STATE OF COLORADO

Colorado Water Conservation Board
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TO: Colorado Water Conservation Board Members

FROM: Anna Mauss, P.E.
Water Supply Planning & Finance Section

DATE: November 10, 2009

SUBJECT: **Agenda Item 26b, November 16-18, 2009 Board Meeting**
Water Supply Planning and Finance Section – New Project Loans
Riverside Ditch & Allen Extension Co. – Phased Canal Improvements Project

Introduction

The Riverside Ditch and Allen Extension Company (Company) has requested a $184,500 loan for 90% of the cost of its Phased Canal Improvements Project (Project). Currently, the Company's structures, including the canal, headgate, check structures, and flumes, are in need of repair or replacement. The estimated Project cost is $205,000. See attached Project Data Sheet for a location map and a project summary.

Staff Recommendation

Staff recommends the Board approve a loan from the Construction Fund not to exceed $186,345 ($184,500 for project costs and $1,845 for the 1% Loan Service Fee) to the Riverside Ditch and Allen Extension Company for engineering and construction costs related to the Phased Canal Improvements Project. The loan terms shall be 30 years at the agricultural rate of 2.75% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.

Background

The Company, located just north of Buena Vista, Colorado in Chaffee County, operates the Riverside Ditch (canal) that has provided irrigation water to 450 acres for more than 125 years. The Company diverts water from the Arkansas River through an earthen dike on the west side of the river.

The canal is approximately 8 miles long and has received very little repair or improvements in recent decades. The Company has decided that it is time for canal modernization and to repair the aging infrastructure to assure all shareholders have a reliable delivery of water.

The Company plans to address the following items with funds from this loan request:

River Diversion

The Company's river diversion is an earthen dike made of rock material that forces a portion of the river flow to be channeled toward the Company's headgate. This earthen dike lacks efficiency. Water seeps through the dike back into the river during high flows. During low river flows, the dike is insufficient to direct the Company's full decreed water rights to the Company's headgate. The diversion structure repairs will involve filling voids and excavation work.

Seepage

A United States Bureau of Reclamation funded study of seepage losses along the Company's canal was conducted by Dr. Tim Gates with Colorado State University in August 2009. The study identified seepage areas to be addressed by lining the canal.

Headgates and Downstream Flumes

The Company never standardized all of its headgates or flow measurement flumes along the canal. Headgate types vary along the system, many of which are in very poor operating condition. This concerns the Company from an operator safety standpoint. The flumes downstream from the headgates also vary in size and condition. Not all of the flumes accurately measure flow; so to assure that all shareholders are getting their allotted amount of water, the Company plans to replace headgates and flumes to standardize the system.

Loan Feasibility Study

The Loan Feasibility Study, "Feasibility Study Considering Phased Canal Improvements" dated October 2009, was prepared by Stephen Smith, P.E., of Aqua Engineering, Inc. The study was prepared in accordance with the CWCB guidelines and includes an alternative analysis and cost estimates.

Riverside Ditch and Allen Extension Company

The Company is a non-profit mutual ditch and irrigation company registered in the State of Colorado. There are 19 shareholders and 1428.33 shares of stock outstanding. The Company is managed by a three-member Board of Directors. The Board has the authority to take on debt, terminate water deliveries to shareholders that have not paid the annual assessments, and has the power to offer shareholders' stock for sale to pay assessments that remain delinquent. Shareholders must approve increases in share assessments.

The Company's annual meeting is held in March of each year; however, a special meeting will be held to approve the assessments for this Project. That meeting will likely be in December 2009.

Water Rights

Direct flow water rights controlled by the Company were appropriated in 1872 through 1888 as shown in Table 1. On average, the Company diverts 3, 250 acre-feet (AF) of water annually.

TABLE 1
WATER RIGHTS

Adjudication Date	Appropriation Date	Amount (cfs)	Use
January 1, 1904	November 11, 1872	3.0	Irrigation
June 19, 1890	February 22, 1882	0.95	Irrigation
June 19, 1890	August 9, 1883	9.00	Irrigation
June 19, 1890	July 6, 1888	16.00	Irrigation

Project Description

The Company evaluated its canal system with the help of its engineer and found the no-action alternative of not repairing/improving the system unacceptable. Other than two new siphons that were financed by the CWCB in 2002, the system has not had significant upgrades since the canal was constructed nearly 125 years ago. In order to best manage and deliver its water, the Company is planning on the following phased improvements:

- Phase 1: Repair the river diversion dike, repair the ditch where there are seepage problems, install and/or replace headgates and flumes, and begin phreatophyte removal.

- Phase 2: Add a trash rack to the siphon, install and/or replace additional headgates and flumes that were not completed in phase 1, install supervisory control and data acquisition (SCADA) monitoring equipment.

- Phase 3: Install additional SCADA monitoring equipment.

Table 2 shows the estimated costs of all of the prioritized capital improvements that have been identified for each phase this Project. All of these improvements are expected to be completed between the winter of 2009 and the spring of 2012.

TABLE 2
TOTAL PROJECT COST SUMMARY

Phase	Construction Cost	Contingency	Engineering Fees	Total Cost
1	$129,000	$7,500	$17,000	$153,500
2	$33,000	$2,800	$3,700	$39,500
3	$11,000	$500	$500	$12,000
TOTALS	**$173,000**	**$10,800**	**$21,200**	**$205,000**

Financial Analysis

Table 3 shows a summary of the financial aspects of the loan request. The Company shareholders are entirely agricultural; therefore, an interest rate of 2.75% for a 30-year loan applies.

TABLE 3
FINANCIAL SUMMARY

PROJECT/LOAN	
Total Project Cost	$205,000
CWCB Loan (90% of the Project cost)	$184,500
CWCB Loan (Including 1% Service Fee)	$186,345
CWCB Annual Loan Payment	$9,203
CWCB Loan Obligation (including 10% debt reserve funding)	$10,123
Number of Shares	1,428.33
Annual Cost Per Share for Project (1st 10 years)	$7.09
Current Annual Assessments per Share	$3.09
Additional Annual Assessment Needed to Cover Operating Expenses	$1.30
Future Assessment per Share to Cover Operating Expenses & Debt Coverage	$11.48
Special Assessment per Share to Cover Company's 10% match	$14.35

Creditworthiness: The Company has one existing loan with the CWCB for its siphon project. The original 2002 loan approval was for $50,000. Annual payments are $2,469. The balance of the loan is $35,491. All payments have been made on time and the Company is in good standing with the CWCB.

The Company's recent assessments have not been generating enough revenue to cover operating expenses and debt service; so it has been using cash reserves to make up the balance. In addition to increasing assessments to cover operating expenses and debt service, the Company will levy a special assessment to generate the 10% matching funds for the Project.

TABLE 4
FINANCIAL SUMMARY

Financial Ratio	Past 3 Years	Future w/ Project
Operating Ratio (revenues/expenses) weak: <100% - average: 100% - 120% - strong: >120%	77% (Weak) $6K/$7.8K	100% (Average) $17.9K/17.9K
Debt Service Coverage Ratio (revenues-expenses)/debt service weak: <100% - average: 100% - 120% - strong: >120%	28% (Weak) ($6K-5.3K)/$2.5K	100% (Average) ($17.9-5.3K) /12.6K
Cash Reserves to Current Expenses weak: <50% - average: 50% - 100% - strong: >100%	4% (Weak) $336/$7.8K	2% (Weak) $336/$17.9K
Annual Operating Cost per Acre-Foot (based on 3,250 AF) weak: >$20 - average: $10 - $20 - strong: <$10	$2.40 (Strong) $7.8K/3250AF	$5.52 (Strong) $17.9K/3250AF

Collateral – As security for the loan, the Company will pledge assessment revenues backed by a rate covenant and water rights sufficient to cover the loan amount. This is in compliance with the CWCB Financial Policy #5 (Collateral).

Staff Recommendation

Staff recommends the Board approve a loan from the Construction Fund not to exceed $186,345 ($184,500 for project costs and $1,845 for the 1% Loan Service Fee) to the Riverside Ditch and Allen Extension Company for engineering and construction costs related to the Phased Canal Improvements Project. The loan terms shall be 30 years at the agricultural rate of 2.75% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.

cc: Laura Berchert, Board President, Riverside Ditch and Allen Extension Company
Stephen Smith, P.E., Aqua Engineering, Inc.
Susan Schneider, AGO

Attachment: Water Project Loan Program – Project Data Sheet

Water Project Loan Program - Project Data

Borrower: Riverside Ditch & Allen Extension Co.

County: Chaffee

Project Name: Phased Canal Improvements

Project Type: Ditch Rehabilitation

Drainage Basin: Arkansas

Water Source: Arkansas River

Total Project Cost: $205,000

Funding Source: Construction Fund

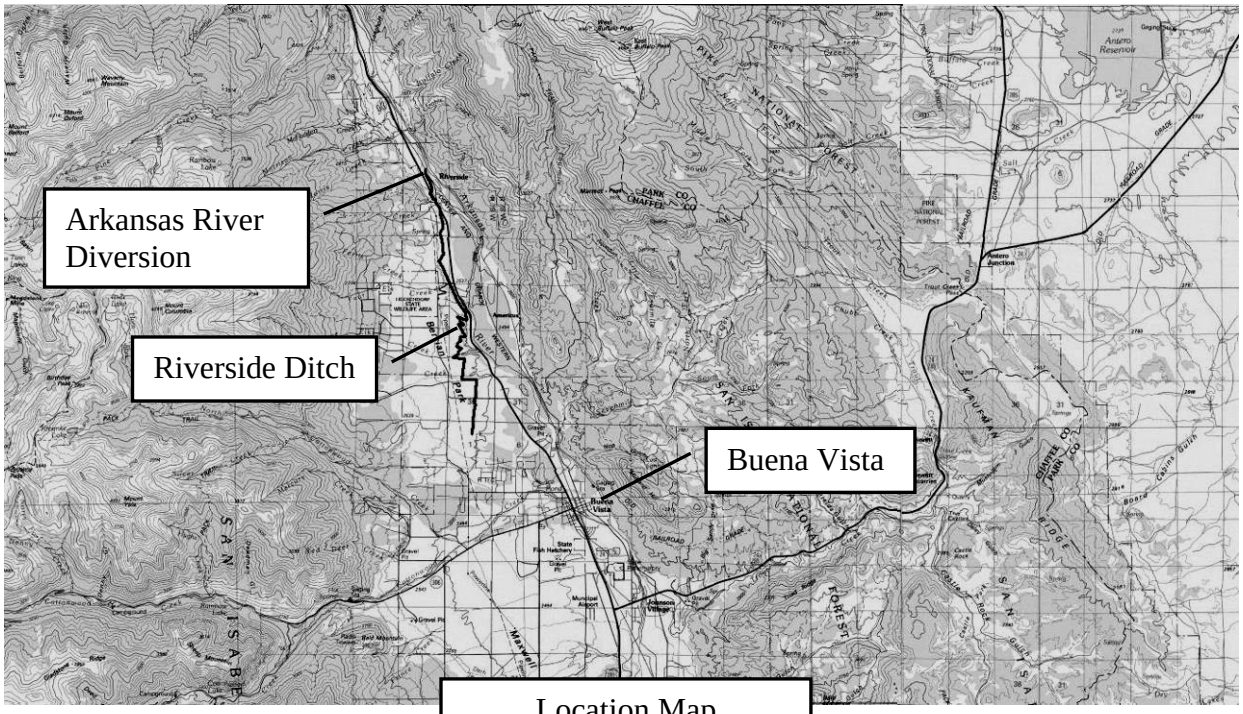
Type of Borrower: Agricultural

Average Diversion: 3,250 acre-feet

CWCB Loan: $186,345 (Including 1% fee)

Interest Rate: 2.75% **Term:** 30 years

The Riverside Ditch and Allen Extension Company (Company), located near Buena Vista, owns and operates the Riverside Ditch (canal) that provides irrigation water to a 450 acre service area within Chaffee County. A significant portion of the Company's structures along the 125 year old canal are aged and in need of repair or replacement. The Company intends to complete a number of phased improvements to the canal that include: repairs to the river diversion; lining of portions of the canal to reduce seepage; installation of canal monitoring using SCADA equipment; phreatophyte removal; repair/replacement of aging headgates; and installation of standardized flumes. The proposed improvements would benefit the shareholders by improving overall canal efficiency, thereby increasing the consistency of shareholder headgate deliveries. These improvements will also benefit the Company through increased operator safety. Improvements are expected to be completed between the winter of 2009 and spring of 2012.



Location Map