



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: 16c. Water Project Loans
Orchard City Irrigation District
Fruitgrowers Reservoir Gates Replacement

Staff Recommendation

Staff recommends the Board approve a loan not to exceed \$505,000 (\$500,000 for project costs and \$5,000 for the 1% service fee) to the Orchard City Irrigation District for costs related to the Fruitgrowers Reservoir Gates Replacement, from the Severance Tax Perpetual Base Fund. The loan term will be 30 years at an interest rate of 2.20% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.

Introduction

The Orchard City Irrigation District (District) is applying for a loan at a blended interest rate for the replacement of the Fruitgrowers Reservoir's Gates (Project) to cover approximately 44% of the estimated costs; the remainder will be covered by grants from the Gunnison Basin Roundtable WSRF, the CWCB statewide WSRF, and the Colorado River Water Conservation District. The gates were originally installed during the construction of the dam in 1938 and have reached the end of their serviceable life as determined by the Bureau of Reclamation (BOR). At present, when fully closed, the emergency gate leaks at a rate of 1,500 gal/min. The District wishes to preemptively replace both the emergency and the regulating gate prior to complete failure. During the gate replacement, the District will also take the opportunity to update the operations of the gates from manual to a complete SCADA system with the option for telemetry in the future. Fruitgrowers Reservoir (Reservoir) is located in Orchard City and irrigates 2,760 acres of agricultural land. The total Project cost is estimated to be \$1,125,000. See attached Project Data Sheet for a location map and Project summary.



Borrower - Orchard City Irrigation District

The Orchard City Irrigation District is an irrigation district, created on February 5, 1938, under the Irrigation District Law of 1921. The District operates and maintains the Fruitgrowers Reservoir (Reservoir) in Delta County for the benefit of its 558 qualified landowners. The Reservoir is supplied with water from Surface Creek and Dry Creek, that are tributaries to the North Fork of the Gunnison River, and releases water into the Alfalfa Run, Circle, Butte, and Fogg Ditches within Orchard City. The District supplies water to 2,760 irrigated acres for agricultural production as well as domestic use. The District is directed by a five-member board elected annually by a simple majority vote of shareholders for three-year terms. Assessments are collected through Delta County taxes. Acquiring debt and increasing assessments are voted on by the shareholders. The resolution for this loan is scheduled for the District's December meeting.

Background

The Reservoir is owned by the BOR and the District is responsible for the operations and maintenance of the dam. Originally, the Reservoir was owned and operated by the Fruitgrowers Ditch and Reservoir Company (Company), but in 1937 the dam failed and flooded the downstream town of Austin. The BOR took over ownership of the Reservoir and rebuilt the dam in 1938 in collaboration with the Company. After the dam was rebuilt, the Company was dissolved and replaced with the District.

For the past 85 years, the same emergency and control gates have been in place and manually operated to release water to downstream users. Replacing this aging infrastructure will minimize risk of failure and allow for more accurate flow control and water delivery via upgraded valves with electric controls. Replacement will preemptively address leaking and a possible failure of the valves, especially the emergency gate valve which leaks approximately 1500 gal/min when closed. The project would include installing electrical components for motorized gates and a phased SCADA system. Monitoring software for aid in decision making and water saving will be implemented as part of this Project. More infrastructure, such as other flow measuring devices and telemetric communications equipment, will be installed during a later phase for remote control of the gates.

Engineering design for the Project was completed in the Summer of 2023, the request for proposals was issued in August, and a contractor was selected in September. With this loan and the awarded grants, the District will be able to construct this Project between the 2023 and 2024 irrigation seasons. The Reservoir is currently drained in anticipation of construction.

Loan Feasibility Study

Suzie Bilberry, with the Delta Conservation District with support from Craig Ullman P.E., with Applegate Group, Inc. prepared the Loan Feasibility Study titled, "Fruitgrowers Dam Outlet Gate Improvement Project," dated September 2023. The feasibility study is in accordance with CWCB guidelines and includes an analysis of alternatives, estimated costs, and financial statements prepared by the Orchard City Irrigation District.

Water Rights

The District reports that it operates under the water rights shown in Table 1. The decrees allow for flexibility in how the Reservoir is filled. If winter water is less available in the Surface Creek drainage, then the Dry Creek drainage can be relied on more heavily.

TABLE 1: PROJECT WATER RIGHTS

Source	Amount (AF)	Appropriation Date	Adjudication Date	Case No.
Surface Creek	3,400	10/15/1898	09/28/1907	CA0457
Dry Creek	3105	06/23/1937	01/31/1964	W0706, CA4808
Surface Creek or Dry Creek	855	06/01/1954	01/31/1964	W0706, CA4808

Project Description

The Purpose of this Project is to replace the two outlet gates of Fruitgrowers Reservoir.

Alternative 1 - No Action: Taking no action is the least expensive option. However, at 85 years old, the gates are 35 years past their anticipated service life. The gates will continue to deteriorate and will eventually fail, leaving the District with a much more costly outcome. For these reasons, this alternative was not considered acceptable.

Alternative 2 - Repair Existing Gates: In order to determine the work necessary to restore the valves they would need to be removed, disassembled, and evaluated for wear and condition. Then welding, fabrication of parts, reassembly and pressure testing would occur. The Reservoir would need to be dewatered for the duration of this minimum 60 day process. Because of the uncertainty of the extent of the gate's degradation and the repairs needed, this option was deemed impracticable.

Selected Alternative 3 - Replacing the Gates: This alternative is to completely remove the gates and replace them with newly fabricated gates, as well as upgrade the system with motorized controls and a SCADA system that may be accessed via telemetry in a future phase. The total estimated cost of this alternative is \$1,125,000 as shown in Table 2.

TABLE 2: ESTIMATED PROJECT COST

Tasks	Cost
Materials	\$67,000
Construction	\$701,000
Permitting	\$66,000
Engineering and Management	\$159,000
Contingency (10%)	\$92,000
Power Connection	\$40,000
TOTAL	1,125,000

Permitting: All permits have either been obtained or are expected to be obtained prior to construction. The easement for the line to power the motorized controls was acquired in May. The US Army Corps of Engineers stated in 2020 the Project is exempt from Section 404 permitting requirements, the BOR has provided a written approval of design in August of 2023, and the Project has been approved for a NEPA Categorical Exclusion. The Project has also received clearance from the Colorado State Historic Preservation Office to proceed.

Schedule: The Project is scheduled for construction after the 2023 irrigation season and construction is expected to be completed Spring of 2024.

Financial Analysis

Table 3 provides a summary of the Project's financial aspects. The District qualifies for a blended interest rate of 2.20% for a 30-year loan (Ownership is 77% agricultural and 23% low-income municipal). All interest rate evaluations are per CWCB Financial Policy #7 (Lending Rate Determination). The District has received grants for the Project (listed in Table 3) and will cover costs exceeding expectations using cash on hand.

TABLE 3: FINANCIAL SUMMARY

Project Cost	\$1,125,000
Colorado River Water Conservation District	\$225,000
Gunnison Basin Roundtable and CWCB Statewide WSRF (Mar 2022)	\$150,000
Gunnison Basin Roundtable and CWCB Statewide WSRF (Sept 2023)	\$250,000
CWCB Loan Amount	\$500,000
CWCB Loan Amount (Including 1% Service Fee)	\$505,000
CWCB Annual Loan Payment	\$23,173
CWCB Annual Loan Obligation (1 st Ten Years)	\$25,490
Number of Acres	2,760
Number of Qualified Landowners	558
Current Assessment per Acre	\$55.00 ¹
Annual Loan Obligation per Acre	\$9.30
Future Assessment per Acre	\$64.30

1. Each qualified landowner is also charged a \$200 account fee annually.

Creditworthiness: The District has no existing debt. The District previously had a CWCB loan (C150169) approved at the March 2004 Board meeting for the rehabilitation of the Dry Creek Transfer Ditch in the amount of \$75,512. The project was completed in 2005 and the loan was fully paid back in 2022. The current assessment—last increased in 2020—is \$55/acre and \$200/qualified landowner. The assessment is collected by the County of Delta by including it with property tax payment.

TABLE 4: FINANCIAL RATIOS

Financial Ratio	Past Years	Future w/ Project
Operating Ratio (revenues/expenses) weak: <100% average: 100% - 120% strong: >120%	147% (strong) \$258K/\$175K	129% (strong) \$258K/\$201K
Debt Service Coverage Ratio (revenues-expenses)/debt service weak: <100% average: 100% - 120% strong: >120%	N/A	325% (strong) <u>(\$258K-\$175K)</u> \$25.5K
Cash Reserves to Current Expenses weak: <50% average: 50% - 100% strong: >100%	305% (strong) \$533K/\$175K	265% (strong) \$533K/\$175K
Annual Operating Cost per Acre-Foot (4,500 AF) weak: >\$20 average: \$10 - \$20 strong: <\$10	\$38.89 (weak) \$175K/4.5K	\$44.67 (weak) \$201K/4.5K

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

cc: Mitch Thomas, President, Orchard City Irrigation District
Jennifer Mele, Colorado Attorney General's Office

Attachments: Water Project Loan Program - Project Data Sheet

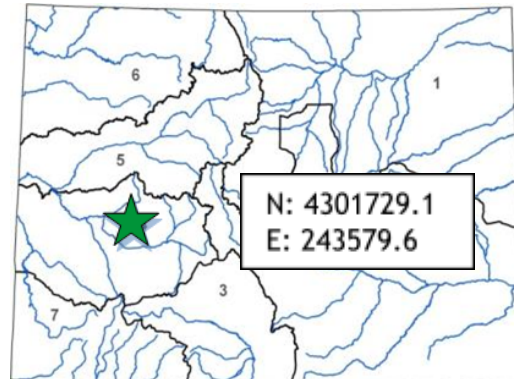


Fruitgrowers Reservoir Gates Replacement

Orchard City Irrigation District

November 2023 Board Meeting

LOAN DETAILS	
<i>Project Cost:</i>	\$1,125,000
<i>CWCB Loan (with 1% Service Fee):</i>	\$505,000
<i>Loan Term and Interest Rate:</i>	30 Yrs @ 2.20%
<i>Funding Source:</i>	Severance Tax Perpetual Base Fund
BORROWER TYPE	
<i>Agriculture</i>	<i>Municipal</i>
77%	23% Low - 0% Mid - 0% High
	0%
PROJECT DETAILS	
<i>Project Type:</i>	Dam Rehabilitation
<i>Average Annual Diversions:</i>	4,500 AF



The Orchard City Irrigation District (District) is a special district created in 1939 to collect funds to reconstruct Fruitgrowers Reservoir after a breach that leveled a portion of the town of Austin in 1937. The District provides irrigation water to 558 users on 2,760 acres of land.

LOCATION	
<i>County:</i>	Delta
<i>Water Source:</i>	Surface Creek and Dry Creek
<i>Drainage Basin:</i>	Gunnison
<i>Division: 4</i>	<i>District: 40</i>

The dam, owned by the Bureau of Reclamation, is operated and maintained by the District as well as the sources for the reservoir, Alfalfa Run and Transfer ditches. The Project will replace the existing emergency and regulating gate valves installed in 1938, and install components for motorized gates and a SCADA system so that the outlet can be operated remotely in the future. The Project was also approved for two WSRF grants, and has received a Colorado River Water Conservation District grant as well. Construction is expected to begin in the winter of 2023 and will be completed prior to the 2024 irrigation season.

