



COLORADO

Colorado Water
Conservation Board

Department of Natural Resources

1313 Sherman Street, Room 718
Denver, CO 80203

March 20, 2015

Alyssa Quinn, Conservation Specialist
Bow Mar Water and Sanitation District
8739 W. Coal Mine Avenue
Littleton, CO 80123

Re: Rehabilitation and Replacment of Water Meters

Ms. Quinn:

I am pleased to inform you that on March 19, 2015, the Colorado Water Conservation Board approved your loan request for the Rehabilitation and Replacment of Water Meters as described in the application and approved Loan Feasibility Study titled "*Feasibility of Rehabilitation and Replacement of Water Meters*" dated July, 2014. The Board approved a loan not to exceed \$332,795 (\$329,500 for project costs and \$3,295 for the 1% Loan Service Fee). The loan terms shall be 2.65% per annum for 10 years.

After the Board approves a loan there are a few steps that remain in the loan process including:

Contracting: An executed loan contract must be in place before funds can be disbursed for eligible project expenses. Peg Mason will contact you to initiate the loan contracting process. She can be reached at (303) 866-3441 x3227.

Design/Construction: Please be aware that there are design and construction procedures that must be followed. Derek Johnson, P.E., will be the Project Manager for this phase of the process and will work with you on the requirements and the disbursements of your loan funds. He can be reached at (303) 866-3441 x3254.

On behalf of the Board, I would like to thank you for your interest in a loan from the Colorado Water Conservation Board.

Sincerely,

Kirk Russell, P.E., Chief
Finance Section

Attachment: Updated Board Memo

E-mail Copy (Including Attachments): Patrica Wells, CWCB Board Member





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1313 Sherman Street
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P (303) 866-3441
F (303) 866-4474

John Hickenlooper, Governor

Mike King, DNR Executive Director

James Eklund, CWCB Director

TO: Colorado Water Conservation Board Members

FROM: Derek Johnson, P.E., Project Manager *DDJ*
Kirk Russell, P.E., Finance Section Chief *KR*

DATE: March 18-19, 2015 Board Meeting (Updated March 20, 2015)

AGENDA ITEM: 23a. Water Project Loan
Bow Mar Water and Sanitation District - Rehabilitation and Replacement of
Water Meters

Introduction

The Bow Mar Water and Sanitation District (District) is applying for a loan for the Rehabilitation and Replacement of Water Meters Project (Project). The Project includes removal and replacement of 233 meters, and rehabilitation of 60 existing meters by replacing meter registers to accommodate automatic meter reading. Associated with these improvements, the District will acquire automatic meter reading equipment and update its current billing software for compatibility with the new equipment.

The total Project cost is estimated at \$366,102. The District is requesting a loan to cover 90% of the Project cost. The funding package from CWCB will also include a Water Efficiency Grant Program grant of \$36,602. The attached Project Data Sheet provides a location map and a Project summary.

Staff Recommendation (Board Approved Staff Recommendation on March 20, 2015)

Staff recommends the Board approve a loan not to exceed \$332,795 (\$329,500 for project costs and \$3,295 for the 1% Loan Service Fee) from the Construction Fund to the Bow Mar Water and Sanitation District for costs associated with design and construction of the Rehabilitation and Replacement of Water Meters Project. The loan terms shall be 10 years at the reduced high-municipal interest rate of 2.65% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.



Background / Purpose of Project

The District serves 293 residential customer accounts within the Town of Bow Mar, with an average lot size of one acre. The annual water consumption is approximately 110 million gallons (338 acre-feet) annually. The District utilizes master meters to monitor the amount of water delivered from Denver Water. Each customer has an individual meter to track water use.

The District, through a meter replacement and rehabilitation program, seeks to reduce water distributed throughout its system without being metered, due primarily to inaccuracy of the aging meters presently in place, resulting in lost revenue and inaccurate consumption tracking. The service life of water meters is considered to vary between 10 to 20 years. Aging water meters tend to become inaccurate and to under-report actual usage. Better tracking of actual water use will aid in the recovery of lost or unbilled revenue, as well as in assisting the goals of conservation by identifying how much each water user actually consumes.

Loan Feasibility Study

Alyssa Quinn, Conservation Specialist for the District, prepared the Loan Feasibility Study titled "Feasibility of Rehabilitation and Replacement of Water Meters" dated July 2014 with the assistance of ENS Consulting. The Study was prepared in accordance with CWCB guidelines and includes preliminary engineering and the District's contractor's estimate of probable costs used in determination of total Project costs.

Bow Mar Water and Sanitation District

The District is located within both Arapahoe and Jefferson Counties. The District, a political subdivision of the State of Colorado, is a Special District organized and created pursuant to the laws of the State of Colorado by decree of the District Court in Arapahoe County on December 22, 1951. It is a quasi-municipal corporation with the right to levy property taxes. The boundaries of the District encompass approximately 0.56 square miles located entirely within the Town of Bow Mar.

The District receives water from Denver Water via a Master Meter agreement, and all subsequent metering, billing, and maintenance is performed by the District. The District is covered under Denver Water's Water Conservation Plan as a distributor (integrated system).

District revenues come from user rates and a mill levy. The District requires voter approval to take on debt, and plans an election in November of 2015 to seek voter approval to execute this CWCB loan.

The District is governed by a five-member Board of Directors, which are elected by property owners and residents of the District to serve four-year terms. The Directors are responsible for establishing policies of the District and are responsible for operation of the District's water and sanitary sewer facilities. The District is fully built-out, and no further growth is anticipated within the District's current service area.

The District has an Intergovernmental Agreement with the Platte Canyon Water and Sanitation District to provide water and sanitary sewer operations, maintenance services, and some select administrative services.

Water Rights

On July 20, 1961, Bow Mar signed a Master Meter Water Supply Agreement with Denver Water. Through this agreement, Denver Water is obligated to sell and the District is obligated to purchase potable water for distribution to the District's customers. Denver Water delivers potable water to the District through five master meters. Once the water reaches the District boundaries, the District is responsible for further distribution to its customers.

Project Description

The District proposes to completely remove and replace 233 meters, and to rehabilitate 60 existing meters by replacing the internal meter register to accommodate automatic meter reading. Associated

with these improvements, the District will acquire automatic meter reading equipment, and update its current billing software for compatibility.

The no-action alternative is considered undesirable to the District due to the continuation of use of inaccurate meters, possible water waste, and continued use of an outdated billing system. Lack of accurate meter reading also makes the appraisal of conservation efforts impossible.

TABLE 1: ESTIMATED PROJECT COST

Task Description	Amount
Meter Rehabilitation (60 meters)	\$ 22,279
Meter Replacement (233 meters)	\$ 305,646
Automatic Meter Reading Equipment	\$ 21,337
Billing Software	\$ 16,840
Total	\$ 366,102

The District will directly acquire the appurtenances and equipment for the Project from their current supplier in order to maintain consistency with existing meters in-place and stockpiled. The actual installation of the meters and meter rehabilitation will be put out to bid. Construction inspection will be provided by Platte Canyon Water and Sanitation District staff and reimbursed by the project.

The District has met the requirements of the CWCB Water Efficiency Grant Program and will be approved for a grant in the amount of \$36,602, conditioned upon approval and execution of a CWCB loan. Funds for Project-related expenses will be disbursed first from the CWCB Water Efficiency Grant. Upon depletion, funds will be drawn at 100% from the CWCB loan to the approved limits.

Schedule: Following a successful November 2015 election to allow the District to take on the debt for the CWCB loan, the Project is expected to begin in early 2016, completing in Spring/Summer of 2016.

Financial Analysis

The District qualifies for the current high-income municipal rate of 3.15% interest rate for a 30-year repayment term. The District applied for a 10-year term, so the interest rate is accordingly reduced to 2.65% per CWCB Financial Policy #7.

The District qualifies for a grant from the CWCB Water Efficiency Grant Program which will be used as the 10% borrower match. The District will cover any costs that exceed the estimated Project cost.

TABLE 2: FINANCIAL SUMMARY

Total Project Cost	\$ 366,102
Borrower Match (CWCB Water Efficiency Grant)	\$ 36,602
CWCB Loan	\$ 329,500
CWCB Loan (Including 1% Service Fee)	\$ 332,795
CWCB Annual Loan Payment	\$ 38,320
CWCB Annual Loan Obligation (including 10% debt reserve funding)	\$ 42,152
Annual Cost of Loan (with Reserve Account) per water tap (293 taps)	\$ 143.86

Creditworthiness:

Approximately 73 percent of the District's water infrastructure has been replaced since 1986. These replacement projects were funded by the District's property tax mill levy, service charges, and a low-

interest loan from the Colorado Water Resources and Power Development Authority. This loan was paid off early in 2014. At this time the District has no debt.

TABLE 3: FINANCIAL RATIOS

Financial Ratio	Past 3 Years ¹	Future w/ Project
Operating Ratio (revenues/expenses) weak: <100% - average: 100% - 120% - strong: >120%	105% (average) \$667K / \$634K	114% (average) \$667K / \$586K
Debt Service Coverage Ratio (revenues-expenses)/debt service weak: <100% - average: 100% - 120% - strong: >120%	136% (strong) (\$667K-\$544K) / \$90K	287% (strong) (\$667K-\$544K) / \$42K
Cash Reserves to Current Expenses weak: <50% - average: 50% - 100% - strong: >100%	74% (average) \$472K / \$634K	38% ² (weak) \$222K / \$586K
Debt per Tap (293 taps) weak: >\$5,000 - average: \$2,500-\$5,000 - strong: <\$2,500	\$1,553 (strong) \$455K / 293 taps	\$1,136 (strong) \$376K / 293 taps
Monthly Residential Water Bill weak: >\$60 - average: \$30 - \$60 - strong: <\$30	\$93 (weak)	\$93 (weak)

Notes:

1. The District currently has no debt, having paid off a Colorado Water Resources and Power Development Authority loan in 2014. Calculations above show prior 3 years which includes debt service on this loan.
2. Cash reserves available in 2015 are reduced by \$250,000 for future years due to planned water main replacement costs.

Collateral: Security for the loan will be the District's pledge of water revenues backed by a rate covenant and evidenced by annual financial reporting. This is in compliance with the CWCB Financial Policy #5 (Collateral).

cc: Alyssa Quinn, Conservation Specialist, Bow Mar Water and Sanitation District
 Susan Schneider/Jennifer Mele, Colorado Attorney General's Office

Attachment: Project Data Sheet



Rehabilitation and Replacement of Water Meters

Bow Mar Water & Sanitation District

March 2015 Board Meeting

L O A N D E T A I L S				
Project Cost:			\$366,102	
CWCB Loan (with Service Fee):			\$332,795	
Loan Term and Interest Rate:			10 Years @ 2.65%	
Funding Source:			Construction Fund	
Agriculture		Municipal		Commercial
0%	0% Low	0% Mid	100% High	0%
P R O J E C T S U M M A R Y				
Project Type:			Municipal Water	
Residential Customers			293	
Annual Water Use			338 Acre-Feet	



The Bow Mar Water & Sanitation District is a master meter distributor for Denver Water located just south of Denver. The District seeks loan funding for the planned rehabilitation and replacement of water meters throughout the subdivision service area.

L O C A T I O N			
County:		Arapahoe & Jefferson	
Water Source:		Denver Water (Master Meter)	
Drainage Basin:		Metro	
Division:	1	District:	9

The purpose of the project is to replace or rehabilitate the existing meters, which currently under-report actual usage due to age and wear. The meter replacement/rehabilitation program will replace 233 meters, rehabilitate 60 existing meters by replacing the meter register to accommodate automatic meter reading, and update the District's billing system to accommodate automatic meter reading.

