

Notes from the URGWOM Steering Committee meeting, February 10, 2000, 10:00 AM, Corps of Engineers Building, Albuquerque

In attendance:

John D'Antonio, Office of the State
Engineer

Ellen Dietrich, SAIC

Steve Hansen, Bureau of Reclamation

Conrad Keyes, Jr., EWRI

Bill Miller, WJM Engineering, Inc.

Sharon Miner, Senator Bingaman

Gail Stockton, Corps

Leann Towne, Bureau of Reclamation

Dave Wilkins, USGS

Mark Yuska, Bureau of Reclamation

- ❖ After introductions led off by Gail Stockton, Mark Yuska distributed a handout on Technical Team status, progress, and issues.
 - The Technical Team is developing a presentation for the Technical Review Committee meeting on February 22 to discuss the updated documentation of the physical model.
 - The first deadline for URGWOM was met. The first draft of the model was completed by the end of January, with a brief informal ceremony to recognize the accomplishments of the project held on February 2.
 - Mark discussed the components of URGWOM, represented in a flow diagram in his handout.
 - Accounting Model—a complete physical model designed to solve for reservoir inflows, given outflows, water elevations, weather, and other reservoir data. It deals strictly with the past, calculating all flows and storages through midnight of the previous day.
 - Water Operations Model—the forecasting version of the Accounting Model, uses updated historic data from the Accounting Model, along with other short-term forecast data to predict flows and storages for the future. It uses rules, as needed, to determine outflows.
 - Planning Model— will make use of data from the other models, but has not yet been developed. It is designed to carry out long-term forecast runs, using less detailed data and rules.
 - Forecasting Model— takes monthly spring runoff forecasts and uses historic inflow hydrographs to create daily forecast hydrographs for each of the inflow points in the Water Operations Model. It does not involve much of the physical model, but feeds the Water Operations Model with forecast data.
 - URGWOM is intended to be used alongside current methods in use during the testing phase so its adequacy can be documented.
 - The briefing of the Engineer-Advisors of the Rio Grande Compact Commission, on February 23, will summarize the model operations and request that they consider what criteria must be met to accept the accounting model.
 - Issues:
 - The Technical Team must organize all the data they have acquired during model development so it can be used more effectively and efficiently, both by the Technical

Team and the water operators who need the data to populate databases to run URGWOM.

- Steve Hansen has set aside \$50,000 to help develop a database associated with URGWOM, and has selected Mark Trevino from the BOR Denver office to lead this effort. Steve asked if this work would help the Technical Team meet the need for data organization. Mark responded that this issue is mainly intended to address the data internal to the model, not HDB and the URGWOM interface. Additional discussion on this topic is summarized below.
 - The purpose of the data organization needed first by the Technical Team is to prepare data for modeling functions. This organization will determine how the model accesses and stores data. These data should be organized before adding the datasets ranging back to 1975.
 - From this organization effort, the Technical Team can learn how to structure the larger database and how to interface with HDB.
 - There are really two database structures needed: one to organize data accessed by URGWOM, and one to contribute to a larger HDB that could manage all Rio Grande data.
 - Bill Miller asked if there is a protocol for determining what should be included in the URGWOM database, and where the data should be stored. Mark responded that this protocol would be developed as they got the data organized.
 - Data sources and quality would be information included in the database.
 - They also must set up naming conventions and decide how datasets should be packaged for model use.
 - URGWOM development and HDB development must be separated, but Mark agreed that it might help the Technical Team to think about data organization if Mark Trevino, as the developer of the HDB interface, could sit in on discussions about database structure.
 - The first responsibility of the Technical Team is to prove that URGWOM works and to show users how it works. Public support is needed to further future funding and model development.
- ➔ • Steve would like Mark Trevino to sit in on some of the Technical Team discussions about data organization. Mark Yuska agreed that the Technical Team could meet with him at the end of February.
- Mark listed some of the items on their wish list for RiverWare features and enhancements.
 - Interface with a database.
 - In the Accounting Model, access to daily inflow and outflow numbers from reservoirs are available only on screen, but the Technical Team would like to be able to store and use the data.
 - Need a method of accounting for the seepage through Heron dam.
- Leann Towne will take over from Steve Hansen as the Bureau of Reclamation URGWOM project team leader. Mark Trevino will primarily be involved with the technical work, especially database design.

- URGWOM is not included in the President's budget for fiscal year 2001.
 - ◆ Support is also needed for the Water Operations Review.
 - ◆ The Technical Team needs time and funding to develop a production version of URGWOM from the prototype currently being tested.
 - ◆ Steve pointed out that the Bureau of Reclamation is having a similar budget problem.
 - ◆ Steve has been contacted by some researchers at Los Alamos National Laboratory who would like to interface their model with URGWOM.
 - ⊞ The LANL people would like to know if their regional groundwater model would help URGWOM. The Technical Team should meet with them to discuss some possible collaborative work after the March public meeting.
 - ⊞ A representative from Duke Engineering said that Elizabeth Keating from LANL has analyzed base flows on a large scale in the upper basin, and asked if this is the same group Steve referred to. Steve thought this might be a different project.
 - ◆ If BOR planning funds are made available for URGWOM:
 - ⊞ URGWOM applications can support the Water Operations Review by developing a planning model for EIS impact analyses.
 - ⊞ Aggregation of daily timestep data may be needed for the EIS, in addition to other data management differences, such as rules and routing changes.
 - ⊞ The Water Operations Review technical teams will need the URGWOM historic data to help them describe existing conditions. Understanding what data are available from the URGWOM Technical Team will help these technical teams develop their study plans.
 - ⊞ The Water Operations Review procedures should be applied to develop the planning model.
- ◆ Dave Wilkins suggested that planning funds could also be used to design a surface water data collection and management network. Dave will provide more detailed information to Steve.
- ◆ Frank Titus is setting up a meeting with congressional representatives to discuss getting assistance from the national laboratories.
 - ⊞ It may be possible to get help through MOUs with the national labs to focus their community development resources toward URGWOM.
 - ⊞ A new Sandia National Laboratory water resources group may be willing to assist, but they will need to be paid for their work.
 - ⊞ Conrad Keyes suggested that it might be possible to use an approach similar to the waste consortium group that was organized with Interior funds.

- ◆ Gail stressed that funding and other resources must be coordinated to reduce the project's reliance on individuals and annual budgets to ensure a long-term effort.
- ◆ Conrad asked how if anyone could estimate the money that would be saved by reducing the length of time the water operators must run both models side by side. This cost savings could then be applied to developing other aspects of URGWOM. Mark replied that the length of the testing period depends, in part, on acceptance of URGWOM by the Rio Grande Compact Commissioners.
- Dave summarized the issues and decisions needed by the Technical Team. He asked the Steering Committee to prioritize the issues and set timeframes for their resolution. After discussion, the group agreed upon the following.
 - Making sure the Accounting Model is operational is the top priority, so the Engineer-Advisors can approve soon and enable its use in 2001. The Accounting Model is being checked now by the Technical Team.
 - Also a high priority is the completion of the Water Operations Model that is needed to assist in the development of the Reclamation's Annual Operating Plan, beginning in the first week of March.
 - These top two priorities will be used to demonstrate a working model that is useful to water users and operators. This can help to acquire funding to continue the project.
 - Data organization is needed to ensure a successful working model.
 - The Planning Model development will begin after the full Water Operations Model is functioning. This work is expected to start in mid summer.
 - ◆ A question asked was whether the Water Operations Model can be used for planning purposes now, causing discussion on whether daily timestep data can and should be aggregated for use in Water Operations Review analysis.
 - ◆ Daily data could be grouped into monthly data if needed by a technical team. URGWOM could be run for any specified time period needed for comparison by a technical team.
 - ◆ Water Operations Review technical teams will also need the ability to change rules to analyze different scenarios or alternatives. The alternative rules sets would need to be developed.
 - ◆ Most of these planning activities are more restricted by the available hardware capabilities than by software limitations. It is difficult to run more than one model for a scenario spanning more than a year with the current model and equipment, if all of the San Juan-Chama contractor accounts are included.
 - ⊘ One solution would be to aggregate the water accounting data into just Rio Grande and San Juan-Chama groups for Water Operations Review uses.
 - ⊘ The computer code should also be cleaned up so it runs more efficiently. Steve suggested that WARSMMP might be interested in funding this work.



❖ Public outreach activities planned

- Gail distributed a draft of the February 22 Technical Review Committee (TRC) meeting agenda and asked how the Steering Committee members can assist.
 - Mark is helping Gail work on the agenda. The Technical Team will give a presentation at the meeting.
 - Gail has 45 extra copies of the Physical Model Documentation draft for the TRC and asked if more was needed. The group felt that this was enough. It is also available to be downloaded from the URGWOM web site under the “Meetings and Activities” link.
- The public information meeting will be held on March 22 from 1:00 to 3:00 PM at the IBWC conference room in El Paso.
 - The seating will be arranged in theater style for a PowerPoint presentation by Mark and possibly one other member of the Technical Team.
 - Mark may take a computer along to run a demo.
 - Conrad told the group that there were at least 50 people at the last IBWC Citizens’ Forum who were told about this meeting. The New Mexico-Texas Water Commission is also aware of the meeting.
 - Mark asked Conrad if he had any suggestions on how the presentation could be better received in Texas. These people can use URGWOM but don’t seem interested yet.
 - Conrad recommended that the Technical Team must first convince the southern New Mexico water users of the utility of URGWOM.
 - Another group that could apply URGWOM is the regional water planning board, organized under the NMISC, that recently contracted with a consultant through WRRRI for some planning work.
 - The Bureau of Reclamation at El Paso is interested in using the URGWOM information on how inflows to Elephant Butte Reservoir affect operations below the dam to help them develop their operational plan. Inflows to Elephant Butte now use only NRCS forecasts at San Marcial, and could be improved with the daily forecasting from URGWOM.
 - Gail reminded the group that, in the presentation, they must clarify that URGWOM will only be used for flood operations.
 - In his presentation, Mark should highlight the benefits of using URGWOM in the lower part of the basin so the southern New Mexico and Texas residents understand how its application can help them. Conrad recommended that the presentation at this meeting should have a different emphasis than a presentation made in the northern part of the basin.
 - Bill Miller suggested that it would be beneficial if someone presented information on URGWOM to water users’ meetings such as a meeting of the Elephant Butte Irrigation District, instead of asking the members to attend a public meeting. Mark plans to make a presentation to the MRGCD board also.
 - **The next URGWOM Steering Committee meeting will be held on Thursday, March 9 at 10:00 at the Corps of Engineers building.**