

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

John W. Hickenlooper
Governor

FROM: Kirk Russell, P.E., Chief
Finance & Administration Section

Mike King
DNR Executive Director

DATE: September 13, 2013

James Eklund
CWCB Director

SUBJECT: **Agenda Item 29c, September 24-25, 2013 Board Meeting**
Finance/Water Supply Planning – CWCB Loan and WSRA Grant
Lone Cabin Ditch & Reservoir Company – Lone Cabin Dam Rehabilitation Project

Introduction

The Lone Cabin Ditch & Reservoir Company (Company) is applying for a WSRA grant and a CWCB loan to finance the Lone Cabin Dam Rehabilitation Project (Project). The Project will repair the dam and remove the fill restriction placed on the dam by the State Engineers Office (SEO) – Dam Safety Branch. The total Project cost is estimated at \$334,300. In March of 2013, the Company was approved for a Basin and Statewide Water Supply Reserve Account (WSRA) by the Gunnison Basin Roundtable. Due to the limited WSRA funds, staff is recommending a reduced grant amount. The Company is requesting a CWCB loan to cover the remaining Project costs (approximately 75%). See attached Project Data Sheet for a location map and a Project summary.

Staff Recommendation for WSRA Grant

Staff recommends approval of up to \$46,000 from the Statewide Account and \$38,000 from the Gunnison Basin Account to the Lone Cabin Ditch & Reservoir Company to fund the Lone Cabin Dam Rehabilitation Project.

Staff Recommendation for CWCB Loan

Staff recommends the Board approve a loan, from the Construction Fund, not to exceed \$252,503 (\$250,300 for project costs and \$2,503 for the 1% Loan Service Fee) to the Lone Cabin Ditch & Reservoir Company from the Construction Fund for the Lone Cabin Dam Rehabilitation Project. The loan terms shall be 30 years at the agricultural rate of 1.75% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.

.

Background

The Lone Cabin Dam is a 53 foot tall earthfill jurisdictional dam constructed in 1905 and enlarged a couple times. It is located in Delta County and impounds 163 acre-feet (AF) of irrigation water. The Reservoir is located approximately five miles southeast of the town of Paonia at 7,380 foot elevation. The Division of Water Resources (DWR) inspected the dam on August 9, 2011 and restricted the storage by 20 feet (restricted storage capacity of 18AF) due to the safety threat of failure related to a slump found on the downstream slope of the dam embankment. The dam has been operating under this restriction since August 2011.

In August of 2011, Buckhorn Geotech was retained to evaluate the cause of failure and provide repair options. The results of this evaluation are provided in the Buckhorn Geotech draft report *Geotechnical and Design Report Lone Cabin Dam Rehabilitation, Division 4 Water District 40, Dam ID: 400404, Delta County, Colorado, Revised June, 2012.*

The main point of diversion for the Company's system is from the Lake Fork of Minnesota Creek at elevation 7,700 feet. The canal feeds into the Lone Cabin Reservoir. The Company's service area is located southeast of Paonia, in Delta County. The irrigation system is tributary to the North Fork of the Gunnison River and is located on the north facing slopes of Mount Lamborn extending down to the north and west to irrigated lands along low mesas south of the North Fork of the Gunnison River. There are approximately 17 miles of mostly open and unlined ditches and serves to irrigate alfalfa hay, grass hay, pasture, organic produce, commercial flowers and some silage corn.

Loan Feasibility Study

The Loan Feasibility Study, titled *Geotechnical and Design Report - Lone Cabin Dam Rehabilitation*, dated May 16, 2013, was prepared by James Briscoe. The study includes preliminary engineering design and construction cost estimates prepared by Norman J. Aufderheide, P.E., Buckhorn Geotech, Inc. The study was prepared in accordance with the CWCB guidelines.

Borrower – Lone Cabin Ditch & Reservoir Company

The Company was established as a non-profit mutual ditch company in 1935 and is in good standing with the Colorado Secretary of State. It has 18 shareholders who own varying amounts of stock and varying sized agricultural land. The 8,628 shares of stock in the Company provides irrigation water for approximately 500 acres of irrigated agricultural owned by shareholders of the Lone Cabin Ditch and Reservoir Company.

Water Rights

The Company has direct flow water rights:

Court Case	Adjudication Date	Decreed Amount
CA0617	06/24/1914	15 cfs
CA0617	06/24/1914	10 cfs

The storage decrees for the Lone Cabin Reservoir are as follows:

CA0617	06/23/1914	90AF
CA2563	05/28/1937	235.9AF

Project Description

In the June 2012 report prepared by Buckhorn Geotechnical, five repair options were offered ranging from installation of different types of impermeable membranes to the removal and replacement of the poorly installed material.

The selected option is the installation of a chimney drain - Excavation of the slumped area and placement of filter material to drain to a new toe drain. This option uses conventional excavation equipment, and is estimated to be the quickest option to construct however the filter material must be imported.

Other options that were considered are: Impermeable Membrane, Slurry Wall Installation, Vertical Membrane Installation, and Remove & Replace top 30 feet of the dam with quality materials. These options were dismissed based on cost, long term reliability, and irrigation season impact.

Table 1 shows the Engineer's Estimate of Probable Cost.

TABLE 1.	
Project Cost Estimate	
Past Engineering Expenses	\$50,000
Final Design & Field Engineering	\$53,500
Mobilization/Revegetation	\$36,000
Earthwork	\$74,800
Filter Material Installation/Piping	\$74,000
25% Construction Contingencies	<u>\$46,000</u>
Total	\$334,300

Schedule: Plans were submitted to the SEO and the Company hopes to begin construction in the fall/winter of 2013.

TABLE 2: RECOMMENDED PROJECT FUNDING SUMMARY

WSRA Grants	
Gunnison River Basin (11%)	\$38,000
Statewide (14%)	<u>\$46,000</u>
TOTAL (25%)	\$84,000
CWCB Construction Fund Loan (75%)	\$250,300
Total Project Cost	\$334,300

CWCB will disburse funds for Project related expenses at a rate of 75% loan to 25% grant for each invoice amount, up to the approved loan grant limits.

Water Supply Reserve Account Grant

At the March 2013 Gunnison Basin Roundtable meeting, the Roundtable granted approval of the Lone Cabin Dam Rehabilitation Project application request for \$38,000 in Basin Funds and recommended approval of \$232,687.50 of Statewide Funds however staff is recommending a lower Statewide amount.

Staff Recommends: 75/25 Matching Funds to WSRA Grant Ratio

Matching Funds: CWCB Loan = \$250,300

Grant Funds: \$38,000 from Basin and \$46,000 from Statewide Funds

Threshold and Evaluation Criteria: The application articulates how the project satisfies the Threshold and Evaluation Criteria as summarized below:

Tier 1: Promoting Collaboration/Cooperation & Meeting Water Management Goals & Identified Needs:

The water activity is a repair project that will help maintain the agrarian nature of rural Colorado, particularly on Lamborn Mesa, Delta County, Colorado.

Tier 2: Facilitating Water Activity Implementation:

Funding from the WSRA account will reduce the uncertainty that the needed repair project will be implemented. Receiving the requested grant will make the cost of the project more affordable to the shareholders of Lone Cabin Ditch and Reservoir Company, which is currently making annual payments of \$16,601 on existing loans, by reducing the amount of additional debt the Lone Cabin will need to incur to complete the repair project. An application for a loan for CWCB has been filed and pursued for the additional funds necessary to successfully complete the project as described in the conceptual design and engineer's estimate for slump repair prepared by Buckhorn Geotech.

Tier 3: The Water Activity Addresses Issues of Statewide Value and Maximizes Benefits:

The water activity helps sustain agriculture and open space. The water activity involves decreed water tributary to the Colorado River. The water activity is complimentary to and assists in the implementation of the CWCB loans that exist to Lone Cabin Ditch and Reservoir Company and the Beaver Reservoir Company, of which Lone Cabin is part owner.

Issues/Additional Needs:

Discussion:

After reviewing the cost per acre foot for agricultural irrigation water, the Reservoir Company will need to pay approximately \$32/acre-foot in order to borrow 75% of the project costs. This appears to be a hardship situation and may require special attention as it relates to the use of WSRA grant funds. Most ditch and reservoir companies experience between \$10 and \$20 per acre foot of annual delivery. In addition, the SEO may require a full breach of the dam at the Company's expense due to safety concerns if repairs are not made. This would result in a loss of approximately 100 acre-foot of pre-1922 water rights.

Additionally, the Management Objectives in the SWSI Phase II Report: Addressing the Water Supply Gap Technical Roundtable, includes the language "sustainably meet agricultural demands," which is directly met through this activity. The proposed Project effectively meets the objectives of HB 1177

and the consumptive needs of the Gunnison Basin by rehabilitating existing infrastructure to preserve agricultural water use.

Reporting and Deliverables: All products, data and information developed as a result of this grant must be provided to CWCB in hard copy and electronic format as part of the project documentation. This information will in turn be made widely available to Basin Roundtables and the general public and will help promote the development of a common technical platform.

In accordance with the revised WSRA Criteria and Guidelines, staff would like to highlight additional reporting and final deliverable requirements provided below:

Reporting: The applicant shall provide the CWCB a progress report every 6 months, beginning from the date of the executed contract. The progress report shall describe the completion or partial completion of the tasks identified in the scope of work including a description of any major issues that have occurred and any corrective action taken to address these issues.

Final Deliverable: At completion of the project, the applicant shall provide the CWCB a final report that summarizes the project and documents how the project was completed. This report may contain photographs, summaries of meetings and engineering reports/designs.

Engineering: All engineering work (as defined in the Engineers Practice Act (§12-25-102(10) C.R.S.)) performed under this grant shall be performed by or under the responsible charge of professional engineer licensed by the State of Colorado to practice Engineering.

CWCB Loan Program

Financial Analysis

The Company qualifies for the agricultural interest rate of 1.75% for a 30-year term. Table 3 provides a financial summary of the loan request.

TABLE 3: LOAN FINANCIAL SUMMARY

Total Project Cost		\$334,300
WSRA Grant Funding (25% of total Project cost)		\$84,000
CWCB Loan Amount (75% of total Project cost)		\$250,300
Loan Amount with 1% Service Fee		\$252,800
CWCB Annual Loan Payment		\$10,900
CWCB Loan Obligation (including 10% debt reserve funding)		\$12,000
Total Project Cost per AF Restored (using 163AF)		\$2,050/AF
Annual Project Cost per share (8,628 shares)		\$1.40/Share
Assessments	Before	After*
Assessments per share	\$3.25/share	\$4.41share

* Company plans to minimize share increase to cover O&M and Debt Service

Creditworthiness: The Company has an existing loan with CWCB (C153517) with an existing balance of \$58,630. The Company has made 21 of the 40 annual payments of \$4,094.48. In 2004, the Company made a partial annual payment; however, they were back on track by 2005's annual payment date. Security for this loan is an 80% interest in the "project" components.

Additionally, the Company is a shareholder in Beaver Reservoir Company. The Company has an annual obligation to repay the Company's portion of a CWCB loan to Beaver Reservoir Company (C150190). The Company's portion of this debt is \$8,113.85. This loan has a balance of approx. \$462,000 and has a payoff date in 2038.

TABLE 4: FINANCIAL RATIOS

Financial Ratio	2010-2012	Future w/ Project
Operating Ratio (operating revenues/operating expenses) weak: <100% - average: 100% - 120% - strong: >120%	124% (strong) \$22.7K/\$18.2K	101% (average) \$30.7K/\$30.4K
Debt Service Coverage Ratio (total eligible revenues-operating expenses)/total debt service weak: <100% - average: 100% - 120% - strong: >120%	135% (strong) (\$22.7K-\$6.2K)/\$12.2K	101% (average) (\$30.7K-\$6.2K)/\$24.2K
Cash Reserves to Current Expenses weak: <50% - average: 50% - 100% - strong: >100%	13% (weak) \$2.3K/\$18.2K	196% (strong) \$2.0K/\$30.4K
Annual Operating Cost per Acre-Foot (based on 950 AF) weak: >\$20 - average: \$10 - \$20 - strong: <\$10	\$19.20 (average) \$18.2K/950	\$32.00 (weak) \$30.4K/950

Collateral - Security for the loan shall be a pledge of the Company's assessment revenues backed by a rate covenant and the Company's storage rights in the Lone Cabin Reservoir. This is in compliance with CWCB Financial Policy #5 (Collateral).

c: Jim Briscoe, President, Lone Cabin Ditch & Reservoir Company
Susan Schneider/Jennifer Mele, Colorado Attorney General's Office

Attachment: Water Project Loan Program – Project Data Sheet

Water Project Loan Program Project Data Sheet

Borrower:	Lone Cabin Ditch and Reservoir Company	County:	Delta
Project Name:	Lone Cabin Dam Rehabilitation Project	Project Type:	Dam Rehabilitation
Drainage Basin:	Gunnison / District 40	Water Source:	Minnesota Creek
Total Project Cost:	\$334,300	Funding Source:	Construction Fund, WSRG Grant
Type of Borrower:	Agricultural	Avg. Annual Diversion:	950 AF
CWCB Loan:	\$252,800 (inc. 1% Service Fee)	Interest Rate:	1.75% Term: 30yr

The Company provides irrigation water storage for 18 farms located on Lamborn Mesa approximately 5 miles southeast of Paonia, CO. The reservoir has a storage capacity of 163 acre-feet; however it is currently restricted by the State Engineer's Office to a storage level 20-feet below the dam crest due to slumping of the downstream face of the dam. The Company hired Buckhorn Geotech to investigate the slump.

