COLORADO WATER CONSERVATION BOARD

WATER SUPPLY RESERVE ACCOUNT APPLICATION FORM

SANCHEZ RESERVOIR PHASE II - OUTLET REHABILITATION AND GATE TOWER REPLACEMENT

Name of Water Activity/Project

THE SANCHEZ DITCH AND RESERVOIR COMPANY

Name of Applicant

RIO GRANDE BASIN

Approving Basin Roundtable(s)
(If multiple basins specify amounts in parentheses.)

Amount from Statewide Account: $859,400.00

Amount from Basin Account(s): $ 55,000.00

Total WSRA Funds Requested: $914,400

Application Content

Required Exhibits

Appendices – Reference Material

1. Program Information
2. Insurance Requirements
3. WSRA Standard Contract Information (Required for Projects Over $100,000)
4. W-9 Form (Required for All Projects Prior to Contracting)

Instructions

To receive funding from the Water Supply Reserve Account (WSRA), a proposed water activity must be approved by the local Basin Roundtable **AND** the Colorado Water Conservation Board (CWCB). The process for Basin Roundtable consideration and approval is outlined in materials in Appendix 1.

Once approved by the local Basin Roundtable, the applicant should submit this application **with a detailed statement of work including budget and schedule as Exhibit A** to CWCB staff by the application deadline.

WSRA applications are due with the roundtable letter of support 60 calendar days prior to the bi-monthly Board meeting at which it will be considered. Board meetings are held in January, March, May, July, September, and November. Meeting details, including scheduled dates, agendas, etc. are posted on the CWCB website at: http://cwcb.state.co.us Applications to the WSRA Basin Account are considered at every board meeting, while applications to the WSRA Statewide Account are only considered at the March and September board meetings.

When completing this application, the applicant should refer to the WSRA Criteria and Guidelines available at: http://cwcb.state.co.us/LoansGrants/water-supply-reserve-account-grants/Documents/WSRACriteriaGuidelines.pdf

The application, statement of work, budget, and schedule **must be submitted in electronic format** (Microsoft Word or text-enabled PDF are preferred) and can be emailed or mailed on a disk to:

Greg Johnson – WSRA Application
Colorado Water Conservation Board
1580 Logan Street, Suite 200
Denver, CO 80203
gregory.johnson@state.co.us

If you have questions or need additional assistance, please contact Greg Johnson at: 303-866-3441 x3249 or gregory.johnson@state.co.us.

Water Supply Reserve Account – Application Form
Revised December 2011

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

1. Applicant Name(s): The Sanchez Ditch and Reservoir Company

Mailing address: Route 1 Box 215
San Acacio, CO 81550

Taxpayer ID#: 84-0465682

Primary Contact: Travis Robinson Position/Title: Manager

Email: sanchezditch@gojade.org

Phone Numbers: Cell: 719-588-6385 Office: 719-672-3963

Alternate Contact: Jerry Lorenz Position/Title: President

Email: sanchezditch@gojade.org

Phone Numbers: Cell: Office: 719-672-3963

2. Eligible entities for WSRA funds include the following. What type of entity is the Applicant?

[ ] Public (Government) – municipalities, enterprises, counties, and State of Colorado agencies. Federal agencies are encouraged to work with local entities and the local entity should be the grant recipient. Federal agencies are eligible, but only if they can make a compelling case for why a local partner cannot be the grant recipient.

[ ] Public (Districts) – authorities, Title 32/special districts, (conservancy, conservation, and irrigation districts), and water activity enterprises.

[x] Private Incorporated – mutual ditch companies, homeowners associations, corporations.

[ ] Private individuals, partnerships, and sole proprietors are eligible for funding from the Basin Accounts but not for funding from the Statewide Account.

[ ] Non-governmental organizations – broadly defined as any organization that is not part of the government.

3. Provide a brief description of your organization

Nonprofit Incorporation: The Sanchez Ditch and Reservoir Company (SDRC) is a Colorado Mutual Ditch Company, incorporated in 1956. The company's facilities, built between 1910 and 1915, are in Costilla County, south and west of the town of San Luis. They consist of Sanchez Reservoir (capacity 104,000 acre feet), Stabilization Reservoir (capacity 300 acre feet), approximately 38 miles of concrete lined ditch, approximately 15 miles of earthen ditch, approximately 23 miles of canal, and a diversion at the inlet of Culebra Sanchez Canal.

Service Area: SDRC administers an irrigation system with approximately 227 contracts to supply water, serving an area of 22,414 acres which are capable of being irrigated in Costilla County, Colorado. The service area includes 13,424 acres of irrigated crop land and 18,392 acres of farm land which, due to lack of water, are either not irrigated or irrigated in rotation. Sanchez Reservoir serves 34 corporate and individual shareholders with a total of 21,802.716 shares. Irrigated crops include potatoes, wheat, barley, oats, alfalfa, and hay mixtures. (Appendix B)

Reservoir Structure: The reservoir is impounded by two separate earthfill dams: a Main Dam and an East Dike, with a total of 104,000 acre feet of water. The Main Dam, 135 feet in height and 1170 feet in length, is constructed across the channel of Ventero Creek, and contains the reservoir outlet works. This dam is classified as a Large, High Hazard structure. Both dams were constructed during the period of 1910-1911.

Intake Structure and Controls: As described and shown in Appendix C, the intake structure is a 150-foot high, free-standing concrete Gate Tower in the reservoir at the upstream end of the outlet conduit. An octagonal room at the top of the tower houses the gate controls. With construction completed in 1915, this Gate Tower controls discharges utilizing a combination of gates and valves located at various elevations.

Outlet & Discharge Structures: The present outlet system consists of an inverted U-shaped cast-in-place concrete conduit, 8 feet wide, 10.5 feet high, and 576.6 feet long, through the base of the dam at its maximum section. At the downstream end of the conduit, flow is discharged through a concrete flume structure to Ventero Creek.

A Century of Operation: For more than 100 years, access to the top of the Gate Tower for operation and maintenance has required the use of a tramway and Gondola. As shown in Appendix C, the Gondola runs on a system of cables and is powered by a portable gasoline engine to winch the Gondola from the shore to the Tower.

Phase I Assessment and Upgrade: Until today, with the June 2012 completion of *Phase I Assessment and Upgrade, a*ccess to the Gate Tower by Gondola has been an integral part of the operation of the reservoir, requiring manual control of all operations from the control room at the top of the Tower. Thanks to WSRA funding, SDRC has improved the safety and structural integrity of the Gondola/Tramway system; repaired a 30" intake control gate to increase reservoir discharge capacity; upgraded the hydraulic gate control system; and automated essential reservoir operations. Today the Gondola ride has been bypassed by a web-based SCADA system, enabling SDRC to efficiently manage its water from the comfort of its office in San Acacio, about 10 miles away.

Feasibility of Outlet Configuration: The *Phase I Assessment and Upgrade* included a feasibility study by Smith Geotechnical Engineering, Inc. (SGE), the purpose being to evaluate the long term viability of the control tower and outlet conduit and to develop potential alternatives to the current configuration of gates and operators in the Gate Control Tower. Of three possible alternatives, SDRC has determined to upgrade the outlet conduit and to demolish and replace the Gate Tower with a more effective system.

If the Contracting Entity is different then the Applicant (Project Sponsor or Owner) please describe the Contracting Entity here.

They are the same.

4. Successful applicants will have to execute a contract with the CWCB prior to beginning work on the portion of the project funded by the WSRA grant. In order to expedite the contracting process the CWCB has established a standard contract with provisions the applicant must adhere to. A link to this standard contract is included in Appendix 3. Please review this contract and check the appropriate box.

[x] The Applicant will be able to contract with the CWCB using the Standard Contract

[ ] The Applicant has reviewed the standard contract and has some questions/issues/concerns. Please be aware that any deviation from the standard contract could result in a significant delay between grant approval and the funds being available.

5. The Tax Payer Bill of Rights (TABOR) may limit the amount of grant money an entity can receive. Please describe any relevant TABOR issues that may affect the applicant.

NA

Part II. - Description of the Water Activity/Project

1. What is the primary purpose of this grant application? (Please check only one)

	Nonconsumptive (Environmental or Recreational)
X	Agricultural
	Municipal/Industrial
	Needs Assessment
	Education
	Other Explain:

2. If you feel this project addresses multiple purposes please explain.

For a full explanation of each of the following multiple purposes addressed by this project, see Section III-2-a, as we have chosen to detail them under "Tier 1" evaluation criteria, which asks, essentially, the same question.

This project fulfills many purposes, including the following:

- **Irrigation:** It enables SDRC to continue providing irrigation water to its shareholders for decades into the future. It improves water management efficiencies, protecting water rights for irrigation from high runoff from Culebra Creek, Ventero Creek, San Francisco Creek, Vallejos Creek, and Torcido Creek.
- **Safety:** It greatly reduces risk of injury or possible loss of life by replacing the 100 year old Gate Tower and eliminating dependence on the Gondola. Dam stability and longevity are improved by this project.
- **Flood protection:** Upgrading the outlet structure ensures structural integrity of the dam and promotes long term operational efficiencies, thereby helping to promote proper function of the Culebra floodplain.
- **Recreation:** SDRC has a contract with the CDPR granting a perpetual easement for recreation and preserving a 2,500 AF conservation pool, providing fishing and boating opportunities at Sanchez Reservoir.
- **Wildlife:** Sanchez Reservoir is managed as a Colorado State Wildlife Area.
- **Economy:** Sanchez Reservoir supports tourism, attracting visitors from all over Colorado and northern New Mexico. Ice fishing is particularly popular in winter, when very little other economic activity is possible in this economically stressed and mostly agrarian community.
- **Protecting cultural values:** This reservoir serves a historically important part of Colorado, where the state's first water right was adjudicated. Irrigation in many parts of this region relies on the traditional *acequia* system, a communal and culturally significant method of ditch maintenance involving the participation of many families.

- **Promoting aesthetic values:** By eliminating wasteful and deteriorating structures and antiquated machinery, this project promotes appreciation for the spectacular beauty of Sanchez Reservoir with its wide horizons and views of the Sangre de Cristo range of the Rockies.

3. Is this project primarily a study or implementation of a water activity/project? (Please check only one)

	Study	X	Implementation

4. To catalog measurable results achieved with WSRA funds can you provide any of the following numbers?

	New Storage Created (acre-feet)
	New Annual Water Supplies Developed, Consumptive or Nonconsumptive (acre-feet)
104,000 AF	Existing Storage Preserved or Enhanced (acre-feet)
	Length of Stream Restored or Protected (linear feet)
576.5 ft	Length of Pipe/Canal Built or Improved (linear feet)
Save lives	Efficiency Savings (acre-feet/year OR dollars/year – **circle one**)
	Area of Restored or Preserved Habitat (acres)
1797 AF	Other -- Explain: Perpetual recreational easement & conservation pool

4. To help us map WSRA projects please include a map (Exhibit B) and provide the general coordinates below:

Latitude: 37-06'48" N Longitude: 105-24'38" W

5. Please provide an overview/summary of the proposed water activity (no more than one page). Include a description of the overall water activity and specifically what the WSRA funding will be used for. A full **Statement of Work** with a detailed budget and schedule is required as **Exhibit A** of this application.

(next page please)

Objective: This water activity enables SDRC to continue providing irrigation water to its shareholders, thereby meeting today's agricultural needs. It also improves safety, helps to preserve proper function of the flood plain, and enables the effective management of water for future generations. WSRA funding will be used to pay for 45% of all of the following, with the remainder of funds secured by a CWCB loan of $1,128,776 ($1,117,600 for the project + $11,176 for the loan service fee).

Background – Completion of Phase 1: Due to continuing deterioration of the Gate Tower and the outlet conduit, and in anticipation of ongoing maintenance issues and changing system needs, SDRC has completed the *Phase I Assessment and Upgrade.* This preliminary work addressed SDRC's concerns for safety and structural integrity relating to the Gondola, providing several more years of continued safe access to the Tower, as needed for maintenance. One of the lower 30 inch intake control gates was repaired, increasing reservoir discharge capacity. The gate control system was upgraded to hydraulic operation, and remote control is now in place, providing a digital means of managing essential reservoir operations.

Selecting Alternative No. 3: After assessing the alternatives developed by SGE in the *Phase I* feasibility study, SDRC has determined that the best alternative is to upgrade the outlet structure, to demolish the gate tower, and to modify the remaining bottom portion of the tower to create a more conventional outlet.

Demolishing and Replacing the Gate Tower: The gate tower will be demolished above approximately elevation 8335 feet. The tower will be removed by sawing a notch on the reservoir side and setting explosive charges to topple the structure into the reservoir. The remaining stub of the tower will then be saw cut at a pre-determined elevation to provide a uniform joint. A slab will then be placed over the top of the remaining portion of the tower to allow the installation of two new slide gates which will be operated by hydraulic cylinders located on the slab. An 18"x24" concrete grade beam from the gates to the crest will be constructed on the face of the dam to support the hydraulic lines and a gate vent pipe.

Dewatering and Silt Removal: To facilitate tower demolition and installation of the concrete cap slab on the remaining stub of the tower, a sheetpile cofferdam will be installed to elevation 8340 feet, allowing for dewatering and removal of the silt from around the tower.

New Gates: The tower walls will be saw cut to a uniform elevation and thimbles will be installed in the concrete slab for the installation of the two sloped gates. One will be a 5' x 6' gate and the other, used for normal operation, will be a 30" x 30" gate, for a total capacity of approximately 1500 cfs at maximum pool of 4825 feet.

Control House: A precast concrete control house will be installed on the upstream face of the dam above the high water level to contain the operators and the controls for remote automated gate operation.

Outlet Conduit: The right side of this structure is in disrepair and portions of the concrete walls have failed. The outlet conduit will be rehabilitated, removing and replacing the deteriorated portions of the downstream outlet works. Measures may be included to collect and filter the seepage that exits into this structure. Rehabilitating the outlet conduit will increase the long term stability of the dam.

Challenges: Implementing this alternative will be a significant undertaking. SGE anticipates that the water needs to be drawn down to about 8340 feet to be practical for the installation. Access to the tower for a crane or an excavator with a pile driver attached can be accomplished with a barge or by the placement of fill to construct a road along the dam face to a point near the tower. The lower the water can be drawn down, the closer the road and crane can be to the work area, reducing the size of the crane required to do the job.

Part III. – Threshold and Evaluation Criteria

1. Describe how the water activity meets these **Threshold Criteria.** (Detailed in Part 3 of the Water Supply Reserve Account Criteria and Guidelines.)

   a) The water activity is consistent with Section 37-75-102 Colorado Revised Statutes.[1]

   Protecting water rights: By improving the operational and maintenance efficiency of Sanchez Reservoir, as proposed in this application, this project protects from flooding and improves the ability of Sanchez Ditch and Reservoir Company to store and release water for irrigation, for recreation, for wildlife, and for flood control, thus protecting existing water rights in the boundary of SDRC's jurisdiction as well as in the surrounding area. Furthermore…

   Not affecting water rights: This project does not affect, supersede, abrogate, or otherwise impair the current system of allocating water within Colorado. Nothing in this project has any effect upon, nor does it repeal or in any manner amend the existing water rights adjudication system. Nor does it affect the state constitution's recognition of water rights as a private usufructuary property right. Nothing in this project is intended to restrict the ability of the holder of a water right to use or to dispose of that water right in any manner permitted under Colorado law.

   Not affecting other rights: This project does not affect the protections for contractual and property rights recognized by the contract and takings protections under the state constitution and related statutes. When implemented, this project will not diminish, impair, or cause injury to any property or contractual right created by intergovernmental agreements, contracts, stipulations among parties to water cases, terms and conditions in water decrees, or any other similar document related to the allocation or use of water. This project does not supersede, abrogate, or cause injury to vested water rights or decreed conditional water rights, nor does it impair, limit, or otherwise affect the rights of persons or entities to enter into agreements, contracts, or memoranda of understanding with other persons or entities relating to the appropriation, movement, or use of water under other provisions of law.

[1] 37-75-102. Water rights - protections. (1) It is the policy of the General Assembly that the current system of allocating water within Colorado shall not be superseded, abrogated, or otherwise impaired by this article. Nothing in this article shall be interpreted to repeal or in any manner amend the existing water rights adjudication system. The General Assembly affirms the state constitution's recognition of water rights as a private usufructuary property right, and this article is not intended to restrict the ability of the holder of a water right to use or to dispose of that water right in any manner permitted under Colorado law. (2) The General Assembly affirms the protections for contractual and property rights recognized by the contract and takings protections under the state constitution and related statutes. This article shall not be implemented in any way that would diminish, impair, or cause injury to any property or contractual right created by intergovernmental agreements, contracts, stipulations among parties to water cases, terms and conditions in water decrees, or any other similar document related to the allocation or use of water. This article shall not be construed to supersede, abrogate, or cause injury to vested water rights or decreed conditional water rights. The General Assembly affirms that this article does not impair, limit, or otherwise affect the rights of persons or entities to enter into agreements, contracts, or memoranda of understanding with other persons or entities relating to the appropriation, movement, or use of water under other provisions of law.

b) The water activity underwent an evaluation and approval process and was approved by the Basin Roundtable (BRT) and the application includes a description of the results of the BRTs evaluation and approval of the activity. At a minimum, the description must include the level of agreement reached by the roundtable, including any minority opinion(s) if there was not general agreement for the activity. The description must also include reasons why general agreement was not reached (if it was not), including who opposed the activity and why they opposed it. Note- If this information is included in the letter from the roundtable chair simply reference that letter.

- This information is included in the accompanying letter from the Chairman of the Rio Grande Basin Roundtable.

c) The water activity meets the provisions of Section 37-75-104(2), Colorado Revised Statutes.[2] The Basin Roundtable Chairs shall include in their approval letters for particular WSRA grant applications a description of how the water activity will assist in meeting the water supply needs identified in the basin roundtable's consumptive and/or non-consumptive needs assessments.

- This information is included in the accompanying letter from the Chairman of the Rio Grande Basin Roundtable.

d) Matching Requirement: <u>For requests from the **Statewide Fund**</u>, the applicant is required to demonstrate a **20 percent** (or greater) match of the request from the Statewide Account. Statewide requests must also include a minimum match of **5 percent** of the total grant amount from Basin Funds. Sources of matching funds include but are not limited to Basin Funds, in-kind services, funding from other sources, and/or direct cash match. Past expenditures directly related to the project may be considered as matching funds if the expenditures occurred within 9 months of the date the application was submitted to the CWCB. Please describe the source(s) of matching funds. (NOTE: These matching funds should also be reflected in your Detailed Budget in **Exhibit A** of this application)

- Construction Project Costs of $2,032,000 plus a loan service fee of $11,176 equals Gross Total Cost of $2,043,176. SDRC is providing a 55% match of Construction Project Costs by securing a loan from CWCB for $1,117,600 plus the 1% service fee for a total loan of $1,128,776. The remaining 45% of Total Project Costs, or $914,400 is requested in this proposal from WSRA funds, with $859,400 from the Statewide Account and $55,000 from the Rio Grande Basin's WSRA Account. Applicant is also providing $50,000 in in-kind Administrative oversight for the project.

[2] 37-75-104 (2)(c). Using data and information from the Statewide Water Supply Initiative and other appropriate sources and in cooperation with the on-going Statewide Water Supply Initiative, develop a basin-wide consumptive and nonconsumptive water supply needs assessment, conduct an analysis of available unappropriated waters within the basin, and propose projects or methods, both structural and nonstructural, for meeting those needs and utilizing those unappropriated waters where appropriate. Basin Roundtables shall actively seek the input and advice of affected local governments, water providers, and other interested stakeholders and persons in establishing its needs assessment, and shall propose projects or methods for meeting those needs. Recommendations from this assessment shall be forwarded to the Interbasin Compact Committee and other basin roundtables for analysis and consideration after the General Assembly has approved the Interbasin Compact Charter.

2. For Applications that include a request for funds from the **Statewide Account**, describe how the water activity/project meets all applicable **Evaluation Criteria.** (Detailed in Part 3 of the Water Supply Reserve Account Criteria and Guidelines and repeated below.) Projects will be assessed on how well they meet the Evaluation Criteria. **Please attach additional pages as necessary.**

Evaluation Criteria – the following criteria will be utilized to further evaluate the merits of the water activity proposed for funding from the Statewide Account. In evaluation of proposed water activities, preference will be given to projects that meet one or more criteria from each of the three "tiers" or categories. Each "tier" is grouped in level of importance. For instance, projects that meet Tier 1 criteria will outweigh projects that only meet Tier 3 criteria. WSRA grant requests for projects that may qualify for loans through the CWCB loan program will receive preference in the Statewide Evaluation Criteria if the grant request is part of a CWCB loan/WSRA grant package. For these CWCB loan/WSRA grant packages, the applicant must have a CWCB loan/WSRA grant ratio of 1:1 or higher. Preference will be given to those with a higher loan/grant ratio.

Tier 1: Promoting Collaboration/Cooperation and Meeting Water Management Goals and Identified Water Needs

a. The water activity addresses multiple needs or issues, including consumptive and/or non-consumptive needs, or the needs and issues of multiple interests or multiple basins. This can be demonstrated by obtaining letters of support from other basin roundtables (in addition to an approval letter from the sponsoring basin).

Irrigation: SDCR is primarily an irrigation company. By replacing deteriorating structures and by restoring and upgrading the outlet structure, SDRC improves long term dam stability, thus ensuring its ability to continue providing storage of high runoff from Culebra Creek, Ventero Creek, San Francisco Creek, Vallejos Creek, and Torcido Creek in Sanchez Reservoir. This project supports consumptive needs of primary irrigation water rights .

Safety: SDRC has implemented the recommendations in a study by Tramway Engineering, Ltd to determine the current, short-term, and future functionality the Gondola-Tramway system. Those recommendations, combined with the feasibility study by SGE, placed a major focus on establishing long term safe access to the gates and operators of the reservoir. Also, rehabilitation of portions of the conduit was deemed necessary by SGE to maintain long term structural integrity of Sanchez Dam.

Flood protection: In all of these communities, maintaining a functioning flood plain is becoming increasingly important as aging structures continue to deteriorate throughout the Culebra watershed. Ditches and *acequias*, many of them created in the mid to late 1800s, are beginning to fail, causing flooding to residents in some of these earliest settlements in Colorado. The Town of San Luis, the oldest town in Colorado, has endured numerous floods in recent years. Upgrading reservoir infrastructure helps reduce the risk of flood from Ventero Creek, where "The Peoples Ditch," the oldest adjudicated water right in Colorado, runs through the Vega – the last remaining true "commons" pasture land in the U.S. - and through portions of the town of San Luis.

Recreation: SDRC has a contract with Colorado Department of Parks and Wildlife granting a perpetual easement for recreation and preserving a conservation pool. With almost no public recreation areas in Costilla County, this project preserves and enhances fishing and boating opportunities at Sanchez Reservoir, a destination for visitors from throughout southern Colorado and northern New Mexico. Colorado Division of Parks and Wildlife (CDPW) recently upgraded a public boat ramp and that agency lists Sanchez Reservoir as a featured ice fishing destination.

Wildlife: With 4,571 surface acres, the reservoir is managed as a Colorado State Wildlife Area, offering angling opportunities for brown trout, northern pike, walleye, yellow perch and channel catfish. Sanchez Reservoir assists CDOW to reach its water use goals and storage objectives by maintaining a fish and wildlife conservation pool of 2,500 acre feet.

Economy: This project provides a direct economic benefit to Costilla County, one of the poorest counties in the State, upgrading an asset that is important to tourists and that welcomes winter guests who come in winter, when ice fishing is popular.

Protecting cultural values and aesthetics: This project is located in a spectacular and historic part of southern Colorado where traditional *acequia* irrigation methods are still practiced. Keeping the Reservoir safe, accessible, and beautiful for another century is an objective of high value.

b. The number and types of entities represented in the application and the degree to which the activity will promote cooperation and collaboration among traditional consumptive water interests and/or non-consumptive interests, and if applicable, the degree to which the water activity is effective in addressing intrabasin or interbasin needs or issues.

SDRC has consulted with and obtained advice and historical data and records from the Division of Natural Resources (Division 3 Engineer Craig Cotten, Assistant Division 3 Engineer Pat McDermott, and dam safety engineer Mark Perry).

The San Luis office of Natural Resources Conservation Service actively supports this project (letter from Tracy Miller, District Conservationist). And the Costilla Conservation District also provides support for this Project (letter from Harold Anderson, President).

Sanchez Reservoir has worked with the Town of San Luis and Costilla County on numerous occasions. Communities which would be most seriously affected in the unlikely event of dam failure are San Pablo, San Luis and Old San Acacio. Such an event would cause severe damage and possible loss of life. San Luis, the oldest town in Colorado, with The People's Ditch crossing La Vega, the last remaining grazing commons in the U.S., has been struggling with municipal drainage problems for many years due in part to a high water table, inadequate drainage systems, and a lack of sufficient ground flow. In many instances when Culebra Creek was at flood stage, or when Ventero, Vallejos, San Francisco were at flood stage, SDRC helped direct water away from San Luis and its surrounding historic communities.

For the valuable contribution which Sanchez Reservoir makes for recreation and wildlife habitat, CDPW's Rick Basagoitia has provided a letter of support.

c. The water activity helps implement projects and processes identified as helping meet Colorado's future water needs, and/or addresses the gap areas between available water supply and future need as identified in SWSI or a roundtable's basin-wide water needs assessment.

The Rio Grande Basin Roundtable has identified the deteriorating condition of its reservoirs as a major concern, and has categorized the upgrading of these facilities as critically important. This project, by increasing the functional and operational efficiency of a large reservoir in a distinctly agricultural region of the San Luis Valley, responds to the Basin's future water needs by helping to keep water in the Basin. It improves irrigation efficiency, reduces water loss, and improves long term delivery of water.

Although SDRC is not in a groundwater management subdistrict at this time, the formation of subdistricts in the Basin is creating a critical need for more storage for augmentation, yet there are few options available. Sanchez Reservoir is primarily a storage resource, equalizing distribution in times of increasingly unpredictable climate.

Tier 2: Facilitating Water Activity Implementation

d. Funding from this Account will reduce the uncertainty that the water activity will be implemented. For this criterion the applicant should discuss how receiving funding from the Account will make a significant difference in the implementation of the water activity (i.e., how will receiving funding enable the water activity to move forward or the inability obtaining funding elsewhere).

SDRC cannot contemplate a project of this size and complexity without securing serious financing. The company has been working with Anna Mauss, of CWCB's Water Project Loan Program, and with CWCB's Kirk Russell, and together they have determined that the most appropriate course is to combine a request for WSRA funds with a carefully designed loan package. The grant-to-loan ratio of 45% to 55% has been proposed and has been reviewed by SDRC's Board of Directors, determining this mix as the best means to finance this project.

SDRC is also working with Duane Smith, of Smith Geotechnical Engineering, to develop cash flow and annual financial projections reflecting annual expenses, including the proposed loan repayment and servicing costs. The SDRC has two previous CWCB loans with remaining balances of $71,558.47 and $194,458.88. The yearly payment to the CWCB is $31,385.92 with the first loan to be retired in 2017 and the second loan in 2022. Neither of these loans is delinquent and the company has no other outstanding obligations.

SDRC hired Nicole V. Langley, of Transforma Research & Design, to help the company coordinate the planning, administration, and funding of this project. In a joint meeting of the Rio Grande Basin's "Technical Support Subcommittee" together with Kirk Russell, Anna Mauss, and Duane Smith of SGE, the strategy and details of this proposal's Scope of Work, Budget, and Timeline were worked out and integrated with CWCB's proposed accompanying loan package.

An attractive CWCB proposal suggests a preliminary period in which the company will accelerate payment of its two existing loans while at the same time requiring interest-only payments on the new loan. This plan is outlined on the following page and is being developed as this proposal is being written.

Without this WSRA grant to leverage and support the CWCB loan, this project would not be possible.

The financial condition of the company is solid. The company has no other obligations than those listed in the financial statement submitted with its loan application. Following is a summary of the company's income and expenses based on its financial statements from 2009, 2010 and 2011.

	2011	2010	2009
Current Assets	$ 152,040.60	$ 119,435.76	$ 139,037.64
Total Assets	$ 789,259.26	$ 781,511.79	$ 793,888.67
Current Liabilities	$ 27,458.62	$ 31,092.56	$ 25,485.27
Long term Liabilities	$ 243,917.20	$ 243,917.29	$ 280,752.03
Total Liabilities	$ 271,375.91	$ 276,009.85	$ 306,237.30
Total Income	$ 234,050.00	$ 239,343.35	$ 236,730.81
Total Expense	$ 223,668.22	$ 219,613.08	$ 229,375.73
Net Income	$ 10,381.78	$ 19,730.27	$ 7,355.08

The Board of Directors of SDRC has actively participated in these discussions, ensuring that good communication and clear understandings are in place. The company appreciates the high level of collaboration and client-centered help it has received from CWCB's Water Project Loan Program, and is pleased that the 45-55 percentage split between grant and loan is so manageable and affordable.

Approval of the WSRA grant for this project is required in order for SDRC to receive approval of its loan application. Without this COMBINED package this project would be impossible. This WSRA grant request, when approved, will leverage the remaining 55% of total project costs, providing an affordable way for SDRC to complete this project.

e. The amount of matching funds provided by the applicant via direct contributions, demonstrable in-kind contributions, and/or other sources demonstrates a significant & appropriate commitment to the project.

Construction Project Costs of $2,032,000 plus a loan service fee of $11,176 equals Gross Total Cost of $2,043,176. SDRC is providing a 55% match of Construction Project Costs by securing a loan from CWCB for $1,117,600 plus the 1% service fee for a total loan of $1,128,776. The remaining 45% of Total Project Costs, or $914,400 is requested in this proposal from WSRA funds, with $859,400 from the Statewide Account and $55,000 from the Rio Grande Basin's WSRA Account. Applicant is also providing $50,000 in in-kind Administrative oversight for the project.

Further evidence of the applicant's commitment to this project is its choice of Smith Geotechnical Engineering Consultants as the principal contractor. There is no other entity which has the long years of experience and familiarity with the Gate Tower and the Sanchez system. Smith Geotechnical Engineering has performed several major studies and completed numerous projects for SDRC dating back many years. SGE is also very familiar with CWCB's Water Projects Loan Program and has been instrumental in pulling together the required details of this funding package.

Tier 3: The Water Activity Addresses Other Issues of Statewide Value and Maximizes Benefits

f. The water activity helps sustain agriculture & open space, or meets environmental or recreational needs.

Agriculture: This project sustains agriculture by improving SDRC's ability to store and distribute water. It serves an area of 22,414 acres which are capable of irrigation, with approximately 227 contracts to supply water. The service area of the Sanchez Ditch and Reservoir Company includes 13,424 acres of irrigated crop land and 18,392 acres of farm land which, due to lack of water, are either not irrigated or irrigated in rotation. Sanchez Reservoir irrigates crops which include potatoes, wheat, barley, oats, alfalfa, and hay mixtures.

Environmental: This project helps meet environmental needs by ensuring the continued stability and viability of the Sanchez Reservoir, created by impounding excess runoff from the surrounding Sangre de Cristo Mountains and the creeks and rivers in the vicinity of the Colorado-New Mexico border. Tourism, boating and fishing bring needed funds into one of the poorest communities of Colorado. A letter from Rick Basagoitia of CDPW accompanies this proposal.

g. The water activity assists in the administration of compact-entitled waters or addresses problems related to compact entitled waters and compact compliance and the degree to which the activity promotes maximum utilization of state waters.

Not Part of the Rio Grande Compact: Although this project is not related to the Rio Grande Compact, the efficiencies obtained in this project directly promote maximum utilization of Colorado's water resources, helping to keep water in the Rio Grande Basin and helping to restore its aquifers to a sustainable level.

h. The water activity provides a high level of benefit to Colorado in relationship to the amount of funds requested.

A Good Investment: SDRC is putting up 55% of the money requested through a CWCB loan in order to rehabilitate a large reservoir which is strategically important to irrigators and residents in the Culebra and Sanchez watersheds.

A Financial Return Flow: This project's funding package, combining CWCB's grant and loan programs, represents a benefit to Colorado, providing, in essence, a kind of financial "return flow" by which other projects and other funding commitments are possible.

Leveraging Emerging Technologies and Advances in Science: The upgrade of the Sanchez system brings a century-old facility up to par with today's complex water-management issues and emerging technologies to maximize utilization of our diminishing water supplies.

i. The water activity is complimentary to or assists in the implementation of other CWCB programs.

San Luis People's Ditch: Recently the Rio Grande Basin Roundtable approved a request for funding from the San Luis Peoples Ditch for an upgrade and rehabilitation of their irrigation system. The flood control aspects of the Sanchez Reservoir are critically important in maintaining the integrity of the *acequia* system.

Supporting the San Luis Valley's Improved Methods for Water Control: The Conejos Water Conservancy District received WSRA funding for an automated gauging stations project to electronically track water flows through 72 measuring weirs and four control gages on its system. By automating the operations at Sanchez Reservoir, SDRC gains a head start on the anticipated future configuration of the Sanchez system, to which the recently installed solar-powered and web-based controls can be easily adapted. This project utilizes available technological advances to extend better water management across the whole south-central part of the San Luis Valley.

Part IV. – Required Supporting Material

1. **Water Rights, Availability, and Sustainability** – This information is needed to assess the viability of the water project or activity. Please provide a description of the water supply source to be utilized, or the water body to be affected by, the water activity. This should include a description of applicable water rights, and water rights issues, and the name/location of water bodies affected by the water activity.

The company's decreed water rights and appropriations begin in 1856 and go through 1934 for a cumulative total of 373.950 cfs. Following is a list of the company's water rights.

Sanchez Ditch and Reservoir Company Water Rights

Priority	Ditch Name	Decreed cfs
8	San Acacia	23.250
42	Island	1.500
60,61	Culebra-Eastdale No. 1	48.625
1934-4ST	Sanchez Res. Storage Priority	
1934-11	Culebra-Eastdale No. 1	228.075
1934-5ST	Sanchez Res. Storage Priority	
1934-21	Culebra-Cerritos	37.500
24	Cordillera	35.000
	Total	373.950

This water project does not affect or change applicable water rights, nor does it raise any water right issues.

Inflow to the reservoir comes from Culebra Creek, on which the reservoir is located, and its tributaries, Culebra Creek, San Francisco Creek, Vallejos Creek, Torcido Creek, and from the Culebra Sanchez Inlet Ditch and Canal. Releases from Sanchez Reservoir flow down Ventero Creek into the Culebra above the San Luis gauging station. The release, minus intervening decreed stream water and transportation losses, is diverted from Culebra Creek at the headgate of the Culebra Eastdale Canal, where it is measured at the headgate by a Stevens Type F recorder, and is delivered into the Sanchez Head Stabilization Reservoir.

The Stabilization Reservoir provides a reasonably constant supply to the Sanchez system irrigators below the stabilization reservoir. Releases at this point consist of water previously stored in Sanchez Reservoir and some direct flow decreed water in high runoff periods.

SDRC has a storage right and a decreed direct flow right. This usually occurs during big rains, in spring runoff, and in winter. After November 1st there is no irrigation water, only stock water.

2. Please provide a brief narrative of any related studies or permitting issues.

a) Studies:

2003, November 6 – Division 3 District 24, Division of Water Resources: *Internal Inspection of Outlet Conduit*. Doug Boyer, Dam Safety Branch; Steve Vandiver, Division Engineer; Charlie Quintana, Water Commissioner District 24.

2010, October 20 – ADI Marine, Minot ND, and Prime Machine, Salt Lake City, UT. *Underwater Inspection Report, Outlet Works & Tower at Sanchez Reservoir*.

2011, March 22 – Tramway Engineering, Ltd., Charles R. Peterson, P.E., *Gondola and Tramway Evaluation* with findings regarding personnel safety, creating alternate access, and possible cableway replacement.

2012, May 15 – Smith Geotechnical Engineering, Inc., *Feasibility Study for Outlet Rehabilitation Plan at Sanchez Reservoir*, Duane Smith, P.E., This is the most relevant study pertaining to this project. Smith Geotechnical Engineering Inc. is the Engineering Contractor for this project.

Other studies over the years were listed in the Phase I proposal and, since they are not instrumental to this project, are not included here.

b) Permitting Issues:

Engineer Duane Smith, of SGE, has established that all easements and rights of way are currently held by the company and that no local construction permits or easements are expected to be required for this repair and upgrade project.

The company and SGE believe no Environmental Assessment (EA) or Environmental Impact Statement (EIS) will be required. The Corps of Engineers - Department of the Army (DA) will be notified of the scope of work, but it is likely that most of that work will not fall within their jurisdiction.

This project will include blasting, removing a portion of the outlet tower, and potentially removing silt from the reservoir around the tower. The blasting will require safety and security measures but no special permits are expected associated with the blasting. The draining of the reservoir, which is expected to transport silt, and the potential need to remove silt from around the outlet may require review by the Department of the Army.

3. Statement of Work, Detailed Budget, and Project Schedule

The statement of work will form the basis for the contract between the Applicant and the State of Colorado. In short, the Applicant is agreeing to undertake the work for the compensation outlined in the statement of work and budget, and in return, the State of Colorado is receiving the deliverables/products specified. **Please note that costs incurred prior to execution of a contract or purchase order are not subject to reimbursement**. All WSRA funds are disbursed on a reimbursement basis after review invoices and appropriate backup material.

Please provide a detailed statement of work using the template in Exhibit A. Additional sections or modifications may be included as necessary. Please define all acronyms and include page numbers.

REPORTING AND FINAL DELIVERABLE

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 statement 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.

PAYMENT

Payment will be made based on actual expenditures and invoicing by the applicant. Invoices from any other entity (i.e. subcontractors) cannot be processed by the State. The request for payment must include a description of the work accomplished by major task, and estimate of the percent completion for individual tasks and the entire water activity in relation to the percentage of budget spent, identification of any major issues and proposed or implemented corrective actions. The last 5 percent of the entire water activity budget will be withheld until final project/water activity documentation is completed. 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 help promote the development of a common technical platform.

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

Signature of Applicant:

Print Applicant's Name:

Project Title:

Return an electronic version (hardcopy may also be submitted) of this application to:

Greg Johnson – WSRA Application
Colorado Water Conservation Board
1580 Logan Street, Suite 200
Denver, CO 80203
gregory.johnson@state.co.us