

Rio Grande Inter-Basin Roundtable
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January 18, 2013

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

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

**Reference: Plaza Project – Phase 2: McDonald Ditch Implementation Project –
Supplemental Funding**

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 Plaza Project – Phase 2, is the second phase of the Plaza Project. Phase 2 will implement the findings of the Plaza Plan. The preliminary design work for Phase 2 was completed under Plaza Planning Project, (Phase 1). Phase 1 was funded with a \$40,000.00 grant from the Rio Grande Basin WSRA Account. Phase 1 was a 5-month collaborative scoping and feasibility study of potential biological and structural approaches to rehabilitate the streambanks, diversion and headgate structures, and a wetland within the approximately 2.8 mile reach of the Rio Grande near the Sevenmile Plaza, Rio Grande County, Colorado.

The objectives of Phase 2 are both consumptive and non-consumptive in nature. They are to:

- Improve diversion efficiency and reduce maintenance by replacing the aging McDonald Ditch headgate, installing a solar-powered automated water gate, and replacing the McDonald Ditch diversion structure with the alternative chosen by the Plaza Stakeholders during Phase 1;
- Enhance water quality by reducing erosion and sediment input;
- Improve riparian and wetland condition by reclaiming a 2-acre wetland and stabilizing up to 2,000 linear feet of streambanks in the project area;
- Increase the capacity of the Rio Grande to transport sediment;
- Improve aquatic conditions and wildlife habitat by including a fish passage in the new diversion structure;

- Encourage recreation on the Rio Grande through installing a boat passage in the new diversion structure;
- Restore a Jurisdictional Wetland. It should be noted that the subject wetland was restored to the satisfaction of the US Army Corp of Engineers in November 2012.
- Promote public involvement in water improvement activities through public outreach and education.

In 2011, the Project was estimated to cost \$888,000 and funding was secured from the following sources: \$150,000, or 17% from the NRCS Environmental Quality Incentives Program (EQIP); \$50,000 or 6% from the Colorado Partnership Program (CPP); \$200,000 or 23% from the Cooperative Conservation Partnership Initiative (CCPI) Program; \$70,000 or 8% from Landowners; \$10,000 or 1% from Rio Grande County; \$113,000 or 13% from in-kind services. The balance was \$20,000 from Rio Grande Basin WSRA funds and \$275,000 from Statewide WSRA funds, or 33% of the total project cost of \$880,000.

Preliminary designs for the McDonald Ditch headgate and diversion, streambanks, and wetland were developed by the NRCS in Phase 1. In Phase 2, NRCS engineers continued work toward detailed designs, specifications and construction drawings for each of the project elements.

During the process of finalizing the design for the McDonald Ditch headgate and diversion dam, the NRCS worked with a 3rd Party Engineer, Stantec, to analyze the relationship between the new dam and scour potential of the Sevenmile Plaza Bridge. It was determined that scour would not be an issue. However, the analysis showed that for a 100 year river flow the chosen design would have caused flooding in the local community and at the bridge. Because of the critical location of the proposed new dam structure and the sources of funding for the project, it was determined that a design that did not consider the 100 year river flow event was not acceptable.

The existing dam or rock structure is very heterogeneous, partially because it was never designed or constructed to any specifications, and it has been subjected to varying flows over its life. Consequently, it has allowed significant river flows through the structure. This has reduced the magnitude of flooding in the area. The initial design of the new structure would have created an impervious barrier that did not allow flows through it. In the situation of a 100 year river flow the bridge and surrounding homes to have been flooded.

To mitigate this situation the NRCS, in consultation with Stantec, developed a solution that included installation of automated floodgates in the new dam. There will be four (4) radial gates in the new dam that can be activated in the event river flows exceed the capacity of the dam to take the flows over its crest. The inclusion of these gates required significant changes to the design of the dam, including the means to install the gates in the structure, and resulted in the associated increase in costs.

It should be noted that the Monte Vista, Colorado, office of the NRCS, who has the primary responsibility for the design of the new dam and headgate, has spent considerable time in re-working the design of the dam. Because of the size and risks associated with the structure the current design is being reviewed by the NRCS's staff in Denver and it is anticipated it will go to their Washington office for additional review.

The effect of the necessary modifications to the dam resulted in the expected cost of the Project exceeding the original estimate, necessitating additional funds be sought. The McDonald Ditch Company is working with staff to increase its CWCB Loan from \$70,000 to \$100,000. The Rio Grande Restoration Foundation is requesting an additional \$431,000, \$22,000 from the Rio Grande Basin Account and \$409,000 from the Statewide Account of the WSRA to meet the additional costs of Phase 2 of the Plaza Project.

At the regular R.G.R.T meeting on January 8, 2013, RGRT Members voted unanimously to request funding from SB 2005 - 179 for a total of \$431,000.

The R.G.R.T urges the CWCB to approve this request for funding of \$431,000 from the WSRA Rio Grande Basin and Statewide Accounts for a Project with multiple benefits to local stakeholders but also on a Statewide basis.

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: Colorado Rio Grande Restoration Foundation