

To: Bob Hipple
Dan Smith
Mike Clements
John Thorburn
Brad Edgerton
Mike Thompson
Paul Koester
Mike McDonald
Dan Morrissey
Chuck Spalding

From: Ann Bleed

Here are the notes from the September 4 meeting between the modelers and the Republican River Basin NRD managers and board representatives. Please review the notes, particular those pertaining to the requested scenarios for new model runs. If you see any corrections that need to be made to the modeling scenarios, please let me know ASAP.

Also please note the change in the meeting agenda in October (see items with ?). The modelers said they could not make the October 15 meeting so I am suggesting we cancel the October 15 meeting and change the October 27 meetings to a meeting with the modelers. At the September 29 meeting we could reschedule, perhaps in early November, a meeting on the draft BCCP and a meeting with the Irrigation District managers and NRD Board representatives. Please let me know if this will work for you all.

CC: Roger Patterson
Jim Cook
David Cookson

Notes from September 4, 2003 Meeting with Republican River Basin NRD Managers and Representative Board Members and Ground Water Modelers Mike McDonald , Dan Morrissey and Chuck Spalding

Modeling Results

Dan Morrissey presented the results running the ground water model under the a number of different development scenarios. The purpose of the analyses was to:

1. Evaluate historical effects of pumping on baseflow/RRCA accounting;
2. Predict future effects of pumping on baseflow/RRCA accounting assuming development conditions for the year 2000 and a climate cycle equal to that from the years 1981 to 2000 is repeated for the years 2001 – 2020 and again for the years 2021 to 2040.
3. Evaluate pumping management strategies that will facilitate compliance with the Republican River Compact. The management strategies modeled were:
 - a. Reduce pumping in the baseline throughout the basin and throughout each NRD by 20%, 40%, 50% and 100%;
 - b. As above only increase pumping over the baseline by 10%;
 - c. Shut off all pumping in wells located
 - i. in the model in the same one-mile by one-mile cell as the river and/or tributary),
 - ii. all wells within one mile of the stream cell,
 - iii. and all wells within two miles of the stream cell.

The results of the scenarios were presented for the whole Nebraska portion of the basin and for each separate NRD. For the results of the analyses, please see the attached copies of the slide presentation.

In his discussion of the results Mike McDonald cautioned that the model was developed to provide information for the entire basin to be used in the Compact accounting. Each cell in the model is one square mile. Within that cell, conditions are considered to be homogeneous through the one square mile. This representation is adequate for Compact accounting purposes, but the model results should not be used to analyze differences within any given one-square-mile grid. The model was also run for the years 1918 to 2000. However, caution must be used in looking at the results of the early years or in looking at any changes in aquifer differences between the early years and current conditions because the stream flow and water level data was extremely sparse in the early years. The model does however do a credible job of matching stream flow and water level conditions in the more recent decades.

Additional Requests for Modeling Runs

The NRDs asked the McDonald Morrissey to model the following management scenarios using 2003 FSA acres numbers:

1. Do a model run reducing all well pumping to no more than 14.5 inches
2. Look at the impact of reducing the pumping of wells by 25% and 50% based on date of registration for:
 - a. Wells in the MRNRD drilled after July 1, 1998
 - b. Wells in the LRNRD drilled after January 1, 2001.
3. Reduce pumping for all wells in the URNRD to no more than 12 inches.
4. In "water short years" as defined by the settlement, reduce pumping in all wells or cut back on the number of acres irrigated in river cells and in cells within one mile by 25% and 50%.
5. Assume the canals in the mound area are fully lined.

Future Schedule

September 18, 2003 9:00 MDT Imperial Jack's Restaurant	Republican River Basin Association Meeting
September 29, 2003 10:00 CDT 1:00 CDT TriBasin NRD	Review draft Basin Compact Compliance Plan (BCCP) NRD managers and DNR NRD managers, representative board members and DNR
October 15, 2003?	Cancelled
October 27, 2003? 10:00 CDT TriBasin NRD	Meet with modelers and representative board members to discuss modeling scenarios
November ? 10:000 CST TriBasin NRD	Meet with mangers and representative NRD board members to review draft BCCP
November ? 1:00 CST	Meet with NRD and Irrigation District mangers and representative NRD and ID board members to review process and how the Ids will be involved in the process
November 17?	Association Meeting to review draft BCCP
Mid-November	Broader information meetings
November 30	Draft BCCP Complete – Explain plan to basin and public for comment and input data
December 31	Complete Basin Compact Compliance Plan

August-September 2004	NRDs and DNR complete Joint Action plan and rules and regs.
October 2004	Hold hearings on rules and regs
November 2004	Adopt Plan