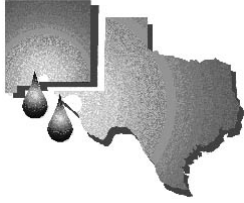


# New Mexico – Texas Water Commission



## *Public Entities in Partnership for Sustainable Water Resources*

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### MEETING OF THE NEW MEXICO – TEXAS WATER COMMISSION

#### **Texas A&M Research and Extension Center**

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**March 9, 2006**

**9:00 A.M.**

Dr. Ari Michelsen of Texas A&M Extension Center (TAMU) welcomed everyone and chaired the meeting. A copy of the sign-in-sheet is attached as “**Exhibit A.**” Those Commission members attending the meeting were as follows:

Karl Wood – NMSU-WRRI	Ed Archuleta – EPWU
Tony Tarquin – UTEP	Ari Michelsen-TAMU
Eric Martin- Las Cruces	Gary Esslinger-EBID

#### **I. Review and Approval of Minutes from January 19, 2006 Commission Meeting (Commission Members)**

Ari asked if anyone had comments on the January 19, 2006 Commission meeting minutes. Tony Tarquin announced that he had some minor revisions that he would provide to Mike Fahy. A motion to approve the minutes as revised by Dr. Tarquin was passed and accepted unanimously by the Commission.

#### **II. Progress of the Paso del Norte Watershed Council (PdNWC) (Irene Tejeda, Program Coordinator)**

Irene explained that the updates to the Spanish version of the Web Page are nearly completed now, and that the next regular meeting of the PdNWC would also be held at TAMU on 3/9/06, immediately after the Commission meeting. Irene also announced the names of the Executive Committee members recently re-elected to serve three year terms. Ari related to the audience that since Irene is an active member of several regional water-related organizations, she would be a good candidate to pursue active coordination of the activities of these organizations. A starting point could be to schedule meetings of the various agencies on the same date and at the

same location, for the convenience of those members common to more than one organization. These organizations include the Commission, Watershed Council, Water Task Force and the IBWC Citizens' Forum.

Mr. Archuleta reported that he would call a meeting of the members of the Commission to try and consolidate the membership and activities of some of these organizations, since participation by each member agency now represents a large manpower and resource commitment to maintain and support the active status of all of the organizations. In addition, CHIWAWA has now been formed and represents another regional organization including members from the previous four organizations.

### **III. Update on Status of New Mexico 319 Grant Funding Proposal submitted to NM Department of the Environment (Sue Watts, PdNWC Chair)**

Sue reported that Jennifer Atchley-Montoya, Julie Maitland and Brian Hanson attended the orientation session at the Albuquerque office of NMED on 1/24/06. The purpose of this meeting was to explain the process for preparing work plans and standard administrative procedures for 319 Projects. The work plan was made available for review by the Commission members, and is attached as **“Exhibit B”**. NMED has approved expanding the project schedule to 18 months and the focus of the study will be an evaluation of fecal coliform. Multiple-party stakeholder involvement is mandated by NMED, and the development of a Watershed Restoration Action Strategy (WRAS) will be the culmination of this phase of the project. The approved project budget includes funds from NMED to hire consultants for both technical services and public outreach. NMDA will be the fiscal agent.

Gary Esslinger questioned the source of the reports of fecal coliform in the Rio Grande and explained that in the past there has been illegal dumping in the river. Ari explained that this stretch of the Rio Grande in New Mexico was on the 303 list for coliform, as reported to EPA by NMED. Karl asked why the resources and manpower of NMWRRI could not be used to provide data, perform lab testing and to compose part of the WRAS. NMDA will consider these options, but must follow state guidelines for contractor selection. Perhaps NMDA can utilize available maps and data from NMWRRI. Gary has several questions regarding this project that he wants to discuss with John Hernandez.

Mr. Archuleta requested that the work plan mention by name the individual at NMDA or with the PdNWC that is responsible for the project, and Mike Fahy mentioned that there are no representatives from municipalities defined on the list of participating committee organizations. Sue explained that Julie Maitland is the individual at NMDA responsible for the project, and that the work plan included a task to expand the list of committee members through public outreach.

### **IV. Year 2006 Irrigation Season, Early Snowpack and Precipitation Forecast (Wayne Treers, USBR)**

**“Exhibits C and D”** contains the hand outs and graphics distributed by Wayne at the meeting. Wayne reported that for this season, there is currently little snowpack in New Mexico and the soils are exhibiting a moisture deficit, which is affecting spring runoff. There has basically been

no snow accumulation since January. Snowpack in the Upper Rio Grande Basin as of March 1 is now the lowest since 1950, and the Snotel site on the Jemez River is now at a record low level of zero for this early in the Spring. This condition of complete melt-down at this site is occurring approximately 7 weeks before normal. The recorded March 1 runoff at San Marcial equaled 10% of normal. The Weather Service and NOAA forecasts show persistent drought for Arizona, New Mexico, Texas and Oklahoma.

With respect to reservoir conditions, storage in Elephant Butte Reservoir (EB) on 3/8/06 equaled 501,500 AF. This storage volume will likely be the peak for 2006. On 12/7/05, storage first exceeded 400,000 AF, so that now the upstream reservoirs can store water. The first release for this season from EB occurred on March 6. Based on 2005 accounting procedures from the Engineering Advisors, EB contains approximately 37,100 AF worth of credit water from New Mexico, plus approximately 10,000 AF combined from both the State of Colorado and the San Juan-Chama Pool. The meeting of the Rio Grande Compact Commission is scheduled for March 23.

Using a 5% of normal runoff value yields a total release of only 469,000 AF for 2006, based on the March 1 forecast. This scenario will leave only 133,000 AF left in EB and Caballo Reservoirs combined, at the end of 2006. Wayne explained that by the end of June, 2006, USBR may be able to forecast a total, final allocation of 448,643 AF, or 48.15% of a full supply, after credit waters are incorporated into the final figure.

EP# 1's initial order of 500 cfs occurred on March 8 and included a compliment of boost water. EBID plans to make their first order on March 13, and will maintain continuous releases for 2006, until their allotment has been delivered. Mexico will order their first release on March 22.

## **V. Other Business -**

Mike provided a brief update on the preparation of the quarterly progress report due to USBR for the EPWU Water 2025 project for the period from January through March 2006. Mike will be requesting input and invoices for this report from EBID and TAMU. EPWU posted the NEPA Categorical Exclusion on the Commission Web Page for the EPWU Project. Mike also provided copies of the program for EPWU's Concentrate Management Conference on March 16 and 17.

Eric Martin of the City of Las Cruces (CLC) provided a slide presentation on the Burn Lake-Regulating Reservoir, Water 2025 Project awarded by USBR to Las Cruces. This presentation is attached as "**Exhibit E**" and includes a schematic of the project master plan, the identification and location of facilities to be constructed at project build out, and photographic views of the Southwest portion of the lake, pipe route locations and the new inlet structure to fill the lake from the nearby EBID canal.

## **VI. Next Meeting/Location/Topics**

The next meeting will be held at 9:00 a.m. on May 19, 2006 at UTEP. Topics mentioned for possible discussion included an updated allocation forecast from USBR, a progress report on the NM 319 Grant funding, and a discussion of opportunities available to coordinate the meetings of the multiple, water resources-related agencies currently active in this region. The March 9, 2006, meeting was adjourned at 10:40 a.m.

## **VII. Technical Summary Report on FLO-2D Modeling from Caballo Dam to Fort Quitman (Jim O'Brien, Author of FLO-2D Model/Army Corps of Engineers Consultant)**

Jim O'Brien's presentation is attached as "Exhibits F and G" for the IBWC Canalization and Rectification projects, respectively. Jim opened his presentation by stating that IBWC originally required that he use a release of 5,000 cfs for the HEC 1 and 2 modeling of the Canalization project. He added that his review of the available, historical information did not necessarily support a flow of 5,000 cfs as equivalent to a 100-year flood event. Jim reviewed the rain gages at the Jornada and Hillsboro locations to more accurately define the historical storm of record, and his review of the 91-years worth of measurements confirmed that a 3.8-inch storm occurring over a 24-hour period would reasonably approximate a 100-year storm event. He therefore used a release of 2,380 cfs for the FLO-2D modeling for a 100-year event instead of 5,000 cfs, and analyzed for return periods of 2, 5, 10 and 25-years.

Mr. O'Brien elaborated on the accuracy of the Dona Ana County, LIDAR- Digital Terrain Model and its usefulness in estimating sediment yield throughout the project area. He also explained that the results of river dredging include river channel incision, and concentrating of coarse gravel and cobble materials in the river bed. Prior U. S. Army Corps of Engineers consultants appear to have overestimated sediment yields in their calculations, and Jim was able to use more recent NRCS sediment load data to back-calculate and improve sediment load values.

This FLO-2D model utilized a finite-difference grid system and 145 cross sections. Most cross sections extended from levee to levee, and the cross sections were generally spaced according to changes in geomorphology. Jim explained that the 1996, HEC-2 modeling showed a higher peak flow for the river compared to the FLO-2D results. Also, by comparison, the new FLO-2D model with the revised hydrology, showed flows peaking approximately 30-miles below Caballo Dam, due to the capacity of the river to store water below that point. Jim informed the audience that these types of hydrology models often overestimate flood damage downstream of storage reservoirs. Jim's last remaining concern with the modeling of the Canalization Project, is the potential impacts of including roads, railroad and other infrastructures in the model. However, including this level of detail was beyond the scope of his current contract with the Corps.

Jim O'Brien's contract with the Corps for the IBWC Rectification Reach contains many of the same tasks as those for the Canalization reach. He is completing the hydrology, but the calibrations will be limited to analyses of flood gage data and comparison of hydrograph shapes. In his opinion, the 100-year flood for this reach will most likely be contained within the levees, and any flooding that does occur, will be conveyed upstream in the agricultural drains, rather than to cause levee overtopping and serious flooding of adjacent fields. Also, the roughness coefficient for the adjacent fields will have a large impact on the degree of any flooding. The roughness coefficient is controlled by the height and density of vegetation in the fields. In conclusion, he related that when the Riverside Dam failed in 1987, the flow in the river equaled approximately 7,900 cfs at that location, and that in 1999, the flow through El Paso equaled 6,700 cfs without overtopping of the levees.