

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



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 8i, October 21, 2013 Special Board Meeting**
Finance – Emergency Loans
North Poudre Irrigation Company – Emergency Fossil Creek Reservoir Inlet
Diversion Structure Repair

John W. Hickenlooper
Governor

Mike King
DNR Executive Director

James Eklund
CWCB Director

Introduction

The North Poudre Irrigation Company (Company) is applying for an Emergency Loan for the Emergency Fossil Creek Reservoir Inlet Diversion Structure 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 Fossil Creek Reservoir inlet diversion structure received significant damage as a result of this flood. The purpose of the Project is to repair the diversion structure to allow the Company to divert their decreed water rights. The total Project cost is estimated to be \$477,000. See attached Project Data Sheet for a location map and project summary.

Staff Recommendation

Staff recommends the Board approve a loan not to exceed \$481,770 (\$477,000 for project cost and \$4,770 for the 1% service fee) to the North Poudre Irrigation Company for 100% of engineering and construction costs related to the Emergency Fossil Creek Reservoir Diversion Structure 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 2.35% 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 North Poudre Irrigation Company serves approximately 28,000 irrigated acres in Larimer County north of Fort Collins near Wellington. The Company owns Fossil Creek Reservoir located in South Fort Collins. There are 5,656 acre-feet of water diverted through the Fossil Creek Reservoir Inlet headgates annually. This water is used by shareholders of 149 preferred water rights to irrigate approximately 2,200 acres of farmland. 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 Company's river diversion for Fossil Creek Reservoir.

The Fossil Creek Reservoir Diversion Structure consists of a concrete check structure that spans the Cache la Poudre River and contains a 10-foot wide radial gate at the right abutment. The check structure checks the river approximately two feet in elevation to permit delivery to the Fossil Creek Reservoir Canal immediately upstream of the check structure on the right abutment. The check structure ties into the right abutment headgate structure with two eight foot-wide by three-foot high radial gates that control discharge into the Fossil Creek Reservoir Canal which flows to Fossil Creek Reservoir approximately 5 miles downstream.

Prior to the 2013, flood the check structure was fully functional and in place. Since point elevations of the structure were surveyed for an unrelated floodplain study in 2013, pre-flood conditions are recorded. During the 2013 flood, the river scoured material beneath the structure leaving a void underneath. The check structure broke near the center of the river and collapsed into the void. The check structure was not attached to the left abutment structure and was only attached to the right abutment structure by way of the radial gate. The concrete check appears to have only broken in the center so that when the center collapsed into the void, the two abutment ends became elevated. Elevation of the left abutment end of the check, combined with scouring and rapid drawdown of water, damaged the left abutment structure. Elevation of the right abutment end of the check damaged the radial gate, but there appears to be no damage to the right abutment headgate structure.

Loan Feasibility Study

Ron Slosson, 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 – North Poudre Irrigation Company, Inc.

The Company is a Mutual Ditch Company that was established in 1901. The Company's office is located in Wellington. It operates as a nonprofit corporation and is in good standing with the Colorado Secretary of State. The Company has issued 10,000 shares of stock. The Company's revenues are primarily derived from assessments charged on shares of stock owned by the stockholders but the Company also receives revenues from recreational leases and notes payable.

The Company's by-laws (1988) allow the Board of Directors to borrow money on the credit or responsibility of the Company for the uses, needs, and demands of the Company and to set assessments accordingly. The Board has the power to take measures to enforce assessments

including the suspension of water deliveries and the eventual sale or forfeiture of shares for failure to pay assessments.

Water Rights

The water rights impacted by this project include

TABLE 1: IMPACTED WATER RIGHTS

Name	Amount (AF)	Appropriation Date	Adjudication Date
Fossil Creek Reservoir	808	3/1/1862	4/11/1882
Fossil Creek Reservoir	808	9/15/1864	4/11/1882
Fossil Creek Reservoir	808	3/15/1868	4/11/1882
Fossil Creek Reservoir	808	3/20/1873	4/11/1882
Fossil Creek Reservoir	808	4/1/1878	4/11/1882
Fossil Creek Reservoir	808	4/25/1881	4/11/1882
Fossil Creek Reservoir	808	9/28/1914	4/11/1882

Average annual diversions of the Company are 31,700 AF. Average annual diversions through the Fossil Creek Reservoir Inlet Diversion Structure are 5,656 AF.

Project Description

The goal of this project is to repair/replace the damaged structure to full functionality. North Poudre Irrigation has retained the services of Ronald H. Slosson, P.E. to provide supervision of the project and design services. Ethan Wiechert, P.E. of Earth Engineering Consultants will be providing geotechnical support, Mary Wohnrade, P.E. of Wohnrade Civil Engineers will be providing civil design and flood plain permitting support, and Gary Weeks, P.E. of Weeks and Associates will be providing structural engineering support. King Surveyors will conduct the required surveying.

Alternative 1 – Do Nothing: This alternative is considered unacceptable. Without this check structure the Company is unable to deliver its water to Fossil Creek Reservoir.

Alternative 2 – Rebuilding Collaboratively with Improvements: Rebuild the structure to increased height and change right abutment headgate. This structure is within the City of Fort Collins and subject to Flood Plain Regulations. Any deviation from historic height of structure will trigger the requirement for flood plain modeling. Changes in the right abutment headgate could benefit downstream conditions. However, this structure needs to be replaced before spring runoff to provide deliveries to Fossil Creek Reservoir, and there is not adequate time to gather information and perform the modeling required to obtain the required permits.

Selected Alternative 3 – Replace Damaged Check Structure to Pre-Flood Elevations: The structure will be restored to pre-flood elevations. Changes to the foundation and abutments will be made to prevent future scouring. This Alternative is a replacement of an existing structure and therefore is type of activity that is included in Section 404(f) as being exempt from the Clean Water Act. Consequently, a U.S. Army Corps of Engineers permit will not be required. The estimated engineering and construction cost of this Alternative is \$477,000 and is further broken down in Table 2.

TABLE 2: PROJECT COST SUMMARY

Task	Cost
Geotechnical Survey	\$7,000
Permitting	\$2,000
Design Engineering and Admin	\$80,000
Construction Surveying	\$8,000
Construction	\$380,000
Total	\$477,000

Note: Contingencies were built into each task's estimates

Collaboration: The borrower is encouraged to consider rebuilding a river diversion system which improves the consumptive and nonconsumptive uses of the river corridor. Examples include improved fish passage, improved rafting/boating navigation, and possible shared ownership/use of a single diversion structure where possible. If needed, loan funds may be used for the construction of temporary diversion until such time that a multi-beneficial structure can be designed and constructed.

Schedule: Project design is expected to be complete in December 2013 and construction is expected to be complete by March 2013.

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 2.35% with the principal amortized over 27 years (Ownership: 37% Agriculture, 1% Low Municipal, 57% Mid Municipal, 4% 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	\$477,000
CWCB Loan Amount (100% of total Project cost)	\$477,000
CWCB Loan Amount (Including 1% Service Fee)	\$481,770
CWCB Annual Loan Payment	\$24,301
CWCB Loan Obligation (Including 10% Reserve)	\$26,731
Number of Shares	10,000
Annual Cost Per Share for Loan	\$3
Current Assessment per Share	\$120
Future Assessment per Share	\$123

Creditworthiness: The Company has \$4,279,624 in existing debt made up of eight CWCB loans as summarized in Table 4. These loans are in good standing.

TABLE 4: EXISTING DEBT

Lender	Original Balance	Current Balance	Annual Payment	Maturity Date	Collateral
CWCB	\$728,895	\$687,883	\$43,225	5/1/2024	Fossil Creek Reservoir Dam
CWCB	\$697,414	\$665,095	\$33,935	5/1/2026	Reservoir No 15 Dam
CWCB	\$273,664	\$263,773	\$10,385	5/1/1985	Clark Lake Dam
CWCB	\$247,334	\$239,854	\$7,854	6/15/2031	Reservoir No 2 Dam
CWCB	\$1,217,664	\$1,177,619	\$40,826	5/1/2035	Reservoir Nos. 5 and 6 Dams
CWCB	\$248,055	\$221,163	\$27,976	8/31/2019	Reservoir No 6 Outlet
CWCB	\$458,813	\$431,288	\$28,637	5/1/2024	Indian Creek Reservoir
CWCB	\$623,264	\$592,949	\$31,301	2/1/2027	Miners Lake Reservoir

TABLE 6: FINANCIAL RATIOS

Financial Ratio	Past 3 Years	Future w/ Project
Operating Ratio (revenues/expenses) weak: <100% - average: 100% - 120% - strong: >120%	135% (Strong) \$1.63M/\$1.21M	134% (Strong) \$1.66M/\$1.24M
Debt Service Coverage Ratio (revenues-expenses)/debt service weak: <100% - average: 100% - 120% - strong: >120%	290% (Strong) \$1.63M-\$0.99M \$0.22M	268% (Strong) \$1.66M-\$0.99M \$0.25M
Cash Reserves to Current Expenses weak: <50% - average: 50% - 100% - strong: >100%	1% (Weak) \$16K/\$1.21M	1% (Weak) \$16K/\$1.24M
Annual Operating Cost per Acre-Foot (31,700 AF) weak: >\$20 - average: \$10 - \$20 - strong: <\$10	\$38 (Weak) \$1.21M/31.7K AF	\$39 (Weak) \$1.24M/31.7K AF

Collateral: As security for the loan, the Company will pledge its assessment revenues backed by a rate covenant and the Project itself (Fossil Creek Reservoir inlet diversion dam and headgate). This is in compliance with the CWCB Financial Policy #5 (Collateral).

cc: Scott Hummer, Manager, North Poudre Irrigation Company
 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**

C150368

Borrower: North Poudre Irrigation Company

County: Larimer

Project Name: Fossil Creek Reservoir Diversion
Structure Repair

Project Type: Diversion Rehabilitation

Drainage Basin/ District: South Platte / 3

Water Source: Cache la Poudre

Total Project Cost: \$477,000

Funding Source: Severance Tax PBF

Type of Borrower: Blended

Average Annual Diversion: 31,700 AF

CWCB Loan: \$481,770
(with 1% service fee)

Interest Rate: 2.35% **Term:** 30-years
(37% Ag, 1% Low, 57% Mid, 4% 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 Company's Fossil Creek Reservoir inlet diversion off the Cache la Poudre River. The purpose of the Project is to repair the existing diversion structure by rebuilding the check dam and abutment. The Project will restore the structure to pre-flood elevations while modifying the foundation to improve protection against future scouring.

