

STATE OF COLORADO

Colorado Water Conservation Board Department of Natural Resources

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TO: Colorado Water Conservation Board Members

FROM: Ryan Edwards, P.E., Project Manager *RME*
Kirk Russell, P.E., Chief *KRR*
Finance Section

DATE: March 9, 2012

SUBJECT: **Agenda Item 15a, March 20-21, 2012 Board Meeting**
Finance Section/Water Supply Planning Section
North Delta Irrigation Company – NDIC Tunnel Repair Project
Water Project Loan - Construction

Introduction

The North Delta Irrigation Company (Company) is applying for a loan for the NDIC Tunnel Repair Project (Project). The purpose of the Project is the emergency repair of the North Delta Irrigation Canal (NDIC) tunnel. The total project cost is estimated to be \$1,210,000. The Company has requested a loan for \$800,000 and received Gunnison Basin Round Table approval of a Water Supply Reserve Account (WSRA) grant for \$800,000. See attached Project Data Sheet for a location map and project summary.

Staff Recommendation

Staff recommends the Board approve a loan, from the Construction Fund, not to exceed \$808,000 (\$800,000 for project costs and \$8,000 for the 1% Loan Service Fee) to the North Delta Irrigation Company for the NDIC Tunnel Repair Project. The loan terms shall be 30 years at a blended interest rate of 3.10% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.

Staff further recommends the following contract condition: Prior to disbursement of loan funds, the Company must have secured sufficient funding to cover the Contractor's revised bid, based on final engineering drawings and specifications.

Background

The Company, located in Delta, Colorado, manages the NDIC, a twenty-three mile canal that delivers irrigation water on behalf of its shareholders. The canal is an earthen ditch that includes three sections of tunnel that penetrate through shale mountainsides, the longest of which is 1,450 feet long. This tunnel underlies a mesa rising as much as 90 feet above flow line of the canal. At the end of July 2011 the tunnel collapsed, blocking irrigation deliveries to nearly 94% of the

Company's headgates. The blockage consists of a forty-foot mass of dirt and rock 350 feet east of the West Portal of the tunnel, directly east of Highway 65, one mile north of Highway 92.

The tunnel is situated near the downstream limit of a two-mile stretch of NDIC constructed along the steep hillside paralleling the Gunnison River. This stretch of canal is difficult to access and is heavily vegetated and showing growing signs of instability. In addition to this Project the Company has targeted two segments of the ditch, immediately upstream and downstream of the tunnel, for replacement with HDPE irrigation pipe. The Company is exploring funding alternatives for the installation of this pipe, totaling just over 7,600 linear feet. Completing the pipelines will increase the reliability of deliveries to the downstream shareholders.

Loan Feasibility Study

The Loan feasibility study titled "Feasibility of Upper Portion of Canal System" and dated December 20, 2011, was prepared by Kellie Knowles, P.E. from West Water Engineering. Support was provided by Lynn French, Attorney/Project Manager for the Company. The study includes a preliminary engineering design. A contractor's bid was used in the determination of total project cost. The Contractor will revise his bid based on final engineering drawings and specifications prior to beginning construction.

North Delta Irrigation Company

The Company was formed in the late 1800's to deliver irrigation water to an area due north of Delta, Colorado. In 1901 the construction of the NDIC was completed. The canal originates near Austin, Colorado, at its diversion structure along the Gunnison River, and terminates at a point just to the northwest of the City of Delta.

The Company utilizes the NDIC to convey raw water to its shareholders for irrigation of approximately 2,300 acres of land. There are a total of 174 shareholders totaling 2,283 total shares. On average, the Company delivers 17,735 acre-feet (AF) of water throughout its typical irrigation season of April to November.

The Company is governed by a five-member board of directors. The board is responsible for managing the operation and maintenance responsibilities of the ditch and has the authority to take on debt as required for the general operation of the ditch. Revenues are generated through annual shareholder assessment dues. The board makes a recommendation on annual assessment rates; however, shareholder approval of the rate is required. The board has the authority to restrict water deliveries and sell stock on delinquent shares.

Water Rights

The Company is located in the Gunnison River Basin, Water District 40. The source of water is the Gunnison River. Table 1 provides details on the Company's water rights. No additional water rights are required for this Project.

TABLE 1: PROJECT WATER RIGHTS

Case No.	Adjudication Date	Appropriation Date	Amount	Use
CA0617	June 23, 1914	February 24, 1901	49.675 cfs	Irrigation

Project Description

The objective of this Project is to repair the tunnel and protect it against further failures. Without action the Company will be unable to deliver its decreed water right to approximately 94% of its shareholders.

A preliminary analysis explored tunnel restoration alternatives from rehabilitation of the existing tunnel to constructing an entirely new tunnel offset from the alignment of the exiting one. Rehabilitation alternatives included the installation of slip-lined pipe, precast concrete box culvert and structural tunnel liner plates, each accompanied with grout backfilling. Methods for new construction included tunnel boring, micro tunneling and drilling/blasting. After extensive research, assessing environmental and permitting impacts, and discussions with contractors experienced with this type of Project, the Company selected pulling fused HDPE pipe through the tunnel with a grouted backfill as the most favorable alternative.

A preliminary engineering design was performed to aid contractors in preparing construction bids for the repair of the tunnel. After receiving bids, the Company selected Petty Construction Company based on a competitive bid of \$1,210,000 and their qualifications. Engineering drawings and specifications are being prepared per CWCB Loan Program requirements and will be used to substantiate the contractor's bid. The Company's goal is to begin construction April 1, and be complete within 30 days.

Financial Analysis

The Company qualifies for a blended (70% agricultural, 30% low-income municipal) interest rate of 3.10% for a 30-year term. In addition, the Company has received Gunnison Basin Round Table approval for \$800,000 in grant funding from the WSRA. Table 2 provides a financial summary of the loan request.

TABLE 2: PROJECT FINANCIAL SUMMARY

Total Project Cost	\$1,210,000
WSRA Gunnison River Basin	\$40,000
WSRA Statewide	\$760,000
CWCB Loan Amount	\$800,000
CWCB Loan Amount (including 1% Service Fee)	\$808,000
CWCB Annual Loan Payment	\$41,758
CWCB Loan Obligation (including 10% debt reserve funding)	\$45,934
Number of Shareholders	174
Number of Shares	2,283
Current Assessment (per share)	\$30.00
Assessment Increase to Cover Debt Service (per share)	\$20.12
Future Assessment (per share)	\$50.12
Project Cost per AF	\$68.23

CWCB disbursement of loan and grant funds will be issued at a prorated ratio for loan and WSRA grant funding, up to the approved limits. The Company will be responsible for all costs in excess of the approved loan and grant amounts.

Creditworthiness:

The Company generates revenue through annual water assessments that are evaluated and set at a rate sufficient to cover projected operation, maintenance and debt service expenses. A shareholder resolution was passed in February 2012, raising assessments in anticipation of this Project. The Company currently has no outstanding debt.

Table 3 provides financial ratios for the Company. The ratios are based on an average of the Company's financial reporting for calendar years 2009-2010 and projected future ratios with the Project.

TABLE 3: FINANCIAL RATIOS

Financial Ratio	2009 - 2010	Future w/ Project
Operating Ratio (operating revenues/operating expenses) weak: <100% - average: 100% - 120% - strong: >120%	115% (average) \$82K/\$71K	100% (average) \$117K/\$117K
Debt Service Coverage Ratio (total eligible revenues-operating expenses)/total debt service weak: <100% - average: 100% - 120% - strong: >120%	No Current Debt	100% (average) (\$117K-\$71K)/\$46K
Cash Reserves to Current Expenses weak: <50% - average: 50% - 100% - strong: >100%	149% (strong) \$106K/\$71K	64% (average) \$75K/\$117K
Annual Operating Cost per Acre-Foot (based on 17,735 AF) weak: >\$20 - average: \$10 - \$20 - strong: <\$10	\$4.00 (strong) \$71K/17,735AF	\$6.60 (strong) \$117K/17,735AF

Collateral: As security for the loan, the Company will pledge its assessment revenues backed by a rate covenant and the Company's water rights included in Table 1. This is in compliance with the CWCB Financial Policy #5 (Collateral).

The pledge and covenant are contractual provisions requiring the Company to pay its CWCB debt obligation from assessment revenues; and requires the Company to set its assessment rates sufficient to fund its debt obligation, in addition to operation and maintenance expenses.

cc: Lynn French, Project Manager/Attorney, North Delta Irrigation Company
Susan Schneider, AGO
Peter Johnson, AGO

Attachment: Water Project Loan Program – Project Data Sheet

Water Project Loan Program – Project Data Sheet

Borrower: North Delta Irrigation Company

County: Delta

Project Name: NDIC Tunnel Repair Project

Project Type: Ditch Rehabilitation

Drainage Basin: Gunnison River Basin, District 40

Water Source: Gunnison River

Total Project Cost: \$1,210,000

Funding Source: Construction Fund/WSRA

Type of Borrower: Blended
(70% Agricultural, 30% Low-income municipal)

Avg. Annual Delivery: 17,735 AF

CWCB Loan: \$808,000 (w/ 1% service fee)

Interest Rate: 3.10% **Term:** 30 years

The North Delta Irrigation Company is responsible for supplying water to its 174 shareholders for the irrigation of 2,300 acres of land. The water is delivered through the North Delta Irrigation Canal. A two-mile stretch of the twenty-three mile canal is located along the steep hillside paralleling the Gunnison River, and includes three tunnels. The longest tunnel, 1,450 feet in length, experienced a collapse in July 2011, blocking deliveries to 94% of its shareholders. This project will repair the tunnel by removing the blockage, installing 1,500 LF of 54" fused HDPE and underdrain system, and backfilling the HDPE with grout. Additional funding for the project includes an \$800,000 WSRA grant approval from the Gunnison Basin Round Table.

Location Map

