COLORADO
Colorado Water Conservation Board
Department of Natural Resources

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Jared Polis, Governor

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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 15-16, 2020 Board Meeting

AGENDA ITEM: 12a. Water Project Loans
Rural Ditch Company – Diversion Structure Improvement

Staff Recommendation:

Staff recommends the Board approve a loan not to exceed $813,050 ($805,000 for Project costs and $8,050 for the 1% service fee) to the Rural Ditch Company for costs related to the Lateral Ditch Diversion Structure Improvement Project, from the Severance Tax Perpetual Base Fund. The loan terms shall be 30 years at a blended interest rate of 2.70% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.

Introduction:

The Rural Ditch Company (Company) is applying for a loan for the Diversion Structure Improvement (Project). The Company is a traditional mutual ditch company, which delivers water to a diverse group of stockholders including commercial, agricultural, and municipal entities. They divert from Boulder Creek via a diversion structure near Longmont. The structure was initially damaged in the severe flooding of 2013 and further damaged by subsequent high river flows which overtopped the structure. Damage included undermining of the structure foundation and scouring of a large hole on the downstream side. Operation of the structure has continued, but risk of failure is real and persistent. In order to address that risk, the Company is proposing a stabilization and repair effort to be implemented between the end of the 2020 and beginning of the 2021 irrigation seasons. See attached Project Data Sheet for a location map and Project summary.

Borrower – Rural Ditch Company
The Company is a mutual ditch company, currently in good standing with the Colorado Secretary of State, that delivers water to its shareholders for beneficial use. The 21 shareholders include farmers, special districts, commercial interests, and municipalities. The ditch has historically provided irrigation water to land west of the South Platte River near Firestone. In order to take on debt, the Company must call a special stockholder meeting at which a presentation will be made describing the project need, financing requirements, and any necessary special assessment to stockholders. Stockholders must pass a resolution approving the improvements and debt service. The board of Directors must pass a resolution approving the same.

Background:
The 2013 floods were the result of extreme precipitation in the watersheds of the Boulder, Thompson, St. Vrain creeks and the Cache la Poudre River. The flooding caused widespread damage to infrastructure of all kinds, but particularly to water diversion and storage structures. The Rural Ditch diversion structure was one of these structures damaged. Water overtopped the structure causing undermining of the foundation on the downstream side. Subsequent high flows damaged the structure further. While the structure has continued to function even in its compromised state, it is at risk of failure. In order to address that risk the Company retained Civil Resources, LLC to design the repair and stabilization of the structure and began talks with CWCB to secure financing in 2019.

Loan Feasibility Study:
Civil Resources, LLC under the direction of Brad Hagen, PE, prepared the Loan Feasibility Study titled "CWCB Feasibility Study for the Rural Ditch Diversion Stabilization & Repair" dated June 2020. The feasibility study was prepared in accordance with CWCB guidelines and includes an analysis of alternatives, engineering plans, construction cost estimates, and financial statements.

Water Rights:
The Company diverts approximately 6,300 AF of water annually on the basis of two senior absolute water rights.

TABLE 1: WATER RIGHTS

Name	Amount (cfs)	Appropriation Date	Adjudication Date	Water Court Case No.
Rural Ditch	22.75	5/10/1862	6/2/1882	CA1336
Rural Ditch	60.25	3/10/1863	6/2/1882	CA1336

Project Description:
The purpose of the project is to provide permanent stabilization of the existing river diversion structure that allows the Company to divert its adjudicated water rights for continued beneficial use. The following alternatives were analyzed:

Alternative 1 – No Action: This alternative represents a high level of risk by allowing a high probability of failure to persist. Failure of the structure would result in an inability to make deliveries to shareholders. This alternative was not selected because it fails to address the risks associated with the compromised condition of the structure.

Alternative 2 – Full Replacement: Full replacement of the structure would require the installation of sheet piling to bedrock and construction of a cofferdam upstream during the period of in-stream work. Full replacement would adequately address the compromised condition of the existing structure, but would do so at a relatively high cost of approximately $1,100,000. Implementation of this alternative in a single irrigation off-season would also be difficult and risk diminished diversions until completed. This alternative was not selected because of its relatively high cost and long implementation schedule.

Selected Alternative 3 – Stabilization and Repair: This alternative consists of a two phase stabilization of the existing structure. The first phase will include the installation of sheet piling and a concrete apron on the upstream side of the structure and a grouted boulder stabilization apron on the downstream side. The second phase will include pressure grouting to fill voids near the structure floor and install replacement backfill.

The cost estimate of this alternative is $805,000 as shown in Table 2.

TABLE 2: ESTIMATED PROJECT COST

Task	Total
Engineering	$45,000
Mobilization/Surveying	$50,000
Site Work (Earthwork, Dewatering, Flume, Gates, etc.)	$342,500
Structure Stabilization (Grouted Boulders, Riprap, etc.)	$283,300
Contingency (12.5%)	$84,200
TOTAL	**$805,000**

Permitting: The U.S. Army Corps of Engineers determined that no additional permitting will be necessary from them for work to go forward as planned.

Schedule: Engineering design began in November 2019 and is expected to be completed this summer. Phase one of construction will take place between November and December 2020, followed by phase two from January to March 2021. It is expected that the structure will be operational for the 2021 irrigation season.

Financial Analysis:
Table 3 provides a summary of the Project's financial aspects. The Company qualifies for a blended interest rate of 2.70% (Ownership: 50% agricultural, 4% low-income municipal, 15% middle-income municipal, 4% high-income municipal, 27% commercial) for a 30-year term.

TABLE 3: FINANCIAL SUMMARY

Total Project Cost	$805,000
CWCB Loan Amount	$805,000
CWCB Loan Amount (Including 1% Service Fee)	$813,050
CWCB Annual Loan Payment	$39,889
CWCB Annual Loan Obligation (1st Ten Years)	$43,878
Number of Shares	50
Annual Loan Obligation per Share	$880
Current Assessment per Share	$1,410
Anticipated Future Assessment per Share	$2,290
Cost of Project per AF Delivered (6,302 AF)	$129

Creditworthiness: The Company has no existing debt. Revenues are derived from shareholder assessments that the Company will increase as necessary to cover their annual debt obligation to CWCB. Assessments have been steady in recent years. Table 4 provides financial ratios for the Company's historic performance from 2016-2019 and future projection with this project.

TABLE 4: FINANCIAL RATIOS

Financial Ratio	Prior Years	Future w/ Project
Operating Ratio (revenues/expenses) weak: <100% - average: 100% - 120% - strong: >120%	109% (average) $120K/$110K	100% (average) $154K/$154K
Debt Service Coverage Ratio (revenues-expenses)/debt service weak: <100% - average: 100% - 120% - strong: >120%	N/A	100% (average) ($154K-$110K) $44K
Cash Reserves to Current Expenses weak: <50% - average: 50% - 100% - strong: >100%	164% (strong) $180K/$110K	117% (strong) $180K/$154K
Annual Operating Cost per Acre-Foot (6,302 AF) weak: >$20 - average: $10 - $20 - strong: <$10	$17.50 (average) $110K/6,302 AF	$24.50 (weak) $154K/6,302 AF

Collateral: Security for this loan will be a pledge of assessment revenues and the project itself (diversion structure). This security is in compliance with the CWCB financial Policy #5 (Collateral).

cc: Dan Grant, Bookkeeper, Rural Ditch Company
Jennifer Mele, Colorado Attorney General's Office

Attachment: Water Project Loan Program – Project Data Sheet

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Diversion Structure Improvement

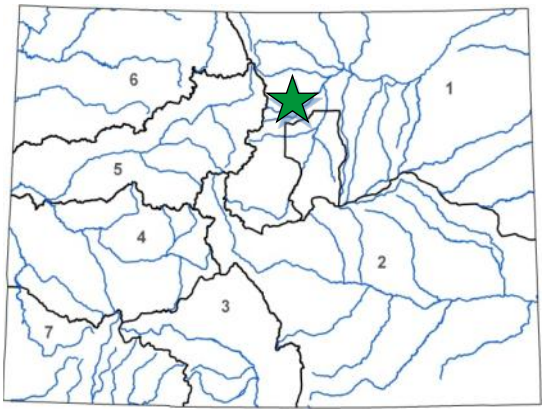
Rural Ditch Company

July 2020 Board Meeting

LOAN DETAILS	
Project Cost:	$805,000
CWCB Loan (with 1% Service Fee):	$813,050
Loan Term and Interest Rate:	30 Years @ 2.70%
Funding Source:	Severance Tax Perpetual Base Fund

BORROWER TYPE		
Agriculture	*Municipal*	*Commercial*
50%	4% Low - 15% Mid - 4% High	27%

PROJECT DETAILS	
Project Type:	Diversion Structure Rehabilitation
Average Annual Diversions:	6,302 AF



LOCATION			
County:			Weld
Water Source:			Boulder Creek
Drainage Basin:			South Platte
Division:	1	*District:*	6

The Rural Ditch Company (Company) was organized in 1873 to deliver water to shareholders in Weld County. Currently the Company has 21 shareholders including farmers, commercial entities, special districts and municipalities that use the water for agricultural irrigation, drinking water, and augmentation.

The existing diversion structure was damaged and undermined during the September 2013 floods, but was still operational. Since then, the structure has continued to deteriorate and is in need of repair. This project will include engineering and construction to stabilize and repair the structure. Repairs will include rebuilding the rock dam with a center cutoff sheetpile and installing a grouted boulder apron on the downstream side of the structure. Construction is expected to begin in the fall of 2020.