

Approved April 29, 2008



**San Juan River Basin Recovery Implementation Program
Hydrology Committee Conference Call
February 7, 2008
9:00 am – 12:00 pm**

Member/Alternates Present

Rege Leach, Chairman
John Simons, Alternate
Ray Alvarado
Ron Bliesner
Brian Westfall, Alternate
Aaron Chavez for Randy Kirkpatrick
Steve Harris
Dave Frick
Bill Miller
Chuck Lawler, Alternate
Earle Dixon
John Whipple
Pat Turney, Alternate
Absent
Absent

Representing

U.S. Bureau of Reclamation
U.S. Bureau of Reclamation
State of Colorado
Bureau of Indian Affairs
U.S. Bureau of Indian Affairs
Water Development Interests
Water Development Interests
Jicarilla Apache Nation
Southern Ute Indian Tribe
Southern Ute Indian Tribe
Navajo Nation
State of New Mexico
State of New Mexico
U.S. Fish and Wildlife Service
U.S. Bureau of Land Management

Program Management

Sharon Whitmore

U.S. Fish and Wildlife Service

Other Interested Parties

Dave King
Brent Uilenberg
Pat Page
Ryan Christianson
Katrina Graham
Rick Cox
Stanley Pollack
Kim Davis
Paul Harms

U.S. Bureau of Reclamation
Water Development Interests
Navajo Nation Dept. of Justice
Navajo Nation Dept. of Justice
NM Interstate Stream Commission

Rege Leach, new Committee Chair, took roll call. He explained that the December 4, 2007, Meeting Summary was not yet finished. They are currently reviewing a draft and it should be done soon. He said an Action Item Log updated after the last meeting was sent out before the meeting.

Review of Action Item Log

#34 – Determined that the gage error was not something that could be fixed. The same gage error was inherent in both Gen2 and Gen3. The item was moved to the Completed List.

#105 – Revised.

#145 – *CO to provide John Whipple with the statistical relations for regressions to get the natural flows for the period outside of records for diversion points in Gen3*, was determined to be cancelled and moved to the Completed List with a notation that it was not completed, just moved.

#146 – Ray Alvarado indicated he would be sending some of this information out probably this week. The due date was changed from pending to ongoing.

#149 – Revised.

#155 – Cancelled and moved to Completed List.

#157 – Completed.

#159 – Whipple said Reclamation has had this information since July. Dave King indicated they have a paper copy but need the electronic version. He said he would also like Whipple's historic data for Blanco, Navajo, and little Navajo diversions into the SJ Chama Project. It was determined that #159 is the first step to completing #160 and that Whipple and King need to get together to complete both of them prior to the April HC meeting.

#161 - *Compare Gen2 and Gen3 including natural flows and depletions for discussion at next meeting.* Brian Westfall and King provided comparison information; however, King's information was not received by the majority of HC members. Westfall re-sent King's information during the meeting. It was decided that even though a full comparison may not be possible at this meeting and more information may be necessary, this item could be considered completed.

#162 – *Send draft write-up for CC describing status of the SJR Model issues and HC recommendations to HC for review in time to provide final to the CC prior to their January 28, 2008, conference call*, was completed. Page said the memo stated the HC had agreement on San Juan-Chama but they had not yet agreed on how to deal with the baseline and completing and implementing Gen3. The due date of #156 was revised to accommodate further guidance/requests from the CC regarding hydrology model issues.

Budget and Status Report – King reported they have spent more than anticipated, to-date, because of the technical transfer from King and Simons to Ryan Christianson and some other unexpected expenses. He indicated that Reclamation would like the HC's approval to use their \$6,000 contingency fund. It was asked what the money would be spent on and could approval wait until later in the year like at the June meeting. Reclamation knows they will need it now primarily because of the technical transfer. Even with the additional \$6,000, they will need to come up with some additional money from somewhere. Their current budget does not cover two additional people. A motion was made to approve use of the contingency fund. There was no second. Reclamation was asked to provide a breakdown of the costs associated with each SOW task in their next budget report.

Discuss Results of Gen2 vs. Gen3 Depletion Comparison Analysis – Westfall explained that his comparison table used some values from King's more extensive tables. The group discussed the values in the tables and why there were differences between them. Whipple asked which version of the Gen3 model King used. King explained he used the November 2007 version without soil moisture. He said there was a problem with soil moisture in the previous version that has now been fixed. Whipple asked if the evaporation rates are the same in Gen2 and Gen3. King said they are not the same but close. There are more depletions above Navajo Reservoir in Gen3 and Navajo operates a little higher so there is more Navajo Reservoir evaporation. Whipple's San Juan-Chama numbers were not included in this exercise. Baseline flows versus historic flows ~ 30K af. Caution should be used in looking at specific numbers

coming out of preliminary draft model versions. Leach suggested finding the largest magnitude changes and go from there. The model stops at Four Corners because consultations stop there and there are problems with data input, e.g., McElmo.

Gen2 does not include Ute Mountain Ute settlement water, only Animas-La Plata. Gen3 includes about 11k af. Gen2 ET, crop mix and irrigated acres should cover all irrigation depletions other than for the Ute Mountain Ute settlement acres. The impacts of using the original Blaney-Criddle method with high altitude crop coefficients in Gen3 as opposed to the modified Blaney-Criddle method with standard crop coefficients in Gen2 for native pasture above 6,500 feet elevation in Colorado, or of using in StateMod different methods or operational assumptions for computing baseline irrigation depletions in Colorado versus historic irrigation depletions in Colorado, have been disclosed in the CDSS San Juan/Dolores water resource modeling documentation and in TM 59.1 available on the CDSS website. Alvarado recognized that Colorado needs to do a comparison between baseline and historic depletions (Action Item #146).

The group determined they need to review and better understand the baseline depletions differences between Gen2 and Gen3, i.e., what changed in the baseline between versions. Bliesner mentioned the difference is about 63k af minus the Indian settlement water. Bliesner said an additional level of evaluation was needed. The additional information needed includes Gen3 with settlement water shut-off, without soil moisture, and acreages and crop mix and associated depletions for historic and baseline by reach between natural flow gages for Gen3 and just baseline for Gen2 using 1929-1993 annual averages, without soil moisture. Several asked if this exercise would be useful considering the level of significance of the differences ~ 64k af. The group agreed they needed to review this information before resolution was possible. These data needs were put into Action Items to be completed at least one week prior to the April HC meeting.

Discussion of Gen3 Model Issues and How to Proceed with Model Development (continued from last meeting) - Position of Hydrology Committee on Use (and Extent of Use) of StateMod in San Juan RIP Hydrology Model (request from CC Work Group) – Leach explained that the CC wants to know what the HC's position is on using StateMod in Gen3 and on supporting Gen3. Whipple said he cannot approve use of the model until he knows more.

Cox said that having two separate agencies involved in model input, Reclamation and Colorado, makes it difficult and it will continue to make it difficult. He asked if it was possible to “freeze” StateMod, turn it over to Reclamation, and let them use it from here on out. Because StateMod needs to be dynamic, it could not be “frozen.” There was general agreement that StateMod needs to stay with Colorado. Cox asked if all of Colorado's input into the SJB flow model could be done in RiverWare. King said no, not for natural flows. Developing this in RiverWare would take a lot of time and money. It was recognized that there would be advantages to having everything in one model. The group added an Action Item to explore the level of effort and cost that would be required to move everything from StateMod to RiverWare and the pros and cons.

Leach reiterated that the HC needs to tell the CC what its position is on using StateMod in Gen3 and on supporting Gen3. Whipple suggested the CC be informed that the HC is still evaluating Gen3. Leach said that was not good enough. After some discussion, Bliesner made a motion that Gen2 is not a viable long-term tool for the SJRRIP but is usable until an agreed-to Gen3 is developed. Steve Harris seconded. The motion passed with seven votes for a one against (NM).

Hydrologic Conditions Discussion/Navajo Reservoir Operations – Pat reported that the last forecast

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shows hydrologic conditions in the basin to be well above average. He explained their plans to evacuate excess water from Navajo Reservoir. Page responded to Bliesner that their operational scenario leaves flexibility to increase the descending limb, if deemed appropriate.

New Projects – Bliesner informed the group that they will get a good example of how the federal government uses the SJB hydrology model in consultations as the Service just informed Reclamation that they need to use the model to determine what affect greenhouse gases from Desert Rock will have on flows.

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HYDROLOGY COMMITTEE ACTION ITEM LOG (Updated February 7, 2008)						
Action Item		Meeting/ Origination Date	Responsible Party	Due Date	Revised Date	Date Completed
4	Add model runs and other information to the permanent hydrology website: http://uc.usbr.gov	7/25/01	Erik Knight	Ongoing		
5	Model modification briefings.	7/25/01	Reclamation	Ongoing		
12	Any new data or methods incorporated into RiverWare or State Mod will be shared with the Hydrology Committee.	7/25/01	Reclamation	Ongoing		
105	USGS agreed to give a presentation annually to the Hydrology Committee regarding the effectiveness of the gage readings.	8/5/03	USGS	Annually	9-16-08	
139	Committee will report any new projects which will be coming up.	5-18-04	Hydrology Committee	Ongoing		
141	Budget Report to include foot notes with explanation of expenditures.	11-9-05	Pat Page, Dave King and (HC comments)	Ongoing		
144	BoR will work with NM and CO on their concerns with G3.	09-12-06	Pat Page/John Whipple & Ray Alvarado	Ongoing		
146	John Whipple requested historic and base line depletions	12-5-06	Ray Alvarado	Ongoing		

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Action Item		Meeting/ Origination Date	Responsible Party	Due Date	Revised Date	Date Completed
149	Depletions above SJ Chama and historic baseline depletion data will be requested from Aaron Wilson in Colorado (done 6-13-07). Ray Alvarado will compile finding and forward to HC.	06-12-07	Ray Alvarado	Ongoing		
156	Provide a memo addressing the issues with the model in which the CC had concerns with, resulting from Tom Pitts memo dated 7-10-07	9-11-07	Reclamation	11-15-07	Pending Request from CC	
159	Whipple to provide seven time series: - Estimated historic flows @ 3 diversion points (Blanco, Navajo, and little Navajo) - Operated numbers @ the 3 the diversion points - Azotea Tunnel	12-4-07	John Whipple/ Dave King	4-29-08		
160	Hardwire San Juan-Chama numbers into SJR hydrology model.	12-4-07	Reclamation	4-29-08		
163	Add column to Reclamation's SJBHM Operation and Maintenance Budget that show expenditures to-date for six identified SOW tasks.	2-7-08	Reclamation	4-29-08		
164	Run Gen3 with settlement water shut-off without soil moisture.	2-7-08	Alvarado/King	4-21-08		
165	Tabulate acreages and crop mix and associated depletions for historic and baseline by reach between natural flow gages for Gen3, just baseline for Gen2. 1929-1993 annual averages; without soil moisture.	2-7-08	Alvarado/King	4-21-08		

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166	Identify level of effort and cost to move everything from StateMod to Riverware with the end goal of one model including what Riverware can and cannot do and pros and cons of migration.	2-7-08	Alvarado/Cox	4-21-08		
167	Write-up of HC approved vote that Gen2 is not a viable long-term tool for the SJRRIP but is usable until an agreed-to Gen3 is developed	2-7-08	Leach/ Whitmore			