SOUTHWEST BASINS ROUNDTABLE
Michael Preston, Chair
c/o Dolores Water Conservancy District
P.O. Box 1150
Cortez, Colorado 81321
970-565-7562

EMAILED: July 16, 2012

Mr. Greg Johnson
Program Manager, Water Supply Management Section
Colorado Water Conservation Board
1580 Logan Street, Suite 600
Denver, Colorado 80203

SUBJECT: Improved Water Use, Conservation, Management and Operations through Implementation of Water Accounting Software
$52,500 from Basin Account

Dear Mr. Johnson:

The Southwest Basin Roundtable is pleased to recommend funding of $52,500 from the Southwest Basin Account for Improved Water Use, Conservation, Management and Operations through Implementation of Water Accounting Software.

The application was considered in detail and approved at the July 11, 2012 meeting of the Southwest Basin Roundtable. There was a quorum of Roundtable members present. The Project was approved by the Roundtable as a Consumptive IPP with potential consumptive and non-consumptive benefits to the Basin as a whole.

The completed Grant Application will be forwarded directly to you by the applicant. Please contact the applicants directly or me at 970-565-7562, mpreston@frontier.net, if you have questions or wish to discuss these applications in more detail.

Sincerely,

Michael Preston
Southwest Basin Roundtable Chair

COLORADO
DEPARTMENT OF NATURAL RESOURCES

COLORADO WATER CONSERVATION BOARD

WATER SUPPLY RESERVE ACCOUNT APPLICATION FORM

IMPROVED WATER USE, CONSERVATION, MANAGEMENT AND OPERATIONS THROUGH THE IMPLEMENTATION OF WATER ACCOUNTING SOFTWARE

Name of Water Activity/Project

Montezuma Valley Irrigation Company

Name of Applicant

SOUTHWEST BASIN ROUNDTABLE

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

Amount from Statewide Account:	**$0.00**
Amount from Basin Account(s):	**$52,500**
Total WSRA Funds Requested:	**$52,500**

Application Content

Required Exhibits

A. Statement of Work, Budget, and Schedule
B. Project Map
C. As Needed (i.e. letters of support, photos, maps, etc.)

Appendices – Reference Material

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

Instructions

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

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

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

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

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

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

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

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

1.	Applicant Name(s):	**Montezuma Valley Irrigation Company**		
	Mailing address:	**P.O. Box 1056** **11501 Highway 491** **Cortez, Colorado 81321**		
	Taxpayer ID#:	**84-0270210**		
	Primary Contact:	**Don Magnuson**	Position/Title:	**Manager**
	Email:	**dmagnuson@mvic.info**		
	Phone Numbers:	Cell: **970-739-5988**	Office:	**970-565-3332**
	Alternate Contact:	**Michelle Butler**	Position/Title:	**Office Manager**
	Email:	**mbutler@mvic.info**		
	Phone Numbers:	Cell:	Office:	**970-565-3332**

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

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

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

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

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

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

3. Provide a brief description of your organization

Established in 1920, Montezuma Valley Irrigation Company (MVIC) is located in southwestern Colorado and supplies irrigation water to over 30,000 acres of agricultural land via 124 miles of canals, laterals and pipelines. MVIC controls 33,284 Class A Shares and 1,500 Class B Shares of Capital Stock. Storage facilities include the Groundhog and Narraguinnep Reservoirs. The MVIC system is intermingled with the workings of the Dolores Project which was constructed by the US Bureau of Reclamation (BOR).

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

The applicant is the contracting entity.

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

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

[X] 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.

6. 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.

No issues.

Part II. - Description of the Water Activity/Project

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

[ ]	Nonconsumptive (Environmental or Recreational)	
[ ]	Agricultural	
[ ]	Municipal/Industrial	
[ ]	Needs Assessment	
[ ]	Education	
[X]	Other	Explain: Establish and maintain a water delivery record to support and document management, operational and water use decisions that demonstrate efficient, progressive use of water

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

MVIC owns senior decrees on the Dolores River that are pivotal to the success of agriculture as well as urban and rural development and the quality of life in the Montezuma Valley. How this water is utilized not only impacts the stockholders of MVIC, but impacts their neighbors and the community at large.

There is a good, detailed record of MVIC's historical diversion and storage of water. However, there is little record of the delivery of this water. To effectively know where water is being used and how it is being used and to effectively determine where improvements might be most beneficial and measure the effectiveness of those improvements, it is critical to have good delivery records.

This project will allow MVIC to implement and document water conservation programs, which will benefit nonconsumptive, agricultural, and municipal/industrial purposes. There will also be an educational aspect in that management can document for its shareholders and other interested parties the ability to efficiently meet the demands of the community, the success of conservation programs and the availability of water, or the lack thereof, to meet the emerging demands of the

area.

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

	Study	X	Implementation

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

	New Storage Created (acre-feet)
	New Annual Water Supplies Developed, Consumptive or Nonconsumptive (acre-feet)
	Existing Storage Preserved or Enhanced (acre-feet)
	Length of Stream Restored or Protected (linear feet)
	Length of Pipe/Canal Built or Improved (linear feet)
	Efficiency Savings (acre-feet/year OR dollars/year – **circle one**)
	Area of Restored or Preserved Habitat (acres)
X	Other – Explain: **Establish baseline data of water use and improve efficiencies**

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

Latitude: 37 22 37.47 Longitude: 108 36 28.84

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

As the population of the Montezuma Valley and surrounding area grow, the demand for water grows as well. Managing and utilizing water resources efficiently continues to become more critical. Water losses via canal and lateral ditch seepage and evaporation are significant. Earthen conveyances such as these require annual maintenance at substantial cost. MVIC has embarked on a new vision to improve water and energy conservation. To date, MVIC has converted 12 miles of lateral ditches to pipeline and installed several pieces of SCADA equipment. The last project was a seven-mile pipeline with the assistance of a $2.2 million Reclamation Stimulus funding grant.

MVIC recognizes the need for improved water and business management tools. The company desires to purchase three software packages from TruePoint Solutions, a software and services company focused on water management solutions, a critical tool to the MVIC effort to improve management and operational decisions that result in efficient use of water.
The packages include:

- **TruAIM – Water operation software to process water orders, collect accurate consumption data, manage seasonal water allocation and improve regulatory reporting.**
- **TrueBill – Billing software which is the core of the package that enables office staff and field staff to work more effectively, take water orders, monitor consumption and efficiently exchange data from the field back to the office for timely, accurate billing and water use tracking of shareholders.**
- **TrueCIP – Online portal allowing MVIC to take water orders online, customer**

verification and signup, as well as up-to-the minute customer account reviews. MVIC will provide the computer hardware and staff to implement and operate the software on a long-term basis. MVIC has already installed a SCADA system to monitor flow rates and operate water conservation facilities. The new computer software will complement and enhance the capabilities of the current system and greatly enhance the ability of management to attain goals of efficient water delivery and use.

Part III. – Threshold and Evaluation Criteria

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

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

   The activity will not affect the current system of allocating water within Colorado or amend the existing water rights adjudication system.

   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.

   Recommendations from the Roundtable will be furnished in a letter from the Southwest Basin Roundtable Chair.

[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.

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.

To effectively know where water is being used and how it is being used and to effectively determine where improvements might be most beneficial and measure the effectiveness of those improvements, it is critical to have good delivery records. The application is for a water accounting software package that will assist MVIC in their activities to better determine and document how to effectively and efficiently provide water to an increasingly diverse community. The software is a key component of the groundwork for managing the MVIC system more efficiently. More efficient use of water provides additional options to the company, the community and the Dolores River Basin.

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

MVIC is providing in-kind matching of labor as well as direct purchase of hardware. The company is also applying for equal funding amounts from the Southwest Water Conservation District.

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

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

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

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

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

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

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

f. The water activity helps sustain agriculture & open space, or meets environmental or recreational needs.
g. The water activity assists in the administration of compact-entitled waters or addresses problems related to compact entitled waters and compact compliance and the degree to which the activity promotes maximum utilization of state waters.
h. The water activity assists in the recovery of threatened and endangered wildlife species or Colorado State species of concern.
i. The water activity provides a high level of benefit to Colorado in relationship to the amount of funds requested.

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

Continued: Explanation of how the water activity/project meets all applicable **Evaluation Criteria.**

Please attach additional pages as necessary.

Statewide Account funds have not been requested.

Part IV. – Required Supporting Material

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

   The project will not affect water rights.

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

The company recently implemented its second $75,000 Conservation Innovation Grant that was awarded by the USDA Natural Resources Conservation Service (NRCS). The grant and MVIC provided funding for solar powered flow meters, turnouts with actuator controlled valves, radio telemetry units and a SCADA system. The projects demonstrate the use of solar power and allow MVIC to monitor flow rates and control turnouts at selected locations from their headquarters. The remote controlled turnouts demonstrate the benefits of flow control in a remote area and from a location where the shareholder requires frequent flow adjustment.

The recommendation of TruePoint Solutions as the source for improved documentation is underpinned by years of involvement directing The New Cache La Poudre Irrigating Company from an assortment of clipboards to a paper ledger system to several versions of computerized accounting. The TruePoint software that is proposed will complement existing operations and improvements of MVIC and provide further opportunities to improve management procedures that will result in water efficiency and conservation.

There are no permitting issues involved with the project.

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

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

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

REPORTING AND FINAL DELIVERABLE

Reporting: The applicant shall provide the CWCB a progress report every 6 months, beginning from the date of the executed contract. The progress report shall describe the completion or partial completion of the tasks identified in the statement of work including a description of any major issues that have occurred and any corrective action taken to address these issues.

Final Deliverable: At completion of the project, the applicant shall provide the CWCB a final report that summarizes the project and documents how the project was completed. This report may contain photographs, summaries of meetings and engineering reports/designs.

PAYMENT

Payment will be made based on actual expenditures and invoicing by the applicant. Invoices from any other entity (i.e. subcontractors) cannot be processed by the State. The request for payment must include a description of the work accomplished by major task, and estimate of the percent completion for individual tasks and the entire water activity in relation to the percentage of budget spent, identification of any major issues and proposed or implemented corrective actions. The last 5 percent of the entire water activity budget will be withheld until final project/water activity documentation is completed. All products, data and information developed as a result of this grant must be provided to the CWCB in hard copy and electronic format as part of the project documentation. This information will in turn be made widely available to Basin Roundtables and the general public and help promote the development of a common technical platform.

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

Signature of Applicant:

Print Applicant's Name: Don Magnuson, Manager

Project Title: IMPROVED WATER USE, CONSERVATION, MANAGEMENT AND OPERATIONS THROUGH THE IMPLEMENTATION OF WATER ACCOUNTING SOFTWARE

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

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

EXHIBIT A

TRUEPOINT SOLUTIONS

PROPOSAL TO THE MONTEZUMA VALLEY IRRIGATION COMPANY
FEBURARY 13, 2012

AMENDMENT AND PROPOSAL TO THE MONTEZUMA VALLEY IRRIGATION COMPANY
MAY 15, 2012

Exhibit A

Statement of Work

WATER ACTIVITY NAME - **IMPROVED WATER USE, CONSERVATION, MANAGEMENT AND OPERATIONS THROUGH THE IMPLEMENTATION OF WATER ACCOUNTING SOFTWARE**

GRANT RECIPIENT – **MONTEZUMA VALLEY IRRIGATION COMPANY**

FUNDING SOURCE - **BASIN WATER SUPPLY RESERVE ACCOUNT**

INTRODUCTION AND BACKGROUND
Provide a brief description of the project. (Please limit to **no more than 200 words**; this will be used to inform reviewers and the public about your proposal)

MVIC owns senior decrees on the Dolores River that are pivotal to the success of agriculture as well as urban and rural development and the quality of life in the Montezuma Valley. How this water is utilized not only impacts the stockholders of MVIC, but impacts their neighbors and the community at large.

There is a good, detailed record of MVIC's historical diversion and storage of water. However, there is little record of the delivery of this water. To effectively know where water is being used and how it is being used and to effectively determine where improvements might be most beneficial and measure the effectiveness of those improvements, it is critical to have good delivery records.

OBJECTIVES
List the objectives of the project

This project will allow MVIC to implement and document water conservation programs, which will benefit nonconsumptive, agricultural, and municipal/industrial purposes. There will also be an educational aspect in that management can document for its shareholders and other interested parties the ability to efficiently meet the demands of the community, the success of conservation programs and the availability of water, or the lack thereof, to meet the emerging demands of the area.

TASKS
Provide a detailed description of each task using the following format

TASK 1 – Contract Development

Description of Task
- **Develop contract with supplier**
- **Develop service and maintenance agreement**

Method/Procedure
- **Develop a contract acceptable to the Board of Directors of MVIC and TruePoint Solutions**

Deliverable
- **Executed contract**

TASK 2 – Kickoff Meeting

Description of Task
- **Establish project approach and communication protocol**
  - **Determine points of contact for MVIC and TruePoint**
  - **Establish project team and define role of team members**
  - **Establish project procedures**
- **Establish an understanding of MVIC business process**
  - **Operations**
  - **Financial**
- **Determine required and potential interfaces**
- **Determine data availability, quantity and quality for conversion**
- **Review project deliverables and milestones**

Method/Procedure
- **Interview staff and review reporting requirements**
- **Review existing data and potential interface requirements**
- **Review business practices associate with the TruePoint software**
- **Evaluate MVIC technology infrastructure for compliance with TruePoint's requirements**

Deliverable
- **Kick-off meeting**

TASK 3 – System Analysis

Description of Task

Identify the detailed system requirements for all interfaces, conversion and reports
Data quality evaluation
Data conversion
Establish timelines

Method/Procedure

Review project scope
Develop project plan

Deliverable

Findings and recommendations

TASK 4 – Install and Configure Software and Data

Description of Task

Successful installation of the TruePoint software in MVIC's environment
Test the configuration of the TruePoint suite of products to meet the requirements

Method/Procedure

Install and test the TruePoint software
Conduct system configuration and data conversion activities
Develop and test all reports, interfaces and conversions

Deliverable

Up to three meeting to review product configuration and project status
Installed instance of TruePoint software
TruePoint configured to meet MVIC's requirements

TASK 5 – Training

Description of Task

Train MVIC personnel of the use and maintenance of the TruePoint system
Office staff
Field staff

Method/Procedure

Conduct up to two days training for specific user groups

Deliverable

Training completed

TASK 6 – Go Live

Description of Task

Process final data conversions

Deploy the TruePoint System on MVIC's production environment for GO LIVE

Method/Procedure

Develop and execute deployment plan for production installation and GO LIVE

Deliverable

Project completion and GO LIVE

TASK 6 – Project perpetuation

Description of Task

Implement support plan for perpetual maintenance

Method/Procedure

Develop and execute maintenance and service plan

Deliverable

Provide a perpetual, enterprise wide licensed solution through maintenance and service agreement

REPORTING AND FINAL DELIVERABLE

Reporting: The applicant shall provide the CWCB a progress report every 6 months, beginning from the date of the executed contract. The progress report shall describe the completion or partial completion of the tasks identified in the statement of work including a description of any major issues that have occurred and any corrective action taken to address these issues.

Final Deliverable: At completion of the project, the applicant shall provide the CWCB a final report that summarizes the project and documents how the project was completed. This report may contain photographs, summaries of meetings and engineering reports/designs.

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.

Total Costs				
	Labor	Direct Costs	Matching Funds (If Applicable)	Total Project Costs
Task 1 – Contract Development	4,000	6,500		10,500
Task 2 – Kickoff Meeting	1,000	21,000	10,500	22,000
Task 3 – System Analysis	22,000	25,000	12,500	47,000
Task 4 – Install & Configuration of Software & Data	24,000	14,000	5,500	38,000
Task 5 - Training	2,500	26,000	13,000	28,500
Task 6 – Go Live	1,500	22,000	11,000	23,500
Task 7 – Project Perpetuation				
Total Costs:	$55,000	$114,500	$52,500	$169,500

Example Titles

Example Project Personnel:	Project Managers	Clerical	Hardware	Software License	Professional Services	Annual Service & Maintenance	Travel		Total Costs
Hourly Rate:	$75.00	$25.00							
Task 1 – Contract Development	4,000		6,500						10,500
Task 2 – Kickoff Meeting	1,000			20,000			1,000		22,000
Task 3 – System Analysis	10,000	12,000		25,000					47,000
Task 4 – Install & Configuration of Software & Data	12,000	12,000	3000	10,000			1,000		38,000
Task 5 - Training	2,000	500			25,000		1,000		28,500
Task 6 – Go Live	1,000	500				22,000			23,500
Task 7 – Project Perpetuation									
Total Hours:	400	1000							
Cost:	$30,000	$25,000	$9,500	$55,000	$25,000	$22,000	$3,000		$169,500

Other Direct Costs						
Item: Units: Unit Cost:	Copies No.	Materials	Equipment/ Supplies	Mileage Miles		Total
Task 1						
Task 2						

	In-Kind Contributions (If Applicable)				
Project Personnel: Hourly Rate:	Project Managers $75.00	Clerical $25.00	Hardware		Total
Task 1 – Contract Development	4,000		6,500		10,500
Task 2 – Kickoff Meeting	1,000				1,000
Task 3 – System Analysis	10,000	12,000			22,000
Task 4 – Install & Configuration of Software & Data	12,000	12,000	3000		27,000
Task 5 - Training	2,000	500			2,500
Task 6 – Go Live	1,000	500			1,500
Task 7 – Project Perpetuation					
Total Hours:	400	1000			
Total Cost:	$30,000	$25,000	$9,500		$64,500

SCHEDULE

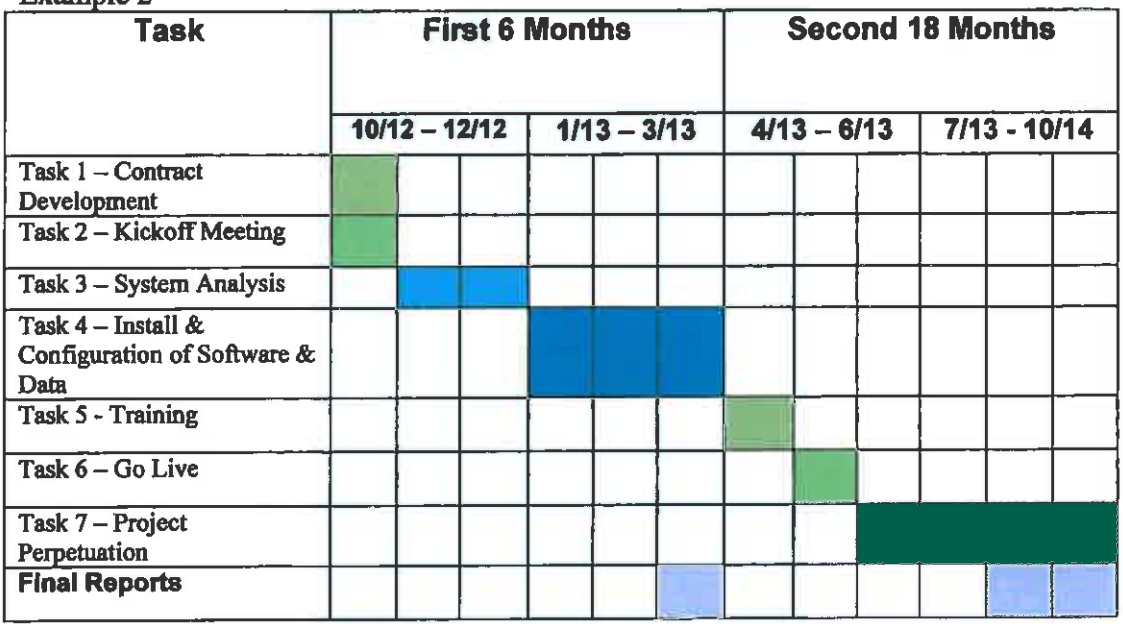
Provide a project schedule including key milestones for each task and the completion dates or time period from the Notice to Proceed (NTP). This dating method allows flexibility in the event of potential delays from the procurement process. Sample schedules are provided below. Please note that these schedules are examples and will need to be adapted to fit each individual application.

Example 1

Task	Start Date	Finish Date
Task 1 – Contract Development	Upon NTP	NTP + 60 days
Task 2 – Kickoff Meeting	Upon NTP	NTP + 60 days
Task 3 – System Analysis	NTP + 30 days	NTP + 90 days
Task 4 – Install & Configuration of Software & Data	NTP + 90 days	NTP + 150 days
Task 5 - Training		NTP + 150 days
Task 6 – Go Live		May 1, 2013
Task 7 – Project Perpetuation		October 1, 2014

NTP = Notice to Proceed

Example 2



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.

Appendix 1
Reference Information

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

- Water Supply Reserve Account main webpage:
  - http://cwcb.state.co.us/LoansGrants/water-supply-reserve-account-grants/Pages/main.aspx
- Water Supply Reserve Account – Basin Fund Application Details:
  - http://cwcb.state.co.us/LoansGrants/water-supply-reserve-account-grants/Pages/BasinWaterSupplyReserveAccountGrants.aspx
- Water Supply Reserve Account – Statewide Fund Application Details:
  - http://cwcb.state.co.us/LoansGrants/water-supply-reserve-account-grants/Pages/StatewideWaterSupplyReserveAccountGrants.aspx
- Colorado Water Conservation Board main website:
  - http://cwcb.state.co.us/
- Interbasin Compact Committee and Basin Roundtables:
  - http://cwcb.state.co.us/about-us/about-the-ibcc-brts/Pages/main.aspx/Templates/BasinHome.aspx
- 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 2010:
  - http://cwcb.state.co.us/water-management/water-supply-planning/Pages/SWSI2010.aspx

Appendix 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.

Appendix 3
Water Supply Reserve Account Standard Contract Information

NOTE: The standard 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.

The standard contract is available here under the header "Additional Resources" on the right side: http://cwcb.state.co.us/LoansGrants/water-supply-reserve-account-grants/Pages/BasinWaterSupplyReserveAccountGrants.aspx

Appendix 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.

Montezuma Valley Irrigation Co.
P.O. Box 1056 Cortez, CO 81321
970-565-3332 Fax 970-565-8505

June 25, 2012

Mike Preston, Chairman
Southwest Basin Roundtable
60 Cactus
Cortez, Co 81321

RE: Create an additional IPP for efficient water management, operations and use

Dear Members of the Southwest Basin Roundtable

Twenty years ago, I was encouraged to visit the Montezuma Valley on spring break to see the Dolores Project that was nearing completion. This reservoir took twenty years of development following decades of planning. This magnanimous effort of inclusion brought agricultural, municipal, environmental, and recreational interests together. I heard about the challenges that had to be overcome to bring the Dolores Project to fruition. The largest challenge being that no beneficiary has as much water as they want.

The Dolores River is fully allocated. That is to say, every acre foot of water that the Dolores River Basin yields is allocated either through the prior appropriation doctrine of the Colorado Constitution or via contracts with the Bureau of Reclamation and/or Dolores Water Conservancy District with the flexibility in the allocation defaulting to the managed release downstream (spill) which is the commitment to rafting flows below McPhee Reservoir. By design, in years of shortage, municipal users still enjoy a full allocation, agriculture and environmental allocations are reduced, and there is no managed release downstream (spill) to provide rafting flows. The Dolores River supply is not short in that the supply meets the anticipated allocations except during severe drought conditions that frequent the region. But, with a fully allocated supply, additional diversion is only possible if the allocation of a beneficiary is reduced. This is not unique to the Dolores River Basin. The water supply for all the river basins in southwest Colorado is fully allocated, if not over appropriated.

After twenty years, the desire of each beneficiary for additional water still looms. Honor to seek a mutually beneficial resolution between agriculture, municipal, environmental and recreational users is still the most impressive character of water management in southwest Colorado. Progress seems slow as we strain to find solutions to our needs while honoring others by protecting their existing rights. Progress has ebbed and flowed throughout the two decades and appears to currently have some momentum. The Dolores Project reached full operation in 1998. This new level of river administration was immediately followed by the drought of 2002. This ecological disaster caused the Dolores River Dialogue to convene in 2004 to explore management opportunities below McPhee Dam. With the extensive involvement of diverse stakeholders in various working groups and committees, it was decided in 2010 to pursue legislation for a National Conservation Area. Differing opinions of stakeholders regarding the status of the native fish and the needs of the river below McPhee Reservoir lead to an assimilation of science and scientific opinion into a report known as "*A Way Forward*" which was completed in 2011. As we are beginning to see, the broad opinions of diverse interest does gain momentum as scientific facts and respect for property rights diverge into a critical flow of opportunities. It is the nine opportunities identified in the report of "*A Way Forward*" that are the basis for discussion today to the age old question of management: 'How do we do more with less?' And regarding the water supply of the Dolores River, 'How do we meet the changing and growing needs/expectations of the community?'

That question can only be answered by understanding the historical record of the diversions and the water delivery record of the water's beneficial use.

The diversion record of the Colorado Division of Water Resources begins with the earliest diversions and is as extensive and complete as standards of the day permitted with the quality of that record improving over time. The research and hydrologic analysis done by the Bureau of Reclamation in the design and promotion of McPhee Reservoir and the Dolores Project have proven to be reasonable projections of the yield of the river and performance of the project. And the water accounting record maintained by the Dolores Water Conservancy District is complete and detailed and has continued to expand as the expectation of the day has continued to expand. As new technology becomes available, the community of water interests continue to pursue an even better understanding of the ability to predict the availability of water and the timing of that availability. Throughout the history of water administration in Colorado and based upon the technology available at the time, we have and have had a good understanding of the water supply and a reliable record of where that supply has been diverted and stored.

However, we don't always have a good record, if any at all, of where water is delivered and how it is used.

Let's consider our bank account. When we look at our financial record, we not only want to know what we have (or often times had), but also where did we spend it. And further, are we happy with how we spent it. Now consider more than one person is writing checks. The less detailed the check register is, the more we are sure the other person is spending too much.

This allegory applies to the water world. We have a reasonable understanding of the volume of water that is available, who has the right to that supply by decree or allocation, when that water is being diverted, and where that water is being stored. We need to establish, and in some instances expand, the ledger that will identify where the water is being delivered and how it is being used in order to determine individually and as a community if we are happy with the way the water is being used. If we want to use more water to expand a use and that water is being provided by increased efficiency, we need to know where and how that water is currently being used.

All those who enjoy the river and benefit from the river are impacted by each others use. The efficient management, operations and use of water has value to all members of the community. Knowing where and how water is being used creates a platform to improve how water is being used, to determine where the greatest benefit can be attained and what is needed to implement the social and structural changes to implement the improvement and develops a track record of the effects of improvement.

There are organizations throughout southwest Colorado strategizing how to maintain healthy rivers, protect existing water users, sustain strong local economy and provide for emerging needs. The Dolores River Dialogue including the Steering Committee, Science Committee, Hydrology Committee, Lower Dolores Working Group, Legislative Committee and Implementation Team is just one example of interconnected groups straining to answer these questions. These groups, as well as groups throughout southwest Colorado, have moved strategies forward successfully when sound data was available. An understanding of the need for such data has also driven these groups to support strategies to attain sound scientific, historic and operational information.

The idea and request for an IPP for efficient water management, operations, and use is based on the assumptions that all parties interested in water administration want more and that there is no more water available. Thus, doing "more with less" requires more efficiency. And to become more efficient requires adequate data to determine individually, corporately and as a community if we are happy with how we are using our water.

As an At Large Member of the Southwest Basin Round Table, I submit an IPP as drafted below which addresses MVIC's current proposal to "Improve Water Use, Conservation, Management and Operations through Implementation of Water Accounting Software" as well as efforts that this project will enable to explore and develop options to apply conserved water to additional needs within the Basin.

Sincerely,

Don Magnuson

Don Magnuson

County	HUC	Subbasin	Major Provider	Notes	Remaining Gap	Supplies Beyond 2050	Source
Montezuma		Dolores McElmo	MVIC	Every acre foot of water that the Dolores River yields is allocated either through prior appropriation or contracts with the USBR and/or DWCD. Additional water for future needs can only be met with additional water availability. The most likely way to create additional availability is by improved efficiencies in the MVIC irrigation delivery system. Realizing these efficiencies will require a combination of improved capacity to track water deliveries throughout the system, identify areas in the system where the best gain in efficiencies can be made, and project and measure how much water can be conserved. With these capacities in place, the next step will be to develop feasible strategies to address and finance improvements with participation of those entities who would benefit from the resulting water availability.	TBD	Maybe	MVIC, DRD & Roundtable Feedback

Montezuma Valley Irrigation Company

Water Management Plan Update
December 2011

BACKGROUND

Established in 1920, Montezuma Valley Irrigation Company (MVIC) is located in southwestern Colorado and supplies irrigation water to 37,500 acres of agricultural land via 124 miles of canals and lateral ditches. MVIC controls 33,284 Class A shares and 1,500 Class B shares of water. Storage facilities include the Groundhog and Narraguinnep Reservoirs. The MVIC system is intermingled with the workings of the Dolores Project which was constructed by the US Bureau of Reclamation (BOR).

As the population of the Montezuma Valley and surrounding area grow, the demand for water grows as well. Managing and utilizing our water resources efficiently continues to become more critical. Water losses via canal and lateral ditch seepage and evaporation are significant. Earthen conveyances such as these require annual maintenance at substantial cost. MVIC is embarking on a new vision to improve water and energy conservation. To date, they have converted 12 miles of lateral ditches to pipeline. The last project was a seven-mile pipeline with the assistance of a $2.2 million Reclamation Stimulus funding grant.

The company recently implemented its second $75,000 Conservation Innovation Grant that was awarded by the USDA Natural Resources Conservation Service (NRCS). The grant and MVIC provided funding for solar powered flow meters, turnouts with actuator controlled valves, radio telemetry units and a SCADA system. The projects demonstrate the use of solar power and allow MVIC to monitor flow rates and control turnouts at selected locations from their headquarters. The remote controlled turnouts demonstrate the benefits of flow control in a remote area and from a location where the shareholder requires frequent flow adjustment.

MVIC continually strives to improve their management system in a manner consistent with the procedures described in the "Achieving Efficient water Management: A Guidebook for Preparing Agricultural Water Conservation Plans, Second Edition" (Guidebook), which was prepared by BOR. The key activities MVIC continually practices are:

- Gathering Data
- Identifying and Prioritizing Issues
- Set Goals
- Identify Candidate Water Management Measure and Activities
- Evaluate Candidate Measures

- Developing and Implementation of Water Management Program
- Monitoring Program Progress and Update Plan

Public involvement is an integral part of the planning process. MVIC realizes that strong public involvement builds credibility, addresses diverse community concerns and helps develop a consensus among divergent interests. The public involvement includes articles in the company newsletter, questionnaires, monthly public board meetings, an annual meeting and separate stakeholder meetings.

GATHERING DATA

MVIC has identified and described their operations in the previous Water Management Plan. The company continues to gather and update data as part of their routine operating procedures.

IDENTIFYING AND PRIORITIZING ISSUES

To the shareholder, good water management means getting the right amount of water to the crops or animals at the right time with minimum labor and expense. To the irrigation company, good water management means meeting the water needs of its customers as efficiently as possible, with minimum waste or loss. Good water management is fundamentally important to good overall company management. Three major issues identified by MVIC are water rights, water leasing, and infrastructure maintenance and improvements.

Water Rights

One of the major priorities that MVIC determined to address was water rights. As reported by the Cortez Journal on February 8, 2011, "A lengthy court battle between two major area water providers ended peacefully in a settlement last month. Montezuma Valley Irrigation Company and the Dolores Water Conservancy District reached the (water rights) agreement after 19 months of proceedings. Now both parties say they agree the settlement is mutually beneficial for understanding the legal interpretation of how water from McPhee Reservoir will be allocated in the future. "We can now work with the district with everything on the table," said MVI President Randy Carver. "There's no confusion on our water rights. ... Both MVI and the district are in a

position now to where we can work together, which is absolutely critical to managing the water supply." DWCD General Manager Mike Preston agreed."

Water Leasing

MVIC has explored water leasing options. The following November 7, 2011 article in the Cortez Journal describes the shareholders reaction to proposed water leasing and how the MVIC directors are implementing public education programs on the matter:

"Montezuma Valley Irrigation Company's board of directors got a loud message from their stockholders last May: "we do not want to lease water to maintain instream flows." Now the board is seeking to understand stockholder concerns. The company, which supplies water to a large area around Cortez, was considering leasing water to the Colorado Water Conservation Board to increase flows downstream of McPhee Reservoir on a short-term, trial basis. The lease was to be paid for primarily by conservation organizations and other nongovernmental sources with the goal of maintaining an instream flow of 78 cubic feet per second on the Lower Dolores River through the dry summer months for fish and wildlife. The water would have come from MVIC water held in Groundhog Reservoir, above Dolores, and passed through McPhee. It would have supplied up to 6,000 acre-feet of water in three out of five years. The "no" vote turning down the lease surprised the board since they had been directed by stockholders at the previous annual meeting to look into a potential lease to provide funds for badly needed system maintenance and repairs. So where was the disconnect?

Since the May vote, MVIC board members have been seeking to understand the concerns of its stockholders. They brought in a facilitator from Colorado State University's water institute to convene small group dialogues aimed at listening — not trying to convince, but to listen. In August, they listened to a representative group of a dozen stockholders, and in September another dozen. Then, throughout October, each of the seven board members held a meeting to listen to the stockholders he represents. That's nine listening meetings all together. Now, on Nov. 14, the board is inviting all of its stockholders to convene as a whole, so that the concerns about the lease — and, just as important, the question of how the company can fund critical system repairs and maintenance — and diffuse rumors can be discussed and addressed."

Infrastructure Maintenance and Improvements

MVIC was established in 1920 and parts of the system have had little ongoing maintenance programs. Repair and improvements were often implemented on a reactionary basis rather than a planned operation and maintenance program. MVIC is seeking funding assistance to conduct a comprehensive inventory of all of the canals, laterals, ditches, control structures, flow measurement devices and turnouts. Candidate water management measures and activities identified to date are addressed in subsequent sections of this plan update.

SET GOALS

MVIC has made unprecedented advances in water conservation the last few years with the in-house construction of 12 miles of pipeline, solar-powered ultrasonic flow measurement devices on the pipelines and respective turnouts, a SCADA system that was designed for expansion to meet future needs and other improvements. Although these advances were significant, they diverted the human and financial resources needed to maintain and improve the existing and newly constructed facilities.

The management of MVIC has established the following *primary* goals:

- Inventory existing canals, laterals, ditches, control structures, flow measurement devices and turnouts,
- Establish maintenance and improvement priorities,
- Implement a long-term planned operation and maintenance (O&M) program, and
- Developed an integrated, computerized business, operations and water use system.

MVIC will continue to address other water conservation goals, such as:

- Financing to continue the conversion of open conveyance structures to pipelines,
- Water leasing,
- Expanding technology, and
- Educating shareholders.

IDENTIFY CANDIDATE WATER MANAGEMENT MEASURES AND ACTIVITIES

Candidate water management measurements and activities that were identified by MVIC are:

- Inventory all infrastructure facilities
- Develop O&M program
- Convert open conveyance structures to pipelines
- Expand technology
- Develop integrated management system

EVALUATE CANDIDATE MEASURES

Inventory

The infrastructure inventory will identify specific system needs within the MVIC system. The company intends to use current staff to conduct the inventory. Since there are 1600 shareholder turnouts and 50 canal structures to inventory, significant resources will be required. Financial assistance will allow MVIC to concentrate on this project. Additional funding will also provide resources to enter the information into a user-friendly data base that can be accessed through their GIS software. Ultimately, the data can be integrated into the existing SCADA system.

O&M Program

The O&M program will be developed to address short, mid and long-term needs. The inventory will also allow MVIC to develop annual budgets for maintenance activities.

Pipelines

MVIC has identified the following conveyance structures as high-priority projects:

- West Lateral
- Upper Arickaree
- Garret Ridge

All of the structures have had preliminary designs and cost-estimates developed in anticipation of funding opportunities becoming available. The West Lateral supplies water to the Upper Arickaree. Pipeline projects for these ditches were submitted to the BOR salinity program but were not funded. The West Lateral is constructed in a rock outcrop and has a few areas with substantial leakage. The steep terrain limits the improvement options. The most feasible solution appears to be the use of bell and spigot-type low pressure pipe but other options should be explored in a detailed feasibility study.

The Garret Ridge lateral has a significant elevation drop and has had high erosion in several places. A pipeline would take advantage of the elevation drop and provide gravity irrigation sprinkler capabilities. Since numerous NRCS Environmental Quality Incentive Program (EQIP) projects would develop if a pipeline were constructed, funding through NRCS and/or the salinity program is being evaluated.

Technology

The Conservation Innovation Grants (CIG) that were awarded to MVIC provided a strong base that was intended to expand as need and resources were identified. The following table is an evaluation of the technology opportunities:

FACILITY	TECHNOLOGY REQUIRED	SCADA REQUIREMENTS	COMMENTS
Moonlight Lateral	Automated flow control structure at inlet	Flow control from office to structure , flow measurement data to office	Inlet is in remote area, automated flow control system will provide all-weather control and save energy
U-Lateral	Flow measurement devices	SCADA access to CWCB inlet flow data, flow measurement data to office at private Davis Ditch and last portion of lateral	Flow data allows Water Master to improve management of water in canal
Lone Pine, inlet	Radio connection to new Rubicon gates	Flow control from office to structure , flow measurement data to office	Inlet is in remote area, automated flow control system will provide all-weather control and save energy

Lone Pine, Shell pond	Automated Shell pond inlet control structure, automated outlet structure	Flow control from office to structures , flow measurement data to office	Shell pond is important equalization basin
Lone Pine, pipe inlet	Flow measurement device	Flow measurement data to office	Allows for measurement of water into pipe and would minimize spill quantities
Garret Ridge	Flow measurement device, open channel measurement at existing structure	Flow measurement data to office	Improve water management system, pipeline system proposed
West Lateral, inlet	Access to DWCD flow data	Flow measurement data to office	Improve water management system and supply to Upper Arickaree, pipeline system proposed
Upper Arickaree	Flow measurement device at inlet	Flow measurement data to office	Provides better management of West Lateral, pipeline system possible for West Lateral and Upper Arickaree
Hermana	Radio connection to existing Rubicon gates	Level control from office to structure, flow measurement and gate operation data to office	Allows for remote lowering of water level to stop flow to May Lateral pipeline, provides transmission of flow data from existing measurement device
May Lateral	No additional technologies		
Lower Arickaree	Flow measurement at inlet	Flow measurement data to office	Improve water accounting system
East Lateral	Flow measurement device at inlet	Flow measurement data to office	Improve water accounting system
Goodland	Flow measurement device at inlet	Flow measurement data to office	Improve water accounting system
Little Corkscrew	Flow measurement device at inlet	Flow measurement data to office	Improve water accounting system
Big Corkscrew	Flow measurement device at inlet	Flow measurement data to office	Improve water accounting system

Cortez Canal	No additional technologies		
Groundhog Reservoir	Automated outlet control structure	Flow control from office to structure , flow measurement data to office	Inlet is in remote area, automated flow control system will provide all-weather control and save energy
Naraguinnep	Automated outlet control structure	Flow control from office to structure , flow measurement data to office	Automated flow control system will provide complete management system for Lone Pine Canal

Integrated Management System

MVIC recognized the need to develop a seamless computerized system that would allow them to integrate their business, operations and water management programs. The company realized that this system would be a key part of their water conservation program. After a thorough review of alternative systems, the company has had discussions and received a preliminary proposal from RimRoc Computing, a Colorado company that specialized in business systems design and development for the irrigation industry.

The company evaluated RimRoc's proprietary software titled "Computerized Irrigation Information System." The software can provide:

- Accounting information needed for financial statement via Quickbooks,
- Billings and payments,
- Flow measurement and water consumption,
- Automate account updates that are a result of stock transfer, and
- A means to audit such transfers and services.

DEVELOPMENT AND IMPLEMENTATION OF WATER MANAGEMENT PROGRAM

O&M Program

A good O&M program results in water conservation because efficiency is optimized. The program will be developed after the inventory has been completed. The program will include budgets and an O&M schedule based on needs. MVIC will initiate the inventory in November 2011 and hopefully complete the work during the winter of 2011/2012. Budgets and an O&M schedule will be developed in 2012. The timing will be impacted by weather conditions, human

resource availability and other off-season maintenance obligations. MVIC is going to seek financial assistance for data management and GIS capabilities. If the physical inventory cannot be completed with in-house staff, financial assistance will be pursued to allow this important element of the management program to proceed.

Pipelines

MVIC is currently reviewing funding opportunities to convert open canals, laterals and ditches to pipelines. Preliminary designs and cost estimates have been developed for the West Lateral, Upper Arickaree and Garret Ridge Lateral. Salinity Parallel Program funds should be available in early 2012 and MVIC intends to evaluate the finances that would be available for the Garret Ridge Lateral. MVIC will also evaluate other funding sources, such as the Colorado Water Conservation Board, and BOR salinity program grants.

Technology

Technology improvements will be integrated into new pipeline projects and identified after the inventory is completed. The two CIG grants have demonstrated applicability in a variety of situations which allows MVIC personnel to identify other needs.

Flow measurement and telemetry at the Beaver Ditch, which flows into Groundhog Reservoir demonstrated that flow measurement and telemetry were feasible at remote locations. MVIC has provided funds and assistance to the Colorado Division of Natural Resources (DNR) for monitoring the discharge from Ground Hog Reservoir. This data will be on the state web site and useful for MVIC, DNR and DWCD managers.

The May Lateral Pipeline turnouts are fitted with ultrasonic flow meters. Currently the ditch rider uses a portable power source to read the meter and adjust flow for the shareholder. This system does not allow for total flow measurements because a constant power source is required. MVIC shares are based on a combination of flow and total volume so it is important to have both measurements. MVIC plans on installing solar power systems on all of the turnouts to allow for water management. This system also provides water conservation because flows will be regulated based on real data.

Flow measurement and telemetry was used successfully at the end of the U Lateral. The U Lateral is difficult to manage and the availability of information on a web site was key to the Water Master providing sufficient flow to shareholders at the end of the lateral and minimizing

the amount of water that was spilled. The meter also saved MVIC fuel and reduced global warming emissions because personnel did not have to drive to the site to determine what the flows were. Acceptance and appreciation of this technology allows the staff to identify other areas where this type of system can conserve water and other resources.

Integrated Management System

On August 29, 2011, MVIC received a preliminary proposal from RimRoc Computing for acquisition and implementation of their Computerized Irrigation Information System software. The company has provided similar services for DWCD. The company will:

- Create the necessary table to store the user information needed for stock certificate tracking, water usage and user billing applications,
- Develop the forms and program necessary to enter, edit and display information,
- Produce the reports and programs necessary for the information requirement,
- Integrate existing table in the new database system where possible,
- Test all program and procedures,
- Provide user reference,
- Provide user support and training on the new system, and
- Provide conversion support and error correction support after completion of the project at no additional cost to MVIC.

MONITOR PROGRAM PROGRESS AND UPDATE PLAN

MVIC management and will assess the progress of the management activities and report significant results to the Board on a monthly basis, as needed, and to the shareholders at the annual meeting. Modification to the program will be identified, evaluated and implemented as new issues are identified.

FUNDING SOURCES

The BOR administers the Water Conservation Field Services Program (WCFSP). The grant program provides financial support to entities such as MVIC for planning and implementation of management practices that will lead to water conservation and more efficient use. MVIC intends to apply for funds to implement the management items identified in this plan update. MVIC is also seeking other funding sources to improve operations and better manage its water.

FUNDING REQUEST
MONTEZUMA VALLEY IRRIGATION COMPANY
"IMPROVED WATER USE, CONSERVATION, MANAGEMENT AND OPERATIONS THROUGH THE IMPLEMENTATION OF WATER ACCOUNTING SOFTWARE"

CONCEPTS FOR BASIN EVALUATION AND PRIORITIZATION

The following will be used to evaluate a project submitted to the Southwestern Colorado Basin Roundtable:

Required:

A. Projects must be submitted on an application form used by the State IBCC and CWCB.
All applicable sections must be completed.

B. Projects must address the values encompassed by the SW Basin Bylaws, especially the following goals and objectives:

- Seek the involvement of all interested parties and stakeholders.
- Propose methods or projects, both structural and non-structural, for meeting any future needs as well as utilizing any unappropriated waters.
- Promote the protection, conservation, and use of water in the Southwestern Colorado Roundtable area.
- Promote the socio-economic sustainability of the Southwestern Colorado Roundtable area.
- Promote the protection and conservation of the natural environment, including the protection of open space.

C. Provide the financial details of the plan, including cost sharing and other possible funding sources. Give a financial overview and rough timeline for completion of the project.

To assist the Southwest Roundtable in determining whether and to what extent a proposed project meets the values set forth in the Bylaws, the following questions should be addressed separately as can reasonably be answered by the applicant.

1. What benefit(s) does the project provide?

As the population of the Montezuma Valley and surrounding area grow, the demand for water grows as well. Managing and utilizing water resources efficiently continues to become more critical. Water losses via canal and lateral ditch seepage and evaporation are significant. Earthen conveyances such as these require annual maintenance at substantial cost. MVIC has embarked on a new vision to improve water and energy conservation. To date, they have converted 12 miles of lateral ditches to pipeline and installed several pieces of SCADA equipment. The last project was a seven-mile pipeline with the assistance of a $2.2 million Reclamation Stimulus funding grant.

MVIC recognizes the need for improved water and business management tools. The company desires to purchase three software packages from TruePoint Solutions, a software and services company focused on water management solutions, a critical tool to the MVIC effort to improve water management and operational decisions that result in efficient use of water.

The packages include:

- **TruAIM – Water operation software to process water orders, collect accurate consumption data, manage seasonal water allocation and improve regulatory reporting.**
- **TrueBill – Billing software which is the core of the package that enables office staff and field staff to work more effectively, take water orders, monitor consumption and efficiently exchange data from the field back to the office for timely, accurate billing and water use tracking of shareholders.**
- **TrueCIP – Online portal allowing MVIC to take water orders online, customer verification and signup, as well as up-to-the minute customer account reviews.**

MVIC will provide the computer hardware and staff to implement and operate the software on a long-term basis. MVIC has already installed a SCADA system to

monitor flow rates and operate water conservation facilities. The new computer software will complement and enhance the capabilities of the current system and greatly enhance the ability of management to attain goals of efficient water delivery and use. Information on the system is attached.

Are there multiple purposes?

MVIC owns senior decrees on the Dolores River that are pivotal to the success of agriculture as well as urban and rural development and the quality of life in the Montezuma Valley. How this water is utilized not only impacts the stockholders of MVIC, but impacts their neighbors and the community at large.

There is a good, detailed record of MVIC's historical diversion and storage of water. However, there is little record of the delivery of this water. To effectively know where water is being used and how it is being used and to effectively determine where improvements might be most beneficial and measure the effectiveness of those improvements, it is critical to have good delivery records.

This project will allow MVIC to implement and document water conservation programs, which will benefit nonconsumptive, agricultural, and municipal/industrial purposes. There will also be an educational aspect in that management can document for its shareholders and other interested parties the ability to efficiently meet the demands of the community, the success of conservation programs and the availability of water, or the lack thereof, to meet the emerging demands of the area.

Note: this does not mean that a single purpose project would be rejected, but for major funding requests, addressing multiple use needs would be an advantage.

2. Outline the steps needed for completion of the project.

MVIC has completed a thorough review of accounting software packages. The most complete and useful for MVIC is the system provided by TruePoint Solutions.

The steps for implementation are:

- **Develop contract with supplier**

- **Kickoff meeting**
  - **Review existing data and potential interface requirements**
  - **Review business practices associate with the TruePoint software**

- **System Analysis**
  - **Review project scope and develop project plan**
  - **Interview staff and review reporting requirements**
  - **Evaluate MVIC technology infrastructure for compliance with TruePoint's requirements**
- **Install/configure software and data**
  - **Install and test the TruPoint software**
  - **Conduct system configuration and data conversion activities**
  - **Develop and test all in-scope report, interfaces, and conversions**
- **Training**
  - **Conduct training session for specified user groups**
- **Go Live**
  - **Develop and execute deployment plan for production installation**

What permit issues must be overcome? **None**

How will funds acquired in this process be used to accomplish the final goal?

Funds will be used to purchase the software and support package necessary to maintain this project into the future. The TruePoint software purchase will complement existing operations and improvements of MVIC and provide further opportunities to improve management procedures that will result in water efficiency and conservation.

3. For prioritization of different proposals and assessment of the merits of the plan, can this project be physically built with this funding?

Equal funding is being requested from the Southwestern Water Conservation District.

Are further studies needed before actual construction is commenced (if the project anticipates construction)?

No. The software and provider have been thoroughly reviewed by MVIC. The recommendation of TruePoint Solutions as the source for improved documentation is underpinned by years of involvement directing The New Cache La Poudre Irrigating Company from an assortment of clipboards to a paper ledger system to several versions of computerized accounting.

Will these studies or additional steps delay the completion of the project substantially?
Not applicable.

4. How does the proposal envision and anticipate support from its beneficiaries or from other sources in addition to the funding requested here?

Equal funding is being requested from the Southwestern Water Conservation District. MVIC is providing the hardware and in-kind personnel. The cost includes technical support for a second year.

Would a loan reasonably address the needs of the applicant or, with a grant, should a recommendation be added to assess the future project status for ability to repay a portion of the grant?

MVIC has invested heavily in conservation projects over the past several years. It is not probable that MVIC could finance this project at this time.The committment to this project is based on a grant being available.

5. What is the ability of the sponsor to pay for the project?

MVIC does not have the resources to fund the project at this time.

What actions have been taken to secure local funding?

Funding was evaluated by management and the Board. Local funding is not a practical solution for MVIC at this time.

Are there supporting factors which overcome the sponsor's inability to pay?

No. MVIC has invested substantial funds in conservation and monitoring projects over the past several years. Stockholders have increased their stock assessments 57% over the past two years to pay for increases in operating and debt retirement. (These could be related to basin water needs and compact considerations).

6. What alternative sources of water or alternative management ideas have you considered?

Continuing with the current limited system; acquiring a less expensive program built on an older platform; developing a custom program in house; contracting the development of a custom program.

Are there water rights conflicts involving the source of water for the project? If so, please explain.

There are no water rights issues.

7. How has public input been solicited and is there local support for the project?

The software needs were presented at the annual meeting. MVIC continues to seek input as this project is developed.

Have the beneficiaries solicited funding, letters or other documentation to demonstrate support?

Letters of support are being solicited.

8. Is there opposition to the project?

MVIC is not aware of any opposition.

If there is opposition, how have those concerns been addressed?

9. How does the project affect the protection and conservation of the natural environment, including the protection of open space?

The Dolores River Basin is a fully allocated water source. There continues to be diverse demands for water. The goal of MVIC is to provide an administrative and physical framework that will optimize and minimize the use of water making more water available for all uses.

10. What is the impact of the proposed action on other non-decreed values of the stream or river? Non-decreed values may include things such as non-decreed water rights or uses, recreational uses and soil/land conservation practices.

See number 9 response.

11. How does the project relate to **local** land use plans? If conflicts exist, how will these be addressed?

There are no local land use issues.

12. Identify any intrabasin conflicts and how they will be addressed.

There are no intrabasin conflicts.

13. Identify any interbasin impacts and how any conflicts would be addressed.

There are no interbasin impacts.

14. How does the project support agricultural development or protect the existing agricultural economy?

The system will provide the data for improved agricultural water use efficiency. Water use efficiency benefits agriculture directly by providing the right amount of water at the right time. Water efficiency benefits agriculture indirectly by maximizing water availablitly to the larger community sustaining a healthy and diversified community.

To effectively know where water is being used and how it is being used and to effectively determine where improvements might be most beneficial and measure the effectiveness of those improvements, it is critical to have good delivery records. The application is for a water accounting software package that will assist MVIC in their activities to better determine and document how to effectively and efficiently provide water to an increasingly diverse community. The software is a key component of the groundwork for managing the MVIC system more efficiently. More efficient use of water provides additional options to the company, the community and the Dolores River Basin.