



COPPER MOUNTAIN CONSOLIDATED METROPOLITAN DISTRICT

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MEMORANDUM

To: Mr. Ben Wade, Project Manager
Colorado Water Conservation Board

Cc: Kevin Reidy – Colorado Water Conservation Board

From: Robert Martin, Public Works Director
Copper Mountain Consolidated Metropolitan District

Date: May 6, 2021

Re: Water Efficiency Plan Foundational Activity
Water Meter System AMI Upgrades
75% Progress Report

Introduction

Copper Mountain Consolidated Metropolitan District (District) applied for and was awarded a Colorado Water Conservation Board (CWCB) Water Efficiency Grant Fund (WEGF) Grant in February 2019. The grant monies were requested to facilitate and expedite implementation of a District project to upgrade the existing water metering system to an Advanced Metering Infrastructure (AMI) platform, with the primary goals of reducing water loss and improving monitoring of water consumption. This Memorandum is intended to serve as the 75% progress report for the Water Meter System AMI Upgrades project.

Project Status

After a slow start in 2019 and delays due to complications related to the COVID-19 pandemic in 2020, the project has been accelerated since the submittal of the 50% Progress Report. As a result, the project is on if not slightly ahead of schedule, and the District expects to complete all meter installations and AMI system integration by the end of 2021. At the time of writing of this report, materials procurement is approximately 95% complete and the number of installed meters is greater than 75%. Based on the actual percentage completion to date and the corresponding project costs, the total project cost is expected to be significantly less than the budget estimate submitted with the WEGF application. This is due in part to the fact that a significant percentage of the meters in the District's system had already been replaced prior to the grant application, but it also speaks to the efficiency of District Water & Sanitation staff in materials procurement, scheduling, and performing or contracting meter installations.

Regarding meter suppliers, the District has continued to procure and install meters from both Badger Meter and Metron Farnier. Each of these manufacturers has its relative advantages and disadvantages with respect to equipment performance, customer service, and technological support, but the implementation of the two systems in general has been relatively easy to manage. And although it was not an initial consideration, the District may also benefit by ensuring a degree of competition between the two manufacturers. Keeping them both on their respective toes, so to speak.

Goals & Objectives

As discussed in the 50% Progress Report, upgrading to an AMI platform has resulted in significant decreases in water loss and increases in revenue for the District. The ability to immediately identify leaks, malfunctioning

equipment, atypical usage, etc... has provided the District with a level of oversight and control that has dramatically improved system management and water conservation. Implementation of the AMI systems has also provided individual water and sewer customers with the ability to monitor their meters and water usage remotely. The majority of the District's customers do not live in the area full-time, and most properties are typically rented or vacant for the majority of the year. Remote monitoring allows property owners and managers to keep a close eye on water consumption in rented units and to identify leaks or other plumbing system issues. Many customers have assumed real ownership and responsibility for their water usage and this lends itself to furthering the water conservation goals of the District.

There were a number of specific goals and objectives established in the District's WEGF grant application. Please refer to the District's 50% Progress Report for more detailed discussion of how the project has met or is working toward achieving those goals and objectives.

Preliminary Findings & Accomplishments

The primary project accomplishment has been the reduction in water loss through system monitoring. Implementation of an AMI system was identified as the highest priority foundational activity in the District's Water Efficiency Plan and has and continues to play a primary role in moving the District toward full realization of its water efficiency goals.

Enhanced monitoring capabilities, both for the District and its customers, have resulted in a more comprehensive understanding of consumption patterns. This has enabled property owners and managers to identify excessive usage, particularly with rental properties, and has in some cases provoked a number of them to begin making plans to install more efficient toilets, water fixtures, and flow control devices. Several of the District's customers have made upgrades that have significantly reduced consumption and the size of their water bills. The District has encouraged these plumbing upgrades and will continue to work with customers to help them improve their individual systems and reduce usage and cost.

Scheduling & Scope of Work

With the acceleration of the project after the submittal of the 50% Progress Report, the project is still on schedule for completion by December 2021. It is anticipated that the meter installations and AMI system integration will be completed several months prior and that all of the administrative work will be finished and Final Progress Report will be submitted to CWCB before the end of the year. The current schedule is provided in Attachment I. Note that the Scope of Work has not changed the tasks that were defined in the original SOW and the sequencing of the work remains the same.

Invoicing & Grant Funding

In addition to a revised project schedule, a District invoice is provided as Attachment II, detailing project Cash Contributions and In-Kind services provided by the District to date. The 10% of Combined Subtotal row represents the percentage of the approved Grant monies that the District is requesting at approximately 75% completion of the project. Invoices from meter manufacturers, plumbing suppliers, and contractors are attached for CWCB reference and evaluation. The District has been able to perform all materials procurement without consultant (Tetra Tech) involvement and most of the meter installations using limited contractor services. This has significantly reduced the anticipated cost of the project to date. However, in order to accelerate the project and due to the complexity of some of the meter installations, it was necessary to increase reliance on contracted plumbing services for this phase of the project. Contracted services are still projected to be less than what was estimated in the original project budget.

ATTACHMENT I

CMCMD WATER METER SYSTEM AMI UPGRADES

PROGRESS REPORT AT 75% COMPLETION

REVISED PROJECT SCHEDULE

COPPER MOUNTAIN CONSOLIDATED METROPOLITAN DISTRICT
METER SYSTEM UPGRADES - PROJECT SCHEDULE
75% PROGRESS REPORT

Activity		2020												2021												2022	
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
Tasks 1 & 2	Prioritize Meter Replacement	x	x																								
	Procurement - Phase I						x	x	x																		
	Installation - Phase I						x	x	x	x	x	x	x														
	Procurement - Phase II																										
	Installation - Phase II																										
50% Progress Report- CWCB Submittal									x	x																	
Tasks 3 & 4	Prioritize Meter Replacement													x													
	Procurement - Phase I													x	x												
	Installation - Phase I														x	x	x	x	x								
	Procurement - Phase II																		x	x							
	Installation - Phase II																			x	x	x	x	x	x		
75% Progress Report- CWCB Submittal																			x	x							
Task 5	Web Portal Verification	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		
Task 6	Billing System Integration	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		
Final Report- CWCB Submittal																							x	x		x	