COLORADO
Colorado Water Conservation Board
Department of Natural Resources
1313 Sherman Street, Room 718
Denver, CO 80203

September 26,2023

Zach Mason, Vice President
Oxford Farmers Ditch Company
112 East Cransten Avenue, Suite E
Fowler, CO 81039
oxfordditch@gmail.com

Re: Chicosa Siphon Repair - Loan Approval

Dear Zach Mason,

I am pleased to inform you that on September 20, 2023 the Colorado Water Conservation Board approved your loan request for the Chicosa Siphon Repair Project described in the application and approved Loan Feasibility Study titled *Reconstruction of the Chicosa Siphon,* dated August 1, 2023. The Board approved a loan not to exceed $1,515,000 ($1,500,000 for Project costs and $15,000 for the 1% service fee). The loan terms shall be 1.90% per annum for 30 years.

I have attached a copy of the updated Board memo dated September 21, 2023 that includes the Board's approval. After the Board approves a loan there are a few steps that remain in the loan process including:

Contracting: An executed loan contract must be in place before funds can be disbursed for eligible project expenses. Kaylee Salazar, Loan Contracts Manager, will contact you to initiate the loan contracting process. She can be reached at (303) 866-3441 x3227.

Design/Construction: You must adhere to the CWCB Design and Construction Administration Procedures including an invitation to the Prebid, Preconstruction and Bid Opening meetings. Joshua Godwin, P.E., will be the Project Manager for this phase of the process and will work with you on the disbursements of your loan funds. He can be reached at (303) 866-3441 x3254.

On behalf of the Board, I would like to thank you for your interest in a loan from the CWCB.

Sincerely,

Kirk Russell, P.E., Chief
Finance Section

Attachment: Updated Board Memo

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1313 Sherman Street, Room 718
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P (303) 866-3441
F (303) 866-4474

Jared Polis, Governor
Dan Gibbs, DNR Executive Director
Lauren Ris, CWCB Director

TO: Colorado Water Conservation Board Members

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

DATE: September 20-21, 2023 Board Meeting (Updated September 21,2023)

AGENDA ITEM: 7a. Water Project Loans
Oxford Farmers Ditch Company
Chicosa Siphon Repair

Staff Recommendation (Board approved Staff Recommendation September 20, 2023)
Staff recommends the Board approve a loan not to exceed $1,515,000 ($1,500,000 for project costs and $15,000 for the 1% service fee) to the Oxford Farmers Ditch Company for costs related to the Chicosa Siphon Repair, from the Severance Tax Perpetual Base Fund. The loan term will be 30 years at an interest rate of 1.90% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.

Introduction
The Oxford Farmers Ditch Company (Company) is applying for a loan at a blended interest rate to finance the Chicosa Siphon Repair (Project) along the Oxford Farmers Ditch (Ditch). The Ditch supplies irrigation water to 5,338 acres of farmland, as well as water to the Town of Fowler. Since April of 2023, the Chicosa Siphon has had 4 blowouts - each time requiring the siphon to be shut down and temporary repairs to be made while downstream irrigators are without water. The Project will install a cured-in-place (CIP) liner on the interior of the siphon - allowing for the continued use of the existing infrastructure while avoiding costly lead-up times for the procurement and construction of a new reinforced concrete pipe (RCP) siphon. The total Project cost is estimated to be $1,500,000. See attached Project Data Sheet for a location map and Project summary.

Borrower – Oxford Farmers Ditch Company
The Oxford Farmers Ditch Company is a mutual ditch company that was established in 1888. The Company operates and maintains the Ditch in Pueblo and Otero Counties for the benefit of its 85 agricultural and 2 municipal shareholders. The Ditch diverts water from the Arkansas River and runs southeasterly along the southern bank of the river before crossing under the Chicosa Creek via the Chicosa Siphon then traveling west and south of the Town of Fowler. The Company supplies water to 5,338 irrigated acres (433 farms) for corn, wheat, alfalfa, hay grazer, onions, and cattle grazing - also supplying irrigation and augmentation water to the Town of Fowler. The Company is directed by a five-member board elected at the annual board meeting. The Company's board has the power to: take on debt, 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. The Company is formed as a non-profit and is in good standing with the Colorado Secretary of State's Office.

Background
In 1944, the Company built the Chicosa Siphon to move water underneath the Chicosa Creek. The siphon is constructed of wood staves and steel bands, is 1,800 ft long with a diameter of 6.2 ft, and supplies water to over 90% of the Company's water users. The steel bands were most recently replaced in 1973.

On April 15th, 2023, the siphon suffered a blowout and was shut down for seven days for repair causing major disruptions to downstream irrigators. During the repair, inspection of the interior of the siphon revealed that a section of the pipe downstream of the blowout was 80% full of sediment which was removed. Three more blowouts occurred from July 3rd to July 25th - all upstream of where the sediment had been found. Each blowout required the siphon be shut down during a critical time of the irrigation season and repaired, costing time and tens of thousands of dollars. Each blowout was repaired with new steel bands and replacement of the wooden staves. The Company determined that the initial blowout had caused damage to the siphon and that blowouts would likely continue despite the sediment being removed.

Under normal conditions, the siphon would be self-cleaned by the large flow rate; however, it's believed that the drier conditions from 2020 to 2022 resulted in lower flows thus allowing for accumulation of sediment in the lower section. Moving forward, the Company will perform annual internal inspections of the siphon and clear out any accumulated sediment.

The Company's inspection of the siphon determined that outside of the damage caused by the initial sediment build up and that the original infrastructure was still viable. In the past several years there has been long lead times for sourcing materials and scheduling contractors. The Company desires to keep the construction between the 2023 and 2024 irrigation seasons as well as keep construction costs lower. This has led the Company to select a CIP liner solution to prevent further blowouts. The Company has been given a guaranteed timeline that the liner can be installed between the irrigation seasons and were provided with cost estimates that are less than the other alternatives.

Loan Feasibility Study
Dan Tucker P.E., with Arkansas Groundwater and Reservoir Association, with support from Jesik Consulting, Inc. prepared the Loan Feasibility Study titled, "Feasibility of Reconstruction of the Chicosa Siphon", dated August 1, 2023. The feasibility study is in accordance with CWCB guidelines and includes an analysis of alternatives, estimated costs, and financial statements prepared by the Oxford Farmers Ditch Company.

Water Rights
The Company operates under water rights as shown in Table 1.

TABLE 1: PROJECT WATER RIGHTS

Name	Amount (cfs)	Appropriation Date	Adjudication Date	Case No.
Oxford Farmers Ditch	13.4	03/23/1867	09/21/1867	CA2535
	116	02/26/1887	02/26/1887	

Project Description
The Purpose of this Project is to repair the Company's siphon that crosses under the Chicosa Creek.

Alternative 1 – No Action: Taking no action is the least expensive short-term option. However, since April 15th, there have been 4 blowouts with each blowout requiring the siphon to be shut down and repaired - costing the Company $50,000 and the increasing potential for crop losses. It has become clear that the siphon will continue to fail until repaired. For these reasons, "no action" is not feasible.

Alternative 2 – Complete Replacement of Siphon: This alternative would be to completely replace the siphon with an RCP of equal or greater capacity. There are two concerns with this approach. The selected alternative can be installed between the 2023 and 2024 irrigation seasons whereas sourcing materials and constructing a full siphon replacement is unlikely in the given timeframe. Also, previous estimates put the cost of this alternative at $2,000,000.

Selected Alternative 3 – Line Existing Pipe with CIP Liner: This alternative involves the lining of the interior of the siphon with a CIP coating. The tensile strength of a properly applied and cured liner is strong enough to operate without the original siphon as support. The liner has a 10 year warranty and will be inspected for wear annually. The liner will be at least 150 millimeters thick and - based on observed similar applications - has a loss (wear) rate of 1 millimeter per year. The total estimated cost of this alternative is $1,500,000 as shown in Table 2.

TABLE 2: ESTIMATED PROJECT COST

Tasks	Cost
Mobilization and Administration	$120,000
CIP Liner and Installation	$1,044,000
Engineering	$6,000
Contingency (24%)	$280,000
Emergency Repairs	$50,000
TOTAL	**$1,500,000**

Permitting: No permitting is required for the Project.

Schedule: The Company expects to begin construction at the end of the 2023 irrigation season and construction will be complete prior to the 2024 irrigation season.

Financial Analysis

Table 3 provides a summary of the Project's financial aspects. The Company qualifies for a blended interest rate of 1.90% for a 30-year loan (Share ownership is 94% agricultural and 6% low-income municipal). All interest rate evaluations are per CWCB Financial Policy #7 (Lending Rate Determination).

TABLE 3: FINANCIAL SUMMARY

Project Cost	$1,500,000
CWCB Loan Amount	$1,500,000
CWCB Loan Amount (Including 1% Service Fee)	$1,515,000
CWCB Annual Loan Payment	$66,718
CWCB Annual Loan Obligation (1st Ten Years)	$73,390
Number of Shares	1,196
Current Assessment per Share	$111.00
Annual Loan Obligation per Share	$61.36
Future Assessment per Share	$204.85

Creditworthiness: The Company has no existing debt.

TABLE 4: FINANCIAL RATIOS

Financial Ratio	Past Years	Future w/ Project
Operating Ratio (revenues/expenses) weak: <100% | average: 100% - 120% | strong: >120%	95% (weak) $164K/$172K	100% (average) $245K/$245K
Debt Service Coverage Ratio (revenues-expenses)/debt service weak: <100% | average: 100% - 120% | strong: >120%	N/A	100% (average) ($245K-$172K) $73K
Cash Reserves to Current Expenses weak: <50% | average: 50% - 100% | strong: >100%	36% (weak) $62K/$172K	25% (weak) $62K/$245K
Annual Operating Cost per Acre-Foot (25,224 AF) weak: >$20 | average: $10 - $20 | strong: <$10	$6.88 (strong) $172K/25K	$9.80 (strong) $245K/25K

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

cc: Zach Mason, Vice President, Oxford Farmers Ditch Company
Jennifer Mele, Colorado Attorney General's Office

Attachments: Water Project Loan Program – Project Data Sheet

COLORADO
Colorado Water Conservation Board
Department of Natural Resources

Chicosa Siphon Repair

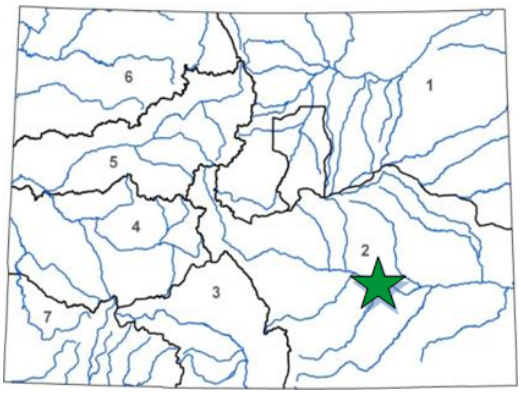
Oxford Farmers Ditch Company

September 2023 Board Meeting

LOAN DETAILS	
Project Cost:	$1,500,000
CWCB Loan (with 1% Service Fee):	$1,515,000
Loan Term and Interest Rate:	30 Yrs @ 1.90%
Funding Source:	Severance Tax Perpetual Base Fund

BORROWER TYPE		
Agriculture	*Municipal*	*Commercial*
94%	6% Low - 0% Mid - 0% High	0%

PROJECT DETAILS	
Project Type:	Ditch Rehabilitation
Average Annual Diversions:	25,224 AF



The Oxford Farmers' Ditch Company (Company) is a mutual ditch company that has been operating since 1888. The ditch provides direct flow irrigation water to 87 shareholders on approximately 5,300 acres of land growing corn, wheat and alfalfa.

LOCATION	
Counties:	Otero, Pueblo
Water Source:	Arkansas River
Drainage Basin:	Arkansas
Division: 2	*District:* 14

The current six foot diameter redwood stave siphon wrapped in steel bands was constructed in the 1940s, with the bands being replaced in 1973 due to corrosion. During the 2023 irrigation season, the siphon blew out multiple times , cutting off irrigation water to approximately 90% of the shareholders. The Project will install a cured-in-place liner inside of the siphon that will provide structural integrity for the siphon eliminating the need for the staves and steel bands. Construction is expected to begin in the fall of 2023 and be complete before the start of the spring irrigation season.