

**MINUTES OF THE SAN JUAN RIVER BASIN RECOVERY
IMPLEMENTATION PROGRAM HYDROLOGY COMMITTEE
MEETING
NOVEMBER 14, 2000**

Committee Membership

Bill Miller was recognized as representing the Southern Ute Indian Tribe and Dan Israel was present on behalf of the Ute Mountain Ute Tribe.

On November 20, 2000 a note was received from Shirley Mondy stating that Dale Wirth is the designated representative for BLM on the Hydrology Committee.

Hydrology Committee Meetings for 2001

The committee determined that the following dates would be set for future Hydrology Committee meetings during 2001.

January 31, 2001 (Wed.)
March 21, 2001 (Wed.)
May 1, 2001 (Tues.)
July 25, 2001 (Wed.)
September 26, 2001 (Wed.)
November 27, 2001 (Wed.)

It was the consensus of the committee that the meeting dates should not be changed. Additional meeting may be added if needed and meeting dropped if it is determined by the committee that a meeting is not needed.

San Juan River Basin Recovery Implementation Program - Recommendation for Hydrology Committee

A new draft of the operating rules for the Hydrology Committee was presented to the Committee. It was determined that after some minor clean up the rules would be presented to the Coordination Committee and recommend that the Coordination Committee accept as offered.

Policy Statement Concerning Model Software

With some minor word changes and the Model Disclaimer portion being changed to match what is contained in the proposed operating rules, the committee approved the policy statement. It was decided to number the policy statement. This policy statement would be numbered

Hydrology Committee Policy Statement 2000-1. (Copy Attached) The model modification policy was tabled for revisions.

It was also suggested that E-mails sent out by the Chairman of the Committee be numbered. Draft of these minutes will be Hydrology Committee E-Mail No. 1

Status of San Juan River Basin RIP Funding

Legislation has been passed and signed by the President. However, funding for the Hydrology Committee comes from base funding which means that it comes from Colorado River Storage Project power revenues. Because of the drought in the Upper Colorado River Basin and how Glen Canyon Dam has been operating during the past year, the Western Area Power Administration is having cash flow problems and funding may not be available for the Recovery Implementation Program. Brent Uilenberg will follow up on this issue and keep us informed of any new developments.

As for now, Reclamation has indicated that they have some funds available to keep Dave King and John Simons working on some of the tasks. The State of Colorado indicated that limited funds may be available for work done by Ray Alvarado and/or their consultant. Dave King also indicated that there may also be some Reclamation research funds that could help fund modification that need to be made by CADWES.

It was reported that funding would be available to start Task A (Analyze gage errors and correct gage record) and that a quote to do the work was expected back from a consultant on November 17, 2000.

Arrangements With the USGS to do Additional Stream Gaging Work

It was agreed to proceed with getting arrangements in place with the USGS to do additional work on the San Juan River proceeding with the following priority:

Visit gaging stations twice as often (visiting of the stations is only needed from post-runoff through the irrigation season and possibly for some future low or high flow tests conducted for the recovery program).

Move the Four Corners gage to the north side of the river.

Move the Shiprock gage a small distance upstream to a more secure site.

Move the Shiprock cableway upstream closer to the gage location.

Reclamation agreed to proceed in making the arrangements with the USGS.

Model Documentation

A copy of the Draft Model Documentation (base model - model used for the Final Supplemental Environmental Impact Statement for the Animas-La Plata Project) was sent out to the Hydrology Committee members. Comments on the documentation are due by December, 31, 2000. All comments needed to be sent to Errol Jensen. Also, a decision has been made that Reclamation will use a version of the model where all the Colorado Ute water is used in Colorado for the Navajo Dam Operations Environmental Impact Statement.

San Juan River Mini-Model

A copy of the Draft Model results and the documentation was sent out to the Hydrology Committee members. Comments are due by December 15, 2000. All comments needed to be sent to John Simons.

Guidance for Setting up Sub-Committees

How sub-committees should be formed and function was discussed by the group. It was recommended that sub-committee members should be made up of Hydrology Committee members, however, the Hydrology Committee member may designate someone to represent him or her on the subcommittee. The subcommittee should draft an agenda and share with the Hydrology Committee members. Also, a sub-committee report should be prepared for the sub-committee meeting and shared with the Hydrology Committee.

These procedures apply to situations where program direction is being discussed. Work groups involved in doing the work can go forward without using these procedure.

Setting Up a Meeting With Brad Vickers to Discuss Methods of Including Water Rights in the Model

Dave King will be setting up a meeting with Brad Vickers to discuss methods of including water rights in the model. Also, daily time-step issues will be discussed. Information on the place and time of the meeting will be distributed to the Committee. Other members of the Committee may attend if they want to.

Getting Started and Setting Up Procedures to Complete the Recommended Work Plan

Dave King lead discussion on the results of the workgroup meeting that was held in Denver on September 5, 2000. It was the consensus of the Hydrology Committee that the workgroup document could be a guide to what need to be done. The following priority was placed on the work tasks:

1. Proceed with getting agreements set up with the USGS pending availability of funding.
2. Proceed with contract to complete Task A (Analyze Gage Error and Correct Gage

- Records). Will use Reclamation funding to get this task started.
3. Proceed with getting modification to the RiverWare software to allow for routing return flow, lagging return flow, and including 12-monthly efficiency values. Reclamation will meet with CADSWES in December to discuss making these modifications. Committee supports proceeding as long as research funds can be used for this task. Approximately \$30,000 may be available in Reclamation's research funding.
 4. Colorado will look into including variable efficiencies into the CDSS.
 5. Dave to continue working with Colorado on the GIS database issues and continue working on Tasks B and C. As the data is finalized, it should be placed in a location where everyone can get to it
 6. Proceed with working on Task D. Reclamation will contact John Whipple and, if possible, set dates when Reclamation and the State of New Mexico can get together to work on Task D.
 7. Incidental losses will be incorporated into the CDSS model for the new projects that have come on line during the historical period. The Hydrology Committee concluded that incidental losses should only be included for Dolores, Hammond, and Navajo Indian Irrigation Project. All new projects will have associated incidental loss. Also, it needs to be determined how small depletions such as stockwater ponds and mining will be incorporated into CDSS.
 8. Determine how to proceed with the daily time step issue. The Committee discussed the following ways of doing this with no decision being made.
 - Basin-wide monthly with daily on mainstem
 - Daily basin-wide
 - Monthly above Navajo Dam and daily below Navajo Dam. (Should this be done in one or two steps?)
 - Monthly above Navajo, monthly for tributaries below Navajo except Animas, Animas and San Juan Mainstem below Navajo are daily
 - Post-process after completing model run

How Do We Get the Work Done and Who Does the Work?

How do we get the work done and who does the work, realizing that funding (hopefully) would be coming through Reclamation's budget, was brought before the Committee. Four ways that were brought forward included:

1. Reclamation do the work
2. Colorado, New Mexico, and Reclamation do the work
3. Keller-Bliesner do some of the work
4. Complete some of the work through private consultants using the RFP process.

Opinions of the group varied from having Committee members do the work to completing the work through the RFP process. Following is a table showing who might do the work as discussed in the meeting. There was no decision on this and discussion will continue at the next meeting.

Task	Expected Schedule	-Professional time - Staff Days			Suggested Consultant to Do Consultant Task
		USBR	Consultant	Total	
A. Analyze and correct gage errors.	Nov-00		15	15	Process to be completed by the RFP process
B. CDSS interface	Nov-00	5	30	35	State of Colorado
C. Data system development	Jan-01	55	20	75	State of Colorado
D. Correct 1970-1993 database	Mar-01	20	20	40	K-B Engineering, State of New Mexico, SJWC
E. Extend data sets to 1929	Apr-01	55	20	75	K-B Engineering, State of New Mexico, SJWC
F. Extend data sets from 1993 - 1999	May-01	20	10	30	K-B Engineering, State of New Mexico, SJWC
G. Configure and Calibrate CDSS	Jun-01	10	30	40	State of Colorado
H. Implement functionality in RiverWare	Jun-01	20	5	25	K-B Engineering
I. Daily disaggregation	Aug-01	5	35	40	K-B Engineering
J. San Juan Model upgrade/calibration	Sep-01	50	40	90	K-B Engineering
K. Coordination with stakeholders	Throughout	10	10	20	Hydrology Committee
L. Develop complete documentation.	Nov-01	30	30	60	K-B Engineering- Review by Hydrology Committee
Total		305	240	545	

Hydrology Committee Attendees –11/14/2000

Name	Organization/Representing	Telephone	E-Mail
Ron Bliesner	Keller-Bliesner Eng./BIA	435-753-5651	bliesner@kelbli.com
Steve Harris	SWCD/Water Development	970-259-5322	scharris@frontier.net
Errol Jensen	USBR- Durango	970-385-6589	ejensen@uc.usbr.gov
Ray Alvarado	CWCB/Water Development	303-986-3441 x307	ray.Alvarado@state.co.us
Andreas Krause	Navajo DWR	520-729-4004	andreas@kestral.bia.gov
Mike Hamman	Jicarilla Apache Tribe	505-983-7694	mhamman@dellnet.com
Randy Kirkpatrick	SJWC/Water Development	505-599-1462	randysjwc@cyberport.com
Dan Israel	Ute Mountain Ute Tribe	520-468-2059	gaspoz@hotmail.com
Bill Miller	Southern Ute Indian Tribe	970-224-4505	mec@millereco.com

Other Attendees

Name	Organization	Telephone	E-Mail
Dave King	USBR-TSC	303-445-2471	dking@do.usbr.gov
Brian Westfall	Keller-Bliesner Eng./BIA	435-753-5651	bw@kelbli.com
C. Nancy LaMascus	City of Farmington	505-324-0738	nlamascus@fmtn.org
Bob Krakow	BIA	505-325-1864	rkrakow@bia.gov
Rick J. Cox	SJWC	801-553-3308	rick.cox@parsons.com
Dave Frick	Ayres Associates/Jicarilla	970-223-5556	frickd@ayresassociates.com
John Simons	USBR- Durango	970-385-6571	jsimons@uc.usbr.gov
Larry Walden	USBR- Farmington	505-325-1794 x136	lwalden@uc.usbr.gov.
Ed Warner	USBR - Grand Junction	970-248-0654	ewarner@uc.usbr.gov
Brent Uilenberg	USBR - Grand Junction	970-248-0641	builenberg@uc.usbr.gov
Randy Seaholm	CWCB	303-866-3441 x314	randy.seaholm@state.co.us
John Leeper	Navajo DWR	505-747-2810	John_Leeper@kestral.bia.gov

SAN JUAN RIVER BASIN RECOVERY IMPLEMENTATION PROGRAM
HYRDOLOGY COMMITTEE

POLICY STATEMENT 2000-1 CONCERNING MODEL SOFTWARE
(Passed at November 14, 2000 Committee Meeting)

The Hydrology Committee was established as a committee of the San Juan River Basin Recovery Implementation Program (SJRBRIP) on June 14, 2000. One of the purposes of the Committee is: "Review and comment on the San Juan Basin Hydrology Model, including providing recommendations for model improvements and input data updates. Review and suggest changes or revisions to the model documentation maintained by USBR to ensure that all assumptions and model operating procedures are fully documented and up to date."

The Hydrology Committee intends to use the most reasonable modeling tools available. The focus of the modeling effort shall be directed toward the development of a tool that most accurately describes the hydrologic conditions of the basin both in real time and in a predictive manner. The model must also be operable to meet schedules associated with goals of the SJRBRIP.

The model used by the SJRBRIP Biology Committee to evaluate hydrology issues for the Flow Recommendations Report, is based on the Riverware generic modeling tool developed by CADSWES of Boulder, Colorado. The Bureau of Reclamation and the Navajo Indian Irrigation Project Office of the Bureau of Indian Affairs have expended considerable time and effort to develop the San Juan River basin model using Riverware. At the time of the formation of the Hydrology Committee there was no other model framework available for the San Juan Basin hydrology and processing of daily flow and statistics for the comparison to the Flow Recommendations. Therefore, the Hydrology Committee plans to utilize the Riverware software for modeling of the San Juan River basin because it is currently the only and best tool available.

However, should new information or modeling tools become available that would enhance, confirm or replace Riverware, the Hydrology Committee will consider recommending adoption of the new tools.

Model Disclaimer

While every effort will be made to incorporate the best data and modeling available into this Implementation Program modeling effort, use of the hydrologic model in the work of the Hydrology Committee and this Implementation Program does not necessarily constitute agreement or approval by individual Program participants with the Model data, methodologies or assumptions. The model data, methodologies and assumptions do not under any circumstances constitute evidence of actual water use, water rights or water availability under compact apportionment's and should not be construed as binding on any party. Furthermore, use of the model, model data, methodologies and assumptions does not change the responsibilities of the respective states to maintain records of water rights and water use. Official records of water rights and water use are maintained by the States agencies statutorily charged with that responsibility.

SAN JUAN RIVER BASIN RECOVERY IMPLEMENTATION PROGRAM
HYRDOLOGY COMMITTEE

POLICY STATEMENT 2001-1
CONCERNING RIVERWARE MODEL MODIFICATIONS
Draft, November 17, 2000 Version

(Note: I have included the “current” version as Navajo Reoperation EIS as we agreed at meeting. I have included the log of changes and a preliminary description of the log. I am not real happy with description so let me know your comments for improvement. Also, new disclaimer language to match approved policy.)

One of the purposes of the Hydrology Committee is: “Review and comment on the SJRIP Hydrology Model, including providing recommendations for model improvements and input data updates. Review and suggest changes or revisions to the model documentation maintained by USBR to ensure that all assumptions and model operating procedures are fully documented and up to date.” The Hydrology Committee will establish a “current” version of the model. Modification to any of the components of the “current” version must be approved by vote of the Hydrology Committee prior to use of the modifications in any activity of the SJRBRIP.

The model being used by the San Juan River Basin Recovery Implementation Program (SJRBRIP) is described in the Hydrology Committee’s “Policy Statement Concerning Model Software”. The initial “current” version will be the model developed for the Navajo Reoperation EIS. The “current” version of the Model consists of the following components: (1) the Riverware generic modeling tool developed by CADSWES of Boulder is the platform software; (2) a large and extensive Model File that consists of all of the input data used by Riverware; (3) a Rule File that tells Riverware how to operate the basin; and (4) a post processor to convert monthly output from Riverware to psuedo daily values.

The Hydrology Committee Chairman will maintain a log of modifications. The log shall contain for each modification: description, reason, date of implementation, date of concurrence by Hydrology Committee, initiating person, implementing person, numbered version of the model.

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