

Non-Binding Arbitration Initiated 10/21/08
Pursuant to
Decree of May 19, 2003, 538 U.S. 720
Kansas v. Nebraska & Colorado
No. 126, Orig., U.S. Supreme Court

ENSURING FUTURE COMPLIANCE BY NEBRASKA

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I. Introduction.

This report is submitted in the context of the claim being made by the State of Kansas against the State of Nebraska for violation of the Supreme Court's Decree of May 19, 2003. That claim was set out in my December 19, 2007 letter attached to the Republican River Compact Administration Resolution of May 16, 2008, and may be restated as follows:

Kansas respectfully requests entry of a Supreme Court Order:

1. Holding Nebraska in civil contempt for violation of the Court's Decree for Water-Short Year 2006;
2. Requiring Nebraska to pay damages plus costs, interest and attorney fees
3. Requiring Nebraska to immediately (a) shut down wells and groundwater irrigation in Nebraska within 2 ½ miles of the Republican River and its tributaries, (b) shut down groundwater irrigation of acreage added after the year 2000 throughout the Republican River Basin in Nebraska, and (c) make further reductions of Nebraska's Computed Beneficial Consumptive Use (CBCU) as are necessary to maintain yearly compliance, especially in Water-Short Year Administration years; or to order an alternative remedy that ensures annual compliance with the Court's Decree;
4. Requiring Nebraska to further reduce Nebraska's CBCU to the extent necessary to keep Nebraska within its Compact allocation until the effects of the reduction of groundwater pumping brings Nebraska into compliance with the Court's Decree;
5. Appointing a river master to administer Decree compliance on an annual basis until such time as Nebraska can demonstrate an independent ability to achieve compliance;
6. Establishing sanctions for future violations of the Decree.

This report consists of two sections: The first section describes the context and history related to Nebraska's violations; the second section discusses the remedies for future compliance proposed by Kansas and Nebraska.

II. Nebraska's longstanding noncompliance with the Compact and the FSS.

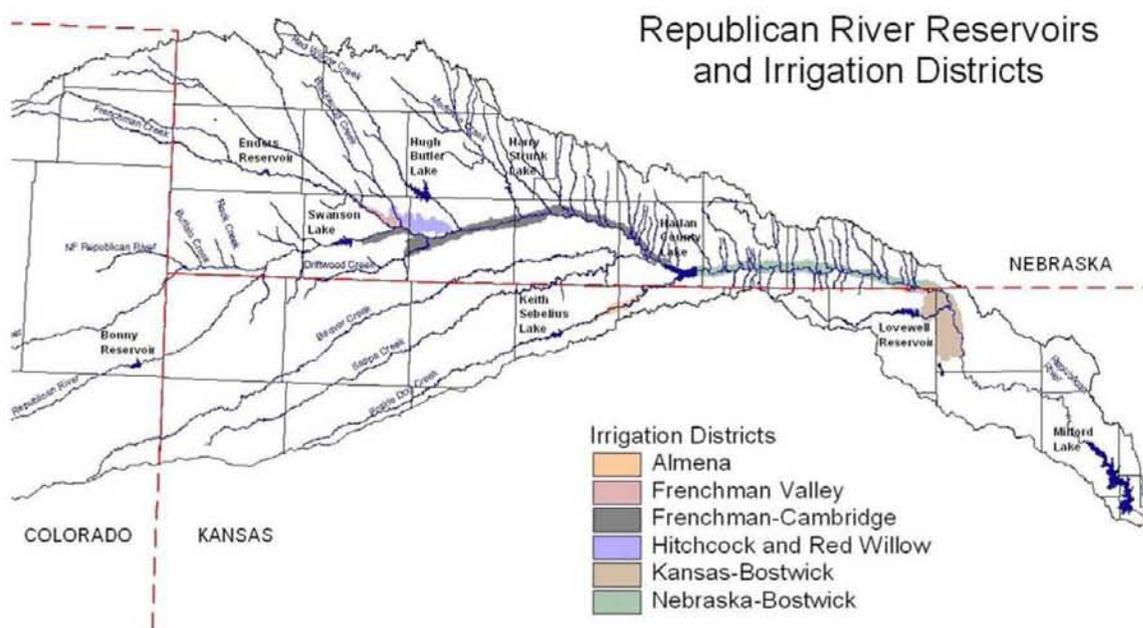
The Compact became effective in 1943, among the States of Kansas, Nebraska, and Colorado. It equitably divides all of the waters of the Republican River Basin ("Basin") among those States. If any state exceeds its allocations, such noncompliance will result in less water supply flowing downstream. The United States Supreme Court has made it clear that the apportionment of water pursuant to an interstate water compact "is binding upon the citizens of

each State and all water claimants, even where the State had granted the water rights before it entered into a compact.” *Hinderlider v. La Plata River & Cherry Creek Ditch Co.*, 304 U.S. 92, 102 (1938). The obligations of *Hinderlider* were well known at the time of the Compact negotiations; indeed, M.C. Hinderlider himself represented the State of Colorado at those negotiations.

The Compact predates the two significant developments in the post-New Deal history of water supply management in the American West: the rise of federal water supply infrastructure in the West, and the rise to dominance of center-pivot groundwater irrigation. Nonetheless, these critical developments have not altered the States’ obligations under the Compact.

After the ratification of the Compact by the States and Federal government, much of the planned federal system of reservoirs and irrigation districts was developed (see Figure 1 below). The need to protect the federal government’s investments in water-supply infrastructure was a principal reason behind the Compact. *See* Statement of Mr. Robert D. Kutz, Project Manager for the Bureau of Reclamation (“Bureau”), 29th Annual Report of the RRCA, p. 14 (1989). Indeed, the Compact explicitly provides that federal surface water development in each State be charged to that state’s respective allocation. Compact, Art. XI (a).

Figure 1:
Republican River Reservoirs and Irrigation Districts



While the limited groundwater use at the time of Compact negotiations was included in the determination of the original virgin water supply, and its use was a part of the allocations, the extent of groundwater development was not fully anticipated. Shortly after the signing of the Compact, center-pivot groundwater irrigation was invented in the Basin: Frank Zyback, a native of Columbus, Nebraska, installed his first systems near Strasburg, Colorado, during the late 1940’s. The Court has made it clear that groundwater is part of the “Virgin Water Supply” of the Basin, insofar as it contributes to streamflows. FSS, Section II, *Kansas v. Nebraska and*

Colorado, No. 126 Orig., FINAL SETTLEMENT STIPULATION I.9 (December 15, 2002). The Compact clearly placed the burden on each State to limit its consumptive use to its Compact allocation, regardless of whether the consumptive use derived from surface waters or groundwater which contributed to surface water flows.

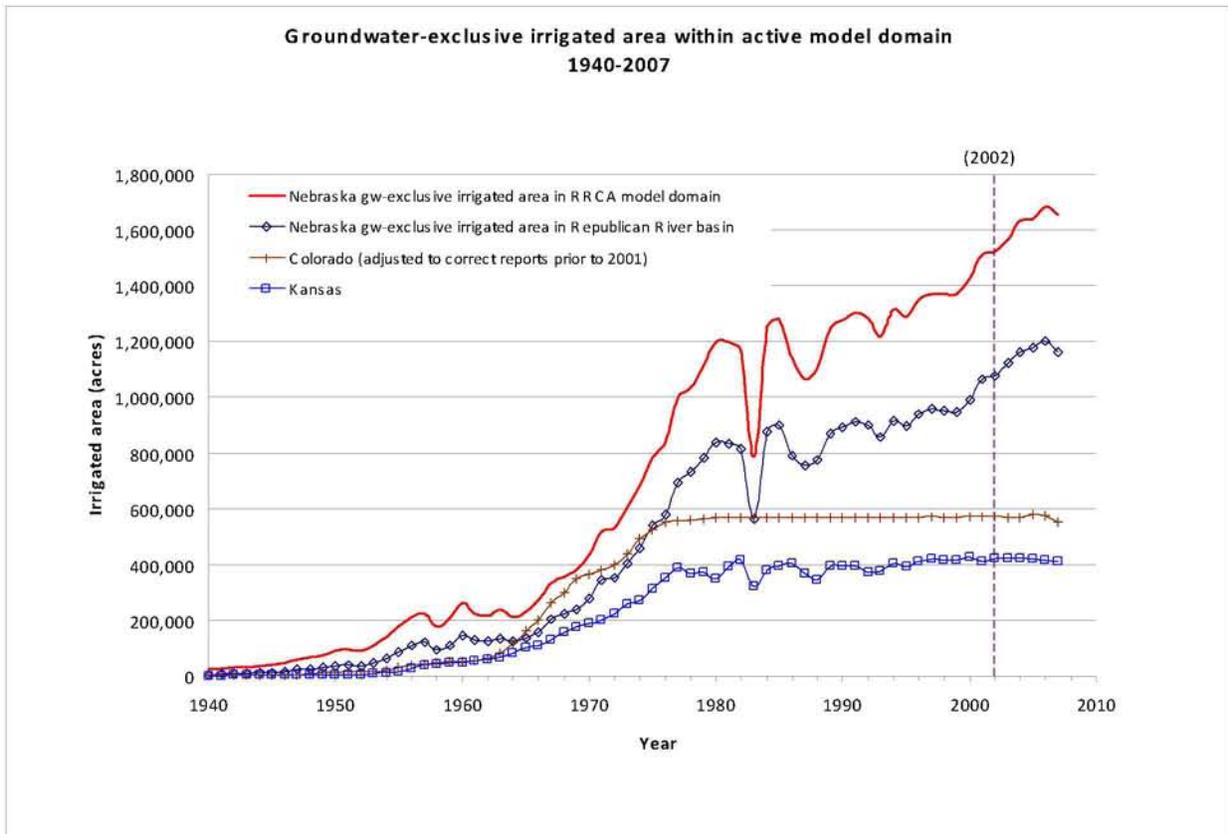
a. Nebraska's noncompliance with the Compact, 1970-1998.

The effects of excessive groundwater pumping became evident in the Basin during the 1970's in declining groundwater levels and, in many cases, declining streamflows derived from groundwater outflows. Colorado and Kansas responded to this problem; with the exception of three counties, Nebraska did not. In 1979 Colorado effectively closed its portion of the Basin to new groundwater development. Kansas began significant restrictions in 1979, and closed most of its part of the basin in northwest Kansas to new surface water and alluvial groundwater development in 1984. Thus by the late 1970's, both Colorado and Kansas stopped increasing groundwater development in their respective portions of the Republican River Model Domain, limiting the number of active groundwater wells to approximately 4,000 wells in each state. By contrast, Nebraska allowed groundwater development to continue virtually unimpeded. By contrast, the cumulative number of active wells in the Model Domain in Nebraska increased by about 50 percent, from approximately 12,000 active wells in 1976 to over 18,000 wells in 2000. *Kansas v. Nebraska and Colorado*, No. 126 Orig., FINAL REPORT OF THE SPECIAL MASTER WITH CERTIFICATE OF ADOPTION OF RRCA GROUNDWATER MODEL, p. 18 (September 17, 2003).

In Nebraska groundwater development is controlled by its Natural Resource Districts ("NRD's"), which are political subdivisions separate from the Nebraska Department of Natural Resources ("DNR"). A state can delegate authority, but it cannot delegate responsibility; and the Republican River NRD's did little to reduce excessive groundwater development. Prior to the adoption of the FSS, only the Upper Republican NRD had significant limits on new groundwater development. It implemented a Groundwater Management Area in 1978. The Middle and Lower Republican River NRD's failed to restrict any groundwater development until the end of 2002, implementing a moratorium on new wells required by the Settlement. As further discussed below, even after 2002, the NRD's allowed substantial increases in irrigated acreage.

These facts are reflected in Figure 2, which shows groundwater irrigated area within the Basin by year as estimated by the states in development of the RRCA groundwater model (Model) through the year 2000, and as subsequently prepared by the states as input to the Model for the RRCA annual accounting. Lands irrigated by a combination of groundwater and surface water, or "commingled lands," are excluded. Figure 2 confirms the data presented in the Special Master's Final Report. From the late 1970's to the present, Colorado has maintained a limit of 600,000 acres irrigated solely by groundwater within the Model Domain, and Kansas has maintained a limit of just over 400,000 acres. Yet over the same period, the amount of groundwater-exclusive acreage in Nebraska's portion of the Model Domain has nearly doubled, from 800,000 acres to 1.6 million acres. (The aberrant and large decline in irrigated acres in 1983 was most likely due to the federal PIK program of that year). A substantial portion of this increase has taken place since the FSS was executed in 2002. Despite the FSS, both the State of Nebraska and its NRD's have abdicated their duties to limit the expansion of groundwater development in the Basin.

**Figure 2:
Groundwater-exclusive irrigated area within the Republican River active model domain,
1940-2007**



The accountings of allocation and use by the Republican River Compact Administration (RRCA) began in 1959. Nebraska first overused its statewide allocation in 1967; it overused its statewide allocation by almost 100,000 acre-feet (AF) in 1976, and did the same by over 60,000 AF in 1978. *See* Attachment 1, “Nebraska statewide allocation minus its consumptive use, 1959 - 1994.”

As a result, in the late 1970’s Kansas began to raise its concerns about Nebraska’s overuse to the RRCA. Beginning in 1985, Kansas began its diligent efforts to address this concern through the RRCA. David Pope, the Chief Engineer for Kansas DWR, repeatedly and consistently made his concerns about Nebraska’s noncompliance known to the RRCA at its annual and special meetings. Kansas had expressed these concerns since the 1970’s, but the continuing over-development of groundwater in the Nebraska portion of the Basin made these concerns increasingly more intense. RRCA, 32nd Annual Report, for Compact Year 1991, pp. 8-9 (1992).

- At the Special Meeting of the RRCA on February 7, 1986, Pope expressed his concern that over-pumping would allow “over development of a basin that could result in a reduction of streamflow in dry years.” RRCA, 26th Annual report, for Compact Year 1985, p. 11 (1986).
- The following year, Pope repeated his concerns “about long term depletions that are occurring in the Republican River Basin . . . and, how to deal with the present situation of consumptive uses exceeding adjusted allocations” RRCA, 28th Annual Report, for Compact Year 1987, p. 12 (1988).
- In 1989, In 1989 Kansas proposed a specific solution to the problem of groundwater over-development, which failed by a vote of 2 to 1, with Nebraska voting no. RRCA, 33rd Annual Report, for Compact Year 1992, p. 20 (1993).
- By 1990, Pope noted that both Kansas and Colorado had “taken definite action” to limit groundwater development, but that Nebraska “had not done so, noting few restrictions on well development in over-allocated areas.” RRCA, 30th Annual Report, for Compact Year 1989, p. 12 (1990).

By 1991, Pope had begun to notify Nebraska of its noncompliance under the Compact, noncompliance caused due to “Nebraska’s combined surface and ground water consumptive uses being above their adjusted allocations.” Such overuse upstream by Nebraska was, in Pope’s word, “intolerable,” leading Pope to officially request Nebraska “to take the appropriate administrative actions necessary to get within their compact allocations.” RRCA, 32nd Annual Report, for Compact Year 1991, pp. 10, 9 (1992). Consequently, Pope

made a motion that the compact administration ask each of the states to take whatever measures are necessary to stay within their annual adjusted allocations of beneficial consumptive use of the water of the Republican River. “ Pope stated that “the intent was to show the administration was in agreement and to provide additional emphasis for dealing with the issue. Kansas voted yes, Nebraska voted no, Colorado voted yes; the motion failed.

Id. at 10. In 1992, Nebraska provided a defense of sorts—that Kansas’s allocation was higher than Kansas’s use. Such a defense belied the reality of Nebraska’s depletions. As Pope stated,

the Compact records show that the amount of over-use in Nebraska translates roughly into the amount of shortage being experienced by the Kansas-Bostwick irrigation project in the years, 1989, 1990, and 1991. These depletions upstream directly translate into water that is not available to Kansas.”

RRCA, 33rd Annual Report, for Compact Year 1992, p. 21 (1993). By the mid-1990’s, Kansas was reporting significant shortages within the lower part of the Basin, shortages “aggravated by Nebraska’s over-use of her allocations” RRCA, 35th Annual Report, for Compact Year 1994, p. 19 (1995).

Thus, for more than two decades, Kansas has been diligently asking Nebraska to limit its groundwater development and use, so that Kansas could receive its legal entitlement under the Compact to the waters of the Basin; but Nebraska has failed to do so. Kansas worked with the

RRCA to study the matter, and offered resolutions to address the issue. After reaching an impasse in 1995, Kansas and Nebraska entered into intense, facilitated negotiations to resolve the matter. The two states reached a preliminary option for settlement, but Basin's water users in Nebraska rejected that option. As a result, these negotiations ended in early 1997, setting the stage for *Kansas v. Nebraska and Colorado*, No. 126 Orig., which formally began in 1998.

b. The Bureau's Concerns with Nebraska's overpumping, 1984-1998.

The Bureau of Reclamation (Bureau) is a pivotal partner in the administration of the water supplies of the Basin. From at least the mid-1980's onward, Bureau personnel within the Basin have expressed their concerns about Nebraska's excessive groundwater development. Mr. Kutz, area manager for the Bureau's Nebraska-Kansas Area Projects Office, consistently warned the Compact Administration about the harmful effects of excessive groundwater pumping in Nebraska. He stressed that "the Compact was initiated at the Bureau's insistence to protect its investments" 29th Annual Report of the RRCA, p. 14 (1989). Independently of Kansas, the Bureau had become concerned with the effects of Nebraska's pumping on Bureau reservoirs. In 1983, Mr. Kutz reported to the RRCA that "the Middle NRD has completed ground water model studies of the Republican Basin. The studies indicate that base flows will be depleted in some streams by the year 2000 unless the continuation of ground water development in Red Willow and Medicine Creek basins is stopped." 24th Annual Report of the RRCA, p. 5 (1984). Five years later, Mr. Kutz "agreed a good faith effort to curtail allocations on over-appropriated basins was necessary." 29th Annual Report of the RRCA, p. 14 (1989).

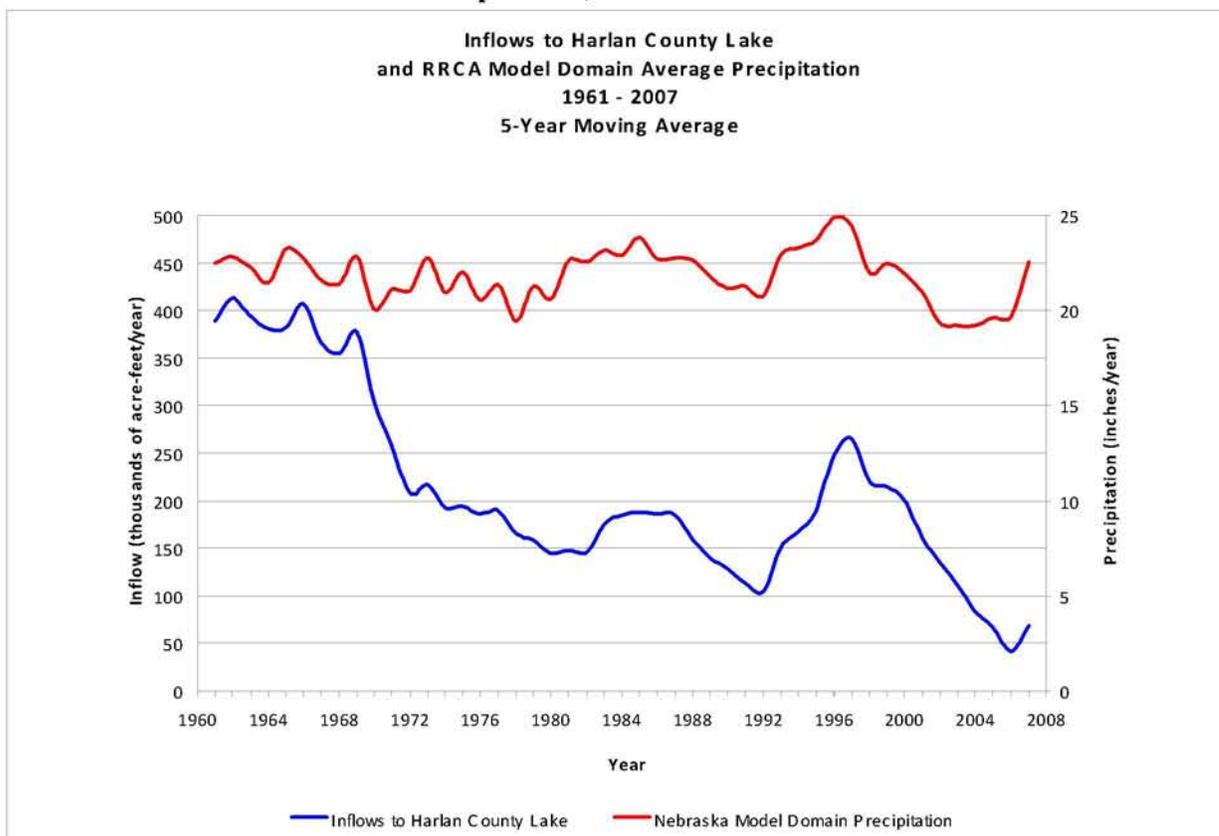
Nonetheless, groundwater development continued unabated in Nebraska. In 1990, Mr. Kutz reported Bureau findings on the decreased inflows into Harlan County Lake. "A graph showing the Harlan County Reservoir inflows on a 10 year running average basis was shown to the Commissioners. The Bureau attributed early initial declines in inflow to development of upstream federal projects in the basin. Later period declines were attributed to an increase in groundwater development. Water conservation practices were not believed to be a major contributor to the declines" 31st Annual Report of the RRCA, p.6 (1991). Two years later, Mr. Kutz handed out 10-year moving averages of the inflow to all the Bureau reservoirs in the Republican Basin; these averages showed a significant decrease in average inflow. 33rd Annual Report of the RRCA, p. 12 (1993). Based on this pattern of declines, Mr. Kutz concluded that "decreased precipitation is not the overriding significant factor in determining loss of streamflow, although there may be significant changes or trends in true precipitation at a specific gaging station." 34th Annual Report of the RRCA, p. 17 (1994). "[P]recipitation may have a small effect upon the decline in streamflow, but that it does not explain the 66% decline in streamflow." 34th Annual Report of the RRCA, p. 18 (1994).

Long before Kansas filed suit, the Bureau had clearly articulated the two principal ways in which Nebraska threatened the water supply of the Basin: Nebraska was not limiting groundwater development, and it lacked the laws to do so. Consequently, streamflows throughout the Basin were declining, threatening the viability of Bureau reservoirs. "According to a recent report filed by the Bureau . . . 'due to extensive groundwater pumping above the reservoir [Enders], the inflow (2003) was only 10 percent of the average preconstruction flow of the Enders Dam site.'" "Low Streamflows threaten Rock Creek Hatchery," MCCOOK DAILY

GAZETTE, February 25, 2005, *available at* <http://www.mccookgazette.com/story/1089652.html> (last accessed January 20, 2009). Indeed, Darrol Eichner, a Nebraska Game and Parks Fisheries Supervisor, warned that low streamflows and ensuing fish kills were “likely to continue as a result of groundwater depletion.” *Id.*

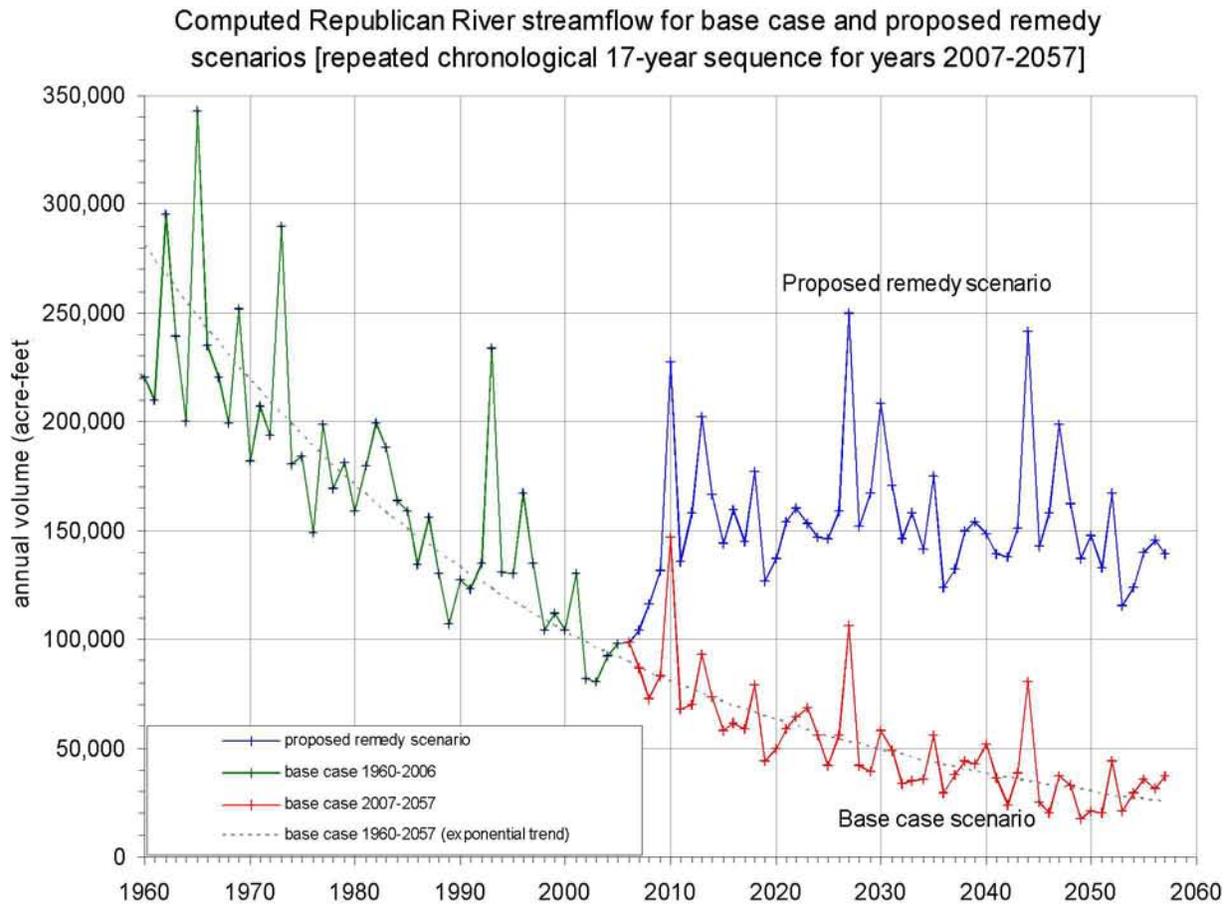
Figure 3 shows an extended set of the type of data which Mr. Kutz was showing to the RRCA during the 1980’s and 1990’s. Figure 3 represents the inflows to Harlan County Lake, which is the major source of supply for the Nebraska and Kansas Bostwick Irrigation Districts, between 1940 and 2007, together with precipitation levels in the Nebraska portion of the Republican River model domain over the same period.

**Figure 3:
Inflows to Harlan County Lake and Nebraska RRCA Model Domain Average
Precipitation, 1961-2007**



While land use practices have been a part of this decline as well in reducing runoff, groundwater pumping impacts have been a major contributor in reducing baseflow and are esp. significant during critical dry periods when they are the dominant part of the supply. Baseflows computed by the RRCA groundwater model through 2007, as well as future projections developed by Kansas experts and documented in Attachment 5 to my December 19, 2007 letter to Nebraska, are shown in Figure 4 below.

Figure 4:
Computed Republican River streamflow for base case and proposed remedy scenarios



c. Impacts to Kansas prior to the litigation, 1988-1993.

With reduced inflows into Harlan County Lake, the Kansas Bostwick Irrigation District has been significantly impacted. This impacts did not start with the most recent drought but were also significant during 1990-93, another period when Nebraska use exceeded its adjusted allocations as computed by the RRCA under its methods of that time (see Attachment 1)

In, for example, the Kansas Bostwick Irrigation District Annual Report for 2007, attached as Attachment 2, there is a table entitled “Information From Crop Census” that provides for annual values of classified acres, irrigated acres, AF delivered and inches/acre for years 1958 to 2000. The table also indicates the years of short supply and which started with restrictions in deliveries. It shows that each years from 1989 to 1993 were either short of supply or started with restrictions as well as significant reductions acres served and deliveries, especially in 1991 and 1992.

d. The Final Settlement Stipulation.

For more than a decade the RRCA failed to address Kansas's consistently expressed concerns regarding Nebraska's over-development and excessive use of its allocation and despite the facilitated negotiations between the two states. Consequently, in 1998 Kansas filed suit against Nebraska, and Colorado was joined as a necessary party. During the five years of litigation, Nebraska continued to allow groundwater development to increase. After the Special Master issued preliminary rulings which required that the effects of groundwater pumping be included in determining the States' allocations under the Compact, the states began settlement discussions. Those discussions culminated with the execution of the FSS on December 15, 2002, with the federal government's concurrence. *Kansas v. Nebraska and Colorado*, No. 126 Orig., FINAL SETTLEMENT STIPULATION, 42 (December 15, 2002).

This arbitration is focusing largely upon the FSS, its RRCA groundwater model, its Accounting Procedures, and the competing legal interpretations concerning these documents which the States have put forth in their briefs. As the interstate water issues specialist for Kansas who participated in those negotiations, and as a professional engineer who participated in the creation of the FSS, the model and the accounting procedures, I find the dispute over them to be particularly exasperating. The FSS was skillfully negotiated; its provisions, accounting procedures and groundwater model were developed based on extensive data; and it employs the highest level of analytical and modeling expertise. To assert otherwise is to fundamentally distort both the historical record and the engineering labor and expertise which produced the FSS, the Model, and the Accounting Procedures.

The final settlement stipulation was skillfully negotiated by chief engineers of great experience: Hal Simpson of Colorado, David Pope of Kansas, and Roger Patterson of Nebraska. They, along with their capable staff, their experienced water lawyers and their respective attorneys general, and their data experts and expert groundwater modelers worked tirelessly, yet carefully and deliberately, to develop the FSS. The federal government, including its own technical staff and legal counsel, also participated throughout the process. The negotiations began in October 2001. After 6 months of intense negotiations, a framework for the settlement was developed and agreed to by the states in April 2002. The states then took an additional eight months to add the significant detail found in the FSS and its appendices. Between their years of working together through the RRCA and the extensive information produced during the lawsuit's discovery period, the States had extensive data to draw upon, as well as the assistance of the federal government.

The FSS includes the Accounting Procedures and the Reporting Requirements. Taken as a coherent whole, it is a carefully produced, thoroughly examined, and flexible document. It provides clear standards for determining Compact compliance; yet it also provides for the implementation of the Compact in a manner that maximizes the benefit and flexibility for each State. The FSS performs this dual function through a series of carefully crafted balances. It provides extensive but limited sub-basin flexibility. It balances five-year compliance periods during normal periods and two-year compliance periods during critical water short years. The tests for water-short years ensure that downstream states have access to their lawful allocation of water during the most crucial water-short periods. The Accounting Procedures and the Groundwater Model quantify groundwater depletions and provide the State of Nebraska with

credits for clearly demonstrated imported water supply from the Platte River Basin to the Republican River. Finally, the FSS allows each state to develop its own data, while simultaneously allowing for the States to exchange underlying data.

Like the FSS, the RRCA groundwater model is the product of long-term cooperation among experienced engineers, as well as some of the finest groundwater modelers in the nation as well as experts in data analysis and representatives of the states. The Technical Groundwater Modeling Committee was formed in the Spring of 2002. Its membership included modelers Willem Schreuder, Michael McDonald, Dan Morrissey, Chuck Spalding and Steve Larson, state officials Ken Knox, David Barfield, and Ann Bleed, as well as Alan Burns and Mark Phillips for the United States.

As its starting point, the committee reviewed and adopted the model grid and data sets from the United States Geological Survey's multi-year, \$1 million effort to model the entire Basin. The modeling committee then worked extensively through December 2002 to further develop the groundwater model and to provide estimates of groundwater depletions for purposes of the broader negotiations. A model report was attached to the FSS agreement in December 2002, in which the States agree on calibration targets and model fundamentals. The committee continued its work over the following six months to improve the model's functions and calibration. The final model was completed on June 30, 2003 with agreement of all the states. Even since the Model's initial adoption by the RRCA, minor errors have been fixed, and its implementation improved through action of the RRCA.

The FSS, its model, and its accounting procedures received praise from both the Special Master and the States. The Honorable Vincent L. McKusick, the Special Master in *Kansas v. Nebraska and Colorado*, praised the FSS as a document that was fully compatible with the Compact.

I am fully satisfied that in framing the Final Settlement Stipulation the party States have stayed within the boundaries of the Compact and that their settlement is in all respects compatible with the controlling provisions and purposes of the Compact.

Second Report of the Special Master, pp. 2-3. McKusick's approval was shared by Mr. David Cookson, Counsel of Record for Nebraska. Cookson praised both the settlement process and the FSS in his statements before the Special Master.

[T]he added benefit [of the settlement process]...is we have added on significant parts to this settlement that weren't part of our initial controversy but will allow this process to work in the manner that was envisioned in 1943...[W]e have created an interwoven product that...not only is consistent with the terms of the Compact but provides a meaningful way for us to get along in the future and administer the Compact in a way that's beneficial to all three States.

Id., p. 30, n. 51. Cookson's testimony before the Special Master provides a clear picture of how Nebraska understood the FSS—as an agreed-upon compromise which was fully consistent with the Compact, and which dealt with the States' obligations in a clear and flexible manner.

In terms of an annual or even an averaged annual Compact allocation from Kansas's perspective, they're really interested in water being available when they [need] it.

What we tried to address here was a practical solution within the general principles of the Compact, without being inconsistent with its terms, such that we could address their practical concerns in a way that didn't, in the other States' view, unduly burden us with non-Compact [obligations].

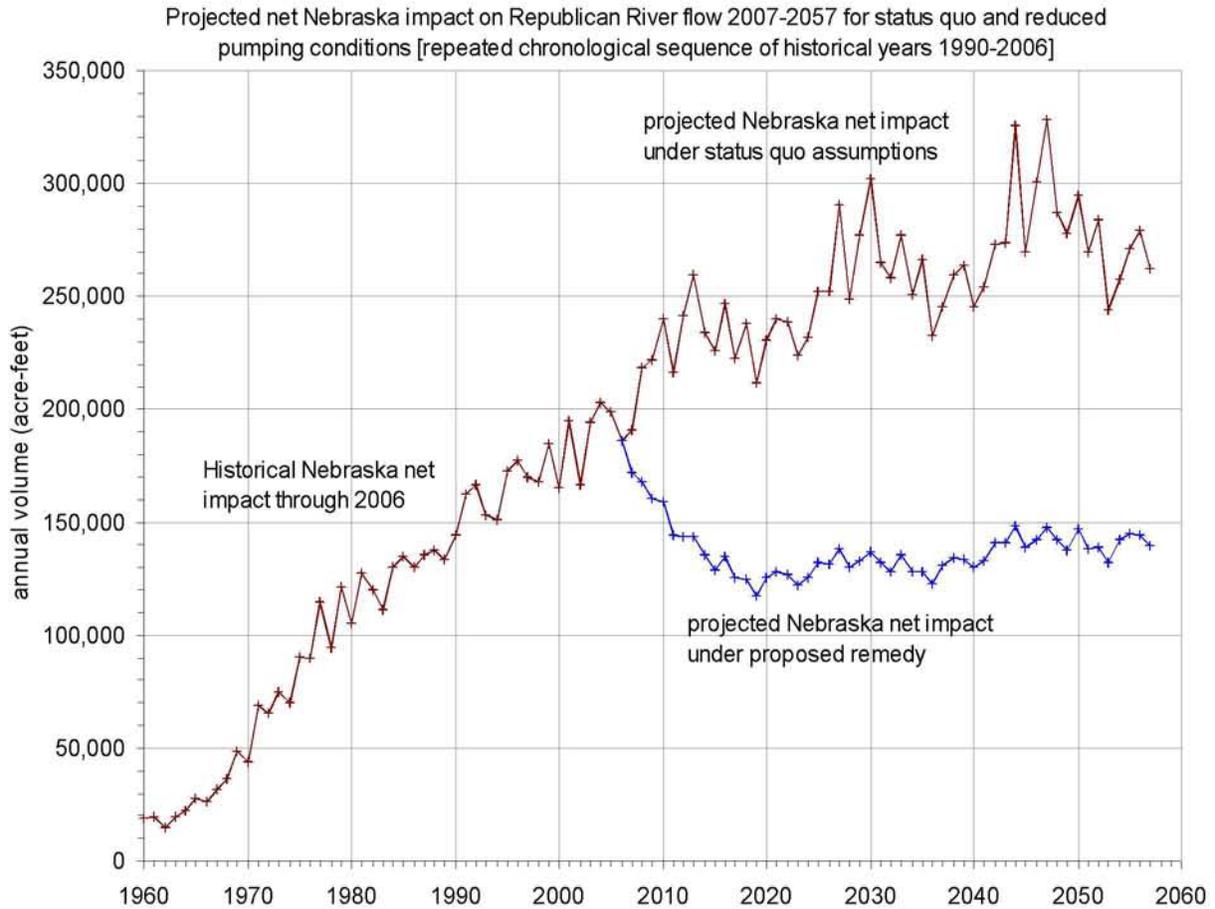
So it was a compromise...in the spirit of Article IX, which allows the Compact Administration to adopt rules and regulations that...are consistent with the terms of the Compact.

So we tried to address the dispute over Guide Rock and what that meant in a way that addressed the needs of Kansas in a practical way and addressed the concerns of upstream States...such that we aren't burdened with what we would consider to be non-Compact obligations.

Id., p. 56, n. 121.

Thus, the results of the Settlement made it clear that Nebraska would have to make significant reductions in its use based on the results of the historic accountings (Attachment 1) informed by updated estimates of groundwater depletions via the groundwater model and the precise tests of compliance from the Settlement, particularly to meet tests of critical dry periods. Furthermore, it was known that, even without increases in pumping, groundwater depletions to streamflow would increase over time, further increasing the need to regulate groundwater use. See Figure 5 below which shows the projected growth in Nebraska's groundwater depletions under the "status quo" condition.

Figure 5:
Projected net Nebraska impact on Republican River flow, 2007-2057



e. Nebraska’s Noncompliance with the FSS, 2002 to the Present.

As we have seen, prior to as well as throughout the negotiations over the FSS, Nebraska had clear notice, via RRCA calculations, that its groundwater resources were over-developed, and that it was exceeding its Compact allocations during critical periods. This non-compliance was due in large measure to excessive groundwater depletions. Nonetheless, Nebraska continued to allow the unrestricted drilling of wells in most of the Basin through the end of 2002, even as the States were negotiating the FSS and continued to add substantial irrigated acres in the Basin through 2004. Over the same period, Nebraska implemented the federal Conservation Reserve and Enhancement Program (“CREP”), which provided federal monies in exchange for retiring farmland from irrigation. Thus, even as Nebraska was claiming to reduce groundwater irrigation via CREP, in fact, Nebraska allowed expansion of irrigated acres through the end of 2004

The Compact Administration began its work of developing its initial accountings under the FSS in 2004, starting with the initial accounting for the year 2003. Nebraska substantially overused its annual allocations in 2003, 2004, 2005 and 2006 (as well as 2002). In each of these

years, Kansas pointed out to Nebraska that its computed beneficial consumptive use (CBCU) had exceeded its annual Compact and called on Nebraska to take additional action. The States fully agreed upon the accountings for 2003 and 2004. The RRCA agreed upon the 2005 accounting, except for the issue of evaporation from Non-Federal Reservoirs below Harlan County Lake. The engineering committee and the RRCA accepted all of the 2006 accounting data and model runs, but the final accounting was not developed due to the continued disputes over allocating evaporation from non-federal reservoirs and Harlan County Lake for 2006. The spreadsheets developed by the engineering committee for 2003 to 2005 as well as Kansas version of the accounting spreadsheet developed from the RRCA data and model run for 2006 are attached.

Nebraska's continued development of groundwater in the Basin, long after Nebraska had official knowledge that it was exceeding its Compact allocations, flies in the face of *Hinderlider*, the Compact, the FSS, and the Court's decree adopting the FSS. Although the FSS was signed on December 15, 2002, neither Nebraska nor its two lower NRD's acted to limit their allocations until 2005. And although the NRD's did establish groundwater allocations for 2005-2007, their five percent reductions in use was grossly insufficient to achieve Compact compliance.

The political leadership in Nebraska was well aware of the reductions and limitations which the FSS required. After the FSS was signed, Ms. Ann Bleed, first Deputy Director, then Interim Director, and finally Director of Nebraska DNR, completed computer runs to determine NRD allocations that would be necessary to for Nebraska to achieve Compact compliance. Bleed's runs revealed that the necessary allocations for Compact compliance were substantially lower than the NRD's allocations. Bleed knew that if Nebraska were to comply with the FSS, the Basin NRD's would have to substantially reduce their use of groundwater.

On December 15, 2006, Governor Dave Heineman, Ms. Bleed, and Dan Smith, the director of the Middle Republican NRD, attended a water conference in McCook, Nebraska, in which they clearly conveyed the need to curtail groundwater use in the Basin. Gov. Heineman told the conference that the "real key" to Nebraska's compliance was "to reduce consumptive use and achieve a balance between competing interests for water." "Irrigation Cuts of 15, 50 percent needed for Republican River Compliance?", MCCOOK DAILY GAZETTE, December 15, 2006, *available at* <http://www.mccookgazette.com/story/1181591.html> (last accessed January 19, 2009). Bleed, then acting director for Nebraska NRD, went on to detail DNR's proposal for what would be necessary to achieve compliance with the Compact and the FSS within the Basin: a fifty-percent reduction in withdrawals from the quick response wells, and a fifteen percent reduction in the "upland" areas. Ms Bleed reported that in the Upper Republican NRD, that meant limits of 2.8 to 5.7 inches per year on quick response wells, and restrictions of 11.38 inches per year on the upland wells; in the Middle Republican NRD, the DNR proposal envisioned limits of 2.7 to 5.3 inches per year on quick response wells, and restrictions of 9.0 inches per year on the upland wells; and in the Lower Republican NRD, the DNR plan called for limits of 2.4 to 4.8 inches per year on quick response wells, and restrictions of 9.6 inches per year on the upland wells. Governor Heineman and Bleed recognized the need for substantial and immediate action; Bleed noted that "there will be lots of sacrifices." However, they fully acknowledged the need to comply with the FSS. As Governor Heineman stated, "It will be painful . . . but we must reduce consumptive use to meet compliance with the Compact." *Id.*

Mr. Smith followed up the December conference in McCook with an open letter on behalf of the Middle Republican NRD. In this letter, Smith acknowledged that he had organized the December conference, and invited both Governor Heineman and Ms Bleed “to discuss the dire situation Nebraska must address regarding water issues.” Smith confirmed Ms. Bleed’s call for fifty-percent reductions in pumping from quick-response wells and fifteen-percent reductions in upland wells. “An Open Letter to All Concerned About Nebraska Water Issues,” January 4, 2007, pp. 1-3, *available at* http://www.nrdnet.org/news_events/news_pdfs/MRNRD_010207.pdf (last accessed January 19, 2009). However, Mr. Smith acknowledged that even the Nebraska DNR plan was not aggressive enough for the state to achieve compliance: “This plan proposed compliance within five years; however, compliance must be achieved by the end of 2007.” *Id.* at p. 3. Even with that five year span, Smith clearly understood NRD’s proposal: “our existing allocations, which DNR both established and agreed upon, need to be drastically reduced in order to achieve compliance.” *Id.*

Integrated Management Plans (IMPs) were authorized in 2004 and the NRD’s adopted their first IMP’s in 2005. In 2005, the NRD’s, with the concurrence of the State of Nebraska, adopted IMPs, which initially adopted three-year allocations requiring only five percent reductions in use. The 2008 IMP’s established five-year pumping allocations for the three Republican River Natural Resource Districts. These allocations set no required limit; rather, they merely have the goal of reducing actual pumping by twenty percent, compared to 1998-2002 figures. As is discussed below and in the attached supporting documentation, these allocations will achieve less than half of that reduction, reducing average pumping in Nebraska’s portion of the Basin by only about ten percent. Such an untargeted, nominal reduction is vastly below the significant and targeted action that Nebraska, and Ms. Bleed, clearly knew to be required. Despite the clear and flexible standards for determining Compact compliance under the FSS, the State of Nebraska has knowingly and willfully failed to comply with it. As a result, Nebraska has obtained illegitimate gains, gains which have come at the expense of Kansas.

Mr. David Pope, Chief Engineer for Kansas, wrote Dr. Bleed on January 24, 2007, to express his concerns that the Nebraska NRD’s did not recognize what Ms. Bleed had made so clear at the McCook conference a month before: namely, “the need for immediate and significant actions to reduce consumptive water use to come into compliance.” Letter of David Pope to Dr. Ann Bleed, January 24, 2007, p. 1, attached as Attachment 3.

f. The Impacts of Nebraska’s noncompliance with the FSS.

As had occurred in the early 1990’s, once again in 2003 and following, water users in the Kansas Bostwick Irrigation District and other water users in the lower Republican basin in Kansas did not receive the water to which Kansas was entitled under the Compact. Kansas had the capacity and need to use that water, and those users were damaged by Nebraska’s failure to comply with the Compact during this time. See the expert reports for Kansas by Dale Book and Golden et al. for illustrations of these impacts in 2005 and 2006.

III. Remedies.

a. The Kansas Remedy is the minimum remedy necessary for compliance.

Kansas has proposed that Nebraska reduce its groundwater-irrigated acreage in the Basin by approximately 515,000 acres of approximately 1.2 million acres which receive groundwater irrigation in the Nebraska portion of the Basin. Although this proposed reduction is substantial, it must be appreciated within the context of Nebraska's unsustainable overdevelopment of its groundwater resources over the last thirty years. It is a reflection of the degree of over development allowed by the State of Nebraska and its NRDs. This over-development includes the post-Settlement "completion" of additional wells. Had Nebraska had the forethought to put adequate groundwater controls in place when Colorado and Kansas put theirs in place, the action required by Nebraska at this time would be much less significant or even unnecessary.

As is shown in Figure 5 above, Nebraska groundwater depletions have been continually increasing over the decade and are currently on the order of 200,000 AF/year and will continue to sharply increase in the future. This level of groundwater depletion, even with ad hoc surface water purchases by Nebraska, resulted in the significant overuse of its allocation. Nebraska cannot turn its groundwater depletions on and off at will. With increasing future groundwater depletions, surface water supplies available for purchase in the future will be smaller and less reliable, barring some definitive agreement between the State and the Bureau and its projects sponsors as well as action to reduce groundwater depletions.

As is substantiated in Dale Book's expert report on Kansas's proposed remedy, that remedy was constructed to establish the needed curtailment in well pumping to reduce Nebraska's groundwater depletions to a level consistent with allocations during the critical five-year periods, 175,000 AF, and that Nebraska would be required to take additional action, including ad hoc surface water purchases, to achieve and maintain compliance during the more severe water-short year tests.

Given this conclusion our modeling experts (Larson and Perkins) determined the level of pumping reduction necessary to reduce Nebraska's groundwater depletions to this level and sustain it over the next 50 years. The remedy focuses action in an area very similar to Nebraska's designation of Quick Response Areas noted above as well as post year-2000 development.

As indicated in my letter, Kansas is willing to consider such a plan, but only as long as the supply is reliable, firm, and sustainable.

b. Nebraska's Plans for future compliance are inadequate.

Nebraska is required by the Compact and the FSS to be in compliance with every Compact compliance period: this includes five-year compliance during all years, and two-year compliance during critical water short-years. Compliance over a five-year period neither excuses nor mitigates failure to comply over a two-year water short period. As has been shown, Nebraska's response to the problem of its overuse has been inadequate. Although the dispute-resolution procedures of the FSS only required Kansas to take thirty days for the RRCA to consider a fast-track issue, Kansas nonetheless agreed to an extensive four-month RRCA process to consider this matter fully. Kansas did so to ensure that the States would fully understand each

other's analyses of the situation. During that four-month period and that process, Nebraska presented its IMPs as the solution to groundwater over-development and its non-compliance. As is shown below and in the Larson/Perkins addendum, our analysis of apparent restrictions in the IMPs show they do very little compared to what Nebraska must do to achieve compliance. Further the IMPs provide so much flexibility to make them largely ineffective.

Without substantial, enforceable reductions and controls on its groundwater depletions, and securing reliable other sources of water to offset these depletions, Nebraska will not be in compliance during future crucial, multi-year drought periods and Kansas will be shorted its water.

i. Nebraska's IMPs are hydrologically inadequate.

The IMP's fail to achieve the substantive reductions in groundwater pumping that Compact compliance requires. Although the Upper Republican NRD has imposed allocation limits as far back as 1978, they did not address the streamflow depletions caused by the over-development which occurred. This is well illustrated in the streamflow analysis of Frenchmen Creek done by the Modeling committee (cite / add??).

The Upper, Middle and Lower Republican NRDs did not adopt their first IMP's until January 1, 2005, January 1, 2005, and June 24, 2005, respectively. This was over two years after the FSS was signed. When they did arrive, the IMP's contained only nominal limits on groundwater pumping. Indeed, each of these IMP's, which set allocations for the period 2005-2007, had a goal of reducing the average annual pumping by five percent, as compared to the actual average annual pumping during the period 1998-2002. These were the allocations in effect during 2005 and 2006, the time period that is the subject of this arbitration.

Moreover, these IMP's allow the Upper NRD to carryover unlimited quantities of unused allocations. The Middle and Lower NRD's may carryover only 12 inches and nine inches respectively. As is shown in Attachment 4, provided by the State of Nebraska in April 2008, unused carryover at the time was almost 3,000,000 AF. Given that, I am uncertain as to the meaning of the IMPs allocations.

Besides these significant carryovers, which can allow for expanded use during critical dry periods, each of the IMP's also contained provisions which allowed their respective NRD boards to grant variances from the allocations, pooling between landowners for good cause shown, and transfers over significant distances of unused allocations. Thus, the IMPs provide no mechanism to address the longer term impacts from past groundwater pumping. Those lag effects will continue many generations into the future.

The IMPs were then amended, and new allocations were set for the next allocation period, from 2008 through 2012. Yet these allocations, like their predecessors, were again grossly inadequate, aiming to reduce the pumping by twenty percent from the 1998-2002 average annual pumping *See* Attachment 5. For instance, the Middle NRD's goal was to reduce pumping volume twenty percent "under average precipitation conditions." These modest twenty percent reductions did not even become effective until the sixth year following the signing of the

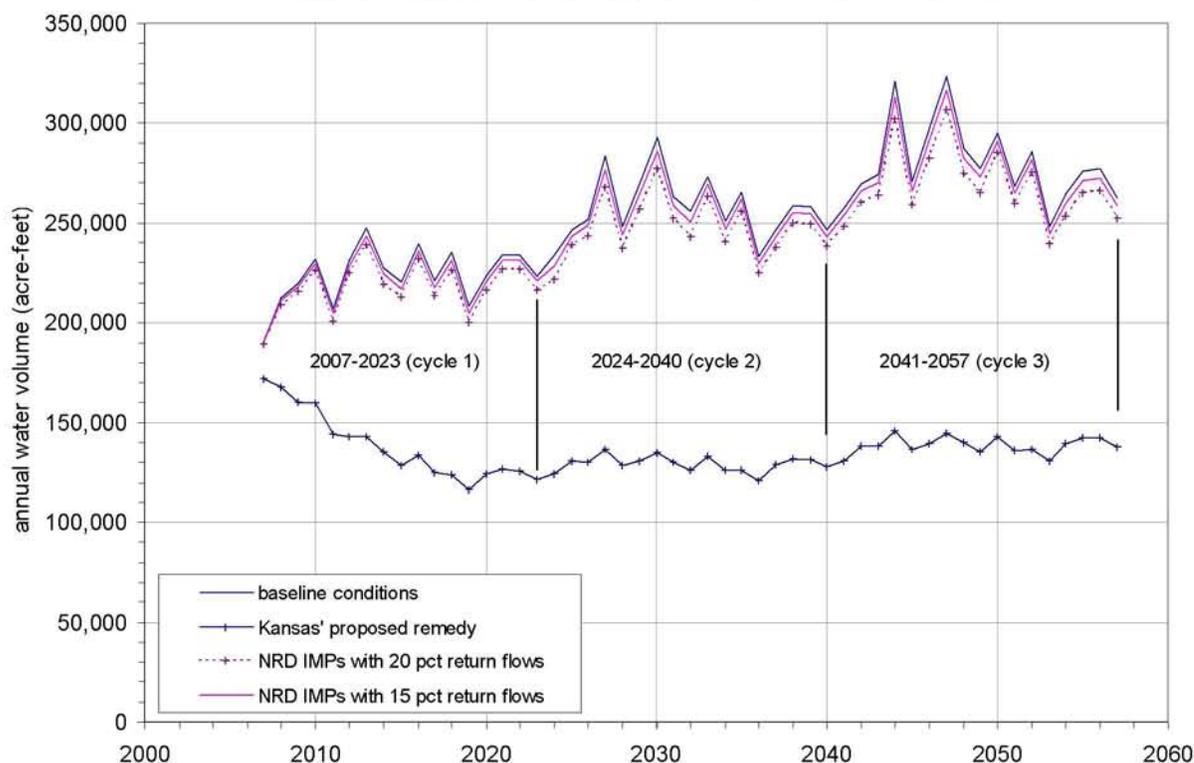
FSS in 2002. The IMPs also make it clear that allocations cannot be further reduced without a public hearing and approval of the NRD boards.

As is detailed in the Larson/Perkins addendum report, pumping based on 1998-2002 climatic conditions is approximately 10 percent above the long-term mean, making the twenty percent reduction from this standard only a 10 percent reduction from long-term average pumping.

A review of the IMP's indicates that the twenty percent reduction in pumping as compared to the actual average annual pumping during the period 1998-2002 was expected to keep Nebraska in Compact compliance under "average precipitation conditions." I asked a member of my engineering and modeling staff, together with an outside consultant, to model the benefits of these so-called reductions. Figure 6 below graphically illustrates its conclusion: the action in Nebraska's IMPs barely slow the rate of graphs in Nebraska's groundwater depletions. This is because their reductions are too small and untargeted. This is contrasted not only with Kansas proposed remedy but also with what Ann Bleed and the Governor told Basin users in 2006.

Figure 6:
Nebraska pumping impact and imported water credit under baseline conditions, 2007-2057

Net sum of Nebraska pumping impact and imported water credit under baseline conditions, Kansas' proposed remedy and Nebraska's NRD IMPs for future years 2007-2057



Even assuming that the allocations which are currently in effect in the Nebraska portion of the Basin are being strictly enforced—and this is a generous assumption—Kansas’s analysis of the effect of these allocations shows that they are woefully inadequate to bring Nebraska into compliance over the long run, and especially in extended periods of below average precipitation.

Nebraska's own analysis of the IMPs reveals their inadequacy. In April, 2008, Nebraska provided Kansas with an analysis using the RRCA model to try to demonstrate that the effectiveness of the IMPs during future dry periods. This analysis assumed that precipitation would occur at the 35th percentile amount at the precipitation gages used in the model and that other conditions would generally recur at average levels equal to the status in 2006 and in some cases 1988-91. While Kansas has not fully analyzed their model runs, Nebraska average depletions for their analysis for their projected future of 2008-2012 is appropriately 185,000 AF/year, significantly below our first five year average of 225,000 AF/year for our IMP run. One cause is the use of their higher “2007 early run” started heads they created for the analysis vs. our use of the actual starting heads from the engineering committee’s work. Despite using a Nebraska allocation that averaged more than 20,000 acre-feet per year higher than the actual average Nebraska allocation during the dry period of 2002 to 2006, the analysis showed that the IMPs would not produce depletions to stream flow that were less than the optimistic allocations. Their analysis makes no provision for increased future depletions the state of Nebraska will face. These results demonstrate that even under the optimistic conditions assumed by Nebraska, the

IMPs will be inadequate. More realistic assumptions regarding future conditions will only exacerbate this inadequacy.

ii. Nebraska's IMP's are administratively inadequate.

The State of Nebraska is directly responsible for compliance with the FSS, but it has delegated the authority to reduce BCU to entities that it does not directly control. By making this delegation, Nebraska has abdicated its clear duty to honor both the Compact and the FSS.

In Nebraska, surface water is governed by one set of laws and is administered by the State of Nebraska's DNR. (*See Neb. Rev. Stat. § 61-206 (2008)* ("The Department of Natural Resources is given jurisdiction over all matters pertaining to water rights for irrigation, power, or other useful purposes except as such jurisdiction is specifically limited by statute.") Groundwater is governed by a different set of laws and administered by the NRD's. (*See Neb. Rev. Stat. § 46-702 (2008)* ("The Legislature also finds that NRDs have the legal authority to regulate certain activities and, except as otherwise specifically provided by statute, as local entities are the preferred regulators of activities which may contribute to ground water depletion."))

An NRD is a political subdivision of the state of Nebraska. Neb. Rev. Stat. § 2-3213 (2008). Each NRD has its own taxing authority, its board members are popularly elected, and its authority is limited to a discrete geographic area. (*See generally* Neb. Rev. Stat. §§ 2-3201 *et seq.*) In fully appropriated areas, the NRDs regulate groundwater use by adopting Integrated Management Plans (IMP's) with the concurrence of the DNR. Neb. Rev. Stat. § 46-715(1) (2008). Because, the NRD's "jointly develop" the IMP with DNR, the NRD's have veto control over what goes into the IMPs. *Id.* Those plans are then implemented by the adoption of rules and regulations. The IMP concept was adopted by the Nebraska legislature after the adoption of the FSS.

In 2004, the Nebraska legislature modified the management of groundwater and surface water by adopting LB 962. This bill introduced the mandatory adoption and implementation of IMP's in over-appropriated and fully appropriated basins such as the Basin. Neb. Rev. Stat. § 46-715(1) (2008). The IMP concept, however, was not developed specifically for FSS compliance in the Basin. Senator Ed Schrock, the chairman of the Natural Resources Committee who introduced LB 962 and served on the forty-nine member commission specifically tasked by the Governor to develop a state wide interrelated water management plan, stated that: "I would say that LB 962 really does not impact the Republican River Basin much because the Republican Basin must live within the terms that we agreed to settle our lawsuit with the state of Kansas." (Nebraska Unicameral Legislature, Floor Debate, LB 962, March 2, 2004, Transcript pg. 10428).

The state of Nebraska, acting through DNR, has no direct supervisory authority over NRD's concerning groundwater administration. The DNR can obtain such authority, but only with the review and concurrence of the Interrelated Water Review Board, a five person committee appointed by the governor of Nebraska. *See Neb. Rev. Stat. § 46-719(2)(a)*. To date, DNR has never sought to obtain such authority, despite Nebraska's continuing overdevelopment of groundwater, and despite Nebraska's clear obligations under the Compact and the FSS. In

short, the IMP's are not effective in imposing meaningful reductions on groundwater overdevelopment in Nebraska.

iii. Nebraska's water purchases are inadequate.

Nebraska appears to intend to make up any overuse by purchase of surface water or other means. Primarily because of well pumping, surface water supplies have decreased and will continue to do so. Nebraska has not shown that it has acquired a firm supply of surface water that is legally and physically available to them that can be delivered to Kansas in a timely manner to make up for any Nebraska overuse. Kansas is willing to agree to a compliance plan that is firm and based on supplies of water that will be physically and legally available to Nebraska. Kansas is not willing to accept a plan based on promises to go out and attempt to purchase surface water during the year in which the overuse is occurring. That simply will not reliably deliver water to Kansas on a timely basis.

Nebraska has indicated it will offset overuse by purchasing surface water. Yet Nebraska's history of water purchases for Compact compliance does not support its claim that such purchases are a dependable component of long-term compliance. Nebraska did not purchase surface water from 2003 to 2005. In 2006 and again in 2007, Nebraska purchased the rights to Bureau of Reclamation surface water projects, and allowed KBID to make use of these waters. In 2006, Nebraska purchased the very limited supply of surface water available from the Nebraska Bostwick Irrigation District ("NBID"). Nebraska did not, however, restrict the use of groundwater wells whose water was applied to the same NBID lands, thus increasing the problem of depleted releases from Harlan County Lake for KBID. Late notice of these supplies hampered Kansas irrigators' ability to make the most optimum use of this limited water. Most of their cropping decisions had been made by the time the NBID water-purchase agreement was finalized.

In 2007 Nebraska again purchased water, and again gave Kansas very late notice that the water would be made available to Kansas. Once again, irrigators (primarily in KBID) had made planting decisions which limited their ability to benefit from the additional water supply. Moreover, such late notice harmed Nebraska as well, since Kansas irrigators would have to use the purchased water in order for Nebraska to receive allocation credit for the purchase. Kansas was not invited to provide input into the terms of the contract between Nebraska and the Bureau. Yet, under the terms of the contract, Kansas was forced to use the purchased water *prior* to using its normal allocation. Pursuant to the terms of KBID's contract with the Bureau, most of Kansas's normal allocation of water from Harlan County Lake was then redivided with NBID. Once again, NBID users were allowed to use their wells to make up for the undelivered surface water, further increasing groundwater impacts on the River in the Basin.

iv. Nebraska's remedy is more inadequate during times of drought, and will become more inadequate as groundwater depletion increases in the Basin.

The Compact is an apportionment of the water supply of the Basin. Like the law of prior appropriation, it is applicable in all years, and is most meaningful and necessary during periods

of aridity and drought. For this reason, the water-short year provisions of the FSS were carefully crafted and clearly laid out to balance the needs of both upstream and downstream states during critical dry periods. Most importantly, the FSS requires Nebraska to be in compliance in every compliance period, not just on the average, under average precipitation conditions. In water-short years, the FSS is quite specific regarding Nebraska's Decree compliance duties and does not take precipitation into account:

During Water-Short Year Administration, Nebraska will limit its Computed Beneficial Consumptive Use above Guide Rock to not more than Nebraska's Allocation that is derived from sources above Guide Rock

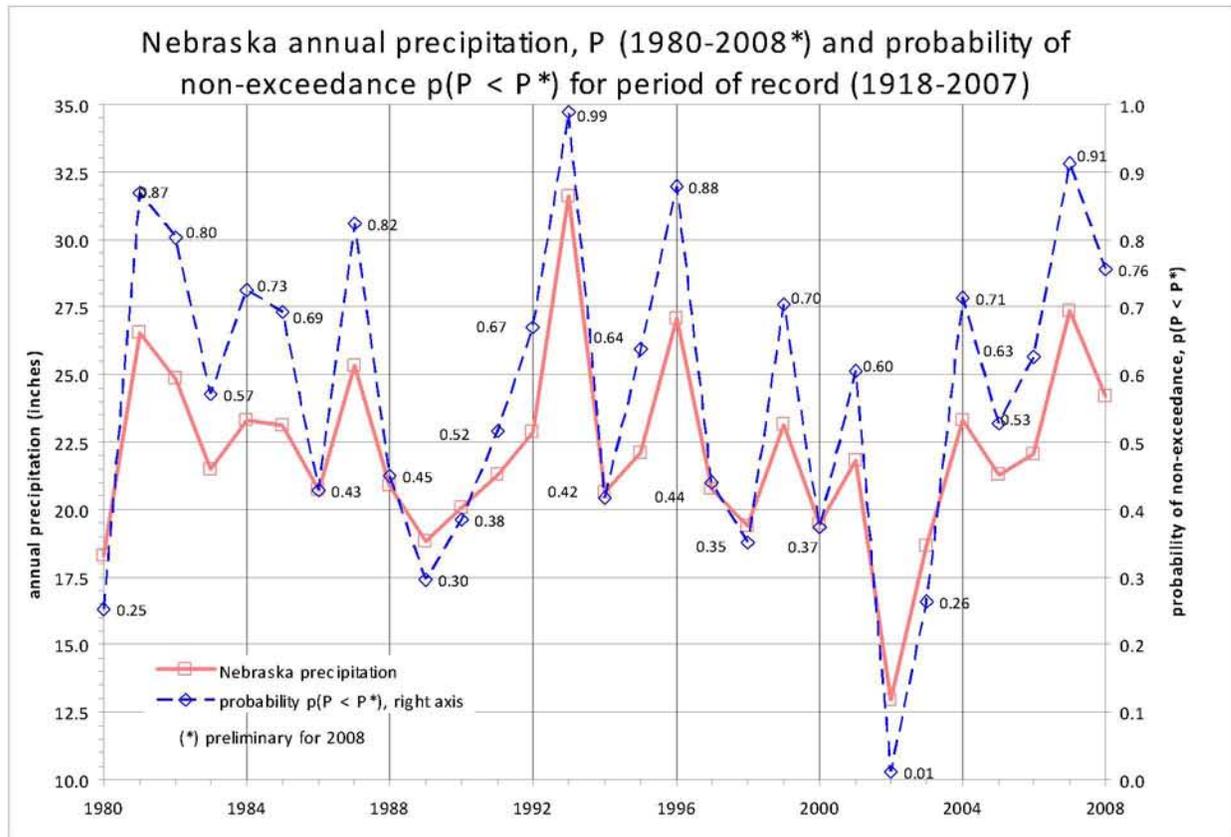
FSS, V.B.2.a.

The language of the FSS is clear because the intent of the States was clear: to clearly provide for dry conditions. In negotiating these provisions, the States used the drought of 1988-93 as one gage to determine the impact of the tests of compliance; and the more severe droughts of the 1930's and 1950's were also clearly within the period of record. Consequently, there is no excuse for non-compliance during such periods.

Nebraska's analysis of compliance presented during the RRCA examination of issues was based on long-term averages, largely ignoring the need to comply during all periods. Even their dry-year Such analysis ignores the reality of complying during dry periods and the water-short provisions in the FSS.

Contrary to its assertion, Nebraska did not suffer the sort of drought it claims to be so extraordinary. Figure 7 measures average annual precipitation within Nebraska's portion of the Basin. With the exception of 2002 and 2003, every year since 2001 is above the median value.

Figure 7:
Nebraska annual precipitation and Probability of Non-exceedance, 1918-2007



Nebraska has argued that requiring it to restrict groundwater depletions to comply with the Compact and Settlement during dry periods will not allow Nebraska to use all of its water during years of normal and above normal water supply. While Kansas agrees that Nebraska is entitled to fully use its allocation during times of normal and above normal water supply, such an entitlement does not relieve Nebraska of its obligation to comply with the Compact and FSS during all compliance periods, including drought periods.

- v. Nebraska’s long noncompliance, together with the inadequacy of its plan for future compliance, require the appointment of a River Master.

Kansas has requested that the Court appoint a river master to supervise Nebraska’s water-related activities within the Basin, to ensure Nebraska’s compliance with the FSS. A river master would provide at least two solutions to the chronic problem of Nebraska’s noncompliance with the Compact.

First, a River Master would resolve the standoff between Nebraska DNR and its NRD’s. Neither DNR nor the Republican NRD’s have confronted the imperative need to curtail excessive groundwater withdrawals in the Basin. Nebraska DNR lacks the power to curtail

groundwater withdrawals, and apparently, does not seek such a power; and the NRD's, beholden to their irrigators, refuse to restrain them. The two institutions appear to work at cross purposes. The Nebraska unicameral has not resolved this problem: Nebraska's ineffective system of allocating and regulating the use of groundwater via different laws and levels of government has proved unworkable. While there has been some evolution in Nebraska's law to consider conjunctive management, the Nebraska system has failed to result in Compact compliance.

Second, a River Master would prevent Nebraska from placing its own economic self-interest above its legal obligations to Kansas since Nebraska's gain from non-compliance is substantially greater than our loss. This cannot be allowed to continue. The Compact is not a typical contract: Kansas cannot obtain substitute supplies of water in the event of Nebraska's noncompliance. Kansas has only option in the current setting is litigation—which is expensive, labor-intensive in both law and engineering, slow, and cumbersome. Only then can Kansas obtain the water to which it is entitled. Nebraska and Kansas may be coequal sovereigns, but they are far from equals, hydrologically speaking. A river master will remedy this hydrological inequality, by requiring that a federally-appointed administrator supervise Compact compliance.

Because Nebraska has failed to take adequate action to come into compliance with the FSS, appointment of a River Master is necessary until such time as Nebraska demonstrates a willingness and ability to remain in compliance with the FSS. A federally-appointed River Master would act as a Trustee of sorts, obeying and enforcing the Compact's requirements until such a time as Nebraska's leaders make the changes necessary to allow it to comply with the Compact by themselves.

vi. Sanctions for Future Violations.

Since Nebraska has shown a strong tendency to violate the Supreme Court's Decree, it is appropriate to establish, and put Nebraska on notice, that successively greater remedies will be imposed if further violations are committed. Based on my experience as a water administrator, I would propose that the remedy, whether in water or money or both, be increased by a significant amount for each violation. In Kansas, for instance, civil penalties are increased significantly and water paybacks are also routinely doubled for each new violation.

IV. Conclusion.

As set out in more detail above, Kansas has been pursuing enforcement of its rights under the Republican River Compact for more than two decades. This effort has not yet resulted in compliance by Nebraska, even though a Supreme Court Decree was entered more than five years ago setting the quantitative tests of compliance. As a result, Kansas farmers and their families, and Kansas as a whole, have continued to suffer. The groundwater development that has been allowed in Nebraska is inconsistent with Compact and Decree compliance. The State of Nebraska has been aware of this significant problem, yet it has failed to respond in any meaningful way. Its proposed remedy is clearly inadequate. Therefore, it is necessary for Kansas to propose a remedy that will ensure future compliance every year. Based on the foregoing analysis, that proposal includes the following prospective remedies as numbered in the Introduction above, namely, that the Supreme Court, in addition to the retrospective remedies referred to in the Introduction above, adopt an order:

1. Requiring Nebraska to immediately (a) shut down wells and groundwater irrigation in Nebraska within 2 ½ miles of the Republican River and its tributaries, (b) shut down groundwater irrigation of acreage added after the year 2000 throughout the Republican River Basin in Nebraska, and (c) make further reductions of Nebraska's Computed Beneficial Consumptive Use (CBCU) as are necessary to maintain yearly compliance, especially in Water-Short Year Administration years; or to order an alternative remedy that ensures annual compliance with the Court's Decree;

2. Requiring Nebraska to further reduce Nebraska's CBCU to the extent necessary to keep Nebraska within its Compact allocation until the effects of the reduction of groundwater pumping brings Nebraska into compliance with the Court's Decree;

3. Appointing a river master to administer Decree compliance on an annual basis until such time as Nebraska can demonstrate an independent ability to achieve compliance;

4. Establishing sanctions for future violations of the Decree.

Kansas is open to equivalent remedies to ensure future compliance, but Nebraska has proposed none.

ATTACHMENT 1

TABULATION OF WATER COMPUTATIONS
REPUBLICAN RIVER COMPACT ADMINISTRATION
COMPUTATIONS IN NEBRASKA OF ADJUSTED ALLOCATIONS,
CONSUMPTIVE USE, AND THE RESULTING DIFFERENCE

All values are in acre-feet for a water year (ending in
September of the year indicated).

Year	Total - All sub-basins		
	Adjusted Allocation	Consumptive Use	Difference
1959	266,080	216,710	49,370
1960	459,180	204,010	254,370
1961	280,270	205,210	75,060
1962	414,380	135,710	278,600
1963	303,200	252,950	50,250
1964	257,430	246,240	11,190
1965	266,140	161,430	104,710
1966	397,080	212,470	184,610
1967	304,690	192,780	191,910
1968	269,740	277,170	(7,430)
1969	293,140	220,110	73,030
1970	273,660	284,590	(10,700)
1971	265,460	253,520	11,940
1972	267,910	257,790	10,120
1973	333,970	244,560	89,410
1974	374,510	315,050	59,460
1975	346,500	312,630	33,870
1976	293,150	390,590	(97,540)
1977	331,670	301,910	29,760
1978	332,940	394,920	(61,980)
1979	304,730	243,480	61,270
1980	289,220	303,080	(16,860)
1981	259,390	174,500	84,890
1982	342,660	233,080	109,780
1983	337,620	248,130	89,490
1984	399,940	266,810	133,030
1985	307,510	257,130	50,380
1986	298,660	311,090	(12,430)
1987	362,140	275,680	86,460
1988	270,290	263,630	6,660
1989	258,660	298,060	(37,400)
1990	266,360	299,070	(32,700)
1991	210,980	263,220	(52,200)
1992	260,670	234,300	26,370
1993	512,050	105,970	408,880
1994	333,530	309,800	23,730

The Difference was calculated by subtracting the Consumptive Use from year.

The Adjusted Allocation for each sub-basin and the total for each state each

Totals for Certified Groundwater Irrigated Acreage by NRD in the Republican River Basin(excludes CREP acreage) as of April 2008

Source of Data: Nebraska DNR Response to KS Questions, April 2008

NRD	Certified Irrigated Acreage
Upper Republican NRD	447,287
Middle Republican NRD	292,819
Lower Republican NRD	302,980
Tri-Basin NRD	189,426
Total	1,232,512

Total acre-feet of unused carry-forward allocation currently accrued by NRD by County

Source of Data: Nebraska DNR Response to KS Questions, April 2008

Lower Republican NRD	Acre-Feet
Franklin	75,538
Furnas	46,388
Harlan	78,192
Nuckolls	8,091
Webster	34,978
LRNRD Total	243,187
Middle Republican NRD	
Frontier	76,028
Hayes	67,508
Hitchcock	36,576
Lincoln	55,026
Red Willow	52,760
MRNRD Total	287,898
Upper Republican NRD	
Dundy	351,922
Chase	979,203
Perkins	1,076,516
URNRD Total	2,407,641
Tri-Basin	
Kearney	<i>not applicable no allocations</i>
Hayes	<i>not applicable no allocations</i>
Hitchcock	<i>not applicable no allocations</i>
Basin Total	2,938,726

*See
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KANSAS

BOSTWICK IRRIGATION

DISTRICT



ANNUAL REPORT

2007

WATER RESOURCES
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2007 WEATHER CONDITIONS

MONTH	TEMP		PRECIP	AVE. PRECIP '60 to '00
	High	Low		
JAN	53	-5	0.60	0.53
FEB	66	-8	1.38	0.74
MAR	77	19	2.07	1.95
APR	88	17	1.82	2.44
MAY	90	47	6.68	4.98
JUN	92	50	5.05	4.17
JUL	98	61	2.26	3.78
AUG	103	60	2.36	3.34
SEP	90	44	2.27	3.11
OCT	91	31	3.22	1.91
NOV	75	11	0.08	1.35
DEC	63	-2	<u>2.40</u>	<u>0.84</u>
		Total	30.19	29.14

Moisture measured at Courtland amounted to a total of 30.19 inches, which is approximately 1.05 inches above the 40 year average. Checking the daily record shows that the most moisture measured in a 24 hour period was 2.60 inches on May 15th. Measurable precipitation was recorded at Courtland on 88 days during the year and 17 days recorded a trace.

The latest frost date last spring was April 16th when a low of 31 degrees was recorded. The temperature dropped to 32 degrees with the first fall frost on October 23rd.

RAINFALL DATA

YEAR	JAN-MAR	APR-JUNE	JULY-SEPT.	OCT-DEC	TOTAL
59	N/A	12.82	4.83	2.46	N/A
60	N/A	11.05	8.40	2.46	N/A
61	4.09	15.17	19.59	3.94	42.79
62	2.84	10.24	11.62	3.29	27.99
63	2.28	7.81	6.86	1.73	18.68
64	1.62	8.60	9.84	1.21	21.27
65	5.10	12.5	10.40	1.12	29.12
66	1.89	6.98	11.88	2.33	23.08
67	.64	15.84	11.87	2.86	31.18
68	.58	11.19	19.39	6.18	37.34
69	3.92	9.84	13.15	4.36	31.28
70	1.27	15.27	9.01	3.79	29.86
71	4.30	10.00	7.47	7.04	28.81
72	1.00	13.38	11.23	6.53	32.14
73	7.13	8.35	18.72	9.46	43.66
74	.97	9.91	4.59	3.71	19.18
75	3.36	13.06	5.82	3.73	25.97
76	4.73	7.81	3.81	1.03	17.38
77	3.99	16.61	15.72	3.41	39.73
78	2.21	10.23	10.13	3.66	26.23
79	7.74	8.50	8.75	6.43	31.42
80	6.47	7.39	7.56	2.85	28.24
81	1.64	14.09	10.93	4.54	31.20
82	4.04	12.48	10.69	5.06	32.27
83	3.95	8.74	9.5	4.17	23.36
84	3.38	14.77	3.45	7.90	29.50
85	2.10	12.03	13.06	2.37	29.56
86	1.84	10.67	14.01	6.53	33.05
87	8.19	15.48	6.26	2.81	32.74
88	1.31	10.27	5.76	2.03	19.37
89	1.68	7.30	13.70	1.05	23.73
90	4.15	10.82	6.38	2.10	23.45
91	1.98	8.99	3.66	4.19	18.82
92	4.34	8.92	17.61	9.14	40.01
93	5.90	12.62	24.07	2.67	45.26
94	1.64	10.92	7.55	4.49	24.60
95	2.32	14.69	9.74	1.40	28.15

RAINFALL DATA CONTINUED

YEAR	JAN-MAR	APR-JUNE	JULY-SEPT.	OCT-DEC	TOTAL
96	0.85	9.45	12.49	6.04	28.83
97	1.27	6.54	6.64	6.40	20.85
98	4.81	7.99	7.26	6.82	26.88
99	2.18	13.49	5.65	1.46	22.78
00	4.60	5.18	3.20	4.40	17.38
01	4.96	15.12	11.99	2.41	34.48
02	2.18	8.05	4.61	5.02	19.86
03	2.89	15.7	10.04	3.03	31.66
04	6.41	10.74	8.89	1.71	27.75
05	5.52	10.14	12.55	3.76	31.97
06	2.26	7.98	11.58	4.36	26.18
07	4.05	13.55	6.89	5.70	30.19

O&M ASSESSMENTS FOR 2007- Blocks I, II, III, IV & V

Class #1	25,513.3 acres
Class #2	9,220.5 acres
Class #3	5,685.2 acres
Class #4	<u>2,624.4 acres</u>
Total District acres	43,043.4 acres

Note: 13,445.0 acres above Lovewell were assessed a flat rate of \$16.00 /acre
29,598.4 acres below Lovewell were assessed: class #1 @ \$22.00/ac
class #2 @ \$22.00/ac, class #3 @ \$21.25/ac and class #4 @ \$21.25/ac

Total O&M Assessments for 2007 are \$862,825,23

REPAYMENT ASSESSMENTS FOR 2007

No repayment assessed for 2007

INFORMATION FROM CROP CENSUS

Irrigated acres above Lovewell 8,923	Irrigated acres below Lovewell 24,055	Total 32,978
Gross crop values above \$4,918,357 \$551/acre	Gross crop values below \$14,170,074 \$589/acre	Total \$19,088,431 \$578/acre
Irrigated acres Jw Co. 5,557	Irrigated acres Rp Co. 27,389	
Gross crop values Jw Co. \$2,958,291 523/acre	Gross crop values Rp Co. \$16,130,139 \$588/acre	

Crop values

Corn \$3.50/bu, Milo \$3.50/bu, Hay \$100/ton, Soybeans \$8.00/bu, Silage \$27/ton

Crop yields above Lovewell Corn 169 bu/ac Milo 118 bu/ac Hay 6.6 ton/ac Beans 55 bu/ac	Crop yields below Lovewell corn 185 bu/ac milo 135 bu/ac hay 6.8 ton/ac beans 55 bu/ac	Above and Below corn 182 bu/ac milo 126 bu/ac hay 6.7 ton/ac beans 55bu/ac Silage 20 t/ac
Water delivered above 5.3"/ac	Water delivered below 7.0"/ac	Dist avg. 6.5"/ac

CROP YIELDS

YEAR	CORN	MILO	BEANS	ALFALFA	SUNFLOWERS
1961	84.0	60.0	24.0	0	0
1962	100.0	88.0	30.0	0	0
1963	85.0	73.0	34.0	0	0
1964	95.0	74.0	24.0	0	0
1965	115.0	97.0	24.0	0	0
1966	95.0	91.0	33.0	0	0
1967	120.0	87.0	32.0	0	0
1968	99.0	72.0	25.0	0	0
1969	107.0	84.0	42.0	0	0
1970	92.0	49.0	25.0	0	0
1971	114.0	90.0	10.0	0	0
1972	129.0	101.0	43.0	0	0
1973	103.0	101.0	28.0	0	0
1974	102.0	81.0	30.0	0	0
1975	107.0	78.0	33.0	0	0
1976	103.0	90.0	44.0	0	0
1977	103.0	107.0	43.0	0	0
1978	123.1	103.6	45.8	0	0
1979	123.1	103.6	45.8	0	0
1980	94.7	63.6	45.2	0	0
1981	134.6	68.9	46.2	0	0
1982	108.0	99.0	37.5	0	0
1983	106.2	78.0	43.6	0	0
1984	139.0	85.8	42.5	0	0
1985	140.5	101.1	44.9	0	0
1986	148.7	131.8	50.4	0	0
1987	137.3	103.7	47.4	0	0
1988	135.2	80.5	46.1	0	0
1989	158.8	85.5	49.0	0	0
1990	139.0	99.0	42.0	5.0	0
1991	110.6	*154.0	39.3	4.0	0
1992	166.0	0	45.8	0	0
1993	92.0	0	36.2	0	0
1994	153.4	0	53.7	6.0	0
1995	135.8	72.8	48.1	4.5	2,613.3
1996	163.9	138.6	54.2	4.7	0
1997	166.6	114.7	58.7	5.0	5
1998	157.6	101.3	54.8	5.3	5.3
1999	165.4	0	*58.6	5.6	0
2000	143.4	0	47.6	2.0	0
2001	155.0	92.8	47.7	6.1	0
2002	162.0	102.0	47.0	7.6	0
2003	160.7	124.2	49.9	5.6	1,943.5
2004	180.4	134.2	54.8	*8.9	1,750.0
2005	*187.0	119.7	58.0	7.6	1,330.2

CROP YIELDS CONTINUED

Year	Corn	Milo	Beans	Alfalfa	Sunflowers
2006	162.6	110.5	54.9	6.3	0
2007	181.6	126.5	55.2	6.8	0

0 may indicate not enough acres reported.
* record, highest year recorded.

INFORMATION FROM CROP CENSUS

YEAR	CLASSIFIED ACRES	IRRIGATED ACRES	AF DEL'D	INCHES/AC
1958	10,043	N/A	4,383	N/A
1959	30,521	N/A	29,861	N/A
1960	31,979	20,455	27,041	15.8
1961	36,912	21,962	27,051	14.7
1962	36,934	22,395	23,326	12.4
1963	37,206	25,117	36,973	17.6
1964	37,286	22,892	41,948	21.9
1965	37,478	24,118	36,634	18.2
1966	38,386	24,063	38,195	19.0
1967	39,039	28,000	38,418	16.4
1968	40,325	28,000	32,566	13.9
1969	39,565	25,500	23,161	10.8
1970	39,828	27,736	52,959	22.9
1971	39,746	28,634	38,433	16.1
1972	40,120	26,515	26,168	11.8
1973	40,330	30,528	25,394	9.9
1974	40,631	29,907	51,507	20.7
1975	40,947	31,711	49,525	18.7
1976	41,118	30,789	# 69,206	27.0
*1977	41,118	32,248	30,934	11.5
*1978	41,118	33,909	34,335	12.9
*1979	41,468	33,529	29,015	10.4
1980	41,499	33,232	49,626	17.7
*1981	41,892	32,892	22,995	8.3
1982	41,862	33,980	30,963	10.9
1983	41,862	26,222	48,409	22.1
1984	41,883	30,048	48,121	19.2
1985	41,888	31,410	28,224	10.7
1986	41,910	32,085	34,082	12.7
1987	41,945	33,585	36,214	12.9
1988	41,960	29,862	51,016	20.5
*1989	41,987	35,696	39,335	13.2
*1990	41,988	36,667	43,874	14.3
*1991	42,488	30,881	32,621	12.7
*1992	42,458	23,589	4,116	2.1
*1993	42,537	33,858	# 3,326	1.2
1994	42,523	34,933	15,796	5.4
1995	42,523	38,485	42,828	13.4

INFORMATION FROM CROP CENSUS CONTINUED

YEAR	CLASSIFIED ACRES	IRRIGATED ACRES	AF DEL'D	INCHES/AC
1996	42,574	35,431	41,074	13.9
1997	42,574	38,985	40,196	12.4
1998	42,547	38,485	41,279	12.9
1999	42,650	38,788	44,734	13.8
2000	42,650	38,788	44,734	13.8
*2001	42,805	39,173	39,243	12.0
*2002	42,922	39,499	43,576	13.2
*2003	43,021	36,460	29,108	9.6
*2004	43,114	23,035	15,632	8.1
*2005	43,100	23,439	15,632	5.8
*2006	43,048	28,580	20,636	7.4
*2007	43,018	32,979	26,303	6.5

* YEARS OF SHORT SUPPLY. START SEASON WITH RESTRICTIONS
HIGHEST - LOWEST USE

VALUE OF ACTUAL IRRIGATED CROPS FROM CROP CENSUS

YEAR	\$ GROSS	\$ PER/ACRE	ACRE
1970	3,882,835.00	140.00	27,736
1971	3,611,674.76	126.15	28,634
1972	5,114,061.00	192.87	26,515
1973	7,006,234.00	229.50	30,528
1974	9,278,426.00	310.24	29,907
1975	8,278,426.00	260.66	31,741
1976	6,846,199.25	222.29	30,798
1977	5,915,316.01	183.43	32,248
1978	7,618,348.80	238.75	31,909
1979	9,690,680.00	289.02	33,529
1980	9,597,194.54	288.79	33,232
1981	9,799,445.00	297.93	32,892
1982	8,313,569.92	244.66	33,980
1983	8,293,717.20	316.29	26,222
1984	9,922,025.00	330.21	30,048
1985	9,081,424.00	289.13	31,410
1986	7,015,931.65	218.67	32,085
1987	7,039,321.40	209.60	33,585
1988	9,938,060.00	332.80	29,762
1989	11,439,457.00	320.46	35,696
1990	10,407,855.94	283.84	36,667
1991	7,712,559.42	249.75	30,881
1992	7,620,389.10	323.05	23,589
1993	7,493,859.30	221.33	33,858
1994	10,636,665.00	304.49	34,933
1995	13,899,728.33	361.17	38,485
1996	13,463,982.00	380.00	35,431
1997	15,349,478.00	393.73	38,985
1998	11,410,761.21	296.49	38,486
1999	11,856,609.01	305.68	38,788
2000	10,666,977.55	262.02	40,711
2001	10,725,896.65	273.81	39,234
2002	14,809,851.00	375.42	39,449
2003	12,308,765.65	337.60	36,460
2004	6,825,529.50	296.32	23,035
2005	6,908,992.63	294.76	23,439
2006	12,201,642.00	427.00	28,580
2007	19,088,431.06	578.81	32,979

PIPE - DITCH - PIVOT SURVEY

This survey was first run in 1990. Pivot acres were counted as pipe and the results were 54% pipe and 46% open ditch.

YEAR	OPEN DITCH	PIPE	PIVOT	DRIP	ACRES
2006	13%	45%	42%	.9%	43,072
2002	17%	56%	27%		42,921
1998	29%	59%	12%		42,421
1994	38%	58%	4%		42,531
1990	46%	54%	0%		42,462

2006 SURVEY BY RIDE

RIDE	OPEN DITCH	PIPE	PIVOT	DRIP	ACRES
1	115.3 - 69%	910.3 - 9%	282.2 - 22%		1,307.8
2	308.9 - 9%	1,657.4 - 49%	1,421.4 - 42%		3,387.7
3	1,053.7 - 21%	1,580.5 - 32%	2,322.7 - 47%		4,956.9
4	959.2 - 23%	1,577.6 - 38%	1,584.9 - 39%		4,121.7
5	6.5 - .6%	368.7 - 36%	657.4 - 64%		1,032.6
6	386.2 - 8%	3,090.4 - 65%	1,270.0 - 27%		4,746.6
7	760.4 - 15%	2,203.2 - 44%	2,054.2 - 40%	45.8 - .9%	5,052.9
8	616.9 - 13%	2,815.1 - 58%	1,401.9 - 29%		4,833.9
9	62.6 - 1%	1,547.4 - 15%	3,056.1 - 65%		4,666.1
10	788.2 - 15%	1,138.9 - 22%	3,217.1 - 63%		5,144.2
11	367.0 - 9%	2,600.2 - 69%	854.7 - 22%		3,821.9
Total	5,424.9 - 13%	19,489.7 - 45%	18,111.9 - 42%	45.8 - .9%	43,072.3

KANSAS
BOSTWICK IRRIGATION DISTRICT NO. 2
Courtland, Kansas

BALANCE SHEET
As Of December 31,

EXHIBIT A

ASSETS

	<u>2006</u>	<u>2005</u>
CURRENT ASSETS		
Cash	\$ 113,785	\$ 42,337
Inventory	83,991	54,996
Accounts Receivable	<u>4,850</u>	<u>20,456</u>
Total Current Assets	<u>202,626</u>	<u>117,789</u>
ACCOUNTS RECEIVABLE - DEFERRED		
Operations & Maintenance Assessments	775,555	776,263
Repayment Assessments	<u>0</u>	<u>0</u>
Total Accounts Receivable - Deferred	<u>775,555</u>	<u>776,263</u>
RESERVED ASSETS		
Investments	<u>708,053</u>	<u>844,098</u>
PLANT, PROPERTY, AND EQUIPMENT		
Plant and Equipment	1,468,013	1,464,613
Accumulated Depreciation	<u>(993,727)</u>	<u>(967,113)</u>
Total Plant, Property, and Equipment	<u>474,286</u>	<u>497,500</u>
TOTAL ASSETS	<u>\$ 2,160,520</u>	<u>\$ 2,235,650</u>

LIABILITIES AND MEMBERS EQUITY

CURRENT LIABILITIES		
Accounts Payable	\$ 90,971	\$ 5,292
Accounts Payable - Water Service Charges	<u>103,466</u>	<u>95,967</u>
Total Current Liabilities	<u>194,437</u>	<u>101,259</u>
Total Liabilities	<u>194,437</u>	<u>101,259</u>
	<u>0</u>	
Deferred Revenue	<u>775,555</u>	<u>776,263</u>
MEMBERS EQUITY		
Retained Earnings - Reserved	708,026	844,098
Retained Earnings - Unreserved	<u>482,502</u>	<u>514,030</u>
Total Members Equity	<u>1,190,528</u>	<u>1,358,128</u>
TOTAL LIABILITIES AND MEMBERS EQUITY	<u>\$ 2,160,520</u>	<u>\$ 2,235,650</u>

KANSAS
BOSTWICK IRRIGATION DISTRICT NO. 2
Courtland, Kansas

EXHIBIT B

STATEMENT OF REVENUES AND EXPENSES
For the Years Ended December 31

REVENUE	<u>2006</u> <u>Operations</u>	<u>2005</u> <u>Operations</u>
Assessments From Members	\$ 777,207	\$ 777,839
Conservation Plan	57,936	64,224
Grants	65,700	35,000
Other	1,589	24,304
Interest	<u>32,756</u>	<u>20,170</u>
Total Revenue	<u>935,188</u>	<u>921,537</u>
EXPENSES		
Supervision and Accounting	262,839	332,193
Diversion Dam and Courtland Canal in Nebraska	11,410	5,189
Blocks	751,180	480,944
Drainage - Wells	14,020	34,388
Vegetation Control	41,960	25,619
Paid Leaves for Vacation, Sickness, Business and Holidays	37,917	35,108
Equipment Maintenance	(25,937)	74,628
Building Maintenance	<u>9,362</u>	<u>8,244</u>
Total Expenses	<u>1,102,751</u>	<u>996,313</u>
REVENUE OVER (UNDER) EXPENSES	<u>\$ (167,563)</u>	<u>\$ (74,776)</u>

See Accountant's Report and Accompanying Notes

**KANSAS
BOSTWICK IRRIGATION DISTRICT NO. 2
Courtland, Kansas**

EXHIBIT C

**STATEMENT OF CHANGES IN
MEMBERS EQUITY
For the Year Ended December 31, 2006 and 2005**

	<u>Retained Earnings Reserved</u>	<u>Retained Earnings Unreserved</u>	<u>Total</u>
<u>December 31, 2006</u>			
Balances at Beginning of Year	\$ 844,061	\$ 514,030	\$ 1,358,091
 Net Loss		(167,563)	(167,563)
Transfers from Reserves	(165,150)	165,150	0
Transfers To Reserves	<u>29,115</u>	<u>(29,115)</u>	<u>0</u>
Balances at End of Year	<u>\$ 708,026</u>	<u>\$ 482,502</u>	<u>\$ 1,190,528</u>
<u>December 31, 2005</u>			
Balances at Beginning of Year	\$ 792,950	\$ 639,917	\$ 1,432,867
 Net Loss	0	(74,776)	(74,776)
Transfers To Reserves	<u>51,111</u>	<u>(51,111)</u>	<u>0</u>
Balances at End of Year	<u>\$ 844,061</u>	<u>\$ 514,030</u>	<u>\$ 1,358,091</u>

See Accountant's Report and Accompanying Notes

KANSAS
BOSTWICK IRRIGATION DISTRICT NO. 2
Courtland, Kansas

EXHIBIT-D1

STATEMENT OF CASH FLOWS
For the Year Ended December 31, 2006 and December 31, 2005

Year 2006

	<u>Unrestricted Funds</u>	<u>Restricted Funds</u>	<u>Total</u>
CASH FLOWS FROM OPERATING ACTIVITIES:			
Cash Received From:			
Assessments	\$ 777,207	\$ 0	\$ 777,207
Conservation Plans	73,542	0	73,542
Other	1,589	0	1,589
Interest	32,756	0	32,756
Grants	65,700	0	65,700
	<u>950,794</u>	<u>0</u>	<u>950,794</u>
Cash Disbursed For:			
Operating Expenses	<u>(967,775)</u>	<u>0</u>	<u>(967,775)</u>
Net Cash used By Operating Activities	<u>(16,981)</u>	<u>0</u>	<u>(16,981)</u>
CASH FLOWS USED BY INVESTING ACTIVITIES:			
Cash Disbursed For:			
Additions to Plant, Property and Equipment	<u>(47,643)</u>	<u>0</u>	<u>(47,643)</u>
CASH FLOWS FROM FINANCING ACTIVITIES:			
Cash received From:			
Transfers from Reserves	<u>165,150</u>	<u>(165,150)</u>	<u>0</u>
Cash Disbursed For:			
Transfer to Reserves	<u>(29,115)</u>	<u>29,115</u>	<u>0</u>
Net Cash Provided (Used) By Financing Activities	<u>136,035</u>	<u>(136,035)</u>	<u>0</u>
Net Increase (Decrease) in Cash and Cash Equivalents	<u>\$ 0</u>	<u>\$ 0</u>	<u>(64,624)</u>
Cash and Cash Equivalents at Beginning of Year			<u>886,435</u>
Cash and Cash Equivalents at End of Year			<u>\$ 821,811</u>
Consisting of:			
Cash			\$ 113,785
Investments			<u>708,026</u>
Total			<u>\$ 821,811</u>
Depreciation			<u>\$ 48,818</u>
Interest			<u>\$ 0</u>

KANSAS
BOSTWICK IRRIGATION DISTRICT NO. 2
Courtland, Kansas

EXHIBIT - D3

STATEMENT OF CASH FLOWS
For the Years Ended December 31, 2006 and 2005

Year 2005

	<u>Unrestricted Funds</u>	<u>Restricted Funds</u>	<u>Total</u>
CASH FLOWS FROM OPERATING ACTIVITIES:			
Cash Received From:			
Assessments	\$ 777,839	\$ 0	\$ 777,839
Conservation Plans	51,587	0	51,587
Other	20,276	0	20,276
Interest	20,170	0	20,170
Grants	<u>46,000</u>	<u>0</u>	<u>46,000</u>
	915,872	0	915,872
Cash Disbursed For:			
Operating Expenses	<u>(956,460)</u>	<u>0</u>	<u>(956,460)</u>
Net Cash Provided By Operating Activities	<u>(40,588)</u>	<u>0</u>	<u>(40,588)</u>
CASH FLOWS USED BY INVESTING ACTIVITIES:			
Cash Disbursed For:			
Additions to Plant, Property and Equipment	<u>(49,439)</u>	<u>0</u>	<u>(49,439)</u>
CASH FLOWS FROM FINANCING ACTIVITIES:			
Cash Disbursed For:			
Transfer to Reserves	<u>(51,111)</u>	<u>51,111</u>	<u>0</u>
Net Cash Provided (Used) By Financing Activities	<u>(51,111)</u>	<u>51,111</u>	<u>0</u>
Net Increase(Decrease) in Cash and Cash Equivalents	\$ <u>(141,138)</u>	\$ <u>51,111</u>	(90,027)
Cash and Cash Equivalents at Beginning of Year			\$ <u>976,462</u>
Cash and Cash Equivalents at End of Year			\$ <u>886,435</u>
Consisting of:			
Cash			\$ 42,337
Investments			<u>844,098</u>
Total			\$ <u>886,435</u>
Depreciation			\$ <u>51,341</u>
Interest			\$ <u>0</u>



Kathleen Sebelius, Governor
Adrian J. Polansky, Secretary

www.ksda.gov

January 24, 2007

Dr. Ann Bleed, Director
Nebraska Department of Natural Resources
301 Centennial Mall South
Lincoln, Nebraska 68509-4676

Dear Ms. Bleed:

Congratulations on your recent appointment as Director of the Department of Natural Resources (DNR). We are looking forward to working with you and your staff in dealing with many issues important to both of our states. We appreciate that both you and Governor Heineman seem to understand Nebraska's Compact obligations and the need to take them seriously. One example of this is the Governor's statement on December 14, 2006, where he said, "Our No. 1 goal for 2007 should be to be in compliance for that year." I agree.

On the other hand, it is not clear that the Nebraska Natural Resource Districts (NRDs) fully understand Nebraska's Compact obligations, especially its obligations under the Water-Short Year provisions of the Final Settlement Stipulation (FSS). They don't seem to see the need for immediate and significant actions to reduce consumptive water use to come into compliance.

As you know, the first Water-Short Year test of compliance under the Settlement is for the year 2006. Unfortunately, every indication is that Nebraska will be out of compliance with this test. The U.S. Bureau of Reclamation is projecting that 2007 will be another year with Water-Short Year Administration in effect and that the Bostwick water supply will be zero. Barring an extremely wet 2007, or without substantial action in 2007, it seems likely that Nebraska will fail both the Water-Short Year test for 2007 as well as the first five-year test of compliance for 2003 through 2007. For the first three years under Compact accounting, Nebraska overused its allocations by over 100,000 acre-feet. It is hard to imagine Nebraska being able to comply in 2007 and beyond without a significant curtailment of pumping from the beginning of the 2007 irrigation season. Yet, so far, we observe no discussion by the NRDs of pumping curtailment or reductions for 2007, much less consideration being given to implementation.

Nebraska's failure to reduce water use has and is significantly increasing the hardships experienced by Kansas water users and there is no end to these hardships foreseeable in the near future. This is unacceptable in my view and cannot continue.

Dr. Ann Bleed
Page 2
January 24, 2007

Given Nebraska's overuse in every accounting period to date, and the current water-short conditions, it is apparent that there will need to be substantial curtailment or reductions in groundwater pumping to limit Nebraska's consumptive use to its Compact allocation.

Nebraska's noncompliance is likely to be exacerbated by a number of actions, omissions and misconceptions being discussed at NRD board meetings and elsewhere, including, among others, the following:

- 1) NRD allocations. The NRDs are apparently not considering additional reductions in allocations for 2007 or limitations in carry-over of unused allocations.
- 2) NRD transfers/variances. Among recent NRD actions have been the approval of the transfers of unused allocations from wells enrolled in EQIP and CREP programs to other active irrigation wells, transfers of fragmented acres not enrolled in CREP and not currently irrigated to new consolidated tracts, and approval of variances for new industrial uses without full offsets.
- 3) Augmentation wells and imports. The NRD's and others are discussing plans to develop augmentation wells for pumping into the streams above key gages as a means to offset stream depletions. We note that FSS Subsections III.B.1.k, and IV H require such plans be approved by the Republican River Compact Administration (RRCA) prior to implementation.

Similarly, the NRDs and others have been discussing the potential for bringing in additional water from outside the Basin. Imported water supply credits can only be included in the modeling and accounting with the approval of the RRCA.

In either case, the RRCA groundwater model and the RRCA accounting procedures require full consideration of all the impacts of such actions. Moreover, without careful management, such waters would likely be largely consumed in Nebraska. For both reasons, benefits to Nebraska will likely be much less than anticipated.

- 4) Removal of non-native invasive riparian vegetation. Although the removal of phreatophytes and their replacement by less consumptive vegetation could cause some relatively small increases in Computed Water Supply, there is little consideration given to the fact that Nebraska would only receive a portion of the increase as increased allocation. Further, the reduced phreatophyte area must be input into the RRCA groundwater model, likely reducing the predicted ET salvage, further diminishing any benefit to Nebraska.
- 5) Conservation measures. The effect of conservation measures has also been discussed, under the apparent assumption that the RRCA groundwater model and the accounting procedures are flawed due to the lack of consideration of these impacts. This is not the case. While the runoff portion of stream flow has declined, this decline is not assigned to stream flow depletions by groundwater pumping. The model was calibrated based on the depletive effect of groundwater pumping on base flows. The gage values used in the calculation of Computed Water Supply may reflect a reduction in streamflow due to conservation measures and other

Dr. Ann Bleed
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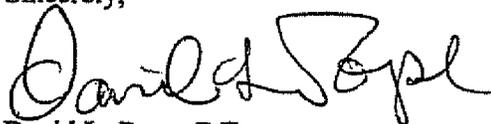
practices, but none of the states are charged with that depletion as consumptive use, whatever its cause.

I also understand that the Unicameral is considering legislation that may have the potential to further thwart the State's ability to comply with the Compact. Compact compliance is a responsibility of the State of Nebraska and any measure that would further complicate the ability of the State of Nebraska to comply would not be in the best interests of either of our states.

The FSS requires that Nebraska report to Kansas by April 30 as to how it plans to come into compliance this year. The FSS also requires that, "In each Water-Short Year Administration year, Nebraska will advise the other States and the United States no later than June 30 of the measures it has taken or will take for the year..." I am most interested in hearing your plans and actions for coming into compliance, both on April 30 and on June 30 in 2007.

I felt that I should provide you with my concerns as soon as possible so that they may be addressed immediately. These are only my initial reactions to the developments described above. Other concerns may arise upon further consideration. Thank you again for the efforts you have made thus far in furthering Nebraska's Compact compliance efforts.

Sincerely,



David L. Pope, P.E.
Chief Engineer

DLP/db/dlh

By Fax and U.S. Mail

Totals for Certified Groundwater Irrigated Acreage by NRD in the Republican River Basin(excludes CREP acreage) as of April 2008

Source of Data: Nebraska DNR Response to KS Questions, April 2008

NRD	Certified Irrigated Acreage
Upper Republican NRD	447,287
Middle Republican NRD	292,819
Lower Republican NRD	302,980
Tri-Basin NRD	189,426
Total	1,232,512

Total acre-feet of unused carry-forward allocation currently accrued by NRD by County

Source of Data: Nebraska DNR Response to KS Questions, April 2008

Lower Republican NRD	Acre-Feet
Franklin	75,538
Furnas	46,388
Harlan	78,192
Nuckolls	8,091
Webster	34,978
LRNRD Total	243,187
Middle Republican NRD	
Frontier	76,028
Hayes	67,508
Hitchcock	36,576
Lincoln	55,026
Red Willow	52,760
MRNRD Total	287,898
Upper Republican NRD	
Dundy	351,922
Chase	979,203
Perkins	1,076,516
URNRD Total	2,407,641
Tri-Basin	
Kearney	<i>not applicable no allocations</i>
Hayes	<i>not applicable no allocations</i>
Hitchcock	<i>not applicable no allocations</i>
Basin Total	2,938,726

Republican River Basin Integrated Management Plans

Special Meeting of the
Republican River Compact Administration
March 11 and 12, 2008
Kansas City, Missouri

The Nebraska Department of Natural Resources (DNR) in conjunction with all three natural resources districts (NRDs) in the Republican River Basin have recently adopted revisions to their Integrated Management Plans (IMPs). These revisions are to be used for the years 2008 through 2012. The revisions will ensure that Nebraska maintains compliance with the Republican River Compact and the Final Settlement Stipulation (Compact). The Integrated Management Plans and the rules to implement the plans for each district are attached as Appendices A, B, and C.

To establish the required revisions to the IMPs to achieve Compact compliance, the DNR used the Republican River Compact Administration Ground Water Model to assess the level of reductions in ground water pumping that would achieve Compact compliance. If the basin experiences average precipitation over the next five-year allocation period, the DNR modeling and accounting for this period estimates that with a 20% reduction in baseline pumping Nebraska will maintain an Allocation plus Imported Water Supply Credit minus CBCU of around 19,000 acre-feet a year. This analysis is described in Tab 3b of this binder. Baseline pumping is the average pumping volumes of each NRD for the years 1998 through 2002. Thus, the IMPs, controls, rules and regulations were revised to achieve the 20% reduction target under average precipitation conditions.

In addition, to ensure that the Compact requirements will be met no matter what water conditions occur in the basin, the IMPs contain provisions that the average net depletions due to ground water pumping shall be no greater than each NRD's allotted percentage of the allowable ground water depletions. The allowable ground water depletions are the maximum level of depletions to stream flow from groundwater pumping within the Republican River Compact area that can be allowed without exceeding the Compact allocation. The allotted percentage was based on the percentage of the depletions to streamflow caused by ground water pumping in each NRD for the years 1998-2002.

Augmentation and Incentive Programs

In 2007 legislation was passed that gives additional authority to the NRDs to levy taxes on irrigated land and or levy property taxes for the purpose of developing incentive programs, augmentation plans or the purchase of surface water to ensure Compact compliance. The intent of the NRDs is to use this new authority to fund incentive plans, augmentation projects and the additional purchases of surface water when needed to ensure compliance with the Compact.

In addition all NRDs and the State of Nebraska have been and will continue to participate in federal programs such as EQIP and CREP to retire irrigated acres in the basin.

Nebraska is also developing an augmentation program to further enhance streamflow in dry years.

Appendices

- A. Lower Republican Integrated Management Plan and Rules and Regulations
- B. Middle Republican Integrated Management Plan and Rules and Regulations
- C. Upper Republican Integrated Management Plan and Rules and Regulations