to purchase from the U.S. Bureau of Reclamation the use of the conservation storage in Bonny Reservoir in Colorado and has submitted a proposed operating plan for Bonny Reservoir in accordance with this proposed purchase.

WHEREAS, the purpose of the Republican River Compact is to provide for "an equitable division" of the waters of the Republican River Basin between the States of Colorado, Nebraska and Kansas.

WHEREAS, the Republican River Compact Administration is charged with the duty of administering this Compact.

NOW THEREFORE, THE REPUBLICAN RIVER COMPACT ADMINISTRATION RESOLVES that water shall only be stored in Bonny Reservoir under the Colorado Division of Wildlife's final approved operating plan in such a manner that the quantity of water occurring in the South Fork Republican River at a gauging station on said river near Hale, Colorado, (SW $\frac{1}{2}$ , NE $\frac{1}{4}$ , Section 15, Township 5 South, Range 43 West, Yuma County, Colorado) is not decreased below the long term monthly average as determined by using the data obtained from the above described gauge beginning on October 1, 1952; further that such flows be protected by the State of Colorado from the Hale gauge to the Colorado-Kansas state line.

BE IT FURTHER RESOLVED that if a shortage of water occurs during any month at the Hale gauge due to storage of water by the Colorado Division of Wildlife in excess of the above specified quantity the shortage shall be made up the following month at a rate to be determined by the Administration.

BE IT FURTHER RESOLVED that a copy of this Resolution be submitted to the Colorado Water Court having jurisdiction in the matter of the Colorado Division of Wildlife's proposed purchase from storage in Bonny Reservoir and the Colorado Division of Wildlife's acquisition of a water right, and that the terms of this Resolution be made a part of the terms of such decree.

Entered this 2nd day of July, 1981, at the annual meeting of the Republican River Compact Administration held in Topeka, Kansas.

Date \_\_\_\_\_ Representative of Colorado

Date \_\_\_\_\_ Representative of Kansas

Date \_\_\_\_\_ Representative of Nebraska

Report of Engineering Committee  
Republican River Compact Administration  
For the 1980 Water Year

The meeting of the Engineering Committee was held in the office of the Nebraska Department of Water Resources on May 20, 1981.

Committee Members present were:

Michael Jess, Nebraska Department of Water Resources  
Harold Simpson, Colorado State Engineer's Office  
Gerald E. Hilmes, Kansas Division of Water Resources

Others in attendance were:

Glen E. Brees, Colorado State Engineer's Office  
Robert Bishop, 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 those used and discussed previously. They are explained in detail in the tenth Annual Report of the Compact Administration.

Municipal and industrial uses are not included in the computations, but for the record, those available to the Committee for the 1980 calendar year are:

City of Norton, Kansas	832 Ac. Ft.
Midwest (Amoco) Oil Company	396 Ac. Ft.
Rex Monahan (Ladd) Petroleum Company	1 Ac. Ft.

Shown in Table 1 are the original computed virgin water supply and the original allocations to each state by sub-basin along with the 1980 adjusted allocations. Adjusted allocations for each state were computed for each sub-basin. Briefly, a state's allocation is adjusted when the computed annual virgin water supply varies "more than ten per cent 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 1976-1980 and ten year running averages for 1971-1980.
- Form 10d: Adjusted allocations by five year and ten year running averages for same years as on Form 10c.

#### Additional Work Assignment

As directed by the Compact Officials the original computed virgin water supply amounts are now shown in the first column of Table 1 opposite each sub-basin. These same amounts have been shown in the previous two years' reports in the second column from the right, however, the column was mistitled as "Compact Allocation." Table 1 in this report now correctly shows the total compact allocation by sub-basin in the second column from the right. Attention is called that the original computed virgin water supply was totally allocated to the three states, however, when the total supply of a sub-basin was not allocated the unallocated amounts were allocated out of the main stem supply of the Republican River.

In both Tables 1 and 2 the last two sub-basin descriptions are revised as instructed, by adding "in Colorado" to the "North Fork of the Republican River" and adding "North Fork Republican River in Nebraska" to "Main Stem of the Republican River plus Blackwood Creek."

The Committee revised the formulas to include diversions of the Wilson No. 1 Ditch for irrigation of Nebraska lands and the return flows from Nebraska lands in the virgin water supply and consumptive use formulas. The new formulas will show the Wilson No. 1 Ditch diversions and return flows being handled similar to the computations used for the Haigler Canal, except that return flows would be 25% of the diversions. Copies of the revised formulas are accompanied with this report. The Committee suggests withholding the adoption of the revised formulas until after an application has been filed by Mr. Ashton Wilson with Nebraska Department of Water Resources to proceed to irrigate his lands in Nebraska.

The Committee discussed the matter of re-publication of the formulas if the revised formulas are adopted and it was generally agreed that it would be preferable in a special publication separate from the regular annual report.

#### Other Business

The Committee was requested by letter dated April 27, 1981, from Glenn Engel, Supervisory Hydrologist of the U. S. Geological Survey, to prioritize a list of gaging stations and ground water level observations as to their importance to the Compact Administration. The concern being that future Federal funding for their "Collection of Basic Records Program" may be insufficient to operate all of the data collection stations. The stations listed for prioritization were:

06835500	Frenchman Cr. at Culbertson
06852500	Courtland Canal at NE-KS line
06838000	Red Willow Cr. near Red Willow
06847500	Sappa Cr. near Stamford
06827500	S.F. Republican R. near Benkelman
06823000	N.F. Republican R. at CO-NE line
06824000	Rock Creek at Parks
06823500	Buffalo Cr. near Haigler
06836500	Driftwood Cr. near McCook
06821500	Arikaree R. at Haigler
06836000	Blackwood Cr. near Culbertson
-----	Haigler recording well and 8 non- recording observation wells

The consensus of the Committee was that all stations listed should have an equal No. 1 priority except for Blackwood Creek and the ground water level data; and informed Mr. Engel accordingly.

It was agreed that the next regular scheduled meeting of the Engineering Committee will be in the office of the Division of Water Resources at Topeka, Kansas, on the first Wednesday in May of 1982.

The Engineering Committee

<u>Donald D. Simpson</u> Colorado	<u>6-22-81</u> Date
<u>Donald E. Kline</u> Kansas	<u>6-29-81</u> Date
<u>Robert A. Quilley</u> Nebraska	<u>6-19-81</u> Date



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;
- minus, the return flows from the lands irrigated by diversions from groundwater 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;
- plus, the diversions by the Superior Canal;
- minus, the return flows from the lands irrigated by the Superior Canal;

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

- 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;
- 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 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 in Nebraska and Kansas above the gaging station near Hardy.

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 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;  
minus, the return flows to the main stem of the  
Republican River from the Haigler Canal and Wilson  
No. 1 Ditch in Nebraska.

Table 1

1980 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 1980 (Acre Feet)			Comparison of Original Compact Allocations and 1980 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	16,330	910	17,240			12,600	7,880	2,100	1,310	14,700	9,190
Sappa Cr.	21,400	24,340	620	24,960			8,800	10,260	8,800	10,260	17,600	20,520
Beaver Cr.	16,500	19,970	430	20,400	3,300	4,080	6,400	7,910	6,700	8,280	16,400	20,270
Medicine Cr.	50,800	14,130	36,270	50,400					4,600	4,600	4,600	4,600
Red Willow Cr.	21,900	5,150	19,160	24,310					4,200	4,660	4,200	4,660
Driftwood Cr.	7,300	1,410	1,610	3,020			500	210	1,200	500	1,700	710
Frenchman Rv.	98,500	32,980	65,580	98,560					52,800	52,800	52,800	52,800
South Fork of the Republican Rv.	57,200	8,580	34,140	42,720	25,400	18,970	23,000	17,180	800	600	49,200	36,750
Rock Cr.	11,000	100	9,200	9,300					4,400	3,720	4,400	3,720
Buffalo Cr.	7,890	450	4,580	5,030					2,600	1,660	2,600	1,660
Arikaree Rv.	19,610	4,960	11,110	16,070	15,400	12,610	1,000	820	3,300	2,700	19,700	16,130
N. F. Republican Rv. in Colorado	44,700	380	45,270	45,650	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	82,560	127,560	210,120			138,000	191,640	132,000	184,130	270,000	375,770
TOTALS	478,900	211,340	356,440	567,780	54,100	45,660	190,300	235,900	234,500	286,220	478,900	567,780

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\*Main Stem 87,700  
Blackwood Creek 6,800

Table 2

Computed Consumptive Water Use for 1980 within the  
Republican River Basin (Acre Feet)

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				16,330	2,640	18,970	0	100	100	16,330	2,740	19,070
Sappa Creek				8,840	160	9,000	16,320	340	16,660	25,160	500	25,660
Beaver Creek	630	0	630	9,420	10	9,430	9,890	30	9,920	19,940	40	19,980
Medicine Creek							14,130	4,880	19,010	14,130	4,880	19,010
Red Willow Creek							5,150	8,430	13,580	5,150	8,430	13,580
Driftwood Creek							1,410	0	1,410	1,410	0	1,410
Frenchman River							32,980	20,260	53,240	32,980	20,260	53,240
South Fork of the Republican River	1,520	8,830	10,350	7,060	210	7,270	0	0	0	8,580	9,040	17,620
Rock Creek							100	0	100	100	0	100
Buffalo Creek							440	400	840	440	400	840
Artikaree River	4,060	0	4,060	140	0	140	760	0	760	4,960	0	4,960
N.F. Republican Rv. in Colorado	380	8,170	8,550				0	4,840	4,840	380	13,010	13,390
N.F. & Main Stem of Republican Rv. plus Blackwood Cr. in Nebraska				110	57,660*	57,770	82,450	100,170*	182,620	82,560	157,830	240,390
TOTALS	6,590	17,000	23,590	41,900	60,680	102,580	163,630	139,450	303,080	212,120	217,130	429,250

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\*Evaporation from Harlan County Reservoir apportioned to Kansas (58%) 15,130 and to Nebraska (42%) 10,960 AF.

RESOLUTION OF APPRECIATION

WHEREAS, John W. Neuberger, past Director of the Nebraska Department of Water Resources has left the Water Resources field; and

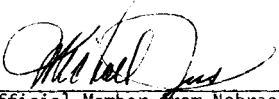
WHEREAS, John served as a Commissioner on the Republican River Compact Administration;


NOW THEREFORE, BE IT RESOLVED, that the Republican River Compact Administration does hereby acknowledge his service and does forward best wishes to John and his family.

BE IT FURTHER RESOLVED, that this resolution be entered into the records of this Administration and that the Chairman be instructed to send a copy to Mr. Neuberger.

Adopted at the Twenty-Second Annual Meeting of the Republican River Compact, at Topeka, Kansas on July 2, 1981.

  
\_\_\_\_\_  
Official Member from Kansas

  
\_\_\_\_\_  
Official Member from Nebraska

  
\_\_\_\_\_  
Official Member from Colorado

## 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.