Dave Heineman
Governor

STATE OF NEBRASKA

DEPARTMENT OF NATURAL RESOURCES

Brian P. Dunnigan, P.E.
Director

March 29, 2013

IN REPLY TO:

David Barfield, P.E.
Kansas Commissioner, RRCA
Kansas State Engineer
Division of Water Resources
109 SW 9th Street, 2nd Floor
Topeka, KS 66612-1283

Dick Wolfe, P.E.
Colorado Commissioner, RRCA
Colorado State Engineer
Colorado Division of Water Resources
1313 Sherman Street, Room 818
Denver, CO 80203

RE: Nebraska's Notification that it will Implement its Alternative Water-Short Year Administration Plan

Dear Commissioners Barfield and Wolfe:

Pursuant to the terms of Appendix M, paragraph 4 of the Final Settlement Stipulation, Nebraska hereby provides notice to the Republican River Compact Administration (RRCA) that it intends to implement the State of Nebraska's Plan for Reduction of Computed Beneficial Consumptive Uses under Alternative Water-Short Year Administration (Plan) in 2013. The Plan was submitted to the RRCA on July 30, 2012. This was followed by a subsequent projection by the United States Bureau of Reclamation on October 3, 2012, that 2013 would be a Water-Short Year. Nebraska put forth a resolution for approval of its Plan to assist with its Compact compliance efforts in 2013 at the October 23, 2012, Annual Meeting of the RRCA. This resolution was supported by the State of Colorado and voted down by the State of Kansas. The Plan is currently the subject of non-binding arbitration invoked by the State of Nebraska on February 8, 2013. Therefore, Nebraska currently intends to implement the Plan pending the outcome of the dispute resolution process to ensure that Nebraska will receive the full benefits of the Plan in 2013 and subsequent years[1].

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[1] Under the terms of Appendix M, paragraph 6, Nebraska would not be allowed to elect Alternative Water-Short Year Administration next year if Nebraska failed to elect Alternative Water-Short Year Administration this year (unless this year ultimately is not designated as water-short). The harm to Nebraska resulting from the lack of resolution over the dispute surrounding the Plan therefore may extend to 2014 at a minimum.

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The Plan outlined that the Compact Call Year provisions in Nebraska's Integrated Management Plans (IMPs) would serve as the foundation for expected Computed Beneficial Consumptive Use (CBCU) reduction under the Plan. These include groundwater curtailments and surface water administration, and could also include alternative management actions, such as: retirement of irrigated acreage; leasing of surface water CBCU; allocation of groundwater pumping; and augmentation of streamflows. The amount of expected CBCU reduction that it could achieve through the Compact Call Year provisions of the IMPs ranged from 0 to 15,089 acre-feet in the first year, with the exact value dependent on the level of actions necessary to comply with the Compact.

The Plan also provided the detailed forecasting process contained in Nebraska's IMPs. The forecast aims to identify the expected Compact balance that Nebraska will obtain if the next year (in this case, 2013) is dry. The forecast uses many conservative assumptions (e.g., extremely dry year, 10,000 acre-feet cushion, etc.) and has been back-tested against recent drought conditions in the basin to ensure that Nebraska's actions will be sufficient to ensure Compact compliance (Schneider, 2012[2]).

Since the Annual Meeting of the RRCA, Nebraska has continued its efforts to implement its Plan, including forecasting and identifying the magnitude of a potential shortfall that would exist if management actions were not taken in 2013 for the applicable compliance tests in 2013. Nebraska's preliminary 2012 accounting for the basin upstream of Guide Rock indicates an annual balance of 13,900 acre-feet, and Nebraska's 2012 dry-year forecast for the basin upstream of Guide Rock indicates an annual balance of -22,960 acre-feet. These results, along with the projection of a Water-Short Year for 2013, lead Nebraska to implement the Plan for 2013.

The Plan identifies that Nebraska's must reduce the impact of its CBCU by half of what would have been necessary under the two-year averaging test, and take any additional steps to reduce the impact of its CBCU to ensure that the three-year average is greater than or equal to zero. This concept is laid out in Equation 1 of the Plan as follows:

Equation 1: Calculation of expected CBCU reduction when Nebraska implements this Plan

$$0.5 \times |\text{Year}_{-1\,CB} + \text{Projected Year}_{0\,CB}| = \text{Expected CBCU Reduction}$$

Where:

$\text{Year}_{-1\,CB}$ = Nebraska's Compact balance for the previous year

$\text{Projected Year}_{0\,CB}$ = Nebraska's projected Compact balance for the current year if no additional management actions were taken

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[2] Nebraska Responsive Expert Report Concerning Nebraska's Future Compliance, James C. Schneider, Ph.D., March 15, 2012.

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Plugging in the values from above for 2012 and 2013, the Expected CBCU Reduction is 4,530 acre-feet. The value for the expected reduction in the impact of CBCU is inserted into Test One. The Test One equation is illustrated below with the results illustrated in Table 1.

Equation 2: Calculation of compliance with Test One

$$[\text{Year}_{-1\,CB} + \text{Year}_{0\,CB} + \text{Expected CBCU Reduction}] = \text{Test One Balance}$$

Where:

$\text{Year}_{-1\,CB}$ = Nebraska's Compact balance for the current year

$\text{Year}_{0\,CB}$ = Nebraska's Compact balance for the current year with management actions implemented

Expected CBCU Reduction = Management actions taken to reduce the impact of CBCU (4,530 acre-feet).

Table 1. Results of Test One under the Plan.

Test One	
Previous Year (Year $_{-1\,CB}$)	13,900
Expected CBCU Reduction	4,530
Current Year (Year $_{0\,CB}$) with Management Actions	-18,430
Test One Balance	0

Nebraska understands that compliance with Test One will ultimately be determined using the Expected CBCU Reduction and comparing this to the sum of the final Compact balances for the appropriate two years (Year $_{-1\,CB,}$ and Year $_{0\,CB}$).

In addition to satisfying the requirements of Test One, Nebraska must also make any additional reductions in CBCU necessary such that the three-year running average would result in a value

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greater than or equal to zero (compliance with Test Two). Providing additional reductions of the expected CBCU would only be necessary if the three-year running average were to result in a negative value even after the CBCU reductions used to satisfy the requirements of Test One were implemented. The quantities of additional reductions in the expected CBCU that may be necessary to comply with Test Two are calculated by the following equation.

Equation 3: Calculation of expected additional CBCU reduction

$$\text{Year}_{-2\,CB} + \text{Year}_{-1\,CB} + \text{Projected Year}_{0\,CB} + \text{Expected CBCU Reduction} = \text{Additional Expected CBCU Reduction}$$

Where:

$\text{Year}_{-2\,CB}$ = Nebraska's Compact balance for the year prior to previous year

$\text{Year}_{-1\,CB}$ = Nebraska's Compact balance for the previous year

$\text{Projected Year}_{0\,CB}$ = Nebraska's projected Compact balance for the current year if no additional management actions were taken

Expected CBCU Reduction = the results from Equation 1, inserted as a positive value

Nebraska's current estimate for her Compact balance above Guide Rock for 2011 is 53,280 acre-feet. Based on this and the values from above for 2012 and 2013, no additional CBCU reductions will be necessary as the projection is that the three-year average will be positive. Nebraska understands that this does not represent a final assessment of Compliance with Test Two. Compliance with Test Two will ultimately be determined by averaging the final Compact balances for the appropriate three years ($\text{Year}_{-2\,CB}$, $\text{Year}_{-1\,CB}$, and $\text{Year}_{0\,CB}$).

Thus, Nebraska hereby elects to implement the Plan and will do so by initiating reductions in its CBCU by an amount of 4,530 acre-feet. This falls within the range identified for the Plan of zero to 15,089 acre-feet. For 2013, Nebraska's management actions under the Plan will include surface water administration and augmentation of streamflows. The streamflow augmentation will be provided by Nebraska's Rock Creek Augmentation Project[3]. The total amount of streamflow augmentation in 2013 will be in excess of 10,000 acre-feet. This will provide an offset to Nebraska's CBCU in excess of 4,530 acre-feet under the current accounting procedures. The surface water administration conducted by the Department will ensure that an additional (i.e., an increase from what would have been available in the absence of Nebraska's management actions) 4,530 acre-feet of water will be provided to Kansas in 2013 as a direct result of the Plan. Accounting for this streamflow augmentation under Nebraska's proposed accounting procedures which were recently submitted to the RRCA as part of the Rock Creek Augmentation Plan, would result in an even greater offset to Nebraska's CBCU, likely in excess of 10,000 acre-feet.

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[3] Rock Creek Augmentation Project, submitted to the RRCA February 8, 2013.

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Due to the pending dispute over the Plan, Nebraska has initiated management actions that are in excess to those that would be required under the Plan[4]. However, this notification focuses only on the management actions that would be required under the Plan. Nebraska will seek appropriate redress for its actions over and above those that are strictly necessary under the Plan.

Nebraska looks forward to ongoing discussions regarding the resolution of the current dispute over the Plan. I hope that the straightforward nature of Plan implementation, as presented above, will help to alleviate the Kansas concerns over the Plan.

Sincerely,
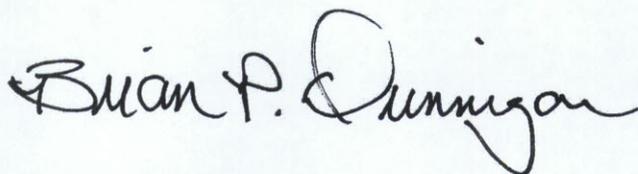
Brian P. Dunnigan, P.E.
Director

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[4] The additional actions include the reduction of irrigated acreage, thus reducing the CBCU.