Water Supply Reserve Account – Grant and Loan Program Water Activity Summary Sheet May 20-21, 2015 Agenda Item 10(f)

Applicant & Fisca	l Agent: Conejos River System Water Users Association (CRSWUA)
Water Activity Na	me: Conejos Groundwater Monitoring and Analysis
Water Activity Pu	rpose: Needs Assessment
County: Conejos	
Drainage Basin: 1	Rio Grande
Water Source: Co	onejos River/San Luis Creek, and Rio Grande Confined Aquifer
Amount Requeste	d/Source of Funds: \$19,000 Rio Grande Basin Account <u>\$200,000 Statewide Account</u> \$219,000 Total Grant Request
Matching Funds:	 Basin Account Match: \$19,000 = 8.7% of total grant request (meets 5% min); Basin Account & Applicant Match: \$136,500 = 62% of total grant request (meets 25% min); Applicant & 3rd Party Match: \$117,500 = 54% of total grant request (meets 5% min) & 35% of total study costs (\$336,500) (refer to <i>Funding Summary/Matching Funds</i>)

Staff Recommendation:

Staff recommends approval of up to \$19,000 from the Rio Grande Basin Account, and \$200,000 from the Statewide Account to help fund the needs assessment titled: Conejos Groundwater Monitoring and Analysis.

Water Activity Summary: WSRA funds, if approved, will be expended to fund the Conejos Groundwater Monitoring and Analysis Study (the Project), which will install a groundwater monitoring network in the Subdistrict #3 area of the Rio Grande Water Conservation District. CRSWUA will place water level transducers in 16 local confined aquifer irrigation wells to record and monitor real-time water level data over a sustained length of time. A set of existing wells were identified for potential use within the monitoring network based on available information of perforated well intervals and a goal to achieve a regular spacing across representative aquifer conditions given the Thiessen polygon method that is used to spatially weight wells within the network (see attached graphic).

The Project will establish a scientific basis for evaluating the relationships/interconnectivity between different pumping wells in the area in and around Subdistricts #3 and #4 and providing a better understanding of the lateral transmissivity of the confined aquifer, the degree of connection to the overlying unconfined aquifer, and the potential connection to surface water bodies. By gathering groundwater data from a larger and more relevant sample, CRSWUA will provide to Colorado a scientific assessment to fine tune the model. Deliverables of the Project will prepare for future groundwater administration; help meet the short-term and long-term objectives of water users in the Conejos watershed; improve understanding of the regional groundwater system in the future

Subdistrict #3; provide data to influence the accuracy of the currently accepted groundwater model; improve current tools being used for meeting delivery obligations of the Rio Grande Compact; and significantly improve groundwater administration and management in the Rio Grande Basin.

Over the years, water users in the CRSWUA have collectively observed aquifer system behaviors that are not entirely in agreement with groundwater model outputs. The current groundwater model of the San Luis Valley uses available hydro-stratigraphic, well pumping, and water level data to calibrate recent water level and flow conditions. The State has used this model (part of the Rio Grande Decision Support System or RGDSS), to forecast future conditions under current and proposed pumping and hydrologic conditions, and intends to use that data in the future as the basis for promoting sustainable Basin groundwater administration.

Objectives:

- Develop ground water data to address "Rules Governing Withdrawal of Ground Water in Water Division No. 3"
- Support optimum use of water, consistent with preservation of the priority system of water rights
- Provide scientific data to the RG Basin and DWR to create a plan for groundwater sustainability
- Develop historical analysis and real time data to identify and address injurious stream depletions
- Help identify injurious depletions on the San Antonio, Conejos, La Jara, Alamosa and Rio Grande
- Improve Colorado's ability to more accurately meet its Rio Grande Compact obligations
- Support agriculture by helping to regulate and balance the use of limited surface and groundwater resources
- Help maintain a sustainable water supply in the Confined and Unconfined Aquifer

Discussion: The proposed needs assessment aligns with many of the Goals and Measurable Outcomes identified in the Draft Rio Grande Basin Water (Implementation) Plan (Goals and Measurable Outcomes: #2, #3, #5 & #6; Section 3.2.1, page 122). In addition, this project comports with aspects of the "Basin Roundtable Identified Projects and Methods" (Section 6.5.1, page 275), also indentified in the Draft BIP.

Issues/Additional Needs: No issues or additional needs have been identified.

Threshold and Evaluation Criteria:

The application meets all four Threshold Criteria.

Tier 1-3 Evaluation Criteria:

Staff has reviewed and evaluated the applicant's response to the Statewide Account Supplemental Scoring Matrix and has determined that it satisfies the Evaluation Criteria. Please refer to WSRA Application for applicant's detailed response.

	Cash	In-kind	<u>Total</u>
Conejos Water Conservancy District	\$10,000	\$0	\$10,000
Alamosa/La Jara Water Conservancy District	\$5,000	\$0	\$5,000
Rio Grande Water Conservation District	\$75,000	\$0	\$75,000
Colorado Division of Water Resources	\$0	\$23,500	\$23,500
CRSWUA	\$0	\$4,000	\$4,000
Sub-total matching funds	\$90,000	\$27,500	\$117,500
WSRA Rio Grande Basin Account	\$19,000	n/a	\$19,000
WSRA Statewide Account	\$200,000	\$0	\$200,000
Total	\$309,000	\$27,500	\$336,500

Funding Summary/Matching Funds:

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: 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 by or under the responsible charge of professional engineer licensed by the State of Colorado to practice Engineering.