



COLORADO
**Colorado Water
Conservation Board**
Department of Natural Resources

1313 Sherman Street, Room 718
Denver, CO 80203

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

Jared Polis, Governor
Dan Gibbs, DNR Executive Director
Rebecca Mitchell, CWCB Director

TO: Colorado Water Conservation Board Members

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

DATE: January 23-24, 2023 Board Meeting (Updated January 25, 2023)

AGENDA ITEM: 14a. Water Project Loans
Fort Morgan Reservoir and Irrigation Company
Augmentation Pump Replacement Project

Staff Recommendation (Board approved Staff Recommendation January 24, 2023)

Staff recommends the Board approve a loan not to exceed \$1,770,530 (\$1,753,000 for project costs and \$17,530 for the 1% service fee) to the Fort Morgan Reservoir and Irrigation Company for costs related to the Augmentation Pump Replacement Project, from the Severance Tax Perpetual Base Fund. The loan term will be 30 years at an interest rate of 2.05% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.

Introduction

The Fort Morgan Reservoir and Irrigation Company (FMRICo) is applying for a blended interest rate loan for the Augmentation Pump Replacement (Project). Together with Groves Farms LLC (Groves Farms), FMRICo owns and operates the Groves Farms Recharge Pump and Pipeline, which is used to divert augmentation water from the South Platte to recharge sites south of the river. The pumps are no longer working satisfactorily and need to be replaced. FMRICo has decided to replace not only the pumps, but also some of the intake infrastructure to better protect the new pumps. This work will be completed before April 2023. The total Project cost is estimated to be \$1,753,000. See attached Project Data Sheet for a location map and Project summary.



Borrower - Fort Morgan Reservoir and Irrigation Company

The Fort Morgan Reservoir and Irrigation Company is a mutual ditch and reservoir company located in Morgan County. The Company is registered with the Secretary of State as a non-profit corporation and is in good standing. It is led by a five-member Board of Directors elected by a vote of the approximately 100 shareholders. The Board is empowered to set annual assessments and to incur debt.

FMRICo operates and maintains a ditch system that serves approximately 15,000 acres of irrigated land. It also manages an augmentation plan for 90 groundwater wells that draw from the South Platte alluvial aquifer. FMRICo diverts water from the south side of the South Platte River for both direct irrigation and augmentation from the Fort Morgan Canal diversion structure near Weldona, Colorado. Its average annual diversions are about 73,000 AF of which about 12,000 AF are for augmentation.

Background

In the early 2000's, FMRICo recognized that some of their augmentation water could be more efficiently used if re-diverted and re-timed. As a result, it executed an agreement with Groves Farms to construct and maintain the Groves Farms Recharge Pump and Pipeline Project. The Groves Farms Recharge Pump and Pipeline Project saw the installation of a 3-mile long, 24-inch pipeline connecting an intake at the Fort Morgan Canal diversion structure to a site near several recharge ponds on Groves Farms property. This project was financed by a \$1.4M CWCB Loan (C150298) and \$420K WSRF Grant (C150464) in September 2009. Construction was completed in May 2012.

The completed pipeline allowed FMRICo to divert augmentation water, deliver it to recharge ponds, and allow it to return to the South Platte River via the alluvial aquifer. Groves Farms also used the pipeline to directly augment 11 of its own groundwater wells. The total volume of water diverted annually by FMRICo via the pipeline has varied during its nine years of operation from about 150 AF in 2015 to 1,920 AF in 2021.

Unfortunately, FMRICo and Groves Farms have experienced difficulties with the project pumps since they began operating. The pumps originally took in a significant amount of sand from the river. The intake was subsequently moved, which reduced the sand, but the pumps continued to burn out periodically. During the period from November 2021 to March 2022—the most efficient period for augmentation re-timing—the pumps were not able to deliver a meaningful volume of water to the recharge ponds.

Loan Feasibility Study

Matt Harris, P.E., with Harris Engineering Consultants, Inc. prepared the Loan Feasibility Study titled, "Feasibility Report for Pipeline Project" dated December 1, 2022. The feasibility study is in accordance with CWCB guidelines and includes an analysis of alternatives, estimated costs, and financial statements provided by FMRICo.

Water Rights

The Groves Farms Recharge Pump and Pipeline's water rights and operational limitations are primarily described in Colorado Water Court Decree, Case No. 04CW0081. The Decree states that up to 8,000 gpm (17.8 cfs) can be diverted into the pipeline for a maximum diversion of 7,000 AF in any one water year, however, the 25-year running average must also stay below 2,500 AF. Neither limit has been exceeded since operation of the pipeline began. Water diverted into the pipeline discharges into any of 17 recharge ponds, infiltrates into the South Platte alluvial aquifer, and eventually returns to the South Platte River. This groundwater recharge process allows 11 groundwater wells owned by Groves Farms, which draw water from the South Platte alluvial aquifer, to operate without causing injurious stream depletions for senior surface water rights holders.

FMRICo also operates an augmentation plan described in Colorado Water Court Decree, Case No. W-2692. This augmentation plan allows FMRICo to divert surface water to recharge ponds and thereby augment alluvial groundwater well pumping from 90 wells in the region. At certain times of the year, surface water delivered to the recharge ponds returned to the South Platte River when it could not be used by senior surface water rights holders. When this was the case, FMRICo earns “excess credits.” With the completion of the Groves Farms Recharge Pump and Pipeline Project, FMRICo was able to utilize it to re-divert excess credit water to re-time their groundwater well pumping augmentation. FMRICo’s right to do so, up to 3,000 AF per water year, was established in Colorado Water Court Decree, Case No. 10CW0177.

A summary of the most relevant water rights associated with the Project are shown in Table 1.

TABLE 1: WATER RIGHTS

Name	Amount (AF)	Appropriation Date	Adjudication Date	Case No.
Groves Farms, LLC	2,500	12/29/2006	12/31/2006	04CW0081
Fort Morgan Reservoir and Irrigation Company	3,000	12/29/2006	12/31/2010	10CW0177 (W-2692)

Project Description

The purpose of this Project is to ensure the ability of the FMRICo to continue to utilize the Groves Farms Recharge Pump and Pipeline for augmentation.

Alternative 1 - No Action: Taking no action would result in the Groves Farms Recharge Pump and Pipeline being inoperable indefinitely. Without a means to deliver excess credit augmentation water to the Groves Farms recharge ponds, FMRICo’s augmentation operations would be significantly less efficient. This inefficiency would limit their groundwater well users’ allowable pumping and reduce agricultural output. Because of the agricultural and other economic losses likely to occur as a result of this alternative, it was not selected.

Alternative 2 - Rehabilitation at a Later Date: This alternative would accomplish the Project purpose, but only after a full season of missed augmentation diversions; a loss of up to 3,000 AF. It is likely that delay would also result in a high construction cost relative to current prices. This alternative was not selected because it would result in a significant loss of augmentation diversions and an unnecessarily high cost.

Selected Alternative 3 - Immediate Rehabilitation: This alternative involves undertaking the Project as soon as possible. This alternative will consist of constructing a new intake structure and wet well further down the Fort Morgan Canal than the existing intake. The new intake structure will feature a wet well specifically designed to keep sand from reaching the pumps as well as other design elements to protect the pumps. Four vertical turbine pumps will be installed in a new building insulated to protect them. The new pumps are less prone to over-heating than the old ones and will also be better protected by the new infrastructure. The building will house other mechanical and electrical equipment necessary for the pumps’ operation as well. The total cost of this alternative is \$1,753,000 as shown in Table 2.

TABLE 2: ESTIMATED PROJECT COST

Tasks	Cost
Planning, Design, and Legal	\$50,000
Pumps and other Pre-Purchased Materials	\$822,000
Construction and Installation of Pre-Purchased Materials	\$811,000
Contingency	\$70,000
TOTAL	\$1,753,000

Permitting: No permits are needed on the project.

Schedule: FMRICo is under a very tight schedule. It has already begun the Project and hopes to have construction completed before the next irrigation season beginning in April 2023. It has already selected a Contractor, Ransom Boone Excavating, LLC, and purchased the long-lead-time items.

Financial Analysis

Table 3 provides a summary of the Project’s financial aspects. FMRICo qualifies for a blended interest rate of 2.05% for a 30-year loan (Ownership: 83% Agricultural, 15% Middle-Income Municipal, and 2% Commercial). All interest rate evaluations are per CWCB Financial Policy #7 (Lending Rate Determination).

TABLE 3: FINANCIAL SUMMARY

Project Cost	\$1,753,000
CWCB Loan Amount	\$1,753,000
CWCB Loan Amount (Including 1% Service Fee)	\$1,770,530
CWCB Annual Loan Payment	\$79,599
CWCB Annual Loan Obligation (1 st Ten Years)	\$87,559
Number of Shares	2,844
Current Assessment per Share	\$190
Annual Loan Obligation per Share	\$31
Future Assessment per Share (Estimate)	\$190 ¹

¹Assessments were set in anticipation of the loan repayment and do not need to be increased.

Creditworthiness: FMRICo currently has two loans in repayment with CWCB, both of which are up-to-date and in good-standing. It is also making payments on a tractor. FMRICo’s existing debt is described in Table 4. Financial Ratios are shown in Table 5.

TABLE 4: EXISTING DEBT

Lender	Original Balance	Current Balance	Annual Payment	Maturity Date	Collateral
CWCB (C150298)	\$1,432,631	\$527,465	\$36,075	2043	Pledged Revenues
CWCB (C150339)	\$1,192,117	\$809,237	\$57,246	2040	Pledged Revenues

TABLE 5: FINANCIAL RATIOS

Financial Ratio	Past Years	Future w/ Project
Operating Ratio (revenues/expenses) weak: <100% average: 100% - 120% strong: >120%	406% (strong) \$650K/\$160K	262% (strong) \$650K/\$248K
Debt Service Coverage Ratio (revenues-expenses)/debt service weak: <100% average: 100% - 120% strong: >120%	627% (strong) (\$650K-\$67K) \$93K	322% (strong) (\$650K-\$67K) \$181K
Cash Reserves to Current Expenses weak: <50% average: 50% - 100% strong: >100%	81% (average) \$130K/\$160K	52% (average) \$130K/\$248K
Annual Operating Cost per Acre-Foot (73,000 AF) weak: >\$20 average: \$10 - \$20 strong: <\$10	\$2.19 (strong) \$160K/73K AF	\$3.40 (strong) \$248K/73K AF

Collateral: Security for this loan will be a pledge of assessment revenues backed by an assessment covenant and the Project itself; the Augmentation Pumps (WDID 0100569) in Morgan County. This security is in compliance with the CWCB financial Policy #5 (Collateral).

cc: Cynthia Lefever, Office Manager, Fort Morgan Reservoir and Irrigation Company
 Jennifer Mele, Colorado Attorney General's Office

Attachments: Water Project Loan Program - Project Data Sheet

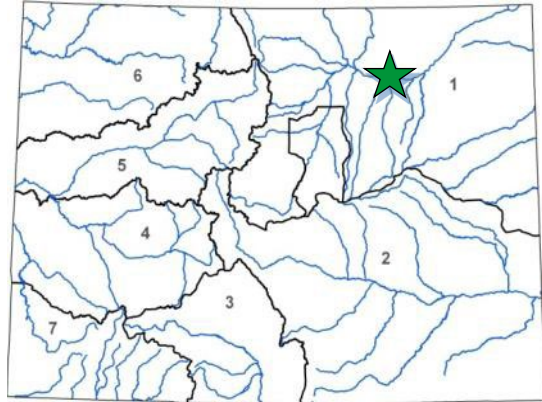


Augmentation Pump Replacement Project

Fort Morgan Reservoir and Irrigation Company

January 2023 Board Meeting

L O A N D E T A I L S	
Project Cost:	\$1,753,000
CWCB Loan (with 1% Service Fee):	\$1,770,530
Loan Term and Interest Rate:	30 Yrs @ 2.05%
Funding Source:	Severance Tax PPBF
B O R R O W E R T Y P E	
Agriculture	Municipal Commercial
83%	0% Low - 15% Mid - 0% High 2%
P R O J E C T D E T A I L S	
Project Type:	Augmentation Facilities
Average Annual Diversions:	73,000 AF



L O C A T I O N	
County:	Fort Morgan
Water Source:	South Platte
Drainage Basin:	South Platte
Division:	1 District: 1

The Company was organized in 1882, and currently diverts irrigation water for approximately 15,000 acres, and augmentation water for approximately 90 wells. These diversions are carried through the Fort Morgan Canal to recharge ponds and agricultural lands south of the South Platte River between Weldona and Brush for 98 shareholders.

The Company also has an operational agreement with Groves Farms, LLC to re-time excess augmentation credits from senior recharge projects when those credits are not needed for direct augmentation, and to divert water under new junior water rights when available for recharge and augmentation use. The infrastructure to implement this operation was originally constructed around 2012, with the Company's portion of the project funded with CWCB loan and grant funds.

The project is the rehabilitation of this pipeline system, and includes a new intake structure, an automated airburst system to backwash the intake screens, 4-stage vertical turbine pumps, and an insulated building to house the pumps and mechanical equipment. Loan funds will cover the entire project cost for planning, design, and construction.

