STATE OF COLORADO

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TO: Colorado Water Conservation Board Members

FROM: Anna Mauss, P.E.
Tim Feehan, P.E., Chief
Finance Section

DATE: May 11, 2010

SUBJECT: **Agenda Item 14b, May 18-19, 2010 Board Meeting**
Finance Section – New Project Loans
Las Animas Consolidated Canal Company – Emergency Repair of the Las Animas Consolidated Canal Diversion Dam

Introduction

The Las Animas Consolidated Canal Company (Canal Company) is applying for a $76,500 loan to repair the Las Animas Consolidated Canal Diversion Dam Project (Project). The purpose of this Project is to complete emergency repairs to the Las Animas ditch diversion dam so that safe and reliable future operations of the structure can be ensured. The current loan request is for 6% of the estimated $1,275,000 total cost of the Project. The additional Project funding will come from the Consolidated Extension Canal Company (Extension Company) and from Xcel Energy (a majority shareholder in the Canal Company). 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 $77,265 ($76,500 for project costs and $765 for the 1% Loan Service Fee) to the Las Animas Consolidated Canal Company for engineering and construction costs related to the Emergency Repair of the Las Animas Consolidated Canal Diversion Dam 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 Canal Company, located in Bent County, Colorado, provides irrigation water to approximately 5,600 acres of land in the vicinity of Las Animas, Colorado. The Canal Company, along with the

Extension Company, owns and operates the Las Animas ditch diversion dam. The diversion dam is located on the Arkansas River approximately 11 miles east of La Junta and about seven miles west of Las Animas, Colorado. Water is conveyed through the head gates of the Las Animas Consolidated Canal Company canal in an easterly direction to the Purgatoire River.

The diversion dam was constructed during the 1870s and 1880s and appears to have been modified numerous times to address deterioration of the structure and erosion. The diversion dam is a 200-foot-wide sheet pile wall that was constructed across the Arkansas River to divert water into the canal system. The sheet pile wall is connected to a reinforced concrete gate structure at the right bank of the river. The gate structure includes an 18-foot-wide gate that controls inflows to the canal system and a 10-foot-wide gate to flush sediments around the structure.

The Canal Company hired the engineering firm of W.W. Wheeler and Associates to analyze the diversion dam. It is the engineer's opinion that the existing sluice gate is too small to adequately flush the large sediment flows that can occur in the Arkansas River. This has resulted in the buildup of sediment to within a foot of the top of the diversion dam. The diversion dam has acted as a sediment trap for many years, so cleaner water has flowed over the diversion dam causing excessive scour downstream of the diversion dam. The lack of an adequate sediment flushing feature has also contributed to the deterioration of the canal intake gates.

A 100-foot-wide concrete wall was connected to the sheet pile wall near the right side of the diversion dam around 1957. At some point in time, steel piles were installed downstream of the dam to help support the sheet pile and concrete diversion dam and to support a timber deck that runs across the downstream face of the diversion dam. It is believed that the timber deck was intended to dissipate the energy of water flowing over the diversion dam as the scour downstream of the dam increased. The downstream erosion has progressed to the point that the river bed immediately downstream of the diversion dam is 13 feet lower than the river bed upstream of the sheet pile.

Based on observations, the engineer believes that the diversion dam is failing and if emergency repairs are not immediately implemented the integrity of the diversion dam cannot be guaranteed for another irrigation season.

Loan Feasibility Study

Amy Willhite, Canal Company Director and Secretary/Treasurer and Steve Jamieson, P.E., of W.W. Wheeler & Associates, Inc., prepared the Loan Feasibility Study titled "Feasibility Study for the Emergency Repair of the Las Animas Consolidated Canal Diversion Dam, February, 2010." The study was prepared in accordance with the CWCB guidelines.

Las Animas Consolidated Canal Company

The Canal Company is a non-profit mutual ditch company incorporated in 1941; although the ditch has been in existence since the 1870s when the most senior water rights were appropriated. The Canal Company is managed by a five-member board of directors. 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 assessments at the annual meetings.

There are 11 shareholders and 562 shares of stock. Xcel Energy owns 430 shares (77%) of the Canal Company; however, it leases all of its water to local irrigators for agricultural use. Xcel Energy has committed to pay for its portion of the Project costs from its capital reserves. The remaining Project funding will come from the Extension Company. (See agenda item 14a.) The Extension Company owns 95 shares (17%) of the Canal Company.

Water Rights

On average the Canal Company diverts approximately 26,000 AF annually. Its water rights are listed below in Table 1.

TABLE 1
WATER RIGHTS

Water Right	Appropriation Date	Amount (cfs)	Use
Las Animas Consolidated Canal Company	4/10/1875	22.3	Irrigation
Las Animas Consolidated Canal Company	12/3/1884	22.0	Irrigation
Las Animas Consolidated Canal Company	3/13/1888	80.0	Irrigation

Project Description

The objective of this Project is to repair the diversion dam to prevent failure and ensure safe and reliable future operation. A secondary objective is to make repairs to the gates and deteriorated concrete in the floor of the gate structure. Four alternatives were considered to meet the project objectives.

Alternative No. 1 – No action: This alternative was considered unacceptable to the Canal Company because the diversion dam is failing and excessive scour is undermining the foundation. A section of the deck has already collapsed and it is believed that the wear on the structure will continue to accelerate. Failure of the diversion dam could prevent the Canal Company from being able to divert water and deliver to shareholders.

Alternative No. 2 – Reinforced Concrete Downstream Buttress: This alternative consisted of removing the decking and wood and steel supports on the downstream face of the dam and constructing a series of reinforced concrete buttress walls to support the vertical face of the diversion dam. The engineer's estimate of this alternative was $2,100,000.

Selected Alternative No. 3 – Grouted Riprap or Roller Compacted Concrete Downstream Buttress: This alternative also included removing the existing decking and supports on the downstream face of the dam. The existing sheet pile wall would be buttressed with a sloped grouted riprap chute or a roller compacted concrete (RCC) buttress. The engineer's estimate of this alternative was $1,275,000.

The Canal Company selected Alternative No. 3 because it is expected to provide the most reliable structure with lower future operation and maintenance expenses. The Canal Company will bid both the riprap and RCC methods of construction and will make a final decision based on contractor bids rather than a decision based upon the engineer's estimate.

Schedule – The engineer will finalize the design in the summer of 2010, the Project will be bid in the fall of 2010, with work being completed by March 2011.

TABLE 2
TOTAL PROJECT COST SUMMARY

Task	Cost
Engineering	$135,000
Construction	$1,140,000
Total	$1,275,000

Financial Analysis

Table 3 shows a summary of the financial aspects of the loan request. Due to Xcel providing cash for its shares, the Canal Company qualifies for an agricultural interest rate of 2.75% for a 30-year term.

TABLE 3
FINANCIAL SUMMARY

PROJECT/LOAN	
Total Project Cost	$1,275,000
Xcel Energy Contribution (shareholder) (80%)	$1,020,000
Consolidated Extension Canal Company Portion (14%)	$178,500
CWCB Loan (6% of the Project cost) (Canal Company's portion of project)	$76,500
CWCB Loan (Including 1% Service Fee)	$77,265
CWCB Annual Loan Payment	$3,800
CWCB Loan Obligation (including 10% debt reserve funding)	$4,200
Total Number of Shares (430 owned by Xcel, 95 owned by Extension Company)	562
Number of Shares Using CWCB Funding (non-Xcel shares & non-Extension Co.)	37
Annual Cost Per Share using CWCB Funding for this Project (1st 10 years)	$114
Current Assessments per Share (all shares)	$90
Future Assessments per Share (non-Xcel & non-Extension Company shares)	$204

Creditworthiness: The Canal Company has no existing debt service.

TABLE 4
FINANCIAL SUMMARY

Financial Ratio	Past 3 Years	Future w/ Project
Operating Ratio (revenues/expenses) weak: <100% - average: 100% - 120% - strong: >120%	120% (Average) $53K/44K	119% (Average) $57K/48K
Debt Service Coverage Ratio (revenues-expenses)/debt service weak: <100% - average: 100% - 120% - strong: >120%	N/A (No Ex. Debt)	310% (Strong) ($57K-44K)/ $4.2K
Cash Reserves to Current Expenses weak: <50% - average: 50% - 100% - strong: >100%	61% (Average) $27K/44K	56% (Average) $27K/48K
Annual Operating Cost per Acre-Foot (based on 26,000AF) weak: >$20 - average: $10 - $20 - strong: <$10	$1.69 (Strong) $44K/26KAF	$1.84 (Strong) $48K/26KAF

Collateral – As security for the loan, the Canal Company will pledge assessment revenues backed by a rate covenant. 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 $77,265 ($76,500 for project costs and $765 for the 1% Loan Service Fee) to the Las Animas Consolidated Canal Company for engineering and construction costs related to the Emergency Repair of the Las Animas Consolidated Canal Diversion Dam 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: Amy Willhite, Consolidated Extension Canal Company, Secretary/Treasurer
Susan Schneider, AGO
Patricia DeChristopher, AGO

Attachment: Water Project Loan Program – Project Data Sheet

Water Project Loan Program - Project Data

Borrower: Las Animas Consolidated Canal Co.

County: Bent

Project Name: Emergency Repair of the Las Animas Consolidated Canal Diversion Dam

Project Type: Diversion Structure Rehabilitation

Drainage Basin: Arkansas

Water Source: Arkansas River

Total Project Cost: $1,275,000

Funding Source: Construction Fund

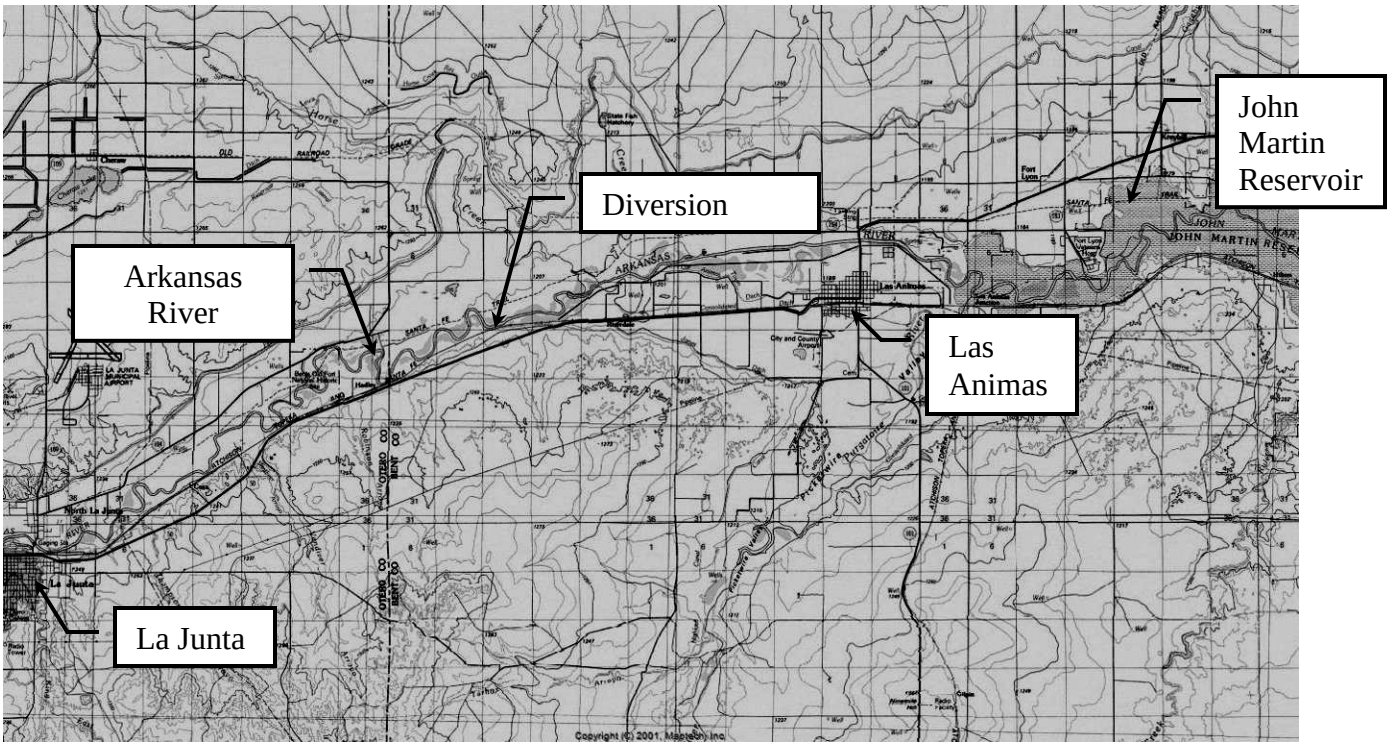
Type of Borrower: Agricultural

Aver. Diversion: 26,000 AF

CWCB Loan: $77,265 (incl. 1% loan fee)

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

The Las Animas Consolidated Canal Company provides irrigation water to approximately 5,600 acres near Las Animas, Colorado. The Canal Company, along with the Consolidated Extension Canal Company, operates the Las Animas ditch diversion dam, located on the Arkansas River approximately 11 miles east of La Junta and about 7 miles west of Las Animas. The diversion dam was constructed in the late 1800s and is at the end of its useful life. The purpose of this project is to complete emergency repairs to support the dam and to minimize further downstream erosion and deterioration of the diversion dam so that safe and reliable future operations of the structure can be ensured. The loan request is for 6% of the estimated $1,275,000 total cost of the project. The additional project funding will come from the Consolidated Extension Canal Company (through a CWCB loan) and from Xcel Energy (a large shareholder in both companies). The project is expected to be bid in the fall of 2010. Construction will begin around November 15, 2010 and work should be completed by March 15, 2011.



Location Map