

Coordinated Water Resources Database & GIS for Watershed Management

Dr. Christopher Brown and Matt Rich, New Mexico State University; Dr. Zhuping Sheng and R. Srinivasan, TAES, Texas A&M University; Dr. Bobby Creel and Dr. John Kennedy, New Mexico Water Resources Research Institute; Dr. Phillip J. King and Sue Tillery, New Mexico State University; Dr. Bob Gray, University of Texas at El Paso; Dr. Alfredo Granados, Universidad Autonmas Ciudad Juarez; Dr. Ari Michelsen, TAES, Texas A&M University

Support Provided by: El Paso Water Utilities, U.S. Army Corps of Engineers, U.S. Bureau of Reclamation, Texas Agricultural Experiment Station and New Mexico State University



Telemetry Gage Station

BACKGROUND

The flow and water quality of the Rio Grande is measured and recorded at several points by various groups from Elephant Butte Dam, New Mexico down to Fort Quitman, Texas. Separate measurements are collected by federal agencies (USBR, USGS, IBWC), irrigation districts (EBID & EPCWID#1), El Paso Water Utilities, City of Las Cruces, and others. Prior to this collaborative program there has been little or no compilation, coordination or convenient method to access data from these numerous sources. In some cases information is collected using real-time technology, with each organization collecting and using information solely for achieving their individual mission. Even when information is shared, it may not be done in a timely manner. This absence of coordinated access and sharing of real-time and historical data may lead to unnecessary duplication of effort and wasted resources.

OBJECTIVES

- This Coordinated Water Resources Database & GIS is designed to coordinate, compile and provide timely Internet access to information for use by water management organizations, stakeholders and scientists.
- The Coordinated Water Resources Database & GIS is being developed by the **Paso del Norte Watershed Council** through collaboration of university scientists, and the cooperation of Federal and State agencies, irrigation districts and water management and user organizations.
- Phase I of this project is to identify sources, locations and parameters of water flow and quality measurements. Concurrently, a website is being developed at NMSU with a GIS interface that shows the Rio Grande irrigation network, measurement stations and information on archival water resources related data within the Paso Del Norte Region.
- Phase II project objectives include: creation of digital records of historical data; facilitating sharing of real-time data; providing actual data, links to sources and access to information through the Coordinated Database website; and assisting in coordination of water resources measurements and reporting.



Rio Grande Paso del Norte Watershed
Source: Paso del Norte Water Task Force, NMWRRI,
Rio Grande GIS Project

PRELIMINARY RESULTS

- A report on water resources data sources, measurement parameters and monitoring locations is being prepared and will be available Fall 2003 from the Paso del Norte Watershed Council.
- An operational web site for the Paso del Norte Watershed Coordinated Water Resources Database with GIS interface has been created and may be accessed at <http://wrri.nmsu.edu/arcims/pdnwcmmap/tiles/home.htm>.
- A workshop will be held September 15, 2003 to demonstrate use of website with GIS interfaces and current availability of water resources information.



Agricultural Research and Extension Center at El Paso
Texas Agricultural Experiment Station, Texas A&M University
1380 A&M Circle, El Paso, Texas 79927
Phone: (915) 859-9111, Fax: (915) 859-1078
<http://elpaso.tamu.edu/Research/Index.htm> 9/03

