COLORADO WATER CONSERVATION BOARD

WATER SUPPLY RESERVE ACCOUNT
GRANT APPLICATION FORM

CONEJOS RIVER SYSTEM GAUGING STATIONS PROJECT
Rio Grande Basin

Name of Water Activity/Project | **Approving Basin Roundtable**

$407,280		**Amount from Statewide Account**	$387,280
Total Amount of Funds Requested		**Amount from Basin Account**	$ 20,000

Application Content

Attachments

1. Reference Information
2. Insurance Requirements (Projects Over $25,000)
3. WSRA Standard Contract (Projects Over $100,000)
4. W-9 Form (Required for All Projects)

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/approval is outlined in Attachment 1.

Once approved by the local Basin Roundtable, the applicant should submit this application, a detailed statement of work, detailed project budget, and project schedule to the CWCB staff by the application deadline.

The application deadlines are:

- Basin Account – 60 calendar days prior to the bi-monthly Board meeting
- Statewide Account – 60 calendar days prior to the September Board meeting

Board Meeting Dates	Basin Account Deadlines	Statewide Account Deadlines
July 20-21, 2010	May 21, 2010	n/a
September 21-22	July 23, 2010	July 23, 2010
November 16-17	September 17, 2010	n/a
January 2011	60 days prior	n/a
March 2011	60 days prior	n/a
May 2011	60 days prior	n/a
July 2011	60 days prior	n/a
September 2011	60 days prior	60 days prior

When completing this application, the applicant should refer to the WSRA Criteria and Guidelines available at: http://cwcb.state.co.us/IWMD.

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:

Mr. Todd Doherty
Colorado Water Conservation Board
Water Supply Planning Section
WSRA Application
1580 Logan Street, Suite 200
Denver, CO 80203
Todd.Doherty@state.co.us

If you have questions or need additional assistance, please contact Todd Doherty of the Water Supply Planning Section at 303-866-3441 x3210 or todd.doherty@state.co.us.

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

1. Applicant Name(s): **CONEJOS WATER CONSERVANCY DISTRICT**

Mailing address: Nathan Coombs, Manager
P. O. Box 550
Manassa, CO 81141

Taxpayer ID#: XH-84-0776076 Email address: cwc548@centurytel.net

Phone Numbers: Business: 719-843-5261
Home:
Fax: 719-843-5452

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

Name: Nathan Coombs

Position/Title Manager

3. Eligible entities that may apply for grants from the WSRA 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.

[x] Public (Districts) – special, water and sanitation, conservancy, conservation, irrigation, or 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 defined as any organization that is not part of the government.

4. Provide a brief description of your organization

The Conejos Water Conservancy District (CWCD or the District) is a public, quasi-governmental entity, eligible under SB 06-179 to apply for funds for this structural water project to establish a networked system of additional gauging stations and control gates on the Conejos River (the Conejos). The District's boundaries include about 100,000 acres, of which 86,000 acres are capable of being irrigated. An additional 8,000 acres that are not within the boundaries of the District are also irrigated by the Conejos and its tributaries. CWCD is that portion of the *San Luis Valley Project Colorado* designated by the Bureau of Reclamation in 1928 and formed in September 1940 under the *Water Conservancy Act of 1938* codified at 37-45-101. The CWCD formed an Enterprise when Platoro Reservoir, a U.S. Bureau of Reclamation project, became available for the CWCD's operation and control, after Colorado's Rio Grande Compact debt was satisfied in 1985. Total budget for the Conejos Water Conservancy District last year, in 2010, was $352,927, and the Enterprise budget was $156.487 of that amount, which includes one full time salary.

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

6. 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 copy of this standard contract is included in Attachment 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.

7. 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.

The Conejos Water Conservancy District is exempt from Tabor regulations per the passing of Referendum B in a Conejos County election held November 6, 2007 in which voters granted the District its exemption.

Part B. - Description of the Water Activity

1. Name of the Water Activity/Project:

CONEJOS RIVER SYSTEM GAUGING STATIONS PROJECT

2. What is the purpose of this grant application? (Please check all that apply.)

[ ] 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

Study or Analysis of:

- [ ] Structural project or activity
- [ ] Nonstructural project or activity
- [ ] Consumptive project or activity
- [ ] Nonconsumptive project or activity

[x] Structural and/ or nonstructural water project or activity

3. 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.

The Conejos Water Conservancy District plays a critical role in the management of flows on the Conejos River and its tributaries, ensuring that sufficient quantities of water are available to meet agricultural needs within the District and to satisfy Colorado's obligation to the Rio Grande Compact. The Compact requires deliveries of water from the Rio Grande to the New Mexico State line based on an annual volumetric delivery, with the volume of water obligated downstream in a given year depending on the volume of flow measured at four index stream gages within the Rio Grande basin. In any given year Colorado is required to deliver between 25 and 70 percent of the water generated in the two river systems -- the Rio Grande and the Conejos.

Within the District's approximately 86,000 acres of land capable of irrigation, water users in this part of Colorado represent the last line of defense for the Colorado Department of Water Resources (DWR), which administers the Rio Grande Compact. To meet the Compact's requirements, the District implements curtailments and manages storage in Platoro Reservoir according to DWR's best estimates of river flows and on its forecasts of expected flows.

In a recent report to the Rio Grande Basin Roundtable, Division Engineer Craig Cotten stated that despite DWR's best efforts, there are often large volume discrepancies between the forecasts and actual river flows, particularly on the Conejos system, and the cost of these errors to the District, to the Basin, and to Colorado is exorbitant. This proposal is the first in a series of District initiatives aimed at assisting the DWR in mutual efforts to gain a better understanding of the highly complex Conejos River system; to minimize forecasting errors and reduce the effect of those errors on water users; to equalize the distribution of irrigation water based on empirical data; and to facilitate and help streamline Colorado's compliance with the Rio Grande Compact.

Funds requested will be used to install 72 new electronic gauging stations and to automate four existing control gates on the Conejos River system. Flow data from the remote gauges will be transmitted to eight pods, or group measurement sites, each consisting of a Gateway receiver and cell modem. Data will be transmitted every minute to the pod sites for averaging, with average stage height and measured flow computed for each 15 minute period. This data will then be transmitted to the system's host site and made available to the District and to DWR on the internet.

In collaboration with water users, four control gates will be upgraded for remote operation through telemetry and integrated into the Conejos River System Gauging Stations project. The sites chosen for automatic gates are at the Headsmill, North Branch, Manassa, and Romero diversions. These diversions are the most used gates, serving the most acres and the greatest number of water users, thus representing the best investment. These bigger gates off of the river channel will logically be where the diurnal effect has the most impact. Each gate will be adjusted each day by the respective ditch riders, as the DWR dictates. Since there are multiple priorities that come to each gate there will be changes made, but the fluctuations of the river will not affect the decreed amount that should be going through the gates. The DWR's commissioners will be able to verify at a glance that the flows are correct, saving time and transportation costs.

The entire system will be solar powered, providing near-real-time data for flow management and allowing the District to check out and correct situations as they occur. This project vastly improves the effectiveness of the District's water management functions. Through close collaboration, it also provides DWR with data on the Conejos River system at a level of accuracy which has previously not been available in the Rio Grande Basin.

The goal of this project is to accurately track and deliver ordered reservoir water to water users on any reach on the system. Multiple benefits include the following: greatly reduce the uncertainty of curtailments to water users in the District; equitably distribute available water resources; improve drought protection through more efficient water management; increase augmentation and contribute to the restoration of the Basin's aquifers; enhance the function of the Conejos system flood plain; and create a management system which improves and facilitates DWR's ability to meet Colorado's obligations to the Rio Grande Compact.

By implementing this simple, affordable, and technically sophisticated system, the District establishes a baseline platform as the first step in a number of comprehensive water management initiatives anticipated to take place over the next few years.

Part C. – 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]

(1)This project supports Colorado's current system of allocating water within Colorado by establishing a system-wide remote monitoring system to more accurately account for the use of water within the District. It therefore improves and does not supersede, abrogate, or otherwise impair Colorado's existing water rights adjudication system. Nothing in this proposal suggests repealing or in any manner amending the State's system. By eliminating a great degree of guesswork in managing the District's water, this provides an efficient and equitable system for affirming and supporting the State constitution's recognition of water rights as a private usufructuary property right. By gathering and reporting data, this project does not 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) This project improves the ability of DWR to more accurately quantify water flows in the Conejos system, thereby protecting the contractual and property rights of water users as recognized by the State constitution and related statutes. By implementing this project, the District in no way diminishes, impairs, or causes any injury to any property or contractual right in the allocation or use of water, 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, but in effect supports and strengthens the State's hand in equitably apportioning and regulating the flows in the Conejos River system.

[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 letter which accompanies this proposal, from Mike Gibson, Chairman of the Rio Grande Interbasin 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 water activity contributes materially to the Rio Grande Basin's consumptive and nonconsumptive needs assessment, as set forth in SWSI 2010's mission statement, by establishing a remote sensing and control system which helps maintain and efficiently administer water supplies for the District's citizens, its agriculture, and its environment.

Water in the Rio Grande Basin is over appropriated, creating a critical need for efficient administration of existing supplies. As part of SWSI 2010, CWCB developed additional and more detailed criteria for Identified Projects and Processes (IPPs) than were developed for SWSI 1. This project, a first of its kind for the San Luis Valley, establishes an "identified project and process" which the Rio Grande Basin can count on for decades into the future to help meet future water supply needs. As a regional in-basin project, this project firms and protects in-basin water rights and potentially reduces the pressures which seek agricultural water transfers to meet predicted M&I needs. Implementing this project creates a state-of-the-art electronic means to gather, analyze, communicate, and regulate the use of water, establishing a base of empirical data which is critical to the Basin. This is the first of several projects being contemplated by the District to help DWR improve the accuracy of its forecasts and day-to-day management. This project provides a new tool to protect existing supplies, to narrow the M&I gap by the year 2050, as development in the San Luis Valley increases, and to more effectively fulfill Colorado's future water supply needs and its obligations to the Rio Grande Compact.

[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.

d) Matching Requirement: For requests from the Statewide Fund, the applicant is required to demonstrate a 20 percent (or greater) match of the request from the Statewide Account. 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 Part D of this application)

Total project cost is $499,780. Total WSRA funds requested is $407,280 The cost of installing 72 stilling wells is $90,000. The District and water users will match 75% of that cost, with $33,750 from each, requesting the remaining 25% from WSRA funds ($22,500). The cost of installing the control systems and operators on each of the four gates differs for each situation. Additional concrete work is required at the Romero diversion prior to installing the operators and telemetry. Automation for the four gates totals $155,120, with grant funds of $132,620. The District is contributing $5,000 to the North Branch operator, and the Manassa, and Headsmill are each contributing $5,000 for their respective operators, with the Romero's contribution being $7,500. Total matching funds from water users is $51,250 and from the District is $41.250, for a total of a $92,500 match, or 22.7% of the WSRA funds requested.

2. For Applications that include a request for funds from the Statewide Account, describe how the water activity meets the **Evaluation Criteria.** (Detailed in Part 3 of the Water Supply Reserve Account Criteria and Guidelines.)

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

a. As can be seen in the accompanying letters of support, The Conejos River System Gauging Stations Project is a collaborative effort involving numerous entities, particularly DWR. Through this cooperative process this project addresses multiple consumptive and non-consumptive needs and issues and addresses interests that extend beyond the Rio Grande Basin, as follows:

As Colorado seeks viable alternatives to permanent agricultural water transfers as a means for meeting a portion of the state's M&I water supply gap, most solutions studied by CWCB present significant hurdles which have to be overcome -- such as high transaction costs, increased complexity and cost of water rights administration, and the uncertainty of predicting and securing long-term supplies for municipalities. This project is different in each of those respects. It is affordable, simple to implement and administer, and it provides tools which strongly help to predict and address future consumptive and nonconsumptive needs by empirical methods of gathering and utilizing realtime data on river flows.

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.

The Rio Grande Basin Roundtable has determined that the single most critical water issue confronting the Basin is the current unsustainable management of surface and ground water. This project sets a new standard throughout the Basin, creating a management system which is participative, transparent, effective, and eminently sustainable.

The potential nonconsumptive benefits and impacts of this project on wildlife and fishery will be negligible, causing little if any change. The measurement, assessment, and improved water flow management practices and procedures proposed by this project will only tend to safeguard and promote the values of recreation and, with perhaps a slight increase in river channel flows over a year, may tend to benefit riparian habitat and wildlife. The District derives many benefits from its relationship with the Bureau of Land Management, and anticipates future opportunities to observe and respond to wildlife and fishery issues as part of gaining a better understanding of the Conejos River system.

This project helps preserve agricultural activity in the region, ensures both the quantity and the quality of water in the Conejos by monitoring and ensuring the safe and proper regulation of flows, and enables the District and DWR to more effectively keep water in the Basin. This project fulfills Colorado's water management objectives as follows:

- Assists in predicting and meeting M&I demands by the year 2050;
- Helps meet agricultural demands in a region having high levels of economic and social stress;
- Promotes real-time collaboration and cooperation across organizational boundaries, as modeled by Division #3 and the District;
- Encourages and establishes cooperation among all water users by making compliance visible, equitable, and mandatory.

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.

This project optimizes existing and future water supplies by enabling the District to know exactly where its water is, where the river is losing or gaining, and to clearly see where Reservoir water is and where Compact water is, thus helping implement a process which greatly improves the Basin's ability to meet its future water needs.

Another major benefit of this project is that it helps to protect the cultural values that are linked to water resources in this part of the San Luis Valley. As water is moved between areas, and as the District and DWR struggle to anticipate and satisfy Colorado's commitment to the Rio Grande Compact, this project helps achieve water management goals equitably and fairly. Beyond producing quantifiable data and numbers, the system proposed here provides operational flexibility and the ability to quickly and collaboratively coordinate resources. The District is certain that, over time, the effects of this project may begin to soften some previously hard boundaries as everyone simply learns to play by the rules.

This project is unique in the Valley and perhaps in Colorado, employing the latest technology and 21st Century tools to help address water use issues that date back many generations.

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).

Despite the good deal that this project represents, as shown below, the District could never undertake it on its own. Participation by water users on the Manassa, San Antonio, Romero, and North Branch systems are contributing to the overall cost of the project and helping to make it possible. The District cannot increase its indebtedness at this time.

In Basin and Statewide terms, this is an affordable project, yielding excellent long term returns on the investment. The District calculated "the cost of not knowing," based on current storage rates, and found that water users on the Conejos realized a loss in value in excess of **$13,000 per day** in 2011 for curtailments to "correct" the calculation of meeting our share of Colorado's Rio Grande Compact obligations. The effective cost/benefit ratio of this project, dividing total project cost by this year's "losses" was less than one percent. The benefits of this project extend far into the future, achieving a quantum-level improvement in Colorado's water management budget. But the District cannot do this alone. The requested funds are critical in order to implement this project.

e. The applicant must demonstrate its ability to implement the proposed activity.

The Conejos Water Conservancy District has a long and distinguished history of stewardship and has repeatedly proven its ability to implement major complex projects. It operates Platoro Reservoir in consultation with the State Engineer, the U.S. Bureau of Reclamation, and, for flood control, the U.S. Army Corps of Engineers, and has written agreements with each of these agencies. The District also has an agreement with the State Engineer to store and release Compact water without charge to the State.

In September, 2009 CWCB granted the District's request for funding in the amount of $250,000 for the Platoro Reservoir Restoration project. This 3-phase project involved creating a bypass system in Phase I; re-coating the 56" penstocks in Phase II (completed in the 4th quarter of 2009); and replacing the discharge valves in Phase III (completed in the 4th quarter of 2010). The completion of that project was a great accomplishment, extending the expected service life of the discharge valves for another 60-75 years and allowing the District to more accurately control the flow of water at the dam.

The challenges of unpredictable climate and the vital role of Platoro Reservoir were made clear in a report by Pat McDermott of the Colorado Division of Water Resources Division III office to the Rio Grande Roundtable at its March 2008 meeting. McDermott was concerned about likely flooding in the lower Conejos River system due to heavy snowpack in the Los Pinos and San Antonio areas which was about 200% higher than normal. He noted that "Platoro Reservoir will provide good flood coverage for the upper Conejos area," but he was "concerned about the area below Antonito because there's

uncontrolled flow on the Rio San Antonio and Los Pinos." The Platoro Reservoir Crest of the Dam Repair project addresses the requirements of the Bureau of Reclamation's Periodic Facility Review, keeping this valuable facility in top working order. Mr. McDermott's concerns about "uncontrolled flow" are being addressed in this Gauging Stations Project.

Over the years these and many other major projects have been implemented by the District, proving that it has the capacity to implement this project.

The District will contract for the building and installation of the stilling wells and the required concrete work. The search for gauging stations and telemetry started early in 2011 with potential bids from Colorado Digital Labs, Inc., based in the San Luis Valley; from Rubicon Water, based in Fort Collins; and from the partner organizations of Dynotek and AMCi. The only contractor to meet the District's criteria in terms of relevant experience, reasonable cost, response time and flexibility, and being able to provide user-friendly and relevant technology was determined to be the combination of Dynotek and AMCi.

Dynotek is a ten year old company that specializes in the manufacture, installation and servicing of water level and flow sensors, data management displays, controllers and data loggers. Dynotek has a long list of satisfied repeat customers in the West, and particularly in Colorado. Dynotek's growing client base includes both large and small water and irrigation management districts, state and local agencies, towns, system integrators, hydrologists, engineers and oil and gas companies. Dynotek warrants its equipment for three years and specializes in fast and quality delivery and service.

AMCi has been in the business of providing remote data delivery to clients throughout the USA and Canada since 1998. AMCi specializes in turn-key wireless telemetry solutions for portable and fixed-site assets for commercial, industrial, and governmental agencies using an application appropriate mix of radio, cellular, and satellite technologies. AMCi provides fully integrated solutions that include field equipment, communications services, and a hosted, full-function, Internet-accessed user application called SatAlarm-Server. AMCi has hundreds of active customers with thousands of active sites across North America.

The District has determined that the Dynotek/AMCi partnership has the ability to do this job. As their material claims, they can "create the most economic, technically advanced and flexible solutions to the increasing demand for accurate and rapid water management data within the State." Most measurement equipment is guaranteed for three years and installation and service is offered with every system that is installed. Client training and troubleshooting assistance is included with the initial installation and is considered essential for successful system start-up. Twenty four hour rapid response is provided willingly and the District has received positive client references about their work.

Dynotek/AMCi provided the following list of successful projects relevant to this proposal, including a wide range of clients and applications along the I-76 corridor following the South Platte River under the jurisdiction of CODWR Division 1 and along the Arkansas River under the jurisdiction of CODWR Division 2:

Quality Water, Ft. Morgan CO - Augmentation flow measurement and data logging

Fort Morgan Ditch - Multiple augmentation and diversion flow monitoring stations including metering and data logging

XCEL Energy, Pawnee Station - Well flow monitoring and data logging

Ranch 70/17, Kersey CO - Multiple well level monitoring with telemetry utilizing a mesh radio network reporting 23 locations to a central cellular modem for telemetry transmission to a hosted website

Heyborne site, Crook CO - Flow monitoring on two production wells utilizing cellular telemetry to report to Division 1 of the CODWR

Schuler Site, Crook, CO – Flow Monitoring in an augmentation pond.

Arkansas Groundwater Users Association, Pueblo, CO – Monitoring three points along the Excelsior Ditch and multiple water meters in a single mesh radio network with satellite egress

City of Pueblo Board of Water Works, Lake Minnequa, Pueblo, CO – Monitoring lake water level with level and rate of change threshold alarms using cellular telemetry

City of Pueblo Board of Water Works, Bessemer Ditch, Avondale, CO – Flow monitoring and data logging

Aurora Water, Holbrook Reservoir. Inlet and outlet flow and reservoir level & capacity monitoring with cellular telemetry

In summary, the District is capable of implementing the terms of this proposal and it has confidence in the combined capabilities of the Dynotek/AMCi partnership. Their technology is illustrated on the following pages.

f. The applicant is providing matching funds and the amount of matching funds or is obtaining partial funding from other sources

As detailed in Part C1d) above, the applicant is providing over 22.7 in matching funds.

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

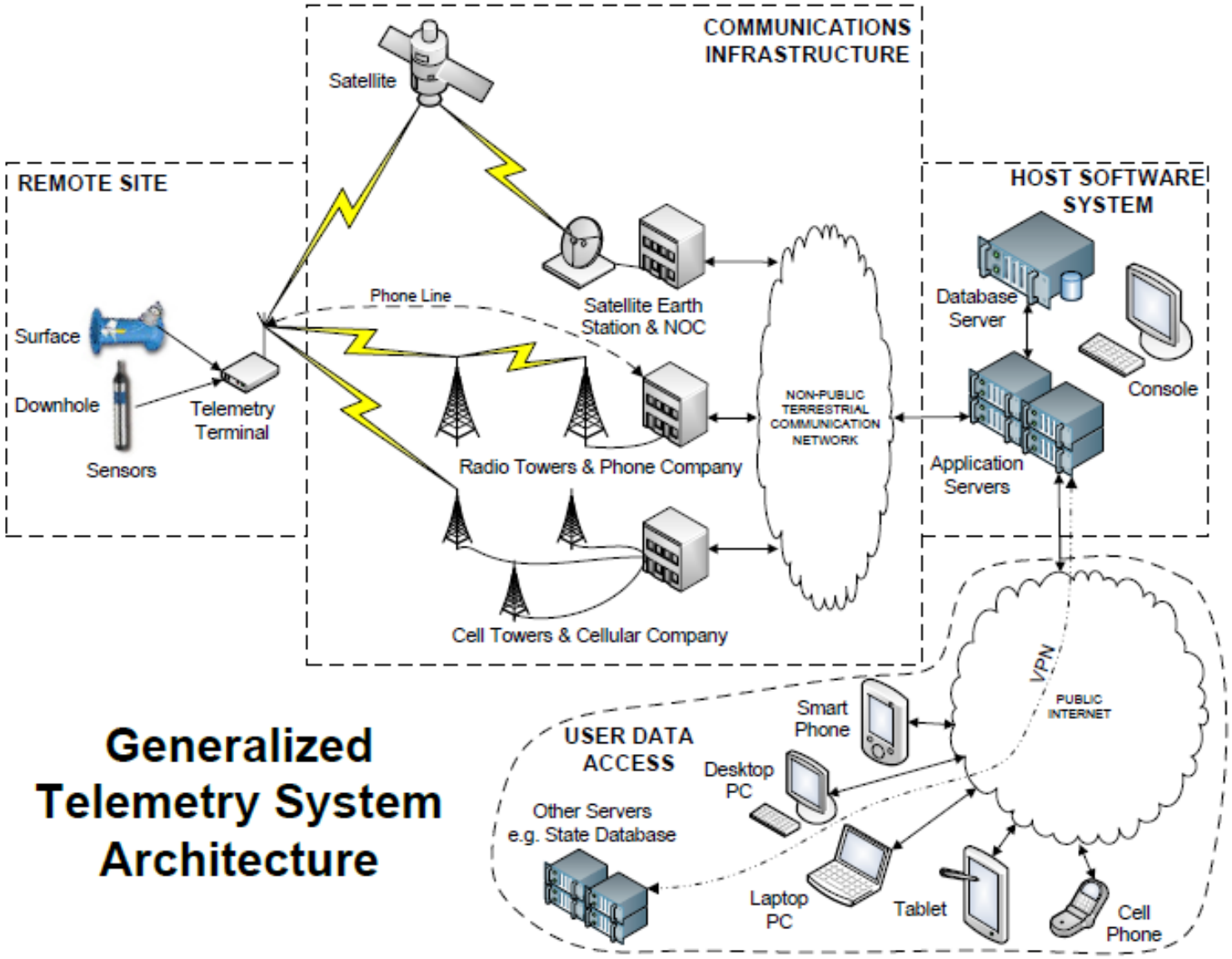
g. The Conejos River System Gauging Stations Project helps sustain agriculture by equitably balancing and administering limited water resources.

h. The water activity establishes a new and higher standard for administering Rio Grande Compact waters, creating tools and efficiencies which have previously not been used in the Rio Grande Basin. By establishing a baseline of knowledge and empirical observations, this project promotes maximum utilization of state waters.

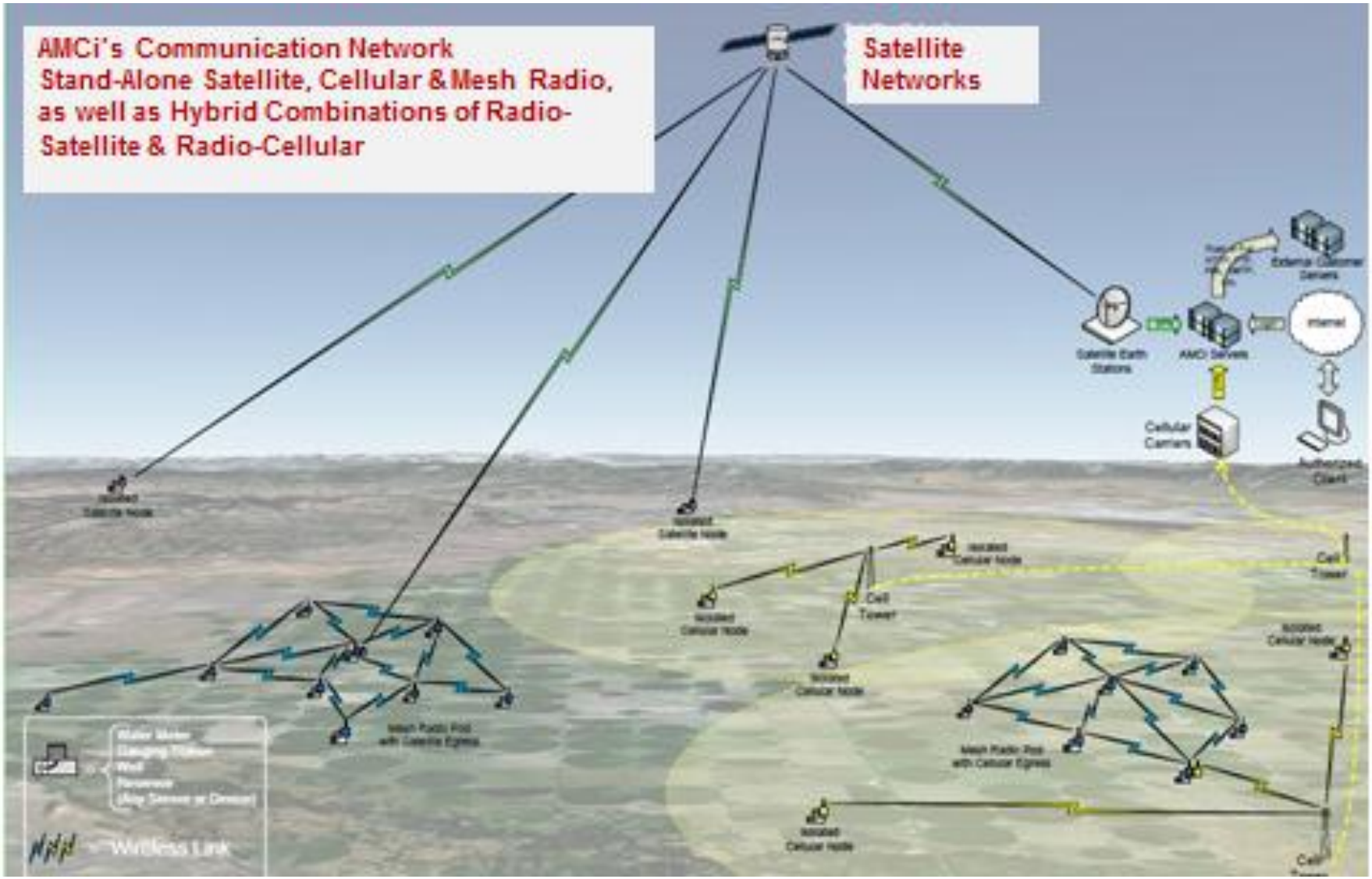
j. Coupled with other measures to improve forecasting which the District plans to pursue, this project goes a long way toward improving DWR's accuracy in distributing water among the District's users and ensuring that curtailments are equitably and minimally applied, while at the same time meeting Colorado's obligation to the Compact. This represents a high level of benefit to Colorado in relationship to the amount of funds requested.

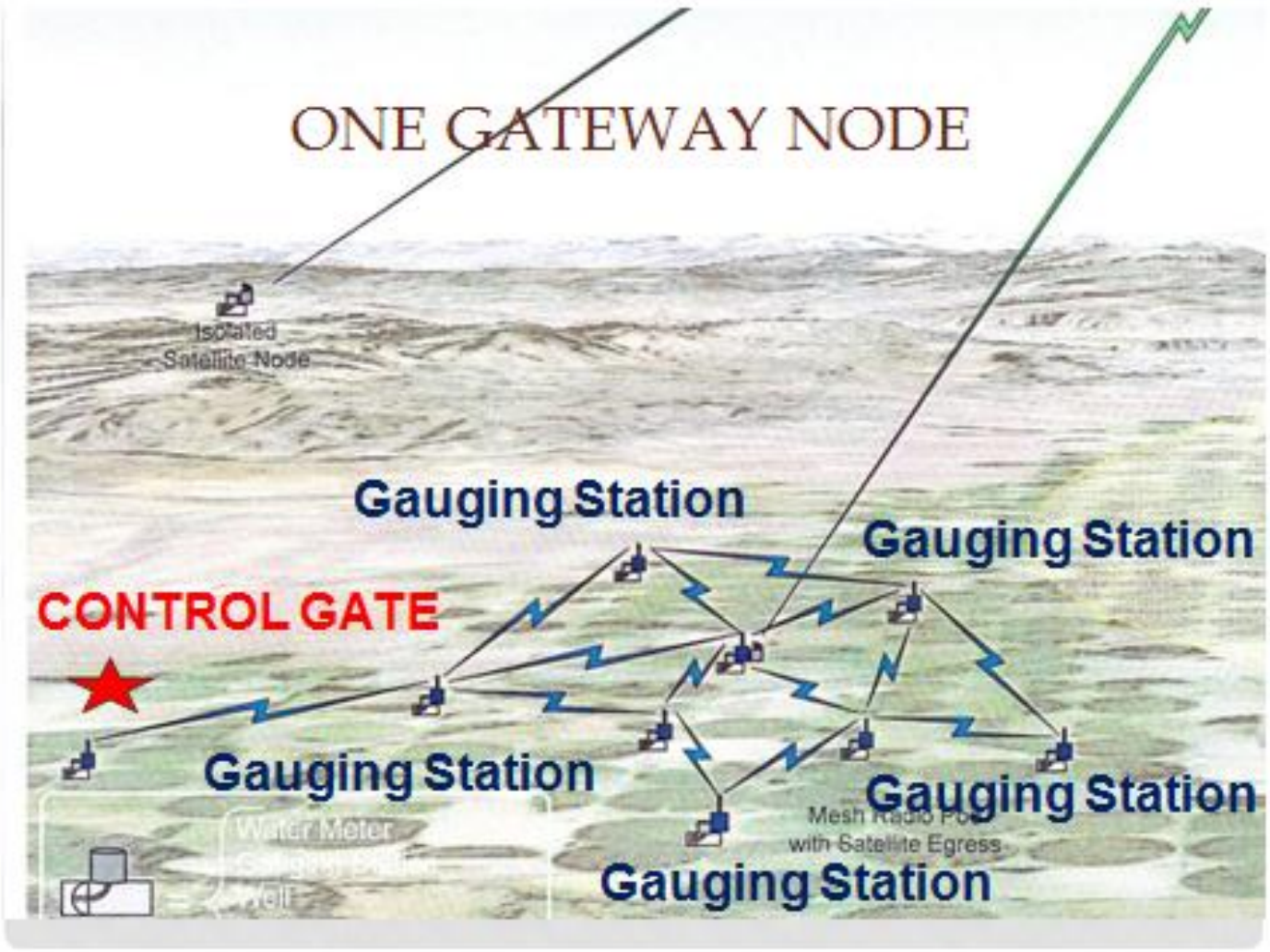
The following graphics illustrate the high level of capability of the Dynotek/AMCi contracting team.

CAPABILITY TO IMPLEMENT PROJECT – schematic of a typical Dynotek/AMCi network.

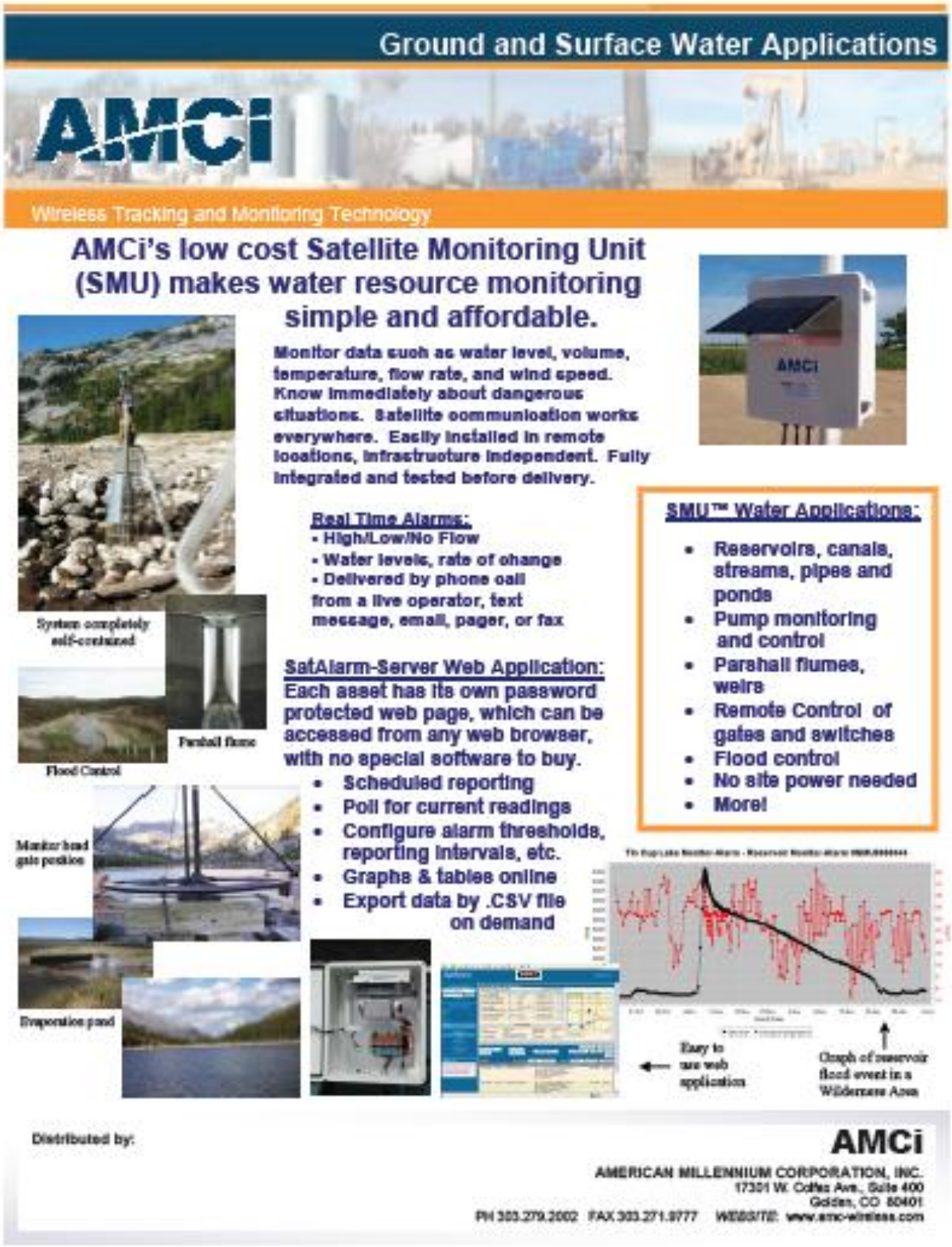


CAPABILITY TO IMPLEMENT PROJECT – How the system works, in schematic form.




ONE GATEWAY NODE
Isolated
Satellite Node
Gauging Station
Gauging Station
CONTROL GATE
Gauging Station
Gauging Station
Mesh Radio
with Satellite Egress
Gauging Station

CAPABILITY TO IMPLEMENT PROJECT – AMCI brochure



Part D. – 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 the name/location of water bodies affected by the water activity.

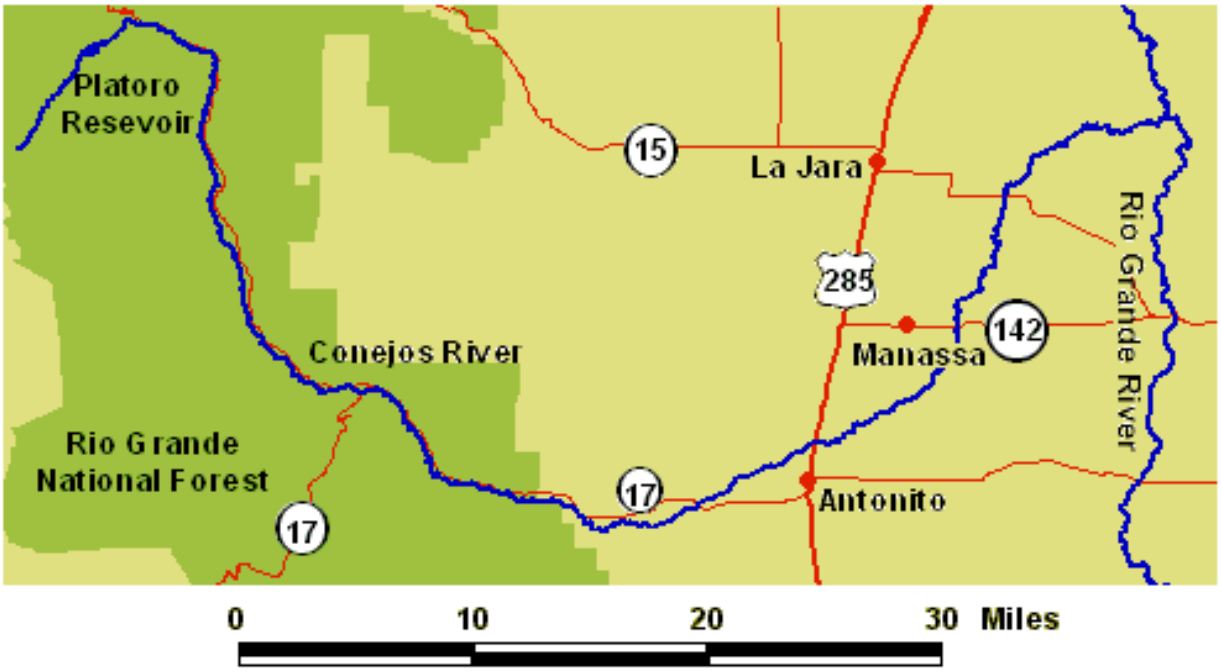
Water Source -- The water supply source is determined by the geomorphology and hydrology of the San Luis Valley and the Rio Grande Basin. The San Luis Valley is located in south-central Colorado and northern New Mexico, and provides drainage to an area of approximately 8000 square miles. The valley extends south from Poncha Pass to beyond the Colorado-New Mexico state line, and is bordered on the east by the Sangre de Cristo Mountains, and by the San Juan Mountains and the Continental Divide to the west. The high treeless plain that makes up the Valley floor has an average elevation of about 7500 feet above sea level. Many of the mountains that surround the valley reach in excess of 12,000 feet and feed numerous streams that flow into the valley, the largest two being the Rio Grande and the Conejos River. The Rio Grande flows across the middle of the Valley from west to east before turning south near Alamosa, while the Conejos River flows along the valley's southern border until it meets the Rio Grande near Los Sauses.

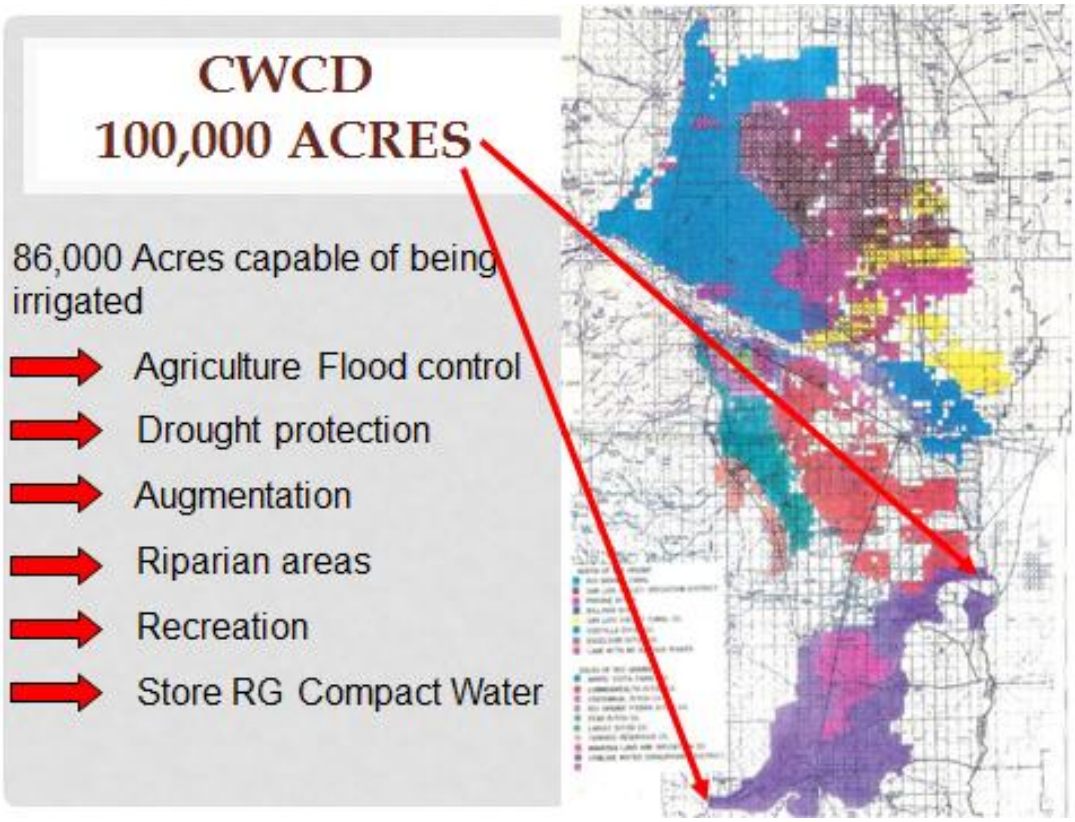
The water body to be affected by this project is the Conejos River and its many tributaries, together with the Rio Grande system's downstream water deliveries destined to New Mexico, Texas, and Mexico under terms of the Rio Grande Compact. The following map details the boundaries of the Conejos Water Conservancy District, from Platoro Reservoir to "The Confluence," to the Los Sauses gauging station. Each yellow node on the map represents a diversion, most of which will be monitored by the remote system described in the following pages.

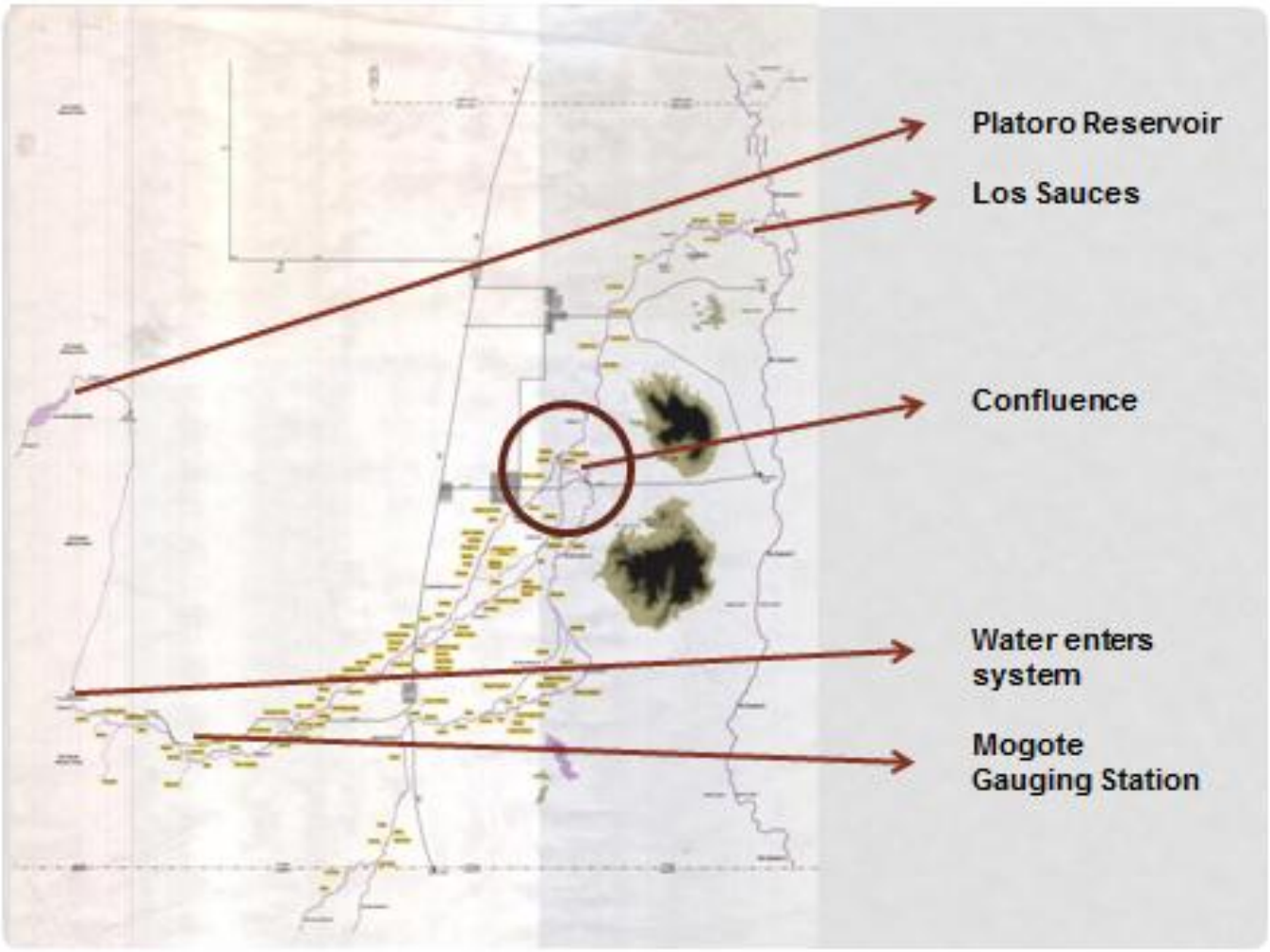
Administration - The District has a decreed water right for storage in Platoro Reservoir, a decreed right to exchange individual direct flow water to the reservoir as an alternate point of diversion, and a decreed right for exchange of water from the Norton Drain and Closed Basin Project to the reservoir. CWCD was formed in order to "acquire and appropriate waters of the Conejos River and its tributaries; to divert, store, and transport such waters by means of works, as defined in the Water Conservancy Act; to control floods by means of the works; to conserve, develop and stabilize water supplies for domestic, irrigation, power, manufacturing and other beneficial uses within the territory included in the boundaries of the District." These purposes continue to guide all operations of the District.

The following aerial photograph illustrates the complexity of "The Confluence," and the overlaying schematic attempts to show the multi-directional forces and flows which confound today's best attempts to adequately determine where Reservoir water is and where Compact water is at any time, and how to quantify how much wet water is flowing through the system.

Maps on the following pages illustrate the above points.

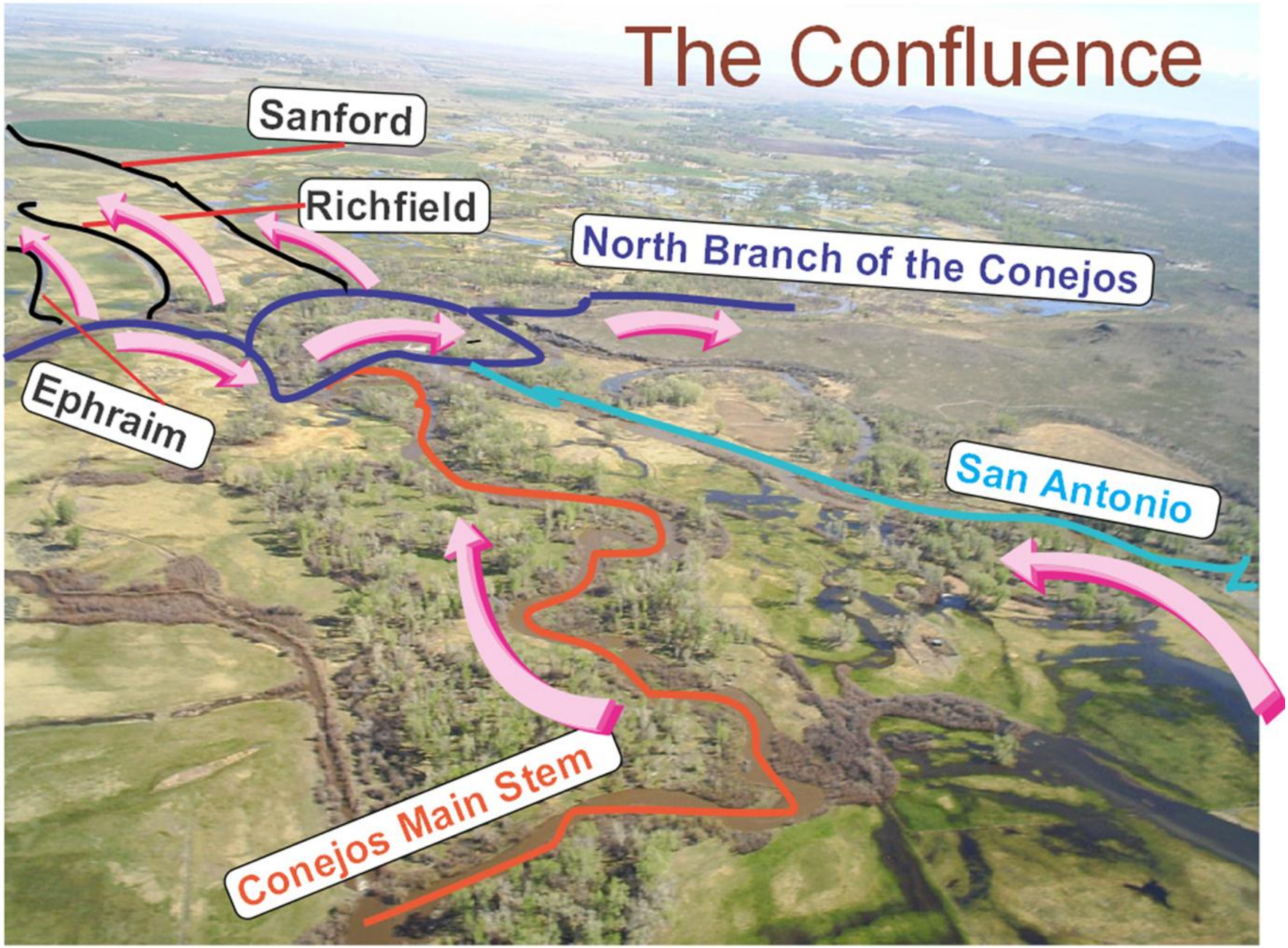

Platoro
Resevoir
15
La Jara
285
142
Manassa
Rio Grande River
Conejos River
Rio Grande
National Forest
17
17
Antonito
0
10
20
30 Miles


CWCD
100,000 ACRES
86,000 Acres capable of being irrigated
Agriculture Flood control
Drought protection
Augmentation
Riparian areas
Recreation
Store RG Compact Water



The challenge of quantifying flows at The Confluence is evident in the following two aerial photos.

Water Form


The Confluence
Sanford
Richfield
North Branch of the Conejos
Ephraim
San Antonio
Conejos Main Stem

1. Please provide a brief narrative of any related or relevant previous studies.

In the history of the District perhaps hundreds of studies have been done. In previous proposals to CWCB the District has exhaustively detailed studies pertaining to the San Luis Valley Project; the establishment, operation, and administration of Platoro Reservoir; the Rio Grande Compact; difficulties with and replacement of the valves at the reservoir in the Platoro Reservoir Restoration Project; and the most recent CWCB-funded project to repair the crest of the dam at Platoro.

The District is not aware of any other studies having been done in the Rio Grande Basin pertaining to the use of remote monitoring and telemetry as a means of managing water flows.

2. 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.

Please provide a detailed statement of work using the following template. Additional sections or modifications may be included as necessary. Please define all acronyms. If a grant is awarded an independent statement of work document will be required with correct page numbers.

Statement of Work

WATER ACTIVITY NAME – The Conejos River System Gauging Stations Project

GRANT RECIPIENT – The Conejos Water Conservancy District

FUNDING SOURCE – Basin Funds $20,000, Statewide funds $387,280
Matching funds $92,500

INTRODUCTION AND BACKGROUND (Please limit to no more than 200 words)

This proposal seeks to better understand the complex Conejos River system; to minimize forecasting errors and reduce the effect of those errors on water users; to equalize the distribution of irrigation water based on empirical data; and to facilitate and help streamline Colorado's compliance with the Rio Grande Compact.

Funds requested will install 72 electronic gauging stations and will install remote control systems for four diversions off the Conejos. Flow data from the remote gauges will be transmitted every minute to eight Gateway pods, where average stage height and measured flow will be computed every 15 minutes and transmitted to the system's host site. The District and DWR will access this near-real-time data over the internet. Telemetry and remote control will be installed at the sites which serve the most acres and the largest number of water users.

This project will enable the District to monitor the flows throughout the entire Conejos River system, improving the effectiveness of the District's water management functions and providing DWR with data at a level of accuracy previously not available.

OBJECTIVES

The goal of this project is to accurately track and deliver ordered reservoir water to water users on any reach on the system. This will greatly reduce the uncertainty of curtailments to water users in the District; equitably distribute available water resources; and improve drought protection through more efficient use of limited water resources.

TASK #1 – Gauging Stations Nos. 1-9

Description of Task – Gauging stations will be installed following the attached schedule.

Method – Contractor will install pre-assembled stilling wells according to Dynotek/AMCI's mapping for the nodes, following specifications and adjusting for water levels at each site. Dynotek/AMCi ("D/A") will install remote node water stage measurement systems at each gauging station site. D/A will install standalone float measurement box and relaying data radio transceiver with antenna at each site, mount the hardware for the float box and radio, and calibrate to acceptable accuracy at each site.

Deliverable – Individual nodes will come online as they are completed, with entire networked system being solar powered.

TASK #1a - Automated Gate #1

***Description of Task – Install operators to automate gates at the first of four locations. Specifications for all sites are described in this task, with installation of each operator scheduled in accordance with seasonal and river conditions. Romero's concrete headgate structure will be replaced as soon as possible, depending on funding schedule, but no later than spring of 2013, with new gate and operator installed upon completion of concrete structure. Operators for Northbranch, Headsmill, and Manassa III will be installed at the earliest opportunity in 2012.

Method/Procedure – Install operators at one of the following locations, as specified. Install radio/cell phone telemetry, with electric actuators and solar power. (See Schedule)

- Headsmill - 7 x 4 Slide Gate. Replace Stem and head channel guide, install actuator, and connect to standalone cell based communication and control unit.

- Romero - 8 x 5 Radial Gate. New hoist assembly, lift cables and Rotork IQ lift assembly connected to standalone cell based communication and control unit.

- Northbranch - 8 x 4 Radial Gate. New hoist assembly, lift cables and Rotork IQ lift assembly connected to standalone cell based communication and control unit.

- Manassa III - 12 x 4 Radial Gate. New hoist assembly, lift cables and Rotork IQ lift assembly connected to standalone cell based communication and control unit.

Deliverable – Each gate's operator is installed and connected to telemetry system, brought online, and tested to determined levels of accuracy.

TASK #1b – Gateway Node #1

Description of Task - D/A will establish one of eight gateway nodes.

Method – D/A will install standalone float measurement box, PLC, Gateway radio, and cellular terminal, using mounting hardware for the float box and radio.

Deliverable – Each Gateway node will compute and transmit data from gauging stations to host site, with this data being available to the District and to DWR.

TASK #2 - Gauging Stations Nos. 10-18

Description of Task – Gauging stations will be installed following the attached schedule.

Method – Contractor will install pre-assembled stilling wells according to Dynotek/AMCI's mapping for the nodes, following specifications and adjusting for water levels at each site. Dynotek/AMCi ("D/A") will install remote node water stage measurement systems at each gauging station site. D/A will install standalone float measurement box and relaying data radio transceiver with antenna at each site, mount the hardware for the float box and radio, and calibrate to acceptable accuracy at each site.
Deliverable – Individual nodes will come online as they are completed, with entire networked system being solar powered.

TASK #2a – Automated Gate #2

Description of Task – Install operators to automate gates at the second of four locations. Specifications for all sites are described in this task, with installation of each operator scheduled in accordance with seasonal and river conditions. Romero's concrete headgate structure will be replaced as soon as possible, depending on funding schedule, in the spring or fall of 2012 or 2013, with new gate and operator installed upon completion of concrete structure. Operators for Northbranch, Headsmill, and Manassa III will be installed beginning spring 2013.

Method/Procedure – Install operators at one of the following locations, as specified. Install radio/cell phone telemetry, with electric actuators and solar power. (See Schedule)

- Headsmill - 7 x 4 Slide Gate. Replace Stem and head channel guide, install actuator, and connect to standalone cell based communication and control unit.

- Romero - 8 x 5 Radial Gate. New hoist assembly, lift cables and Rotork IQ lift assembly connected to standalone cell based communication and control unit.

- Northbranch - 8 x 4 Radial Gate. New hoist assembly, lift cables and Rotork IQ lift assembly connected to standalone cell based communication and control unit.

- Manassa III - 12 x 4 Radial Gate. New hoist assembly, lift cables and Rotork IQ lift assembly connected to standalone cell based communication and control unit.

Deliverable – Each gate's operator is installed and connected to telemetry system, brought online, and tested to determined levels of accuracy.

TASK #2b – Gateway Node #2

Description of Task - D/A will establish the second of eight gateway nodes.

Method – D/A will install standalone float measurement box, PLC, Gateway radio, and cellular terminal, using mounting hardware for the float box and radio.

Deliverable – Each Gateway node will compute and transmit data from gauging stations to host site, with this data being available to the District and to DWR.

TASK #3 - Gauging Stations Nos. 19-27

Description of Task – Gauging stations will be installed following the attached schedule.

Method – Contractor will install pre-assembled stilling wells according to Dynotek/AMCI's mapping for the nodes, following specifications and adjusting for water levels at each site. Dynotek/AMCi ("D/A") will install remote node water stage measurement systems at each gauging station site. D/A will install standalone float measurement box and relaying data radio transceiver with antenna at each site, mount the hardware for the float box and radio, and calibrate to acceptable accuracy at each site.

Deliverable – Individual nodes will come online as they are completed, with entire networked system being solar powered.

TASK #3a - Automated Gate #3

Description of Task – Install operators to automate gates at the third of four locations. Specifications for all sites are described in this task, with installation of each operator scheduled in accordance with seasonal and river conditions. Romero's concrete headgate structure will be replaced as soon as possible, depending on funding schedule, in the spring or fall of 2012 or 2013, with new gate and operator installed upon completion of concrete structure. Operators for Northbranch, Headsmill, and Manassa III will be installed beginning spring 2013.

Method/Procedure – Install operators at one of the following locations, as specified. Install radio/cell phone telemetry, with electric actuators and solar power. (See Schedule)

- Headsmill - 7 x 4 Slide Gate. Replace Stem and head channel guide, install actuator, and connect to standalone cell based communication and control unit.

- Romero - 8 x 5 Radial Gate. New hoist assembly, lift cables and Rotork IQ lift assembly connected to standalone cell based communication and control unit.

- Northbranch - 8 x 4 Radial Gate. New hoist assembly, lift cables and Rotork IQ lift assembly connected to standalone cell based communication and control unit.

- Manassa III - 12 x 4 Radial Gate. New hoist assembly, lift cables and Rotork IQ lift assembly connected to standalone cell based communication and control unit.

Deliverable – Each gate's operator is installed and connected to telemetry system, brought online, and tested to determined levels of accuracy.

TASK #3b - Gateway Node #3

Description of Task - D/A will establish the third of eight gateway nodes.

Method – D/A will install standalone float measurement box, PLC, Gateway radio, and cellular terminal, using mounting hardware for the float box and radio.

Deliverable – Each Gateway node will compute and transmit data from gauging stations to host site, with this data being available to the District and to DWR.

TASK #4 - Gauging Stations Nos. 28-36

Description of Task – Gauging stations will be installed following the attached schedule.

Method – Contractor will install pre-assembled stilling wells according to Dynotek/AMCI's mapping for the nodes, following specifications and adjusting for water levels at each site. Dynotek/AMCi ("D/A") will install remote node water stage measurement systems at each gauging station site. D/A will install standalone float measurement box and relaying data radio transceiver with antenna at each site, mount the hardware for the float box and radio, and calibrate to acceptable accuracy at each site.

Deliverable – Individual nodes will come online as they are completed, with entire networked system being solar powered.

TASK #4a - Automated Gate #4

Description of Task – Install operators to automate gates at the last of four locations. Specifications for all sites are described in this task, with installation of each operator scheduled in accordance with seasonal and river conditions. Romero's concrete headgate structure will be replaced as soon as possible, depending on funding schedule, in the spring or fall of 2012 or 2013, with new gate and operator installed upon completion of concrete structure. Operators for Northbranch, Headsmill, and Manassa III will be installed beginning spring 2013.

Method/Procedure – Install operators at one of the following locations, as specified. Install radio/cell phone telemetry, with electric actuators and solar power. (See Schedule)

- Headsmill - 7 x 4 Slide Gate. Replace Stem and head channel guide, install actuator, and connect to standalone cell based communication and control unit.

- Romero - 8 x 5 Radial Gate. New hoist assembly, lift cables and Rotork IQ lift assembly connected to standalone cell based communication and control unit.

- Northbranch - 8 x 4 Radial Gate. New hoist assembly, lift cables and Rotork IQ lift assembly connected to standalone cell based communication and control unit.

- Manassa III - 12 x 4 Radial Gate. New hoist assembly, lift cables and Rotork IQ lift assembly connected to standalone cell based communication and control unit.

Deliverable – All four gates will be automated for remote control, connected and networked into the system, and will operate at determined levels of accuracy.

TASK #4b - Gateway Node #4

Description of Task - D/A will establish the fourth of eight gateway nodes.

Method – D/A will install standalone float measurement box, PLC, Gateway radio, and cellular terminal, using mounting hardware for the float box and radio.

Deliverable – Each Gateway node will compute and transmit data from gauging stations to host site, with this data being available to the District and to DWR.

TASK #5 Gauging Stations Nos. 37-45

Description of Task – Gauging stations will be installed following the attached schedule.

Method – Contractor will install pre-assembled stilling wells according to Dynotek/AMCI's mapping for the nodes, following specifications and adjusting for water levels at each site. Dynotek/AMCi ("D/A") will install remote node water stage measurement systems at each gauging station site. D/A will install standalone float measurement box and relaying data radio transceiver with antenna at each site, mount the hardware for the float box and radio, and calibrate to acceptable accuracy at each site. Deliverable – Individual nodes will come online as they are completed, with entire networked system being solar powered.

TASK #5a Gateway Node #5

Description of Task - D/A will establish the fifth of eight gateway nodes.

Method – D/A will install standalone float measurement box, PLC, Gateway radio, and cellular terminal, using mounting hardware for the float box and radio.

Deliverable – Each Gateway node will compute and transmit data from gauging stations to host site, with this data being available to the District and to DWR.

TASK #6 Gauging Stations Nos. 46-54

Description of Task – Gauging stations will be installed following the attached schedule.

Method – Contractor will install pre-assembled stilling wells according to Dynotek/AMCI's mapping for the nodes, following specifications and adjusting for water levels at each site. Dynotek/AMCi ("D/A") will install remote node water stage measurement systems at each gauging station site. D/A will install standalone float measurement box and relaying data radio transceiver with antenna at each site, mount the hardware for the float box and radio, and calibrate to acceptable accuracy at each site.

Deliverable – Individual nodes will come online as they are completed, with entire networked system being solar powered.

TASK #6a Gateway Node #6

Description of Task - D/A will establish the sixth of eight gateway nodes.

Method – D/A will install standalone float measurement box, PLC, Gateway radio, and cellular terminal, using mounting hardware for the float box and radio.

Deliverable – Each Gateway node will compute and transmit data from gauging stations to host site, with this data being available to the District and to DWR.

TASK #7 Gauging Stations Nos. 55-63

Description of Task – Gauging stations will be installed following the attached schedule.

Method – Contractor will install pre-assembled stilling wells according to Dynotek/AMCI's mapping for the nodes, following specifications and adjusting for water levels at each site. Dynotek/AMCi ("D/A") will install remote node water stage measurement systems at each gauging station site. D/A will install standalone float measurement box and relaying data radio transceiver with antenna at each site, mount the hardware for the float box and radio, and calibrate to acceptable accuracy at each site.

Deliverable – Individual nodes will come online as they are completed, with entire networked system being solar powered.

TASK #7a Gateway Node #7

Description of Task - D/A will establish the seventh of eight gateway nodes.

Method – D/A will install standalone float measurement box, PLC, Gateway radio, and cellular terminal, using mounting hardware for the float box and radio.

Deliverable – Each Gateway node will compute and transmit data from gauging stations to host site, with this data being available to the District and to DWR.

TASK #8 Gauging Stations Nos. 64-72

Description of Task – Gauging stations will be installed following the attached schedule.

Method – Contractor will install pre-assembled stilling wells according to Dynotek/AMCI's mapping for the nodes, following specifications and adjusting for water levels at each site. Dynotek/AMCi ("D/A") will install remote node water stage measurement systems at each gauging station site. D/A will install standalone float measurement box and relaying data radio transceiver with antenna at each site, mount the hardware for the float box and radio, and calibrate to acceptable accuracy at each site.

Deliverable – All stations will be completed and online.

TASK #8a Gateway Node #8

Description of Task - D/A will establish the eighth and final gateway node.

Method – D/A will install standalone float measurement box, PLC, Gateway radio, and cellular terminal, using mounting hardware for the float box and radio.

Deliverable – Each Gateway node will compute and transmit data from gauging stations to host site, with this data being available to the District and to DWR. All stations will be completed and online.

TASK #9 Total System Beta Test

Description of Task – Test all components and systems as they come online. Ensure operational parameters are met to the satisfaction of the District.

Method – Assess all measurement and control functions of system components, identifying and calibrating for optimum performance.

Deliverable – Completion of the Conejos River System Gauging Stations Project to accurately track and deliver ordered reservoir water to water users on any reach on the system. Reduced uncertainty of curtailments to water users in the District. More equitable distribution of available water resources. Improved drought protection through more efficient use of limited water resources.

TASK #10 Reporting and Final Deliverable

Description of Task – The District shall provide the CWCB a progress report every 6 months, beginning from the date of the executed contract.

Method – 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.

Deliverable - At completion of the project, the District 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.

BUDGET

Provide a detailed budget by task including number of hours and rates for labor and unit costs for other direct costs (i.e. mileage, $/unit of material for construction, etc.). A detailed and perfectly balanced budget that shows all costs is required for the State's contracting and purchase order processes. Sample budget tables are provided below. Please note that these budget tables are examples and will need to be adapted to fit each individual application. Tasks should correspond to the tasks described above.

(next two pages)

CONEJOS RIVER SYSTGEM GAUGIING STATIONS BUDGET

CONEJOS GAUGING STATIONS BUDGET							
Element	Cost	Projected	Sub	Applicant	Local	TOTAL	PROJECT
	Per Site	# of Sites	TOTAL	MATCH	MATCH	GRANT	TOTAL
GAUGING STATIONS				CWCD	W USERS		
Measurement	$ 1,294	72	$ 93,168			$ 93,168	$ 93,168
Telemetry	$ 1,294	72	$ 93,168			$ 93,168	$ 93,168
Gateway Nodes	$ 6,428	8	$ 51,424			$ 51,424	$ 51,424
Stiling Wells	$ 1,250	72	$ 90,000	$ 33,750	$ 33,750	$ 22,500	$ 90,000
Installation	$ 200	72	$ 14,400			$ 14,400	$ 14,400
GAUGING STATIONS TOTAL			**$ 342,160**	**$ 33,750**	**$ 33,750**	**$ 274,660**	**$ 342,160**
AUTOMATED GATES							
Headsmill	$ 20,350	1	$ 20,350		$ 5,000	$ 15,350	$ 20,350
North Branch	$ 31,505	1	$ 31,505	$ 5,000		$ 26,505	$ 31,505
Manassa	$ 35,415	1	$ 35,415		$ 5,000	$ 30,415	$ 35,415
Romero	$ 67,850	1	$ 67,850		$ 7,500	$ 60,350	$ 67,850
AUTOMATED GATES TOTAL			**$ 155,120**	**$ 5,000**	**$ 17,500**	**$ 132,620**	**$ 155,120**
SYSTEM CALIBRATION & BETA TEST			$ 2,500	$ 2,500			$ 2,500
SYSTEM CALIBRATION & BETA TEST TOTAL			**$ 2,500**	**$ 2,500**			**$ 2,500**
TOTALS			**$ 499,780**	**$ 41,250**	**$ 51,250**	**$ 407,280**	**$ 499,780**
TOTAL MATCHING					**$ 92,500**		
TOTAL WSRA FUNDS						**$ 407,280**	
TOTAL PROJECT							**$ 499,780**

SCHEDULE – With anticipated budget allocations. Tasks will be timed for optimal seasonal and river conditions.

IMPORTANT NOTE – The cost of automating each gate is different. Since the timing for each gate will depend on many variables, final scheduling will be determined accordingly. This schedule for installing operators anticipates Task #1a – Headsmill; #2a – Northbranch; #3a - Manassa; and #4a - Romero. This order may change upon implementation, so those line items would be interchanged as required.

CONEJOS GAUGING STATIONS SCHEDULE									
MONTHS	1-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24	TOTAL
Task #1 Gauging Stations Nos. 1-9	$ 36,342								
Task #1a Automated Gate #1	$ 20,350								
Task #1b Gateway Node #1	$ 6,428								$ 63,120
Task #2 Gauging Stations Nos. 10-18		$ 36,342							
Task #2a Automated Gate #2		$ 31,505							
Task #2b Gateway Node #2		$ 6,428							$ 74,275
Task #3 Gauging Stations Nos. 19-27			$ 36,342						
Task #3a Automated Gate #3			$ 35,415						
Task #3b Gateway Node #3			$ 6,428						$ 78,185
Task #4 Gauging Stations Nos. 28-36				$ 36,342					
Task #4a Automated Gate #4				$ 67,850					
Task 4 b Gateway Node #4				$ 6,428					$ 110,620
Task #5 Gauging Stations Nos. 37-45					$ 36,342				
Task #5a Gateway Node #5					$ 6,428				$ 42,770
Task #6 Gauging Stations Nos. 46-54						$ 36,342			
Task #6a Gateway Node #6						$ 6,428			$ 42,770
Task #7 Gauging Stations Nos. 55-63							$ 36,342		
Task #7a Gateway Node #7							$ 6,428		$ 42,770
Task #8 Gauging Stations Nos. 64-72								$ 36,342	
Task #8a Gateway Node #8								$ 6,428	$ 42,770
Task #9 Total System Beta Test								$ 2,500	$ 2,500
Task #10 Final Report									
TOTALS	**$ 63,120**	**$ 74,275**	**$ 78,185**	**$ 110,620**	**$ 42,770**	**$ 42,770**	**$ 42,770**	**$ 45,270**	**$ 499,780**

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 this application to:

Mr. Todd Doherty
Intrastate Water Management and Development Section
COLORADO WATER CONSERVATION BOARD
1580 Logan Street, Suite 200
Denver, CO 80203

To submit applications by Email, send to: todd.doherty@state.co.us

Attachment 1
Reference Information

The following information is available via the internet. The reference information provides additional detail and background information.

Colorado Water Conservation Board (http://cwcb.state.co.us/)

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

Interbasin Compact Committee and Basin Roundtables (http://ibcc.state.co.us/)

Interbasin Compact Committee By-laws and Charter (under Helpful Links section) –

http://ibcc.state.co.us/Basins/IBCC/

Legislation

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

http://cwcbweblink.state.co.us/DocView.aspx?id=105662&searchhandle=28318

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

http://cwcbweblink.state.co.us/DocView.aspx?id=21291&searchhandle=12911

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

http://cwcbweblink.state.co.us/DocView.aspx?id=21379&searchhandle=12911

Statewide Water Supply Initiative

General Information – http://cwcb.state.co.us/IWMD/

Phase 1 Report – http://cwcb.state.co.us/IWMD/SWSITechnicalResources/SWSIPhaseIReport/

Attachment 2
Insurance Requirements

NOTE: The following insurance requirements taken from the standard contract apply to WSRA projects that exceed $25,000 in accordance with the policies of the State Controller's Office. Proof of insurance as stated below is necessary prior to the execution of a contract.

13. INSURANCE

Grantee and its Sub-grantees shall obtain and maintain insurance as specified in this section at all times during the term of this Grant: All policies evidencing the insurance coverage required hereunder shall be issued by insurance companies satisfactory to Grantee and the State.

A. Grantee

i. Public Entities

If Grantee is a "public entity" within the meaning of the Colorado Governmental Immunity Act, CRS §24-10-101, et seq., as amended (the "GIA"), then Grantee shall maintain at all times during the term of this Grant such liability insurance, by commercial policy or self-insurance, as is necessary to meet its liabilities under the GIA. Grantee shall show proof of such insurance satisfactory to the State, if requested by the State. Grantee shall require each Grant with Sub-grantees that are public entities, providing Goods or Services hereunder, to include the insurance requirements necessary to meet Sub-grantee's liabilities under the GIA.

ii. Non-Public Entities

If Grantee is not a "public entity" within the meaning of the GIA, Grantee shall obtain and maintain during the term of this Grant insurance coverage and policies meeting the same requirements set forth in **§13(B)** with respect to sub-Grantees that are not "public entities".

B. Sub-Grantees

Grantee shall require each Grant with Sub-grantees, other than those that are public entities, providing Goods or Services in connection with this Grant, to include insurance requirements substantially similar to the following:

i. Worker's Compensation

Worker's Compensation Insurance as required by State statute, and Employer's Liability Insurance covering all of Grantee and Sub-grantee employees acting within the course and scope of their employment.

ii. General Liability

Commercial General Liability Insurance written on ISO occurrence form CG 00 01 10/93 or equivalent, covering premises operations, fire damage, independent Grantees, products and completed operations, blanket Grantual liability, personal injury, and advertising liability with minimum limits as follows: **(a)**$1,000,000 each occurrence; **(b)** $1,000,000 general aggregate; **(c)** $1,000,000 products and completed operations aggregate; and **(d)** $50,000 any one fire. If any aggregate limit is reduced below $1,000,000 because of claims made or paid, Sub-grantee shall immediately obtain additional insurance to restore the full aggregate limit and furnish to Grantee a certificate or other document satisfactory to Grantee showing compliance with this provision.

iii. Automobile Liability

Automobile Liability Insurance covering any auto (including owned, hired and non-owned autos) with a minimum limit of $1,000,000 each accident combined single limit.

iv. Additional Insured

Grantee and the State shall be named as additional insured on the Commercial General Liability and Automobile Liability Insurance policies (leases and construction Grants require additional insured coverage for completed operations on endorsements CG 2010 11/85, CG 2037, or equivalent).

v. Primacy of Coverage

Coverage required of Grantee and Sub-grantees shall be primary over any insurance or self-insurance program carried by Grantee or the State.

vi. Cancellation

The above insurance policies shall include provisions preventing cancellation or non-renewal without at least 45 days prior notice to the Grantee and the State by certified mail.

vii. Subrogation Waiver

All insurance policies in any way related to this Grant and secured and maintained by Grantee or its Sub-grantees as required herein shall include clauses stating that each carrier shall waive all rights of recovery, under subrogation or otherwise, against Grantee or the State, its agencies, institutions, organizations, officers, agents, employees, and volunteers.

C. Certificates

Grantee and all Sub-grantees shall provide certificates showing insurance coverage required hereunder to the State within seven business days of the Effective Date of this Grant. No later than 15 days prior to the expiration date of any such coverage, Grantee and each Sub-grantee shall deliver to the State or Grantee certificates of insurance evidencing renewals thereof. In addition, upon request by the State at any other time during the term of this Grant or any sub-grant, Grantee and each Sub-grantee shall, within 10 days of such request, supply to the State evidence satisfactory to the State of compliance with the provisions of this **§13**.

Attachment 3
Water Supply Reserve Account Standard Contract

NOTE: The following contract is required for WSRA projects that exceed $100,000. (Projects under this amount will normally be funded through a purchase order process.) Applicants are encouraged to review the standard contract to understand the terms and conditions required by the State in the event a WSRA grant is awarded. Significant changes to the standard contract require approval of the State Controller's Office and often prolong the contracting process.

It should also be noted that grant funds to be used for the purchase of real property (e.g. water rights, land, conservation easements, etc.) will require additional review and approval. In such cases applicants should expect the grant contracting process to take approximately 3 to 6 months from the date of CWCB approval.

Attachment 4
W-9 Form

NOTE: A completed W-9 form is required for all WSRA projects prior execution of a contract or purchase order. Please submit this form with the completed application.