COLORADO
Colorado Water Conservation Board
Department of Natural Resources

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TO: Colorado Water Conservation Board Members

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

DATE: January 25-26, 2016 Board Meeting

CONSENT AGENDA ITEM: 3a. Change to Existing Loans
Bergen Ditch and Reservoir Company – Bergen Reservoir No. 2 Rehabilitation

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Guidance

At the May 2005 Board Meeting, the Board authorized staff to present as Consent Agenda items increases to existing loans that are less than 20% of the original loan request. This request is for an increase of approximately 4% of the original loan amount.

Introduction

The Bergen Ditch and Reservoir Company (Company) received approval of a $2,020,000 CWCB loan (contract number CT2015-017, C150344), at the November 2012 Board Meeting to finance the Bergen Reservoir No. 2 Rehabilitation (Project). The purpose of the Project is to prevent a State Engineer's Office Dam Safety Branch (SEO) storage restriction order, and ensure the safe operation of the reservoir, by making needed repairs to the dam and outlet works. Construction began in July 2015 and major construction activities have been completed, with only site cleanup and seeding activities remaining. Final Project costs exceeded the original loan application estimate by approximately 4%. The Company is requesting a loan increase to cover the final Project cost. See attached Project Data Sheet for a location map and Project summary.

Staff Recommendation

Staff recommends the Board approve a loan increase of $91,102 ($90,200 for Project costs and $902 for the 1% Loan Service Fee), for a total loan not to exceed $2,111,102 ($2,090,200 for Project costs and $20,902 for the 1% Loan Service Fee) to the Bergen Ditch and Reservoir Company for engineering and construction costs related to the Bergen Reservoir No. 2 Rehabilitation Project, from the Construction Fund. The loan terms shall remain 30 years at a blended interest rate of 3.15% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.

Background

The Company's water system was developed in the late 1800s to provide agricultural irrigation water to a service area located in central Jefferson County. There has been a shift to municipal water use since the 1960s as a result of urbanization. Today, the primary use of water is for park and golf course irrigation by public agencies, with only a limited number of private shareholders using the water for residential landscape irrigation.

The Company uses Bergen Ditch to divert water off Turkey Creek and deliver it to shareholders through a series of open and piped ditches, reservoirs, pumps, and pipelines. The Company owns three reservoirs: Bergen No. 1, Bergen No. 2, and Poly Deane. Altogether the Company has a storage capacity of 1,828 AF with Bergen No. 2 accounting for 40% of the total storage (726 AF).

Bergen No. 2 was constructed in 1874 and its dam has a history of slumping and seepage issues. Embankment and drain repairs were documented in 1925, 1943, and 1947-1949. In 1999, the overflow spillway was rebuilt to bring the spillway into compliance with SEO guidelines. The dam's outlet operator failed in 2007 and temporary repairs were made. Ongoing SEO inspection reports have monitored seepage, stability, erosion, and outlet concerns. In 2012 the SEO recommended the Company rehabilitate the dam or face the possibility of a storage level restriction.

Water Rights

The Company owns multiple direct flow and storage rights. Water rights impacted by this Project include:

TABLE 1: IMPACTED WATER RIGHTS

Name	Amount	Appropriation Date	Adjudication Date
Bergen Ditch	12 CFS	5/1/1874	2/4/1884
Bergen Ditch	26.89 CFS	9/6/1878	2/4/1884
Bergen Ditch	4.01 CFS	9/6/1878	2/4/1884
Bergen Ditch	128 CFS	10/24/1885	9/24/1935
Bergen No. 2 Res	574 AF	5/1/1874	2/4/1884
Bergen No. 2 Res Enlgmt.	316 AF	3/1/1884	9/24/1935

The Company's annual average of water delivered to shareholders is 628 AF, or 1.56 AF/share.

Project Update

The original loan was approved in November 2012 and was based on an engineer's estimate of construction cost from a feasibility-level design. Final design has since been completed by Jim Ferentchak, P.E. with W.W. Wheeler and Associates, and the construction plans and specifications received final SEO approval in May 2015.

The Project went out to bid in the winter of 2015 and American West Constructors, LLC was the low bidder at just over $1.9 million. This bid was in excess of the Project budget and so the Company, Contractor, and SEO worked together to identify cost savings. In April 2015, a negotiated bid price of $1,755,800 was accepted, which was $142,800, or 9%, more than the engineer's estimate.

Construction began in July 2015. The substantial completion walk through with the SEO office occurred on November 5, 2015 and a final walk through occurred on December 17, 2015. Site cleanup and seeding will occur in spring 2016. The current construction cost estimate is $1,805,830 and includes all change orders. The largest change order cost increase was an adjustment of final earthwork quantities because the depth to competent bed rock was greater than anticipated, resulting in additional fill. In all, change orders totaled 3% of the negotiated final bid.

Design engineering substantially increased from the original estimate due to the efforts required to redesign the project for construction cost savings and to secure SEO approval for the revised design. Construction Management, including observation and materials testing, increased in response to increased soils testing required on the actual material encountered. The current Project cost estimate is shown in Table 3.

TABLE 3: PROJECT COST

Task	Engineer's Estimate	Actual Cost
Engineering, Design & Permitting	$129,000	$335,620
Outlet Works Construction	$455,000	$527,830
Embankment Construction	$1,158,000	$1,278,000
Construction Management	$161,000	$181,000
Contingency	$322,000	$0
Total	$2,225,000	$2,322,450

Schedule: Outlet and embankment construction were completed in December 2015. Final site reclamation will occur spring 2016.

Financial Analysis

Table 4 provides a summary of the Project's financial aspects. The Company's blended interest rate of 3.15% for a 30-year term (Ownership: 36% Mid Municipal, 64% High Municipal) will remain as per the terms of the original contract.

TABLE 4: FINANCIAL SUMMARY

	Original Approval	Current Request
Total Project Cost	$2,225,000	$2,322,450
Borrower Match (10% of total Project costs)	$225,000	$232,250
CWCB Loan Amount	$2,000,000	$2,090,200
CWCB Loan Amount (Including 1% Service Fee)	$2,020,000	$2,111,102
CWCB Annual Loan Payment	$105,607	$109,806
CWCB Loan Obligation (Including 10% Reserve)	$115,574	$120,786
Number of Shares	403.5	403.5
Annual Loan Obligation Per Share	$286/share	$299/share
Current Assessment per Share	$450/share	$700/share
Future (Budgeted) Assessment per Share	$700/share	$700/share
Total Cost of Project per AF of Storage (890 AF)	$2,500/AF	$2,610/AF

Creditworthiness: The Company has no existing debt. Assessments have historically been set at $450/share but were raised to $700/share in 2014 to generate funds for this Project. This was successfully collected by the Company in 2014 and 2015.

TABLE 6: FINANCIAL RATIOS

Financial Ratio	**Past 3 Years**	**Future w/ Project**
Operating Ratio (revenues/expenses) weak: <100% - average: 100% - 120% - strong: >120%	147% (strong) $261K/$178K	121% (strong) $362K/$299K
Debt Service Coverage Ratio (revenues-expenses)/debt service weak: <100% - average: 100% - 120% - strong: >120%	NA	152% (strong) $362K-$178K $121K
Cash Reserves to Current Expenses weak: <50% - average: 50% - 100% - strong: >100%	38% (weak) $68K/$178K	8% (weak) $25K/$299K
Annual Operating Cost per Acre-Foot (628 AF) weak: >$20 - average: $10 - $20 - strong: <$10	$283 (weak) $178K/628 AF	$476 (weak) $299K/628 AF

Collateral: Security for the loan will remain a pledge of assessment revenues backed by an assessment covenant and the Project itself (outlet works and toe drain). This is in compliance with the CWCB Financial Policy #5 (Collateral).

cc: Robert Easton, Manager, Bergen Reservoir and Ditch Company
Susan Schneider/Jennifer Mele, Colorado Attorney General's Office

Attachment: Water Project Loan Program – Project Data Sheet

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Bergen Reservoir No. 2 Rehabilitation

Berge Ditch and Reservoir Company

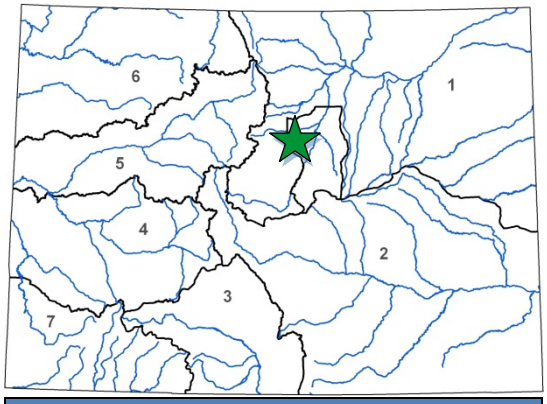
January 2016 Board Meeting

(Loan Increase)

LOAN DETAILS	
Project Cost:	$2,322,450
CWCB Loan (with Service Fee):	$2,090,200
Loan Term and Interest Rate:	30 Years @ 3.15%
Funding Source:	Construction Fund

BORROWER TYPE		
Agriculture	*Municipal*	*Commercial*
0%	0% Low - 36% Mid – 64% High	0%

PROJECT DETAILS	
Project Type:	Reservoir Rehabilitation
Average Annual Delivery:	628 AF
Storage Preserved:	890 AF



LOCATION			
County:			Jefferson
Water Source:			Turkey Creek
Drainage Basin:			South Platte
Division:	1	*District:*	9

The Bergen Ditch and Reservoir Company utilizes Bergen Ditch to divert water off Turkey Creek and deliver it to shareholders through a series of open and piped ditches, reservoirs, pumps and pipelines. The Company owns three reservoirs, Bergen No.1, Bergen No. 2 and Polly Deane. Bergen No. 2 was originally constructed in 1874. The dam has an ongoing history of slumping and seepage issues. In 2007 the dam's outlet works were damaged and temporary repairs were made in 2009. Ongoing SEO inspection reports have monitored seepage, stability, erosion and outlet concerns over recent years. Following the latest inspection report the SEO recommended the Company consider rehabilitation of the dam or face the possibility of a storage level restriction. This Project consists of full replacement of the outlet works and rehabilitation of the dam. Construction began in July 2015 and by December 2015 all construction work has been completed with the exception of site reclamation which will occur in spring 2016. Final Project costs will exceed the original cost estimate by approximately 4%.