STATE OF COLORADO

Colorado Water Conservation Board
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TO: Colorado Water Conservation Board Members

FROM: Jonathan Hernandez, P.E., Project Manager
Kirk Russell, P.E., Chief
Finance Section

DATE: May 9, 2014

SUBJECT: **Agenda Item 32c, May 21-22, 2014 Board Meeting**
Conejos River System Confluence Management Project
Ephraim Ditch Company (CWCB LOAN) – Ephraim Diversion and Headgate Rehabilitation Project

Introduction

The Ephraim Ditch Company (Company) is requesting a loan for the Ephraim Diversion and Headgate Rehabilitation Project (Project). This Project is one of three projects collectively known as the Conejos River System Confluence Management Project (CMP). This Project will replace the existing diversion structure and headgates and add measurement structures to the Ephraim Ditch. The total Project cost is estimated to be $201,500. The Company is requesting a loan from the CWCB for approximately 50% of Project costs. See attached Project Data Sheet for a location map and a project summary.

Staff Recommendation

Staff recommends the Board approve a loan not to exceed $101,000 ($100,000 for Project costs and $1,000 for the 1% Loan Service Fee) to the Ephraim Ditch Company for the Ephraim Diversion and Headgate Rehabilitation Project from the Construction Fund. The loan terms shall be 30 years at the agricultural interest rate of 1.75% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.

Background

The Company's service area covers approximately 5,000 irrigated acres. Its diversion is located on the Conejos River just below the confluence with the San Antonio River. The North Branch of the Conejos also converges at this location. This area is known as the Confluence of the Conejos and is located 12 miles upstream from the point where Colorado releases its water to the Rio Grande Compact's downstream states of New Mexico, Texas, and the country of Mexico. Ranching and irrigated farming are the principal income-producing activities in this area, with most ranchers growing winter feed for livestock and raising cattle. Meadow hay and alfalfa are the main crops, with a few raising barley and oats.

The Conejos Water Conservancy District (District) plays a critical role in the management of flows on the Conejos River and its tributaries, ensuring that sufficient quantities of water are available to meet agricultural needs within the District and to satisfy Colorado's obligation to the Rio Grande Compact. The District has taken a proactive "whole river" system approach to water management and, over the past few years, has improved the efficiency and stability of many diversions, developed real-time water management data, and studied the effects on return flows from irrigated areas from groundwater withdrawals. The CMP will extend this whole river strategy to the Confluence, specifically to the Sanford Canal, Ephraim Ditch, and East Bend Ditch.

CMP funding comes from a variety of sources. Concurrent with this request, the District is seeking approval of a $295,000 Water Supply Reserve Account (WSRA) Grant for the CMP (See Agenda Item 32a). Of this grant, it is anticipated $86,000 will be used towards the Sanford Project.

Loan Feasibility Study

The District, together with Transforma Research & Design, LLC., prepared the Loan Feasibility Study titled "*Feasibility Study for Rehabilitation of the Ephraim Core & Diversion at the Conejos River Confluence,*" dated November 22, 2013, with support from the Natural Resources Conservation Service (NRCS). The study was prepared in accordance with CWCB guidelines and includes an alternative analysis, preliminary engineering design, cost estimates, and financial statements.

Borrower - Ephraim Canal Company

The Company formed in 1883 and incorporated in 1927 as a Mutual Ditch Company. It operates as a nonprofit corporation and is in good standing with the Colorado Secretary of State. The Company has issued 50,000 shares of stock. Revenues are primarily derived from assessments charged on shares of stock owned by the stockholders.

Assessments are levied on the capital stock of the Company through a vote of shareholders through a majority of all stock. The Board has the authority to enforce assessments, including suspending water deliveries and the eventual sale of shares for failure to pay assessments. Shareholders approved taking on this debt during a special meeting of the shareholders on Monday, October 13, 2013.

Water Rights

The water rights impacted by this project are shown in Table 1:

TABLE 1: EPHRAIM DITCH COMPANY WATER RIGHTS

Decreed Name	Amount (CFS)	Appropriation Date	Adjudication Date
Ephraim Ditch	47.0	03/28/1881	10/22/1883

Average annual surface diversions of the Company over the past 10 years are 4,100 AF (0.08 AF per share). The Company also owns five irrigation wells completed in the confined aquifer that are used as a supplemental source of irrigation water for its shareholders. Use of these wells to supplement surface water will become more restrictive and expensive with the implementation of Ground Water Use Rules and sub-districts within Division 3.

Project Description

The purpose of this Project is to address the need for a well-designed diversion structure that will reduce maintenance, improve water management efficiencies, and allow for the accurate control of compact-entitled waters. The core of the Ephraim Ditch diversion structure has been washed away over time, contributing to decades of limited diversion to irrigators and potential over payment to the Compact. Currently, irrigators divert their water right by piling debris such as tree trunks or cinderblocks to act as the diversion dam. The Project, in conjunction with the District's CMP, seeks to eliminate this practice.

Alternative 1 - No Action: Due to the deteriorated rock and rubble diversion structure, this alternative was not considered further. The ability to divert the Company's water rights will become more diminished as the already deteriorated structure continues to deteriorate. It is not feasible for the Company to rely on its irrigation wells to make up for its surface rights.

Alternative 2 – Repair Existing Structure: The existing rock and rubble piles of debris offer no possibility of repair. This alternative was not considered further.

Selected Alternative 3 – Remove and Replace All Existing Structures: This alternative will remove and replace the diversion and headgate structures. The new headgate will be automated and five gauging stations will be installed. Additionally, measurement structures and telemetry will be installed at five locations within the ditch to accomplish water management efficiency goals. This alternative meets the Project's goals and has an estimated cost of $201,500 as shown in Table 2.

TABLE 2: PROJECT COST SUMMARY

Task	CMP Cost	Ephraim's Project Cost
Engineering and Administration	$91,000	$32,000
Construction	$480,000	$164,000
Telecommunications	$11,000	$5,500
Total	**$582,000**	**$201,500**

Schedule: Final design is scheduled to be completed in summer 2014, with construction expected to start around July 2015. Construction is expected to be completed by December 2015.

Financial Analysis

Table 3 shows a summary of the Project's financial aspects. The term of the loan will be 30 years and the interest rate will be the agricultural rate of 1.75%.

TABLE 3: PROJECT FINANCIAL SUMMARY

Total Project Cost	$201,500
Additional Funding Sources	
NRCS Match (In-Kind)	*$15,000*
District Match	*$10,500*
Borrower Match	*$2,000*
WSRA Grant (Pending CWCB Approval)	*$74,000*
Total	$101,500
CWCB Loan	$100,000
CWCB Loan (Including 1% Service Fee)	$101,000
CWCB Annual Loan Payment	$4,356
CWCB Annual Loan Obligation (incl. 10% debt reserve)	$4,792
Number of Shares	50,000
Total Project Cost per Acre Foot (4,100 AF)	$49/AF
Annual Cost of Loan Per Share (1st 10 Years)	$0.10/share
Current Assessment per Share	$0.20/share
Future Assessment per Share	$0.33/share

Loan funds will only be used on the Project's construction phase ($164,000) with a split of 61% loan funds to 39% WSRA funds (pending grant approval).

Creditworthiness: The Company has no existing debt.

TABLE 4: FINANCIAL RATIOS

Financial Ratio	Past 3 Years	Future w/ Project
Operating Ratio (revenues/expenses) weak: <100% - average: 100% - 120% - strong: >120%	95% (Weak) $30.2K/$31.9K	100% (Average) $36.7K/$36.7K
Debt Service Coverage Ratio (revenues-expenses)/debt service weak: <100% - average: 100% - 120% - strong: >120%	N/A	100% (Average) ($36.7K-$31.9K) $4.8K
Cash Reserves to Current Expenses weak: <50% - average: 50% - 100% - strong: >100%	63% (Average) $20.2K/$31.9K	50% (Average) $18.2K/$36.7K
Annual Operating Cost per Acre-Foot (4,100 AF) weak: >$20 - average: $10 - $20 - strong: <$10	$7.80 (Strong) $31.9K/4.1K AF	$8.95 (Strong) $36.7K/4.1K AF

Collateral – Security for this loan will be a pledge of the Company's assessment revenues backed by an assessment covenant, and the Project itself (diversion, headgate, and measurement equipment). This security is in compliance with CWCB Loan Policy #5 (Collateral).

cc: Warren Crowther, President, Ephraim Ditch Company
Susan Schneider/Jennifer Mele, Colorado Attorney General's Office

Attachment: Water Project Loan Program – Project Data Sheet

C150402

CWCB Water Project Loan Program
Project Data Sheet

Borrower: The Ephraim Ditch Company

County: Rio Grande

Project Name: Ephraim Diversion and Headgate Rehabilitation

Project Type: Ditch Rehabilitation

Drainage Basin/ District: Rio Grande / 22

Water Source: Conejos River

Total Project Cost: $201,500

Funding Source: Construction Fund, WSRA Grants

Type of Borrower: Agricultural

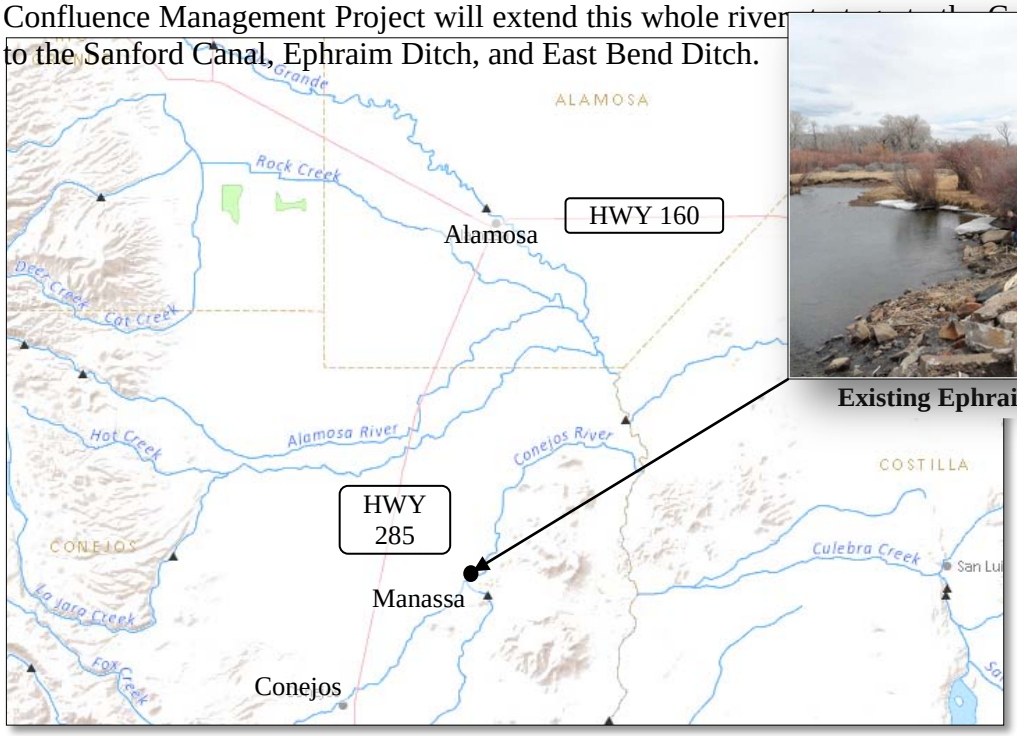
Average Annual Diversion: 4,100 AF

CWCB Loan: $101,000 (with 1% service fee)

Interest Rate: 1.75% **Term:** 30-years

The Ephraim Ditch Company formed in 1883 and incorporated in 1927 as a Mutual Ditch Company. Its diversion is located on the Conejos River just below the confluence with the San Antonio River and a service area covering approximately 5,000 irrigated acres. The purpose of this Project is to address the need for a well-designed diversion structure that will reduce maintenance, improve water management efficiencies, and allow for the accurate control of compact-entitled waters. The core of the Ephraim Ditch diversion structure has been washed away over time, contributing to decades of limited diversion to irrigators and potential over payment to the Compact. Currently irrigators divert their water right by piling debris such as tree trunks or cinderblocks to act as the diversion dam. This Project will remove and replace the diversion and headgate structure and install automated headgates and five gauging stations. Construction is expected to start around July 2015.

This Project is one of three projects collectively known as the Conejos River System Confluence Management Project, managed by the Conejos Water Conservancy District. The District has taken a proactive "whole river" system approach to water management and, over the past few years, has improved the efficiency and stability of many diversions, developed real-time water management data, and studied the effects on return flows from irrigated areas from groundwater withdrawals. The Confluence Management Project will extend this whole river [illegible] to the Sanford Canal, Ephraim Ditch, and East Bend Ditch.



Existing Ephraim Ditch Diversion