

**IN RE: NON-BINDING ARBITRATION PURSUANT TO THE
FINAL SETTLEMENT STIPULATION, *KANSAS v. NEBRASKA
AND COLORADO*,
NO. 126 ORIGINAL**

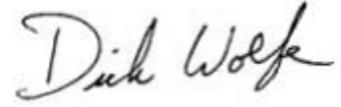
BEFORE JEFFREY C. FEREDAY, ARBITRATOR

**Direct Testimony of Dick Wolfe P.E. On Behalf of Colorado Regarding the
Nebraska Cooperative Republican Platte Enhancement Augmentation Plan
Proposal**

February 24, 2014

Exhibit NCORPE C105

I declare under penalty of perjury that the following answers are true and correct.



Dick Wolfe

1. **Qualifications/Experience**

Q Could you please state your full name and provide a spelling of your last name?

A Dick Wolfe, W-O-L-F-E.

Q And, Mr. Wolfe, could you give us a summary of your educational background?

A I have a bachelor's degree and masters of science degree in agricultural engineering from Colorado State University.

Q Did you do a thesis or coursework to achieve your masters degree?

A A thesis.

Q What was the subject of your thesis?

A Basically, it was the evaluation of the center pivot's uniformity of application of water and overall application efficiency based on wind speed. I was trying to understand the operation of center pivot irrigation systems in terms of maximizing the application efficiency and how those efficiencies are a function of how and when they're operated; specifically understanding how and to what extent operation of center pivots during windy conditions affects their ability to provide a uniform application of water on a parcel.

Q What is your current position?

A I'm currently State Engineer for Colorado and also Director of the Colorado Division of Water Resources.

Q Could you briefly summarize your duties as state engineer?

A Basically, I manage approximately 280 employees whose principal responsibilities are surface and groundwater administration throughout the state of Colorado and administration of interstate compacts and agreements. The Division is also responsible for surface and groundwater hydrologic

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studies, the hydrographic program, the public safety program for dam safety, and well inspections. I also act as Colorado's representative to several Compact or interstate decree commissions. I also sit on and advise several state boards that address Colorado water issues, such as the Colorado Ground Water Commission and the Colorado Water Conservation Board. And, most relevant here, I am Colorado's representative to the Republican River Compact Administration, or RRCA, and also act as commissioner on four other compacts.

Q And when were you appointed state engineer?

A November 26, 2007.

Q In total, how long have you been employed with the Division of Water Resources?

A A little over 20 years.

Q What other positions have you held within the division?

A When I first joined the Division of Water Resources, I was staff engineer. Then I was a team leader for Water Divisions 2, 3, and 7; and then I was the chief of water supply; and then I became the assistant state engineer prior to my appointment as the state engineer.

Q What is a team leader?

A A team leader is responsible for a group of individuals in the Denver office of the Division of Water Resources who assist our Division offices and is responsible for both surface and groundwater activities, reviewing and evaluating water court applications, review of subdivision water supply plans, issuance of water well permits, approval of substitute water supply plans and other general water review and administration duties.

Q Were you employed prior to working for the Division of Water Resources?

A Yes.

Q And what positions did you hold?

A Prior to joining the Division of Water Resources, I was a partner with Spronk Water Engineers, a private consulting firm in Denver, for seven years.

Q What types of work did you do with Spronk Water Engineers?

A I was a water resources engineer consulting on water rights issues, groundwater and surface water hydrology studies, water court applications

Exhibit NCORPE C105

including plans for augmentation and other types of activities regarding water resources engineering.

Q Have you had extensive experience developing, reviewing, and administering augmentation plans?

A Yes, under Colorado law.

Q What is the basic requirement of an augmentation plan under Colorado law?

A Remedy of injury – that is remedying the depletions to a stream that could cause material injury to a senior water right by the diversion and consumption of water by a junior water right.

Q And are you a registered professional engineer within Colorado?

A Yes.

Q Is Exhibit NCOPRE C103 a copy of your curriculum vitae?

A Yes.

Q Do you have any additions or corrections to your curriculum vitae?

A Yes. I should add my recent expert reports and expert testimony in the Rock Creek Arbitration. I understand those will be part of the record in this proceeding.

Q Have you previously been admitted as an expert witness in any prior water court cases or other cases?

A Yes, I have, several times.

Q Do you remember in what areas you were qualified as an expert?

A As one example for intrastate matters, I was admitted as an expert by the Division 3 Water Court – that is the Rio Grande Basin in 2008 in the areas of groundwater hydrology, surface water hydrology, water rights administration, and water resources engineering. In the arbitration hearing before Arbitrator Pagel in 2010 I was admitted as an expert and provided expert opinions and testimony. More recently, in the Supreme Court lawsuit by Kansas against Nebraska and Colorado, I was also admitted as an expert and provided expert opinions and testimony. And as I just mentioned, I was also admitted as expert in the previous arbitration hearing on Nebraska's Rock Creek Augmentation Project.

Q Do you have any expertise in the area of interstate compact administration?

Exhibit NCORPE C105

A Yes, I am responsible for assuring that Colorado continues to comply with the various compacts and interstate decrees by administering water rights within Colorado. I also regularly interpret and apply those compacts and interstate decrees, in the same way I must interpret permits and decrees of the Colorado courts.

2. Offer as an Expert

Colorado moves to admit Mr. Wolfe as an expert in the areas of groundwater hydrology, surface water hydrology, water rights administration, Compact and interstate water administration and water resources engineering.

3. Evaluation of Kansas' Criticism

Q. Have you reviewed the expert reports of David W. Barfield, Dale E. Book, Steven P. Larson, and Samuel P. Perkins dated January 24, 2014?

A. Yes.

Q. Do those reports express a common criticism of the Nebraska Cooperative Republican Platte Enhancement Augmentation Plan ("N-CORPE") Proposal?

A. Yes, those reports make the same general criticism of the N-CORPE Proposal—that it is necessary to account for transit losses and deduct them from the Augmentation Water Supply ("AWS") Credit, and that failing to account for transit losses will reduce Kansas' Compact allocation. But the reports offer contradicting theories on where and how transit losses should be calculated.

Q. Have you formed an opinion as to whether it is necessary to account for transit losses and deduct them from the AWS Credit?

A. Yes, I have an opinion. Neither the FSS nor the Compact requires the States to consider transit losses when calculating augmentation credit.

Q. Is that opinion described in more detail in Exhibits NCOPRE C101 and NCOPRE C102?

A. Yes, the joint opinions of Dr. Willem Schreüder and I are contained in those exhibits, including our opinion about the impropriety of accounting for transit losses to augmentation water supply.

Q. Are any of those opinions held only by Dr. Schreüder and not you?

Exhibit NCORPE C105

A. No they are fully joint opinions; we evaluated the N-CORPE Proposal, reached our conclusions and opinions and wrote and revised the report together. It is truly a joint report. Of course, Dr. Schreüder did the technical evaluations of Nebraska's modeling and he reported his conclusions based on that review.

Q. Can you explain why it is your opinion that neither the FSS nor the Compact requires the States to consider transit losses when calculating augmentation credit?

A. For many reasons, including that the Compact is not a delivery Compact. NCORPE J100: WSY/RC J63; NCORPE J103 at 24-25. Calculating augmentation credit as the amount of water that reaches Harry Strunk Reservoir or Harlan County Lake applies a delivery requirement to augmentation flows. There is no authority in the FSS or the Accounting Procedures to require a State to deliver augmentation water to a certain point, or to reduce augmentation credit to correspond to the amount that reaches a certain point. NCORPE J100: WSY/RC J63; NCORPE J100: WSY/RC J64; NCORPE J103 at 24-25.

In addition to contradicting the Compact, imposing Harry Strunk Reservoir or Harlan County Lake as delivery point is arbitrary. The Kansas expert reports offer no basis for choosing one over the other.

Furthermore, reducing the augmentation credit to correspond to the amount that reaches Harry Strunk Reservoir or Harlan County Lake would also be inconsistent with other ways Nebraska can comply. For example, by reducing surface water consumption Nebraska receives 100% credit for the amount by which it reduced its consumption. NCORPE J103 at 25. The Accounting Procedures do not consider the amount of surface flow that reaches Harry Strunk Reservoir or Harlan County Lake as a result of decreased consumption, and they would not reduce Nebraska's credit to correspond to the amount of water that reaches Harry Strunk Reservoir or Harlan County Lake. *See Id.* Again, this is because the Compact is not a delivery Compact. NCORPE J100: WSY/RC J63; NCORPE J103 at 24-25.

Q. Can you describe the conflicts between the reports of David W. Barfield, Dale E. Book, Steven P. Larson, and Samuel P. Perkins regarding where and how transit losses should be calculated?

Exhibit NCORPE C105

A. These are described in detail in our rebuttal report. The main points of our discussion there are that (1) the Kansas' experts appear to disagree about where to assess transit losses; and (2) they appear to disagree about how to calculate transit losses.

Q. Are you familiar with the criticism expressed by some of the Kansas experts that failing to account for transit losses will reduce Kansas' allocation?

A. Yes, I am familiar with it.

Q. Have you formed an opinion on the issue?

A. Yes. My opinion is that the effect on allocations is irrelevant, since there is no justification in the FSS for amending the Accounting Procedures to treat augmentation water differently than any other water in the Basin. NCORPE J100: WSY/RC J63; NCORPE J100: WSY/RC J65; NCORPE J103 at 25. Augmentation is for the purpose of offsetting stream depletions ("CBCU"). NCORPE J100: WSY/RC J64 at § III.B.1.k. Augmentation water supply is counted as an offset to CBCU once it is in the stream. NCORPE J103 at 25. Once the water is in the stream, it should be treated as any other surface water and should not be subject to accounting for transit losses. NCORPE J103 at 25.

Q. Would you like to add anything else to your testimony?

A. Yes. I would like to incorporate the opinions contained in my reports and testimony in the Rock Creek Arbitration to the extent necessary to respond to Kansas' criticisms of the N-CORPE project. NCORPE J100: WSY/RC C001-C004.

Colorado moves to admit Exhibits NCOPRE C101, NCOPRE C102, NCOPRE C103, NCOPRE C104 and NCOPRE C105.

No further questions for this witness; Colorado reserves its right to redirect examination and to present rebuttal testimony from this and other witnesses.