

**Exhibit NCOPRE C101**

**IN RE: NON-BINDING ARBITRATION  
PURSUANT TO THE FINAL SETTLEMENT STIPULATION,  
*KANSAS v. NEBRASKA and COLORADO*  
*No. 126 Original, U.S. Supreme Court***

**NEBRASKA'S N-CORPE AUGMENTATION PLAN**

---

**BEFORE JEFFREY C. FEREDAY, ARBITRATOR**

---

**JOINT EXPERT REPORT**

**DICK WOLFE, P.E.  
STATE ENGINEER  
AND  
DR. WILLEM A. SCHREUDER  
PRINCIPIA MATHEMATICA**

---

**I. Operation of the Project**

Nebraska's Cooperative Republican Platte Enhancement Augmentation Plan Proposal ("N-CORPE Proposal" or "Proposal").

We have reviewed the N-CORPE Proposal submitted by Nebraska to the RRCA dated June 10, 2013. In addition, Nebraska provided a portable hard drive containing model runs, additional documentation and analysis of the Proposal. We studied this information provided by Nebraska to understand what the Proposal entails, how it would be incorporated into the RRCA modeling and accounting, as well as the demonstrations provided by Nebraska of how the Proposal could be used to aid Nebraska in meeting its obligations under the Compact.

We further participated in a workshop on June 27, 2013 with representatives from all three states to discuss the Proposal. Nebraska addressed all of Colorado's questions during the workshop.

## **Exhibit NCOPRE C101**

Nebraska submitted a proposed resolution on July 3, 2013 consistent with the Proposal submitted on June 10, 2013 and discussed during the workshop on June 27, 2013.

We believe that Nebraska has developed a proposal consistent with the provisions of the Final Settlement Stipulation (FSS), specifically, Subsections III.B.1.k, IV.A., IV.H. and I.F.

Nebraska has also provided revisions to the RRCA Accounting Procedures consistent with the requirements of Section I.F. of the FSS. A copy of the Accounting Procedures with proposed revisions for the N-CORPE Proposal were included with the submission on June 10, 2013. During a special meeting of the RRCA on July 9, 2013, Colorado voted to approve the N-CORPE Proposal.

It is our opinion that the N-CORPE Proposal complies with the requirements of the Republican River Compact and the FSS. The N-CORPE Proposal uses the augmentation water supply as a credit to offset beneficial consumptive use in the basin to assist Nebraska in its efforts toward compact compliance.

The N-CORPE Proposal utilizes approximately 30 new augmentation wells (the “Augmentation Wells”) as the source for augmentation water. The N-CORPE Proposal also retires 114 existing irrigation wells. The proposal retires the 15,376 acres formerly irrigated by those wells.

The Augmentation Wells are located outside the moratorium area described in the FSS, Subsections III.B.1.a.ii and III.B.1.b. Therefore, the wells and the Proposal are not subject to the “no new net depletion” requirement found in Subsection III.B.1.k.

The Proposal recognizes that overall, average annual groundwater pumping under the Project may significantly exceed the average annual historical groundwater pumping.

### **II. RRCA Groundwater Model**

The N-CORPE Proposal uses the RRCA Groundwater Model to calculate the depletion to stream baseflow that will result from pumping the Augmentation Wells. That depletion is then compared to the Augmentation Water Supply Credit (“AWS Credit”) to determine the net streamflow accretion. This approach is consistent with the FSS and Compact.

# Exhibit NCOPRE C101

## III. RRCA Accounting Procedures

The N-CORPE Proposal includes revisions to the RRCA Accounting Procedures. These revisions incorporate the AWS Credit for the Project with the calculations for determining the Virgin Water Supply, CBCU, and Imported Water Supply Credit. These modifications are consistent with the FSS and the Compact.

## IV. Conclusion

The N-CORPE Proposal satisfies the required elements of an augmentation plan utilizing wells located outside of the moratorium area under the FSS. The Proposal also includes additional elements, which are beyond those strictly required by the FSS. While these additional elements are not necessary for approval by the RRCA, Colorado recognizes and appreciates Nebraska' efforts to accommodate previous comments provided by the other states, to address any concerns the states may have related to data sharing and future tracking of Project operations, and to demonstrate additional potential operations of the Project to meet State-based objectives.



---

Dr. Willem A. Schreuder,  
President  
Principia Mathematica



---

Dick Wolfe, P.E.  
Colorado State Engineer  
Colorado Division of Water Resources