

Rio Grande Inter-Basin Roundtable
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January 17, 2013

Mr. Michael King, Executive Director
Colorado Department of Natural Resources

Mr. Todd Doherty, Intrastate Water Management & Development
Colorado Water Conservation Board

Reference: Santa Maria Reservoir Siphon & Canal System Rehabilitation

Gentlemen:

The Rio Grande Inter-Basin Roundtable (R.G.R.T) has determined that the single, most critical water issue confronting the Rio Grande Basin (Basin) is the current unsustainable management of surface and ground water. The R.G.R.T. has made the decision that water activities that address this issue be favorably considered for funding from the Water Supply Reserve Account, SB 2005 -179 (WSRA Funds), providing the proposed water activities meet the SWSI findings for the Basin and the CWCB & IBCC Criteria and Guidelines for funding.

The **Santa Maria Reservoir Siphon & Canal System Rehabilitation Project** (Project) is the initial phase of a larger rehabilitation of the Santa Maria and Continental Reservoirs. The overall rehabilitation is the result of a broad engineering and feasibility study that was partially funded by the WSRA some 5 years ago, and is a demonstration of how WSRA funds were envisioned to be made available for essentially scoping and project definition followed by subsequent on-the-ground projects. The rehabilitation has been divided into two phases to better accommodate funding and construction management.

Santa Maria Reservoir (Santa Maria) is located in the crater of an old volcano. The reservoir was constructed in 1910 and is operated in conjunction with Continental Reservoir by the Santa Maria Reservoir Company (SMR). Santa Maria receives regulated discharges from Continental Reservoir through a century-old conveyance system of a pipeline, a siphon and an open ditch. Grant funds will be used to upgrade this conveyance system by rehabilitating and stabilizing the siphon and implementing critical repairs to the canal. Ninety percent of the water managed by SMR goes through the Rio Grande Canal, serving some of the best water rights in the San Luis Valley. The remaining 10% goes through the Monte Vista Canal. SMR has 5,400 shares of outstanding stock, mostly split in groups of 10 shares, with 225 stockholders. A total of 70,000 acres are irrigated by this two-reservoir system.

The multiple benefits of implementing 1st phase of a multi-phase project are:

- Upgrading the conveyance system, with ultimate objective to remove State-imposed storage restrictions on Continental Reservoir.
- Restoring full operating efficiency to the conveyance system between Continental and Santa Maria reservoirs, thereby managing irrigation water more effectively.
- Improving control of current and future Rio Grande Compact water.
- Preventing further deterioration of water-control assets
- Reducing maintenance needs.
- Improving flood control capability and providing flexibility in responding to drought.
- Preparing the system to handle increased storage.
- Maximizing total capacity of pipeline and ditch when water is available for storage.
- Increasing options to serve third party water storage needs, such as the new Groundwater Management Subdistricts in the San Luis Valley.
- Maintaining favorable wildlife habitat conditions.
- Continuing to provide public and private recreational opportunities.

The Project meets the Threshold and Evaluation Criteria and addresses Tier 1, Tier 2 and Tier 3 of the WSRA Application.

The Request for WSRA funding is shown below, together with all sources of funding for the Project:

Total Project Cost	\$1,855,000	
WSRA Request (Total)	\$ 463,750	25% of the overall project
WSRA (basin)	\$ 23,000	5% basin match to statewide request
WSRA (statewide)	\$ 440,750	
CWCB Loan Request	\$1,391,250	75% of the total project cost
CWCB Loan w/ 1% service fee	\$1,405,163	

SMRC MATCHING AMOUNT

\$139,125

As can be seen, the SMR is making a major contribution to the cost of the Project of some 75%, with their stockholders unanimously supporting this significant loan commitment.

At the regular meeting of the Rio Grande Interbasin Roundtable on January 8, 2013, the Roundtable voted unanimously to recommend that the request for WSRA funds be sent to the CWCB for approval. The Roundtable approved \$23,000 be granted from the Basin Account and \$440,750 be granted from the Statewide Account.

The Project consists of two elements,

- Rehabilitation of Siphon Support System: A 7-foot diameter siphon takes water from North Clear Creek, after being released from Continental Reservoir, and discharges these flows into an open ditch and a concrete box conveyance or pipe structure. The siphon pipe is located on the side of a hill of talus material which continues to move. This has resulted in movement of the siphon support system, resulting in the possibility

of the 7-foot diameter pipe failing. Various alternatives were considered before electing to rehabilitate the support structures at a cost of \$172,000.

- Rehabilitation of the Canal and Open Ditch: Portions of the canal are open, with an associated concrete box structure which acts as a pipeline during cold weather months when the open ditch is subject to freezing. The rehabilitation of this system consists of reshaping the open canal and lining a portion of the canal with concrete to improve the hydraulics and hence the capacity. A 42-inch bypass pipe will be installed within the existing concrete box structure. This portion of the work essentially consists of earthwork, placement of concrete, and installation of 2,410 feet of bypass pipe. The total cost of this portion of the Project is some \$1,614,000. In addition, there are some incidental costs of \$68,000.

The funding of this WSRA request will enable SMR to achieve the 25% to 75% grant-to-loan funding formula from CWCB. Therefore, the R.G.R.T urges the CWCB to approve this request for funding of \$463,750 from the WSRA Rio Grande Basin and Statewide Accounts. This project provides multiple benefits to local stakeholders and achieves significant improvements in Colorado's efficient management of Compact-entitled waters.

The R.G.R.T. appreciates the support of the Department of Natural Resources, the Colorado Water Conservation Board and the Interbasin Compact Commission in assisting in meeting the needs of all users of Colorado's water and in fostering intrabasin and interbasin communications and discussions. We believe that the above project will assist in this effort.

Sincerely,



Mike Gibson
Chair, Rio Grande Interbasin Roundtable

Attachment (1)

cc: Santa Maria Reservoir Company