COLORADO
Colorado Water Conservation Board
Department of Natural Resources

Last Update: August 3, 2017

Colorado Water Conservation Board

Water Supply Reserve Fund
Grant Application

Instructions

All WSRF grant applications shall conform to the current 2016 WSRF Criteria and Guidelines.

To receive funding from the WSRF, a proposed water activity must be approved by a Roundtable(s) **AND** the Colorado Water Conservation Board (CWCB). The process for Roundtable consideration and recommendation is outlined in the 2016 WSRF Criteria and Guidelines. The CWCB meets bimonthly according to the schedule on page 2 of this application.

If you have questions, please contact the current CWCB staff Roundtable liaison:

Arkansas	**Gunnison | North Platte | South Platte | Yampa/White**	**Colorado | Metro | Rio Grande | Southwest**
Ben Wade	Craig Godbout	Megan Holcomb
ben.wade@state.co.us	craig.godbout@state.co.us	megan.holcomb@state.co.us
303-866-3441 x3238	303-866-3441 x3210	303-866-3441 x3222

WSRF Submittal Checklist (Required)

X	I acknowledge this request for funding was recommended for CWCB approval by the sponsoring Basin Roundtable(s).
X	I acknowledge I have read and understand the 2016 WSRF Criteria and Guidelines.
X	I acknowledge the Grantee will be able to contract with CWCB using the Standard Contract.(1)
Exhibit A	
X	Statement of Work(2) *(Word – see Exhibit A Template)*
X	Budget & Schedule(2) *(Excel Spreadsheet – see Exhibit A Template)*
X	Letters of Matching and/or Pending 3rd Party Commitments(2)
X	Receipts of partial contribution.
Exhibit C	
X	Map(2)
X	Photos/Drawings/Reports
X	Letters of Support
-	Certificate of Insurance(3) (General, Auto, & Workers' Comp.)
Contracting Documents	
-	Certificate of Good Standing(3)
-	W-9(3)
-	Independent Contractor Form(3) (If applicant is individual, not company/organization)
-	Electronic Funds Transfer (ETF) Form(3)

(1) Click "Grant Agreements". For reference only/do not fill out or submit/required for contracting
(2) Required with application if applicable.
(3) Required for contracting. While optional at the time of this application, submission can expedite contracting upon CWCB Board approval.

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Schedule		
CWCB Meeting	**Application Submittal Dates**	**Type of Request**
January	December 1	Basin Account; BIP
March	February 1	Basin/Statewide Account; BIP
May	April 1	Basin Account; BIP
X July	X June 1	Basin Account; BIP
September	August 1	Basin/Statewide Account; BIP
November	October 1	Basin Account/BIP

Desired Timeline	
Desired CWCB Hearing Month:	June 2018
Desired Notice to Proceed Date:	July 2018

Water Activity Summary	
Name of Applicant	Special Improvement District Number One
Name of Water Activity	Rio Grande Water Conservation District Groundwater Level Telemetry

Approving Roundtable(s)	Basin Account Request(s)[1]
Rio Grande Roundtable	$71348.00 (75%)
Basin Account Request Subtotal	$71348.00 (75%)
Statewide Account Request[1]	$0
Total WSRF Funds Requested (Basin & Statewide)	$71348.00 (75%)
Total Project Costs	$95170.00

(1) Please indicate the amount recommended for approval by the Roundtable(s)

Grantee and Applicant Information

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Grantee and Applicant Information	
Name of Grantee(s)	Special Improvement District Number One
Mailing Address	8805 Independence Way, Alamosa, CO 81101
FEIN	Tax ID: 84-0608457
Grantee's Organization Contact(1)	Cleave Simpson
Position/Title	Rio Grande Water Conservation District - General Manager
Email	cleave@rgwcd.org
Phone	719-589-6301
Grant Management Contact(2)	Chet Tokarsky
Position/Title	Hydrologic Technician/ Well Program Technician
Email	chester@rgwcd.org
Phone	713-306-6787
Name of Applicant (if different than grantee)	Cleave Simpson
Mailing Address	8805 Independence Way Alamosa, CO 81101
Position/Title	Rio Grande Water Conservation District - General Manager
Email	cleave@rgwcd.org
Phone	719-589-6301

(1) Person with signatory authority

(2) Person responsible for creating reimbursement invoices (Invoice for Services) and corresponding with CWCB staff.

Description of Grantee
Provide a brief description of the grantee's organization (300 words or less).
In 2006, the formation of Special Improvement District Number One (Subdistrict No. 1) was created as legal entity to begin management of groundwater in West Central San Luis Valley in Southwest Colorado. With the subdistrict formation, the subdistrict's plan of water management cited its first priority to improve and replenish unconfined groundwater levels in the subdistrict. With this in mind as its primary goal, focus weighed heavily on improving injurious depletions by recovering the unconfined aquifer in this region by any means necessary within the confines of the subdistrict. After multiple years of litigation with Colorado water courts the subdistrict had drafted an "effective" plan of water management in December 2011. The plan of water management now undertook its primary focus for replacement of injurious depletions to the Rio Grande River to meet Rio Grande River Compact obligations and senior surface water rights users. The secondary goal was recovery and maintenance of groundwater storage in the unconfined aquifer to a historically sustainable level in order to maintain the hydraulic divide permanently. The hydraulic divide is a line on the north of the Rio Grande River separating the unconfined aquifer underlying the subdistrict and the tributary unconfined aquifer that attributes groundwater to the Rio Grande River. To meet these criteria, aquifer storage levels must be increased from the current level (2017) at -1,000,000 acre feet below the 1976 level (considered the relative 0 storage value) to a level between -200,000 to -400,000-acre feet below the 1976 aquifer storage level to be sustainable. To reach this goal by 2030, it has been estimated that 40,000 acres of irrigated lands would need to be retired from irrigation. The Rio Grande Water Conservation District (RGWCD) will administer the grant on behalf of the Special Improvement District Number One. The Special Improvement District Number One (Subdistrict No. 1) of the RGWCD will be the fiscal agent for the grant.

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Type of Eligible Entity (check one)	
	Public (Government): municipalities, enterprises, counties, and State of Colorado agencies. Federal agencies are encouraged to work with local entities. Federal agencies are eligible, but only if they can make a compelling case for why a local partner cannot be the grant recipient.
X	**Public (Districts):** authorities, Title 32/special districts (conservancy, conservation, and irrigation districts), and water activity enterprises
	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, any organization that is not part of the government
	Covered Entity: as defined in Section 37-60-126 Colorado Revised Statutes

Type of Water Activity (check one)	
	Study
X	Implementation

Category of Water Activity (check all that apply)		
X	Nonconsumptive (Environmental)	
	Nonconsumptive (Recreational)	
X	Agricultural	
	Municipal/Industrial	
X	Needs Assessment	
X	Education & Outreach	
	Other	Explain: add the activities explanations why we think each category fits our project.

Location of Water Activity	
Please provide the general county and coordinates of the proposed activity below in **decimal degrees**. The Applicant shall also provide, in Exhibit C, a site map if applicable.	
County/Counties	Alamosa County, Rio Grande County, Saguache County
Latitude	-106.096957
Longitude	37.671513

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Water Activity Overview
Please provide a summary of the proposed water activity (200 words or less). Include a description of the activity and what the WSRF funding will be used for specifically (e.g. studies, permitting, construction). Provide a description of the water supply source to be utilized or the water body affected by the activity. Include details such as acres under irrigation, types of crops irrigated, number of residential and commercial taps, length of ditch improvements, length of pipe installed, area of habitat improvements. If this project addresses multiple purposes or spans multiple basins, please explain. The Applicant shall also provide, in Exhibit A, a detailed Statement of Work, Budget, and Schedule.
The water project will use WSRF funding for the purchase of groundwater telemetry units from the telemetry company, In-Situ, to monitor groundwater observational wells in Subdistrict No. 1. Subdistrict No. 1 represents the area north of the Rio Grande River between the cities of Monte Vista, Del Norte, Center, Mosca and Hooper. This district is approximately 246,000 acres in size using more than 3,000 irrigation wells and numerous diversions from the Rio Grande by ditches and canals to irrigate roughly 174,000 acres. In an agricultural driven economy, water consumption in this area is a serious matter. Since groundwater and surface water in this region has been considered "over appropriated", there has been a need to protect groundwater resources. Increasing frequency of groundwater data collected in the West Central San Luis Valley is necessary to better predict and understand what is available and what is considered sustainable. The project includes installation of 25 well telemetry systems (including pressure transducers) within the boundaries of the Subdistrict 1 at the RGWCD historical observation well locations (See **Map 1**). The well locations have been measured as part of an on-going study called the "Change in Unconfined Aquifer Storage." The telemetry units will collect water levels from each of the 25 wells twice a day to improve on the historic collection of monthly water levels for these wells. The telemetry company In-Situ has created an interface called HydroVu for users to visit to see daily water levels. WSRF funding will allow the purchase for the telemetry units for this project.

Measurable Results		
To catalog measurable results achieved with WSRF funds please provide any of the following values.		
	New Storage Created (acre-feet)	
	New Annual Water Supplies Developed or Conserved (acre-feet), Consumptive or Nonconsumptive	
	Existing Storage Preserved or Enhanced (acre-feet)	
	Length of Stream Restored or Protected (linear feet)	
	Efficiency Savings (indicate acre-feet/year OR dollars/year)	
	Area of Restored or Preserved Habitat (acres)	
	Length of Pipe/Canal Built or Improved	
X	Other	Explain: Telemetry and Hydrovu software installed and utilized at 25 wells to improve the frequency of groundwater observation wells within the "Change in Unconfined Aquifer Storage Study Area" in the San Luis Valley.

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Water Activity Justification

Provide a description of how this water activity supports the goals of Colorado's Water Plan, the most recent Statewide Water Supply Initiative, and the respective Roundtable Basin Implementation Plan and Education Action Plan (1). The Applicant is required to reference specific needs, goals, themes, or Identified Projects and Processes (IPPs), including citations (e.g. document, chapters, sections, or page numbers).

For applications that include a request for funds from the Statewide Account, the proposed water activity shall be evaluated based upon how well the proposal conforms to Colorado's Water Plan criteria for state support (CWP, Section 9.4, pp. 9-43 to 9-44;) (Also listed pp. 4-5 in 2016 WSRF Criteria and Guidelines).

The objective of Subdistrict No. 1 is complimentary to Colorado's Water Plan, the Statewide Water Supply Initiative and the Rio Grande Basin Implementation Plan by giving the people of this area a chance to govern themselves to protect their ground water supply. The formation of Subdistrict No. 1 has given its members a chance to protect groundwater supply and develop a long-term plan to mitigate or avoid economic and social impacts on agricultural and rural communities. This governance provides ability to better manage water in situations of extreme drought and formidable seasonal changes. Managing this water supply in better efforts to increase storage in the unconfined aquifer will also help to improve some of the non-consumptive needs in the Rio Grande Basin. By improving or increasing groundwater supply in a heavily irrigated area by groundwater, the Rio Grande hydraulic divide can stabilize to mitigate damages on riparian corridors while avoiding interference with Colorado's obligations under the Rio Grande Compact. By improving frequency of data collection within the West Central San Luis Valley, significant groundwater models like the Rio Grande Decision Support System can be improved with daily monitoring of the well network improving accuracy of the model within this area for the unconfined aquifer.

CWP:
The data telemetry project will help support Colorado's Water Plan by improving data frequency to provide more accurate information to visualize progress towards meeting the some of the goals of Subdistrict No. 1, keeping agriculture productive and efficient while recharging the unconfined aquifer.

SWSI:
Keep the hydraulic divide on the Rio Grande more stable for the river by using less groundwater. Increased data frequency by telemetry to better represent more frequent change.

RBIP:
Project supports Rio Grande Basin Implementation Plan by mitigating and avoiding, economic and social impacts on agricultural and rural communities by improving data frequency within a heavily groundwater use area. The project may provide more information for Subdistrict No. 1 to improve water conservation methods and to improve future observation efforts for ground water resources in order to meet normal agriculture yields, aquifer sustainability and water recharge goals.

EAP:
Using In-Situs web interface, HydroVu, the website can be used by anyone to learn what the water wells in the telemetry network are doing at any time using the Rio Grande Water Conservation District website to view the telemetry wells.

In summary, this well network would help to increase our understanding of the unconfined aquifer, to better forecast changes more dynamically as well as improvement of our measurements for the "Change in Unconfined Aquifer Storage Study Area." Data from the telemetry system will be used to improve the Rio Grande Decision Support System Ground Water model in efforts to improve validity of the model in this region.

(1) Access Basin Implementation Plans or Education Action Plans from Basin drop down menu.

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Matching Requirements: Basin Account Requests	
Basin (only) Account grant requests require a 25% match (cash and/or in-kind) from the Applicant or 3rd party and shall be accompanied by a **letter of commitment** as described in the 2016 WSRF Criteria and Guidelines (submitted on the contributing entity's letterhead). Attach additional sheet if necessary.	
Contributing Entity	Amount and Form of Match (note cash or in-kind)
Rio Grande Water Conservation District (Cash)	$ 20906.00
Rio Grande Water Conservation District (In-Kind)	$ 2916.00
Total Match	$ 23822.00 (25%)
If you requested a Waiver to the Basin Account matching requirements, indicate the percentage you wish waived.	

Matching Requirements: Statewide Account Requests	
Statewide Account grant requests require a 50% match as described in **the 2016 WSRF Criteria and Guidelines**. A minimum of 10% match shall be from Basin Account funds (cash only). A minimum of 10% match shall be provided by the applicant or 3rd party (cash, in-kind, or combination). The remaining 30% of the required match may be provided from any other source (Basin, applicant, or 3rd party) and shall be accompanied by a **letter of commitment.** Attach additional sheet if necessary.	
Contributing Entity	Amount and Form of Match (note cash or in-kind):
Total Match	
TOTAL Project Cost	
If you requested a Waiver to the Statewide Account matching, indicate % you wish waived. (Max 50% reduction of requirement).	

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Related Studies

Please provide a list of any related studies, including if the water activity is complimentary to or assists in the implementation of other CWCB programs.

Change in Unconfined Aquifer Storage Study:

Starting in 1974, the Change in Unconfined Aquifer Storage study and its study area was used to measure the approximate change in the shallow groundwater (unconfined aquifer) storage within the region north of the Rio Grande River in the West Central San Luis Valley (see **Map 2**). Since this area was considered an intensively farmed area the creation of the Change in Unconfined Aquifer Storage Study Area focused on this region. The study area includes 335,000 acres and was measured using 26 RGWCD historical observation wells (today using 27 wells). Annual and monthly changes were measured using the Thiessen Mean Method where a large polygon area is constructed to represent each observation well. An assumption is made that each observational well's water level is same throughout that well's polygon area. The change was plotted as a zero value at the beginning of the study period in 1975 with monthly changes plotted thereafter through this most recent month. For 2017 the current level in the Change in Unconfined Aquifer Storage for the West Central San Luis valley was -1,000,000 acre feet. This study is used currently by Subdistrict No. 1 as a measure of progress to reach its recharging and sustainability efforts for the unconfined aquifer by reaching a level of -200,000 to -400,000 acre feet below the 1976 aquifer storage level by 2030.

RGDSS:

The Rio Grande Decision Support System (RGDSS) has been described as an interactive computer-based system that utilizes data and computer models to help decision makers solve unstructured problems. Built and created by five major contractors, the computer system encompasses concepts of IT, hydrology, physics, mathematical formulation, groundwater, surface water, geology, irrigation, crops grown, irrigation methods and the relationships interlocking ground and surface water. RGDSS is then broken into major "tools" that make up the model including the groundwater model, surface water planning model, consumptive use model, water budget model and water rights administration model. Groundwater data collected by the RGWCD, National Parks Service, United States Geological Survey, Bureau of Land Management, US Bureau of Reclamation, Conejos Water Conservation District and a collection of other well measurements throughout the San Luis Valley help to calibrate and improve the ground water model in regards to making the ground water model represent what happens in the San Luis Valley.

Closed Basin Project:

The water salvaging project known as the Closed Basin Project spans 195 square miles of the sump zone of the closed basin east of Alamosa and 4 miles south of Moffat. The 42 mile canal comprised of 350 observation wells, 170 salvage wells, head gates, locks and pump stations are part of the telemetry network system known as a Supervisory Control and Data Acquisition (SCADA) system.

Previous CWCB Grants

List all previous or current CWCB grants (including WSRF) awarded to both the Applicant and Grantee. Include: 1) Applicant name; 2) Water activity name; 3) Approving RT(s); 4) CWCB board meeting date; 5) Contract number or purchase order

Neither the District nor the Special Improvement District #1 have any previous or existing CWCB loans or grants.

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Tax Payer Bill of Rights
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.
As a special enterprise of the Rio Grande Water Conservation District, Subdistrict #1 is not subject to TABOR restrictions.

May 29, 2018
Rio Grande Basin Round Table
623 E 4th Street
Alamosa, CO 81101

Colorado Water Conservation Board
1313 Sherman Street
Denver, CO 80203
Re: RGWCD Groundwater Telemetry Project

The Rio Grande Basin Roundtable with unanimous decision approves the proposed Rio Grande Water Conservation District Groundwater Telemetry Project. The total cost of the project is $95,170.00 with a 25% contribution match ($22,822.00) by the RGWCD in order to acquire funding approval from the CWCB to use the Water Supply Reserve Fund for a total of $71,348.00 from the Rio Grande Basin Roundtable.

Approval from the project was due to the project's function as an improvement towards Groundwater interpretation in the valley's first formed Groundwater Management Sub District (Special Improvement District Number One). One of Sub District No. 1's goals in its amended plan of water management was to recover groundwater levels in the unconfined aquifer within 200,000 to 400,000 acre feet below the January 1, 1976 unconfined aquifer storage level. The observation wells that are used to calculate the monthly and annual changes in aquifer storage for Subdistrict No. 1 to meet this goal are the wells to be improved by daily groundwater level collection by the RGWCD Groundwater Telemetry Project. Data from these wells would then be used as an improvement in the frequency of data for the subdistrict area north of the Rio Grande for the Rio Grande Decision Support System groundwater model. The increased data from the observational wells would be added to improve on the model that has been used to establish the major rules and regulations for groundwater within Division 3 of Colorado's Department of Water Resources.

This project meets Rio Grande Basin Implementation Plan Goals by improving data collection to better interpret sustainability of the unconfined aquifer's groundwater system in order to meet long-term water needs that promote overall basin health and protection of San Luis Valley economy in times of drought.

Nathan Coombs – Roundtable Chair

Rio Grande Basin Round Table

Signature: Date:

5-29-18

Water Supply Reserve Fund
Water Activity Summary Sheet
July 18-19, 2018
Agenda Item 27(b)

Applicant & Grantee:	Special Improvement District Number One (Subdistrict No. 1)
Water Activity Name:	Rio Grande Water Conservation District Groundwater Level Telemetry
Water Activity Purpose:	Agricultural & Environmental Needs Assessment
County:	Alamosa, Rio Grande, and Saguache
Drainage Basin:	Rio Grande
Water Source:	Groundwater in Subdistrict No. 1
Amount Requested:	$71,348 Rio Grande Basin Account
Matching Funds:	Applicant Match (cash & in-kind) = $23,822 • 33% of the basin request (meets 25% min) • 25% of the total project cost of $95,170

Staff Recommendation:
Staff recommends approval of up to $71,348 from the Rio Grande Basin Account to help fund the project titled: Rio Grande Water Conservation District Groundwater Level Telemetry.

Water Activity Summary: WSRF grant funds, if approved, will assist Subdistrict No. 1 with the installation, management and production of automatic groundwater telemetry systems and data for the Unconfined Aquifer Storage Study Area north of the Rio Grande River near the cities of Monte Vista, Del Norte, Center, Mosca, and Hooper. The project includes installation of 25 well telemetry units within the boundaries of the Subdistrict No. 1 at historical observation well locations. The telemetry units will be used to send data from the well twice a day, for all 25 wells in the study area. After the one-year monitoring operation the Rio Grande Water Conservation District (RGWCD) will begin to fund the project for long-term usage.

WSRF funding will help purchase the well telemetry unit, transducer, vented cables and other primary components from the telemetry company, In-Situ. Funding will also contribute to HydroVu Services and a cellular data plan. HydroVu is an interface created by the telemetry company, In-Situ, which allows users to visualize daily water levels. HydroVu services will act as multiple platform tool to backup new data, present data for each of the 25 wells for both administrative and public viewing, and share data in multiple formats for other users, publications, or studies.

Discussion: As described in the Rio Grande Roundtable chair's recommendation letter, this project was supported and recommended for approval on May 29, 2018. This project assists in satisfying Colorado's Water Plan Critical Goals and Actions as identified in Chapter 10.3, *A. Supply and Demand* and D. *Agriculture* by improving data collection to better interpret sustainability of the unconfined aquifer's groundwater system in order to meet long-term water needs and basin health in the San Luis Valley economy in times of drought.

In an agricultural driven economy, water consumption in this area is a serious matter. Since groundwater and surface water in this region has been considered "over appropriated", there has been a need to protect groundwater resources. Increasing frequency of groundwater data collected in the West Central San Luis Valley is necessary to better predict and understand what is available and what is considered sustainable.

Well Locations: The project includes installation of 25 well telemetry systems (including pressure transducers) within the boundaries of the Subdistrict 1 at the RGWCD historical observation well locations. The well locations have been measured as part of an on-going study called the "Change in Unconfined Aquifer Storage." The telemetry units will collect water levels from each of the 25 wells twice a day to improve on the historic collection of monthly water levels for these wells.

Issues/Additional Needs: No additional needs have been identified.
Eligibility Requirements: The application meets requirements of all eligibility components.
Evaluation Criteria: Staff has determined this activity satisfies the Evaluation Criteria.

Funding Summary / Matching Funds:

Funding Source	**Cash**	**In-Kind**	**Total**
Rio Grande Water Conservation District	$20,906	$2,916	$23,822
WSRF Rio Grande Basin Account	$71,348	n/a	$71,348
Totals	**$92,254**	**$2,916**	**$95,170**

CWCB Project Manager: Megan Holcomb