

**Notes from the Upper Rio Grande Basin Water Operations Review ID Team meeting, July 8, 1999, 1:00 PM, Corps of Engineers Building, Albuquerque.**

In attendance:

Shawn Boelman, Bureau of Reclamation	Lori Robertson, Bureau of Reclamation
William DeRagon, Corps	Gary Rutherford, Corps
Ellen Dietrich, SAIC	Tim Seaman, NM SHPO
Richard Fike, Corps	Bill Skinner, NMED-SWQB
Chris Gorbach, Bureau of Reclamation	Bill Spurgeon, Corps
Conrad Keyes, Jr., RGCC-TX	Gail Stockton, Corps
Clay Mathers, Corps	Chris Velasquez, Corps
Robert Padilla, Bureau of Reclamation	Doug Wolf, Corps
Cynthia Piirto, Corps	James F. Zokan, Santa Ana Pueblo

- ❖ Chris Gorbach reported on his recent meeting with Gail Stockton, Norm Gaume, and Pat Turney, to discuss the Memorandum of Agreement for the joint lead agencies in the Water Operations Review.
  - Progress is being made and he expects feedback from them on the memorandum by the end of July.
  - The next step will be to invite agencies, tribes, and pueblos to participate in the Review and EIS. Different levels of participation will be offered, such as cooperating agency, participation as specialists on technical teams, or public involvement.
  - Gail distributed a draft of the letter that is planned to be sent to heads of tribal governments and federal agencies under the signature of the Colonel. The New Mexico Interstate Stream Commission will send similar letters to the heads of state and local agencies. Copies of the letter will be sent to tribal and agency natural resources employees and other participants. The list currently includes 37 people to receive the original Corps letter, others to receive an original letter from the NMISC, and 47 receiving copies.
  - The letter will ask for a response on the desired level of Water Operations Review participation within two months of receipt of the letter, by approximately September 15.
- ❖ Robert Padilla, Shawn Boelman, and Chris Velasquez presented a slide show and discussion on the issues and data needs, investigations, and data outputs planned by the Sedimentation and River Geomorphology Technical Team.
  - They first reviewed the primary issues, resources, and resource indicators for their technical team analysis.
  - The type of analysis they intend to conduct will result in characterization of the baseline geomorphic and hydraulic conditions of the Rio Grande. Part of the description of baseline conditions will be an analysis and description of trends in these parameters.

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- The technical team identified the river reaches where data are available and where additional data are needed. The team members have not determined all the information that is needed by the team yet. Reaches were selected based on geomorphology, using current data and aerial photos. In general, they coincide with the URGWOM reaches, using fewer subreaches, because they relate to the nearest USGS gage.
    - From Otowi to Elephant Butte, there appears to be adequate data for the Geomorphology Technical Team.
    - The technical team has a map of the reaches and would like to discuss them with the other technical teams, possibly by having a representative of each technical team attend the next Geomorphology Technical Team meeting.
    - They pointed out that other technical teams must also decide what data they need, which will help them select representative river sections for data collection. Collaboration is necessary among the technical teams so they can select the appropriate reaches and representative sections within a reach, although it is expected that not all technical teams will be able to use the same representative sections for data collection within a reach.
    - James Zokan asked if the technical teams have thought about collecting all data at the same locations so that the data could be correlated.
    - Gail suggested that all technical teams use the same reach designations, and select representative sections within each reach that are appropriate for that team's data collection, but try to coordinate as much as possible with the other technical teams to maximize potential data correlation.
    - The technical teams should be aware of reaches that are planned to be modified through construction or restoration within the timeframe of the EIS, so that they select other sections for monitoring effects.
  - The resources the technical team plans to use include aerial photographs, cross-sectional surveys, bed material samples, URGWOM hydrology for baseline and future discharges, and suspended sediment measurements.
  - The Geomorphology Technical Team plans to calculate measurements for each reach like average velocity, depth, width, and overbank flow.
  - The Geomorphology Technical Team hopes to start the discussion among other technical teams on their plans for data collection and modeling. The Geomorphology Technical Team plans to do 1-dimensional modeling and would like to know if other teams plan to conduct 2-D modeling, such as Flo-2D.
    - The Riparian Technical Team plans to do some 2-D modeling, according to team leader William DeRagon. They are primarily interested in overbank flows. They will need information on how to vary the river cross-sections from the Geomorphology Technical Team for model input. The Geomorphology Technical Team will predict channel changes and provide the information to the Riparian Technical Team in preparation for 2-D modeling.
    - Shawn Boelman suggested that, to alleviate duplicated efforts, only one technical team should model a reach.
    - The Geomorphology Technical Team intends to focus on modeling the river channel to characterize its equilibrium state, not necessarily its current condition, for the river baseline. Then changes in hydrology caused by alternative water operations will be
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evaluated by comparing the impacts to this equilibrium state. Therefore, the alternatives must be known before the hydrology is modeled.

- ❖ The discussion proceeded to a more generalized review of GIS and remote sensing materials needed by the technical teams. The Geomorphology Technical Team pointed out that GIS and other spatial data is spread throughout the participating agencies and should be summarized for use in one list.
  - Doug Wolf told the group that aerial photos and a Flo-2D model on a 500-foot grid will soon be available for most of the river from Cochiti to Elephant Butte. Digital Terrain Models (DTM) will also be available soon for the area from Albuquerque to Elephant Butte and from Cochiti up to Chama.
  - A question about the availability of digital orthophotography brought the response that Jeff Whitney, USFWS, will have multispectral imagery from Santa Ana Pueblo to Elephant Butte that was flown for the purpose of identifying vegetation. It is not controlled imaging.
  - Doug suggested that the group decide what GIS platform and map projection will be used so the GIS specialists start accumulating and documenting the needed digital data. The Corps digital aerial photography is referenced to the New Mexico State Plane coordinate system, but that would cause problems with analyses that crosses state lines.
  - Doug recommends a goal of eventually having the imagery available on the Web server without requiring GIS software to access, but to begin with using the ARC/INFO servers in use by the agencies now.
  - William suggested that an index summarizing the aerial photos and other spatial data be developed to help determine what is available and what is needed. He recommended marking up a USGS quad map index to keep track of the locations of the information. Each technical team leader could assemble an index of resources, including photography, cross-sectional data, and mapping, which would be collected by Clay Mathers.
  - Clay suggested that the technical team leaders also pay attention to the scale of the photos and consider whether it is large enough to get the information needed before listing the map or photo as a reference. He also told the group to be aware that the resolution of photos and DTMs varies greatly, and scales at some locations are not good enough to use for analysis.
  - This list of spatial datasets should be compiled by the technical team leaders, with the help of their team members, preferably by locating the coverages on quad index maps or quad sheets, and provided to Clay Mathers by August 6.
- ❖ William said that the Riparian and Aquatic Technical Teams need historic geomorphic information back to about 1900. Knowledge of the historic condition may be needed in selecting the preferred plan among alternatives.
  - Conrad replied that the 1938 report has this type of information.
  - More discussion followed on the difference between using historic river data and baseline river conditions for comparing alternatives in the EIS. To analyze the impacts of alternative water operations and storage for the EIS, the alternative scenario should be compared to the No Action Alternative. To identify recommended improvements, the biologists could describe historic conditions, if appropriate.



- ❖ Gail reminded the technical team leaders that she still needs study plans for most of the technical teams. She has study plans from the Aquatic Habitat, Geomorphology, Socioeconomics, Water Quality, and Water Operations Technical Teams.
- ❖ Chris suggested that other technical teams present their study plans and data needs at future ID Team meetings. The GIS Technical Team will make a presentation at the **next meeting scheduled for August 12.**
- ❖ Lori Robertson asked if the ID Team would want to have a presentation from the City of Albuquerque on how their project affects the Water Operations Review. Gail reminded the group that the city and other interested people are always invited to these meetings. It was agreed that the September meeting might be a good time for the city's presentation.
  - John Stomp, water resources manager for the City of Albuquerque, has been invited to give a presentation on the city's Drinking Water Project on September 9.