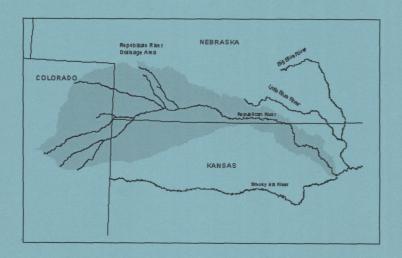


# REPUBLICAN RIVER COMPACT ADMINISTRATION

# FORTY-SECOND ANNUAL REPORT

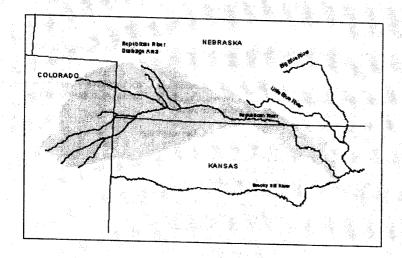


For The Year 2002

Alma, Nebraska August 22, 2003

# REPUBLICAN RIVER COMPACT ADMINISTRATION

# FORTY-SECOND ANNUAL REPORT



For The Year 2002

Alma, Nebraska August 22, 2003

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# ANNUAL REPORT 42<sup>nd</sup> ANNUAL MEETING REPUBLICAN RIVER COMPACT ADMINISTRATION

### **Minutes**

A transcript of this meeting was prepared by a court reporter. It has been reviewed by each of the states and approved by the Compact Administration as the official minutes of the  $42^{nd}$  annual meeting of the Compact Administration. Copies of the transcript can be obtained from the offices of each of the commissioners. Below is a brief summary of the meeting.

#### Introductions

The meeting was called to order by Chairman Patterson at 9:00 a.m., August 22, 2003, Johnson Community Center, Alma, Nebraska.

Chairman Patterson welcomed everyone in attendance. Chairman Patterson of Nebraska, Commissioner Simpson of Colorado and Commissioner Pope of Kansas each introduced their staff and others in attendance. Those in attendance were:

N:	am	e
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### Representing

Roger K. Patterson	Nebraska Commissioner
David L. Pope	Kansas Commissioner
Hal D. Simpson	Colorado Commissioner

Ann Bleed Nebraska Department of Natural Resources
Mike Thompson Nebraska Department of Natural Resources
Brad Edgerton Nebraska Department of Natural Resources
David Cookson Nebraska Attorney General's Office
Ustin Lavene Nebraska Attorney General's Office
Ken Knox Colorado Division of Water Resources

David W. Barfield Kansas Department of Agriculture, Division of Water Resources

Montgomery and Andrews, counsel for Kansas John Draper Steve Ronshaugen Bureau of Reclamation, Grand Island, Nebraska Bureau of Reclamation, McCook, Nebraska Mary Swanda Pam Bonebright Nebraska Department of Natural Resources Shane Stanton Nebraska Department of Natural Resources David Gunderson Nebraska Department of Natural Resources Nebraska Department of Natural Resources John Witler Don Blankenau Fennemore Craig, counsel for Nebraska

Roy Patterson Frenchman-Cambridge Irrigation District, Nebraska

Phil Soenksen U.S.G.S. – Nebraska John Thornburn Tri-Basin NRD, Nebraska Mike Clements Lower Republican NRD, Nebraska

Robert Andrews Frenchman-Cambridge Irrigation District, Nebraska Ralph Best Frenchman-Cambridge Irrigation District, Nebraska

Ginger Jensen Kearney Hub

Scott Ross Kansas Department of Agriculture, Division of Water Resources

R.E. Pelton Kansas River Water Assurance Dist. #1
Kirsten Prickett Harlan County Journal

Bob Hipple Upper Republican NRD, Nebraska

Don Felker Frenchman Valley and H&RW Irrigation Districts, Nebraska

Kevin Low Corps of Engineers – Kansas Allen Tool Corps of Engineers - Kansas

Norman Nelson Upper Republican Basin Advisory Committee – Kansas

David Walton Lower Republican NRD, Nebraska
Peter Ampe Assistant Attorney General - Colorado
Kenny Nelson Kansas Bostwick Irrigation District

Bill Peck Bureau of Reclamation, Grand Island, Nebraska Mike Kube Bureau of Reclamation, Grand Island, Nebraska Fred Ore Bureau of Reclamation, Grand Island, Nebraska

Willem Schreüder Principia Mathematica

Dale Book Consultant for the State of Kansas

Dan Smith Middle Republican Natural Resource District
Mike Delka Bostwick Irrigation District, Nebraska

Steve Garner USDA – NRCS

Mike Bizon Lower Republican Water Association, Kansas

Jim Miller Bostwick Irrigation District, Nebraska

Clarence Jankowitz, Jr Frenchman Valley Irrigation District, Nebraska

Steve Yochum NRCS

Joann Freeborn Kansas Legislature

Bill Gilbert Lower Republican Water Association, Kansas

Fred Rogge Kansas River Water Assurance District

#### Approval of agenda

The Agenda was approved as proposed:

- 1. Introductions
- 2. Adoption of Revised Agenda
- 3. Approval of Previous Annual Meeting Minutes and Annual Report
- 4. Report of Chairman (Roger Patterson, Member for Nebraska)
- 5. Members' Reports

Hal Simpson, Member for Colorado David Pope, Member for Kansas

6. Federal Reports:

Bureau of Reclamation Corps of Engineers U.S. Geological Survey

- 7. Engineering Committee Report
- 8. Legal Committee Report
- Old Business
- 10. New Business

Adoption of revised Rules and Regulations
Adoption of RRCA Accounting Procedures and Reporting Requirements
Adoption of RRCA Groundwater model
Notification to the Special Master
Status report on Conservation Practices Study
Status report on Lower Republican Appraisal Study
Other

- 11. Assignments to the Engineering Committee
- 12. Remarks from the Public
- 13. Future Meeting Arrangements
- 14. Adjournment

# Approval of 41st Annual Report and the Minutes

It was moved by Commissioner Simpson, seconded by Commissioner Pope, and passed, that the minutes of the 41<sup>st</sup> Annual Report be approved for publication.

## Report of Chairman

Chairman Patterson began his report with comments on the drought. Nebraska is in their fourth year, as the other states are. He commented that the drought is extremely severe, particularly in the western part of the basin. The supplies this year to the irrigation districts were the most limited they have ever been in the past. The hope in the state is for a very wet winter.

As far as interstate litigation, Chairman Patterson was happy to report that the interstate litigation with Wyoming and Kansas has been settled. Nebraska's current major skirmish now is on the Missouri River. The Cooperative Agreement on the Platte River is an ongoing issue for Nebraska. It has become more of a negotiation recently, with a November 1 deadline.

This year in the legislature we passed LB619, which standardized some of our water transfer statutes.

Next year is expected to be Nebraska's big year for water legislation. A Water Policy Task Force was put in place in April of 2002. They were given 18 months to look into Nebraska's conjunctive use law, water transfers, water leasing and water banking to see what changes can be made to those statutes. Their report is due in September.

In regards to settlement implementation there are a lot of requirements and obligations in the Republican River settlement for Nebraska. The Department is moving very aggressively and has been very busy carrying out these obligations. Additional money was allocated from the Legislature to employ four additional staff, three of which have been filled. The Department has carried out an adjudication in the Basin from Guide Rock upstream to Cambridge so that we can get our water rights in order. Because of the supply for irrigation in Harlan County Reservoir of less than 130,000 acre-feet we closed all junior direct flow appropriators junior to the Courtland Canal priority date, approximately 120. This is something that is required by the settlement. The Department has also spent a tremendous amount of time with the Natural Resource Districts putting together the framework for a Joint Management Plan. They have adopted rules and regulations regarding water meters and are moving out to certify irrigated acres.

Commissioner Pope raised a question concerning the number of acres brought to adjudication and what was cancelled. Mr. Edgerton explained that 275 permits irrigating 21,500 acres were investigated and brought to hearing. 12,151 acres were cancelled, so they are no longer on the books. Commissioner Simpson inquired if the reason for the cancellation was three years of non-use. Mr. Edgerton indicated that was correct.

## Report of the Commissioner from Colorado

Colorado is wrapping up litigation with Kansas on the Arkansas River. The litigation was initiated in late 1985. The Special Master's final report is anticipated within the next 30 days.

The drought of 2002 in Colorado was the driest year in over 400 years in many parts of the state. As a result, the streamflows were at record lows. Colorado had a large number of forest fires with over half a million acres burned. This year streamflow will probably be about 40 percent of average. In the Republican River Basin, Bonny Reservoir was drawn down twelve vertical feet, or about 10 to 12,000 acre-feet of water.

As a result of the drought the Colorado Legislature dealt with over 30 bills that addressed water issues or budgets related to water agencies. Because of the budget crisis there were some fees added to allow the agency to become more cash-funded and less funded through the general fund. Water well permit fees were increased from \$60 to \$440. Colorado now also has a water rights administration fee, for surface water rights, and ground water rights that are adjudicated. Storage rights greater than a hundred acre-feet have a fee to help cover Colorado's operating expenses. The Legislature, in times of drought, gave the state engineer the authority to temporarily approve changes of water rights or changes in use; this would only grant a temporary change of the water right. Also created was state-wide water banking authority for the state engineer to approve water banks for stored water. Finally there was a provision to allow the state engineer to approve loans between a rancher or farmer to the Colorado Water Conservation Board, whereby compensation received by another entity, they would stop irrigating and leave the water in the stream.

As far as responsibilities under the Republican River Settlement Agreement, Colorado will have to take steps to off-set groundwater pumping and consumptive use in Colorado during dry years. Colorado is really seeing the reduced surface run-off in the Arikaree Basin where they have a high percentage of allocation and therefore it puts Colorado in a negative situation with respect to overall Compact entitlements and obligations.

Upon questioning Commissioner Simpson pointed out that the water banking state-wide did not allow for water to be moved from one water division to another. Mr. Simpson also clarified that one new statute allows for interruptible water supply agreements that allow an irrigator to stop irrigating for one year and the water that would have been consumed may be left in the stream for fish and wildlife and be protected from diversion. The water right loan is held by the Water Conservation Board.

#### Report of the Commissioner from Kansas

Commissioner Pope stated as elsewhere, the drought in Kansas is severe. Spring rainfall was relatively good but afterward, rainfall was lacking. The Governor activated a drought response team so there are mechanisms in place to help, but it's hard without some rain.

As far as legislation is concerned, there were few water issues; the session was mainly taken up with budget issues. Kansas does not have annual administration fees but they do have permit, application-type fees and inspection fees that were raised.

With regards to interstate issues, Kansas is also involved in implementing the Republican River Settlement. In regards to the Missouri River, Kansas is not a formal party but is certainly very interested.

In terms of activities in the Basin and metering of wells, not all wells in the uplands are metered right now but meetings are being held and full metering is expected in the coming years. In the alluvial valley there has been full metering since 1998. There has been some activity in

the Upper Republican area with regard to enforcement to deal with overpumping and to make sure water is properly distributed. In the Lower Republican area, Kansas has been administering junior water rights, both wells and surface water uses, since May of 2002.

The Department is also involved in the process of promulgating new rules this year both in regards to fines and water banking. Kansas had a water banking statute pass previously so the rules are almost ready to go.

In answer to questions, Commissioner Pope stated that there would be a private, non-profit group created to oversee any water bank that may be created. In regard to overpumping enforcement, they work with anyone identified and require them not only to meter but also to develop a water conservation plan, do a monthly report and follow-up with field monitoring to closely observe their practices.

# Report by the Bureau of Reclamation, U.S. Department of Interior

Fred Ore reported that the settlement negotiations protected the integrity of the contracts that were recently negotiated and signed with the irrigation districts in the basin, and also the consensus plan that was recently developed with the Corps of Engineers on Harlan County Lake. The Bureau has been busy providing technical assistance to the states with regard to identifying boundaries and state-of-the-art mapping for purposes of accounting water supply from irrigation. Marv Swanda then reported on the levels in the seven reservoirs they maintain in the basin. Mr. Swanda's report is attached as Exhibit 1. Mr. Swanda also reported on the installation of hydromet equipment on canal sites and gaging stations below Harlan Dam and above the Superior Courtland Diversion Dam.

Mr. Swanda was questioned as to whether the Standing Operating Procedures for Bonny Dam had been updated. They had in regards to adding more as-built drawings, and addressing the toe drains and the outlet works, but there were no changes to the operations of the outlet works.

#### Report by the U. S. Army, Corps of Engineers

Allen Tool reported on the Harlan County Dam safety study which was put on hold in March of 2003 because of shortfalls in funding. At that time the independent technical review had been initiated and three of the concrete spillways and monoliths did not meet current factors of safety. The tainter gate portion of the evaluation was completed in 1999; they will likely need repair or modification to bring them into compliance.

He also reported on the Milford Lake Section 1135 wetlands restoration project. Phase one and two have been completed which include a total of 1,900 acres of restored wetlands. Phase three will include an additional 500 acres and supplemental pumping to support some of the acres restored.

### Report by the U.S. Geological Survey

Phil Soenksen reported on the U.S. Geological Survey's cooperative stream gaging program in the basin. As shown on the table in his report 14 of the 17 states reported had flows less than 50 percent of the long-term mean and nine of them showed a record low for the 2002 water year. Mr. Soenksen's report is attached as Exhibit 2.

# **Engineering Committee Report**

Ann Bleed reported for the Engineering Committee. There is no written report to be submitted this year due to the settlement talks and the need to better define the implementation of the Compact. Ms Bleed listed eight possible assignments for the Engineering Committee for the coming year. One, take over the operation and maintenance of the Republican River Compact Administration Groundwater Model. Two, recommend to the RRCA where and how the Groundwater Model and the groundwater data sets for the model should be housed. Three, review the Republican River Compact accounting procedures and reporting requirements and recommend any necessary corrections for adoption by the Republican River Compact Administration. Four, develop and recommend an accounting program for adoption by the Republican Compact Administration. Five, develop a user's manual for the Republican River Compact Administration Groundwater Model. Six, develop data and update the Groundwater Model through 2002. Seven, by April 15, 2004, exchange the data required by the Republican River Compact accounting procedures, and use these data to complete the accounting of the virgin water supply, the computed water supply, and the beneficial consumptive uses in the Basin for the calendar year 2003. Eight, develop Compact accounting for the years 1995 to 2002, using methods generally based on those prescribed in the accounting procedures. Of note is that the 1995-2002 data would be developed for informational purposes only. Finally Ms. Bleed requested the appointment of members to the new Engineering Committee.

#### **Legal Committee Report**

Pete Ampe reported for the Legal Committee. Once again the legal committee was not given any specific tasks so there was no report to give. Based on this trend, it was recommended that the RRCA disband the standing Legal Committee. This suggestion was also taken under consideration.

### Old Business

No old business was reported.

# New Business

Chairman Patterson indicated that listed under new business are four items that are all contained in one resolution. One, we will repeal the previous rules and regulations. Two, we

would adopt new rules and regulations. Third, we would adopt the Groundwater Model from July 1st that was approved. And fourth, we would adopt the accounting procedures and reporting requirements contained in Appendix C in the final settlement stipulation. Mr. Pope made a motion to adopt the resolution. Mr. Simpson seconded the motion. Mr. Pope recommended one change before the rules were adopted and that was under Rule No. 12. He suggested it be changed to read "And the officials of appropriate state and federal agencies and any other person, as determined appropriate by the RRCA." Mr. Pope indicated that he would like that change incorporated into this motion. Mr. Simpson agreed with the change. The motion was carried. This resolution is attached as Exhibit 3 and the new rules and regulations are attached as Exhibit 4

Chairman Patterson requested direction to provide a copy of the resolution and adopted rules and regs to the Special Master. Mr. Pope made a motion that the Chairman should notify the Special Master by submitting the resolution and the attached rules so that he is officially notified that the RRCA has complied with those steps necessary to implement the settlement. Mr. Simpson seconded the motion. The motion was carried.

The Chairman called on Mr. Barfield to give a short status report on the Conservation Practices Study. The settlement made a provision for the states and the U.S. to do a five-year study to try and assess the impacts of non-federal reservoirs and terraces on the Basin's water supply and uses within the Basin. By April 30, 2004, the committee would review existing studies that are relevant to the question of quantifying these impacts, look at data that is available that is pertinent and evaluate potential methods that might be used to quantify the effects of these practices. They then would develop a plan of study for the five-year study. Mr. Pope also wanted to indicate that that even though the settlement committed them to develop the plan of study it did not commit any state or the Compact Administration to take any particular action in regards to these practices.

Mr. Ore gave a report on the Lower Republican Appraisal Study. This Study will look at water availability in the lower basin and/or investigate possibility of additional water that could be developed. Right now they are looking at the hydrology with regards to the better alternatives. In particular they are looking at rehabilitation of Courtland Canal, possibly some winterizing and/or some automation at Guide Rock. They are also taking a close look at Lovewell Reservoir due to the fact that if you raise the Lovewell storage you could get a significant amount of additional water for availability for relatively low cost. A draft report is expected by the end of the year, which will recommend whether to continue with a feasibility study. Chairman Patterson noted that Nebraska is working with Congressman Osborne's office on potential legislation to authorize a feasibility study. Mr. Pope indicated that Kansas is very interested in the study's outcome.

Chairman Patterson requested a motion in regards to the suggestion to disband the Legal Committee. Mr. Simpson made the motion and it was seconded by Mr. Pope. The motion was carried.

# **Exhibits**

Exhibit #1 – Bureau of Reclamation report Exhibit #2 – U.S. Geological Survey report Exhibit #3 – Resolution Exhibit #4 – Rules and Regulations Exhibit #5 – Resolution Recognizing Dick Stenzel

Mr. Simpson introduced a resolution to recognize Dick Stenzel's service as engineer advisor to the Compact Administration. This resolution was accepted by the Compact and is attached as Exhibit 5.

# Assignments to the Compact's Committees:

# Engineering Committee

Mr. Simpson moved to accept the eight recommendations made by Ms. Bleed, Mr. Pope seconded the motion. The motion was carried. Ann Bleed, David Barfield and Ken Knox are appointed as the members of the Engineering Committee.

# Remarks from the Public

No remarks were received.

# Future Meeting Arrangements

Chairman Patterson noted that according to the tradition of the Compact Administration, Colorado would host the meeting next year. He suggested Burlington, Colorado, June 9<sup>th</sup>, and this date was accepted.

# Adjournment

The meeting was adjourned at 11:10 a.m., August 22, 2003.

Roger K. Patterson

Nebraska Commissioner (Chairman)

Hal D. Simpson

Colorado Commissioner

David L. Pope

Kansas Commissioner

# **Exhibits**

Exhibit #1 - Bureau of Reclamation report

Exhibit #2 – U.S. Geological Survey report Exhibit #3 – Resolution Exhibit #4 – Rules and Regulations

Exhibit #5 - Resolution Recognizing Dick Stenzel

# BUREAU OF RECLAMATION

**OPERATION** 

AND

MAINTENANCE

REPORT

REPUBLICAN RIVER

COMPACT MEETING

ALMA, NEBRASKA

AUGUST 22, 2003

Exhibit #1

#### REPUBLICAN RIVER COMPACT MEETING

August 22, 2003 Alma, Nebraska

#### 2002 Operations

As shown on the attached Table 1, precipitation in the Republican River Basin varied from 49 percent of normal at Norton Dam to 78 percent of normal at Lovewell Dam. Total precipitation at Reclamation dams ranged from 9.17 inches at Bonny Dam to 21.16 inches at Lovewell Dam.

Inflows varied from 28 percent of the most probable forecast at Swanson Lake to 83 percent of the most probable forecast at Keith Sebelius Lake. Inflows into Harlan County Lake were 60,094 AF and Lovewell Reservoir 57,158 AF.

Average farm delivery values for each irrigated acre are as follows:

District	Farm Delivery
Frenchman Valley	4.1 inches
H&RW	0.0 inches
Frenchman-Cambridge	8.0 inches
Almena	4.1 inches
Bostwick in NE	11.5 inches
Kansas-Bostwick	13.3 inches

## 2002 Operation Notes

Bonny Reservoir—Started the year 10.3 feet below the top of conservation. Annual precipitation was the second lowest on record. Annual computed inflow of 6,996 AF was the lowest ever recorded at this site. Record low inflows were recorded during eight months of the year. Due to the low water supply, releases were not made to Hale Ditch. The end of year storage was at an historical low, 13.4 feet below the top of active conservation.

Enders Reservoir—Started the year 25.6 feet below the top of conservation. Annual precipitation was the lowest ever recorded at the site. Annual computed inflow of 7,432 AF was also the lowest ever recorded. All twelve months recorded record low inflows. H&RW Irrigation District did not divert water due to the extremely low water supply. Reservoir inflows were bypassed from July 23<sup>rd</sup> through August 11<sup>th</sup> as directed by the Nebraska Department of Natural Resources. The end of the year storage was the lowest ever recorded for December 31<sup>st</sup> (26.2 feet below the top of conservation).

Construction of a filtered drainage collection pipe and monitoring system in the existing open drain below Enders Dam was completed in the spring of 2002.

Swanson, Hugh Butler, and Harry Strunk Lakes--Swanson and Hugh Butler

Exhibit #1

started the irrigation season 22.1 feet and 11.4 feet below the top of conservation and Harry Strunk was .4 foot into the flood pool. Annual precipitation was the lowest ever recorded at both Red Willow and Medicine Creek Dams and the second lowest at Trenton Dam. Annual computed inflows were the lowest ever recorded at all three reservoirs. Both Swanson and Hugh Butler Lakes reached contracted shut off levels in July and historical low reservoir levels in August. At the end of the year, Swanson was 26.5 feet below the top of conservation, Hugh Butler was 19.1 feet below and Harry Strunk was 12.4 feet below.

Replacement of an existing open drainage ditch with pipe to enhance seepage collection at Red Willow Dam was completed in 2002. Low lake levels at Swanson Lake permitted the removal of a significant amount of debris and sediment from the canal intake structure and channel.

Keith Sebelius Lake—Annual precipitation at Norton Dam was the lowest ever recorded at the site. The total inflow of 5,751 AF was between the dry and normal-year forecasts. The reservoir started the irrigation season 7.7 feet below the top of conservation and ended the year 12.7 feet below conservation.

Harlan County Lake--Last year's high elevation was El. 1942.88 which is 2.9 feet below the top of conservation. The lake finished the season at elevation 1932.84 (12.9 feet below full). Inflow for the year was 60,094 AF, the lowest ever recorded.

Lovewell Reservoir—Last year's high elevation was El. 1585.10 which is 2.5 feet into the flood pool. The reservoir level at the end of the irrigation season was 9.9 feet below the top of active conservation. Diversions of Republican River flows via Courtland Canal were maintained through the end of the year to increase the reservoir storage. At the end of the year the reservoir level was 2.6 feet below the top of conservation.

# **Current Operations**

Table 2 shows a summary of data for the first seven months.

Bonny Reservoir-Bonny is presently 13.2 feet from full. Due to the low reservoir storage, releases were not made to Hale Ditch for the second year in a row.

Swanson Lake—Presently 22.9 feet from full. Inflows for 2003 are only 31% of most probable. Frenchman-Cambridge Irrigation District did not irrigate from Swanson Lake this year due to the low water supply.

Enders Reservoir—The reservoir is 26.3 feet from full. Inflows for 2003 are only 38% of most probable. H&RW Irrigation District did not irrigate this season for the second year in a row due to the water supply shortage.

Hugh Butler Lake--Presently 15.5 feet from full. Frenchman-Cambridge Irrigation District did not irrigate from Hugh Butler Lake this year due to the low water supply.

Harry Strunk Lake—Presently 14.0 feet below the top of conservation. Did not fill in 2003 for only the third time since initial filling. Irrigation releases discontinued on August 22<sup>nd</sup>. Frenchman-Cambridge Irrigation District expects to deliver 7 inches to acres served by Cambridge Canal.

Keith Sebelius Lake—Presently 16.2 feet below full. Irrigation releases discontinued on August 14th. Almena Irrigation District restricted water delivery to approximately 3 inches.

Harlan County Lake—Presently 18.1 feet below full. Irrigation releases ended on August 19th. Inflow for 2003 is 30% of most probable. Nebraska Bostwick Irrigation District planned to deliver 6 inches.

Lovewell Reservoir—Presently 7.7 feet below full. Irrigation releases ended on August 19<sup>th</sup>. Kansas Bostwick Irrigation District expected to deliver 7.5 to 8.5 inches. A new ramp flume was constructed on Courtland Canal just downstream of Lovewell Dam in the spring of 2003 to improve water scheduling and accounting.

#### Other Items

### Inspections

Comprehensive Facility Reviews (CFR) were conducted at Bonny and Norton Dams in 2002. Periodic Facility Reviews (PFR) have been conducted in 2003 at Red Willow and Medicine Creek Dams. Annual inspections have been or will be conducted at the remaining project dams in 2003.

#### **Emergency Management Operations**

Orientation Meetings are held annually to discuss the Emergency Action Plan for all NKAO dams. Federal, state, county and local organizations that would be impacted by an emergency at NKAO dams are invited to attend. Radios which contact the downstream 24-hour warning points are tested monthly.

A Functional Exercise of the Norton Dam EAP took place in 2002. A Tabletop Exercise of the Bonny Dam EAP will be conducted prior to the end of this year.

#### Standing Operating Procedures

The Standing Operating Procedures (SOP) for Bonny Dam was republished in 2002. The Norton Dam SOP was republished in 2003. The SOP for Enders Dam is scheduled to be republished in 2003. The SOP's for Red Willow and Medicine Creek Dams are being updated and scheduled to be republished in 2003 or 2004.

# Sedimentation

A sedimentation re-survey was done for Keith Sebelius Lake in 2000 with new areacapacity data available in January 2002.

### Water Conservation

Increased emphasis is being placed on water conservation by Reclamation. A full time employee is available in the Area Office to work with the irrigation districts on their water conservation efforts.

Exhibit #1

#### Security

Security at all Reclamation dams has increased since September 11, 2001. We have installed or are installing security fencing around the critical facilities at nearly all of the NKAO dams and maintaining close communication with local law enforcement at all sites. A threat assessment leading to a risk analysis is underway on project dams. Once the risk analyses are complete, we will make structural and non-structural changes to ensure a proper level of security and safety.

# Hydromet

Installation of data collection equipment (DCPs) continues on all canal diversion points and other key locations within the Republican River Basin. DCPs have been installed at all canal sites in the basin with the exception of Courtland Canal, Mile 34.8. We intend to install data collection equipment at Courtland Canal, Mile 34.8 prior to the 2004 irrigation season. In cooperation with Nebraska Department of Natural Resources, five DCPs were installed in 2002 at key locations between Harlan County Dam and the Superior-Courtland Diversion Dam to improve stream flow monitoring and enhance project operations. Additional instrumentation equipment was added at the Superior-Courtland Diversion Dam in the spring of 2003 to monitor river flows passing through the sluice gates as well as the river flows passing over the control weir. Remote monitoring equipment has also been installed at several canal wasteways within the Basin.

Historical data collected by the DCPs as well as real time data during the operation season are available by accessing Reclamation Hydromet Data System through the Internet site (www.usbr.gov/gp).

TABLE 1
NEBRASKA-KANSAS PROJECTS
Summary of Precipitation, Reservoir Storage and Inflows
CALENDAR YEAR 2002

		Total	Percent Of	Storage	Storage	Gain or	Gain or Maximum	Storage	Minimum Storage		Total	Percent Of Most
		Precip.	Average	12-31-01	12-31-02	Loss	Content	Date	Content	Date	inflow	Probable
	Reservoir	Inches	%	AF	AF	AF	AF		AF		AF	%
	Box Butte	9.71	57	11,714	7,717	-3,997	17,976	MAY 31	3,652	AUG 21	15,715	84
	Merritt	15.50	77	68,288	68,560	272	74,781	MAY 30	28,415	SEP 6	181,594	99
	Calamus	15.63	66	108,704	103,572	-5,132	128,376	JUN 8	54,694	SEP 28	256,492	97
	Davis Creek	14.79	63	14,886	6,339	-8,547	30,840	JUN 24	5,732	SEP 10	46,265	117
	Bonny	9.17	53	23,290	18,952	-4,338	24,914	APR 16	18,952	DEC 30	6,996	42
	Enders	10.82	57	11,920	11,485	-435	15,148	JUN 5	10,216	AUG 21	7,432	35
5	Swanson	10.17	51	24,011	21,864	-2,147	33,509	MAY 8	19,511	AUG 26	17,491	28
	Hugh Butler	11.67	59	17,958	12,640	-5,318	20,737	JUN 4	10,986	AUG 8	10,980	60
	Harry Strunk	10.52	51	25,435	18,155	-7,280	36,541	JUN 7	12,101	AUG 21	29,038	74
	Keith Sebelius	12.13	49	20,600	13,510	-7,090	21,420	APR 12	13,249	OCT 22	5,751	83
	Harlan County	16.86	74	242,875	160,463	-82,412	277,515	JUN 16	160,363	OCT 22	60,094	38
	Lovewell	21.16	78	30,074	28,514	-1,560	43,606	JUN 13	13,254	AUG 22	57,158	81
	Kirwin	15.05	64	64,493	41,637	-22,856	68,480	APR 16	41,637	DEC 26	11,398	54
	Webster	17.47	. 74	56,258	35,497	-20,761	61,391	MAY 8	35,497	DEC 25	11,214	66
	Waconda	20.45	79	228,215	195,889	-32,326	229,065	JUN 1	194,048	OCT 1	63,467	46
	Cedar Bluff	13.38	63	169,853	145,890	-23,963	170,262	FEB 11	145,890	DEC 31	9,288	68

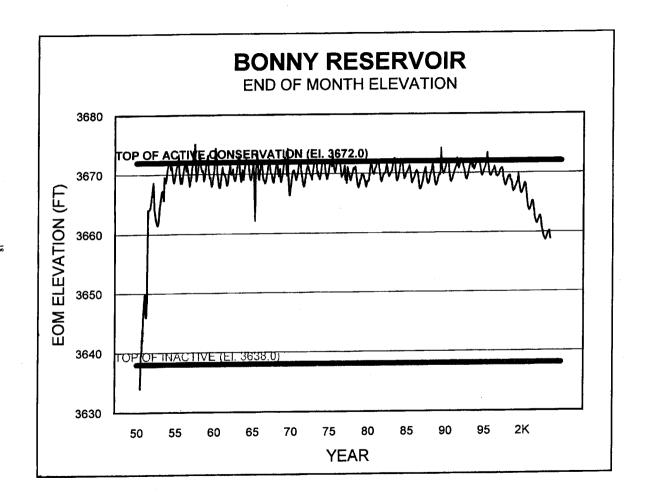
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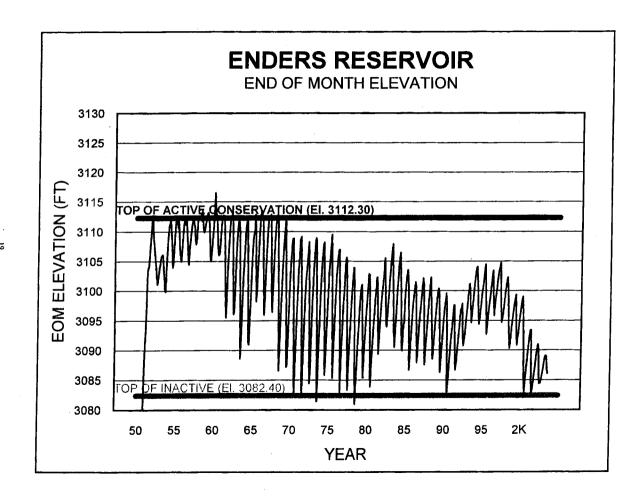
TABLE 2
NEBRASKA-KANSAS AREA OFFICE
Summary of Precipitation, Reservoir Storage and Inflows

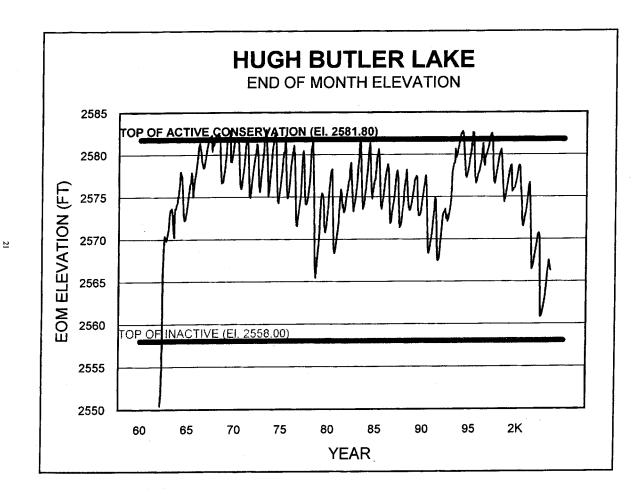
# JANUARY - JULY 2003

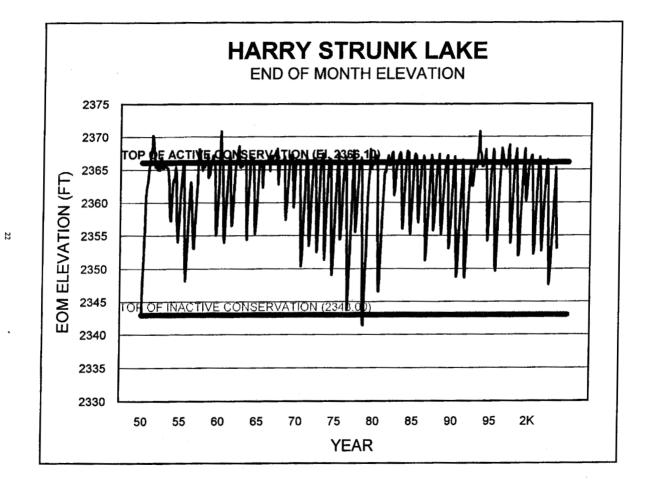
		Percent Of	Storage	Storage	Gain or		Percent Of Most
	Precip.	Average	7/31/2002	7/31/2003	Loss	Inflow	Probable
Reservoir	Inches	%	AF	AF	AF	AF	%
Bonny	16.15	137	21,636	19,952	(1,684)	6,792	62
Enders	12.59	97	10,250	11,913	1,663	4,469	38
Swanson	12.33	90	20,253	30,465	10,212	14,031	31
Hugh Butler	14.22	109	11,067	16,467	5,400	7,599	69
Harry Strunk	13.80	99	19,100	23,725	4,625	21,677	88
Keith Sebelius	16.32	100	15,793	11,296	(4,497)	3,971	75
Harlan County	12.14	80	195,947	142,202	(53,745)	33,633	30
Lovewell	19.86	116	19,237	28,255	9,018	31,147	74
Kirwin	10.83	71	51,821	31,926	(19,895)	6,152	34
Webster	11.19	72	44,604	25,804	(18,800)	4,332	28
Waconda	12.98	79	210,311	167,694	(42,617)	31,795	27
Cedar Bluff	12.96	92	158,774	140,377	(18,397)	9,574	113

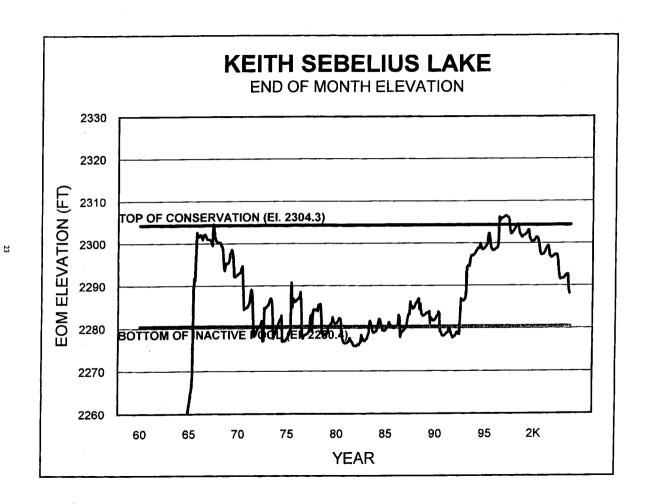
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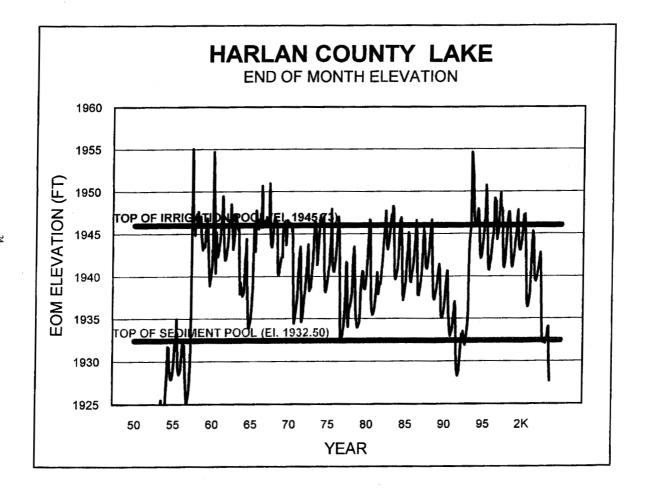


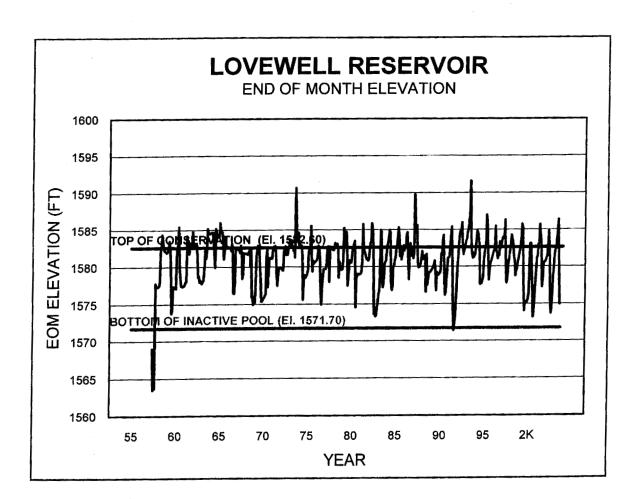












# REPUBLICAN RIVER COMPACT ADMINISTRATION U.S. Geological Survey Report Water Year 2002

The U.S. Geological Survey (USGS), Nebraska District, operates 14 real-time streamflow gaging stations in the Republican River Basin and supports the real-time transmission, review and publishing of data from 3 stations operated by the Nebraska Department of Natural Resources (DNR) (see attached table). Funding for 10 of the USGS stations comes from the National Streamflow Information Program (NSIP), into which the Federal Collection of Basic Records program has been incorporated. The U.S. Army Corps of Engineers (USACE) provides funding for 3 USGS stations and for another in conjunction with the DNR. The USGS receives funding from the USACE for operation of the real-time data transmission for the 3 stations operated by the DNR and for one of the NSIP stations. The U.S. Bureau of Reclamation provides the satellite data collection platform (DCP) in support of real-time data transmission for one of the stations. All funding received from DNR is matched by the USGS through its Cooperative funding program.

Real-time, recent, and historic published data on surface-water, ground-water, and water-quality for the Nation can be accessed online from the National Water Information System Web (NWISWeb) site along with daily, monthly, and annual streamflow statistics. Real-time data—up to 31days of unit values or 18 months of daily values—for Nebraska and nearby streamflow stations can also be accessed directly from the recently updated Nebraska District Web site.

http://waterdata.usgs.gov/nwis/ http://ne.water.usgs.gov/ NWISWeb site Nebraska District Web site

Before the data are finalized, updates and revisions are made as needed, based on a series of quality checks and reviews. Finalized values of daily discharge and summary statistics are published in the Survey's annual water-resources data report for Nebraska. Streamflow data for water year (WY) 2002 have been published for Nebraska, including the Republican River Basin stations. Beginning this year, and continuing into the future, the data report was primarily released as an online report. It, and those from other states, can be accessed at the Web site show below.

## http://water.usgs.gov/pubs/wdr/ USGS Water Data Reports

Mean stream flow for WY 2002 was well below normal for much of the basin. Only Courtland Canal had an annual mean flow greater than the long-term mean, and 14 of the 17 stations published by the USGS had flows less than 50 percent of the long term mean (see attached table). Record lows were set for 9 of the stations for the 2002 WY. For each of the 10 Compact stations operated by the USGS, four sets of charts and tables (one for each State and one for the record) were prepared that present the flows for WY 2002 in comparison to historic flows. These include (1) a chart comparing WY 2002 daily flows to the historic day-of-year maximum, median, and minimum flows, (2) a chart comparing WY 2002 daily flows to the historic high and low WYs, (3) a table of data for the daily flow charts, (4) a bar chart of the annual mean flows for complete WYs for the period of record, and (5) a table of data for the annual mean flow chart. The daily flow charts were scaled primarily for the WY 2002 data. Therefore, because of the generally low flows for WY 2002, many of the historic high flows do not show on the charts.

Phil Soenksen USGS, Nebraska District August 21, 2003

#### RESOLUTION

BE IT RESOLVED that the Republican River Compact Administration (RRCA) hereby repeals rules and regulations of the RRCA adopted July 15, 1959, as amended; the RRCA Formulas for the Computation of Annual Virgin Water Supply adopted April 4, 1961, as amended; and the Formulas for the Computation of Annual Consumptive Use, adopted April 27, 1964, as amended.

BE IT FURTHER RESOLVED that the RRCA hereby adopts the attached Rules and Regulations of the Republican River Compact Administration, dated August 22, 2003.

BE IT FURTHER RESOLVED that the RRCA hereby adopts the RRCA Groundwater Model, dated July 1, 2003; as approved by the parties and filed in the case of Kansas v. Nebraska and Colorado, No. 126, Original, in the Supreme Court of the United States.

BE IT FURTHER RESOLVED that the RRCA hereby adopts the RRCA Accounting

Procedures and Reporting Requirements, which are contained in Appendix C of the Final

Settlement Stipulation, dated December 15, 2002, filed in the case of Kansas v. Nebraska and

Colorado, No. 126, Original, in the Supreme Court of the United States.

Adopted by the Republican River Compact Administration this 22nd day of August, 2003

Roger K. Patterson

Chair, Republican River Compact Administration

Member for Nebreska

David L. Pope

Member for Kansas

Hal D. Simpson

Member for Colorado
Exhibit #3

# **Rules and Regulations**

### Republican River Compact Administration

#### August 22, 2003

- 1. Pursuant to Article IX of the Republican River Compact (Compact), the states of Colorado, Nebraska and Kansas have the duty to administer the Compact through the officials in those states who are now or may hereafter be charged with the duty of administering the public water supplies in those states. Such officials shall be the members of an administrative body hereby designated as the "Republican River Compact Administration" (RRCA). The purposes of the RRCA shall be to administer the Compact, such administration to include but not be limited to the responsibilities as are assigned to it in the Final Settlement Stipulation dated December 15, 2002, approved by the states and filed in the case of Kansas v. Nebraska and Colorado, No.126, Original, in the Supreme Court of the United States.
- 2. As of the effective date of these regulations, the officials who are charged with the duty of administering the public water supplies in the three states, and who therefore constitute the members¹ are the individuals who hold the following offices: the State Engineer of the Division of Water Resources of the Colorado Department of Natural Resources; the Director of Natural Resources for the State of Nebraska; and the Chief Engineer of the Division of Water Resources of the Kansas Department of Agriculture.

<sup>&</sup>lt;sup>1</sup> Reference in RRCA records to Commissioner(s) refers to the members as described in these Rules and Regulations of the RRCA.

- Each RRCA member's term shall run concurrent with his or her term of
  office as the official charged with administering the public water supplies in his or her
  state.
- 4. Each state official shall be recognized as a member of the RRCA upon furnishing to the other members satisfactory evidence that he or she is the official in his or her state charged with the duty of administering the public water supplies in that state.
- 5. A member of the RRCA may appoint an alternate member to serve in his/her place. In the event any member is unable to perform his/her official duties, the appointing authority of the state represented by that member may appoint the member's alternate to serve in his/her place. Any such alternate shall be recognized as that state's representative to the RRCA upon presentation to the members from the other states of a written appointment letter signed by the absent member, or, as applicable, by the appointing authority of the state involved. An appointment of an alternate shall be valid only for the period of the appointment.
- 6. The chair of the RRCA shall be a member of the RRCA. Each chair shall serve for two annual meetings. The chair's term shall begin upon the conclusion of the last meeting chaired by the previous chair and shall expire at the conclusion of the second annual meeting at which he or she serves as chair. Unless otherwise agreed by the members, the rotation of the chair shall be by state in the following order beginning at the

conclusion of the annual meeting in 2003: Colorado, Kansas and Nebraska.

7. The chair, or his/her alternate, shall preside at all meetings of the RRCA. The chair may initiate or second motions and vote on all matters coming before the RRCA. The chair shall issue notice of all meetings to all members as to the time, place, and agenda of the meeting at least 15 days in advance of any regular meeting, unless otherwise agreed by the members, and as soon as possible prior to any special meeting. Any issue to be raised for dispute resolution at a regular meeting pursuant to paragraph 15 of these regulations shall be distributed to the members at least 30 days in advance of the regular meeting. The agenda shall include all items for which timely requests for inclusion on the agenda are made by a member. The chair or other person designated by the RRCA shall also keep a record of the proceedings, including official meeting minutes, of all meetings and of all transactions of the RRCA during his or her term of office. Record of proceeding shall include: minutes; Annual Report; reports required by the Final Settlement Stipulation; committee and subcommittee reports; the data, computations and results required in the Accounting Procedures; and such other matters as deemed appropriate by the RRCA. Meeting minutes will not be official until approved by the RRCA. Unless otherwise agreed to by all the members of the RRCA, the chair shall be responsible for the preparation of an electronic recording of each meeting, unless a member requests, in advance, a transcript of each meeting. The chair will be responsible for providing a copy of the record of proceedings for that year. The RRCA, through the chair, will maintain an official repository of record of proceedings.

- 8. The RRCA hereby creates a standing Engineering Committee which shall be composed of one representative from each state appointed by the RRCA member from that state. The RRCA may create other standing or special committees composed of the members of the RRCA and/or other persons appointed by the members. The RRCA may assign to such committees any tasks that it determines to be appropriate.
- 9. The RRCA shall hold a regular annual meeting prior to August 1<sup>st</sup> each year; however, the chair may waive an annual meeting, or hold the meeting at a later date, upon the unanimous written consent of the members. The annual meeting shall be held at a location in the chair's state at a time and place acceptable to the other members.
- 10. The RRCA shall hold a special meeting, other than a meeting to address a "fast track issue" as provided for in the Final Settlement Stipulation Section VII, upon written request of any member and with the concurrence of the other two members. The chair of the RRCA shall poll all of the members prior to setting the meeting date, time, and place of a specially scheduled meeting. All members shall make a good faith effort to arrange a mutually agreeable date, time, and place for all meetings.
- 11. A quorum for a RRCA meeting shall be present only when all of the state members or their duly appointed alternates are in attendance. Action may be taken by the RRCA only by unanimous vote of all members or duly appointed alternates. Each state shall have one vote. Each action of the RRCA shall be documented by formal written resolution or shall be recorded in the approved minutes. A request by any member or duly

appointed alternate that action on any matter be by formal resolution shall be honored.

- 12. The RRCA shall prepare and approve an annual report that includes: the official actions taken by the RRCA at the annual meeting and at any specially scheduled meetings; a summary of the compact accounting for the previous year; and such other matters as may be deemed appropriate by consensus of the members. Copies of the report shall be furnished to the President of the United States; the Governors of the States of Colorado, Nebraska and Kansas; and the officials of appropriate state and federal agencies and any other person, as determined appropriate by the RRCA.
- 13. Amendments, revisions, deletions, or additions to these rules and regulations may be made at any meeting of the RRCA. Unless otherwise agreed to by all the members, written notice and a copy of any proposed change must be sent to all members by the member proposing the change at least 15 days in advance of any meeting at which such changes are to be considered. Modifications of any such proposed changes may be offered by any member at any time prior to action on those proposed changes.
- 14. Compact accounting and data exchanges among the states shall be done annually in accordance the Final Settlement Stipulation, dated December 15, 2002, including the RRCA Accounting Procedures and Reporting Requirements, which are contained in Appendix C thereof; and the Republican River Compact Administration Groundwater Model, dated July 1, 2003; as approved by the parties and filed in the case of Kansas v. Nebraska and Colorado, No. 126, Original, in the Supreme Court of the United

States. Unless otherwise agreed to by the RRCA members, the annual accounting shall be completed by the Engineering Committee and submitted to the RRCA no later than June Ist of the year following the year for which the accounting is being done. The RRCA may modify the RRCA Accounting Procedures and Reporting Requirements and the RRCA Groundwater Model by amending these regulations. At the time of any modification, the RRCA shall specify the time and method for implementation of each modification.

15.	Any dispute arising among the states shall be resolved in ac	cordance with
the procedures	set forth in Article VII of the Final Settlement Stipulation, da	ted December
15, 2002, appro	oved by the states and filed in the case of Kansas v. Nebraska	and
Colorado, No.	126, Original, in the Supreme Court of the United States.	
Adopted by the	e Republican River Compact Administration this day of	of August
2003.		•
		•
	Roger Patterson	
	Chair	
	Republican River Compact Administration	
	Member for Nebraska	

David Pope

Member for Kansas

Hal Simpson

Member for Colorado

# Resolution of the Republican River Compact Administration August 22, 2003

In recognition of his many years of dedication and professional service to the Republican River compact Administration as an Engineer Adviser to the State of Colorado;

The Republican River Compact Administration hereby recognizes the contributions and expertise provided by Mr. Richard Stenzel;

Therefore, be it resolved, the Republican River Compact Administration extends its sincere appreciation to Mr. Stenzel for his efforts.

Hal D. Simpson

Commissioner for Colorado

Roger K. Patterson

Commissioner for Nebraska

David L. Pope

Commissioner for Kansas