



**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:** July 20-21, 2022 Board Meeting

**AGENDA ITEM:** 18a. Water Project Loans  
Grand View Irrigation Company - Siphon Repair Project

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### Staff Recommendation

Staff recommends the Board approve a loan not to exceed \$353,000 (\$350,000 for project costs and \$3,500 for the 1% service fee) to the Grand View Irrigation Company for costs related to the Siphon Repair Project, from the Severance Tax Perpetual Base Fund. The loan term will be 30 years at an interest rate of 2.25% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.

### Introduction

The Grand View Irrigation Company (Company) is applying for a loan for the Siphon Repair (Project). The Company operates and maintains the Grand View Ditch in Cañon City, Colorado. At the head of the ditch there is a 2,500 foot siphon pipe that carries water beneath a highway and several commercial properties. In November 2021, water was observed in a commercial parking lot. A subsequent investigation identified 130 joints of the siphon pipe that were in need of emergency repair. The total Project cost is estimated to be \$350,000. See attached Project Data Sheet for a location map and Project summary.



### **Borrower - Grand View Irrigation Company**

The Grand View Irrigation Company is a mutual ditch company established in Cañon City, Colorado in 1955. The Company operates and maintains the Grand View Ditch for the benefit of 54 shareholders. About three-quarters of the shares are held by the Colorado Department of Corrections and the remaining one-quarter are held by small agricultural producers. The Company is directed by a five member board elected annually by a majority vote of shareholders. The board has the ability to approve all bonds and execute contracts. A majority vote of the shareholders is required to increase assessments.

### **Background**

The Grand View Ditch’s headworks are located on the Cañon City Hydraulic & Irrigating Ditch from which it receives water. It extends about three miles. In the years since the original construction of the Grand View Ditch, Canon City has experienced significant commercial development in the area and the widening and paving of Highway 50. As a result, the upper reaches of the open ditch were buried and replaced with a 48-inch siphon pipe.

In November 2021, standing water was observed in a commercial parking lot and the siphon was shut down for inspection. During the winter of 2021/22 a contractor was hired to inspect the pipeline joints and confirmed that 35 of the siphon’s joints were actively leaking and 95 others were deteriorated. In order to deliver irrigation water on time, the Company began repair work in the spring of 2022.

### **Loan Feasibility Study**

Mannie Colon, President of the Grand View Irrigation Company, supported by Craig Ullman, P.E., with Applegate Group, Inc., prepared the Loan Feasibility Study titled, “Feasibility of Emergency Repair of the Home Depot Siphon” dated May 2022. The feasibility study is in accordance with CWCB guidelines and includes an analysis of alternatives, estimated costs, and financial statements.

### **Water Rights**

The Grand View Ditch does not directly divert off the Arkansas River or any other natural stream. Instead, its water is conveyed via the Cañon City Hydraulic & Irrigating Ditch. The Company owns shares in two ditch companies as shown in Table 1. The Company diverts an average of 7,883 acre-feet per year.

**TABLE 1: WATER RIGHTS**

Name	Shares	Priority	Amount
Cañon City Hydraulic & Irrigating Ditch Company	597.75	17	96 cfs
Cañon City and Oil Creek Ditch Company	136	20	14.2 cfs
		34	19.4 cfs

### **Project Description**

The purpose of this Project is to repair the Grand View Ditch siphon to ensure it continues to convey water.

**Alternative 1 - No Action:** Taking no action would result in the failure of the Grand View Ditch siphon to operate. This alternative is unacceptable as the Company shareholders would no longer be able to receive water.

**Alternative 2 - Repair 35 leaking joints:** This alternative involves repairing only the siphon’s joints which were actively leaking. While it would solve the immediate problem it would not prevent likely, future failures. It was not selected because the engineers determined that the eventual long term cost would be higher than the Selected Alternative 3.

**Selected Alternative 3- Repair 35 leaking joints and additional 95 deteriorated joints:** This alternative involves repairing all the joints actively leaking and those which, while not leaking, were compromised. This alternative was selected as the most efficient. Repairing the weak joints will prevent future damage to the siphon, the Home Depot parking lot, and potentially crop losses during the irrigation season. The estimated cost is \$350,000 and is shown in Table 2.

**TABLE 2: ESTIMATED PROJECT COST**

Tasks	Cost
Engineering and legal	\$15,050
Dewater and film interior of pipe and joints	\$4,950
Repair 35 joints	\$105,000
Repair leaks on additional joints	\$200,000
Fill and pack excavation site	\$15,000
Repair monitoring system	\$10,000
<b>TOTAL</b>	<b>\$350,000</b>

**Permitting:** No permits are needed on the project.

**Schedule:** Because of the emergency nature of the project, materials were purchased and the majority of the construction took place in May 2022. As of July 2022, the remaining work includes repair to monitoring pipes, which are clogged, and re-paving a portion of the parking lot.

**Financial Analysis**

Table 3 provides a summary of the Project’s financial aspects. The Company qualifies for a blended interest rate of 2.25% for a 30-year loan (Ownership: 77% Mid-Income Municipal and 23% Agriculture). All interest rate evaluations are per CWCB Financial Policy #7 (Lending Rate Determination).

**TABLE 3: FINANCIAL SUMMARY**

Project Cost	\$350,000
CWCB Loan Amount	\$350,000
CWCB Loan Amount (Including 1% Service Fee)	\$353,500
CWCB Annual Loan Payment	\$16,331
CWCB Annual Loan Obligation (1 <sup>st</sup> Ten Years)	\$17,964
Number of Shares	64,795
Current Assessment per Share	\$0.85
Annual Loan Obligation per Share	\$0.28
Future Assessment per Share	\$1.13

**Creditworthiness:** The Company has \$60,652 in long-term debt. The Grand View Irrigation Company received two CWCB loans in the 1980s: C153455 for \$105,207 and C153485 for \$195,279. The loans

were consolidated in 2016 and appears as a single loan today. The Company is up-to-date on their payments and is in good standing.

**TABLE 4: EXISTING DEBT**

Lender	Original Balance	Current Balance	Annual Payment	Maturity Date	Collateral
CWCB (C153485)	\$300,486	\$60,652	\$11,380	2027	Pledged Revenues

**TABLE 5: FINANCIAL RATIOS**

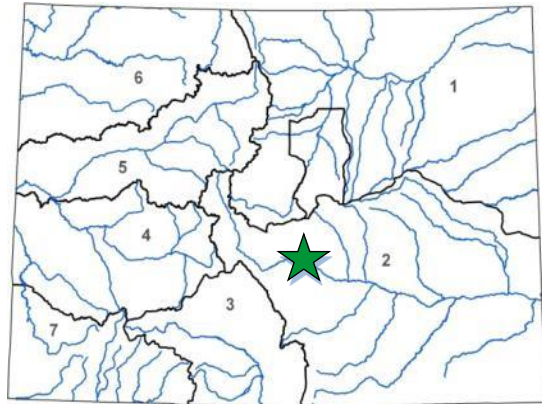
Financial Ratio	Past Years	Future w/ Project
Operating Ratio (revenues/expenses) weak: <100%   average: 100% - 120%   strong: >120%	114% (strong) \$57K/\$50K	100% (average) \$68K/\$68K
Debt Service Coverage Ratio (revenues-expenses)/debt service weak: <100%   average: 100% - 120%   strong: >120%	161% (strong) \$57K-\$39K \$11K	100% (average) (\$68K-\$39K) \$29K
Cash Reserves to Current Expenses weak: <50%   average: 50% - 100%   strong: >100%	96% (average) \$48K/\$50K	71% (average) \$48K/\$68K
Annual Operating Cost per Acre-Foot (7,883 AF) weak: >\$20   average: \$10 - \$20   strong: <\$10	\$6.34 (strong) \$50K/7.9K AF	\$8.63 (strong) \$68K/7.9K AF

**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: Mannie Colon, President, Grand View Irrigation 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:	\$350,000	
CWCB Loan (with 1% Service Fee):	\$353,500	
Loan Term and Interest Rate:	30 Yrs @ 2.25%	
Funding Source:	Severance Tax Perpetual Base Fund	
B O R R O W E R   T Y P E		
Agriculture	Municipal	Commercial
23%	0% Low - 77% 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:	7,883 AF	



The Grand View Irrigation Company is a mutual ditch company incorporated in 1955 that currently provides irrigation water to 54 shareholders in its 600-acre service area located in and around Canon City. Irrigated acreage is typically cattle ranch, hay fields, and small truck farms.

L O C A T I O N			
County:	Fremont		
Water Source:	Arkansas River		
Drainage Basin:	Arkansas		
Division:	2	District:	12

The project will provide emergency repairs to a siphon that allows irrigation water to flow under Highway 50 and several commercial properties including a Home Depot. In November 2021 the siphon was shut down to stop water coming out of the ground and flooding the Home Depot parking lot. A contractor was brought in to determine the cause, but inspection was not possible due to standing water in the siphon. In April 2022, the contractor returned and was able to determine that caulking in some of the pipe joints had deteriorated, leading to a significant release of water, and that the monitoring pipe was not functioning due to debris blockage. The loan will repay costs for inspection, engineering, and legal fees in addition to repairs to the siphon and the monitoring system. Construction was completed in May of 2022.

