1. Entity Seeking a Water Efficiency Grant

Applicant / Fiscal Agent:
Mount Werner Water & Sanitation District (MWW)
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Project Leader: Nancy Wilson
General Manager: Jay Gallagher

Mount Werner Water & Sanitation District (MWW) is seeking a Water Efficiency Grant from the Colorado Water Conservation Board (CWCB) to fund a project that will deliver a **Web-based, demand-side leak detection and irrigation efficiency solution.** One of the goals of this project is to deliver individualized information to each of MWW's 2,400 water customers that:

- Notifies them when water leaks are detected
- Helps minimize over-irrigation
- Enables them to more efficiently manage their water consumption.

This project will take approximately 5 months to complete. The total cost of the project is **$44,915**. MWW is seeking a grant in the amount of **$33,435.**

This project will use the AquaHawk Alerting™ Web portal framework, currently under development by American Conservation & Billing Solutions, Inc. (AmCoBi). A prototype of this solution is currently being used at one Front Range water district. Data from the pilot project have revealed some exciting water-saving opportunities. For example:

- Many properties in the District are over-irrigating.
- Many of the District's customers have second homes. These "absentee owners" or their guests may have a malfunctioning fixture such as a running toilet or experience a water leak as the result of a frozen pipe.
- Providing water efficiency information proactively and directly to customers can save customers money; customer engagement will substantially improve water conservation results.

Daily consumption data from MWW's Aclara fixed-network Advanced Metering Infrastructure (AMI) system will be integrated into this Web portal solution. AquaHawk Alerting uses a sophisticated statistical data analytics engine to identify leaks and over-irrigation. When deployed, MWW will be able to proactively notify its customers, via e-mail and telephone, when problems are detected. By encouraging customers to fix leaks quickly, MWW expects to substantially reduce water waste.

The solution will also incorporate landscape area and local evapotranspiration (ET) data, so that a daily/weekly irrigation requirement (IR) can be calculated for each customer. This information will be used to measure irrigation efficiency and notify customers when opportunities for improvement are available.

2. Organizations that Will Assist with this Project

AmCoBi will be assisting with this demand-side leak detection and irrigation efficiency project by:

- Integrating AMI data into the AquaHawk Alerting framework and customizing it for MWW
- Finalizing the development of the Web portal
- Integrating customer, weather, and IR data into the system
- Developing training and support documentation
- Providing training and support to MWW staff members.

AmCoBi is a privately-held, Colorado Corporation providing water conservation services to municipal water utilities throughout the State. An engineering-focused company, AmCoBi has pioneered new technologies for applying statistical data analysis to improve water conservation effectiveness.

Todd A. Brehe will be the Project Manager for AmCoBi responsible for managing the scope of work and ensuring that tasks are being completed according to designated timelines, as well as delivering progress reports to MWW. Todd will develop the help documentation and conduct system training.

Charlie Whiteside is AmCoBi's lead engineer, heading up a team of three experienced software engineers. Charlie and his team will be responsible for developing the Web portal application, integrating the customer and consumption data, and performing software quality testing.

Nancy Wilson, Office Manager, Mt. Werner Water and Sanitation District. Ms. Wilson has over 35 years' accounting and business management experience in property management. She attended Metro State College and University of Northern Colorado for four years where she majored in Accounting and minored in Business Administration and Mathematics.

Nancy Wilson (MWW) will be responsible for:

- Helping connect the Aclara AMI system to the AquaHawk portal
- Providing customer information, rates, and other information required
- Testing and providing feedback during the pilot rollout
- Training MWW staff on how to use the portal
- Marketing the service to MWW customers
- Providing direct training and support to MWW customers.

3. Entity Information

3.a) Retail water delivery for each of the past five years and additional information characterizing past water use by sector and source.

		millions of gallons			
	2006	**2007**	**2008**	**2009**	**2010**
Mt Werner District	506	543	511	518	456
		Acre-Feet (AF)			
	2006	**2007**	**2008**	**2009**	**2010**
Mt Werner District	1,553	1,667	1,568	1,590	1,400

Breakdown by Sector for 2010						
	Residential	**Commercial**	**Combined Commercial**	**Active Other**	**Unknown**	**Produced Water Total**
Mt Werner District	947 AF	224 AF	88 AF	28 AF	113 AF	1,400 AF
	68%	16%	6%	2%	8%	
Source Water						
surface water	92%					
groundwater	8%					

3.b) Background characterizing the local water system, potential growth and any other pertinent issues.

The City of Steamboat Springs and the District share ownership of the Fish Creek Filtration Plant and the Yampa River Wellfields; both facilities are operated by Mt. Werner Water. The entities own and maintain their own distribution systems. Mt Werner Water serves the residents in a four-square mile area generally south of Fish Creek in the ski resort portion of Steamboat Springs; the City serves residents in a six-square mile area generally north and west of Fish Creek, including the Old Town and the area west of Old Town. The City also supplies water to the Steamboat II Metro District, a residential area of approximately 400 homes in three subdivisions located west of the City limits.

This grant will apply only to the Mt. Werner Water District service area where the District has deployed AMI meters to 75% of its customer base (as of April, 2012). The City of Steamboat Springs will begin to deploy AMI meters in the next several years as part of its master plan.

The average annual water use of the combined districts is approximately 3,000 AF per year. Annual usage is split roughly 50/50 between the City and Mt. Werner Water.

The served population in our community is different than that of traditional rural communities in that the resort area served by Mt. Werner Water includes a transient population of part-time residents with second homes and an even larger population of resort visitors.

In the Mt. Werner Water District, residential properties, including multi-family complexes and single family homes, account for 68% of its share of total produced water followed by commercial properties using 16%, commercial combined at 6%, unbilled municipal irrigation at 2%, and unknown at 8% which includes fire hydrant flushing, leaks, and other unidentified losses.

The City Service Area follows more traditional usage patterns: Residential accounts consume 67%, followed by commercial properties at 29%, commercial combined at 3%. Unbilled usage accounts for 1% which includes park irrigation, fire hydrant flushing, street cleaning, leaks and other unidentified losses.

Mt. Werner Water does not anticipate expanding beyond its current boundaries; therefore, its growth potential is limited to development of vacant parcels and redevelopment of older properties within its four-square mile service area. The annual analysis of potential development under current zoning indicates that the District is approximately 68% built-out.

The City, with a service area of six square miles, is largely built-out; future growth will be tied to redevelopment and increased residential densities. However, there remains significant long-term growth potential in the unincorporated West Area between the Old Town and the Steamboat II Metro District. Under current economic conditions and local housing inventory overhang, the future of the West Area remains uncertain. Instead of a development of dense residential neighborhoods that would be annexed into the City, the land could remain in the county and be subdivided into 35-acre parcels without City services.

3.b.i) Current and past per capita water use for the last five years and the basis for this calculation.

Below we have listed population estimates for the City of Steamboat Springs and produced water to meet retail and other demand. The economic downturn begins to show in the reduction of water use in 2009. A cooler, wetter summer in 2010 had an even more dramatic effect on lowering water consumption while the resident population remained relatively stable. Average daily per capita water use for the period was 220 gpcd, approximately 8% lower than in the middle of the decade.

Average Daily Per Capita Water Demand (GPCD) Steamboat Springs, CO			
Year	**Total System Annual Produced Water (mg)**	**Population**	**Average Daily Per Capita Demand (gpcd)**
2006	982	11,349	237
2007	1,023	11,701	240
2008	984	12,143	222
2009	940	12,356	208
2010	852	12,088	193
			Average 2006-2010 = 220 gpcd

3.b.ii) Population for the past five years, current year and 10 year population projection served by the entity and the source for this information.

In the period 2006 - 2009, the population of Steamboat Springs grew at an annual rate of 2.9%. However, the 2010 US Census indicated a 2% decline in population from 2009. The State Demography Office's most recent study of labor statistics estimates that the population of Routt County will grow at 1.86% per year for the period 2010-2015. Even this modest projection is unlikely to be realized because of continued weakness in the national and local economies. Accordingly, we are projecting population growth over the next ten years at 1.3% per year based upon Routt County growth rates in the period 2000-2005 preceding the development boom.

Steamboat Springs Population (US Census, State Demographic Office)	
Year	**Estimated Population**
2006	11,349
2007	11,701
2008	12,143
2009	12,356
2010	12,088

	***2010**	****2015**	****2020**
Routt County	23,447	25,011	26,680
Steamboat Springs	12,088	12,894	13,755

**Source: 2010 US Census*
*** Projected at Routt Co. growth rate 2000-2005 = 1.3%*

Continued weakness in the national economy is also expected to result in slow growth in the user base and in resort tourism. For the period 2012-2016, this will likely translate into a modest rate of growth in base usage of 1.3% per year for the City following the population growth trend; for the Mt. Werner Water District, we expect a rate of 0.75% per year reflecting a static residential population and continued slow growth in resort tourism. Summer weather patterns drive irrigation demand and will continue to have the greatest effect on annual water production volume.

Under current economic conditions, the future of the West Area is uncertain. Therefore, we have not assigned any additional water usage for the West Area in our five-year projection.

Future Annual Retail Demand 2012-2016 (AF)

	2012	**2013**	**2014**	**2015**	**2016**
Mt Werner Water District	1,556	1,568	1,579	1,591	1,603

3.b.iii) Estimated water savings goals to be achieved through implementation of the Plan in acre-feet and as a percentage.

In 2010, the City of Steamboat Springs and Mt. Werner Water completed a Water Conservation Plan that was reviewed and approved by the CWCB in 2011. Water saving goals will be achieved through reductions in water demand and in distribution system losses.

This application is seeking funding for the first phase of consumer-initiated water efficiency programs listed below which represent a total of 30% of our water savings goal. The balance of savings (70%) will come from utility-initiated programs. See Steamboat Springs Water Conservation Plan II (May, 2011) for more detail.

COMBINED TARGETS - REDUCE PRODUCED WATER 15% BY YEAR 2035

Water Conservation Program General Category	Estimated annual water savings by 2035 = 15% of produced water	Estimated annual water savings using projected 2035 water production of 5,087 AF
Consumer-initiated indoor residential and commercial water savings through water efficient appliances/equipment & behavioral best practices.	**2.25%** will be achieved through this category	114 AF
Consumer-initiated outdoor irrigation and landscaping efficiencies.	**2.25%** will be achieved through this category	114 AF
Utility-initiated programs (such as distribution system repair/replacement, leak detection, tiered rate structure, meter upgrades and monitoring, hydrant testing/monitoring, bill stuffers & newsletters, decorative water feature standards, park irrigation monitoring, and raw water conversion for irrigation).	**10.50%** will be achieved through this category	534 AF
TOTAL WATER SAVED PER YEAR	**15%**	**762 AF**

3.b.iv) Estimates of water savings realized in the past 5 years (2006-2010) through water conservation efforts implemented by the applicant.

The applicant received approval of the Water Conservation Plan in 2011. Prior to developing the conservation plan, the applicant had the following conservation efforts in place, but no systematic measurements have been made.

Distribution system infrastructure repair and replacement
MWW: Replaced 6,390 LF DIP since 2006

Tiered rate structure
MWW: in place since 2007

Water Meter enhancements
MWW: as of 2010, 54% of 2400 water meters retrofitted with Aclara fixed network AMI system

Meter monitoring
MWW: repair/replace 3 meters per year

Newsletters
MWW: conservation messaging in quarterly newsletter

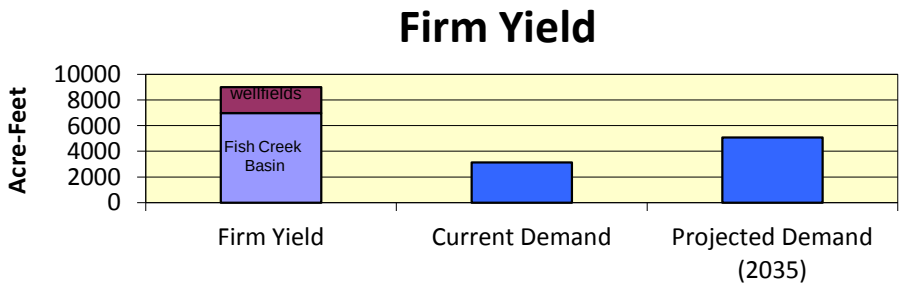
3.b.v) Adequacy, ability, and reliability of the entity's water system.

Colorado experiences a wide range of climatic conditions from year-to-year as well as from season to season. Climate records and research conducted by the National Center for Atmospheric Research indicate a pattern of major droughts in Colorado occurring every 20 to 22 years. Water suppliers in the West accommodate this uncertainty through reservoir storage, consideration of "firm yields" in estimates of water availability, raw water supply development, and "demand side" strategies such as voluntary or mandatory restrictions on outdoor water usage. Plans to reduce usage are necessary to stretch the available water supply through periods of drought.

The firm yield of Steamboat's current water supplies is estimated to be 9,000 AF per year including 7,000 for Fish Creek Basin (including senior in-stream rights and two storage reservoirs) and 2,000 AF for the Yampa wellfields. In addition, the City of Steamboat Springs holds water rights in the Elk River drainage northwest of the City with 1000-3000 AF potential depending on storage facilities. The Yampa wellfields also have potential for expansion.

Meeting Future Demand

	City of Steamboat Springs	Mt. Werner Water	Total
Current Demand (2010):	*1,215 AF	1,400 AF	**2,615 AF**
Projected Demand (2035):	*2,589 AF	2,498AF	**5,087 AF**
	*includes Steamboat II Metro District (145AF to 181AF)		
Firm Yield/Supply:			
Fish Creek Basin			**7,000 AF**
Yampa River Wells			**2,000 – 3,500 AF**
Elk River Right (conditional)			**1,000 – 3,000 AF**



In total, our raw water resources in the Fish Creek Basin appear to be ample to meet current and future annual demands; however, the snowpack runs off the Divide by late July and, from mid-August to the following March, our community must live on the most senior in-stream flow rights in Fish Creek and released storage from the two reservoirs in the Fish Creek Basin. From June to October, the Fish Creek water supply is augmented by groundwater production from the Yampa River Wellfields. Water conservation will play an essential role in modifying water-use behavior to ensure the long-term sustainability of our community.

Uncertainties for long-range water supply planning include a possible Colorado Compact call, a large scale fire in the Fish Creek Basin, extended drought, climate change, and development in the West Area of Steamboat Springs.

For Mt. Werner Water, future water demand will be shaped by zoning densities within District boundaries; for the City, the major variables shaping future demand are zoning densities affecting in-fill and the future course of development in the West Area. The rate of growth is dependent on the national economy and, in particular, on the continued evolution and diversification of the local economy which is currently dependent on tourism.

The City of Steamboat Springs and Mt. Werner Water share ownership of the Fish Creek Filtration Plant which is operated by Mt. Werner Water. The current capacity of the plant is 7.5 mgd; the plant can be expanded to 12.0 mgd. The Yampa River Well system is operated during the summer irrigation season to meet summer irrigation demand and has a sustainable capacity of 1.8 mgd. The City and Mt. Werner Water are examining the feasibility of expanding wellfield production from 1.8 mgd to 3.3 mgd.

3.c) How the Grant Program monies will be used to address the applicant's stated water savings goals.

The approved 2011 Water Conservation Plan identifies five existing programs and calls for the implementation of 14 additional programs to achieve plan goals over a 25-year period. Among these programs is a meter enhancement program. The purpose of this program is to deploy AMI meters and enabling software to monitor customer meters for the purpose of detecting leaks and over-watering.

In 2011, the CWCB approved the Steamboat Springs, Colorado Water Conservation Plan II submitted by the Mt. Werner Water District and the City of Steamboat Springs.
The goals of this Plan include:

- Raising awareness of the need for, and benefits of, water conservation
- Creating a "conservation culture" in Steamboat Springs that protects the limited and essential water supply
- Fostering the understanding that making wise water use choices directly correlates to future investment of public funds – saving water means saving money on mandatory water supply and wastewater plant expansions.

Some specific conservation targets include:

- Reduce produced water by 5% (by 2015), by10% (by 2025) and by15% (by 2035)
- Improve irrigation efficiencies
- Enhance leak detection.

The Web portal solution developed with CWCB grant program monies will address MWW's water conservation goals by:

- Monitoring MWW customer accounts and analyzing consumption patterns to detect leaks
- Proactively notifying MWW customers so that leaks can be repaired more quickly
- Incorporating landscape measurements and daily weather data to notify customers when they are over-irrigating
- Delivering individualized information to each MWW customer that will promote indoor and outdoor conservation.

Substantial water-saving opportunities exist in the areas of indoor usage and outdoor irrigation. The Steamboat Water Supply Master Plan (WSMP), completed in November 2008, demonstrated that indoor demands account for roughly two-thirds of the total demand on the system.

Because many of MWW's customers are "absentee owners," water leaks can have a much larger impact on unnecessary water usage because of the amount of time they tend to run prior to being detected and corrected.

This demand-side leak detection solution will accelerate the time between when a leak is identified, and when the customer (or his/her property management firm) is alerted. Leaks that in the past would have run for days or weeks will be fixed more quickly.

MWW's outdoor irrigation water requirements account for roughly one-third of the total system demand, however, during the summer, outdoor irrigation use is double indoor use. The irrigation efficiency guidance that this Web portal solution offers will aid customers in using the least amount of water necessary for a healthy landscape.

An ancillary goal of this project is to provide impact metrics to the CWCB that demonstrate the effectiveness of this type of conservation system. If data from a production rollout of this system confirm the results of the prototype project, this system could be the foundational element for every water conservation initiative, at every water utility in the State of Colorado that has adopted AMI technology.

The water meter monitoring program is designed to achieve water savings as follows:

Program Names	**Gallons per year**	**AF per year**	**AF per 5 years**
U4a - Residential Leak Detection	2,250,000	8	40
U4b - Overwatering / Irrigation System Leak Detection	24,000,000	74	370
U4c - Customer Water Budgeting	3,240,000	10	50
Total Savings	29,790,000	92	460

	2012	**2016**	**Cumulative savings 2013-2016**
MWW Total Retail Demand without meter monitoring program	1,556 AF	1,603 AF	0 AF
MWW Total Retail Demand with meter monitoring program	1,556 AF	1,511AF	299AF
Program Savings % of Total		5.9% annual savings	4.7% cum. annual savings

3.d) Summary of How Water Savings will be Calculated During Project implementation

After the solution has been implemented, one method for estimating water savings will be to compare usage totals from previous years--normalized for weather variances--to the year subsequent to implementing the demand-side leak detection system.

Another method is to track "prevented losses." For example, if a leak is detected on the 15th day of the month in a home where the residents are away, prior to implementing this system, the leak would have run through the 30th day of the billing cycle and as much as 5 days later depending on when the customer receives a printed bill.

The total amount of water that would have been used for the 20 day period prior to the customer learning of the problem would represent prevented losses or estimated water savings.

To calculate water savings from the irrigation efficiency improvements the system offers, water consumption during past irrigation seasons will be normalized for year-to-year weather differences and compared to consumption data after the system has been deployed.

By targeting water leaks and over-irrigation, this solution has the potential **to save the District 92 acre-feet of water every year.**

4. Grant Request Overview

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A. Groups, individuals, and organizations included in the education and outreach efforts

The goal of this project is to reach all MWW customers and provide information and guidance individualized to their homes or businesses.

B. Specific goals of the project

This project will create a Web-based demand-side leak detection and irrigation efficiency system that will integrate with an AMI fixed-network system. Water utilities will be able to more effectively serve their customers by proactively contacting them--via e-mail or telephone--when leaks, over-irrigation, or other problems are detected.

Water users will be empowered with capabilities to:

- Know if they are irrigating optimally
- Set a usage (or price) budget each month and be notified if their consumption is trending to exceed that limit
- Track how much water they are using during a billing cycle
- See how their usage compares to their neighbors.

Specific goals of this project include:

1. Substantially reduce water unnecessarily lost to leaks and over-irrigation
2. Provide actionable information that residential and business customers need to use water efficiently
3. Provide a tool that aids water conservation professionals in performing their daily duties
4. Measure the amount of water this conservation system saves
5. Provide summary data about the project's water conservation results to the CWCB.
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This project seeks to revolutionize how water conservation activities are conducted. Instead of imitating standard conservation programs--irrigation audits, rebates, education, etc.-- that are one-time initiatives, affecting a small percentage of a water utility's customer base, this solution is a conservation system--continually communicating high value information to all customers in a provider's service area.

This project supports the mission and objectives of the CWCB in several ways. For example, by working to eliminate wasted water, providers can "*avoid or reduce the need to develop or acquire new water supplies.*" They can also "*postpone, downsize or avoid altogether the need for new water treatment or wastewater treatment infrastructure.*"

This project is intended to improve conservation results for entire communities. Successful conservation will "*reduce operating costs related to water and wastewater treatment and source water production.*"

The way this project focuses on communicating critical information directly to water users will have tremendous public relations value for utilities and "*improve public credibility by demonstrating stewardship of natural and financial resources.*"

Overall, this project "*promotes the sustainable use of finite water supplies*" in a way that may prove more effective than any other water conservation program to date.

C. Detail Specific Activities and Tasks to be Funded with this Water Efficiency Grant Monies

Activities and tasks to be funded with this Water Efficiency Grant include:

Task 1: Finalize Development of the Web Portal Software

a. *Integrate the data analytics engine* - this part of the software application performs statistical data analyses and uses mathematical computations to determine when a water customer's usage indicates a potential leak, over-irrigation issue, or other problem.
b. *Configure the relational database* - because of the large volume of information being processed, the system will use a commercial relational database to store customer and program data. The database will be customized to MWW's requirements.
c. *Customer/Administrator Web portal* - water utilities and their customers will manage the system using a standard Web browser and an Internet connection. It will be hosted at a secure datacenter. It will be delivered using the Software-as-a-Service (SaaS) or "subscription model." Water providers will not need to install any hardware or software to run the system.

Task 2: Integrate MWW Customer Information into the Web Portal

a. Create user accounts and import: account #, meter #, service address, customer name, phone, e-mail, etc.
b. Upload historical consumption data
c. Define how customer account information will be updated, i.e. new, updated, closed accounts.

Task 3: Integrate Aclara AMI Star System Data into the Web Portal

a. Define and implement a process for uploading daily consumption data from the Aclara Star System.

Task 4: Initiate Beta Test of the Web Portal System

a. Create user accounts for MWW staff
b. Develop help documentation--Administrator and End User Training Guides
c. Conduct administrator training--via Webinar or onsite at the provider's facility
d. Invite a small group of MWW customers to participate and train them on the system's capabilities.

Task 5: Launch Production Version of the Web Portal System

a. Send a letter to MWW customers notifying them of the new service
b. Post information to MWW website
c. Use the system to identify problems and alert customers.

Task 6: Reporting - CWCB

a. Develop written progress reports for the CWCB at 50%, 75%, and final upon project completion.

5. Project Scope of Work

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This project will be completed in 120 days and is divided into three phases. Phase 1 will be completed by October 31, 2012. Phase 2 will be completed November 30, 2012, and Phase 3 will be completed December 31, 2012, 120 days from the project start date.

Primary Features of the Project

Task 1: Finalize Development of the Web Portal Software

Finalize development of the demand-side leak detection and irrigation efficiency solution. This solution uses the AquaHawk Alerting Web portal framework currently under development by AmCoBi.

The Web portal will combine a commercial relational database, an analytics engine (used to evaluate consumption data to determine when there is a valid reason to alert a water user) and other software capabilities.

End Product to be Delivered:

- A demand-side leak detection system that water utilities with AMI systems can use.

Timeline: Portal software delivered at the completion of Phase 1 of the project (October 31, 2012).

Tasks to be Performed:

- Finalize development of the Web portal
- Conduct initial software testing and quality control
- Deliver a project progress report to the CWCB (October 31, 2012 -50% project completion).

Task Responsibility: AmCoBi.

Funding Source: **$14,400** of the overall grant funds will be used for Task 1. MWW will contribute 22 hours equivalent to $770 of value-in-kind assistance.
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Task 2: Integrate MWW Customer Information into the Web Portal
During this task, MWW customer information and historical consumption data will be incorporated into the Web portal application.

End Product to be Delivered: MWW customer information will be accessible via the Web portal.

Timeline: Delivered at the completion of Phase 1 of the project (October 31, 2012).

Task Responsibility: MWW and AmCoBi.

Tasks to be Performed:

- Create user accounts and import: account #, meter #, service address, customer name, phone, e-mail, etc.
- Integrate price tier information
- Upload historical consumption data
- Define and implement a process for updating customer account changes
- Perform quality assurance testing on the imported data.

Funding Source: **$3,285** of the overall grant funds will be used for Task 2. MWW will contribute 45 hours equivalent to $1,575 of value-in-kind assistance.

Task 3: Integrate Aclara AMI Star System Data into Web Portal
During this task, daily consumption data from MWW's AMI system will be uploaded to each customer account in the Web portal.

End Product to be Delivered: Data from MWW's metering system will be available in the Web portal.

Timeline: Delivered at the completion of Phase 2 of the project (November 30, 2012).

Task Responsibility: MWW and AmCoBi.

Tasks to be Performed:

- Develop and implement the daily process of uploading customer consumption data into the Web portal.
- Deliver a project progress report to the CWCB (November 30, 2012 -75% project completion).

Funding Source: **$3,600** of the overall grant funds will be used for Task 3. MWW will contribute 25 hours equivalent to $875 of value-in-kind assistance.

Task 4: Launch Beta Test of Web Portal System
During this task, the demand-side leak detection and irrigation efficiency solution will be tested by MWW employees and a select group of customers.

End Product to be Delivered: The solution will be tested thoroughly.

Timeline: Delivered at the completion of Phase 2 of the project (November 30, 2012).

Task Responsibility: MWW and AmCoBi.

Tasks to be Performed:

- Create user accounts for MWW staff
- Develop help documentation--Administrator and End User Training Guides
- Conduct administrator training--via Webinar or onsite at the provider's facility
- Invite a small group of MWW customers to participate and train them on system capabilities
- Correct software bugs and issues discovered during testing.

***Funding Source:* $5,400** of the overall grant funds will be used for Task 4. MWW will contribute 100 hours equivalent to $3,500 of value-in-kind assistance.

Task 5: Launch Production Web Portal System

During this task, the leak detection and irrigation efficiency solution will be released for general use by all MWW customers.

End Product to be Delivered: The system will be available to all MWW customers.

Timeline: Delivered at the completion of Phase 3 of the project (November 30, 2012).

Task Responsibility: MWW and AmCoBi.

Tasks to be Performed:

- Send a letter to customers notifying them of the new service
- Post information to the MWW website
- Start using the system to alert customers
- Deliver a project progress report to the CWCB (December 31, 2012 -final project completion).

***Funding Source:* $6,750** of the overall grant funds will be used for Task 5. MWW will contribute 116 hours equivalent to $4,060 of value-in-kind assistance.

6. Project Budget

The following is a project budget broken down by tasks and identifying all associated costs. The total project cost is **$44,915**. MWW is requesting a grant in the amount of **$33,435**--74% of the total cost. MWW will contribute **$11,480** in the form of in-kind services--26% of the total project cost.

CWCB Water Efficiency Grant Budget - Task Detail							
	Mt. Werner Water			AmCoBi		CWCB	Totals
TASK	Office Manager	Customer Service	Total MWW staff hours	Consultant Hours	Consultant costs	CWCB Grant Request	Total
Software Development			$35		$45		
1.0 Finalize Development of the Web Portal system	14	8	22	320	$14,400	$14,400	$15,170
2.0 Integrate MWW Customer information into Web Portal	20	25	45	73	$3,285	$3,285	$4,860
3.0 Integrate Aclara AMI Star System Data into the Web Portal	15	10	25	80	$3,600	$3,600	$4,475
Testing and Training							
4.0 Initiate Beta Test of the Web Portal system							
4.1 Staff Training	10	10	20	20	$900	$900	$1,600
4.2 Train customer test group	10	10	20	20	$900	$900	$1,600
4.3 Perform end-user testing	30	30	60	80	$3,600	$3,600	$5,700
Product Launch							
5.0 Launch production version of the Web Portal system							
5.1 Direct Mail		16	16	0	$0	$0	$560.00
5.2 Update MWW Website		30	30	0	$0	$0	$1,050
5.3 Customer Support	50	20	70	150	$6,750	$6,750	$9,200
Reporting - CWCB							
1. Progress Report 50%	5		5				$175
2. Progress Report 75%	5		5				$175
3.Final Report	10		10				$350
Totals	169	159	328	743	$33,435	$33,435	$44,915

7. Summary

By partnering with MWW, the CWCB has the opportunity to play an invaluable role in the creation of a water conservation system that may prove to be one of the most effective ever developed.

MWW has elected to work with AmCoBi because the company has invested significant time and effort in developing a functional demand-side leak detection and irrigation efficiency prototype. A CWCB grant would accelerate the software development process enabling the system to be deployed more quickly. The faster the solution is implemented, the more quickly water can be saved.

This Web portal solution will be architected to support AMI systems used by other Colorado water providers. In the future, they will be able to leverage the investment the CWCB makes in this project because they will be able to use the system at a lower overall cost.

This project will further establish Colorado as a national leader in water conservation.

8. Signing Authority

Jay Gallagher, General Manager, has signing authority on behalf of the Mt. Werner Water District to commit the organization's resources to fulfill the tasks presented in this grant request.

_____ August 8, 2012

Signature **Date**

General Manager

Title

ATTACHMENT 2

CWCB Water Efficiency Grant: Timeline

TIMELINE

		September				October				November				December			
	WEEK	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
	Task																
1	Software Development																
2	Integrate MWW Customer Information into Portal																
3	Integrate Aclara AMI Star System Data in Web Portal																
4	Initiate Beta Test of the Web Portal System																
5	Launch Production Version of the Web Portal System																
6	Reporting CWCB								50				75				Final