Coordinated Water Resources Database & GIS for Watershed Management

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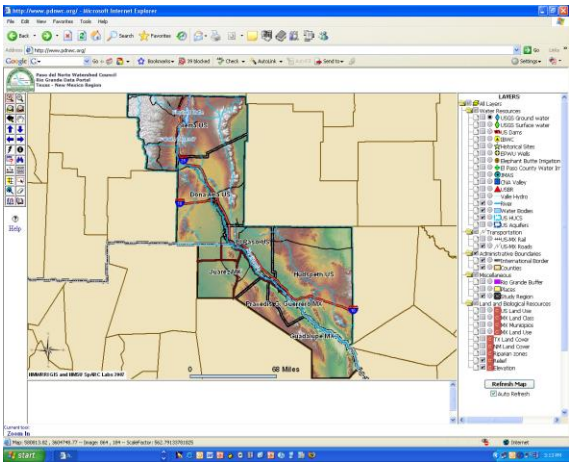
Telemetry Gage Station

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 cooperation of Federal and State agencies, irrigation districts and water management and user organizations.
- Phase I identified sources, locations and parameters of water flow and quality measurement stations. Concurrently, a website is housed at NMSU-WRRI with a GIS interface with the Rio Grande irrigation network, measurement stations and information on archival water resources related data in the Paso Del Norte Region.
- Phase II created historical data digital records, facilitated sharing of real-time data, upgraded links to sources and access to information through the Coordinated Database website, assisted in coordination of water resources measurements and reporting (QA/QC) and provided data needed for development of conceptual model design and configuration of Riverware for the PdN Watershed.



Rio Grande Paso del Note Watershed ArcIMS website

PROGRAM RESULTS AND BENEFITS

- A web site with GIS interface for the Paso del Norte Watershed Coordinated Water Resources Database has been created, tested and refined and can be accessed at http://www.pdnwc.org/. It has been updated continuously.
- Two Technical Reports published by New Mexico Water Resources Research Institute and Texas Water Resources Institute: http://wrri.nmsu.edu/publish/techrpt/abstracts/abs327.html and http://wrri.nmsu.edu/publish/techrpt/abstracts/abs341.html
- Workshops for water resources stakeholders were held demonstrating use of database website with GIS interfaces, data availability, breadth of water resources information and applications in water resources management.

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