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 and Administration Section

DATE: October 18, 2013

SUBJECT: **Agenda Item 8j, October 21, 2013 Special Board Meeting**
Finance – Emergency Loans
Church Ditch Water Authority – Emergency Leyden Creek Crossing Repair

Introduction

The Church Ditch Water Authority (Authority) is applying for an Emergency Loan for the Emergency Leyden Creek Crossing Repair Project (Project). During the unprecedented flood of September 2013 in the tributaries to the South Platte River, a significant number of diversion structures and dams along the river corridor were damaged. The Leyden Creek Crossing structure received significant damage as a result of this flood. The purpose of the Project is to repair the crossing structure to allow the Authority to convey its decreed water rights. The total Project cost is estimated to be $600,000. See attached Project Data Sheet for a location map and project summary.

Staff Recommendation

Staff recommends the Board approve a loan not to exceed $606,000 ($600,000 for project cost and $6,000 for the 1% service fee) to the Church Ditch Water Authority for 100% of engineering and construction costs related to the Emergency Leyden Creek Crossing Repair Project from the Severance Tax Perpetual Base Fund, up to the approved loan amount. The loan terms shall be 3 years of no interest followed by 27 years at a blended interest rate of 2.85% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.

Additionally, staff recommends the following contract condition:

> Any future grant funds obtained for the purpose of this Project shall be submitted to CWCB to be applied to the balance of the loan within thirty (30) days after receipt of said funds.

Background

The Church Ditch Water Authority runs the Church Ditch, which serves 55 headgates from Golden to Arvada and Westminster. During the unprecedented flood of September 2013 in the tributaries to the South Platte River, a significant number of diversion structures and dams along the river corridor were damaged, including the Authority's Church Ditch. The flood damage has made the Church Ditch inoperable and unable to exercise its decreed water rights.

The Church Ditch is a 26-mile long carrier ditch that delivers water from Clear Creek at its headworks in the mouth of Clear Creek Canyon to its terminus at Dry Creek Valley Ditch north of Standley Lake. During the 2013 flood, several areas of the Church Ditch were damaged and are in need of repair. The most significant damage occurred at the Church Ditch crossing of Leyden Creek approximately 11 miles downstream from the headworks. Prior to the flood, Leyden Creek flowed under Church Ditch in an 84-inch CMP culvert. During the flooding, flood waters washed out an estimated 100-foot length of the eastern bank of the Church Ditch and the access road sustained major damage. In addition to the Leyden Creek Crossing, numerous smaller areas had minor damage from sloughing and erosion that need to be repaired.

Loan Feasibility Study

Cory Peterson, P.E. prepared the Loan Feasibility Study titled "*Emergency Loan Application and Feasibility Study,*" dated October 2013. The study includes an alternative analysis and preliminary engineering design and cost estimates. The study was prepared in accordance with the CWCB guidelines.

Borrower – Church Ditch Water Authority

The cities of Northglenn and Westminster created the Authority pursuant to C.R.S. Section 29-1-204.2 through an Intergovernmental Agreement dated October 24, 2004. The Authority's Establishing Contract authorizes the Board to exercise all powers of the Authority. The Authority's source of income is through carriage rates, set by the Authority and charged to its contractual users (inch-holders). The Authority has 98 inch-holders with a total of 5710.64 inches.

Water Rights

The water rights impacted by this project include

TABLE 1: IMPACTED WATER RIGHTS

Name	Amount (CFS)	Appropriation Date	Adjudication Date
Swadley Ditch	0.90	6/1/1862	10/4/1884
Golden City and Ralston Creek Ditch	41.43	2/28/1865	10/4/1884
Swadley Ditch	1.25	5/16/1865	10/4/1884
Golden City and Ralston Creek Ditch	18.26	11/18/1877	10/4/1884
Golden City and Ralston Creek Ditch	18.85	11/15/1878	10/4/1884
Golden City and Ralston Creek Ditch	32.34	11/20/1881	10/4/1884
Golden City and Ralston Creek Ditch	100.12	3/16/1886	5/13/1936
Golden City and Ralston Creek Ditch	185.00	11/18/1887	5/13/1936

Average annual diversions of the Authority are 8,355 AF.

Project Description

The goal of this project is to reestablish the operational function of the Church Ditch as a water supply structure and to ensure the continuation of future deliveries. Ecological Resource Consultants, Inc. has been retained to design a suitable repair for the Leyden Creek Crossing and to provide engineering services for the other locations as needed.

Alternative 1 – Do Nothing: This alternative is considered unacceptable. With the inability to cross Leyden Creek and safely convey water in areas of the other areas of damage, Church Ditch would be unable to deliver to its contractual users and would eliminate a critical raw water supply source for the cities of Arvada, Northglenn, Westminster, and Broomfield.

Alternative 2 – Rebuilding Collaboratively with Improvements: The Leyden Crossing is located in unincorporated Jefferson County in planned open space away from other development or infrastructure. The other smaller areas of damage are limited to the Church Ditch itself. Collaboration with other agencies is not feasible.

Selected Alternative 3 – Church Ditch Flood Repairs: This alternative entails restoring the Church Ditch to pre-flood conditions. The Leyden Creek Crossing Structure will be rebuilt with this section of the ditch piped to prevent the uncontrolled diversion of flood waters in potential future events. For all areas of the ditch, sediment that was deposited by the flood will be removed and the ditch banks will be reshaped where sloughing occurred. Riprap will be added to portions of the reconstructed ditch banks to prevent erosion and increase protection to the ditch. This solution provides for the most cost effective solution that can be completed in the available construction schedule to restore water supply deliveries. The estimated engineering and construction cost of this Alternative is $600,000 and is further broken down as follows:

TABLE 2: PROJECT COST SUMMARY

Task	Cost
Leyden Crossing Engineering, Design and Construction Management	$22,000
Leyden Crossing Testing, Survey, &Permitting	$15,000
Leyden Crossing Construction	$182,000
Cleaning and Sediment Removal Projects	$225,500
Subtotal	$444,500
Contingency (35%)	$155,500
Total	$600,000

Schedule: Construction is expected to commence October 2013 with Project completion by March 2014.

Financial Analysis

Table 3 provides a summary of the Project's financial aspects. The first three years of the loan will be assessed a 0% interest rate. The remaining term of the loan will be assessed a blended interest rate of 2.85% with the principal amortized over 27-years (Ownership: 6% Agriculture, 28% Mid Municipal, 67% High Municipal, <1% Commercial). Staff is recommending an exemption to Financial Policy #11 to allow for 100% funding of eligible Project costs.

TABLE 3: FINANCIAL SUMMARY

Total Project Cost	$600,000
CWCB Loan Amount (100% of total Project cost)	$600,000
CWCB Loan Amount (Including 1% Service Fee)	$606,000
CWCB Annual Loan Payment	$32,480
CWCB Loan Obligation (Including 10% Reserve)	$35,728
Number of Inches	5710.64
Annual Cost Per Inch for Loan	$6.26
Current Assessment per Inch	$90
Future Assessment per Inch	$135*

* Future assessment represents an existing (pre-flood) approved rate increase. A special assessment for debt service can be assessed by the Authority as needed.

Creditworthiness: The Authority 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%	83% (Weak) $485K/$584K	124% (Strong) $771K/$620K
Debt Service Coverage Ratio (revenues-expenses)/debt service weak: <100% - average: 100% - 120% - strong: >120%	No Existing Debt	519% (Strong) $771K-$584K $36K
Cash Reserves to Current Expenses weak: <50% - average: 50% - 100% - strong: >100%	85% (Average) $499K/$584K	72% (Average) $449K/$620K
Annual Operating Cost per Acre-Foot (8,355 AF) weak: >$20 - average: $10 - $20 - strong: <$10	$70 (Weak) $584K/8K AF	$74 (Weak) $620K/8K AF

Collateral: As security for the loan, the Authority will pledge its assessment revenues backed by a rate covenant. This is in compliance with the CWCB Financial Policy #5 (Collateral).

cc: Raymond Reling, President, Church Ditch Water Authority
Susan Schneider/Jennifer Mele, Colorado's Attorney General Office

Attachment: Water Project Loan Program – Project Data Sheet

CWCB Water Project Loan Program
Project Data Sheet

C150377

Borrower: Church Ditch Water Authority

County: Jefferson

Project Name: Leyden Creek Crossing Repair

Project Type: Ditch Rehabilitation

Drainage Basin/ District: South Platte / 7

Water Source: Clear Creek

Total Project Cost: $600,000

Funding Source: Severance Tax PBF

Type of Borrower: Blended

Average Annual Diversion: 8,355 AF

CWCB Loan: $606,000
(with 1% service fee)

Interest Rate: 2.85% **Term:** 30-years
(6% Ag, 26% Mid, 67% High, <1% Com)

During the unprecedented flood of September 2013 in the tributaries to the South Platte River, a significant number of diversion structures and dams along the river corridor were damaged including the Authority's Church Ditch. Church Ditch flood repairs include restoring the Church Ditch to pre-flood conditions. The Leyden Creek Crossing Structure will be rebuilt with this section of the ditch piped to prevent the uncontrolled diversion of flood waters in potential future events. For all areas of the ditch, sediment that was deposited by the flood will be removed and the ditch banks will be reshaped where sloughing occurred. Riprap will be added to portions of the reconstructed ditch banks to prevent erosion and increase protection to the ditch.