

Notes from URGWOM Steering Committee Meeting; May 12, 2005; 10:00 AM; Bureau of Reclamation Conference Room, Albuquerque

In Attendance:

Cyndie Abeyta, USFWS

Steve Bowser, Reclamation

Ellen Dietrich, SAIC/Corps

Rhea Graham, Pueblo of Sandia

Nancy Hanks, Paso del Norte Watershed
Council

Mark Horner, Corps

Conrad Keyes, Jr., Consultant to Corps

Charles Lujan, Pueblo of San Juan

William J. Miller, WJM Engineering,
Inc./Corps

Michael Roark, USGS

April Sanders, Corps

Valda Terauds, Reclamation

Dave Wilkins, Corps consultant

Edie Zagona, CADSWES

❖ April Sanders opened the meeting.

- Bill Miller distributed a copy of the QA/QC Plan with proposed edits. He had e-mailed a version to the Steering Committee earlier in the week and the handout includes one change in Item 2f in response to a comment. The draft Phase II testing plan is included in the handout.

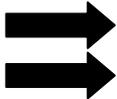


➤ Other changes recommended include:

- In section 2.d.ii, the Upper Rio Grande Basin Water Operations Review and EIS should be identified.
- Section 2.e.ii.2 (Phase II) should be changed to read “Testers will be provided copies of the Phase I base case models along with instructions on how to duplicate the three Phase I alternative scenario model runs.”

➤ Other comments:

- Testers need to send more than just model files, but should submit comments on how it worked and what happened during model runs.
- The Scenario Manager will help document changes and model runs in Phase II.
- Charlene Strickland of SAIC is developing a questionnaire to send to testers that might help them describe what happened.
- It will be useful to obtain some comments and general impressions in addition to the Scenario Manager.



- In the QA/QC Plan, a statement should be added that testers will provide comments and results.

➤ The Steering Committee agreed to accept the plan with the recommended changes and send to the cooperators for signature.

❖ Mike Roark reviewed Technical Team activities since the last meeting. He distributed a handout that is included at the end of these notes. Additional information, questions, and discussion are summarized briefly below.

- Target flow simulations are calculated on daily timesteps. After changes were made to improve simulations, the variations are small (<5 cfs). They are the most realistic, compared to actual conditions, over a 5-day period.

- All rules documented are currently in MS Word. Brad Vickers must copy them into an ASCII file in the correct model location and run with the model after all comments have been entered. Once this is done, the rules should be good for Phase II testing.
- For MMS, the development team is working on verification and creating a list of problems to fix or enhancements to improve usability. The model version was converted to PC from Unix.
- The Annual Operating Plan created for water managers using URGWOM is intended to address operations in the Rio Grande down to Elephant Butte.
- The middle valley improvements in groundwater/surface water calculations developed by Nabil Shafike and Mike Roark are being done only in RiverWare, not MODFLO. They are also developing a list of improvements to calculate groundwater for Edie Zagona at CADSWES. Steve Bowser is considering how to handle evapotranspiration.
 - Edie Zagona told the group that CADSWES has a proposal to build a mechanism to link RiverWare with MODFLO for a California decision model with groundwater/surface water interactions. The models would run side-by-side, not directly connected, due to the time it takes to run. CADSWES will modify MODFLO and the California model being developed by a consultant with their help. Three to four other locations in the US are interested in MODFLO/RiverWare interactions. This additional interest will help calibrate URGWOM groundwater/surface water interaction calculations.
 - Nabil Shafike is discussing the use of similar model links with MODFLO for EBID's adjudication of water rights. If tied to water depletions, this link could help other Rio Grande water users.
 - It may be possible to tie evapotranspiration to MODFLO. Simulation of the complex middle valley drain system is easier in MODFLO than in RiverWare.
 - The Tech Team needs to make a decision on the appropriate method for calculating groundwater/surface water interactions. They may need to discuss how to obtain additional funding for this with Steering Committee. April asked Mike to present the Technical Team's decision to the Steering Committee at the next meeting and to include whether more funding would be needed.
- **Question** from Cyndie Abeyta: FWS is measuring conductance as a water quality parameter in middle valley wells. They are getting interesting information where there are high flows, combined with whether the reach is a gaining or losing stream. How can this information be used in URGWOM? Discussion is summarized below.
 - A small study was done for the Upper Rio Grande Basin Water Operations Review and EIS on water quality using URGWOM data. On the Colorado River, a water quality study was developed but have more data are available to use. Both of these studies provide the basic components for a predictive model not now available for the Rio Grande. These additional data from FWS would be helpful to supplement the other studies.
- **Question:** Does URGWOM have the ability to model groundwater/surface water interactions?
 - **Answer:** No, but MODFLO does and can also track water quality. RiverWare could be the decision system, using MODFLO to do the calculations. RiverWare can also handle constituent analysis, but MODFLO has more capabilities to handle water quality data.
- The Tech Team has been approached by Reclamation to calculate prior and paramount water rights using URGWOM. In order to accomplish this, the Technical Team will need documentation from Reclamation on the procedures to use before making changes to the model.

- If Reclamation can get consensus on the method to use, they can provide the information to the URGWOM Technical Team necessary to make changes to the ruleset.
- URGWOM was developed to solve problems for the river and the addition of this tool could help increase the use of the model for everyday decision-making, as originally intended.
- It was agreed that the baseline data should come from Reclamation or Department of the Interior. The Steering Committee can give direction to the Tech Team.
- The Interagency Hydrologic Modeling Conference will be held in mid-April next year in Reno, Nevada.
- ❖ Dave Wilkins summarized the progress in planning for the Phase II model testing.
 - The testing subcommittee met on May 5 and finalized the scenarios to be used in Part 2 of the testing.
 - Elephant Butte starting at 200,000 acre-feet and Caballo at 30,000 af. (*Note:* Conrad Keyes recommended starting with the Caballo volume that is used in the southern operating plan.)
 - Target flows of 200 cfs at Central gage and 100 cfs at San Acacia gage
 - Reduce all inflows by 50 percent
 - Dave developed a list of objects and slots to be changed for each scenario
 - In Part 3 of the testing, testers changing the physical system and/or rules must document what was done. The Scenario Manager will help with this.
 - Scheduling the training workshop for testers depends on completion of the Scenario Manager, rules documentation, and the EIS document. For training and testing, the Technical Team should use the latest model version with updated target flows.
 - A letter inviting testers to participate has been developed, which should be sent out 30 to 60 days before the training. Mike recommended sending draft list of testers to the Steering Committee for review and comment. Currently, there are approximately 60 agencies on the list. The workshop may be limited to 15 people.
- ❖ Edie Zagona presented an update on development of the Scenario Manager.
 - The Scenario Manager has changed little since the Steering Committee presentation at the March meeting. What is not in yet included is the ability to modify all values by a percentage as recommended by the Steering Committee. CADSWES is planning to do this, plus enable more automated comparisons to the baseline.
 - Conrad requested the ability to change groups of values by a percentage. He is primarily interested in being able to change diversion values. Within RiverWare, this capability may already available.
 - The pre-release version will be available for limited use by May 16. It will be 2 to 3 weeks before full release, but before June 10.
 - The upcoming RiverWare release has many changes and CADSWES must ensure that the Scenario works with the new model release.
 - For the testers' training workshop, the plan is to set up 15–20 computers in advance. Edie will have someone come down the day before to ensure that licenses are set up on these computers. When making reservations for the workshop, testers will be asked to state whether they will bring a laptop with the license and RiverWare loaded in advance or plan to use one of the computers set up for the session.

- Edie recommended that the Steering Committee and Technical Team consider charging a small fee for training workshop.
- The Steering Committee discussed different possible dates for the training workshop. The most recent proposal, made after this meeting, is to hold the workshop on August 9–10, with formal testing beginning on August 15.
- ❖ April and Conrad attended an EBID meeting on URGWOM on May 11 to try to enhance communications between northern and southern water managers and users. Mark Horner and April had a similar meeting with El Paso Water Utilities #1 and Reclamation.
 - EBID is supportive of trying to obtain additional funding for southern model development.
 - EBID does not want an operations model, but is interested in a planning model. They seemed more willing than previously to add infrastructure data to the model. The southern physical model has been developed and they are interested in obtaining data for it, such as tributary flows, groundwater/surface water interactions, and water quality data.
 - Conrad pointed out that El Paso Reclamation still wants to use its own software, not URGWOM.
 - IBWC, U.S. Section representatives did not attend the El Paso meeting so they have not had input, except through the FLO-2D contract with the Corps. IBWC wants to determine their need for URGWOM before they commit to its use.
 - EBID wanted to know why URGWOM was not already set up for use in the south, and how to use it to require IBWC to “clean up” sediment and other pollutants in the Rio Grande.
 - EPWU #1, EBID, and the City of Las Cruces recently received challenge grants for proposed projects. **April will send a summary of the grant information to the Steering Committee.**
- ❖ April noted that she frequently gets calls from other Corps entities about URGWOM, including the daily operations model and the planning model for the EIS, reflecting nationwide interest. The Corps nationwide is considering using models like URGWOM for managing water operations. This underscores the need to focus on getting stakeholders to use URGWOM for daily water management.
- ❖ Items for the next Steering Committee meeting include the final QA/QC Plan, middle valley decisions, and testing. The meeting will be held at the Corps at a date to be announced.



Technical Team Activities—Mike Roark

Target Flow improvements:

- Marc Sidlow has been working on solving additional problems with the target flow simulation. The target flow simulation is functioning much better. Mark indicates that is still is more to be done to make the simulation perfect.

Model Testing

- The Technical Team has had several meetings with the testing subcommittee to plan the testing and to determine the scenarios that will be used in the testing. The next meeting to discuss Phase II testing is set for June 2.

Water Operations

- The team has run the 2005 Forecast and Water Operations models for the April and May NRCS forecast. With the record snowpack the water operations model has been used extensively to forecast the runoff and the filling of reservoirs.

Rule-set Documentation

- The technical team has finished the draft documentation of the rules. The draft documentation has been given to Brad for inclusion into the rule set. Nabil and Garrett will then review the rule documentation by June 30.

Development of the MMS Model for snowmelt-runoff:

- Mike and Jack are continuing to work with the USGS Denver development team. The Denver development team delivered an updated model on March 8. We are going through and making a list of problems that we see that need to be resolved.

Model improvement of the Middle Valley Reaches:

- Nabil and Mike have started working on the conceptual model for the Middle Valley starting with the reach from Cochiti to San Felipe. We have put together a mock-up workspace for this reach and have started formulating the concept for the new methods that will be needed for the Middle Valley. We had a very productive meeting with David Gensler from MRGCD to go over our concept for the Cochiti to San Felipe reach. David is very interested in working with us to develop the new Middle Valley simulation.

Miscellaneous:

- Several members of the Technical Team had submitted abstracts for the Interagency Hydrologic Modeling Conference next year. There will be a session in the conference on modeling the Rio Grande and a session on RiverWare.