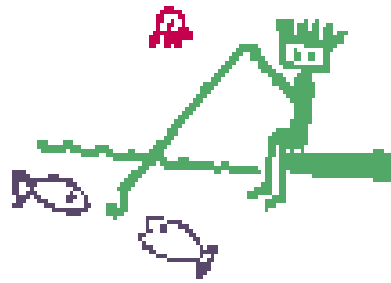


August 29, 2002

**San Juan River Basin
Recovery Implementation Program
Hydrology Committee
June 25, 2002
Meeting Summary**



Members/Alternates Present:

Ray Alvarado
Ron Bliesner
Rick Cox
Dave Frick
Mike Hamman
Steven Harris
Randy Kirkpatrick
Pat Page
John Simons
Bernadette Tsoie
Pat Turney
Brian Westfall
John Whipple (via telephone)

Others present:

Bob Krakow
Dave King
Marilyn Greenberg, Program Assistant
Shirley Mondy, Program Coordinator

Hydrology/Biology Committee Conference Call:

Jim Brooks
Mike Buntjer
Tom Chart
Sara Gottlieb
Vince LaMarra
Bill Miller
Steve Platania
Ernie Teller
Tom Wesche

Representing: _____

State of Colorado
U.S. Bureau of Indian Affairs
Water Development Interests
Jicarilla Apache Nation
Jicarilla Apache Nation
Water Development Interests
Water Development Interests
U.S. Bureau of Reclamation
U.S. Bureau of Reclamation
Navajo Nation
State of New Mexico
U.S. Bureau of Indian Affairs
State of New Mexico

Representing:

U.S. Bureau of Indian Affairs
U.S. Bureau of Reclamation
U.S. Fish and Wildlife Service
U.S. Fish and Wildlife Service
U.S. Fish and Wildlife Service
U.S. Fish and Wildlife Service
U.S. Bureau of Reclamation
University of New Mexico
Navajo Nation
Southern Ute Indian Tribe
University of New Mexico
U.S. Bureau of Indian Affairs
Water Development Interests

Introductions and Review of Agenda Items

Additional grow out ponds were added as a discussion item.

Review of September 26, 2001 Draft Meeting Summary

The September 26, 2001 meeting summary had been approved previously. New Mexico's comments will be added as an attachment.

Review of March 26, 2002 Draft Meeting Summary

The March 26, 2002 draft meeting summary was approved as amended.

Review of May 7, 2002 Draft Meeting Summary

The May 7, 2002 draft meeting summary was approved as amended.

Review of Action Item Log

Item to discuss funding USGS (#37 action item log) will be added to the October meeting agenda.

Budget and Status Report

Pat has been assured that the work will be complete and the money will be spent by the end of the fiscal year. There were some concerns about being over expended on some tasks. ***Pat Page and Dave King will add a total percent expended and completed line at the bottom of the monthly status report.***

In the development of the model, if new information becomes available that conflicts with data in the model, or with data used to develop the model, then that information needs to be discussed at a Hydrology Committee meeting.

Reclamation will compare Reclamation's Hammond Project irrigated acreage data with New Mexico's data. Dave King will send an email out to the Hydrology Committee indicating if any discrepancies are found.

Model and Data Development

Data development: Daily and monthly climate data for all San Juan New Mexico stations have been retrieved or developed for 1929 through 2000. Monthly data for Colorado stations have been extended through 2000 also. Acreages and cropping patterns for New Mexico have been incorporated into Reclamation's Blaney-Criddle model formats. Revisions can easily be incorporated. Some hydrologic data for water year 2000 are still unavailable, but are forthcoming. The ET (evapotranspiration) spreadsheets that are being used to facilitate movement of data between the Blaney-Criddle model, StateMod, and RiverWare are being fine tuned. Documentation will be posted when they are completed. Spatial distributions were estimated for irrigation return flows. Historic reservoir operations data for Reclamation facilities has been provided to the Colorado Water Conservation Board (CWCB).

Model interfacing: Two utilities were developed to convert StateMod special reports to StateMod data files and to convert StateMod operation reports to StateMod data files. Daily data management interface (DMI's) will be developed to provide Reclamation daily data to

CWCB in StateMod format and visa versa. Options for maintaining and updating data were investigated. In the long term, Reclamation's preference is to use HDB (Hydrologic Database). In the short term, some bridge applications may be needed.

Model Development

The Blaney-Criddle model has been modified to optionally compute evapotranspiration using original Blaney-Criddle. It is recommended that it be modified to use user- provided frost dates. The irrigation configuration of the main stem San Juan has been implemented in RiverWare and the San Juan Node Mapping Tool (SJNIPT). The non-irrigation configuration awaits input by New Mexico. Reclamation is adding a Jicarilla node upstream of Navajo to address all of the Jicarilla depletions. The model documentation will include:

1. Generalized documentation
2. User manual
3. Programmer's Manual

The three documents from Keller-Bliesner/Brian Westfall (posted on their website) are clarification of the Plan of Approach approved by the Hydrology Committee. If Committee members have concerns, they should talk with Keller-Bliesner as soon as possible.

The discussion on zero flows, on handout #2 from Keller-Bliesner, needs to be strengthened to describe the need for spreading flows out over a month instead of showing several days of zero flow. Also, more description of the magnitude of the missing data would make it easier to understand the methodology.

There continues to be discussion about the use of two different versions of Blaney-Criddle in the model.

Data Needs to Complete Model Work

The following data are needed to compute naturalized flows:

New Mexico non-irrigation configuration
New Mexico historic non-irrigation data
New Mexico capacities and efficiencies
USGS data – nearly complete but some are outstanding
Historic reservoir data – need to process BOR data and update non-Reclamation data
Estimate of ground water storage for new projects
Estimate of return flow lagging for the main stem

The following data are needed for the decision model:

San Juan Chama data – need to develop daily data from 1994 through 2000
Daily disaggregation data – method to compute daily natural flows that are contiguous to the daily decision model
Develop New Mexico baseline acreages and depletions
Streamflow routing variables need to be developed for the daily decision model
Stage discharge curves for outlet works and spillways need to be obtained or developed for non-Reclamation, real reservoirs

Baseline Discussion

The Hydrology Committee was given the charge to review hydrology related information for the Program, including baseline depletions. The Committee can review the baseline to see if the data is correct. Ultimately, it is the U.S. Fish and Wildlife Service's (FWS) call on what is in the baseline. The Committee could look at whether the best assessment has been made about what water uses or depletions now occur and will occur in the future. Ron Bliesner stated that some decision on baseline depletions will be needed prior to running the new model.

Shirley Mondy will see if Joy Nicholopoulos is available to be on the next conference call to answer consultation and baseline questions.

Baseline depletions will be discussed further at the next Hydrology Committee meeting.

New Mexico water users will meet to discuss a strategy for dealing with depletions in the baseline. (Ongoing)

Grow Out Ponds

Per the Biology Committee, an additional nine acres of grow out ponds are needed. The Hydrology Committee would like to request that funds for an additional 15 acres be set aside in FY 2003 so the ponds can be constructed as needed. There are some private landowners who are interested in providing pond space.

Hydrology/Biology Committee Joint Meeting/Conference Call

Introductions

Pat Page welcomed the Biology Committee members and stated that the purpose of this meeting is to facilitate better coordination and communication between the Hydrology Committee and the Biology Committee.

Discussion of Flow Recommendations

Pat Page explained how Reclamation is currently operating Navajo Reservoir to implement the flow recommendations. On June 25, 2002, the average weekly flow was 507 cfs - using the average of Farmington and the next highest gage. There were concerns expressed regarding maintaining 500 cfs throughout the critical habitat area this year could deplete the reservoir and might not allow for a spring release next year because of the current drought.

Currently, Bluff is the lowest of the gages, so flow is averaging around 300 cfs in the habitat range from Shiprock downstream.

Ron Bliesner suggested that using the average of the three downstream gages describes about 145 of 180 miles of the habitat range. He questioned whether this is really an unprecedented drought, or is it like the drought in the 1950s?

Biology Committee members stated that maintaining base flows is more important than a spring release. Inflows of 500,000 af are needed next year in order to do what has been done this year; 90% of historic inflow has been greater than that. It appears that fish can adapt better to no spring release for a couple of years rather than low base flows over a period of years. If releases to the fish cause shortages to the water contractors, New Mexico would request that

the federal government pay for the water that is taken away from the water contractors.

The Biology Committee will provide some guidance on the intent of the base flow recommendations to Reclamation after their next conference call. This guidance should be sent to FWS as well as Reclamation.

Pat Page stated that Reclamation will continue their more strict interpretation of the target base flows until they hear something different from FWS.

Status of the Long Range Plan (LRP)

Jim Brooks sent out a revised draft LRP to both the Hydrology and the Biology Committees on June 25, 2002. The new version needs to be reviewed as a whole. Several new tasks were identified in the tables. ***Jim Brooks would like comments by August 1st. Steve Harris and Pat Page will review the LRP and put together Hydrology Committee comments and send them out to the Hydrology Committee prior to August 1, 2002.***

Status of (two) Temperature Analyses

Amy Cutler (Bureau of Reclamation, Salt Lake City) has completed the input portion and will be working on the reservoir temperature model soon. The model will be peer reviewed and then she will run scenarios after that. The Committee will invite Amy to the October Hydrology Committee meeting to make a presentation on the model, if she has it completed. ***The Hydrology Committee will request to be included in the peer review process. Shirley Mondy will send out Amy's status report to the Hydrology Committee.***

Keller-Bliesner has not yet received FY2002 funding, so their temperature analysis has not begun. However, the data is being collected.

Grow Out Ponds

The Hydrology Committee suggested that the Biology and Hydrology Committees submit a proposal to the Coordination Committee to set aside approximately \$420,000 in FY03 for 15 additional acres of grow out ponds to be utilized for private or other party ponds that can be ready for fish by next spring. Jim Brooks would like to discuss the issue with the full Biology Committee first. ***Shirley Mondy will talk with Brent Uilenberg about the ponds to see what the capital expenditure implications would be.***

Hydrology Committee Meeting (continued)

Hydrology Committee Recommendation to Reclamation

John Simons will prepare a draft memo from the Hydrology Committee to the Biology Committee, with a copy to FWS and Reclamation, which will describe how this year (2002) compares to previous years - hydrologically, and share statistics and describe the risks involved based on different operating scenarios (i.e., using the two highest reading gages versus using the three furthest downstream gages). ***Ron Bliesner will send NIIP demands for next year to John Simons, so that information can be included also.***

John Simons, Dave King, and Keller-Bliesner agreed to formulate some new operating criteria for the model by Aug 6 (before the next Hydrology Committee conference call on August 20) for discussion.

Data needs to complete modeling work

John Simons will meet with John Whipple on July 11 to discuss the New Mexico data still needed for the model.

Status Report for the Coordination Committee

Pat Page will incorporate John Whipple's comments in redline and send back to the Hydrology Committee for review.

The next Hydrology Committee meeting is scheduled as a conference call on August 20, 2002, 9am - noon.

The October 22, 2002 Hydrology Committee meeting has been changed to October 29, 2002 in Farmington, New Mexico from 8:30am - 4pm.