

**Water Supply Reserve Account – Grant and Loan Program  
Water Activity Summary Sheet  
Agenda Item 11.h**

**Applicant:** Trinchera Irrigation Company

**Water Activity Name:** Sangre de Cristo Trinchera Diversion Canal Restoration

**Water Activity Purpose:** Structural Water Project

**County:** Costilla County

**Drainage Basin:** Rio Grande River

**Water Source:** Sangre de Cristo Creek and Trinchera Creek

**Amount Requested:** \$200,000 (Statewide Account) and \$50,000 (Rio Grande Basin Account)

**Matching Funds:** \$46,500

<b>Staff Recommendation</b>
The proposed project will meet consumptive water supply needs in the Rio Grande Basin. Staff recommends approval of up to \$150,000 from the Statewide WSRA Account and up to \$50,000 from the Rio Grande Basin Account to partially fund the Sangre de Cristo Trinchera Diversion Canal Restoration for the Trinchera Irrigation Company contingent on resolution of the items in the issues/additional needs section. This recommendation is a reduction from the applicant's request of \$200,000 from the Statewide WSRA Account.

**Water Activity Summary:**

The Sangre de Cristo Trinchera Diversion Canal is a 24,000foot concrete-lined segment of the Trinchera Irrigation Company (TIC) system. The proposed project seeks to replace 2,125 linear feet of that concrete lining. The Canal diverts water from Sangre de Cristo Creek southwestward to Hoffman Canyon, where it joins Trinchera Creek below the dam at Mountain Home Reservoir. Both of these flows converge into Trinchera Canal providing about 50% of TIC water that serves the agriculturally productive southern end of the system. The Canal forms the heart of a unique and flexible system for distributing water. At Hoffman Canyon, where the flows of the Canal meet Trinchera Creek, there is a self-regulating headgate, where flows are regulated to continue southward or to flow back northward, if needed, to irrigate farms north of Blanca. This efficient circulatory system is the basis of TIC's Alternate Points of Diversion (APD) method for allocating water. The Canal lining was installed in 1976 and is badly deteriorated, causing the canal to operate at 50% of capacity, drastically reducing delivery of decreed water rights.

Normally, 98% of Trinchera Creek's flows before irrigation season are stored in Mountain Home Reservoir. This water is used starting in April and later in the season when Sangre de Cristo Creek runs dry. However, due to the reduced capacity of the canal, TIC must prematurely release water from the reservoir, causing shortfalls in late summer and early fall when the need is greatest. This forces irrigators to use groundwater for supplemental irrigation. The proposed project seeks to restore the capacity of the canal to its original capacity of over 100cfs. The existing concrete lining will be removed; the ditch will be filled, compacted to grade, and re-trenched; and a new float-form concrete lining will be installed. By restoring full capacity to the canal, TIC restores much needed operational efficiency, reduces groundwater use, and allows water in Mountain Home Reservoir to be maximized for multiple uses including irrigation, flood control, recreation, and the preservation of wildlife habitat.

*Threshold and Evaluation Criteria*

The application meets all four Threshold Criteria.

The application articulates how the project meets each of the Evaluation Criteria. This water activity does an excellent job of meeting the following Evaluation Criteria:

Promoting Collaboration & Cooperation: The proposed project meets irrigation needs and promotes a sustainable water supply in the basin by reducing water loss and allowing full diversion of decreed rights. By reducing premature draws on Mountain Home Reservoir the project also improves its fishery, wildlife habitat, and boating, popular nonconsumptive uses in the basin. In addition, the restoration of decreed flows will reduce unnecessary groundwater withdrawals helping to address the critical groundwater management issues identified by the basin. Involved parties include TIC, the Trinchera Water Conservancy District, Colorado DOW, Costilla County Commissioners, DWR Division 3, Costilla County Soil Conservation District, Trinchera Ranch, and the NRCS.

Facilitating Water Activity Implementation: Along with reduced capacity, the canal's degradation risks flooding and further erosion. Due to two outstanding CWCB loans for system improvements TIC does not have the financial resources to complete this project without financial assistance. TIC has procured engineering assistance from the NRCS and selected a qualified contractor with significant ditch lining experience.

Meeting Water Management Goals & Objectives & Identified Water Needs: The proposed project greatly increases irrigation efficiency through the rehabilitation of existing facilities. As a result the project sustainably meets consumptive and nonconsumptive needs identified in the basin while reducing unnecessary groundwater withdrawals.

The Water Activity Addresses Issues of Statewide Value: By restoring and maximizing the use of senior water rights this project helps sustain Colorado agriculture while also meeting environmental and recreational needs of Mountain Home Reservoir. The project would compliment previous system improvements financed with CWCB loans and have a positive impact on the local agricultural and tourist and economy.

#### *Funding Overview*

Grant funding in the amount of \$200,000 is requested from the Statewide WSRA Account and \$50,000 is requested from the Rio Grande Basin Account. Total requested WSRA funds constitute about 84% of the overall project cost (\$296,500). Requested Statewide WSRA funds constitute about 67% of the total project cost. The balance of funding (\$46,500) would be provided by the applicant (\$40,000), NRCS (\$4,500), and Resource Conservation and Development (\$2,000).

#### **Discussion:**

As identified in the SWSI findings, small agricultural water users often lack the financial ability to adequately address infrastructure needs without financial aid. The Trinchera Irrigation Company does not possess the financial resources to make the required improvements to fully utilize its existing water rights. In addition, the SWSI Management Objectives, of the SWSI Phase II Report: Addressing the Water Supply Gap Technical Roundtable, include to "sustainably meet agricultural demands." That management objective is directly met through this activity. The proposed project effectively meets the objectives of HB 1177 and the consumptive needs of the Rio Grande Basin by rehabilitating existing infrastructure to preserve agricultural water use.

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

- WSRA funds cannot be used to accommodate the "cost increase estimate" of \$28,000 included in the proposed budget. Due to this item and the very limited availability of Statewide WSRA funds, staff recommends approval of up to \$150,000 from the Statewide Account, a reduction of \$50,000.
- Please provide a detailed scope of work, budget, and schedule as a standalone document for procurement.

#### **Staff Recommendation:**

The proposed project will meet consumptive water supply needs in the Rio Grande Basin. Staff recommends approval of up to \$150,000 from the Statewide WSRA Account and up to \$50,000 from the Rio Grande Basin Account to partially fund the Sangre de Cristo Trinchera Diversion Canal Restoration for the Trinchera Irrigation

Company contingent on resolution of the items in the issues/additional needs section. **This recommendation is a reduction of \$50,000 from the applicant's request of \$200,000 from the Statewide WSRA Account.**

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.