

Rio Grande Basin Roundtable

c/o San Luis Valley Water Conservancy District
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VIA United Parcel Service Overnight Service

January 10, 2007

Mr. Harrison Sherman, Executive Director
Colorado Department of Natural Resources

Mr. Eric Hecox, Manager, Office of Interbasin Compact Negotiations
Colorado Department of Natural Resources

Mr. Rick Brown, Section Chief, Intrastate Water Management & Development
Colorado Water Conservation Board

Gentlemen:

The Rio Grande Basin Roundtable (R.G.R.T) has determined that the single, most critical water issue confronting the Rio Grande 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, providing the proposed water activities meet the SWSI findings for the Basin and the Criteria and Guidelines for funding.

At the December 12, 2006 and January 9, 2007 the R.G.R.T. meetings, the membership voted to pursue several projects, and are requesting that funding be allocated from SB 2005 – 179 to support these projects. The R.G.R.T. is requesting authorization and consideration for distribution of Funds pursuant to SB 2005-179, for discretionary Basin Funds or Statewide Funds.

At the December 12, 2006 meeting, funding requests were considered by R.G.R.T. for the following projects:

PROJECT AND AMOUNT REQUESTED	SOURCE SB 179
ALAMOSA RIVER IN-STREAM FLOW PROJECT \$64,500	BASIN
100 YEARS OF SAN LUIS VALLEY RESERVOIRS CELEBRATION \$13,000	BASIN

Project proponents were provided time to make presentations, together with opportunities for questions from the R.G.R.T. Members and members of the public. After discussion, a voice vote was taken of all R.G.R.T. Members that were present.

The By-Laws of the R.G.R.T. require a simple majority vote of those Members present for any action to be taken by the Roundtable. The vote was unanimous in favor of both of these projects moving forward for funding.

At the January 9, 2007 meeting, a funding request was considered for the following project:

PROJECT AND AMOUNT REQUESTED	SOURCE SB 179
PRELIMINARY DESIGN OF MULTI- USE RIO GRANDE RESERVOIR REHABILITATION AND ENLARGEMENT \$288,000	STATEWIDE

Project proponents were provided time to make presentations, together with opportunities for questions from the Roundtable Members and members of the public. After discussion, a voice vote was taken of all Roundtable Members present.

The vote was unanimous in favor of this project moving forward for funding.

In summary, as a result of the discussion, review and balloting, the R.G.R.T. recommends the following projects for SB 2005 – 179 funding, and that these be considered at the March 2007 meeting of the Colorado Water Conservation Board:

SB 179 BASIN FUNDS

- Alamosa River In-stream Flow Project
- 100 Years of San Luis Valley Reservoirs Celebration

SB 170 STATEWIDE FUNDS

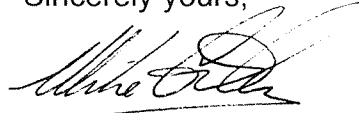
- Preliminary Design of Multi-Use Rio Grande Reservoir Rehabilitation and Enlargement

As stated above, the R.G.R.T. has determined that the single, most critical water issue confronting the Rio Grande Basin is the current unsustainable management of surface and ground water. All of the above projects address the educational and technical aspects of this issue.

By this letter, I am forwarding the applications and supporting materials for these projects. If you require additional information, please notify me accordingly.

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 projects will assist in this effort.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Mike Gibson", with a long horizontal flourish extending to the right.

Mike Gibson
Chair, Rio Grande Basin Roundtable

Enclosures (3)



COLORADO WATER CONSERVATION BOARD



WATER SUPPLY RESERVE ACCOUNT 2006-2007 GRANT APPLICATION FORM

Rio Grande Reservoir Multi-Use Enlargement
and Rehabilitation Preliminary Design

Rio Grande Basin

Name of Water Activity/Project

River Basin Location

\$288,000

☐

Basin Account

☒

Yes

☒

Statewide Account

☐

No

Amount of Funds Requested

Please Check Applicable Box

Approval Letter Signed By
Roundtable Chair and
Description of Results of
Evaluation and Approval
Process

*** For the Basin Account, the Application Deadline is 60 Days Prior to the Bimonthly CWCB meeting.**

The CWCB meetings are posted at www.cwcb.state.co.us and are generally the third week of the month.

*** For the Statewide Account, the Application Deadline is 60 Days Prior to the March and September CWCB Board Meetings.**

*** In completing the application you may attach additional sheets if the form does not provide adequate space. If additional sheets are attached please be sure to reference the section number of the application that you are addressing (i.e., A.1. etc.).**

Instructions: This application form should be emailed, typed, or printed neatly. The Water Supply Reserve Account Criteria and Guidelines can be found at <http://cwcb.state.co.us/IWMD/>. **The criteria and guidelines should be reviewed and followed when completing this application.** You may attach additional sheets as necessary to fully answer any question, or to provide additional information that you feel would be helpful in evaluating this application. Include with your application a cover letter summarizing your request for a grant. If you have difficulty with any part of the application, contact Rick Brown of the Intrastate Water Management and Development (Colorado Water Conservation Board) for assistance, at (303) 866-3514 or email Rick at rick.brown@state.co.us.

Generally, the applicant is also the prospective owner and sponsor of the proposed water activity. If this is not the case, contact the Rick Brown before completing this application.

Water Supply Reserve Account – Grant Application Form

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Part A. - Description of the Applicant (Project Sponsor or Owner);

1.	Applicant Name(s):	San Luis Valley Irrigation District		
	Mailing address:	296 Miles Street Center, CO 81125		
	Taxpayer ID#:	84-6002934	Email address:	slvid@centurytel.net
	Phone Numbers: Business:	(719) 754-2254		
	Home:			
	Fax:	(719) 754-3616		

2. Person to contact regarding this application if different from above:

Name:	Travis Smith
Position/Title	Superintendent

3. Provide a brief description of your organization below: Refer to Part 2 of criteria and guidance for required Information. Attach additional sheet(s) as needed.

The San Luis Valley Irrigation District (District) is an irrigation district formed and operating pursuant to Title 37, Article 42 of the Colorado Revised Statutes. Its office is located in Center, Colorado. The District owns and operates the Farmers Union Canal, which diverts water from the Rio Grande River and delivers it through a network of over 100 miles of ditches to nearly 62,000 acres of land in Alamosa, Rio Grande and Saguache Counties. It also owns and operates Rio Grande Reservoir located on the headwaters of the Rio Grande River in Hinsdale, County, 20 miles southwest of Creede, Colorado. It is the only on-stream main stem reservoir on the Rio Grande in Colorado. The Reservoir's current storage capacity is approximately 54,000 acre-feet, the majority of which is presently used for the storage of irrigation water for use within the District. .

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3. Provide a brief description of your organization below (**Continued**)

As an irrigation district formed under the laws of the State of Colorado, the District meets the eligibility requirements of Senate Bill 06-179 for grant or loan funding. The District believes that it is not subject to the limitations of the Tabor Amendment. In *Campbell v. Orchard Mesa Irrigation District*, 972 P.2d 1037 (Colo. 1998), the Colorado Supreme Court held that an irrigation district is not a local government within the meaning of Amendment I's (Tabor Amendment) taxing and spending election requirements. While the irrigation district at issue in the Orchard Mesa case was formed under the Irrigation District Laws of 1921 (C.R.S. '37-41-101 et seq., see 972 P.2d. at 1038, n.2), the Court's analysis is equally applicable to irrigation districts, such as the San Luis Valley Irrigation District, that were created and operate under the Irrigation District Act of 1905.

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Part B. - Description of the Water Activity – Please Refer to Criteria and Guidance Document for Eligibly Criteria

1. Name of water activity/project:

Rio Grande Reservoir Multi-Use Enlargement and Rehabilitation Preliminary Design

2. What is the purpose of this grant application? Check one.

☐

Environmental compliance and feasibility study

☐

Technical assistance regarding permitting, feasibility studies, and environmental compliance

☐

Studies or analysis of structural, nonstructural, consumptive, nonconsumptive water needs, projects, or activities (Please specify)

☒

Structural and/or nonstructural water project or activity

The purpose of this grant application is to fund the preliminary design of rehabilitation, enlargement and utilization of Rio Grande Reservoir for multi-use purposes. The District is finalizing its report from Phase 1 of the study and will have the report to CWCB before the March meeting. The findings of this report support further analysis of enlarging and rehabilitating the Reservoir for several uses including storage of water to better meet Colorado's obligations under the Rio Grande Compact, the re-regulation of flows to support instream and riparian needs, storage of additional supplies of augmentation water to meet the growing domestic and commercial development in the Rio Grande Basin, the development of a larger sustainable conservation pool within the Reservoir for fish habitat, flood control and re-design of the outlet works to provide consistent and safe water delivery, particularly during high flow periods.

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3. Please provide an overview of water project or activity to be funded including – type of activity, statement of what the activity is intended to accomplish, the need for the activity, the problems and opportunities to be addressed, expectations of the participants, why the activity is important, the service area or geographic location, and any relevant issues etc. Please include any relevant Tabor issues. Please refer to Part 2 of criteria and guidance document for additional detail on information to include. Attach additional sheets as needed.

As noted above, the District is finalizing its report analyzing the possible enlargement of Rio Grande Reservoir and the potential benefits such an enlargement may provide. This report will be completed shortly and will be provided to the CWCB. It will discuss the preliminary analysis of raising the height of the dam and the collaborative and cooperative ways in which water stored in an enlarged Reservoir can be re-regulated and delivered at a time and in a way to better meet instream, fish flow and river habitat needs.

In general, the report concludes that it is likely that the height of the dam can be safely raised a maximum of approximately 10 feet, which would yield an additional 10,000 acre-feet of storage. This would bring the Reservoir's total storage capacity to approximately 64,000 acre-feet. Located on the headwaters of the Rio Grande River, the Reservoir provides a unique on-stream, pre-compact facility available to better manage Colorado's share of the River for the benefit of the State, the San Luis Valley and the River corridor. Additional storage will provide the State of Colorado with an invaluable tool to store and better manage delivery of the water it is obligated under the Rio Grande Compact to deliver to the Colorado-New Mexico border. It will help to assure that Colorado retains for use in Colorado all its annual share of water available under the Compact. Re-regulation of deliveries under the Compact will also help to address instream flow needs for fish and river habitat. And it will help to reduce the wide fluctuations in the curtailments presently imposed on irrigators to meet Colorado's Compact obligations. This will hopefully provide irrigators with a more consistent water supply during the irrigation season while assuring that Colorado has stored water that may be needed to meet any remaining compact obligation after the irrigation season ends.

In light of the initial Report's positive analysis of both the possibility of enlarging the Reservoir and of the broad range of needs and demands that might be better met with additional storage capacity, the District is applying to fund a preliminary design of a rehabilitation and enlargement of the Reservoir. This study will further analyze and address several issues identified in the initial study, including:

A. Reservoir Enlargement:

- Evaluation of the potential for future landslide movement in the Reservoir and along the left abutment
- Evaluation of existing outlet works and development of proposed outlet improvements
- Analysis of storm event using EPAT for spillway sizing
- Preparation of a preliminary design for rehabilitation of the dam and various enlargement alternatives, including spillway design that meets present regulatory requirements
- Evaluation of environmental issues including a final determination of whether areas identified as potential "fens" wetlands areas will be inundated or otherwise affected by an enlargement of 10,000 acre feet. (The preliminary analysis indicates these areas will not be inundated.) The analysis will also evaluate the potentially affected wetlands and develop a plan for mitigating any wetlands lost by an enlargement of the Reservoir.

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3. Please provide an overview of water project or activity to be funded including – type of activity, statement of what the activity is intended to accomplish, the need for the activity, the problems and opportunities to be addressed, expectations of the participants, why the activity is important, the service area or geographic location, and any relevant issues etc. **(Continued)**

B. Uses of Water Stored in an Enlarged Reservoir:

- Analysis of the Rio Grande Decision Support System (RGDSS) StateMod model runs and development of additional model runs to determine development, in cooperation with the State and Rio Grande Water Users, of a methodology for storing and delivering Compact water in a manner that optimizes Colorado's full use of its annual entitlement.
- Development, in cooperation with the Colorado Division of Water Resources, Colorado Water Conservation Board, Colorado Division of Wildlife, Rio Grande Water Users, United States Forest Service, United States Fish and Wildlife Service, environmental interests and recreational interests, of a schedule to store and then deliver Compact water to the State line in a manner that better meets in stream flow, riparian habitat and recreational needs without impairing any Colorado water rights.
- Develop, in cooperation with the Colorado Division of Water Resources, Colorado Water Conservation Board, Colorado Division of Wildlife, San Luis Valley Water Conservancy District and others, an allocation of storage within an enlarged Reservoir.

C. Legal Issues

- Further evaluation of the impacts of enlarging the Reservoir on the status of the District's 1891 Act right-of-way for the Reservoir as currently constructed
- Further evaluation of Forest Service instream flow issues and the limitations established in the Forest Service's reserved water rights decree issued in Water Division No. 3
- Analysis of NEPA process and issues (i.e., threatened and endangered species, wetlands, etc.)

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4. Please provide a brief narrative of any related or relevant previous studies. Attach additional sheets as needed.

A.) The District, with its consultant CDM, is completing the Rio Grande Multi-Use Enlargement Study Report, (Phase 1 Report) which provides a preliminary analysis of the physical and legal feasibility of enlarging the Reservoir and outlines the potential uses of an enlarged Reservoir to address multi-use consumptive and non-consumptive needs. This initial report will be completed by the end of January, 2007, and will be provided to the CWCB.

B.) Helton & Williamson, Draft Report – “Water Available to a Potential Rio Grande Reservoir Enlargement” This draft report provided an analysis of the water that would be available for storage and re-regulation in an enlargement of Rio Grande Reservoir. The draft report concluded that there was significant opportunity to store and re-regulate water in an enlarged reservoir for Compact purposes. A copy of the Draft Report is being submitted with this application.

C.) Memorandum of Understanding for the Operation of Rio Grande Reservoir for Dam Safety Purposes A memorandum of understanding between the District and the State to assure safe operation of the outlet works at the Reservoir during periods of high flow. A copy of the Memorandum is being submitted with this application.

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- 5 Please provide a copy of the proposed scope of work. Please refer to Part 2 of the criteria and guidance document for detailed requirements. Attach additional sheets as needed.

The objective of the Rio Grande Reservoir Multi-Use Enlargement and Rehabilitation Preliminary Design is to further investigate the technical issues associated with enlargement and rehabilitation of the Reservoir. In particular, additional geotechnical issues related to spillway crest elevation will be examined as well as issues related to flood hydrology and spillway sizing. A detailed description of each task is provided below. Also attached separately is a detailed cost estimate for the study.

Task 1 – Geotechnical Analysis

In order to enlarge the Reservoir, the potential for future landslide movement in the Reservoir and left abutment requires further evaluation. Deere & Ault Consultants, Inc will lead this task. They will be supported by Mr. Robert Kirkham, a renowned Colorado geologist. Mr. Kirkham is based in Alamosa and completed the landslide mapping on Rio Grande Reservoir in 1983 and also co-authored a paper on the West Lost Creek Slide that occurred near the Reservoir in the 1990s. Deere & Ault will conduct the field work necessary to map the Reservoir Basin and West Lost Creek Basin to compare geology and determine if a slide of this type could occur in the near future under existing climatic conditions in the Reservoir Basin. A slope stability analysis of the Reservoir will be conducted using the GeoSlope computer package. In addition to the landslide analysis, a hydraulic analysis of the required outlet improvements under existing and proposed (i.e., enlarged) conditions will be conducted using Flow Master software. Upon completion of the landslide and outlet hydraulic analyses, Deere & Ault will prepare the following deliverables:

- Preliminary design drawings of the proposed improvements to the dam and spillway;
- Detailed engineering cost estimates for both rehabilitation and enlargement of the dam;
- A preliminary design report summarizing all of the finding.

The total cost for this task is **\$92,680.**

Task 2 – Wetlands Analysis

In the initial wetlands analysis, Sugnet Environmental, Inc. (Sugnet) identified 1,264 acres of jurisdictional wetlands and other waters of the U.S., including two potential “fens” areas. In this study, Sugnet will conduct a wetlands delineation per the U.S. Army Corps of Engineers (USACE) 1987 *Wetland Delineation Manual* and procure written verification of wetland delineation from USACE staff. This written verification from the USACE of Sugnet’s final wetlands delineation map will be suitable for Clean Water Act Section 404 permitting purposes for five years. Sugnet will also produce a suggested wetlands mitigation and monitoring plan for the impacted wetlands that will be necessary as part of future NEPA processes. In addition to the wetlands delineation, Sugnet will conduct other investigations that will also be needed to address future NEPA requirements. These investigations include a cultural resources assessment of the project area and an assessment of threatened and endangered species in the project area. Michael A. Frost Environmental Services, Inc. will be retained to conduct the cultural resources assessment.

The total cost for this task is **\$23,900.**

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5. Please provide a copy of the proposed scope of work. Please refer to Part 2 of the criteria and guidance document for detailed requirements. **(Continued)**.

Task 3 – Hydrological Analysis

CDM will conduct a detailed investigation of the hydrology associated with Reservoir enlargement from a Compact administration, water rights, environmental, recreational and flooding perspective. CDM will work with CWCB and utilize the Rio Grande DSS (RGDSS) model for purposes of developing model runs of flows, diversions, gains and losses throughout the basin under defined assumptions. CDM will develop a modeling tool that will use output from the RGDSS StateMod model. The modeling tool will allow the evaluation of various storage allocations in the Reservoir among various interests (i.e., San Luis Valley Irrigation District, Division of Water Resources, Colorado Water Conservation Board, Division of Wildlife, San Luis Valley Water Conservancy District) and for various purposes including Rio Grande Compact storage, minimum pool preservation, river administration, use for direct flow storage, etc. The modeling tool will also allow for the evaluation and development of target releases for meeting Forest Service instream flow rights as well as downstream recreational and environmental flows. CDM will consult with representatives from The Nature Conservancy and other organizations to determine methods for evaluating optimum flows for maximizing recreational and environmental benefits without impairing Colorado water rights.

CDM will also evaluate flood hydrology for the Reservoir under proposed conditions using the Extreme Precipitation Analysis Tool (EPAT) developed by the Colorado Division of Water Resources. EPAT will be used to develop the maximum precipitation event and thus a flood inflow, which will be routed through the reservoir using HEC-HMS (or similar program) to determine sizing for the spillway under proposed conditions. A preliminary design of the spillway will be completed based on this analysis.

The total cost for this task is **\$76,600**.

Task 4 – Analysis of Legal Issues

Tod Smith, of the firm Whiteing & Smith, the District's current legal consultant, will provide further analysis of the legal issues associated with Reservoir enlargement. These issues include further analysis of the impact of an enlargement on the District's 1891 Act right-of-way for the present reservoir, further analysis of the impact of the terms of the Forest Service's instream flow decree in Water Division No. 3 on an enlargement of the Reservoir and a re-regulation of water deliveries, and further analysis of water rights issues related to the allocation of storage to various non-irrigation uses. Mr. Smith will also assist in drafting proposed operations and storage agreements with parties interested in participating in an enlargement. Additionally, pending the outcome of the investigations conducted in Task 2, Task 4 will also include a detailed analysis of the NEPA processes that will need to be followed in order to enlarge the Reservoir.

The total cost for this task is **\$30,000**.

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5. Please provide a copy of the proposed scope of work. Please refer to Part 2 of the criteria and guidance document for detailed requirements. **(Continued)**.

Task 5 – Development of Operational and Storage Agreements

The objective of this task will be to investigate how different operational practices and storage agreements will affect administration of the Rio Grande River under both existing and proposed conditions. CDM will develop proposed operational scenarios and assist the District and interested parties in drafting storage agreements for both current conditions and an enlarged reservoir to determine how various goals could be met. CDM will work closely with project stakeholders on this task to develop alternatives and potential storage allocations and operational rules.

The total cost for this task is **\$18,000**.

Task 6 – Project Communication and Stakeholder Outreach

As with Phase 1 of this study, CDM will conduct an extensive communication and outreach program for stakeholders potentially affected by this project. Such stakeholders include Federal agencies, such as the U.S. Forest Service, State entities, such as the Rio Grand Basin Roundtable, the Division of Wildlife and the State Engineers Office, Water Division No. 3, and environmental interests, such as The Nature Conservancy, San Luis Valley Wetlands Focus Area Committee, the Rio Grande Headwaters Restoration Project, San Luis Valley Ecosystem Restoration Council, and the Rio Grande/Rio Bravo Basin Coalition.

The total cost for this task is **\$46,820**.

The total cost for the Rio Grande Reservoir Multi-Use Enlargement and Rehabilitation Preliminary Design is **\$288,000**.

Total Costs					
	Labor	Sub-contract	Other Direct Costs		Total Project Cost
Task 1 - Geotechnical Analysis	\$ 3,550	\$ 89,130			\$ 92,680
Task 2 - Wetlands Analysis	\$ 2,150	\$ 21,750			\$ 23,900
Task 3 - Hydrological Analysis	\$ 76,600				\$ 76,600
Task 4 - Legal Analysis		\$ 30,000			\$ 30,000
Task 5 - Development of Operational and Storage Agreements	\$ 18,000				\$ 18,000
Task 6 - Meetings and Stakeholder Outreach	\$ 42,078		\$ 4,740		\$ 46,820
Total Cost:	\$ 142,378	\$ 140,880	\$ 4,740		\$ 288,000

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6. List the names and addresses of any technical or legal consultants retained to represent the applicant or to conduct investigations for the water activity/project.

Name	Address/Phone Number
Kelly DiNatale CDM	1331 17 th Street, Suite 1200 Denver, CO 80202 (303) 298-1311
Tod Smith Whiteing & Smith	1136 Pearl Street, Suite 203 Boulder, CO. 80302 (303) 444-2549
Don Deere Deere and Ault	600 South Airport Road, Suite A-205 Longmont, CO 80503 (303) 651-1468

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7. Water Availability and Sustainability – this information is needed to assess the viability and effectiveness of the water project or activity. Please provide a description of each water supply source to be utilized for, or the water body to be affected by, the water activity. For water supply sources being utilized, describe its location, yield, extent of development, and water right status. For water bodies being affected, describe its location, extent of development, and the expected effect of the water activity on the water body, in either case, the analysis should take into consideration a reasonable range of hydrologic variation. Attach additional sheets as needed.

Water Availability

The water supply sources affected by this project are the Rio Grand River and transmountain water diverted from the San Juan River Basin into the Rio Grande River Basin. The District stores water in the Rio Grande Reservoir for irrigation purposes under Priority No. 1916-63A (45,833 acre-feet) and Priority No. 1934-2 (5,280 acre-feet). Other water stored in the reservoir includes the following:

- Transmountain water delivered through the Pine River Weminuche Pass Ditch stored by the San Luis Valley Water Conservancy District under the decrees in Case Nos. 84CW16 and 94CW62 (each for 131 acre-feet annually) and water stored by exchange pursuant to the decree in Case No. 96CW6 (15 acre-feet).
- Transmountain Water stored in the Reservoir by the Division of Wildlife pursuant to an agreement between the District and the Division. That water is presently used by the Division to maintain a small conservation pool in the Reservoir and for subsequent delivery to other Division facilities in the Basin.
- The District and the Rio Grande Canal Water Users Association store water under direct flow storage decrees in Case Nos. W-3979 and 3980, respectively.
- The Commonwealth Irrigation District stores water under a direct flow storage Decree in Case No. 95CW18.
 - *These direct flow storage decrees permit storage of water available under direct flow priorities when flows at Del Norte exceed certain amounts*
- The State stores small amounts of water for use to meet Compact obligations pursuant to an agreement entered in the late 1980s with the District and the Rio Grande Water Users Association.

In Tasks 3 through 5, described in the Scope of Work above, detailed evaluations will be conducted to determine the impacts of the proposed enlargement on the administration of water rights on the Rio Grande and water stored in the Reservoir. It is anticipated that all stakeholders, including environmental and recreational interests, will benefit from the proposed project. Additionally, the State of Colorado will benefit from enlargement of the reservoir through improved ability to administer the Rio Grande Compact.

Sustainability

An enlarged or rehabilitated Reservoir will provide various options for storage of additional Compact water, transmountain water, recreational or conservation pool, and additional water under direct flow storage decrees. Storage of Compact water will help in assuring that Colorado's full entitlement is available to water users each year. The delivery of Colorado's full entitlement will help sustain flows in the Rio Grande River and, of the utmost importance, will deliver additional water to the Closed Basin thereby assisting and supplementing the efforts of the Groundwater Subdistrict in recovering and sustaining the unconfined aquifer. The opportunity to store additional transmountain water will assist in sustaining and enhancing a conservation pool in the Reservoir and at other recreational and wildlife habitat facilities throughout the Basin. It will also help to meet the increasing domestic and commercial growth in the Rio Grande Basin by providing augmentation water to protect the River's flow against increased depletions. Furthermore, re-regulation of flows from the Reservoir will sustainably address environmental and recreational demands while decreasing transportation and evaporation losses.

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8. If you have not specifically and fully addressed the Evaluation Criteria found in Part 3 of the criteria and guidance document please provide additional detail here. Attach additional sheet(s) if needed.

This project addresses the Evaluation Criteria in the following ways:

1. Promoting Collaboration and Cooperation

The enlargement and re-regulation of water stored in Rio Grande Reservoir will promote collaboration and cooperation among the water users in the Rio River Basin by:

- Providing the State with increased storage to better time the deliveries of water to meet Colorado's obligations under the Rio Grande Compact while assuring that Colorado optimizes the use of its entire annual entitlement.
- Providing for the re-regulation of flows to better meet non-consumptive needs in the Basin including winter fish flows, instream flows for riparian habitat, recreational needs and River restoration.
- Providing a permanent reservoir conservation pool at the Reservoir and better management opportunities for the State's Division of Wildlife.
- Providing increased storage for transmountain water used to meet the increasing demand for augmentation water for domestic and commercial growth in the Basin, thus minimizing the need for agricultural dry-up and transfer of consumptive use for augmentation of domestic and commercial depletions.

2. Facilitating Water Activity Implementation

Rio Grande Reservoir is the only on-stream reservoir in Colorado. Its location on the headwaters of the Rio Grande River provides a unique opportunity to address multiple water use demands throughout the Basin including providing additional assurances that Colorado will be able to utilize its full annual entitlement of water from the River under the Rio Grande Compact.

The San Luis Valley has suffered extraordinary losses of available water supply in the past ten years. Drought has been a major factor, as well as an increase in the amount of irrigated land being put into production. Agriculture in the Valley provides two to three times the return per acre of other agricultural basins on the east slope (James Pritchett and Jenny Thorvaldson, Agricultural and Resource Economics, Colorado State University, presentation to Arkansas River Basin Roundtable, May 10, 2006.) At the same time the demand has and continues to increase significantly for water for non-irrigation purposes including non-consumptive in stream uses for fisheries, in stream flows for riparian habitat and recreational uses. And there has been a marked increase in domestic and non-agricultural commercial development in the Basin. Additional storage to address these needs, primarily through assuring that Colorado retains its full annual entitlement under the Rio Grande Compact and re-regulating water deliveries to meet multiple uses is essential and crucial and must be implemented as quickly as possible. This together with the creation of groundwater subdistricts and other water conservation measures will help to assure that the San Luis Valley remains the breadbasket of Colorado while meeting its ever-increasing needs for water for non-consumptive uses and development of a more economically diverse economy.

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8. If you have not specifically and fully addressed the Evaluation Criteria found in Part 3 of the criteria and guidance document please provide additional detail here. **(Continued)**

Rio Grande Reservoir is owned by the District and has historically been used for the primary benefit of its landowners. But it also has served the needs of the State and other water users. While the State has provided funding for emergency reservoir repairs during the 1980s and early 1990s, the majority of the costs to operate, maintain and repair the Reservoir have been borne by the District's landowners, including the repayment of significant loans from the Colorado Water Conservation Board for those prior repairs. The District's landowners presently pay the highest assessments of any water user organization in the San Luis Valley. In addition, those landowners will soon be paying additional substantial assessments for the groundwater subdistrict recently created by the Rio Grande Water Conservation District to address the continual depletion of the unconfined aquifer in the San Luis Valley. Again, the sub-district assessments paid by the District's landowners will be some of the highest.

Therefore, it is beyond the present capability of the District and its landowners to incur additional costs to fund a preliminary design for rehabilitation and enlargement of Rio Grande Reservoir. As the District's Phase I Report confirms, additional storage will not directly benefit the District or its landowners but will address supply and management issues of benefit to all water users in the Basin for both consumptive and non-consumptive water demands. While matching funds are not available to the District for this second phase, the District has and will continue to seek funding for other sources for any subsequent analysis, including the necessary NEPA analysis and for actual construction costs.

3. Meeting Water Management Goals and Objectives and Identified Water Needs –

The preliminary design study will complete the analysis of the potential rehabilitation and enlargement of the Reservoir and of the various needs, both consumptive and non-consumptive, that may be better met through the re-regulation of stored water. The enlargement of Rio Grande Reservoir and the re-regulation of deliveries from storage meet several of the management objectives identified in the Statewide Water Supply Initiative (SWSI) as well as the Rio Grande Basin Roundtable's water assessment needs, including:

- Assisting the State in administration of water under the Rio Grande Compact to better assure Colorado's full use of its entitlement each and every year
- Assisting in addressing regional water supply problems including, for example, the increasing demand for augmentation water for domestic and commercial development, the loss of agricultural lands due to changes in use of surface water rights and the depletion of groundwater sources, the ability to store and utilize all water available to Colorado's pre-Compact reservoirs, the need for recreational flows, fish flows and riparian enhancement and protection, the need for water for development below the River's headwaters and above the CWCB's in stream flow reaches and potential recreational corridor in stream flow diversions.

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8. If you have not specifically and fully addressed the Evaluation Criteria found in Part 3 of the criteria and guidance document please provide additional detail here. **(Continued)**

- Assisting in the conservation and protection of fish in the River's main stem, particularly in the River's upper reaches above South Fork, Colorado.
- Assisting in the presently on-going and future River restoration projects and floodplain management.
- Assisting the Division of Wildlife in the development of a larger conservation pool in the Reservoir as well as enhanced opportunities to store and exchange water for fish and wildlife habitat
- The rehabilitation and enlargement of Rio Grande Reservoir and the re-regulation of deliveries from storage will promote the full optimization of Colorado's annual entitlement and cooperative water management facilitating conservation and efficient use of that supply to meet multiple uses.
- Rio Grande Reservoir is the only existing Reservoir located on the main stem of the Rio Grande River.

On the following page is a table showing how the benefits of enlarging the Rio Grande Reservoir correspond to the SWSI objectives.

4. The Water Activity Addresses Issues of Statewide Value

Of foremost importance, the rehabilitation and enlargement of Rio Grande Reservoir and the re-regulation of the delivery of water to meet Colorado's obligations under the Rio Grande Compact, will help ensure that the State obtains, preserves and optimizes the full amount of water annually available to Colorado under the Compact.

An enlargement of Rio Grande Reservoir and the re-regulation of deliveries from storage will assist in meeting instream flow, fish habitat, riparian and recreational needs throughout the River corridor in Colorado. Re-regulation in deliveries as well as the opportunity to store additional transmountain water will provide help to sustain agricultural production in the area of the State that has the greatest economic return per acre.

Rio Grande Reservoir Multi-Use Enlargement and Rehabilitation Preliminary Design

Achievement of SWSI Objectives

SWSI Objectives:	Sustainably Meet Municipal & Industrial Demands	Sustainably Meet Agricultural Demands	Optimize Existing and Future Water Supplies	Enhance Recreational Opportunities	Provide for Environmental Enhancement	Promote Cost Effectiveness	Protect Cultural values	Provide for Operational Flexibility	Comply With All Applicable Laws, Regulations, and Water Rights
Enlargement Benefits									
Reduce fluctuations in curtailments	✓	✓	✓			✓		✓	✓
Deliver water at periods of low flow reducing conveyance losses	✓	✓	✓			✓	✓	✓	✓
Deliver water later in season following more definite annual flow projections	✓	✓	✓			✓		✓	✓
Storage of credit water upstream with reduced evaporation charges	✓	✓	✓			✓		✓	✓
Storage of additional trans-mountain water	✓	✓	✓			✓	✓	✓	✓
Meet rapidly growing demand for augmentation water	✓	✓	✓				✓		✓
Preserve existing agricultural lands		✓	✓				✓		✓
Storage and release of water for environmental and riparian enhancements				✓	✓		✓	✓	✓
Re-regulation of flows for recreational purposes				✓	✓	✓	✓	✓	✓
Permanent conservation pool				✓	✓		✓		✓

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9. Additional Information – If you feel you would like to add any additional pertinent information please feel free to do so here. Attach additional sheets as needed.

The above statements are true to the best of my knowledge:

Signature of Applicant: *David Graham, President*

Print Applicant's Name: David Graham, President

Project Title: Rio Grande Reservoir Multi-Use Enlargement and Rehabilitation Preliminary Design

Return this application to:

Mr. Rick Brown
Intrastate Water Management and Development Section
COLORADO WATER CONSERVATION BOARD
1580 Logan Street, Suite 600
Denver, CO 80203

To submit applications by Email, send to: rick.brown@state.co.us

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The following information is available via the Internet. The reference information provides additional detail and background information regarding these criteria and guidelines and water policy issues affecting our state.

Colorado Water Conservation Board Policies

Loan and Grant policies and information are available at - <http://cwcb.state.co.us/Finance/>

Water Supply Reserve Account Criteria and Guidelines –

http://cwcb.state.co.us/TWMD/tools.htm#Water_Supply_Reserve_Account

Interbasin Compact Committee and Basin Roundtables

Interbasin Compact Committee By-laws and Charter –

<http://dnr.state.co.us/Home/ColoradoWaterforthe21stCentury/Interbasin+Compact+Committee/IbccHomePage.htm>

Basin Roundtable By-laws –

<http://dnr.state.co.us/Home/ColoradoWaterforthe21stCentury/IbccHome.htm>

Legislation

House Bill 05-1177 - Also known as the Water for the 21st Century Act –

<http://cwcb.state.co.us/TWMD/statutes.htm>

House Bill 06-1400 – Adopted the Interbasin Compact Committee Charter –

<http://cwcb.state.co.us/TWMD/statutes.htm>

Senate Bill 06-179 – Created the Water Supply Reserve Account –

<http://cwcb.state.co.us/TWMD/statutes.htm>

Statewide Water Supply Initiative

General Information - <http://cwcb.state.co.us/TWMD/>

Phase 1 Report - <http://cwcb.state.co.us/TWMD/PhaseIReport.htm>

Rio Grande Reservoir Multi-Use Enlargement and Rehabilitation Preliminary Design

Proposed Cost Summary January 10, 2006

Proposed Cost Summary January 10, 2006	
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Labor															
Personnel:	Principal Tech Rev	Principal Tech Rev	Senior Engineer	Project Engineer	Project Engineer	Engineer/ Modeler	Engineer/ Modeler	Staff Engineer	Graphics/ Drafter	Word Processor	Clerical			Total Hours	Total Labor Cost
Grade:	9 to 10	8	7	6	5	4	3	2							
Hourly Rate:	\$210.00	\$200.00	\$160.00	\$135.00	\$115.00	\$105.00	\$95.00	\$70.00	\$90.00	\$65.00	\$55.00				
Task 1 - Geotechnical Analysis		12			10									22	\$ 3,550
Task 2 - Wetlands Analysis		5			10									15	\$ 2,150
Task 3 - Hydrological Analysis		70	80	80	200		140		30					600	\$ 76,600
Task 4 - Legal Analysis															
Task 5 - Development of Operational and Storage Agreements		90												90	\$ 18,000
Task 6 - Meetings and Stakeholder Outreach		148			109									257	\$ 42,078
Total Hours:		325	80	80	329		140		30					984	
Cost:		\$65,000	\$12,800	\$10,800	\$37,778		\$13,300		\$2,700						\$ 142,378

Other Direct Costs											
Item:	Air Travel	Copies	Color/ Printing	Courier/ Shipping	Equip- ment Supplies	Hotel & Meals	Comm Charge	Auto Rental	Mileage		
Units:	Dollars	No.	Dollars	Dollars	Dollars	Days	Hours	Days	Miles		
Unit Cost:	\$1.00	\$0.10	\$1.00	\$1.00	\$1.00	\$100.00	\$3.50	\$65.00	\$0.45		Total
Task 1 - Geotechnical Analysis											
Task 2 - Wetlands Analysis											
Task 3 - Hydrological Analysis											
Task 4 - Legal Analysis											
Task 5 - Development of Operational and Storage Agreements											
Task 6 - Meetings and Stakeholder Outreach		10600	500	200		12			4000		\$ 4,740
Total Units:		10600	500	200		12			4000		
Cost:		\$1,060	\$500	\$200		\$1,200			\$1,780		\$ 4,740

Subcontractors						
	Deere & Ault Dollars \$1.00	Sugnet Environmental Dollars \$1.00	Whiteing & Smith Dollars \$1.00			
Units: Unit Cost:						Total
Task 1 - Geotechnical Analysis	\$ 89,130	\$ -	\$ -			\$ 89,130
Task 2 - Wetlands Analysis	\$ -	\$ 21,750	\$ -			\$ 21,750
Task 3 - Hydrological Analysis	\$ -	\$ -	\$ -			
Task 4 - Legal Analysis	\$ -	\$ -	\$ 30,000			\$ 30,000
Task 5 - Development of Operational and Storage Agreements	\$ -	\$ -	\$ -			
Task 6 - Meetings and Stakeholder Outreach	\$ -	\$ -	\$ -			
Total Units:	\$ 89,130	\$ 21,750	\$ 30,000			
Cost:	\$89,130	\$21,750	\$30,000			\$ 140,880

Total Costs					
	Labor	Sub-contract	Other Direct Costs		Total Project Cost
Task 1 - Geotechnical Analysis	\$ 3,550	\$ 89,130			\$ 92,680
Task 2 - Wetlands Analysis	\$ 2,150	\$ 21,750			\$ 23,900
Task 3 - Hydrological Analysis	\$ 76,600				\$ 76,600
Task 4 - Legal Analysis		\$ 30,000			\$ 30,000
Task 5 - Development of Operational and Storage Agreements	\$ 18,000				\$ 18,000
Task 6 - Meetings and Stakeholder Outreach	\$ 42,078		\$ 4,740		\$ 46,820
Total Cost:	\$ 142,378	\$ 140,880	\$ 4,740		\$ 288,000