



**COLORADO**

**Colorado Water  
Conservation Board**

Department of Natural Resources

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**TO:** Colorado Water Conservation Board Members

**FROM:** Joshua Godwin, P.E., Project Manager  
Kirk Russell, P.E., Finance Section Chief

**DATE:** November 15-16, 2023 Board Meeting

**AGENDA ITEM:** 16b. Water Project Loans  
Montezuma Valley Irrigation Company  
Beaver Creek Ditch Repairs

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### Staff Recommendation

Staff recommends the Board approve a loan not to exceed \$1,414,000 (\$1,400,000 for project costs and \$14,000 for the 1% service fee) to the Montezuma Valley Irrigation Company for costs related to the Beaver Creek Ditch repair, from the Severance Tax Perpetual Base Fund. The loan term will be 30 years at an interest rate of 2.10% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.

### Introduction

The Montezuma Valley Irrigation Company (Company) is applying for a loan at a blended interest rate to finance the repairs to the Beaver Creek Ditch Repairs (Project). The Company supplies an average of 125,000 AF to over 37,500 irrigated acres of farmland and 1,546 shareholders. Beaver Creek Ditch (Ditch) has a carrying capacity of 150 cfs, and provides water to fill approximately 25% of the Groundhog Reservoir (Reservoir). In May, the Company discovered two washouts in the Ditch, as well as significant erosion to the embankment. Due to the area's high elevation, the viable construction window was short and the Company began the repairs in August and completed them late October. The total Project cost is estimated to be \$1,429,147; the Company is seeking a loan for \$1,400,000 and will fund the remainder through the Company's operating budget. See attached Project Data Sheet for a location map and Project summary.



### **Borrower - Montezuma Valley Irrigation Company**

The Montezuma Valley Irrigation Company is a mutual ditch company that was initially organized in 1880 and filed with the State of Colorado in 1920. The Company operates and maintains the Ditch for the benefit of its 1,546 shareholders and supplies water to over 37,500 acres in Montezuma County. Groundhog, Narraquinnep, and Totten Reservoirs—a total of 48,738 AF of storage—are operated and maintained by the Company as well. The Company is directed by a seven-member board with staggered three year terms who are elected each year at the annual board meeting. The Company's board has the power to: take on debt up to \$500k, set annual assessments to be paid by shareholders, to cut off water deliveries to shareholders that fail to pay their assessments, and to offer stock for sale to pay back assessments. Debt above \$500k must be voted on by the shareholders. The Company is formed as a non-profit and is in good standing with the Colorado Secretary of State's Office.

### **Background**

The Company owns, operates, and maintains both the Beaver Creek Ditch and Groundhog Reservoir into which the Ditch flows. The Reservoir was constructed in 1908 and expanded in 1938 to double the capacity. The water in the Ditch is supplied from the Dolores River.

On May 9th, 2023, two washouts were discovered in the Ditch, south of the Reservoir. These washouts, which were caused by high spring runoff, eroded the banks, creating large drainage paths that diverted water away from the Reservoir. These damages compromised the land conditions so that they became unstable, unsafe, and prone to further deterioration. Due to high snowpack and remoteness, a helicopter was first used to observe washouts.

The first washout extended northwards in a V-shaped erosion to a nearby drainage. This was estimated to be 30 feet long, 45 feet wide, and 15 to 20 feet deep from the direction of the canal. The second washout, unlike the first, created a deep ravine downstream of the washout location that extended westwards approximately 2,000 feet before entering a natural drainage. The second washout was roughly twice the size of the first, with significant erosion downstream of the site. Unstable banks contributed to further damage. The Company estimates that 10,000 AF of water was lost to the two washouts. The Company inspected the rest of Ditch for additional washouts and found no evidence of damage outside of the aforementioned washouts.

It's believed that winter snow insulated the ground and prevented the ground from freezing solid. The excessive snow's severe runoff led to the two different washouts and erosion areas, resulting in a water diversion that prevents normal runoff into Groundhog Reservoir.

Due to the high elevation of the needed repairs, the construction window for repairs is narrow. The Company acted quickly to design a solution and repair both washouts before snowfall. A special stockholder meeting was held June 27th and a vote of the members passed a motion to take on debt for the emergency repairs. The mobilization for the Project began in August and repairs were completed in late October. CWCB staff have been in close communication with the Company. Two site visits have been made by staff since the Company's application—once within the middle of construction and once more in late October after the repairs were completed.

### Loan Feasibility Study

Tim Halper P.E., with Jones and DeMiller Engineering, prepared the Loan Feasibility Study titled, “Beaver Creek Ditch Repairs”, dated September 5, 2023. The feasibility study is in accordance with CWCB guidelines and includes an analysis of alternatives, estimated costs, and financial statements prepared by the Montezuma Valley Irrigation Company.

### Water Rights

The Company reports to operate under water rights as shown in Table 1.

**TABLE 1: PROJECT WATER RIGHTS**

Name	Amount (AF or cfs)	Appropriation Date	Adjudication Date	Case No.
Groundhog Reservoir	1,291 AF	08/01/1905	12/18/1933	CA0967
	9,332 AF	08/01/1905	12/18/1933	CA0967
	9,332 AF	08/01/1905	12/18/1933	CA0967
	400 AF	08/01/1905	12/18/1933	95CW0104
	11,086 AF	10/24/1929	12/18/1933	CA0967
	4,410 AF	06/30/1950	12/31/1912	12CW0020
Groundhog Well	0.0222 cfs	06/30/1950	12/31/1972	W0635
Beaver Creek	150 cfs	10/24/1929	12/18/1933	CA0967

### Project Description

The Purpose of this Project is to repair the both washouts in the Ditch and prevent future washouts in these areas.

**Alternative 1 - No Action:** Taking no action is the least expensive option. However, with this approach, the Reservoir will not receive water from the Ditch and the existing washouts will continue eroding. Loss of flows from Beaver Ditch would significantly reduce the Reservoir’s storage and negatively impact the Company’s shareholders. Landowners adjacent to the washouts would see further erosion and sediment deposition as snowmelt continues to flow into the washout areas. For these reasons, this option was not viable.

**Alternative 2 - Repair with Transported Materials:** This alternative would be to repair the canal washouts using compacted fill material that was transported from another location. In this alternative, the embankment would be filled in to match the existing canal dimensions and capacity. This alternative is technically viable, however, it’s estimated that the cost to haul the material would cost more than \$300,000 alone. For this reason, this alternative was not selected.

**Selected Alternative 3 - Repair with Local Materials and Polyethylene Liner:** This alternative involves using locally sourced materials - approved by the engineer - from borrow sites and to cover the repaired areas with a Polyethylene Liner. The Company proceeded with this alternative and completed construction in October. The total cost of this alternative is \$1,429,147 as shown in Table 2.

**TABLE 2: PROJECT COST**

Tasks	Cost
Mobilization and Administration	\$39,028
Materials	\$18,330
Earthwork (Washout #1)	\$157,877
Earthwork (Washout #2)	\$1,172,562
Engineering	\$41,350
<b>TOTAL</b>	<b>\$1,429,147</b>

**Permitting:** No permitting was required for the Project.

**Schedule:** The Company began the construction in August and finished the repairs in mid-October.

### Financial Analysis

Table 3 provides a summary of the Project's financial aspects. The Company qualifies for a blended interest rate of 2.10% for a 30-year loan (Share ownership is 97% agricultural, 2% low-income municipal, and 1% commercial). All interest rate evaluations are per CWCB Financial Policy #7 (Lending Rate Determination).

**TABLE 3: FINANCIAL SUMMARY**

Project Cost	\$1,429,147
Company Direct Contribution	\$29,147
CWCB Loan Amount	\$1,400,000
CWCB Loan Amount (Including 1% Service Fee)	\$1,414,000
CWCB Annual Loan Payment	\$64,006
CWCB Annual Loan Obligation (1 <sup>st</sup> Ten Years)	\$70,407
Number of Shares	33,284
Current Assessment per Share	\$38.00 <sup>1</sup>
Annual Loan Obligation per Share	\$2.09
Future Assessment per Share	\$848.96

1. Each shareholder is also charged a \$380 account fee annually.

**Creditworthiness:** The Company has \$982,153 in existing debt in the form of a CWCB loan (C150251) for the MVIC May Lateral Piping Construction that was approved by the Board July 2007. The loan is in good standing and is scheduled to be paid off in 2031.

**TABLE 4: EXISTING DEBT**

Lender	Original Balance	Current Balance	Annual Payment	Maturity Date	Collateral
CWCB (C150251)	\$2,979,825	\$982,153	\$137,666	2031	Assessment Revenues and Project

**TABLE 5: FINANCIAL RATIOS**

Financial Ratio	Past Years	Future w/ Project
Operating Ratio (revenues/expenses) weak: <100%   average: 100% - 120%   strong: >120%	116% (average) \$2.19M/\$1.88M	112% (average) \$2.19M/\$1.95M
Debt Service Coverage Ratio (revenues-expenses)/debt service weak: <100%   average: 100% - 120%   strong: >120%	328% (strong) <u>(\$2.19M-\$1.74M)</u> \$138K	215% (strong) <u>(\$2.19M-\$1.74M)</u> \$208K
Cash Reserves to Current Expenses weak: <50%   average: 50% - 100%   strong: >100%	76% (average) \$1.42M/\$1.88M	73% (average) \$1.42M/\$1.95M
Annual Operating Cost per Acre-Foot (125,000 AF) weak: >\$20   average: \$10 - \$20   strong: <\$10	\$15.04 (average) \$1.88M/125K	\$15.60 (average) \$1.95M/125K

**Collateral:** Security for this loan will be a pledge of assessment revenues backed by an assessment covenant and the Project itself. This security is in compliance with the CWCB financial Policy #5 (Collateral).

cc: Brandon Johnson, General Manager, Montezuma Valley Irrigation Company  
Jennifer Mele, Colorado Attorney General's Office

Attachments: Water Project Loan Program - Project Data Sheet

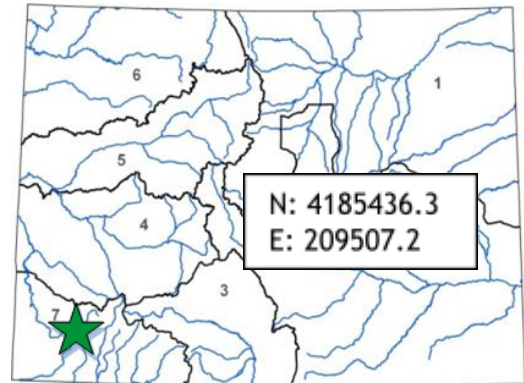


## Beaver Creek Ditch Repairs

### Montezuma Valley Irrigation Company

November 2023 Board Meeting

LOAN DETAILS	
<i>Project Cost:</i>	\$1,429,147
<i>CWCB Loan (with 1% Service Fee):</i>	\$1,414,000
<i>Loan Term and Interest Rate:</i>	30 Yrs @ 2.10%
<i>Funding Source:</i>	Severance Tax Perpetual Base Fund
BORROWER TYPE	
<i>Agriculture</i>	<i>Municipal</i>
97%	2% Low - 0% Mid - 0% High
	<i>Commercial</i>
	1%
PROJECT DETAILS	
<i>Project Type:</i>	Ditch Rehabilitation
<i>Average Annual Diversions:</i>	125,000 AF



The Montezuma Valley Irrigation Company (Company) is a mutual ditch company non-profit corporation initially organized in 1880. The Company provides irrigation water to 1,546 shareholders on approximately 37,500 acres of land near Cortez.

LOCATION	
<i>County:</i>	Dolores
<i>Water Source:</i>	Beaver Creek
<i>Drainage Basin:</i>	Dolores
<i>Division: 7</i>	<i>District: 71</i>

Currently the Company owns three reservoirs, the largest of which is named Groundhog Reservoir, which provides 26,710 AF of storage. Beaver Ditch, with a carrying capacity of 150 cfs, provides water to fill approximately 25% of the reservoir. During the heavy spring snowmelt season this past year, the ditch developed two breaches, significantly reducing the amount of water reaching the reservoir. The Project involves repairing the ditch with locally sourced material due to the remote location of the breaches and lining it. Construction began in August 2023 and is expected to be complete in the fall of 2023.

