COLORADO
Colorado Water Conservation Board
Department of Natural Resources

1313 Sherman Street
Denver, CO 80203

P (303) 866-3441
F (303) 866-4474

TO: Colorado Water Conservation Board Members

FROM: Rachel Pittinger, P.E., Project Manager
Kirk Russell, P.E., Finance Section Chief

DATE: September 19-20, 2018 Board Meeting

AGENDA ITEM: 23d. Water Project Loans
Arabian Acres Metropolitan District – Automatic Meter Implementation

---

Introduction

The Arabian Acres Metropolitan District (District), acting by and through its water activity enterprise, is applying for a loan for the Automatic Meter Implementation (Project). The District and water system is located in the South Platte Basin approximately 11 miles west of Woodland Park. The purpose of the Project is to improve the District's operational efficiency by upgrading its water system. The existing manually read water meters within the District have reached the end of their design life and they do not accurately measure water flow. The Project cost is estimated at $400,000. The District is requesting a loan for 100% of Project costs. See attached Project Data Sheet for a location map and Project summary.

Staff Recommendation for CWCB Loan

Staff recommends the Board approve a loan not to exceed $404,000 ($400,000 for the Project costs and $4,000 for the 1% service fee) to the Arabian Acres Metropolitan District, acting by and through its water activity enterprise, for costs related to the Automatic Meter Implementation Project, from the Construction Fund. The loan terms shall be 10 years at a reduced low-income municipal interest rate of 1.85% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.

Background

The District currently services most of Arabian Acres and some of the neighboring Trout Haven Estates in Teller County. Not all lots are developed and have a tap from the District. The District has 145 residential taps and 5 commercial taps within the service area of approximately 0.85 square miles having a population of approximately 390 people. It is anticipated that the boundaries of the current service area will remain unchanged for the next 20 years. The community is predominantly single family homes that are premanufactured or mobile homes. Due to the variable availability of water in the groundwater wells, the potential for water service outages, and the high cost for the District to haul water, it is estimated each home receives less than 100 gallons per day.

The District's original treatment and distribution systems were constructed between 1972 and 1979. Water loss in the service lines is a constant and persistent issue for the District due to its age, materials used to construct the distribution system, bury depth of the water lines, and condition of the water laterals and the manually read water meters. Water loss in the water mains is addressed by the District's operator and is believed to contribute only to a small portion of the overall water loss as the operator proactively monitors the distribution system for leaks. The majority of the water loss is believed to occur in the existing water lines between the District's water mains and the individual homes. The District plans to replace these water lines in the future. The existing water meters are unreliable and the District is not able to accurately determine the water usage.

Loan Feasibility Study

Adam Somers, P.E., with AquaWorks DBO, Inc. prepared the Loan Feasibility Study titled, "Colorado Water Conservation Board Loan Feasibility Study Automatic Meter Reading System Implementation," dated May 2018. The feasibility study was prepared in accordance with CWCB guidelines and includes an analysis of alternatives, preliminary engineering, and estimated engineering costs.

Borrower – Arabian Acres Metropolitan District

The District is a quasi-municipal governmental entity formed in 2002 and governed by a five-member board of directors operating under the authority of Title 32 of the Colorado Revised Statutes. The board acting through its water enterprise fund has the ability to take on debt and to withhold delivery of water if assessments are unpaid. Liens can also be placed against any customer. The District was approved for a disadvantaged community status from the Colorado Water Resources and Power Development Authority (CWRPDA) on August 23, 2018. This designation allows small communities with challenges completing water projects to qualify for 0%-2% interest loans through the CWRPDA. The District's eligibility factors included household income and home values less than the Teller County values. The total average water produced from the wells is 5.42 million gallons or approximately 17 acre-feet per year.

Water Rights

The water rights associated with the Project are shown in Table 1. The District's decreed augmentation plan, 94CW281, allows for up to 15 additional wells with the District and so long as maximum out-of-priority depletions associated with the District do not exceed 6.906 acre-feet per year unless additional augmentation water is acquired. Rather than assuming a fixed water usage, the augmentation plan is based on the depletions associated with the measured water deliveries to the District's customers. Currently, 9 of the 15 additional wells have been constructed.

TABLE 1: WATER RIGHTS

Name	Amount	Date	Water Court Case No.
Rupp Well No. 1-55210	0.11 cfs	12/22/1995	94CW281
Rupp Well No. 4-58790	0.09 cfs	12/22/1995	94CW281

Project Description

The purpose of the Project is to better measure the delivery of water to its customers.

Alternative 1 – No Action: Failure to replace the existing water meters will continue to result in inaccurate measurements of water usage and water losses occurring in the service lines.

Selected Alternative 2 – Automatic Meter Implementation: This alternative consists of installation of an automatic meter reading system by Sensus, new meter pits, hardware and software installation, and a drive-by meter read base station. The new meters will provide accurate water usage measurements, will improve operational efficiency and will allow the District to accurately charge for water usage. The estimated cost for this alternative is $400,000.

TABLE 2: ESTIMATED PROJECT COST

Tasks	Cost
Design and Construction Engineering	$82,250
Meter Installation	$114,750
Meter Read Base Station (150 meters)	$174,000
Contingency (10%)	$29,000
TOTAL	**$400,000**

Permitting: The District does not anticipate the need to obtain any permits for this Project.

Schedule: The District anticipates construction in the spring of 2019.

Financial Analysis

Table 3 provides a summary of the Project's financial aspects. The District qualifies for a low-income municipal interest rate of 2.45% for a 30-year term based on their disadvantaged community status. Because CWCB limits the loan term on water metering projects to 10 years, a 10-year term is used and an additional 0.6% interest rate reduction will be applied per CWCB Financial Policy #7, bringing the interest rate to 1.85%.

The District applied for a $200,000 DOLA Energy Impact Assistance Fund grant concurrent with this loan request and the determination is anticipaed by the end of October 2018. If the District receives this grant, the grant will go toward this Project.

TABLE 3: FINANCIAL SUMMARY

Project Cost	$400,000
CWCB Loan Amount	$400,000
CWCB Loan Amount (Including 1% Service Fee)	$404,000
CWCB Annual Loan Payment	$44,624
CWCB Annual Loan Obligation (1st Ten Years)	$49,086
Number of Taps	150
Annual Loan Obligation per Tap (150 taps)	$327

Creditworthiness: The District's water activity enterprise fund has no existing debt. The District does not anticipate an increase to assessments for its customers.

TABLE 4: FINANCIAL RATIOS

Financial Ratio	Past Years	Future w/ Project
Operating Ratio (revenues/expenses) weak: <100% - average: 100% - 120% - strong: >120%	203% (strong) $355K/$174.5K	159% (strong) $355K/$223.5K
Debt Service Coverage Ratio (revenues-expenses)/debt service weak: <100% - average: 100% - 120% - strong: >120%	N/A	367% (strong) ($355K-$174.5K) $49K
Cash Reserves to Current Expenses weak: <50% - average: 50% - 100% - strong: >100%	115% (average) $201K/$174.5K	90% (average) $201K/$223.5K
Debt per Tap (150 taps) weak: >$5,000 - average: $2,500 - $5,000 - strong: <$2,500	N/A	$2693 (average) $404K/150tap
Average Monthly Water Bill* weak: >$60 - average: $30 - $60 - strong: <$30	$185 (weak)	$185 (weak)

**The average monthly water bill is comprised of a $60 water service fee, a $75 capital improvement fee and a $50 water usage fee.*

Collateral: Security for this loan will be a pledge of water activity enterprise revenues backed by a rate covenant as evidenced by annual financial reporting. This security is in compliance with the CWCB Financial Policy #5 (Collateral).

cc: Ms. Judy Bertrand, District Manager, Arabian Acres Metropolitan District
Ms. Jennifer Waller, President, Arabian Acres Metropolitan District
Jennifer Mele, Colorado Attorney General's Office

Attachment: Water Project Loan Program – Project Data Sheet

COLORADO
Colorado Water Conservation Board
Department of Natural Resources

Automatic Meter Implementation

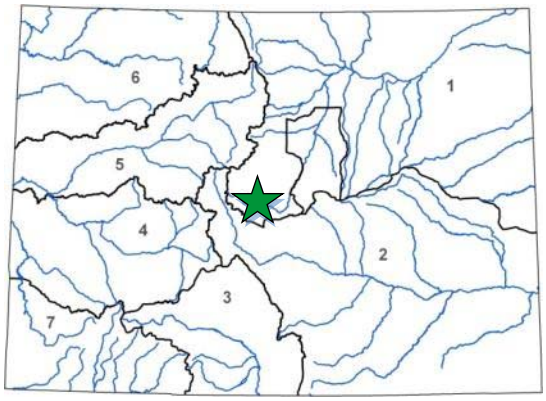
Arabian Acres Metro District

September 2018 Board Meeting

LOAN DETAILS	
Project Cost:	$400,000
CWCB Loan (with Service Fee):	$404,000
Loan Term and Interest Rate:	10 Years @ 1.85%
Funding Source:	Construction Fund

BORROWER TYPE		
Agriculture	*Municipal*	*Commercial*
0%	100% Low - 0% Mid -0% High	0%

PROJECT DETAILS	
Project Type:	Water Meter Replacement
Average Annual Diversions:	17 AF



LOCATION			
County:			Teller
Water Source:			Groundwater
Drainage Basin:			South Platte
Division:	*1*	*District:*	*23*

The Arabian Acres Metropolitan District (District) provides potable water service to the Arabian Acres subdivision and Trout Haven Estates in Teller County. The District currently serves 145 residential and 5 commercial taps for a population of approximately 392 people. The District has had trouble providing reliable service with an approximately 40-year-old, poorly constructed distribution system that leaks considerably and lacks adequate flow measurement of potable water delivery. Through this Automatic Meter Implementation (Project) the District intends to install an automatic meter reading (AMR) system, new meter pits, installation hardware, a drive-by meter read base station, and software. This Project will help improve the District's operational efficiency by upgrading its water system. The meters will help accurately measure the amount of water usage and help quantify the system water loss. In addition to the loan, the District is also seeking a DOLA Energy Impact Assistance Fund Grant for 50% of the project cost.