Memorandum – DRAFT

To: URGWOM Technical Team Members
Date: November 20, 2017
Subject: Notes of November 14, 2017 URGWOM Technical Team Meeting

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These notes summarize the salient matters discussed during the November 14, 2017 Upper Rio Grande Water Operations Model (URGWOM) Technical Team meeting. The meeting began at 9:00 am in the NM Interstate Stream Commission Office in Albuquerque, NM. An attendance list is included on the last page.

The meeting Agenda topics include ET Toolbox and URGWOM reference ET comparison, ET Toolbox and SSEBop ET comparison, comparison of irrigated acreage using 2015 MRGCD and NMISC data; implementation of RiverSMART platform; RiverWare Functionality Demonstrations and an update on the URGWOM Five-year plan.

Nabil announced that he had applied to fill the vacant position of Chief of the Reservoir Control Branch with the Corps of Engineers, and that he had been selected to fill that position. Nabil introduced Curtis McFadden, who would serve in a temporary role of URGWOM Program Manager until the full-time position is filled by the Corps.

Kenneth presented plots of reference ET values from URGWOM and the ET Toolbox for three years using the Los Lunas station temperature data. The comparison showed that there were daily differences of up to 0.05 in/day, an amount greater than expected. Kenneth will review the temperature data used by each method to determine the source of the discrepancies. Miller will provide the air temperature data used to compute the reference ET in the URGWOM database.

The ET Toolbox will begin using the MRGCD weather tower data as they become available and will continue to rely on National Digital Forecast Database as backup for historical data. When the tower data come one-line, these data will be used for current/historic reference ET computations and NDFD would provide forecast data. The tower data will have to undergo QA/QC review at the end of each year before the data are added to the database. The ET Toolbox will use the crop curves used in the URGWOM reference ET computations.

Kyle briefly reported on his work in the SSEBop reference ET computation. The initial model iteration included land use data outside of the irrigated area boundaries which diluted the

computed crop ET values and could therefore could not be compared with URGWOM reference ET data. The Team recommended that Kyle use the land use data of Middle Valley areas inventoried by NMISC in 2015.

Cindy reported on her comparison of the 2015 NMISC Middle Valley acreage (44,797 ac.) inventory and the MRGCD (ditch rider, 44,997 ac.) database. Pueblo lands and Bosque de Apache lands are not included. The NMISC plans on performing an acreage inventory in the Middle Valley every five years. Cindy will continue her comparison of the data sources by comparing irrigated acreage using data from 2011 (MRGCD data are available back to 2002). Cindy suggested that a review of the USDA-NASS Crop Data Layer reports may be a source of reliable information for use in the comparison. Molly stated that the NMOSE 2015 Report on water use will rely on the USDA CDL data. Nabil suggested that the NASS data be used as a check on the MRGCD data, and if the MRGCD data also compare well with the NASS data, that this source of land use data be utilized in the URGWOM data base. Molly agreed to make a report to the Team on the use of the USDA-NASS crop data layers as a source of crop data at the next Team meeting.

Nick presented a report on the implementation of URGWOM into the RiverSMART platforms as requested by the Corps. He demonstrated how this platform serves as a study manager to organize data sources, demands and different rules, and the post processing tools that are available. It is best suited for use in long-range studies, such as recently completed Colorado River basin studies by the Bureau of Reclamation. This platform is available for use by those who have a RiverWare license.

David and Patrick presented a demonstration of the RiverWise function of RiverWare, which had previously been referred to as the Scenario Explorer. This tool could be utilized at stakeholder demonstrations or for trial runs by "laypersons". It is still under development and will be available for use in the upcoming release of version 7.2. A license will be required however and David was not sure if there would be a cost for its use.

David described the new ground water functionalities, including the elimination of negative storage computation and the ability to link groundwater objects directly to a local inflow, which must be completed for each individual link. CADSWES has also developed a link between reservoir object and an "under reservoir" object serves as a head based boundary condition based on the reservoir water surface elevation. This function will be utilized to link

the Elephant Butte Reservoir seepage object with the upstream San Marcial groundwater object. David also demonstrated the addition of a script dashboard that displays the status of script execution progress and the addition of output flow lines on the workspace tea-cup diagrams.

Miller reported that he is continuing to work on the update to the five-year plan, adjusting the schedule in the plan based on the progress of ongoing investigations. The plan will include a schedule for ET Toolbox enhancements and the linking the ET Toolbox to the Real-Time Water operations model. The plan will also describe efforts to extend development in the Lower Rio Grande, including the ET Toolbox, and developing crop ET data for the lower Rio Chama and the Velarde areas. A final draft of the five-year plan will be circulated to Team members prior to the next Tech Team meeting.

Under other business, the CADSWES Users' group meeting is scheduled for February 1-2, 2018. Abstracts are due December 1t, 2017. Marc encouraged Team members to consider presenting an URGWOM topic at the meeting in Boulder, CO.

An URGWOM training session for users in the Lower Rio Grande area will be held February 7-8, 2017 at the IBWC offices in El Paso, TX. Marc indicated that he is anticipating up to 20 people in attendance. Conrad reported that the deadline for enrolling in the class in January 10, 2018.

The next meeting of the Team has been scheduled for December 14, 2017.

The meeting adjourned at about 11:40 am.

ATTENDANCE LIST
URGWOM TECHNICAL TEAM MEETING
November 14, 2017

NAME	REPRESENTING
Marc Sidlow	USACE
Jesse Roach	Tetra Tech / USACE Contractor
Carolyn Donnelly	USBR
Kyle Douglas-Mankin	USGS
William Miller	WJM Engineers/USACE Contractor
Lucas Barrett	USBR
Kenneth Richards	USBR
Cindy Stokes	NMISC
Curtis McFadden	USACE
Nabil Shafike	USACE

Those participating via telephone conference:

Nick Mander	Hydros Consulting
Conrad Keyes Jr.	Paso del Norte WC / USACE Contractor
David Neumann	CADSWES
Brian Westfall	Keller Bliesner / BIA Contractor
Julie Valdez	NMOSE
Molly Magnuson	NMOSE
Ashenafi Madebo	CDWR