



Dave Heineman
Governor

STATE OF NEBRASKA

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DATE:

May 19, 2008

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TO:

Name

Ron Theris

Agency/Co

DNR

Phone

471-2900

Fax

FROM:

Name

Neil Moseman

State of Nebraska

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DEPARTMENT OF
NATURAL RESOURCES

TOTAL NUMBER OF PAGES INCLUDING COVER PAGE: _____

Per your request

Please Review

Urgent

For your information

COMMENTS:

Ron,

I have shared w/ MTR -
Dunigan will ask for
your advice.

Thanks!



www.WaterClaim.org

Pro to draft
F. Water-118311

WaterClaim

A Non-Profit 501 (c)(5) organization
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GOVERNORS OFFICE

APR 16 2008

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April 13, 2008

Governor Dave Heineman
Office of the Governor
P.O. Box 94848
Lincoln, NE 68509-4848

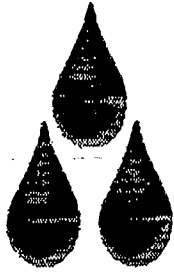
Dear Governor,

Last year, WaterClaim sent you a letter identifying some of the problems we see with the computer simulation that is used to measure compliance with the Republican River Basin Compact with Kansas. You promptly replied that you had forwarded our concerns to the DNR for Director Bleed's consideration.

As there has been a change in personnel at the DNR, we felt that there might be a new willingness to consider some of the issues that we feel make it difficult for Nebraska to comply.

Enclosed is a copy of the letter we sent in August of 2007.

Steve Smith, director
WaterClaim



www.WaterClaim.org

WaterClaim
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August 8, 2007

Governor Dave Heineman
Office of the Governor
P.O. Box 94848
Lincoln, NE 68509-4848

Dear Governor,

The following is a summary of the concerns that WaterClaim has with the computer simulation used to measure compliance with the Republican River Basin Compact with Kansas. Detailed explanations of each point can be found online at www.waterclaim.org and at <http://tinyurl.com/2x9hbv>. After the summary, I have included more information about each problem identified.

In my opinion, if we want our money and our actions to put more water in the stream, then the Model needs to, as accurately as possible, simulate reality. If we feed the Model bad data or knowingly force the formulas to produce desired results, then the system has failed and we have wasted a lot of money as well as hurt a lot of people. You are in the unique position to influence the DNR and cause it to do its job accurately and with due process. Modeling the interaction of ground and surface water requires the estimate of many variables. The more people who look at those inputs and processes, the more likely the simulation is to give us accurate information and predictions.

Problem**Brief Description**Missing Water

The Model artificially caps the benefit of shutting off irrigation wells. Approximately 250,000 acre feet are missing from the Model. The DNR says this water is used by farmers and that, if it isn't used by farmers, then it is used by trees and grass. So, even if the farmer doesn't use the water, it will not be in the stream. If this were true, then most of the reductions we make in pumping will be of no benefit to the compliance effort.

Input Data
(Pumping)

Is accurate data going into the Model? The data released on the RRCA (Republican River Compact Administration) web site in 2005 showed pumping in the Basin at a rate three times greater than what was actual.

Input Data
(Base Flows)

Is accurate data going into the Model? The data released on the RRCA web site in 2005 showed base flows at several gages to be greater than stream flows. That is not possible.

Inaccurate
Aquifer Level
Predictions

When the Model aquifer level predictions are compared to actual levels, the Model is wrong on about 56% of locations measured. It is in error mostly in the eastern end of the Basin. The Model says the aquifer went down much more than it actually did. This causes the Model to overestimate base flow depletions caused by groundwater pumping.

Conservation

The effects of conservation are not separated in the system. This exclusion is intentional. The effects of conservation are assigned to groundwater pumping. The DNR agrees that conservation is not labeled as such in the Model but denies that groundwater pumping has been assigned the effects from conservation instead. However, a review of the numbers shows that conservation effects really are assigned to groundwater irrigation. Conservation was intentionally omitted from the formulas because the States did not want any reduction in conservation, even though it is the primary cause of the problem. To make the formulas balance, something else had to take the blame. Groundwater irrigation took most of it. As a result, though, when irrigation wells are turned off, the stream will not increase as the Model predicts.

Base Flow
Calculation
Methodology

According to the Model, over 50% of the base flows are caused by precipitation events in the alluvium within a few days of the precipitation event. This means about half of the base flow values used by the Model are not aquifer-related. As a result of the way base flows are calculated, groundwater pumping is assigned a much greater responsibility than it causes.

Base Flows and Dams

The Model says that the dams caused a permanent 50% reduction in the amount of water oozing from the aquifer when they were constructed. The dams were put in place before groundwater irrigation became common. Is this drop in base flows attributed to groundwater irrigation? Is it accurate? It does not appear to be correct.

One Layer

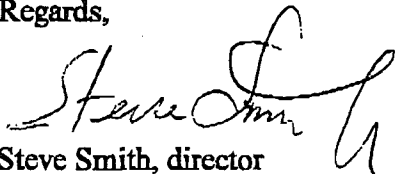
The Model works with only one layer. This prohibits the software from differentiating between the alluvial and deep aquifer. It also means the Model does not recognize the fact that much of the Ogallala formation is disconnected from the Republican River.

Allocations, No Rebound

Even though precipitation has been nearly normal for several years, the allocation has not rebounded. We have seen a return to normal precipitation in 2004, 2005, and 2006; yet, the Model shows the allocations going down. The DNR says this is because we have a hydrological drought, not a precipitation drought. This means the Model bases allocations on how much water is in the stream, not on how much precipitation falls in the Basin.

Thank you for reviewing this information and the other pages of data I have included. If you have questions or comments, please feel free to contact me.

Regards,



Steve Smith, director
WaterClaim