URGWOM News

A newsletter devoted to informing the public of the status of the Upper Rio Grande Water Operations Model (URGWOM)

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What is URGWOM?

URGWOM is an acronym for the Upper Rio Grande Water Operations Model, a tool for water storage and delivery operations, which is under development through a cooperative multi-agency effort.

In This Issue

URGWOM, short for the Upper Rio Grande Water Operations Model, is now well under construction on the full mainstem Rio Grande from the Colorado border to Fort Quitman, Texas. The computer model is a routing tool capable of simulating water storage and delivery operations. In the last newsletter of June 1998, we discussed the completion and performance of the Rio Chama test case. In this issue, we have several updates to share.

Mainstem Model Design and Development

The Technical Team began mainstem development by sending a skeleton model (topology) of the main channel of the Rio Grande, complete with all the system features including gages, reaches, reservoirs, diversions, confluences, and canals, to the people on the URGWOM mailing list. A letter was also sent to solicit involvement in the Technical Review Committee (TRC) to continue outside technical review for the mainstem. In addition to their earlier review of the Rio Chama test case models, the TRC provided valuable input on the topology and summary of the technical literature, highlighting useful data and methods for development of the mainstem. The physical model should be ready for their review in April.

Early this year, the Technical Team focused on defining the level of detail required to insure that the model has flow forecasting capability for everyday water operations use and for review of reservoir system operations. Subsequent detailed discussions between the Technical Team and Steering Committee members on the best technical approach culminated in a written physical model development procedure for the Rio Grande Basin. This procedure now guides the team in developing routing and gain/loss relationships for each river reach.

Water resources modeling requires a consistent set of flow data. Engineering changes in the Rio Grande downstream from Cochiti Lake, between the mid-1930s and mid-1970s, altered river flow patterns and affected gage record periods and data consistency. The Technical Team, supported by the Steering Committee, selected the period of record from 1975 to 1997 to provide data for use in calibrating the model and analyzing water resources below Cochiti Lake. This constraint admittedly sacrifices some desirable and useful data in model development and application, but it is a tradeoff to facilitate developing usable forecast and accounting models representing recent conditions in a reasonable timeframe. The 1950s drought hydrology will need to be applied to current hydrological conditions below Cochiti in the model through use of statistical methods. The Rio Grande above Cochiti Lake has reliable gage data available, with long periods of record that can be used to calibrate the model in these reaches.

The foundation for developing a major modeling effort is standardization of all flow data to one base condition and time. The base condition for developing flows for URGWOM is the present.

The following steering committee members manage the model development process :

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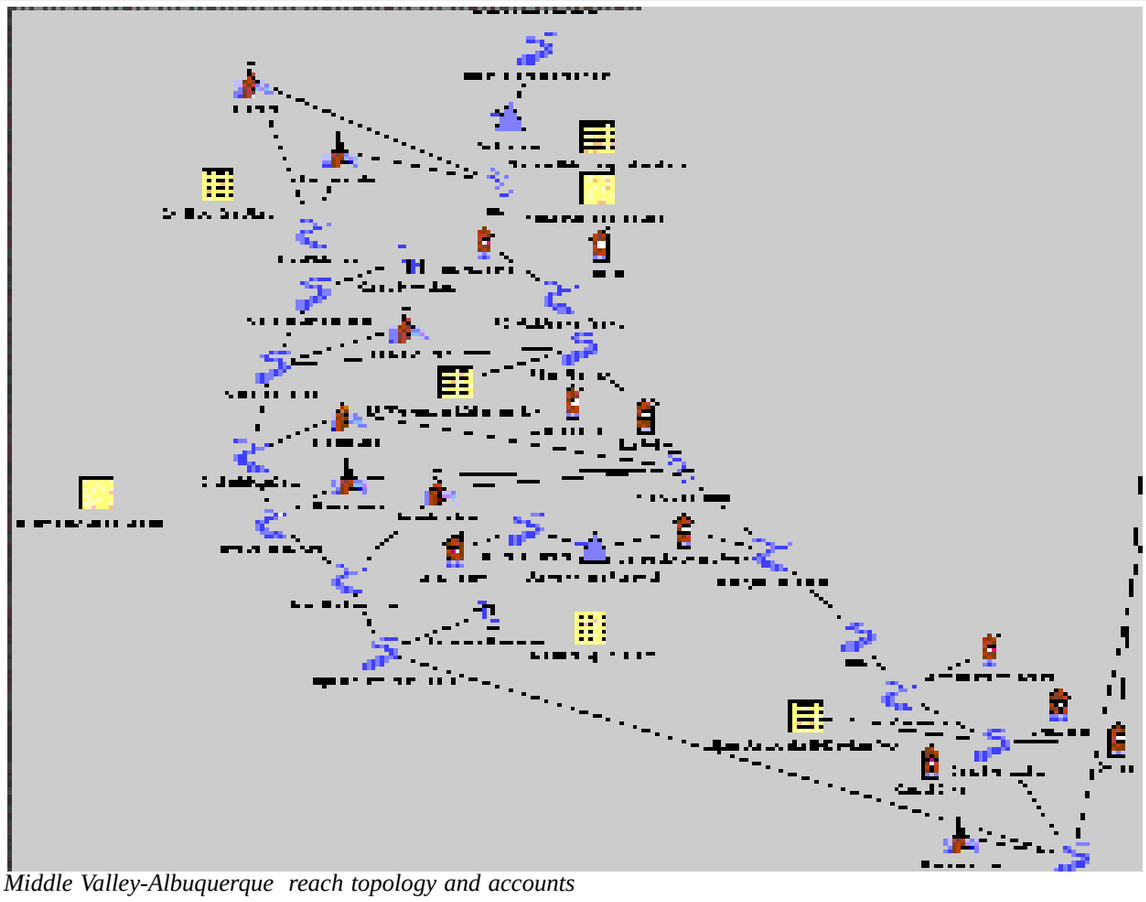
Informational Meeting on Status of URGWOM

You are invited to an informational meeting from 1:00 PM to 3:00 PM on Wednesday, March 24, 1999, in the Tewa and Nambe Meeting Rooms of the Santa Fe Radisson Hotel at 750 North St. Francis Drive in Santa Fe, New Mexico.

The presentation will focus on model development activities and procedures on the mainstem of the Rio Grande. There will also be a short status report on the upcoming Upper Rio Grande Water Operations Review.



Middle Valley-Albuquerque reach topology and accounts

Water Accounting and Operational Rules Writing

Work continues on development of multi–contractor water accounting methods under contract with CADSWES (the Center for Advanced Decision Support for Water and Environmental Systems), as an integral utility of RiverWare, the software used in URGWOM. These tools will replace the two water type method used to distinguish Rio Grande from trans-mountain diversion water developed in the Rio Chama test case. Accounting capability will be expanded by further subdividing the San Juan Chama project water into more detailed multi-contractor accounts for project water deliveries. URGWOM's multi-contractor accounting capability is tentatively scheduled for completion at the end of this year.

Documentation of the operational rules for the Rio Chama test case were published in draft form in September 1998. The Technical Team is further refining the rules as they build and link the Rio Chama with the mainstem model.

Modeling Coordination

In our early model development discussions, we recognized that other river modeling activities were ongoing or planned in the basin. In hopes of sharing data sets and other information, the URGWOM Technical Team will continue to coordinate data and routing techniques with modeling efforts conducted by other agencies.

Steering Committee Meetings

Steering committee meetings are usually held on the second Thursday of each month from 10:00 a.m. to noon. Meetings are open to all interested parties. Please call Gail Stockton at 505-342-3348 to verifty meeting dates, time, and place. Unless otherwise indicated, all meetings are scheduled to take place at the U.S. Army Corps of Engineers Headquarters Building, 4101 Jefferson Plaza NE, Room 119, Albuquerque, NM 87109.

URGWOM Web Site: http://www.spa.usace.army.mil/urgwom

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