

Memorandum

To: URGWOM Technical Team Members
Date: November 24, 2020
Subject: Notes of November 17, 2020 URGWOM Technical Team Meeting

These notes summarize the salient matters discussed during the November 17, 2020 Upper Rio Grande Water Operations Model (URGWOM) Technical Team meeting. The meeting began at 9:00 am and was conducted as an on-line collaboration hosted by the Corps of Engineers using the Corps' WebEx account. All those participating introduced themselves and their names and affiliation are listed on the last page of these meeting notes.

Specific meeting agenda topics include a status report on the review of the simulation of Rio Chama Acequia depletions, an update on RiverWare improvements and enhancements and general updates on ongoing URGWOM related activities from the Corps of Engineers, the Bureau of Reclamation, the Interstate Stream Commission and the US Geological Survey.

Phillip reported that he and his associates at the Corps' Albuquerque District Office have returned to working in their offices on Jefferson Plaza.

Miller reported to the Team on his investigation into the diversion and depletion of Rio Chama flow by the Acequias diverting from the Rio Chama below El Vado Dam. He reported that all of the historic record of diversions collected by the NMOSE for the 2012-2020 period have been compiled and subjected to a QA/QC review. These data will be compared to the assumed diversion data (water right limit) currently used in the model and any significant change in depletion of the flow of the Rio Chama due to the use of recorded data instead of the assumed data could justify a change in the local inflow file for this reach.

Miller also reported that in order to evaluate the assumed Acequia return flow currently used in the model (33% of diversion), the consumptive irrigation requirement (CIR) will be computed and deduced from the amount diverted to estimate the return flow. The ET data from Reclamation's ET Toolbox for the Rio Chama – Velarde area is considered for use here. The ET data for the Rio Chama-Velarde area is computed using Hargreaves Samani based on data from the Alcalde weather station and effective precipitation computed using the SCS TR-21 method modified by Brian Westfall at K-B Engineering. The ET Toolbox applies a cropping pattern of 30% alfalfa, 40% pasture and 30% orchard. The 2017 Rio Arriba County USDA NASS show that 95% of the crop was in alfalfa and pasture.

Acequia irrigated land extends from Abiquiu Dam to Espanola. The differences in elevation, air temperatures and precipitation between the Alcalde weather station and the Abiquiu Dam weather station were evaluated to determine which station data (2012-2020) would be most appropriate for use in computing ET for the Chama Acequias. The maximum air

temperature at Abiquiu Dam is less than the maximum air temperature at Alcalde (-1 °F), but the minimum air temperature at Abiquiu Dam is about 3.5 °F greater than the minimum temperature at Alcalde. The mean annual precipitation at Alcalde is 0.71 in. greater than the Abiquiu Dam mean annual precipitation. The diversion for the most upstream Acequia, (Abeyta Trujillo) is very near the toe Abiquiu Dam, but 350 ft. lower in elevation than the Abiquiu Dam weather Station, and about 370 feet higher in elevation than the Alcalde weather station elevation.

Miller recommended that the Alcalde weather station data be used in the computation of crop ET along with the precipitation from this station for application in the K-B Engineering TR-21 effective precipitation transformation. The crop mix will be based on the 2017 NASS data. The Crop ET (potential) would be reduced by 20% to take into account the less than optimum field conditions along the Rio Chama.

The Team also briefly discussed fallow acreage. The 1961 NMOSE Hydrographic Survey of the Rio Chama found that about 6.5% of the acreage was fallow and no depletion assigned to this acreage. The amount of acreage with a water right that is not now being irrigated is larger than 6.5% and inspection of the aerial images of these lands indicates that some of the non-irrigated lands are now overgrown with trees (elms or Russian olive) or other riparian vegetation. Miller reported that some value of consumptive use, in excess of effective precipitation, will be assigned to these lands.

David reported to the Team on upgrades to the RiverWare software that CADSWES has prepared for the Corps' and Reclamation's Albuquerque Offices. These changes, which will be released with version 8.2 update, include:

- Capability to filter list objects when searching for specific objects;
- Capability to format years without commas; users will be able to configure slots as "year" with no precision or decimals and no commas;
- Enable SCT tables to show priorities by flagging letters, priority numbers, or both;
- Scripts – users will now have the ability to execute a single action or resume after stopping the script run. This option will also be available to execute from the edit tab;
- Scripts - add capability to add an additional line of text for an action description;
- Added the ability to utilize DMIs to access web data sources for the HDB (Reclamation), CWMS Radar (Corps) and REST web services (USGS, still under development). David demonstrated how to connect to the USGS-REST web data service and import the data into RiverWare. In response to a question David reported that these web data services are available to the public and a password is not required.

Phil reported that Nabil had advised him that the aerial inventory of irrigated land in the middle Valley will not be conducted this year due to the lack of adequate funding. In addition,

the work that Hydros is performing on the aquifer objects will be the subject of a presentation at the next meeting of the Team

Cindy reported that the NMISC crop inventory of lands along the Rio Chama is nearly complete. The NMISC had no further updates on URGWOM related activities to report at this time.

Dave M. reported that the USGS had no matters to bring before the group during this meeting.

The next regular meeting of the Technical Team is scheduled for January 12, 2021 at 9:00 am, which will also be an on-line collaboration.

The meeting adjourned at approximately 10:15 am.

ATTENDANCE LIST
URGWOM TECHNICAL TEAM MEETING
November 17, 2020

<u>NAME</u>	<u>REPRESENTING</u>
Dave Moeser	USGS
Marc Sidlow	USACE
Phillip Carrillo	USACE
William Miller	Southwest Water Design/USACE Contractor
Mike Brown	Tetra Tech/USACE Contractor
Cindy Stokes	NMISC
Shalamu Abudu	NMISC
Guillermo Martinez	Intera / Corps Contractor
David Jordan	Intera / Corps Contractor
Brian Westfall	Keller Bliesner Engineering / BIA Contractor
David Neumann	CADSWES
Nick Mander	Hydros Consulting
John Carron	Hydros Consulting
Ashenafi Madebo	Colorado Division of Water Resources
Zhuping Sheng	Paso del Norte Watershed Council