

# STATE OF COLORADO

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## Colorado Water Conservation Board Department of Natural Resources

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CWCB Director

TO: Colorado Water Conservation Board Members

FROM: Anna Mauss, P.E., Project Manager  
Kirk Russell, P.E., Chief  
Finance Section

DATE: March 9, 2012

SUBJECT: **Agenda Item 17a, March 20-21, 2012 Board Meeting**  
**Finance Section – New Construction Fund Loan**  
**Montezuma Valley Irrigation Company -**  
**Lone Pine and May Pipeline Improvements Project**

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### Introduction

The Montezuma Valley Irrigation Company (Company) is applying for a loan for the Lone Pine and May Pipeline Improvements Project (Project). The Project will address operational issues with two pipelines that will reduce maintenance and lower operating costs. The total Project cost is estimated at \$472,500. The Company is eligible to receive \$100,000 in funding assistance from the Bureau of Reclamation (BOR) Water Conservation Field Services Program. The remaining project cost will become a 30-year CWCB loan. See attached Project Data Sheet for a location map and a project summary.

### Staff Recommendation

Staff recommends the Board approve an initial construction loan not to exceed \$439,603 (\$435,250 for project costs and \$4,353 for the 1% Loan Service Fee) from the Construction Fund to the Montezuma Valley Irrigation Company, for engineering and construction costs related to the Lone Pine and May Pipeline Improvements Project. Following construction, staff further recommends the loan be amended to a long-term loan in an amount not to exceed \$339,603 (\$335,250 for the remaining balance of the Project and \$4,353 for the Loan Service Fee). The loan terms shall be 30 years at the agricultural interest rate of 2.75% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.

Staff additionally recommends the following contract conditions:

- a. The CWCB receive a parity position with the Dolores Water Conservancy District on the Company's assessment revenues for the new debt added by this loan.

- b. Any funds received by the Company from the Bureau of Reclamation related to the water accounting system shall be given to the CWCB and will be applied to the outstanding principal loan balance, and the loan contract shall be amended to the reduced loan amount.

### **Background**

The Company is located in Montezuma County, north of the Town of Cortez. The Company diverts water from the Dolores River, just west of the Town of Dolores. Irrigation water is delivered from the McPhee Reservoir through the Company's ditches and to the service area of approximately 30,000 acres. (The McPhee Reservoir is the main storage reservoir built as part of the BOR's Dolores Project.)

The Company's water delivery system is made up of 109 miles of earthen canal and 15 miles of gravity pressurized pipelines. The Company also owns Groundhog Reservoir and Narraguinne Reservoir.

In 2007, the Company was approved for a loan from the CWCB to install five miles of pipeline in the corridor of the May Lateral, now known as the May Pipeline. This was done to improve delivery and reduce leakage from the ditch.

In the past three years, the Company has installed 10 miles of pipeline to improve delivery efficiencies in the May Lateral, as noted above, and in the Lone Pine Lateral. These laterals are now both enclosed pipeline systems that deliver pressurized water.

While the pipelines have improved efficiencies, a few items need to be addressed to reduce operating expenses and keep the pipelines working effectively for the long-term. The main items to be addressed through this Project include: preventing trash and debris from entering the pipelines, reducing the pressure at the lower end of the Lone Pine Pipeline, and improving the water delivery accounting.

### **Loan Feasibility Study**

The Loan Feasibility Study titled, "Loan Feasibility Study: Lone Pine and May Pipeline Improvements," dated January 2012, was prepared by the Applegate Group, Inc. The study was prepared in accordance with the CWCB guidelines and includes an alternative analysis, engineering design and cost estimates.

### **Montezuma Valley Irrigation Company**

The Company is a non-profit mutual ditch company registered in the State of Colorado in 1920, governed by a seven-member Board of Directors. There are 1,358 shareholders and 33,284 shares of stock. The Board of Directors has the ability to enter into contracts on behalf of the Company and to set assessments if the shareholders fail to authorize assessments at the Company's annual meeting. The Company also has the power to cut off water deliveries to shareholders who fail to pay their assessments.

The Company provides irrigation water to approximately 30,000 acres of irrigated land in its service area, located entirely within Montezuma County. The Dolores Water Conservancy District owns 170 shares representing 0.5% of the total shares and the City of Cortez owns 177 shares representing 0.5% of the total shares.

## **Water Rights**

The source of water for the Company is direct flow water rights out of the Dolores River. The water rights diverted at the Company's headgate consist of 9 rights with dates of appropriation ranging from 1863 to 1905 and totaling 795 cfs. Records indicate that the total average annual diversions are approximately 136,000 acre-feet.

## **Project Description**

There are three main concerns the Company intends to address with this Project:

1. Trash and Debris Removal
2. Pipeline Pressure Management
3. Water Measurement

Trash and Debris Removal: Both the Lone Pine and May Pipeline were installed between 2009 - 2011. While settling basins to reduce the silt entering the pipelines were constructed, there was no consideration for removal of trash. Since the installation of the pipelines, trash entering the pipelines has been a maintenance problem.

Alternatives were considered for each site including trashracks, motorized traveling screens, and self-cleaning wedge wire screens.

Based on site conditions, installation costs and operation and maintenance costs, the Company chose a self-cleaning wedge wire screen for the May Pipeline. For the Lone Pine Pipeline, the Company chose a motorized traveling screen.

Pipeline Pressure Management: The Lone Pine Pipeline needs additional pressure reduction. Currently, it is operating at pressures greater than the design pressure and the Company is concerned that the added stress will shorten the life expectancy of the pipe.

Alternatives considered included improving an existing pressure reducing station by adding an anti-cavitation device to an existing pressure reducing valve (PRV) or adding a new PRV downstream. Based on the cost estimates, the Company is choosing to improve its existing Pressure Station #2 by installing an anti-cavitation trim on to an existing PRV.

Water Management: All turnouts on the Lone Pine Pipeline were fitted with ultrasonic sensors, dataloggers, control panels, and solar panels to allow water users to monitor delivery on site. On the May Pipeline, digital meters and electronic sensors were installed, but were done so without a power source. Currently, a battery is transported from each turnout to the next to set the flow, but no totalizing record is collected. The Company wants to be able to collect this information to establish accurate delivery records. To do so, the Company plans on upgrading each station to include a totalizing recorder with a digital readout powered by a solar panel.

In addition, the Company wants to improve the accounting for water delivered within its canal system. It plans on purchasing a program from TruePoint Solutions to address this issue. The Company has applied to the BOR Water Conservation Field Services Program for a \$100,000 grant for the purchase, configuration, and training associated with this new system. The funds will not be available until after the Project is completed. The CWCB will finance this element of the overall

Project prior to reimbursement from BOR funds. When the grant funds are issued to the Company, the CWCB loan contract will require those funds to be applied to the loan.

The Company expects to hear a decision on the BOR grant funding by April 2012 with funds likely being available in Federal fiscal year 2013 (October 1, 2012 – September 30, 2013).

**TABLE 1: TOTAL PROJECT COST SUMMARY**

Task	Construction	Engineering	Contingency
May Pipeline Intake (Coanda Screen)	\$74,825.00	\$11,200.00	\$10,975.00
Lone Pine Pipeline (Traveling Water Screen)	\$106,650.00	\$11,000.00	\$16,850.00
Pressure Management (Anti-Cavitation)	\$28,650.00	\$1,700.00	\$2,650.00
Flow Measurement (May Pipeline)	\$108,000.00	-	-
Water Accounting Program	\$100,000.00	-	-
Total (\$472,500)	\$418,125.00	\$23,900.00	\$30,475.00

**Schedule:** The Company plans on constructing the Project as soon as possible because it believes the completion of the Project will solve operational issues that have been costing the Company time and money. Construction will begin on the Lone Pine Pipeline screen and PRVs in the spring of 2012. The May Pipeline screen will be installed in the fall of 2013. The water management solar panels and accounting program will be completed as time permits.

### **Financial Analysis**

Financial Policy #7 requires the interest rate to be blended based on the ownership of the company shares. Since over 99% of the Company's shares are owned by agricultural producers (the City of Cortez owns less than one percent) the blended interest rate remains at the current 30-year agricultural rate of 2.75%.

**TABLE 2: FINANCIAL SUMMARY**

Total Project Cost	\$472,500
Initial Loan (100% of Accounting Package & 90% of remaining Project)	\$435,250
Water Accounting Package	\$100,000
Remaining Project Costs	\$372,500
90% of Remaining Project Costs	\$335,250
Company's 10% Match (on Remaining Project Costs)	\$37,250
1% Service Charge	\$4,353
Long-term Loan Amount	\$339,603
Annual Loan Obligation 1 <sup>st</sup> 10 years (based on long-term loan amount)	\$18,448
Number of shareholders	33,284
Annual cost of loan per shareholder	\$0.55

**Creditworthiness:** The Company currently has a contract with the Dolores Water Conservancy District to pay for a portion of the stored Dolores Project water in the McPhee Reservoir. The

payment is applied to the District's repayment obligation to the BOR for the construction of the reservoir. The Company's annual payment to the District of \$63,200 lasts through 2038.

The Company also has a \$2,949,895 loan with the CWCB for the May Lateral Pipeline Project. The \$136,300 payments (\$149,900 including the reserve requirement for the first 10 years of repayment) will begin in 2014 and go through 2044. Collateral on the loan was a pledge of revenues and the May Lateral Pipeline (including all associated access easement rights).

**TABLE 3: FINANCIAL RATIOS**

Financial Ratio	Average Pre-Project(s)	Future w/ Project*
Operating Ratio (revenues/expenses) weak: <100% - average: 100% - 120% - strong: >120%	120% (Average) \$1.2M/\$1M	108% (Average) \$1.3M/\$1.2M
Debt Service Coverage Ratio (revenues-expenses)/debt service weak: <100% - average: 100% - 120% - strong: >120%	352% (Strong) \$1.2M-\$978K/ \$63K	139% (Strong) \$1.3M-\$978K/ \$232K
Cash Reserves to Current Expenses weak: <50% - average: 50% - 100% - strong: >100%	5% (Weak) \$51K/\$1M	1% (Weak) \$14K/\$1.2M
Annual Operating Cost per Acre-Foot (136,039 AF) weak: >\$20 - average: \$10 - \$20 - strong: <\$10	\$7.35 (Strong) \$1M/136,039	\$8.82 (Strong) \$1.2M/136,039

*\*Note: The Future w/ Project ratios were calculated using the long-term loan amount and considered a \$0.55/share increase for this Project. Additionally, the maintenance expenses are expected to be reduced through this Project; however, the exact amount is unknown at this time.*

**Collateral:** Security for the loan will be: 1) A pledge of the Company's assessment revenues backed by a rate covenant and any other revenues legally available; 2) The May Pipeline and all associated access easement rights. This is in compliance with the CWCB Financial Policy #5 (Collateral).

cc: Don Magnuson, General Manger, Montezuma Valley Irrigation Company  
 Susan Schneider, AGO  
 Peter Johnson, AGO

Attachment: Water Project Loan Program – Project Data Sheet

## CWCB Construction Loan Program Project Data Sheet

**Borrower:** Montezuma Valley Irrigation Co.

**County:** Montezuma

**Project Name:** Lone Pine and May Pipeline Improvements Project

**Project Type:** System Rehabilitation

**Drainage Basin:** San Miguel-Dolores/San Juan

**Water Source:** Dolores River

**Total Project Cost:** \$472,500

**Funding Sources:** Construction Fund

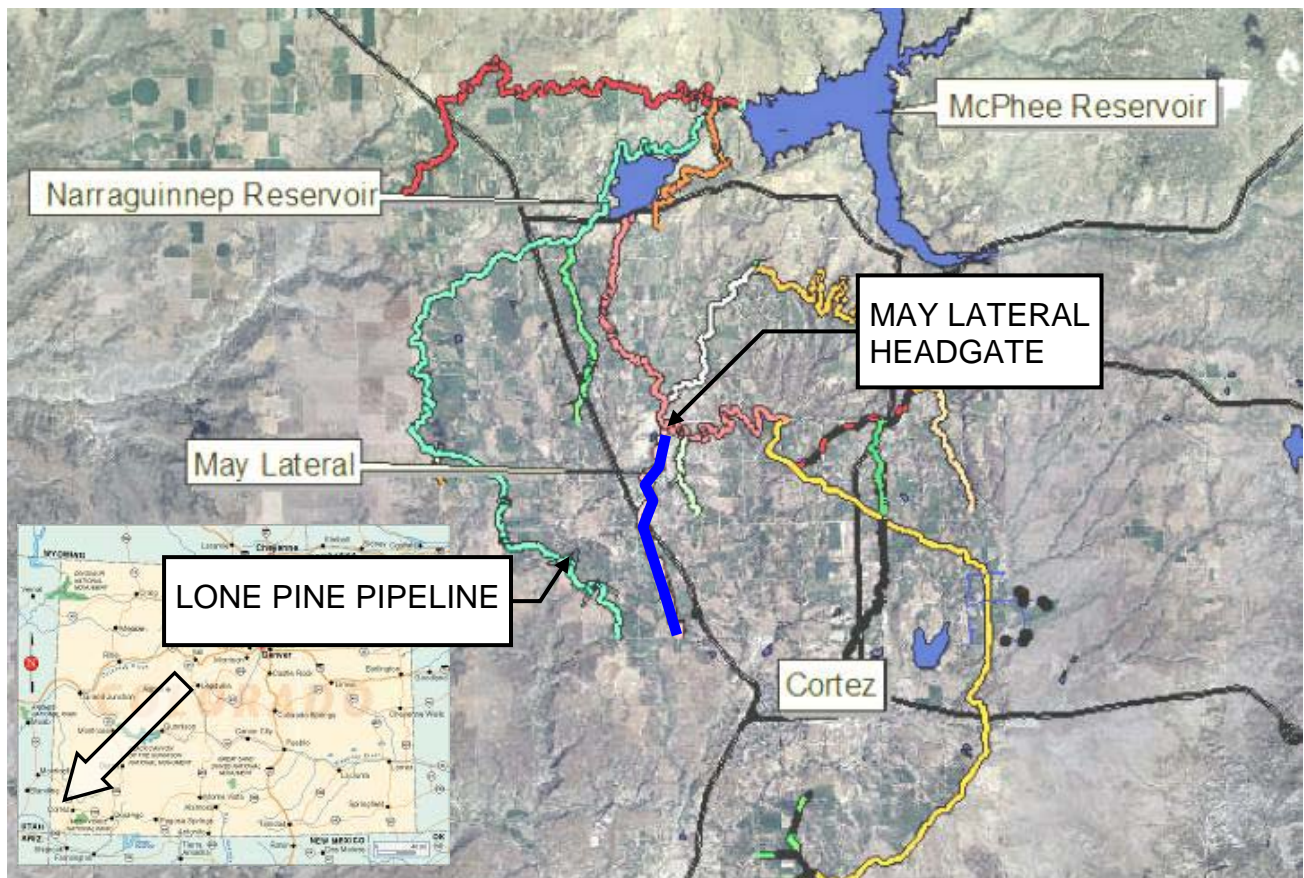
**Type of Borrower:** Agricultural

**Average Delivery:** 136,039 acre-feet

**Loan Amount:** \$339,603 (Including 1% fee)  
(Initial during construction: \$435,250)

**Interest Rate:** 2.75%      **Term:** 30 years

The Montezuma Valley Irrigation Company is a non-profit corporation established in the State of Colorado in 1920. The Company manages the delivery of irrigation water to a service area of over 30,000 acres. The Company is proposing to address issues that have become long-term maintenance concerns through this project including: trash and debris removal in delivery pipelines, pipeline pressure management, and water management issues. It is planning on installing screens on the Lone Pine and May pipelines; improving an existing pressure reducing valve on the Lone Pine pipeline; installing totalizing recording devices with solar panels at the delivery turnouts on the May pipeline; and implementing a new water accounting program for more accurate data collection on water deliveries. The Company is eligible to receive \$100,000 from the Bureau of Reclamation Water Conservation Field Services Program for the water accounting program. When the grant funds are issued to the Company, the loan contract will require those funds be applied to the CWCB loan principal. The Company will begin construction in the spring of 2012.



LOCATION MAP