Water Supply Reserve Account – Grant and Loan Program
Water Activity Summary Sheet
Agenda Item 14.e

Applicant: Mogote-Northeastern Consolidated Ditch Company in collaboration with the Romero Irrigation Company

Water Activity Name: Quantifying Mogote/Romero Flows & Effects on the Conejos System

Water Activity Purpose: Non-structural and structural consumptive project

County: Conejos

River Basin: Rio Grande

Water Source: Conejos

Amount Requested: $268,300 (Statewide Account); $16,700 (Rio Grande Basin Account)

Matching Funds: $60,350 (Conejos Water Conservancy District), $27,500 (NRCS), $7,500 (shareholders)

Staff Recommendation
Staff recommends approval of up to $16,700 from the Rio Grande Basin Account and $268,300 from the Statewide Account to help complete the project titled: Quantifying Mogote/Romero Flows & Effects on the Conejos System.

Water Activity Summary:
This is a joint project of the Mogote-Northeastern Consolidated Ditch Company (Mogote NE) and the Romero Irrigation Company (Romero), together referred to as RMNE. Mogote NE is the Applicant, taking fiscal and administrative responsibility.

This large and complex combined system represents two of the oldest ditch companies with some of the most senior rights on the Conejos River that collectively irrigate over 15,000 acres. The Romero Ditch diverts about 25% of the Conejos River flow (667 cfs), and carries the water through about 80 miles of earthen canals and ditches. Since it is one of the larger diversions on the river, with multiple decreed water rights, the diurnal effect has significant impact on the actual water diverted throughout the day, requiring significant monitoring and adjustment in an attempt to meet decreed flows. Due to the diversion volume a 10% error in the flow can have a significant impact on irrigators and the Conejos River Compact flows.

Therefore, this project seeks WSRA funds to implement combined technologies of measuring weirs, automation, and telemetry to enhance measurement and operational accuracy of the RMNE system and optimize beneficial use of the Conejos River Compact water. In order to quantify flows/losses and more accurately identify return flows, the project includes the installation of sixteen measuring weirs combined with a recently installed gauging and telemetry system on major laterals in the RMNE system. In addition, the project includes the replacement of the Romero diversion gate with a new 12-foot automated radial gate.

Through this project, RMNE seeks to: (1) Equalize the distribution of irrigation water based on empirical real-time data; (2) maximize sustainable beneficial use of existing water supplies; (3) provide data of RMNI's role in the Conejos River system; (4) help minimize forecasting errors and their effects; and (5) help streamline Colorado's compliance with its Compact obligations.

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:

This project seeks to meet multiple consumptive needs through efficiencies gained on the subject ditches, as well as providing important data to DWR to assist in the complexities of compact compliance on the Conejos River. Data generated from the project could also assist in better understanding effects of the complicated stratigraphy and implications for groundwater management via future subdistrict efforts. The application represents two of the major entities on the Conejos. In addition, the application is supported financially by the Conejos Water Conservancy District (CWCD) as well as being incorporated with similar gauging technologies that CWCD and other neighboring systems have recently installed, which will all ultimately assist DWR with Compact Administration. The main objective of maximizing beneficial agricultural use on the Conejos River meets important identified needs in the Rio Grande Basin.

Tier 2: Facilitating Water Activity Implementation:

The applicant has stated that this project could not proceed without WSRA funding and the leveraging opportunities that it provides. The Conejos Water Conservancy District is contributing $60,350, including $36,000 for the new Romero Diversion radial gate, and $24,350 for automation and telemetry equipment at the new Romero gate. The NRCS has also contributed $27,000 in technical assistance with the gauging equipment and engineering services.

Tier 3: The Water Activity Addresses Issues of Statewide Value and Maximizes Benefits:

The proposed project seeks to sustain agriculture on the Conejos River by optimizing irrigation efficiencies, and therefore minimizing previously substantial operational losses. Due to the large volume of water on the Conejos used by the RMNE system (up to 25%) better management could greatly benefit Compact administration to help maximize the beneficial use of Colorado's waters. As such, the project could have a large long-term benefit to Colorado in relationship to the amount of funds request. This project would be complimentary to other WSRA-funded funded projects on the Conejos River, including CWCD's Guaging Stations Project and the Manassa Land and Irrigation Company's Conejos North Branch Water Conservation and Management Project.

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$16,700 from the Rio Grande Basin Account and $268,300 from the Statewide Account to help complete the project titled: Quantifying Mogote/Romero Flows & Effects on the Conejos System.

All products, data and information developed as a result of this grant must be provided to the 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 and Final Deliverable: 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. 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 by or under the responsible charge of professional engineer licensed by the State of Colorado to practice Engineering.

Location Map: