Notes from URGWOM Steering Committee Meeting; February 8, 2001; 10:00 AM; Corps of Engineers Conference Room, Albuquerque

In attendance:

Cyndie Abeyta, USFWS
Jim Brainard, Sandia National Lab
Ellen Dietrich, SAIC
Rhea Graham, NMISC
Deborah Hathaway, SSPA/NMISC
Conrad Keyes, Jr., EWRI of ASCE
Dick Kreiner, Corps
Art Martinez, BIA
William J. Miller, WJM Engineering, Inc.
Nabil Shafike, NMISC
Gail Stockton, Corps
Leann Towne, USBR
Jack Veenhuis, USGS
Dave Wilkins, USGS
Mark Yuska, USBR

- The Quality Assurance/Quality Control (QA/QC) Plan for URGWOM was signed by IBWC earlier, and by all of the URGWOM Steering Committee members at the meeting. The final version will be posted on the Web site.
- Mark Yuska reviewed URGWOM Technical Team status and activities, following a handout that is attached to the end of these notes. Discussion points and questions asked are summarized below.
  - After the upcoming Technical Review Committee meeting, Mark asked that the Steering Committee **consider enhancement of URGWOM to directly use riparian evapotranspiration consumptive use data from the ET Toolbox**. This would improve short-term water operations forecasting in the middle valley.
  - Question—What time period is used for weather data?
    - URGWOM uses weather data estimated back to 1983, some of which has been recreated because there were few weather stations and some incomplete data. Weather data from 1983 to 1997 uses data averaged from only two stations for the entire middle valley. Recent data are better because more weather stations and better methods are being used.
  - Question—Will the daily operators need to use ET data for estimating return flows?
    - The newly gaged return flow measurements will help calculate more realistic return flows.
    - Forecast crop ET helps operators estimate the quantity of return flows to the river until more return flows are gaged.
  - There are approximately 20 pumps operated by the city and county in the middle valley that return stormwater runoff to the river from behind the levees. These estimated flows from pumping records could be included in URGWOM to improve local inflow values.
  - Carole Thomas distributed graphs and discussed URGWOM validation results.
- The next Technical Review Committee (TRC) meeting is scheduled for April 26, 9:30 a.m. to 12:30 p.m. in the Corps of Engineers conference room. Notices will be posted on the Web

site and in a newsletter to be sent to the general mailing list. Letters of invitation will also be mailed to committee members and key stakeholders. The meeting will be held to discuss the latest physical model documentation, validation, and the calibration process of URGWOM.

- Bill Miller reported that the physical model documentation will be sent out to the TRC 30 days before the meeting. It will also be posted on the Web site. Anyone requesting hard copies can request them through Gail Stockton. The calibration process will be included in an appendix.
- Jack Veenhuis previewed the MMS model, in advance of a more detailed presentation scheduled for the next URGWOM Steering Committee meeting on March 8.
  - MMS addresses inflows to Heron (San Juan-Chama water) and El Vado (Chama to Puente gages), using snowpack and historical data to predict watershed runoff in a daily simulation model. On the San Juan side, the modeling predicts inflows to the diversion sites to predict the amount of water that can be diverted.
  - Eventually, Jack plans to add watershed modeling for the upper Rio Grande in Colorado and northern New Mexico, if he gets additional funding.
  - The March presentation will compare current prediction methods using NRCS SNOTEL data with MMS.
  - Jack is looking into applying a method developed at the University of Arizona that uses remote sensing snow cover data to enhance SNOTEL point data.
- Don Gallegos reviewed some inflow/outflow hydrographs generated by comparing URGWOM modeled reservoir operations with actual operations of several reservoirs. He demonstrated that, while the extreme storage and elevation values did not exactly match, the timing and overall volumes were similar.

➡ - **The next URGWOM Steering Committee meeting will be held on March 8 at the Corps at 10:00 a.m.**

February, 2001 - STATUS OF URGWOM TECH TEAM ACTIVITIES from Mark Yuska, Technical Team Leader

People:

- Brad Vickers is here working on Water Operations Model and Rules.
- Dennis Romero is taking extended leave for personal reasons.

Activities:

- The Accounting Model is working well at USBR. We are adding output and input features to make it friendlier.
- The Water Operations Model is working, and the results are very promising! We are seeing operations that make sense! The Annual Operating Plan is coming together well based upon this model.
- The new sediment equations for Abiquiu, Cochiti, and Jemez are in RiverWare and we're checking them out.
- Attempted to use aggregate reach methods in RiverWare, in the Bernardo to San Acacia reach, to compute leakage. Have requested several changes from CADSWES regarding

methods of estimating the riverbank area through which water is exchanged between the river and the shallow ground water system.

- We discovered data errors at Leasburg and Mesilla that require us to revise routing/gain/loss for all three reaches below Caballo. We're working on it now.
- The model is calibrated for the middle valley, and we have validation results for 1998 and 1999.

Meetings:

- Our modeling coordination meetings with Sandia Labs (Vincent Tidwell) and University of Arizona (Kevin Lansey) on 1/19/01 went well. Sandia (with SEED money) is doing related PC-based ("PowerSim") water management modeling with much less detail and would like to work with us some. U of A has some NSF Grant money, working with "SAHRA", and has a graduate student available to assist on the Rio Grande. Sandia would like to help lobby with us for more emphasis on Rio Grande modeling.
- Steve Hansen came and met with us on ideas on Riparian ET impacts to the river, and how we should use ET-Toolbox-generated Riparian ET rates directly to best model middle valley river flows.
- We presented Accounting Model results in a special meeting 1/19 to the Engineer Advisors, and received favorable comments on its performance
- We have a WaRSMP meeting February 21-22 in Denver, and Dave Wilkins will represent us.
- We also have a 2/21 SAHRA meeting at the University of Arizona to attend, and Nabil Shafike will represent us.
- We have a two-hour slot to present Accounting Model results for approval at Engineer Advisors Meeting 2/27-3/2/01
- Mark Yuska submitted an abstract to do a presentation at the June 27-30 AWRA Conference at Snowbird Utah. The topic is URGWOM, particularly related to WaRSMP and how MMS and other forecasting are anticipated.
- We are having tech team meetings the 1st and 3rd Tuesday mornings of the month, and they are helping with work scheduling and communications.

Issues requiring Steering Committee Considerations:

- Due to staffing shortage and fast approaching needs and deadlines, Mark Yuska will spend more time modeling and less in administration
- The team believes there are potential improvements in (short-term) water operations forecast modeling using riparian ET data. We recommend considering such enhancements for after the April 26th technical review meeting.