United States Department of the Interior

BUREAU OF RECLAMATION
Great Plains Region
Nebraska-Kansas Area Office
P.O. Box 1607
Grand Island, Nebraska 68802-1607

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NK-100
WTR-4.11 FV

NOV - 1 2007

BUREAU OF RECLAMATION NEBRASKA-KANSAS PROJECTS McCook, Nebraska		
11-2-07 Date Received		
Code	Initials	Action
400		
410		
Action Completed By:		
Initials	Date	

Upper Republican Natural Resources District
PO Box 1140
Imperial, NE 69033

Subject: Written Testimony, Upper Republican Natural Resources District (URNRD) Public Hearing

Dear Sir:

Enclosed is the written testimony of the Bureau of Reclamation, Nebraska-Kansas Area Office submitted for the public hearing records as conducted by the URNRD regarding the proposed modifications of the integrated management plan and amendments to controls pertaining to Groundwater Control in the URNRD. Specific comments concerning the draft integrated management plan are included as part of the above-referenced testimony.

Thank you for the opportunity to provide testimony and comments to your proposed integrated management plan. If you have any questions, please contact me at the above address or telephone 308-389-5300.

Sincerely,

Aaron M. Thompson

Aaron M. Thompson
Area Manager

Enclosure

KAN. EXHIBIT 78
Kan. v. Neb & Colo. No. 126, Orig.
Arbitration Initiated 10/21/08

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TransmittalLtrWRittenTestimonyURNRD10302007.doc WTR-4.11 FV

Statement of the Bureau of Reclamation
Nebraska-Kansas Area Office
Aaron M. Thompson, Area Manager

Regarding Proposed Integrated Management Plan for the Upper Republican Natural Resources District

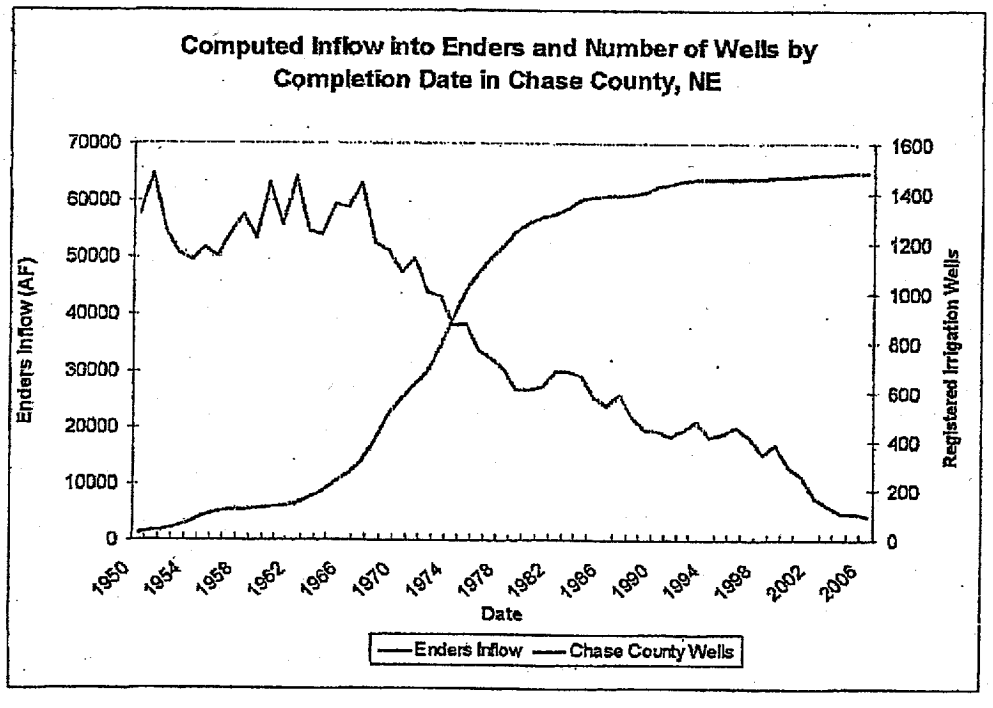
November 1, 2007

EXPERTISE

This statement was prepared by Bureau of Reclamation (Reclamation) personnel having extensive experience with the hydrology of the Republican River and the construction and operation of Reclamation and Corps of Engineers projects in the basin. This experience also includes considerable involvement with the Republican River Compact (Compact) calculations and the 1998 Compact litigation and 2002 settlement.

RECENT HISTORY

The original Compact, signed in 1942, was negotiated and drafted with the knowledge that significant federal water resource development was being planned for the basin. The natural flow rights associated with the Federal projects have priority dates that vary from 1890 to 1954 and numerous small rights with later priority dates. An increase in groundwater wells in the Basin, for irrigation development, became particularly evident in the late 1960's. The following graph shows the increase in the number of wells over time which corresponds closely with a noticeable decline in inflow to Enders Reservoir.



On May 26, 1998, Kansas filed a complaint with the United States Supreme Court (Court). Kansas alleged that the use of groundwater wells had resulted in the appropriation by the State of Nebraska of more than its allocated equitable share of the waters of the Republican River. In 2000 the Supreme Court ruled that the Republican River Compact restricts a compacting State's consumption of groundwater to the extent the consumption depletes stream flow in the Republican River Basin. A Stipulated Settlement was reached and approved by the Court in May 2003. This Stipulated Settlement established general terms governing the settlement, Compact accounting, and additional administration requirements.

In 2007, the NRD Coalition signed agreements with several Irrigation Districts to lease portions of their water supplies to assist with Nebraska's Compact Compliance. Due to current pending litigation it is uncertain when payment may be made to these Irrigation Districts. This uncertainty could negatively affect the future working relationships of all parties involved, including this agency.

COMPACT RULES AND CALCULATIONS

Changes to the Compact accounting calculations resulting from the 2003 Settlement Stipulation included the accounting of all groundwater depletions and averaging the states' consumptive use and its Compact allocation over a period of years. The accounting procedure relating to reservoir storage was also changed such that water stored in Federal reservoirs is not counted as part of the basin water supply until it is released from the reservoir. Water released from Federal reservoirs becomes Compact water subject to allocation only after it is either diverted or flows by a Compact gage. Water released from reservoirs in Nebraska becomes Compact supply and is allocated accordingly. As a result, the release of stored water for diversion and use by Nebraska irrigation districts is beneficial to Nebraska's Compact compliance. This release of stored water increases Nebraska's Compact allocation by an amount that exceeds the resulting consumptive use assigned to Nebraska. This results in a net positive contribution to Nebraska's Compact compliance. On the other hand, pumping of groundwater in Nebraska results in an increase to Nebraska's allocation that is less than the increase in consumptive use that results from the groundwater use. Because of the current imbalance of groundwater use in the basin, groundwater depletions have resulted in significant Compact compliance deficits for Nebraska.

CURRENT CONDITIONS

For the 1998-2002 baseline period, Nebraska's total allocation averaged 288,000 acre-feet/year. Since official Compact accounting began in 2003 through 2006, Nebraska's allocation has averaged 205,000 acre-feet and Nebraska's use has averaged 250,000 acre-feet, each year resulting in computed beneficial consumptive use exceeding the allocation. This deficit follows the reduction in surface water supplies in the basin. Nebraska is currently using about 75% of the total water being used in the basin while it is allocated about 56% of the total Compact supply. This has created the deficits ranging

from about 25,000 to 40,000 acre-feet annually since Compact Settlement accounting was initiated.

CONCERNS

Reclamation is very concerned with Nebraska's failure to meet Compact compliance since Compact compliance accounting was reinitiated in 2003. Reclamation is even more concerned about the continuing depletion of inflows to the Federal reservoirs (namely Enders Reservoir and Swanson Lake). Federal projects were constructed based on the concept that project surface water rights would be protected. It needs to be noted that Enders Reservoir has experienced the most severe reduction in inflows of all Federal reservoirs in the Republican River Basin in Nebraska. Prior to construction of Trenton and Enders Dams, a Definite Plan Report (DPR) was prepared by Reclamation for Congress. The following table shows the average flows that were included in the DPR compared to the actual flows experienced since 1956. The table depicts the historic decline of inflows since the projects were first developed. Of specific concern is the inflow decline over the last 20 year period. This decline cannot be attributed to a decline in precipitation. The average precipitation of Republican River Compact Administration precipitation stations for the 1986-2005 period was 20.98 inches, which is 103% above the 1918-2005 average.

RESERVOIR INFLOW COMPARISONS – Acre-Feet

RESERVOIR	DPR AVERAGE	20 Yr AVERAGE 1956-1975	20 Yr. AVERAGE 1986-2005	5 Yr. AVERAGE 2001-2005	ACTUAL 2006
SWANSON	115,300	102,000	45,000	17,700	12,000
ENDERS	55,100	52,600	16,200	6,800	4,200
TOTALS	170,400	154,600	61,200	24,500	16,200
Percentage of DPR		91%	36%	14%	10%

Reduced surface water supplies have caused project water deliveries, throughout the Basin, to decline over the last 40 years. Activities in the URNRD directly impact the water supply for several canals associated with Federal projects in the Basin. Declines in return flows from these canals have reduced supplies to downstream Federal projects. The following table indicates the canal deliveries for several time periods showing a progressive decline in water deliveries to the farms.

WATER DELIVERIES – INCHES/ACRE

	CULBERTSON CANAL	CULBERTSON EXTENSION CANAL	MEEKER-DRIFTWOOD CANAL	BARTLEY CANAL
1966-1975	16.8	14.6	16.8	15.9
1976-1985	13.5	7.9	13.5	13.6
1986-1995	12.4	5.1	12.4	10.7
1996-2005	7.1	2.7	7.1	6.1
2006	0.0*	0.0	0.0	4.9
2007	0.0*	0.0	0.0	0.0

* No storage water delivered; natural flow sold to DNR and NRD's.

Under Legislative Findings, Nebraska Statute 46-703, "The Legislature further finds: (1) The management, conservation, and beneficial use of hydrologically connected ground water and surface water are essential to the continued economic prosperity and well-being of the state, including the present and future development of agriculture in the state; (2) **Hydrologically connected ground water and surface water may need to be managed differently from unconnected ground water and surface water in order to permit equity among water users and to optimize the beneficial use of interrelated ground water and surface water supplies; . .** (4) The Legislature recognizes that ground water use or surface water use in one natural resources district may have adverse affects on water supplies in another district or in an adjoining state. **The Legislature intends and expects that each natural resources district within which water use is causing external impacts will accept responsibility for ground water management in accordance with the Nebraska Ground Water Management and Protection Act in the same manner and to the same extent as if the impacts were contained within that district; . ."**

According to NE Stat. 46-715, the Integrated Management Plan (IMP) should include clear goals and objectives with the purpose of sustaining the balance between water uses and water supplies. Reclamation is very concerned with this balance in the Basin as it relates to surface water supplies for existing surface water uses. Based on indications from model runs that provide inflow values for Enders Reservoir, streamflows will continue to decline even with 20% reduction in pumping and average hydrologic conditions.

REALITY

Republican River Compact overall allocations for Republican River waters are Nebraska 49.0%, Kansas 39.7% and Colorado 11.3%. Nebraska groundwater pumping is currently causing over 80% of the depletion to the streamflows in the Basin. As long as the

groundwater depletion is at this at or near this percentage level, significant surface water will be needed to offset Nebraska's groundwater depletion and to achieve Compact Compliance. The deficit offset is likely to be as much as 60,000 to 75,000 acre-feet per year.

It is obvious to Reclamation that the use of available storage water from the Federal projects by irrigation districts is beneficial to Nebraska's Compact compliance. Continuing to allow pumping at the current levels or even a 20% reduced levels will only further reduce streamflow resulting in a reduction in the quantity of stored water available to supply surface water users. Reducing groundwater depletions will gradually allow the streamflows to recover and result in improved chances to maintain long term compliance. Storage water use during normal operations by the irrigation districts improves the chances of Compact compliance as this increases the total Compact supply allocated to Nebraska.

COMPACT ADMINISTRATION

The hydrologists and others associated with the Compact Administration have stated that significant reduction in groundwater depletions is necessary for Nebraska to come into long-term compliance with the Compact. Although Colorado has been slow to act it now appears that they are in the process of making significant reductions in its groundwater use to achieve Compact compliance. Reclamation agrees that long-term Compact compliance can only be achieved through significant reductions in groundwater use in Nebraska and Colorado.

EXPECTATIONS

The Bureau of Reclamation expects the water rights associated with the authorized Federal multipurpose projects that were in the Republican River Basin be protected by Nebraska Department of Natural Resources and the Natural Resource Districts. Reclamation expects to continue to operate the Federal projects for their authorized purposes. With the exception of wet periods, Reclamation does not believe that the IMP proposed by the URNRD and DNR will result in Nebraska meeting long-term Compact Compliance. Reclamation requests action by the NRDs and the State of Nebraska to place further and sufficient restriction on groundwater pumping that will allow streamflows to recover, provide equity among water users, and assist Nebraska in achieving Compact compliance.

SPECIFIC COMMENTS

1. Reclamation believes that any waters that appear as streamflow is subject to storage and surface water use in accordance with Nebraska surface water statutes.
2. It's not clear how credits and benefits from streamflow augmentation projects will be calculated.

3. Proposed IMP does not address improving long-term surface water flows nor make up existing deficits. Improved surface water flows will be needed to achieve long-term compliance.
4. Reclamation has not seen data for other areas but the data for Enders indicated that inflows will continue to decline with average pumping reductions of 20%, therefore the long-term surface water supplies will be unavailable for use or augmentation. Other reservoir inflows are likely to be similar.
5. The URNRD's current pumping volumes are near 20% reduction from the 98-02 baseline volumes discussed in the IMP. Reductions may need to be higher to improve surface water supplies and achieve long-term compliance. Nebraska has been out of compliance since 2003 and surface water supplies have continued to decline.
6. It is difficult to understand the URNRD's practice of allowing carryover to future years of any unused allocation when there are pumping limits associated with the proposed plan.
7. Under B. Objectives #4 - How would the additional reductions be determined when the accounting computations are not available until after the year is over? What reductions would be required when not in a water short year designation but Nebraska is out of compliance with the Compact?
8. 1st Paragraph Ground Water Controls - Reclamation believes that basin-wide reductions must be made to obtain long-term compliance. Reductions in quick-response areas may be effective for short-term compliance help.

CONCLUSION AND FINAL STATEMENT

Due to the reduced streamflow in the URNRD, surface irrigators and their water rights have been adversely affected by receiving inadequate water supplies far less than what was expected from the Federal projects. The reduced water deliveries have significantly reduced the economic benefits provided by the projects. Other impacts associated with reduced streamflows result in reduced reservoir levels which negatively impacts the recreational and fish and wildlife benefits associated with these projects.

I would like to note that Paragraph IV of the Integrated Management Plan of the Proposed Rules and Regulations states the goals and objectives of an integrated management plan must have as a purpose "sustaining a balance between water uses and water supplies so that the economic viability, social and environmental health, safety, and welfare of the Republican River Basin can be achieved and maintained for both the near term and the long term." Sustained surface water inflows to the Federal reservoirs provide not only irrigation benefits, but also significant recreation and fish and wildlife benefits to the area.

Of grave concern is goal number 5 as stated in the draft IMP. Goal number 5 states "Reserve any streamflow available from regulation, incentive programs, and purchased or leased surface water required to maintain compact compliance from any use that would negate the benefit of such regulations or programs." The Federal reservoirs and surface

water irrigators have a severely diminished water supply. The interpretation that has to be assumed from Goal number 5 is there never will be an improved, restored surface water supply. This is not consistent with Nebraska Statute 46-703 and is not acceptable to Reclamation. It needs to be noted that the most senior water rights in the basin are the surface water rights that are currently not being provided "equity among water users" and with Goal number 5, will not be in the future.

In conclusion, Reclamation is fully supportive of the Federal projects and these projects should continue to operate as planned and authorized. Continued operation of these projects requires the protection of existing water rights and restoration of inflows to the reservoirs. Reclamation requests action by the NRDs and the State of Nebraska to protect and restore streamflows and inflows to the reservoirs, provide equity among water users, and assist Nebraska to achieve Compact compliance.

Aaron M. Thompson

Aaron M. Thompson, Area Manager