



COLORADO

**Colorado Water
Conservation Board**

Department of Natural Resources

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TO: Colorado Water Conservation Board Members

FROM: Cole Bedford, P.E., Project Manager
Kirk Russell, P.E., Finance Section Chief

DATE: September 20-21, 2022 Board Meeting

AGENDA ITEM: 10a. Water Project Loans
Morrissania Water Supply Company
Ditch Rehabilitation Project

Staff Recommendation

Staff recommends the Board approve a loan not to exceed \$141,400 (\$140,000 for project costs and \$1,400 for the 1% service fee) to the Morrissania Water Supply Company for costs related to the Headgate Rehabilitation and Pipeline Installation Project, from the Severance Tax Perpetual Base Fund. The loan term will be 20 years at an interest rate of 2.45% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.

Introduction

The Morrissania Water Supply Company (Company) located southeast of Parachute, Colorado is applying for a middle income municipal rate loan for the Ditch Rehabilitation (Project). The Project will improve the most vulnerable portions of the Company's system. The Company's headgate will be improved with new concrete where the existing is spalled and cracked and immediately downstream of the headgate, a 1,350 foot reach of open ditch will be piped with 24-inch HDPE. The Company has made extensive use of multiple funding sources so that the majority of the Project cost will be covered by grants. The total Project cost is estimated to be \$420,000. See attached Project Data Sheet for a location map and Project summary.



Borrower - Morrisania Water Supply Company

The Morrisania Water Supply Company is an Unincorporated Non-profit Association, per the Colorado Secretary of State Office, located in Garfield County. The Company was established in 1910. It owns and operates diversion and supply infrastructure, which is supplied with water from Battlement Creek. The Company’s infrastructure includes a headgate structure, more than three miles of mainlines, and twenty-three diversion boxes, which serve 65 shareholders on 880 acres. Most of the system is piped except for a 1,350 foot reach of open ditch at the diversion.

The Company is directed by a five member board elected annually by a vote of the shareholders. Per the Company Bylaws, shareholders set annual assessments and an assessment of the shares may be made for the purpose of keeping the system in good repair and for the “payment of any indebtedness or interest thereon.” The Company is registered with the Colorado Secretary of State and is in Good Standing.

Background

When it was established in the early 1900’s the Company’s irrigation network consisted exclusively of open ditches. In the decades since, the ditches have been piped for more efficient delivery, the financing for which was mostly provided by the system users. By the 2010’s, most of the system except for a short reach near the Company’s headworks was piped. Despite the shortness of this reach, it is believed that as much as 20% of flows through it are lost to seepage. In order to have the entire system piped, the Company began soliciting financial and in-kind support from local stakeholders in 2019. Financial contributors to the Project include the Colorado Department of Agriculture, Colorado Cattlemen’s Association, the Colorado River District, and the NRCS. Letters of support were also provided by Garfield County Commissioners; Bookcliff, Mount Sopris, and South Side Conservancy Districts; and West Divide Water Conservancy District.

Loan Feasibility Study

Judy Sappington, with the Morrisania Water Supply Company, supported by Dan Fedirko, P.E., with J-U-B Engineers Inc., prepared the Loan Feasibility Study titled, “Feasibility Study: Headgate Rehabilitation and Pipeline Installation” dated August 2022. The feasibility study is in accordance with CWCB guidelines and includes an analysis of alternatives, estimated costs, and financial statements provided by the Company.

Water Rights

The Company’s water rights are all associated with Battlement Ditch. They are detailed in Table 1. Among others, they own Priorities number 1 and 3 on Battlement Creek. Water is used for irrigation purposes. Battlement Ditch’s maximum diversion for the Company is 16.06 cfs and the average annual diversion is 2,448 AF. Because the Company’s service area is built out, there is no expectation that additional water will be required in the future.

TABLE 1: WATER RIGHTS

Name	Amount (cfs)	Appropriation Date	Adjudication Date	Case No.
Battlement Ditch	1.67	6/12/1884	5/5/1888	CA0089
	6.67	6/1/1885		
	3.00	6/8/1887		
	3.33	7/21/1887		
	2.00	5/21/1891	4/8/1893	CA0089
	3.06	5/22/1997	12/31/2008	08CW0152

Project Description

The purpose of this Project is to ensure that water can continue to be reliably diverted and reduce seepage losses.

Alternative 1 - No Action: Taking no action would not meet the Company’s needs. Risk of failure at the headgate would remain high and large water transmission losses would continue along the open portion of the ditch. For these reasons it was considered unacceptable and was not selected.

Alternative 2 - Replace Headgate Structure and Pipe Short Reach of Ditch: This alternative would involve completely replacing the headgate structure and piping relatively short reach of open ditch. This alternative is driven by cost. The cost of fully replacing the headgate structure would result in some funds available for piping the open ditch, but not enough to pipe the whole open reach. While this alternative would meet the Project purpose it would not do so as effectively as Selected Alternative 3. Fully replacing the headgate would provide a similar reduction in risk to rehabilitation alone. Furthermore, piping a relatively short reach of the open ditch would reduce transit and evaporative losses, but not as much as a longer length.

Selected Alternative 3- Rehabilitate Headgate Structure and Pipe Long Reach of Ditch: This alternative involves rehabilitating the headgate structure and piping 1,350 feet of open ditch. Rehabilitation of the headgate structure will reduce the risk of failure as much as a full replacement and piping a long length of open ditch will reduce transit and evaporative losses as much as possible. This alternative was selected as the most efficient and effective. The estimated cost is \$420,000 and is shown in Table 2.

TABLE 2: ESTIMATED PROJECT COST

Tasks	Cost
Engineering	\$27,000
Project Management and Legal	\$17,000
Furnish and Install 24” HDPE	\$255,000
Form and Pour Inlet & Outlet Structures	\$16,000
All other Construction Activities	\$83,000
Contingency	\$22,000
TOTAL	\$420,000

Permitting: As a requirement of the NRCS funding for the Project, a NEPA review was completed. The Corps of Engineers determined that the Project is exempt. Any necessary local construction permits will be obtained by the contractor.

Schedule: J-U-B Engineers Inc. completed design documents for the Project and advertised it for bid in the summer of 2022. JC Excavating, Inc. was the selected bidder. The contractor intends to mobilize in early October and have the work completed by the 2023 irrigation season.

Financial Analysis

Table 3 provides a summary of the Project’s financial aspects. The Company qualifies for a Middle Income Municipal interest rate of 2.70% for a 30-year loan. Because the Company has requested a 20-year loan, the rate is reduced by 0.25% for a final rate of 2.45%. All interest rate evaluations are per CWCB Financial Policy #7 (Lending Rate Determination).

TABLE 3: FINANCIAL SUMMARY

Project Cost	\$420,000
CWCB Loan Amount	\$140,000
CWCB Loan Amount (Including 1% Service Fee)	\$141,400
Funding Contributors	
Colorado Cattleman's Association	\$22,000
Colorado Department of Agriculture Drought Resiliency Grant	\$100,000
Colorado River Conservation District Community Funding Partnership	\$50,000
NRCS Environmental Quality Incentives Program Grant	\$100,000
NRCS Technical Service Providers Grant	\$3,000
Company Cash	\$5,000
Post-Project	
CWCB Annual Loan Payment	\$9,028
CWCB Annual Loan Obligation (1 st Ten Years)	\$9,931
Number of Shares	880
Current Assessment per Share	\$30.00
Annual Loan Obligation per Share	\$11.29
Future Assessment per Share (estimated)	\$41.29

Creditworthiness: The Company currently carries no debt.

TABLE 4: FINANCIAL RATIOS

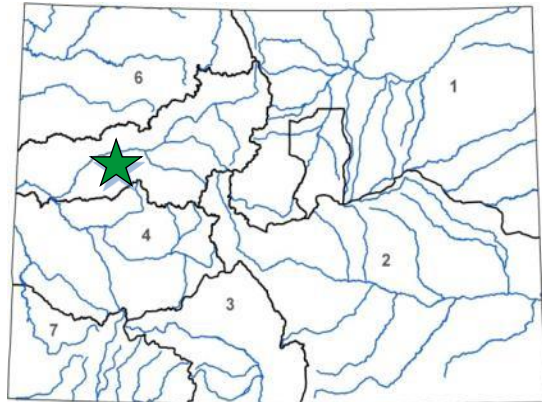
Financial Ratio	Past Years	Future w/ Project
Operating Ratio (revenues/expenses) weak: <100% average: 100% - 120% strong: >120%	100% (average) \$26.4K/\$26.4K	100% (average) \$36.3K/\$36.3K
Debt Service Coverage Ratio (revenues-expenses)/debt service weak: <100% average: 100% - 120% strong: >120%	N/A	100% (average) (\$36.3K-\$26.4K) \$9.9K
Cash Reserves to Current Expenses weak: <50% average: 50% - 100% strong: >100%	76% (average) \$20K/\$26.4K	55% (average) \$20K/\$36.3K
Annual Operating Cost per Acre-Foot (2,448 AF) weak: >\$20 average: \$10 - \$20 strong: <\$10	\$11.00 (average) \$26.4K/2.4K AF	\$15.13 (average) \$36.3K/2.4K AF

Collateral: Security for this loan will be a pledge of revenues backed by a rate covenant, annual financial reporting and the project itself; diversion structure and 1,350 linear feet of pipeline in Garfield County. This security is in compliance with the CWCB financial Policy #5 (Collateral).

cc: Chris Beasley, President, Morrisania Water Supply Company
 Jennifer Mele, Colorado Attorney General's Office

Attachments: Water Project Loan Program - Project Data Sheet

L O A N D E T A I L S	
Project Cost:	\$420,000
CWCB Loan (with 1% Service Fee):	\$141,400
Loan Term and Interest Rate:	20 Yrs @ 2.45%
Funding Source:	Severance Tax Perpetual Base Fund
B O R R O W E R T Y P E	
Agriculture	Municipal Commercial
100%	0% Low - 0% Mid - 0% High 0%
P R O J E C T D E T A I L S	
Project Type:	Ditch Rehabilitation
Average Annual Diversions:	2,448 AF



The Morrisania Water Supply Company, established in 1910, owns and operates diversion and supply infrastructure primarily for irrigation, which is supplied with water from Battlement Creek. The Company’s infrastructure includes a headgate structure, more than three miles of mainlines, and twenty-three diversion boxes, which serve 65 shareholders on 880 acres.

L O C A T I O N	
County:	Garfield
Water Source:	Battlement Creek
Drainage Basin:	Colorado
Division:	5 District: 45

The Project will improve the most vulnerable portions of the Company’s ditch system. The Company’s headgate will be improved with new concrete where the existing is spalled and cracked and immediately downstream of the headgate, a 1,350 foot reach of open ditch will be piped with 24-inch HDPE. Rehabilitation of the headgate structure will reduce the risk of failure and piping a long length of open ditch will reduce transit and evaporative losses. The contractor intends to mobilize in early October and complete the work by the 2023 irrigation season.

