

STATE OF COLORADO

Colorado Water Conservation Board Department of Natural Resources

1313 Sherman Street, Room 721
Denver, Colorado 80203
Phone: (303) 866-3441
Fax: (303) 866-4474
www.cwcb.state.co.us



November 19, 2010

Ms. Mary Jay Vestal
Farmers' High Line Canal and Reservoir Company
725 Malley Drive
Northglenn, CO 80233

Bill Ritter, Jr.
Governor

Mike King
DNR Executive Director

Jennifer L. Gimbel
CWCB Director

Re: System Rehabilitation Project
Contract Number C150314

Dear Ms. Vestal:

I am pleased to inform you that on November 16, 2010 the Colorado Water Conservation Board approved your loan request for the System Rehabilitation Project as described in the application and approved Loan Feasibility Study titled "*Feasibility Study: Farmers' High Line Canal and Reservoir Company*," dated October 2010. The Board approved a loan not to \$1,410,768 (\$1,396,800 for project costs and \$13,968 for the 1% Loan Service Fee). The loan terms shall be 30 years at a blended interest rate of 4.65% per annum. I have attached a copy of the updated Board memo dated November 19, 2010, that includes the Board's approval.

After the Board approves a loan there are a few steps that remain in the loan process including:

- A) Contracting: An approved contract must be in place before funds can be disbursed. Vaughn McWilliams will initiate the loan contracting process for this project. When all of the contract conditions are met and the contract is executed the Company may request loan funds to cover eligible project expenses. You can contact Vaughn at (303) 866-3441 x 3227 regarding the requirements.
- B) Design/Construction: You must adhere to the CWCB Design and Construction Administration Procedures. Kirk Russell will contact you regarding this phase of the process. Kirk will make construction site visits, which will be the basis of pay estimates for disbursement of your loan funds. You can contact Kirk at his desk at (303) 866-3441 x 3232 or cell phone (303) 956-5653.

Farmers' High Line Canal and Reservoir Company
System Rehabilitation Project
November 19, 2010
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On behalf of the Board, I would like to thank you for your interest in a loan from the Colorado Water Conservation Board.

Sincerely,

A handwritten signature in black ink, appearing to read "Tim Feehan".

Tim Feehan, P.E., Chief
Finance Section
Colorado Water Conservation Board

A handwritten signature in black ink, appearing to read "Anna Mauss".

Anna Mauss, P.E.
Finance Section
Colorado Water Conservation Board

Attachment: Updated Board Memo

E-mail Copy (Including Attachments)

Barbara Biggs, Board Member – City and County of Denver
Patricia DeChristopher, AGO
CWCB Finance Section Staff

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TO: Colorado Water Conservation Board Members

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

DATE: November 5, 2010 (**November 19, 2010**)

SUBJECT: **Agenda Item 10b, November 15-17, 2010 Board Meeting**
Finance Section – New Project Loans
Farmers' High Line Canal and Reservoir Company – System Rehabilitation Project

Introduction

The Farmers' High Line Canal and Reservoir Company (Company) is applying for a loan for its System Rehabilitation Project (Project). The purpose of this project is to rehabilitate the Company's 130 year-old canal system, which has not been renovated since 1942. The Company is requesting a loan for approximately 90% of the \$1.55 million Project. See attached Project Data Sheet for a location map and a project summary.

Staff Recommendation (Board approved staff recommendation November 16, 2010)

Staff recommends the Board approve a loan not to exceed \$1,410,768 (\$1,396,800 for project costs and \$13,968 for the 1% Loan Service Fee) to the Farmers' High Line Canal and Reservoir Company for engineering and construction costs related to the System Rehabilitation Project. The loan terms shall be 30 years at a blended rate of 4.65% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.

Background

The Company operates a ditch and reservoir system with 31 miles of canal from Clear Creek in Golden, Colorado through Jefferson and Adams Counties. Water is delivered to both municipal and agricultural shareholders over 96 square miles.

The service area is approximately 55 percent developed municipal land, 25 percent irrigated farmland, and the remaining land is undeveloped. Approximately 70 percent of the water diverted in the Farmers' High Line Canal (Canal) is used to fill Standley Lake.

The Canal system was built in approximately 1885. The last major renovation to the river headgates and diversions structures at Clear Creek took place in approximately 1942. Over the course of the last 68 years, Clear Creek and age have taken their toll on both the diversion dam and the steel headgates. The earthen channel that carries the water to the end users requires constant attention. The concrete and steel structures that carry water under roadways and railroads are also deteriorating.

Concerned about the aging infrastructure, the Board of Directors of the Company commissioned Deere & Ault Consultants, Inc. to prepare a Canal evaluation and a engineering planning study with regard to infrastructure repair and replacement. The items of immediate concern were identified and are explained in the Project Description section of this memo.

Loan Feasibility Study

The Loan Feasibility Study, "Feasibility Study: Farmers' High Line Canal and Reservoir Company," dated October 2010, was prepared by Deere & Ault Consultants, Inc. The study was prepared in accordance with the CWCB guidelines and includes an alternative analysis, engineering design and cost estimates. Financial information was prepared by the Company.

Farmers' High Line Canal and Reservoir Company

The Company is a Mutual Ditch Company that was founded in 1885. Currently 80 shareholders hold 1,110 shares of stock. The Company is managed by a seven-member board of directors.

The Company shareholders are a mix of 6% agricultural, 1% low-income municipal, 55% middle-income municipal, 31% high-income municipal, and 7% commercial ownership. Assessments must be approved by these shareholders and are set at the Company's annual meeting in March each year or at a special meeting. The Company's bylaws permit it to sell the stock of delinquent shareholders if assessments are not paid.

Water Rights

Total water delivered through the Canal averages approximately 24,000 acre-feet per year. The Canal typically diverts March 20 through November 10. The Company has the following water rights on Clear Creek, a tributary to the South Platte River:

TABLE 1: WATER RIGHTS

Clear Creek Priority No.	Appropriation Date	Rate (cfs)	Cumulative Rate (cfs)
1	2/25/1860	0.275	0.275
3	5/16/1860	1.000	1.275
5	5/31/1860	3.281	4.556
9	7/1/1860	39.800	44.356
30	5/28/1863	1.610	45.966
32	6/20/1863	2.750	48.716
42	4/23/1865	2.890	51.606
48	11/2/1865	0.807	52.413
54	5/24/1870	0.330	52.713
57	4/1/1872	154.000	206.743
68	4/1/1886	191.000	397.743
69	4/23/1895	335.860	733.603

These rights are decreed for the following uses: storage, irrigation, municipal, commercial, industrial, recreation, fishery, fire, domestic, stock, augmentation, and wildlife.

Project Description

Aging structures along the Canal need to be repaired. The degree of repair ranges from minor modifications to full replacement. The key structures that were identified in the Canal evaluation and engineering planning study as items to be repaired were:

- A. Club Crest Storm Drain Crossing
- B. Headworks on Clear Creek
- C. Van Bibber Creek Siphon
- D. Ralston Creek Siphon
- E. Burlington Northern Railroad Siphon
- F. Tree removal along the Canal

Alternatives ranging from no-action, to repair, to full replacement were evaluated for each of the items identified. Below is a summary of the selected alternatives. Pending loan approval, the majority of the construction (unless otherwise noted below) will be completed during the winter months of 2010 through 2014, when the Canal can be taken out of service.

A. Club Crest Storm Drain Crossing

This culvert was exposed at the invert of the canal and was deteriorating. Given the likelihood of failure and potential loss of water in the Canal, the Company chose to replace the culvert. This work was completed in August 2010. The cost of this alternative was \$67,000.

B. Headworks on Clear Creek

System failures at the headworks during the irrigation season could result in significant operational difficulty or possible shutdown or reduction of flow entering the Canal so the Company selected to modify the existing structure because it was the most cost-effective

way to extend its serviceable life. Work to be completed at the headworks includes: headgate structure rehabilitation, gate replacement, SCADA control installation, diversion dam rehabilitation, and erosion control. The estimated cost of this alternative is \$1,005,000.

C. Van Bibber Creek Siphon

The Canal crosses underneath Van Bibber Creek in a cast-in-place concrete inverted siphon. The siphon is located near the beginning of the canal with only six active turnouts or augmentation locations above the structure, leaving 43 active turnouts and augmentation stations downstream of this structure. Because the majority of the shareholders are downstream of this structure, it is very important to the Canal operation that flow be able to cross Van Bibber Creek in this siphon.

The structure has significant damage, including surface erosion and concrete wear. The repairs to be completed include removal of vegetation around the structure and cleaning out and sealing the concrete box culvert. The estimated cost of this alternative is \$114,000.

D. Ralston Creek Siphon

The Canal crosses underneath Ralston Creek using a cast-in-place concrete inverted siphon. The siphon is located in the Westwood's Golf Course in the City of Arvada along a bike path, making it accessible to the public. The majority of the siphon's concrete surface has erosion showing exposed aggregate. Additionally, several trees and willows are growing adjacent to the structure in several locations. As these trees get larger over time they can put a significant amount of pressure on the side and transition walls of this structure.

The Company elected to repair the existing structure. Work to be completed will include: removal of vegetation around the structure, installation of steel dowels to supplement the existing corroded steel on the inlet, installation of cementitious patch primer and high strength shotcrete or hand-trowelled patch material at the inlet, and construction of a new outlet structure (including a new headwall, sidewalls, and transition walls to canal bank, and downstream riprap). The estimated cost of this alternative is \$93,000.

E. Burlington Northern Railroad Siphon

Immediately downstream of the siphon some erosion needs to be addressed. Work to be completed involves excavation and placement of riprap to prevent further erosion. The estimated cost of this alternative is \$8,000.

F. Tree Removal

This portion of the project consists of the removal of cottonwood trees in the Canal banks and easement area. These trees, having reached the end of their life expectancies, now need to be removed before they fall and damage large portions of the ditch bank or nearby structures. This work began in the fall of 2010 and will continue over the course of the next year. The estimated cost of this alternative is \$126,000. (This will be paid for by the Company as part of its 10% matching funds.)

TABLE 2: PROJECT COSTS

Item	Description	Estimated Construction	Estimated Engineering	Total
A	Club Crest storm drain crossing	\$60,000	\$7,000	\$67,000
B	Headworks on Clear Creek	\$894,000	\$111,000	\$1,005,000
C	Van Bibber Creek Siphon structure repair	\$101,000	\$13,000	\$114,000
D	Ralston Creek Siphon repair and partial replacement	\$83,000	\$10,000	\$93,000
E	Burlington Northern RR Siphon repair and erosion control	\$7,000	\$1,000	\$8,000
F	Tree Removal (To be paid for by Company as part of its 10% match)	\$126,000	-	\$126,000
	Canal Evaluation & Engineering Planning	-	\$139,000	\$139,000
Total		\$1,271,000	\$281,000	\$1,552,000

Financial Analysis

Based on the share ownership, the Company qualifies for the blended interest rate of 4.65% for a 30-year term.

TABLE 3: FINANCIAL SUMMARY

Total Project Cost	\$1,552,000
CWCB Loan Amount (90% of total Project cost)	\$1,396,800
CWCB Loan Amount (Including 1% Service Fee)	\$1,410,768
CWCB Loan Payment	\$88,144
CWCB Loan Obligation (Including 10% Reserve)	\$96,958
Number of Shares	1,110
Current Assessment per share	\$390
Annual Cost of Loan (with Reserve Account) per Share	\$87
Future Assessment per share (1 st 10 years of loan repayment)	\$477

Creditworthiness: The Company has no existing debt service. The CWCB loan will be repaid from increases in share assessments.

TABLE 4: FINANCIAL RATIOS

Financial Ratio	Past 3 Years	Future w/ Project
Operating Ratio (revenues/expenses) weak: <100% - average: 100% - 120% - strong: >120%	107% (Average) \$450K/\$422K	105% (Average) \$547K/\$519K
Debt Service Coverage Ratio (revenues-expenses)/debt service weak: <100% - average: 100% - 120% - strong: >120%	No Existing Debt	129% (Strong) \$547K-422K/ \$97K
Cash Reserves to Current Expenses weak: <50% - average: 50% - 100% - strong: >100%	66% (Average) \$287K/\$422K	55% (Average) \$287K/\$519K
Annual Operating Cost per Acre-Foot (24,000 AF) weak: >\$20 - average: \$10 - \$20 - strong: <\$10	\$18 (Average) \$422K/24K AF	\$22 (Weak) \$519K/24K AF

Collateral: As security for the loan, the Company will pledge its assessment revenues backed by a rate covenant, annual financial reporting and the Company's main diversion structure located on Clear Creek. This is in compliance with the CWCB Financial Policy #5 (Collateral).

Staff Recommendation (Board approved staff recommendation November 16, 2010)

Staff recommends the Board approve a loan not to exceed \$1,410,768 (\$1,396,800 for project costs and \$13,968 for the 1% Loan Service Fee) to the Farmers' High Line Canal and Reservoir Company for engineering and construction costs related to the System Rehabilitation Project. The loan terms shall be 30 years at a blended rate of 4.65% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.

cc: Mary Jay Vestal, Director, Farmers' High Line Canal and Reservoir Company
Susan Schneider, AGO
Patricia DeChristopher, AGO

Attachment: Water Project Loan Program – Project Data Sheet

**CWCB Water Project Loan Program
Project Data Sheet**

Borrower: Farmers' High Line Canal and Reservoir Company

Project Name: System Rehabilitation

Drainage Basin/District: South Platte / 7

Total Project Cost: \$1,552,000

Type of Borrower: Municipal

CWCB Loan: \$1,410,768 (incl. 1% loan fee)

County: Adams/Jefferson

Project Type: Ditch Rehabilitation

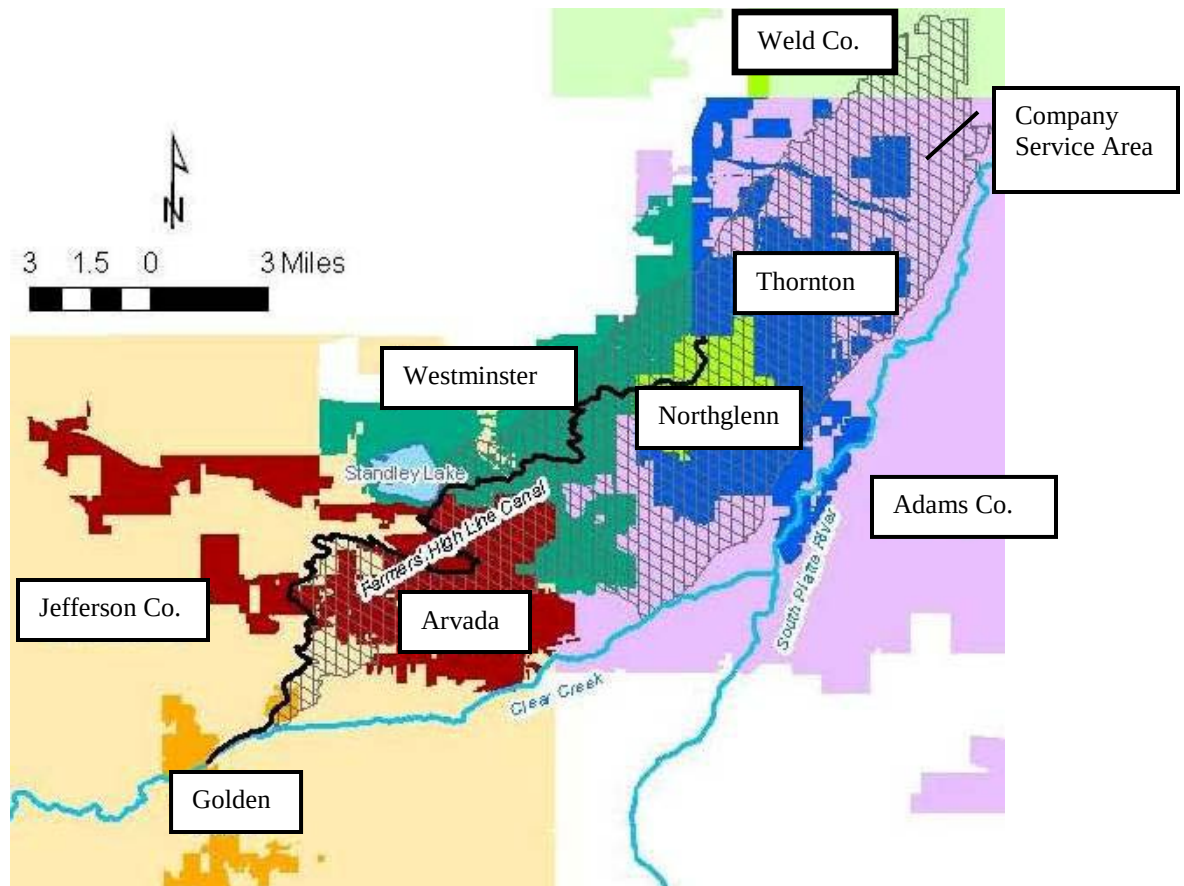
Water Source: Clear Creek

Funding Source: Construction Fund

Water Delivery: 24,000 AF/yr

Interest Rate: 4.65% **Term:** 30 years
(Blended rate)

The Farmers High Line Canal and Reservoir Company (Company) is a ditch company that was established in 1885. It diverts water off of clear creek and it delivers water through a 31 mile canal running from Golden to Northglenn, through Arvada and Westminster. The Company has completed a canal evaluation and engineering planning study and identified a list of improvements it intends to do with the CWCB loan proceeds. These items include: replacement of corroded drain pipes, replacement of three siphons, headgate rehabilitation, SCADA control system installation at the headgate, diversion dam rehabilitation, and tree removal along the ditch. This work is expected to be completed between the fall of 2010 through the winter of 2014.



Location Map