Notes from Upper Rio Grande Basin Water Operations Review Interdisciplinary NEPA Team Meeting; November 14, 2002; 1:00 PM; Corps of Engineers Conference Room, Albuquerque

In Attendance:

Neal Ackerly, Dos Rios/Corps
Robert Browning II, Corps
Mike Buntjer, USFWS
Deb Callahan, USBR
Ellen Dietrich, SAIC/Corps
William DeRagon, Corps
Darrell Eidson, Corps
Don Gallegos, Corps
Susan Goodan, SAIC/Corps
Rhea Graham, NMISC
Debbie Hathaway, SSPA/NMISC
Anne Janik, USBR
Conrad Keyes, Jr., Consultant to Corps
Bill Leibfried, SWCA/NMISC
Colleen Logan, R.F. Weston/Corps
Claudia Oakes, SWCA/NMISC
Jim O'Brien, Tetra Tech/Corps
Brian Ortiz, USFWS
Chris Perez, USFWS
Steve Piper, USBR
Valerie Provencio, PSB
Garret Ross, USBR
Gary Rutherford, Corps
Gail Stockton, Corps
Scott Waltemeyer, USGS
Gary Watts, NMISC
Doug Wolf, Tetra Tech/Corps
Mark Yuska, USBR/URGWOM Technical Team

- Gail Stockton opened the meeting, began introductions, and asked that everyone review the notes from the last meeting.
- Doug Wolf and Jim O'Brien gave a slide presentation to show how FLO-2D with Mapper functions to calculate the flows and water surface elevations in the reaches from Cochiti to Elephant Butte. The presentation focused on model runs and providing data that can be used by GIS for technical team analysis.
  - A new feature of the model is the capability to model the mobile stream channel. It can now distribute sedimentation and scouring based on shear stress characteristics.
    - For analysis purposes, the amount of scouring and aggradation should be discussed and applied in relative terms or proportions, not in absolute quantities of deposition and erosion.
    - The model shows flow and channel configurations at the end of a run by recomputing the cross-sections for each cell.
    - **Question:** Does the model proportionately remove sediment from overbank flows?
      - **Answer:** Yes, but it does not route by size fractions yet. It may do this in a few months.
  - Mapper imports the FLO-2D output data files and displays colored grid cells that show whether they are inundated or not. It represents the water surface elevation outside the channel using an isopach of the original ground digital terrain models and the computed FLO-2D water surface .

- Mapper exports shapefiles for use in ArcView.
- FLO-2D generates ASCII files and can capture snapshots of the area of inundation. A report can be output which will document the duration of flooding that exceeds 1 foot in depth.
- **Question:** In overbank flooding situations, can the model identify where overbank flooding returns to the river?
  - **Answer:** In MAXPLOT the velocity vectors indicate where the flow is returning to the channel. You can also use a series of hydrographs generated by the model to determine in which cell downstream the flows in the river greatly increase.
- Infiltration to groundwater is calculated using hydraulic conductivity.
  - **Question:** URGWOM calculates losses from the river also, so by recalculating losses, are you double counting?
    - **Answer:** FLO-2D will be calibrated to the discharge at the URGWOM nodes. If one model has channel seepage, the other model can be reviewed to determine if the infiltration losses need to be addressed.

❖ Claudia Oakes gave a presentation on NEPA terms and procedures for impact analysis. She distributed a copy of the Regulations for Implementing NEPA.

- Future impacts to be expected under each alternative must be predicted for each resource. The predictions would be bounded by assumptions, knowledge of the resources, and iterations of analysis.
- Impact analysis does not have to be precise, which is why monitoring and adaptive management are often applied to make adjustments during implementation if the impact predictions are incorrect. However, imprecise data or gaps in data must be disclosed along with the assumptions used in analysis.
- **The appropriate mitigation measures for each resource should be identified by each technical team and included in their analyses.**
- Some areas, resources, or locations can be eliminated from analysis if they can be demonstrated to be unlikely to be affected. Those less sensitive areas, resources, or locations can be given lighter treatment. In either case, the reasons for elimination or lighter treatment must be explained.
- The types of effects to be analyzed include direct, indirect, secondary, and cumulative. Cumulative impacts must include foreseeable future projects.
- **Question:** Is anyone **compiling a list of the reasonably foreseeable actions** that may affect some resources in the Upper Rio Grande Basin?
  - **Answer: There was a list on Team Link, but Rhea Graham will review and update the list.**
- Effects may or may not be significant in the big picture. The determination of significance is important in NEPA. The context and duration of impacts should be used to help determine whether they are significant.
  - Considerations must be given to establishing a threshold to determine whether an impact is significant.
  - It is often more difficult to measure significance in human resources than in natural resources. The scoping issues may be used to help determine this.

- For the ISC, significance would relate to compliance with the Rio Grande Compact.
- Significance is measured by whether the effects caused by project actions are outside the bounds of normal variation.
- **Technical teams needing to discuss significance thresholds should notify one of the Project Managers to schedule a meeting or conference call.**

➢ Claudia cautioned that all technical teams should be careful how they use the term "significance."

❖ Debbie Hathaway provided an update on the 40-year sequence of hydrology for URGWOM.

➢ The only substantive comments that Debbie received on the concept and the sequence presented at the last ID NEPA Team meeting was from the Geomorphology Technical Team. A follow-up teleconference concluded the following:

- The order of the wet and dry periods in Run 17 is acceptable. The technical team concluded that their analysis would not be sensitive to the order of the periods.
- Originally, the technical team was concerned that the 1995 hydrology was not included in the sequence due to the high flows that year. However, they have determined that the sequence includes years that have caused great geomorphic changes, so the inclusion of 1995 data is not necessary.
- The use of Run 17 was approved by the Geomorphology Technical Team.

➢ **Debbie will complete the final memo describing the 40-year sequence and post it on Team Link.**

➢ **The ID NEPA Team has agreed to accept Run 17 as the sequence to use for the URGWOM Planning Model.**

❖ Mark Yuska updated the group on progress in developing the URGWOM Planning Model.

➢ Historic data for the years from 1975 to 1984 are being entered for use in the model.

➢ The Technical Team is working on debugging the rules and on conducting runs to evaluate options for the Endangered Species Act.

➢ The functioning of El Vado has been converted to a power-producing model, per a request from the Land Use Technical Team.

➢ Nodes have been added to the model at Paseo del Norte and Isleta to account for Albuquerque's diversion and return flows.

➢ **Mark needs to get significant land use, population, and irrigation trends for the 40-year planning period from the Land Use Technical Team.**

- There are several water resources management projects for Albuquerque that should be considered as sources of information.
- Mark met with the USGS to discuss their projected groundwater pumping trends.
- It is important to adapt any changes anticipated over the 40-year planning period as simply as possible for URGWOM.

➢ The URGWOM Technical Team is configuring the model for the use of historic release data from Elephant Butte. Only flood control releases will be modeled. The documentation on how this works is on the URGWOM web site at http://www.spa.usace.army.mil/urgwom/.

- Rhea Graham gave a short summary of the agenda for the Steering Committee meeting to be held on November 15.
  - The main topic will be a presentation of the 40-year sequence of hydrology to be used in the URGWOM Planning Model for evaluation of the alternatives.
  - Other plans include summarizing progress to date and the next steps for the project.
- Gail reviewed the flow chart and project schedule.
  - The Water Operations Technical Team has begun refining the operational alternatives and has created a process for developing the action alternatives. **When the Water Operations Technical Team has completed documentation of their evaluation of the draft alternatives, a summary will be posted on Team Link. Technical teams should review and comment on this.**
  - **If technical teams determine that they will need to develop and print a technical report to document supporting data and analyses, they should make that recommendation to the Project Managers.**
  - An integrated work plan has been completed that shows the resources allocated and documents the in-kind services provided by many agencies.
    - The plan will be posted on Team Link.
    - The Executive Committee will send thank-you letters to the agencies that are providing staff.
    - Colleen Logan told the group that the EIS sections now have a separate folder on Team Link.
- The other items discussed are summarized below.
  - Rhea encouraged **all technical team members to review the planning aid letters** that are available on Team Link.
  - **The bibliography on Team Link should be updated and added to the administrative record.**
  - **All technical teams should be developing a glossary and acronym list for their sections**. The Aquatic Habitat Technical Team requested a glossary of terms used by the Geomorphology Technical Team.
  - William DeRagon described 2 biological assessments under development that address issues of concern in the Rio Grande.
    - One BA to be completed by January with a biological opinion by March 1, 2003 involves native storage, flood control, and diversions to MRGCD.
    - One BA to be completed by June with a BO by August 15, 2003 will address long-term water operations from 2004 to 2011. This includes significant discussions on storage at Abiquiu, passage of releases below Abiquiu, possibly Jemez storage, carryover storage for the 10-year planning period, and establishing Rio Grande flow requirements.
    - Both of these biological opinions would revise the future baseline to be used in the URGWOPS EIS but should not affect the alternatives to be evaluated. The decisions would provide constraints because they would become policy.
- **The next meeting of the ID NEPA Team will be held on December 12 at 1:00 p.m. in the Corps conference room.**