

Data Needs for Implementing the Republican River Settlement

January 30, 2003

I. Need Integrated Data System

A. Integrate field offices (both DNR and NRDs) with main data bank at DNR

1. Field offices can pull up the information they need to collect their data
2. Field offices can collect field or user data and input to the main data base
3. Field offices can obtain technical help from DNR (training, computer problem solving)
4. Field offices can relay data collection problems etc to DNR
5. Other?

B. Integrate surface and ground water information

To implement the settlement, the NRDs and DNR will have to restrict the consumptive use of water, probably through allocations of water per acre of irrigated land. The regulation of water allocation will have to be a coordinated process between DNR and the NRDs, especially when the irrigated land uses both surface and ground water.

C. Integrate Republican Basin Information architecture with the same for the rest of the State

The surface and ground water system used in the Republican Basin cannot be different from that used in the rest of the state. Although DNR already has numerous surface and ground water databases, we are working to upgrade the ease of using these databases. Given the need to do this immediately in the Republican Basin, DNR is planning to use this effort as the prototype for the rest of the state. Therefore, the Republican Basin database must be structured so that it can be used to run CoHyst on the Platte etc. DNR will work to coordinate what is done on the Republican with the needs of the rest of the State.

D. Integrate the information collected with the data requirements of the Republican Compact including the Ground Water Model.

DNR will coordinate the data bank architecture and collection activities with the data needs of the Compact ground water model.

DNR MEMO

3/18/2003

TO: Ann Bleed
Gayle Starr
Brian Dunnigan
Steve Gaul ✓

FROM: Mike Thompson *mt*

SUBJECT: Republican River Settlement GIS

As you know the Republican River Compact calculations require Nebraska to report the evaporation from reservoirs 15 AF and larger. This will necessitate an accurate cataloging of dams in the Republican Basin. There are several steps our staff can take to make this effort more effective. The net effect of these actions will be to improve the accuracy of the dam inventory and allow DNR to exchange data about non-inventory dams with the Republican basin Natural Resource Districts. The main components are as follows:

- 1) Create a process to automatically generate spatial data in the form of an ArcView shapefile every day. This can be implemented in the same way the well data was. A batch process will be created to process the Dam Inventory Database overnight and update the spatial data. The Inventory is edited almost daily, so the spatial data will need to be updated and shared. Staff involved will likely include Mark Noble, Jeff Hogan, Kim Menke and I. It shouldn't take more than 3 hours for each person to complete his or her task.
- 2) Create a script to automatically add the Inventory of Dams to an ArcView session. This will enable people from multiple agencies to quickly review our current Inventory and make judgments necessary to complete our Compact duties. Staff involved will be Jeff Shafer and Mike Thompson. It should not take more than 4 hours of Jeff's time.
- 3) Improve the spatial accuracy of the coordinates in the Dam Inventory Database and the non-inventory dam table in the Republican basin. This will involve Mark Noble and possibly someone from the Planning and Assistance section. This will be the most time consuming task of all. It should be completed in about 12 hours.

I would appreciate the cooperation of the individuals mentioned. We need to move quickly to begin coordinating our efforts with the NRD's. Please let me know if you have concerns about staff availability.

January 23, 2004

**PRELIMINARY AGENDA
PRESENTATION MEETING
LOWER REPUBLICAN APPRAISAL STUDY**

**10:00 AM, FEBRUARY 5, 2004
ELKS CLUB, 230 CENTRAL AVENUE
SUPERIOR NE**

Sponsors:

**Kansas Department of Agriculture, Division of Water Resources
Nebraska Department of Natural Resources
U.S. Bureau of Reclamation**

- A. Welcome
- B. Introductions and Meeting Purpose
- C. Background for Study *Agenda*
- D. Planning Process
- E. Appraisal Study Results
- F. Feasibility Study
- G. Conclude Meeting

A lunch buffet will be available at the Club.