

**Notes from URGWOM Steering Committee Meeting
July 13, 2006 - 10:00 AM
Corps of Engineers Conference Room, Albuquerque**

In Attendance:

Rhea Graham, Pueblo of Sandia (telecom)	Cyndie Abeyta, FWS
Conrad Keyes, Jr., Consultant to Corps	Steve Bowser, Reclamation
Lesley McWhirter, Corps	April Sanders, Corps
Don Gallegos, Corps	Nabil Shafike, NMISC
William J. Miller, WJM Engineering, Inc./Consultant to Corps	Dave Wilkins, Consultant to Corps
Michael Roark, USGS	Deb Hibbard, Consultant to Corps
Cliff Crawford, UNM	Christian LeJeune, BEMP-UNM
Kim Eichhorst, BEMP-UNM	Cliff Dahm, UNM
Jennifer Schuetz, BEMP-UNM	Dave VanHorn, UNM
Charles Lujan, Ohkay Owingeh Pueblo	Kimi Scheerer, BEMP-UNM
	Naomi Archuleta, Ohkay Owingeh Pueblo

- ❖ April Sanders opened the meeting and requested that everyone introduce themselves.

Water Quality Monitoring

- ❖ Cyndie Abeyta introduced the water quality monitoring program, the purpose and objectives of the program, and the project tasks that are under contract. The Corps is funding this program through Fish and Wildlife Service. The objectives of the water quality monitoring include planning and collecting data for developing water quality capability in URGWOM; fulfilling certain recommendations of the *Middle Rio Grande Bosque Ecosystem: Bosque Biological Management Plan*; and implementing applicable Reasonable and Prudent Alternative elements of the current Biological Opinion for the Rio Grande silvery minnow. The project tasks include monthly, synoptic and continuous surface and ground water quality monitoring within the Middle Rio Grande.
- ❖ Dave VanHorn presented findings of the water quality assessment activities being conducted with this funding. The approach includes monthly longitudinal sampling and quarterly synoptic sampling for major solutes and nutrients from Cochiti Lake to Elephant Butte Reservoir. Monthly sampling is conducted on the Rio Grande mainstem and quarterly sampling includes the mainstem, selected tributaries, and the Low Flow Conveyance Channel. In addition, continuous monitoring sondes will be deployed at four sites distributed over about 50 river kilometers in the Middle Rio Grande: Hwy. 550 Bridge in Bernalillo; near the USGS Gage at Alameda Blvd.; the Rio Bravo Blvd. Bridge; and near the USGS Gage at Isleta. The sondes are currently deployed at three of the four sites and are obtaining continuous measurements of dissolved oxygen, temperature, conductivity, pH, and turbidity. Dissemination of the data will be through the Sevilleta LTER website. A copy of the PowerPoint presentation is attached at the end of these notes (Attachment A).
- ❖ Kim Eichhorst presented findings of the water quality activities being conducted at the 21 Bosque Ecological Monitoring Program (BEMP) sites. The activities include quarterly collection and analysis of

water quality data from the wells at 21 BEMP sites (5 wells per site), and from the ditches and riverbanks at 14 of those sites. Samples are analyzed for depth to water, temperature (water and air), pH, specific conductance, turbidity, dissolved oxygen, chloride, bromide, ammonium, nitrate, phosphate, and sulfate. Some of the data is currently available on the BEMP website (<http://bosqueschool.org/BEMP/bemp.htm>), and will ultimately be available on the Sevilleta LTER website. A copy of the PowerPoint presentation is attached at the end of these notes (Attachment B).

Sandia National Labs / PowerSim Coordination

- ❖ Mike Roark discussed the status of the URGWOM Technical Team coordination with Sandia National Labs (SNL). The Technical Team attended a one-day workshop on June 29 regarding PowerSim functionality and to begin looking at how daily outputs from URGWOM can be used for the PowerSim monthly model. They will begin by first looking at the Reservoir rules.
- ❖ The end result is intended to be incorporation of URGWOM daily outputs into PowerSim and verification by the Technical Team that the PowerSim model can be used to accurately predict broad-brush scenarios. More detailed modeling would continue to be done with the URGWOM daily model. The Technical Team will present the results to the Steering Committee by the end of this calendar year.
- ❖ Cliff Dahm stated that there is an overview of PowerSim models in the latest issue of *Southwest Hydrology*.

Technical Team Activities and Updates

- ❖ Mike Roark distributed a handout describing Technical Team activities since the last meeting. The handout is included at the end of these notes and additional discussion and questions raised at the meeting are briefly summarized below.
 - Development of URGWOM enhancements in the middle valley to improve modeling of surface water / ground water interactions
 - CADSWES has provided a design document and spreadsheet for an object in RiverWare to model ground water /surface water interaction.
 - A preliminary test model has been developed by the Tech Team to test the design spreadsheet.
 - The Tech Team has requested CADSWES to develop a new aggregate object that will account for deep percolation from crops by taking irrigation water out and linking it with the ground water object.
 - The Tech Team is building a more complex test model in RiverWare to verify that the methods and equations are correct. The test reach will be San Felipe to Central.
 - The timeframe for CADSWES development of the MODFLOW interface has been shifted to FY07. A meeting is scheduled for August 8 with Edie Zagona and a graduate student with CADSWES to discuss development of a MODFLOW linkage.
 - Charlie Lujan suggested that the Tech Team consider working with the water research technical office at Los Alamos National Labs, which is using electromagnetism to model deep aquifer ground water. Mike Roark stated that URGWOM is looking at modeling quick response of shallow ground water / surface water interactions.
 - Update of HEC-DSS is continuing.
 - RiverWare 4.7 provides a direct interface between DSS and RiverWare.
 - Roberta Ball and Marc Sidlow of the Corps are working with CADSWES to improve the functionality of the interface.
 - Bill Miller reported on revisions to the Draft URGWOM Quality Control Plan. Changes were made to Part 6 in response to prior comments on the Draft. Major changes include adding the versioning

protocol and re-writing the section on model accuracy. The Tech Team is currently reviewing the revised Draft. It is hoped to have the final Quality Control Plan available at the next Steering Committee meeting.

- Documentation of the rules and logic development is being done by TetraTech, under contract with the Bureau of Reclamation. The draft documentation is due to the Tech Team by the end of August.
- Marc Sidlow is working with CADSWES to improve the ability to change the area/capacity tables in RiverWare on-the-fly so that a longer series of data can be run without having to reload the database.
- April Sanders noted that the Tech Team is extremely busy, not only with all of the scheduled URGWOM tasks, but also with other requests, e.g., ESA Collaborative Program. We are exploring ways of getting more technical assistance for the Tech Team.

Other Discussion Items

- ❖ April Sanders informed the group that the ESA Collaborative Program will be holding a facilitated workshop August 16-17 regarding long-term water management strategies and sustainability for endangered species protection. The goal is to develop feasible strategies for water management agencies to consider.