

Draft Memorandum

To: URGWOM Technical Team Members
Date: July 15, 2022
Subject: Notes of the July 12, 2022 URGWOM Technical Team Meeting

These notes summarize the items discussed during the July 12, 2022 meeting of the Upper Rio Grande Water Operations Model (URGWOM) Technical Team. The meeting began at 9:00 am and was conducted as an on-line collaboration hosted by the Corps of Engineers using Webex. All those participating in the meeting introduced themselves and their names and affiliation are listed on the last page of these meeting notes.

This month's meeting agenda includes a report on the Bureau of Reclamation work on updates to ESA release and MRGCD diversions in URGWOM, updates to the URGWOM SharePoint Site and general model clean-up activities as well as general updates on ongoing URGWOM related activities from the Corps of Engineers, the Bureau of Reclamation, the U. S. Geological Survey and their contractors

Marc reported on the following model related items that the Corps have been working on:

- Update of the unregulated scripts and development of the DMIs for the URGWOM real time model; the changes necessary to implement the updates are nearly ready to add to the official model;
- Realtime Modeling (10-days) using NWS ten days forecast; and
- Running URGWOM model simulations related to potential changes in Abiquiu Reservoir operation (Water Control).

Hydros will implement these changes to the model after the deep aquifer objects are added to the official model.

Lucas reported on model revisions underway at Reclamation as described in the document circulated to the Technical Team by email dated May 13, 2022. The revisions include changes to supplemental water and MRGCD diversion methods, file screening and cleanup and Abiquiu Reservoir operations.

Lucas described two problems in the way model simulates ESA releases. First, the model calculates extremely high and unrealistic ESA flow releases from Abiquiu to attempt to meet gage target flows and, second, the diversion dams directly above the gages that are flow targets do not realistically bypass enough flow when the flows get low. He presented hydrographs from the April, 2022 AOP model runs that graphically depict the problem. To fix these model issues, five slots were added to two existing data objects and ten rules were created under two existing policy groups.

Slot changes and rules for the operation of Angostura Diversion Dam related to the capacity of the canal were modified. Slots were added that set fixed values of step-down flow rates when ending ESA releases. Slots were modified to change diversion bypass flows and to define release step down amounts and duration that would limit extreme fluctuations in release rates and which diversion location controls the amount of release. A new slot was added to the MiddleValleyTargets Objects that specifies how much ESA water is to be released at Abiquiu to assist in stabilizing the tail end of the snowmelt runoff.

Lucas described the changes to four rules in the Abiquiu Deliveries Policy Group and six rules in the Limit MRG Diversions Policy Group. He also described rules that could be removed. These include four rules in the SetMiddleValleyOperations policy group and two rules in the Abiquiu Deliveries Policy Group. These rules do not appear to work as intended and the new rules created for this update would take their place.

Lucas presented hydrographs of Abiquiu Reservoir releases and flow at gages in the Middle Valley from the 2022 AOP model that demonstrate the effect of the proposed changes. Two 1975-2009 planning model runs were made to compare the results of the changes to the model with the pre-change model results. The number of days ESA water is released is almost double in the modified model while the average release is about half of the original model. This indicates that to meet the targets the modified model did not have to release as much water as the original model.

Carolyn noted that the biological opinion target flows have changed over the 1975-2009 planning model period of record. Nick stated that some of the original model methods are used to compute supplemental water releases and the ability to use of the old methods should be retained through the use of a switch to toggle between the original and modified rulesets. In response to a comment from Marc about the lack of demonstrated lag time in the hydrographs, Lucas reported that in the simulation, MRGCD operates their diversion system in anticipation of the change in release at Abiquiu. Lucas will modify the existing switch to accommodate the proposed changes and the updates will be added after the deep groundwater objects are added.

Lucas also reported on the work he has been doing to clean up unused slots and David advised him that there is a tool to search for slots that are referenced or used. Also, two new accounts were added to Abiquiu Reservoir, one for accounting for the temporary storage of prior and paramount water in the reservoir and a slot for accounting of storage of environmental water leased to Reclamation.

Lucas also reported that he has reviewed and organized all of the post-2017 Technical Team files and moved them from the myUSGS web page to the URGWOM SharePoint site. Other features were also added to the home page. Miller volunteered to review the myUSGS files and propose screening criteria to determine which of the pre-2017 Technical Team files should be retained and moved to the SharePoint site.

Breana reported that Tetra Tech is nearly complete with the development of the accounting model documentation, and it should be completed this month. She is also working on an update to the URGWOM database (.dss file). Nick reported that Hydros is also working on a database update, and he suggested that they coordinate their efforts to eliminate the potential for a duplication of effort.

Cindy reported that the NMISC is completing the report on an inventory of irrigated acreage in the Middle valley from the year 2020. Cindy will provide Nick with these data so that they are included in the database update.

The Team discussed a Technical Team inspection trip including the irrigation works of the Acequias Norteñas (located above El Vado Reservoir) and an inspection of the progress of construction at the rehabilitation of El Vado Dam. Facilities of the San Juan-Chama Project could also be visited during this time. This trip may require two days to accommodate visits to the sites and travel time from Albuquerque. Miller will circulate a more detailed draft itinerary to the Technical Team to determine the level of interest in this trip.

David N. reported on the following model work tasks underway at CADSWES:

- Develop the capability to export slots without breaking their references; and
- Discussion about the SWMM model and NRCS web page links to the URGWOM model.

The next meeting of the Technical Team is scheduled for August 9, 2022.

There being no additional matters to be brought before the Team, the meeting was adjourned at about 10:30 am.

ATTENDANCE LIST
URGWOM TECHNICAL TEAM MEETING
July 12, 2022

<u>NAME</u>	<u>REPRESENTING</u>
Marc Sidlow	USACE, Albuquerque District
Prakash Kaini	USACE, Albuquerque District
William Miller	Southwest Water Design/USACE Contractor
Cindy Stokes	NM Interstate Stream Commission
Breana Chavez	Tetra Tech/USACE Contractor
Walt Kuhn	Tetra Tech/USACE Contractor
Lucas Barrett	Bureau of Reclamation
Carolyn Donnelly	Bureau of Reclamation
Jerry Melendez	Bureau of Reclamation
Brian Westfall	Keller Bliesner / BIA Contractor
David Neumann	CADSWES
Nick Mander	Hydros Consulting
Diane Agnew	Albuquerque Bernalillo County Water Utility Authority
Steve Schultz	City of Santa Fe
Zhuping Sheng	Paso del Norte Watershed Council