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: January 19, 2010

SUBJECT: **Agenda Item 26b, January 26-27, 2010 Board Meeting**
Water Supply Planning and Finance Section – New Project Loans
Trinchera Irrigation Company – Smith Dam Repair

Introduction

The Trinchera Irrigation Company (Company) is applying for a $600,000 loan to repair erosion on Smith Dam and replace the upstream sluice valve in order to remove the State Engineer's Office (SEO) restriction. This project has been identified as the Smith Dam Repairs Project (Project). The current loan request is for 90% of the estimated $667,000 total cost of the Project. 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 $606,000 ($600,000 for project costs and $6,000 for the 1% Loan Service Fee) to the Trinchera Irrigation Company for engineering and construction costs related to the Smith Dam Repair 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.

Staff also recommends a contract condition requiring that all bridge financing be paid in full with the proceeds from the CWCB loan.

Background

The Company, located in Costilla County, Colorado, owns and operates Smith Reservoir, Mountain Home Reservoir, and approximately 26 miles of canals and 45 miles of laterals for the purpose of managing agricultural irrigation water for the benefit of its shareholders. The total irrigated farm land serviced by the Company is approximately 14,100 acres.

Smith Reservoir is a 5,000 acre-foot (AF) irrigation water storage reservoir. The reservoir is located about 2 miles south of the Town of Blanca, or approximately 20 miles east of Alamosa. The dam, constructed in 1914, is an earth and rockfill dam. The original dam construction included a concrete core wall with an impervious zone on the upstream side and an upstream slope of 1.5:1.

In April 2009, an intense snow storm accompanied by high easterly winds occurred in the area. This storm caused considerable damage on the upstream slope of the dam due to wave erosion. The erosion resulted in six foot high vertical scarps and large voids between the rockfill.

The outlet has existing upstream and downstream gate valves; however, due to operational difficulties with the upstream gate, the Company has controlled the flow with only the downstream valve. This is considered an undesirable mode of operation by the SEO. In addition, the upstream gate leaks because it cannot be completely closed.

Due to these concerns, the SEO restricted the dam to a level two feet below the emergency spillway crest (gage height 26.5') on April 22, 2009. This restriction results in a loss of water storage of approximately 1,100 AF. The Company intends to make the necessary repairs to address the safety concerns in order to restore the reservoir to full capacity rather than risk losing storage.

Loan Feasibility Study

Jane Devine, Company Office Manager, prepared the Loan Feasibility Study titled "Feasibility of Smith Dam Repairs, November 30, 2009." Technical assistance was provided by Allen Davey, P.E., of Davis Engineering Service, Inc. The study was prepared in accordance with the CWCB guidelines.

Trinchera Irrigation Company

The Company is a non-profit mutual ditch company incorporated on February 4, 1944, and is managed by a five-member board of directors. There are 43 shareholders and 12,500 shares of stock. A total of 12,396 shares are currently issued. The board has the power to enter into contracts, to cut off water deliveries to shareholders who fail to pay their assessments, and the power to offer stock for sale to pay back assessments. Shareholders must approve the annual assessment at the annual meetings held on the second Tuesday of March.

Water Rights

Smith Reservoir takes its supply of water from Trinchera Creek, Sangre de Cristo Creek and Spring Creek and their tributaries. The Company's Smith Reservoir decree for 5,000 AF of irrigation water was adjudicated January 4, 1915. In addition, the Company has a 1906 decree for 19,150 AF of irrigation water in Mountain Home Reservoir. On average the Company diverts approximately 26,700 AF annually.

Project Description

The Company considered three alternatives to restore Smith Reservoir to its full capacity.

Alternative No. 1 – No action: This alternative was considered unacceptable to the Company because recovering the 1,100 AF of storage lost by the current restriction is necessary to deliver adequate amounts of water to shareholders for their irrigation needs.

Alternative No. 2 – Correct upstream dam slope and repair outlet with concrete pipe extension: This alternative included: reconstructing the upstream dam face to a 3:1 slope; installing riprap; extending the outlet pipe with a concrete pipe; and replacing the upstream sluice gate. The original engineer's estimate of this alternative was $193,000.

Selected Alternative No. 3 – Correct upstream dam slope and repair outlet with steel pipe extension: This alternative was identical to Alternative No. 2 with the exception of using a steel pipe versus a concrete pipe. The original engineer's estimate of this alternative was $244,000. The Company selected this alternative because the steel pipe was the SEO's preferred method of repair.

Schedule - Davis Engineering Service, Inc. was contracted in June 2009 to prepare a design for the repairs and to perform related field work. The plans were submitted to the SEO for review on August 7, 2009. On November 2, 2009, the SEO approved the plans and the Company hired Gardner Excavating to begin reconstruction immediately. Completion is expected to occur by February 2010.

Cost – The price has increased significantly from the original estimate to the current actual cost of the project. Unexpected costs occurred due to the large amount of silt that had to be removed from the site, pumping costs to keep water out of the repair site, and upgrading material to meet SEO specifications.

TABLE 1
TOTAL PROJECT COST SUMMARY

Task	Cost
Engineering	$70,000
Construction	$597,000
Total	$667,000

Financial Analysis

Table 2 shows a summary of the financial aspects of the loan request. The Company qualifies for an agriculture interest rate of 2.75% for a 30-year term.

TABLE 2
FINANCIAL SUMMARY

PROJECT/LOAN	
Total Project Cost	$667,000
CWCB Loan (90% of the Project cost)	$600,000
CWCB Loan (Including 1% Service Fee)	$606,000
CWCB Annual Loan Payment	$29,927
CWCB Loan Obligation (including 10% debt reserve funding)	$32,920
Number of Shares	12,396
Annual Cost Per Share for this Project (1st 10 years)	$2.66
Current Assessments per Share	$21.00
Future Assessments per Share	$23.66
Cost per AF to Preserve 1,100 AF of Storage	$606

Creditworthiness: Based upon the original estimated construction costs, the Company stockholders thought they could fund the Project through the sale of their own stock that it had acquired over the years from delinquent stockholders. The Company sold 864 shares of Company held stock for $172,800. Due to the increased actual cost of the project, the Company needs additional funds to pay for the construction and engineering fees.

A stockholder provided a $200,000 short term loan to the Company to cover the reconstruction costs until long-term funding could be obtained. This loan will be repaid with proceeds from the CWCB loan.

The Company had two previous loans from the CWCB. The first was for the Trinchera Watershed Project for concrete lining of canals and ditches. The $251,690 loan was approved in 1978 and had annual payments of $11,000. This loan was paid in full in April 2009. The second loan was for the Mountain Home Reservoir Dam Project. This $1,000,000 loan was approved in 1993 and has a balance of $410,135, with $18,623 due annually. The maturity date of the loan is September 2034. This loan was secured by a pledge of assessment revenues and the Mountain Home Reservoir.

In September 2009, the Company was approved for a $200,000 Water Supply Reserve Account grant ($150,000 from the state wide funds and $50,000 from the Rio Grande basin funds) for the Sangre de Cristo Trinchera Diversion Canal Restoration Project. In addition, the Company has applied for an additional $54,000 grant from the Rio Grande Basin for a project titled “Shortfall Request Sangre de Cristo Trinchera Diversion Canal Restoration.” This request was approved by the basin and will be before the CWCB as part of the January 2010 grant requests.

TABLE 3
FINANCIAL SUMMARY

Financial Ratio	Past 2 Years	Future w/ Project
Operating Ratio (revenues/expenses) weak: <100% - average: 100% - 120% - strong: >120%	115% (Average) $291K/253K	116% (Average) $323K/279K
Debt Service Coverage Ratio (revenues-expenses)/debt service weak: <100% - average: 100% - 120% - strong: >120%	252% (Strong) ($291K-228K)/ 25K	183% (Strong) ($323K-228K)/ 52K
Cash Reserves to Current Expenses weak: <50% - average: 50% - 100% - strong: >100%	14% (Weak) $36K/253K	21% (Weak) $58K/279K
Annual Operating Cost per Acre-Foot (based on 26,700AF) weak: >$20 - average: $10 - $20 - strong: <$10	$9.48 (Strong) $253K/26,700AF	$10.45 (Average) $279K/26,700AF

Collateral – As security for the loan, the Company will pledge assessment revenues backed by a rate covenant and the water rights stored in Smith Reservoir and Smith Reservoir. 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 $606,000 ($600,000 for project costs and $6,000 for the 1% Loan Service Fee) to the Trinchera Irrigation Company for engineering and construction costs related to the Smith Dam Repair 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.

Staff also recommends a contract condition requiring that all bridge financing be paid in full with the proceeds from the CWCB loan.

cc: Jane Devine, Office Manager, Trinchera Irrigation Company
Susan Schneider, AGO

Attachment: Water Project Loan Program – Project Data Sheet

Water Project Loan Program - Project Data

Borrower: Trinchera Irrigation Company

County: Costilla

Project Name: Smith Dam Repairs Project

Project Type: Dam Rehabilitation

Drainage Basin: Rio Grande

Water Source: Trinchera Creek

Total Project Cost: $667,000

Funding Source: Construction Fund

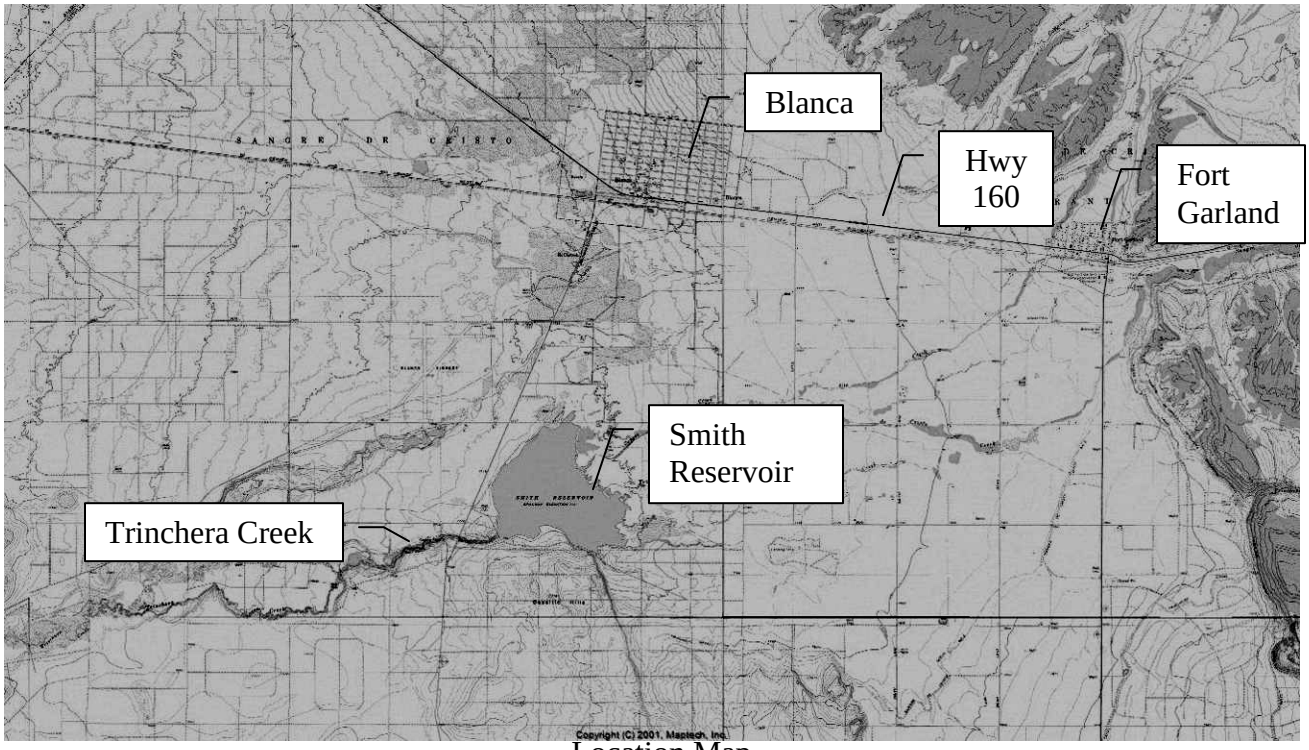
Type of Borrower: Agricultural

Aver. Diversion: 26,700 AF
Storage Recovered by Project: 1,100 AF

CWCB Loan: $606,000 (incl. 1% loan fee)

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

The Trinchera Irrigation Company (Company) owns and operates Smith Reservoir, Mountain Home Reservoir, and approximately 26 miles of canals and 45 miles of laterals for the purpose of providing irrigation water for the benefit of its shareholders. The Company services approximately 14,100 acres of irrigated farm land. The Company is applying for a loan to repair Smith Reservoir, which the State Engineer's Office (SEO) placed under a storage restriction. The restriction was put in place on April 22, 2009 after a storm caused considerable erosion on the upstream slope of the dam. The repairs include: correcting the slope of the dam, repairing erosion damage on the upstream face of the dam, and replacing the upstream sluice valve. The SEO approved the construction plans on November 2, 2009 and construction began immediately. The Company expects work to be complete by February 2010 so it can begin filling the reservoir as soon as possible.



Location Map