

**Water Supply Reserve Account – Grant and Loan Program**  
**Water Activity Summary Sheet**  
**May 21-22, 2014**  
**Agenda Item 23 (d)**

**Applicant:** San Luis Valley Irrigation Well Users Association

**Water Activity Name:** Ground Water Recharge for Augmentation and Aquifer Sustainability in the three study areas in Conejos County

**Water Activity Purpose:** Feasibility Study

**County:** Conejos

**Drainage Basin:** Rio Grande

**Water Source:** Conejos River

**Amount Requested:** \$150,000 (\$142,000 Statewide Account, \$8,000 Rio Grande Basin Account)

**Matching Funds:** \$8,000 from Rio Grande Basin Account (5.3% of total grant request, 4.4% of total study costs), and \$30,000 from SLV Irrigation Well Users Association (20% of total grant request, 16.7% of total study costs)

<b>Staff Recommendation</b>
Staff recommends approval of <b>up to</b> \$142,000 of Statewide WSRA funds and <b>up to</b> \$8,000 of Rio Grande Basin WSRA funds to help complete the feasibility study titled: <i>Ground Water Recharge for Augmentation and Aquifer Sustainability in the three study areas in Conejos County.</i>

**Water Activity Summary:** The State Engineer is in the process of promulgating "Rules Governing the Withdrawal of Ground Water in Water Division 3" (Rules and Regulations). In order to continue pumping, wells must be covered by either ground water management sub-district plan of water management or by a court-approved augmentation plan. The Rules and Regulations will require that ground water withdrawals can only occur if 1) injurious stream depletions are replaced or remedied, and 2) a plan for sustainability of the unconfined aquifer and the confined aquifer is addressed and maintained. In response to this need, San Luis Valley Irrigation Well Owners Inc. (SLVIWO) is applying for WSRA funds to conduct a hydrological feasibility study of potential groundwater recharge opportunities for augmentation in three study areas in Conejos County, exploring options for using Taos Valley #3 Ditch water for augmentation credits to offset well pumping depletions. The three study areas are: Conejos Off-Channel Recharge Feasibility, Punche Arroyo Off-Channel Recharge Feasibility, and Rio San Antonio Off-Channel Recharge Facility. The activities for each study area are: install piezometers (monitoring wells), establish water table gradients, aquifer testing, and pilot ground Water Recharge testing.

If approved, this study represents the first in a three phase effort. Upon the successful conclusion of Phase 1, Phase 2 will develop the physical infrastructure to accomplish the plan. This phase will potentially require investing in the development of an augmentation station, recharge basins, perhaps pipelines or ditch linings, or perhaps a change in point of diversion, so that SLVIWO can physically get the Taos Valley No. 3 water to the locations where it needs to be stored or recharged. Phase 3 will involve submitting an application for an augmentation plan to Water Court and working through the subsequent proceedings required to adjudicate the plan.

### *Threshold Criteria:*

The application meets all four Threshold Criteria.

### *Evaluation Criteria:*

Tier 1: The proposed study will address augmentation options that may provide effected irrigators the opportunity to offset pumping depletions, as well as updating an augmentation decree to help Colorado meet its Rio Grande Compact obligations. There are eight or more active shareholders in the SLVIWO, that includes: Conejos Sub-district, Trinchera Sub-district, Carmel/Waverly/Alamosa Sub-district, Closed Basin Sub-district, Saguache Sub-district, San Luis Creek Sub-district, among others. In addition, the Rio Grande Water Conservation District is a key partner, providing technical assistance and advising the project from the perspective of the emerging sub-districts and their augmentation requirements. The projects and processes emerging from this hydrologic feasibility study will significantly inform the Rio Grande Decision Support System as its conclusions will advance the identified basin-wide need to 1) restore the Basin's aquifer to a sustainable level and 2) establish a sustainable balance between surface water and ground water.

Tier 2: Due to the very recent and rapid advance of the State Engineer's new Rules and Regulations, the pressures which the augmentation requirements place upon well owners and sub-districts are quite real. Nobody will be allowed to pump unless they comply with the new Rules and Regulations. Therefore SLVIWO is doing everything possible to adapt to the funding schedule of CWCB's grant and loan programs, and cannot stress enough how critically important it is for this project to be funded. Although there is no loan component at this early phase, SLVIWO understands that future funding phases will likely require pursuing a CWCB grant/loan combination. Without the requested funds from the Water Supply Reserve Account this project would not be possible, nor could future critical phases be accomplished in time for the new Rules and Regulations. Additionally, the applicant has committed \$30,000 to the study, which represents 16.7% of the total study costs.

Tier 3: Colorado Senate Bill 222 has two goals – to prevent injury to surface water rights by groundwater pumping and to build back the San Luis Valley's aquifer to a sustainable level. This project provides a high level of benefit to Colorado by addressing and curing some of the problems in both of these cases. The amount of grant money requested constitutes a financially good investment for the Rio Grande Basin and for Colorado. This feasibility study promotes a better understanding of the hydrogeology of the Rio Grande Basin and provides the data needed to inform numerous future decisions. There are hydrogeologically analogous areas in Colorado – where perched or multiple water tables exist in a geologically complex area - that may benefit from this study in terms of the technical approach, testing, and solutions.

### *Funding Summary/Matching Funds*

	<u>Cash</u>
WSRA Rio Grande Basin Account	\$8,000
WSRA Statewide Account	\$142,000
San Luis Valley Irrigation Well Owners	<u>\$30,000</u>
<b>Total Study Costs</b>	<b>\$180,000</b>

### **Discussion:**

No additional discussion needed

### **Issues/Additional Needs:**

CWCB staff requests that the following issues be addressed prior to contracting:

- The Statement of Work, Budget and Schedule need further clarification and revisions.

**Staff Recommendation:**

Staff recommends approval of **up to** \$142,000 of Statewide WSRA funds and **up to** \$8,000 of Rio Grande Basin WSRA funds to help complete the feasibility study titled: *Ground Water Recharge for Augmentation and Aquifer Sustainability in the three study areas in Conejos County*.

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.

**Reporting:** The applicant shall provide the CWCB a progress report every six months from beginning from the date of the executed contract. The progress report shall describe the completions or partial completions of the task 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 summarized 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 performed under this grant shall be performed by or under the responsible charge of a professional engineer license by the State of Colorado to practice engineering.

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