Technical Team Activities

October 24, 2012

Data Acquisition, Database and DMI Administration and Management

(5-year Plan Item 1.1)

- A full update to the URGWOM database is nearly complete with just a few additional items to be completed, primarily related to ungaged local inflows and crop evapotranspiration (ET) values. A new single database DSS file has been created with all the historical data needed for URGWOM, and a new data management interface (DMI) was set up in the Middle Valley calibration model for importing data through 2010 to the calibration model from the new database file. DMI work is now being completed more efficiently with the new enhanced DMI dialog in RiverWare. Work is continuing to implement the database management plan as discussed at the last Advisory Committee meeting with focus on the role and format for the 2013 Accounting Model, the role of RiverWare initialization rules for meeting data needs for all applications, and additional steps to simplify data management.

Update and Development to Rules

(5-year Plan Item 2.7)

- The Tech Team completed a thorough review of the latest revamped ruleset for version 5.0 of URGWOM through the use of the latest model and ruleset to complete the 2012 Annual Operating Plan (AOP) model runs. Numerous rule edits were completed during the AOP modeling process to refine the new ruleset. Some additional enhancements are now being implemented for better representing policy for Albuquerque Bernalillo County Water Utility Authority (ABCWUA) surface water diversions and also to incorporate the functionality to simulate deliveries of contractor water to Elephant Butte Reservoir to be available for exchange with Rio Grande water. Additional rule changes have also been incorporated to further consolidate and simplify the rule policy language (RPL), and numerous inline comments have been added to document details of the RPL in the URGWOM ruleset.

Maintain Model Documentation and User Manuals

(5-year Plan Item 1.2)

- The rules documentation developed for the last Technical Review was updated recently to reflect all the significant changes to the new revamped ruleset used with version 5.0 of URGWOM as discussed at the last Advisory Committee meeting. The documentation now contains a flowchart for overall policy as represented in the URGWOM ruleset. The Tech Team will be reviewing the draft document.
- As part of the overall effort for model development, documentation, and stakeholder outreach, the Tech Team completed a field trip to visit aspects of the San Juan-Chama Project and other sites along the Rio Chama in August. The trip was conducted as a review of specific components of the system set up in URGWOM and for new Team members and agency representatives to see several important aspects of the system.

Updated Vegetation Surveys

(5-year Plan Item 1.4)

- The Interstate Stream Commission (ISC) completed an updated vegetation survey in 2011, and work has now been completed to process all the data. Irrigated areas will be provided soon and

added to the URGWOM database for use as the projected areas in model runs for future conditions. The updated survey included an additional component - separate teams were dispatched to assess areas from on-the-ground surveys.

Extend Model to Colorado Portion

(5-year Plan Item 2.4)

- Significant progress was made with work to set up a test model for the Colorado portion of the Rio Grande basin. A full historical simulation model of the surface water system is nearly complete. Diversions have been set up for all the diversions in both Water District 20 of Colorado Water Division 3 (the mainstem of the Rio Grande) and Water District 22 (the Conejos River basin), and separate diversion accounts have also been set up for all the water rights held by each diverter. Historical diversion data, back to 1950, have been set up along with the historical gage data. The accounting configuration is being set up for ultimately using the water rights solver capability in RiverWare, which will set diversions during rulebased simulation based on the Prior Appropriation Doctrine as done each day in the basin from an identified daily allocatable water supply. Separate deliveries to the Colorado-New Mexico State-line will be set to replicate actual policy for setting Compact curtailments. Work has also been completed on the rules for Platoro Dam.

Set Up URGWOM for Efficient Longer Runs with 64-bit

(5-year Plan Item 2.7)

- The latest version 5.0 of URGWOM with the revamped ruleset can now be used for longer continuous model runs for planning studies. Fifty year runs using RiverWare for 64-bit machines are completing in about an hour. The model will be used in the near future to complete sixteen 48-year model runs for the West Wide Climate Risk Assessment (WWCRA). This exercise will serve as an excellent first use of the model for efficient longer simulations.

Monthly Timestep Powersim Model

(5-year Plan Item 1.5)

- The monthly timestep Powersim model, or Upper Rio Grande Simulation Model (URGSiM), is being used as the primary tool for evaluating climate change scenarios for WWCRA. Several enhancements to the model have been incorporated as needed for this project. Work is also continuing to improve the user interface for the model.

Middle Valley Calibration

(5-year Plan Item 2.1)

- Will be discussed later in the meeting.

Water Quality Modeling

(5-year Plan Item 2.5)

- Will be discussed later in the meeting.