

**Water Supply Reserve Account – Grant and Loan Program
Water Activity Summary Sheet
March 2012 Agenda Item 19.d**

Applicant: Conejos Water Conservancy District

Water Activity Name: Conejos River System Gauging Stations Project

Water Activity Purpose: Structural Project (Agricultural)

County: Conejos

Drainage Basin: Rio Grande River

Water Source: Conejos River

Amount Requested: \$407,280 (\$387,280 Statewide Account and \$20,000 Rio Grande Basin Account)

Matching Funds: \$41,250 from the applicant; \$51,250 from participating water users

Staff Recommendation

Staff recommends approval of up to \$387,280 of Statewide WSRA funds and up to \$20,000 of WSRA funds from the Rio Grande Basin Account to help complete the Conejos River System Gauging Stations Project.

Water Activity Summary:

The Conejos Water Conservancy District (District) plays a critical role in the management of flows on the Conejos River and its tributaries, ensuring that enough water is available to meet agricultural needs and satisfy Colorado's obligation to the Rio Grande Compact. The Compact requires water deliveries to New Mexico based on flow measured at four index stream gages. In any given year Colorado is required to deliver between 25 and 70 percent of the water from the two river systems: the Rio Grande and the Conejos. Within the District's 86,000 acres of irrigable land, its water users are the last line of defense for the Colorado Department of Water Resources (DWR) to administer the Compact. To meet the Compact's requirements, the District implements curtailments and manages storage in Platoro Reservoir according to DWR's best estimates of river flows and forecasts of expected flows. Despite DWR's best efforts, there are often large discrepancies between the forecasts and actual river flows, particularly on the Conejos system, resulting in major costs and other ramifications to the District, the basin, and the state.

The proposed project is the first in a series of collaborative initiatives by the District to assist the DWR in better understanding the complex Conejos River system; minimizing forecasting errors; reducing the effect of those errors on water users; equalizing the distribution of irrigation water based on empirical data; and streamlining Colorado's compliance with the Rio Grande Compact.

The proposed project seeks to accurately track and deliver water to users throughout the system. Funds requested would be used to install 72 solar-powered gauging stations and automate 4 existing control gates on the Conejos River system. Flow data would be transmitted every minute to eight group measurement sites (pods), each consisting of a Gateway receiver and cell modem. Stage height and flow data would then be averaged for each 15 minute period and made available to the District and DWR via the internet. In collaboration with water users, four of the system's most important control gates will be upgraded for remote operation. The DWR's commissioners will be able to verify flows at a glance, saving time and transportation costs.

The proposed system would provide near-real-time data, vastly improving the District's management efficiency and effectiveness. Through close collaboration, it also provides DWR with data on the Conejos River system at a level of accuracy which has previously not been available in the Rio Grande Basin.

Threshold and Evaluation Criteria

The application meets all four Threshold Criteria.

The application articulates how the project meets the Evaluation Criteria as summarized below:

Tier 1: Promoting Collaboration/Cooperation & Meeting Water Management Goals & Identified Needs: The Conejos River System Gauging Stations Project is a collaborative effort involving numerous entities, particularly DWR. Through this cooperative process this project addresses multiple consumptive and non-consumptive needs by creating a management system that is participative, transparent, effective, and sustainable. This project seeks to protect and more efficiently use senior agricultural rights identified as critical by the Rio Grande Basin Roundtable. Due to the nature of the Rio Grande Compact administration these rights are particularly vulnerable without accurate measurement and forecasting tools.

Tier 2: Facilitating Water Activity Implementation: Due to the District's existing debt load it cannot implement this project without assistance. Water users on the Manassa, San Antonio, Romero, and North Branch systems are contributing over \$50,000 to the project while the District is contributing over \$40,000. In addition, curtailment corrections resulting from current inaccurate measurements and forecasts on the Conejos system can result in losses that have been calculated to exceed \$13,000 per day. The District has repeatedly proven its ability to implement major complex projects, including the WSRA-funded Platoro Reservoir Restoration Project and Platoro Reservoir Crest of Dam Repair. It operates Platoro Reservoir in consultation with the State Engineer, the U.S. Bureau of Reclamation, and the U.S. Army Corps of Engineers. The District has an agreement with the State Engineer to store and release Compact water without charge to the State. Finally, the District has done extensive research selecting appropriate contractors capable of executing the proposed project.

Tier 3: The Water Activity Addresses Issues of Statewide Value and Maximizes Benefits: The proposed project would sustain agriculture by equitably balancing and administering limited water resources. In addition, it seeks to bring greater efficiency to the administration of the Rio Grande Compact through the use of innovative tools. By establishing a baseline of knowledge and empirical observations, this project promotes maximum utilization of state waters. Coupled with future measures planned by the District to improve forecasting, this project goes a long way toward improving DWR's accuracy in distributing water among the District's users and ensuring that curtailments are equitably and minimally applied, while at the same time meeting Colorado's obligation to the Compact.

Discussion:

The requested WSRA funds would help implement an innovative and collaborative project to more efficiently meet identified consumptive needs in the Rio Grande Basin. Resulting efficiencies would serve to sustain agriculture while assisting DWR to more effectively meet Colorado's obligations under the Rio Grande Compact. Other benefits include: reducing the uncertainty of curtailments to water users; more equitably distributing available water; improving drought protection through more efficient management; increasing augmentation and restoration of the Basin's aquifers; and enhancing the function of the Conejos flood plain. As such, the proposed project does an excellent job of meeting criteria established for the WSRA program.

Issues/Additional Needs:

No issues or additional needs have been identified.

Staff Recommendation:

Staff recommends approval of up to \$387,280 of Statewide WSRA funds and up to \$20,000 of WSRA funds from the Rio Grande Basin Account to help complete the Conejos River System Gauging Stations Project.

All products, data and information developed as a result of this grant must be provided to CWCB in hard copy and electronic format as part of the project documentation. This information will in turn be made widely

available to Basin Roundtables and the general public and will help promote the development of a common technical platform.

In accordance with the revised WSRA Criteria and Guidelines, staff would like to highlight additional reporting and final deliverable requirements. The specific requirements are provided below.

Reporting: The applicant shall provide the CWCB a progress report every 6 months, beginning from the date of the executed contract. The progress report shall describe the completion or partial completion of the tasks identified in the scope of work including a description of any major issues that have occurred and any corrective action taken to address these issues.

Final Deliverable: At completion of the project, the applicant shall provide the CWCB a final report that summarizes the project and documents how the project was completed. This report may contain photographs, summaries of meetings and engineering reports/designs.

Engineering: All engineering work (as defined in the Engineers Practice Act (§12-25-102(10) C.R.S.)) performed under this grant shall be performed or certified by a professional engineer licensed by the State of Colorado to practice Engineering.