

Advanced	Water M	Aeter F	Repla	cement	- Pha	ase I
		Tow	/n of	Mounta	in Vil	lage
			Mar	ch 2023 B	oard M	eeting

Water Plan Grant Application



	DETAILS	
Total Project Cost:		\$140,288
Water Plan Grant Re	equest:	\$70,144
Recommended Amo	unt:	\$0
Other CWCB Funding	g:	\$0
Other Funding Amou	unt:	\$0
Applicant Match:		\$70,144
Project Type:	Construction 8	Implementation
Project Category:	Conservation & La	and Use Planning
	orporating water-sa nning, \$200,000 in	annual efficiency

LOCATION	
County:	San Miguel
Drainage Basin:	San Miguel

Colorado Water Plan Grant funding is requested to support Phase I of the Town of Mountain Village's Advanced Water Meter Replacement Project to update 32 aging meters with automated meters in commercial properties and establish a website for customers to track readings remotely in real time, which would hopefully incentivize reductions in water uses and associated costs. The new meters will allow for more accurate readings and the detection of leaks as they are occurring.

The Colorado Water Plan grant request is 50% of the total project cost and the applicant match is 50%.

Success of the project will include 1) an updated inventory of all existing water meter sizes, makes, and models at all commercial properties served by the Town of Mountain Village, 2) a successful Request for Proposals to secure a contractor, and 3) their installation of new meters, the associated software, and a customer portal.

Phase I of the Advanced Water Meter Replacement Project addresses potential water loss, aging infrastructure, and consumer education in Mountain Village, all of which are goals of Colorado's Water Plan.

However, given the competitive applications and limited conservation and land use category funding this round, CWCB staff encourages the Town of Mountain Village staff to register for the free Colorado Water Loss Initiative training to receive direct technical assistance to identify and prioritize water loss projects within their municipal system through the free water loss audit and adopt supply-side conservation practices considered best management practices by the CWCB before applying in a future grant cycle.

Funding Recommendation:

While the project in concept aligns with Water Plan goals, given that this application was not competitive in this round of limited category funding, staff recommends denial of the funding request from the Town of Mountain Village for Phase I of the Advanced Water Meter Replacement Project and encourages Mountain Village to reapply after completing the Colorado Water Loss Initiative training and audit.



Colorado Water Conservation Board

Water Plan

Water Project Summary

Name of Applicant	Town of Mountain Village	
Name of Water Project	Advanced Water Meter Replacement, Phase 1	
Grant Request Amount		\$70,144.00
Primary Category		\$70,144.00
Conservation & Land Use Planning		
Total Applicant Match		\$70,144.00
Applicant Cash Match		\$47,518.00
Applicant In-Kind Match		\$22,626.00
Total Other Sources of Funding		\$70,144.00
Town of Mountain Village		\$47,518.00
Town of Mountain Village		\$22,626.00
Total Project Cost		\$210,432.00

Applicant & Grantee Information		
Name of Grantee: Town of Mountain Village Mailing Address: 455 Mountain Village Blvd, Suite A Mountain Village CO 81435 FEIN: 841,299,345		
Organization Contact: Lauren Kirn Position/Title: Environmental Efficiencies & Grant Coordinator Phone: 970-369-8601	Email: Ikirn@mtnvillage.org	
Organization Contact - Alternate: JD Wise Position/Title: Assistant Director of Public Works Phone: 970-708-0215	Email: jwise@mtnvillage.org	
Grant Management Contact: Lauren Kirn Position/Title: Environmental Efficiencies & Grant Coordinator Phone: 970-369-8601	Email: lkirn@mtnvillage.org	
Grant Management Contact - Alternate: JD Wise Position/Title: Assistant Director of Public Works Phone: 970-708-0215	Email: jwise@mtnvillage.org	
Description of Grantee/Applicant		

No description provided

Type of Eligible Entity

- □ Public (Government)
- Public (District)
- Public (Municipality)
- Ditch Company
- Private Incorporated
- Private Individual, Partnership, or Sole Proprietor
- Non-governmental Organization
- Covered Entity
- Other

Category of Water Project

Agricultural Projects
Developing communications materials that specifically work with and educate the agricultural community on
headwater restoration, identifying the state of the science of this type of work to assist agricultural users
among others.
Conservation & Land Use Planning
Activities and projects that implement long-term strategies for conservation, land use, and drought planning.
Engagement & Innovation Activities
Activities and projects that support water education, outreach, and innovation efforts. Please fill out the
Supplemental Application on the website.
Watershed Restoration & Recreation
Projects that promote watershed health, environmental health, and recreation.
Water Storage & Supply
Projects that facilitate the development of additional storage, artificial aquifer recharge, and dredging
existing reservoirs to restore the reservoirs' full decreed capacity and Multi-beneficial projects and those

projects identified in basin implementation plans to address the water supply and demand gap.

Location of Water Project

Latitude	37.934735
Longitude	-107.865245
Lat Long Flag	Municipal centroid: Coordinates based on centroid of municipal boundary
Water Source	The Town of Mountain Village's water source is multiple wells within Mountain Village's
	boundaries.
Basins	Southwest
Counties	San Miguel
Districts	60-San Miguel River Basin

Water Project Overview

Major Water Use Type	Municipal
Type of Water Project	Construction / Implementation
Scheduled Start Date - Design	
Scheduled Start Date - Construction	3/13/2023
Description	

The Town of Mountain Village is the local water delivery authority for Mountain Village and the unincorporated San Miguel County neighborhoods of Ski Ranches, Sky Field, and Elk Run. The Town of Mountain Village is located within San Miguel County in rural, southwest Colorado. Over the Summer 2022, 100% of the county was in a moderate drought and 64.59% was in a severe drought. Through the proposed Advanced Water Meter

Replacement, Phase 1 project, the Town will replace its existing, inconsistent and aging water meters in commercial properties and establish a customer portal for these properties over a duration of one year. The new, automated meters will measure water use in real time and remotely, which the current meters do not do. This will allow for more accurate readings and the detection of leaks as they are occurring. The customer portal will allow commercial properties to view their water use in real time, which will incentivize customers to reduce unnecessary water use and associated costs.

	Measurable Results
	New Storage Created (acre-feet)
	New Annual Water Supplies Developed or Conserved (acre-feet), Consumptive or Nonconsumptive
	Existing Storage Preserved or Enhanced (acre-feet)
	New Storage Created (acre-feet)
	Length of Stream Restored or Protected (linear feet)
\$200,000	Efficiency Savings (dollars/year)
4	Efficiency Savings (acre-feet/year)
	Area of Restored or Preserved Habitat (acres)
	Quantity of Water Shared through Alternative Transfer Mechanisms or water sharing agreement (acre-feet)
200,000	Number of Coloradans Impacted by Incorporating Water-Saving Actions into Land Use Planning
	Number of Coloradans Impacted by Engagement Activity
Other	
No additio	nal measurable results provided

Water Project Justification

The Town of Mountain Village is a local municipality in Southwest Colorado that serves as the community's water utility company. The draft 2023 Colorado Water Plan states on page 185 section 1.4, "Aging infrastructure is an ongoing challenge, especially for smaller communities where system water loss, treatment, and water metering are major issues. These communities are often extremely susceptible to system water issues that are exacerbated by climate extremes like flood and drought." Within the Southwest Basin Roundtable's Implementation Plan, page 23, section C, states, "3: Promote wise and efficient water use through implementation of municipal conservation and efficiency strategies to reduce overall future water needs." Furthermore, the first page of the Water Plan 2023 Fact Sheet lists Colorado's water values "1) A productive economy that supports vibrant and sustainable cities, agriculture, recreation and tourism; 2) An efficient and effective water infrastructure system; 3) A strong environment with healthy watersheds, rivers, streams and wildlife; 4) An informed public with creative, forward-thinking solutions that are sustainable and resilient to changing conditions and result in strong, equitable communities that can adapt and thrive in the face of adversity." Our proposed project will advance the goals of the Colorado Water Plan and the Southwest Basin's Implementation Plan by addressing all of these goals and statements. The Town of Mountain Village is a small community of 1.264 year-round residents per the 2020 U.S. Census. In the summer, 100% of San Miguel County, within which Mountain Village is located, was designated as in a moderate drought and over 64.59% was in a severe drought. This project addresses municipal water, aging infrastructure, customer education through real time data, and increased accuracy and efficiencies which in turn are used to inform the public, municipal operations, and reduce operational costs for a tourism and outdoor recreation-based community. The key results of the Colorado Water Plan Analysis and Technical Update, per page xxii of the Executive Summary, states that while municipal users do not experience a gap currently, future need will increase, causing a gap, due to increasing population and a potential change in climate conditions. It goes on to state that "conservation efforts...can create significant future benefits in lowering the gap, as demonstrated by comparing the Adaptive Innovation and Hot Growth scenarios (which have similar assumptions on population and climate)."

Additionally, a core value of the Colorado Water Plan is efficient and effective water infrastructure, and emerging challenges have been identified as infrastructure enhancements and efficient water use (CO Water Plan Overview, July 2018, page 1; Water Plan Status Sheet 2021, page 2). Theme 5 – Land Use, on page 5 of the plan, resonates with this project. Section 5, page 140 of the Water Plan states that "implementing water conservation practices can lower the state gap" and can be done "with very little expense". This project aligns with the State's goal to protect and restore environmental, agricultural and recreational settings through water efficiency practices. Additionally, it is tailored to fit our local community.

This project supports the Colorado's Water Plan goals of meeting water supply and demand gaps and exploring financial incentives while honoring Colorado's water values and protecting its most valuable natural resource for current and future generations. The objectives of the Colorado Water Plan that directly align with the Town of Mountain Village's project include supply-demand gap, conservation, land use, and education and innovation (CO Water Plan Overview, July 2018, page 2). Our proposed project addresses the goals, themes and objectives mentioned above through educating and engaging the community about customers' individual water use through advanced water meters. This real-time, accurate data allows them to make water conservation decision, promoting infrastructure enhancements for reducing water loss and addressing aging infrastructure.

Related Studies

Leveraging Advanced Metering Infrastructure To Save Energy Rachel Gold, Corri Waters, and Dan York January 3, 2020. Revised January 27, 2020. Report U2001

U.S. EPA WaterSmart. Improving Water Management Using Advanced Metering Infrastructure Data: A Guide for Facility Managers

January 2022. Increasing consumer benefits & engagement in AMI-based conservation programs. Report prepared for American Water Works Association

Social equity implications of advanced water metering infrastructure. Miriam Solis, Samira Binte Bashar. Published December 1, 2020.

Colorado Water Loss Initiative

Colorado Growing Water Smart

Forest Health "State of Science"

Katrina Jessoe, Gabriel E. Lade, Frank Loge, Edward Spang, Residential water conservation during drought: Experimental evidence from three behavioral interventions, Journal of Environmental Economics and Management, Volume 110, 2021, 102519, ISSN 0095-0696,

https://doi.org/10.1016/j.jeem.2021.102519.

Tsai, Yushiou et al. "The Impacts of Water Conservation Strategies on Water Use: Four Case Studies." Journal of the American Water Resources Association vol. 47,4 (2011): 687-701. doi:10.1111/j.1752-1688.2011.00534.x

Taxpayer Bill of Rights

The Town of Mountain Village does not have any TABOR-related issues that may affect our application.