



US Army Corps
of Engineers®
Engineer Research and
Development Center

Urban Flood Demo Program & Southwest Demo Program

State of flood related modeling along the Middle Rio Grande (identification of issues/needs)

Products	A seminar class on the Rio Grande at the University of New Mexico. A simple database identifying models relating to flood analysis along the Middle Rio Grande.
Benefits	Better collaboration between entities studying the Middle Rio Grande. A systematic way to identify the modeling needs related to flood control.
Problem	A number of federal, state, and local governmental agencies are actively participating in studies related to sediment transport and flood control along the Middle Rio Grande. Some of these studies may be highlighted at a local meeting; however, many of these studies result in reports that are not well circulated. For example, the FLO-2D model was used to model the entire Middle Rio Grande from Cochiti Dam to Elephant Butte. The results of this model have been presented at Bosque Initiative meetings. FLO-2D was applied to the river again to assist the Save Our Bosque Task Force in their restoration planning through the Socorro reach. Results of FLO-2D through the Albuquerque stretch were presented at a February 10 th meeting at the Corps office in Albuquerque. This model used updated cross sections and additional high-flow calibration data. Each of these studies had different objectives; nonetheless, the river was modeled and flood surface elevations were calculated for different flow rates.
Description	<p>A seminar class was held during the fall semester, 2006, which focused on the Rio Grande. This seminar afforded us the opportunity to invite outside speakers as well as provided a collaborative forum for the different Rio Grande projects taking place at UNM.</p> <p>To determine the current state of knowledge of flooding issues associated with the Middle Rio Grande, an inventory of hydrologic, hydraulic, sediment transport, and water operation models that have been used for the Middle Rio Grande will be conducted. The inventory will include assembling the following:</p> <ul style="list-style-type: none"> Model used Assumptions inherent to model Governing equations Variables used for calibration Data used for validation Ranges of input data Spatial extent (River miles of application) <p>Model parameters and corridor locations most associated with uncertainty will be identified</p>
Principal Investigator	<i>Julie Coonrod and Tim Ward, University of New Mexico</i> email: jcoonrod@unm.edu , tjward@unm.edu Phone: 505-277-3233, 505-277-2328.
Collaborators	USACE – Albuquerque District
Funding Source	Funding comes from the Southwest Urban Flood Damage Program (SWDP) and the Urban Flood Damage Reduction and Channel Restoration Development and Demonstration Program for Arid and Semi-Arid Regions (UFDP).