Memorandum

To: URGWOM Technical Team Members
Date: January 15, 2018
Subject: Notes of January 9, 2018 URGWOM Technical Team Meeting

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These notes summarize the salient matters discussed during the January 9, 2018 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 of these meeting notes.

The principal meeting Agenda topics include ET Toolbox and SSEBop ET comparison, method for computing real-time and forecast effective precipitation, long-term planning runs using historical data and an update on the URGWOM Five-year plan. Kyle reported that the USGS is no longer using WebEx to provide meeting access for remote attendees and that a new system (GStalk) would be utilized during this meeting and probably future Technical Team meetings as well.

Kyle and Grady reported on the status of their work on the comparison of ET computations using the ET Toolbox ET computations and the Landsat-based SSEBop computations. They also reported on a discrepancy in the riparian and crop acreage data between the ET Toolbox areas and the Utah State / IKONOS area data for 2014. Kenneth reported that he had discussed the matter with Kyle and Grady and he had forwarded this matter to Reclamation's Denver Office, but that he had not yet received a response. Kyle reported that a comparison of the two methods for computing crop ET for a large irrigated parcel in the middle valley showed that the two methods yielded very similar results (on a monthly basis). Other related matters discussed included:

- The method could provide reliable crop acreage and ET data for use in URGWOM in lieu of the current methods;
- May help in review of the 80% potential ET factor currently in use;
- Applying this method to develop a historic ET record is not time consuming as much of the work has been completed; and
- Are SSEBop crop ET values influenced by lower ET values in surrounding non-irrigated terrain?

- Jesse suggested that the volume of ET over the period of record for each method be tabulated and compared.

Brian began his discussion of effective precipitation by summarizing the problem; that is, the current URGWOM method of computing effective precipitation (SCS TR-21 with the KB Engineering distribution function), is not suitable for real time use. In response to a request from the Technical Team, Brian presented a method to estimate effective precipitation based on the use of the NRCS TR-55 curve numbers. The Team discussed the value of the initial abstraction (I_a) and the paper by Hawkins that posited that the coefficient value of 0.20 is too high and a more appropriate value is 0.05. Brian presented results of a comparison of effective precipitation computations using the curve number approach and the TR-21 method. In summary, Brian reported that with the Hawkins change in initial abstraction and a curve number of about 90 we can nearly duplicate the TR-21 calculation in URGWOM. Brian also pointed out that the TR-21 may not be correct. This method is easy to implement for use in the ET Toolbox on a daily basis and may be a good option.

Jesse presented a report on the results of the sixty-year monthly/daily planning model study. Jesse discussed the model changes required to ensure successful completion of monthly model runs, such as modifying some look-up tables because of the increased volumes involved with monthly time steps. Jesses presented charts comparing the massed flow at gaging stations and reservoirs from Colorado to San Marcial. Jesse pointed out that although there are discrepancies between the two models such as in the flow of the Rio Grande at La Sauces and at San Marcial, and in storage values at Platoro and Abiquiu Reservoirs, he was satisfied with the results to date. The work to date has suggested areas for further review, which, along with the model results, are discussed in the Technical Memo previously circulated by Jesse. He requested comments on the Technical Memo by January 26, 2018.

Miller presented an outline of tasks and a schedule to be included in the draft 2018-2022 URGWOM Five-Year Plan. The Plan is intended to serve as a guide for prioritizing and budgeting of work tasks and includes regular activities, model enhancements and development, and planning support. The plan document also includes a summary of previous model accomplishments, individual work plans and estimated costs. Miller suggested adding to the plan some ongoing activities including the SSEBop and long-term daily/monthly model studies. The Team also suggested that Dagmar Llewellyn be contacted about a MRGCD/Albuquerque

study and the potential role of URGWOM in this effort. It is likely that URGWOM will also be useful in evaluating Cochiti and El Vado Reservoir operation for the benefit of endangered fish. Miller will circulate the planning document to the Team for further review and post the Plan on the myUSGS webpage when the 2018 files are set up.

Under other business:

- Kyle has updated the myUSGS site with all of the 2016-2017 Technical Team meeting notes and presentations. He will also update the site to accommodate 2018 reports and consolidate all pre-2016 data files into an archive file.

- Marc reported that he was able to complete an unofficial January 1 AOP run, although he cautioned that there had not been complete coordination with Reclamation on operations input. The March-July runoff forecast for Otowi Bridge is 24% of normal.

- The CADSWES Users' group meeting is scheduled for February 1-2, 2018; Marc requested that if any Team members had any items to add to the CADSWES wish list, this would be the time to speak up.

- The 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.

- Miller suggested that the Team consider a field trip to the lower Rio Grande area in lieu of the regular March meeting. The field trip may require two nights out of town, depending upon how far down the Valley the tour extends.

- The Rio Grande Compact Engineer Advisors Meeting is scheduled for March 5-6, and the Compact Commission is scheduled to meet March 29 in Austin, TX.

The next meeting of the Team has been scheduled for February 13, 2018.

The meeting adjourned at about 11:10 am.

ATTENDANCE LIST
URGWOM TECHNICAL TEAM MEETING
January 9, 2018

NAME	REPRESENTING
Marc Sidlow	USACE
Jesse Roach	Tetra Tech / USACE Contractor
Carolyn Donnelly	USBR
Kyle Douglas-Mankin	USGS
Brian Westfall	Keller Bliesner Engineering / BIA
William Miller	WJM Engineers/USACE Contractor
Grady Ball	USGS
Kenneth Richards	USBR
Tony Zimmerman	BIA

Those participating via telephone conference included:

Nick Mander	Hydros Consulting
Conrad Keyes Jr.	Paso del Norte WC / USACE Contractor
David Neumann	CADSWES
Jerry Melendez	USBR
Julie Valdez	NMOSE
Molly Magnuson	NMOSE