

# Notes from the Upper Rio Grande Basin Water Operations Review Steering Committee Meeting; November 13, 2003; 1:00 PM; Corps of Engineers; Albuquerque, New Mexico

## *In attendance:*

\*Douglas P. Boyle, Desert Research Institute

Marti Blad, Ph.D., Pueblo of Jemez

\*Galen Buller, City of Santa Fe

Deb Callahan, USBR

Marsha Carra, USBR

\*John Carangelo, Socorro Soil and Water Conservation District

☛ LTC Dana Hurst, Corps

\*Gina DelloRusso, USFWS

Ellen Dietrich, SAIC/Corps

Don Gallegos, Corps

Susan Goodan, SAIC/Corps

Debbie Hathaway, SSPA/NMISC

Mark Horner, Corps

\*Dick Kreiner, Corps

Leslie Kryder

Clay Mathers, Corps

William J. Miller, WJM Engineering, Inc./Corps

Claudia Oakes, SWCA/representing NMISC Project Manager

Jim O'Brien, Tetra Tech/Corps

Jesse Roach, Sandia National Laboratories

Garret Ross, USBR

Zhuping Sheng, Texas A&M University

☛ Rolf Schmidt-Petersen, NMISC

Andy Smith, CWSG/Water Assembly

Gail Stockton, Corps Project Manager

Valda Terauds, USBR Project Manager

Vince Tidwell, Sandia National Laboratories

\*Steve Vandiver, Colorado Diver of Water Resources

Jack E. Veenhuis, USGS

\*Steve Wagner, Weston Solutions

Doug Wolf, Tetra Tech/Corps

Mark Yuska, Corps

\*Edith Zagona, University of Colorado

☛ denotes Executive Committee member or designated representative.

\* denotes Steering Committee member or designated representative

- ❖ Lt. Col. Dana Hurst opened the meeting and welcomed the Steering Committee members for the Executive Committee. After self-introductions, he turned the meeting over to the Gail Stockton, the Corps Project Manager.
- ❖ Gail Stockton reviewed the agenda, pointing out that the decision criteria matrix will be one tool to be used to document decisions on the alternatives selection process and the impact analyses leading to Records of Decisions by the Joint Lead Agencies. Other tools to be used include the following:
  - Data quality matrices developed by each technical team to rate the quality of the data used for impact analyses.
  - Dynamic simulation model developed by Vince Tidwell and Jesse Roach to present “what if” scenarios that may occur in the system under different actions to the public during meetings to discuss the Draft EIS.

- ❖ Valda Terauds, USBR Project Manager, gave a slide presentation on decision support for evaluation of operations alternatives, or how to evaluate the impacts from each alternative to get to the selection of a Preferred Alternative in the EIS. Following is a brief summary of some of her key points and questions and answers during her presentation.
  - A Decision Support System is a structured process used to document the selection process leading to decisions and how problems were solved during the process to arrive at the “best” compromise. It addresses multiple objectives and issues.
  - The Steering Committee, Executive Committee, and technical teams will all define evaluation criteria and identify key variables.
  - The Project Managers will process this information using software that keeps track of the individual basic decisions and provides a summary. The software also performs risk analysis to determine the amount of uncertainty in the final decision and maps the effects matrix by grouping individual criteria into larger categories. Valda briefly described some of the software that might be used.
  - To get from effects to a decision on a preferred alternative, the criteria must be weighted for their importance by a variety of participants. The goal is to end up with a blending of values, a task reserved for the Executive Committee, using the input of all those who provided weighted evaluation criteria.
  - Valda presented some of the weighting techniques used to prioritize the criteria to determine preferences, including pair-wise comparisons, individual weights per criteria, and ordinal ranking. The purpose of these different techniques, when used in combination, is to distinguish minor differences or “shades of gray.” She also described a potential sensitivity analysis that could be used.
  - She briefly described some of the software that might be used to apply the weighting techniques that would assist in the selection of a preferred alternative and document the process. She also described a potential sensitivity analysis that could be used.
  - Valda described the work that has been done to date and reviewed the proposed Decision Criteria used by the Lead Agencies.
  - Valda asked all attendees to complete a worksheet that lists the criteria related to resources to be ranked. Threshold criteria on the sheet will not be rated.
  - **Question:** Where is recreation addressed in the spreadsheet? Is it part of Land Use?
    - **Answer:** Recreational uses and impacts are considered as part of the Land Use team activities.
  - **Question:** You include Recreational Uses in the evaluation criteria, but is agriculture included with all land uses? Is there any way to rank the importance of specific land uses like agriculture as separate from recreation or other uses?
    - **Answer:** The worksheet to be completed by the Steering Committee is intended to address overall issues. The ranking of individual land uses or resources will be addressed at the technical team level. For example, portions of the Land Use Technical Team will be looking at municipal and industrial land uses, as well as agriculture, recreation, and others. Where specific areas of impact are identified, the team will use other tools to more closely evaluate impacts. Input on the impacts to specific land uses may be made by Steering Committee members or other stakeholders to the technical team directly.

- **Comment:** Without an opportunity to evaluate specific land uses, like agriculture, the criterion on the worksheet is too broad to provide weights. The differences between some of the criteria are not clearly expressed on the worksheet, so it is difficult to provide rankings.
  - Comments and suggestions to improve the worksheet should be submitted with the completed form.
- **Question:** What is the methodology to be used to process the criteria weights and comparisons and how was it selected?
  - The Corps' planning guidance lists ways to document the decision process. Using this and knowledge of the project as a guide, the Project Managers will select commercially available decision support software after researching those available.
  - The decision support system is not the only tool to be used to evaluate the impacts under each alternative. The evaluation will be conducted using different approaches. If similar results are produced using different methods, there will be more confidence in the conclusions reached.
- **Question:** Why is Criterion #4 (Provides System Operating Flexibility) included in the list of decision criteria? It seems not to be a final goal.
  - Maximum flexibility in managing water operations is a stated goal in the Purpose and Need Statement developed by the Joint Lead Agencies.
- The results of the combined Steering Committee input from the worksheets completed at this meeting will be posted to the public Upper Rio Grande Basin Water Operations Review website (<http://www.spa.usace.army.mil/urgwops/>).
- **Question:** Will the summary of the worksheets from the Joint Lead Agencies be posted on the website?
  - **Answer:** Yes. The rankings may be revised first, based on suggested new criteria and stakeholder input.
- ❖ Don Gallegos presented a demonstration of URGWOM Planning Model output generated for one action alternative. The Planning Model is being used to generate the flows over a 40-year period to enable each technical team to evaluate impacts to their resources under the No Action and action alternatives.
  - The alternative that was demonstrated incorporated up to 75,000 acre-feet of conservation storage at Abiquiu. In this alternative, the Low Flow Conveyance Channel (LFCC) is set up to operate the entire year, whenever flows are greater than 250 cfs at San Acacia.
  - Don also showed the amount of storage and outflow from El Vado and other reservoirs, and the flows after Albuquerque's drinking water diversions begin in 2006.
  - **Question:** When would 75,000 acre-feet of conservation storage be used?
    - **Answer:** The Planning Model is designed to store conservation water annually and evacuate it before the end of each year (November-December). The use or the owner of the water is not identified in the model because that cannot be predicted.
  - **Question:** At a minimum, could conservation storage at Abiquiu be used to reduce evaporation from Elephant Butte?
    - **Answer:** Yes, and for other purposes, as well. It is water that exceeds the amount needed to meet downstream needs.

- **Question:** What happens to water storage over the first ten years?
  - **Answer:** Water is able to be stored only one year of ten.
- **Question:** How does the model handle diversions to the Middle Rio Grande Conservancy District (MRGCD)?
  - **Answer:** MRGCD gets its allocation before conservation storage occurs.
- **Question:** In the 40-year sequence, how many times does the flow at San Acacia exceed 4,000 cfs?
  - **Answer:** During approximately 5 to 7 years.
- **Question:** Do any alternatives consider no operation of the LFCC during peak flow times? Not diverting to the LFCC could be used to restore riparian vegetation by using the additional water for overbank flooding.
  - **Answer:** No alternative has been proposed to do this. However, the No Action alternative assumes no operation of the LFCC. There is no option under consideration to create overbank flooding through no diversion to the LFCC.
  - Alternatives evaluation of data by technical teams could determine the potential to close the LFCC and create overbank flooding without incorporating this option in the Planning Model runs for every year of the 40-year sequence. Technical teams must consider how to manage the flows under each alternative.
- **Question:** How is evaporation analyzed?
  - **Answer:** Evaporation can be plotted at any reservoir for each alternative.
- **Question:** Are evapotranspiration losses available for all parts of the system?
  - **Answer:** The most detailed data available are the middle valley riparian and crop evapotranspiration data in the model.
- **Question:** Do you know the acres of riparian forest?
  - **Answer:** The Riparian Technical Team's vegetation mapping will quantify this for the middle valley. The mapping will soon be completed to be used for technical team analysis.
- **Question:** What is the schedule for the rest of the EIS?
  - **Answer:** The project is approximately 6 months behind the original projections. Technical teams have until March 2004 to analyze the impacts to their resources. The current schedule is to have the Draft EIS available to the public at the end of June 2004, followed by a 90-day public comment period. The Final EIS and Records of Decision will be distributed around August 2005.
- **Question:** What alternatives are most likely to be dropped out as the final alternatives are developed?
  - **Answer:** Possibly the 1,200 cfs release from Abiquiu because it decreases the level of flood protection available and cannot meet water deliveries, both part of the stated project purpose and need.

- **Question:** Are the alternatives listed on the public website?
  - **Answer:** There is a summary of the public meetings held to obtain comments on the draft alternatives. The final set of alternatives to be analyzed will be available in the Draft EIS, with an explanation of the other alternatives considered but eliminated.
- **Question:** Will you be able to find alternatives that are clearly distinguishable from each other?
  - **Answer:** The alternatives may be relatively similar.
- **Question:** Are there sediment management assumptions included in the alternatives?
  - **Answer:** We have made an effort to maintain peak discharges so the channels do not narrow, without making specific sediment management assumptions.
- **Question:** Why are you considering low channel flows?
  - **Answer:** Low flows below Abiquiu were requested during the Abiquiu public meeting to minimize damage to acequia diversion structures.
- ❖ The consensus of the Steering Committee was that another meeting should be held after impact analyses by the technical teams has been completed, so the findings can be presented. This is consistent with the project plans to hold a Steering Committee meeting twice a year.