

MINUTES
ENWRA Technical Committee Meeting
1:30-3:30 January 26, 2011
Embassy Suites, Lincoln

Attendees: Gerry Bowen (Papio), Jesse Korus (CSD), Greg Steele (USGS), Paul Hanson (CSD), Jim Cannia (USGS), Bob Swanson (USGS), Ron Zelt (USGS), Jesse Bradley (DNR), Brian Henkel (Papio), Rick Wozniak (Lower Elkhorn), Meghan Sittler (LPRCA), John Gates (UNL), Vitaly Zlotnik (UNL), Marlin Petermann (Papio), Larry Angle (LPN), Chuck Wingert (Nemaha), Bob Hilske (Nemaha), Tom Moser (L&C), Mike Murphy (Lower Elkhorn), Dan Schulz (LPS), Dick Ehrman (LPS), Karen O'Connor (UNL), Dana Divine (Coordinator).

Discussion of Water Budget

Gerry: would water budget cover the entire ENWRA area?

Answer: no—only the Platte Valley below Fremont. However, other water budgets could be done in other portions of the ENWRA area after this water budget is completed.

Ron: what is the purpose of the water budget?

Answer: To support the development of voluntary Integrated Management Plans and to potentially serve as a tool for hydrologic analysis (a need identified by the Lower Platte working group).

Jesse B explains that DNR has hired The Flatwater Group to define a framework and approach and to construct basin scale water budgets across the entire state. The time frame for Flatwater to complete this work is 1-2 years. These budgets would make the basic data available and could be refined to a smaller scale.

Rick: would our efforts towards constructing a water budget duplicate DNRs efforts?

Answer: not if we use the same framework DNR uses.

Dan: Did DNR provide a scope of work to The Flatwater Group and could we use the same scope?

Answer: Yes to both.

Jesse B said DNR would be happy to meet to discuss potential overlaps so we don't duplicate efforts

Brian: Flatwater's timeframe is 1-2 years to complete budgets for the entire state?

Answer: yes. The results may come out in phases.

Ron: Is the input data monthly?

Answer: seasonally, but more data could be incorporated to increase the resolution in some areas.

Greg said that data sets can be collected independently from one another. For example, we could get started collecting water use data.

Dick said that Lower Platte South is on a three year schedule to complete their IMP and they'll need to make a water budget for a larger area than just the Platte Valley.

Rick said he thinks it's a good idea to start compiling data but we should wait until DNRs framework is defined before moving too far ahead with the budget.

Chuck said he thinks the \$12,000 of ENWRA funds proposed to spend on the water budget is not excessive and it could be treated as a primary project.

The group decides that those parties interested in developing a water budget meet with DNR to discuss further.

Discussion of Geophysical Flights

Nemaha is interested in flying a ~240 square mile area centered on the Nemaha River from northwest of Talmage to the confluence of the Nemaha and Missouri Rivers. They are budgeting money over the next two years for their portion of the costs and would like to define a target date for the flight sometime in 2013.

Jim explains that USGS has tested four different airborne time-domain contractors/systems in western Nebraska and they recommend the use of SkyTEM. In western Nebraska the system had good resolution to 600-700 feet deep.

Bob said they have been talking to federal officials about the value of airborne geophysical flights and those officials are interested.

Rick said he thinks the application of airborne time-domain fits with the ENWRA objective of identifying new techniques for mapping eastern Nebraska. He asked if we need to apply the airborne time domain at a pilot scale before flying a larger area. Jim said no—USGS is confident the technology will work in eastern Nebraska.

Dan: is the procedure for interpreting airborne time domain the same as HEM? Will test holes need to be drilled as deep as the TDEM signal penetrates?

Answer: the interpretation procedure is the same. USGS is interested in working directly with CSD to interpret the data, with an emphasis on making the interpretation as quickly as possible after the data is collected. Yes, the test holes should extend to the depth of signal penetration, but that will probably not be as deep in eastern Nebraska as it was in western Nebraska.

Dan: is the cost the same as it was for the 2009 HEM flights?

Answer: yes

Jesse K explained that CSD is revising the interpretation of some existing cross sections with the purpose of using them to potentially locate geophysical flight reconnaissance transects. Is the group still interested in flying recon transects?

Answer: yes

The group decides that those parties interested in geophysical flights meet with USGS in May to discuss further.

Discussion of Subarea Delineation Maps

Jesse B explained that DNR would like to use the subarea delineation maps of Lower Platte North and Lewis & Clark, but not sure how to rectify the data shown in those maps with the data presented in CSD maps that depict transmissivity, storativity and aquifer type (e.g. confined, hydraulically connected, etc.). He proposes that Karen and CSD work together to produce one set of maps.

Jesse K: what exactly do the subarea delineation maps depict?

Answer: areas having distinct aquifer characteristics. The subarea delineation maps incorporate information available since the CSD maps were published and provide higher resolution to Lower Platte North and Lewis & Clark districts. A subarea delineation map of the Lower Elkhorn district might not provide as much additional resolution.

Jesse K explains that ENWRA has only just begun refining the geologic framework in eastern Nebraska, and he's not sure how the CSD maps could be significantly updated. He went on to say that perhaps there's a different focus on use of the CSD maps now than when they were generated and two separate sets of maps are valid if their respective purposes are clearly defined.

Karen explains that she has a three year time frame for her thesis work, and she would like to focus on areas where the subarea delineations would have the most benefit.

Jesse K said CSD would potentially be interested in working with Karen to review and publish the subarea delineation maps.

The group decides that those parties interested in subarea delineation maps meet to discuss further.

Discussion of IWMPP application

The next opportunity to obtain funds from IWMPP will be November 2012. Until then, ENWRA will continue with ongoing work and meet to refine the path forward for the water budget, geophysical flights and subarea delineation maps.

Summary of NRD Interests over the next three years:

Papio: water budget

Lower Platte South: water budget

Nemaha: geophysical flight north of Talmage to Nemaha/Missouri confluence

Lower Platte North: water budget, geophysical flights over the rest of the Swedeburg area, the uplands around Prague, and the Shell Creek uplands.

Lower Elkhorn: subarea delineation maps, water budget, geophysical flights

Lewis and Clark: estimating groundwater recharge