

STATE OF COLORADO

Colorado Water Conservation Board

Department of Natural Resources

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TO: Colorado Water Conservation Board Members

FROM: Kirk Russell, PE
Mike Serlet, PE, Chief
Water Supply Planning & Finance Section

DATE: May 12, 2009

SUBJECT: **Agenda Item 17a, May 19-20, 2009 Board Meeting**
Water Supply Planning and Finance Section – New Project Loans
Town of Gypsum – LEDE Ditch & Reservoir Upgrade Project

Bill Ritter, Jr.
Governor

Harris D. Sherman
DNR Executive Director

Jennifer L. Gimbel
CWCB Director

Dan McAuliffe
CWCB Deputy Director

Introduction

The Town of Gypsum (Town), acting by and through its water activity enterprise, is applying for a \$2,663,100 loan for the LEDE Ditch & Reservoir Upgrade Project (Project). The cost estimate is \$3,162,000, which includes design and construction costs. The infrastructure improvements which include ditch piping and reconstruction of the Reservoir's outlet works are necessary to comply with state dam safety regulations and to return the LEDE Reservoir (Reservoir) to its full capacity. The loan request is for approximately 85% of the Project costs. See attached Project Data Sheet.

Staff Recommendation

Staff recommends the Board approve a loan not to exceed \$2,689,731 (\$2,663,100 for project costs and \$26,631 for the 1% Loan Service Fee) to the Town of Gypsum, acting by and through its Water Enterprise, for the LEDE Ditch & Reservoir Upgrade Project from the Construction Fund. The loan terms shall be a High Income Municipal interest rate of 4.5% per annum for 30 years. In the event the Town prefers a shorter term loan (20 or 10 years), staff shall review the request and make recommendation to the Director. The Board authorizes the Director to approve the new terms and report the loan revisions to the Board in the Director's Report at the next Board meeting. Security for the loan shall be in compliance with CWCB Financial Policy #5.

Loan approval will be conditioned upon CWCB receiving parity with all current debt that is secured by the Town's water activity enterprise revenues.

Background

The Town of Gypsum purchased the LEDE Ditch (Ditch) and Reservoir water rights in 2006. The original appropriators in the Reservoir were Lundgren, Erickson, Doll and Engstrom (LEDE). The original water rights are decreed for irrigation use, and provide storage for up to 947 AF in the reservoir. The Reservoir was built to a capacity of 431 AF. The Town seeks to recover capacity to accommodate continued agricultural irrigation, and for future water supplies to Gypsum Creek and the Town. The reservoir is located at the headwaters of Gypsum Creek and is a good source of augmentation water. Irrigation in the Gypsum valley often depletes Gypsum Creek and the Town relies on the Reservoir to augment its other water rights. The Reservoir will become even more important as the Town's population continues to increase.

The Town has a contractual obligation to provide LEDE water for agricultural purposes in the Gypsum Valley. In addition, the reservoir has aging infrastructure that require repairs to comply with state dam safety regulations. The Town wishes to repair and improve the Reservoir to utilize its potential and to protect valuable senior storage rights.

The Reservoir is located on the Gypsum Creek drainage in Eagle County approximately 17 miles south of the Town of Gypsum. Water is diverted into the Reservoir via a 2,800 foot long ditch called LEDE Ditch, from a diversion structure on Antones Cabin Creek (aka Lost Creek). It is within the White River National Forest and operates pursuant to an approved special use permit.

The available water supply in the Gypsum Creek headwaters is estimated at 1,160 AF annually as determined in a hydrologic yield analysis conducted from 2002 to 2005. Demands on irrigation and increased population were also examined, with a conclusion that expanding capacity in the ditch and reservoir is desired. The Town made a significant investment in the water rights and seeks to preserve the full value of those water rights by ensuring maximum beneficial use.

Loan Feasibility Study

The Loan Feasibility Study, titled "Rehabilitation and Capacity Increase LEDE Ditch and Reservoir Loan Feasibility Outline", was prepared by Ramsey Kropf, of Patrick Miller Kropf, PC and Thomas Zancanella of Zancanella & Associates, PC. The study includes feasibility level engineering design and estimates and audited financial information. The study was prepared in accordance with the CWCB guidelines.

The Town of Gypsum

The Town of Gypsum was formed by a commission duly elected on April 6, 1982, under the Colorado Constitution, and then approved by special election held on September 14, 1982.

The Town's municipal code requires all development to provide water rights or "in-lieu fees" for water rights dedication. The in-lieu fees for annexation and water right dedication, and tap fees are held and managed in the Town's Water Enterprise Fund. The Town also collects monthly service fees for water use which are held in the Water Enterprise Fund.

The Town produces and stores its own drinking water and has 2,038 water service taps. Drinking water is obtained from Mosher Springs and Gypsum Creek; both supply the entire Town with drinking water. Because the Mosher Springs diversion produces very high quality water, there are very few chemicals needed to treat this water supply.

The Town's distribution system is currently adequate and a master plan exists for addressing growth inside and outside the Town's boundary areas. The Town has policies in place to encourage the conservation of water, including a graduated monthly service rate schedule for existing users.

Water Rights

Water Right	Amount Decreed	Decreed Use	Appropriation/ Adjudication
LEDE Ditch	15.23 cfs	Irrigation	1931/1936
LEDE Reservoir	947 AF Absolute	Irrigation	1931/1936
Eye Lake Supply Ditch	20 cfs, conditional	Delivery of water into storage	1966/1991
Wolcott Reservoir	600 AF, conditional	M&I, stock watering, augmentation and exchange, power generation, recreational	1966/1979 1992/1993
LEDE Ditch Enlargement	30 cfs, conditional	Domestic irrigation, M&I including augmentation and exchange	1998/2005
LEDE Res. Enlargement	400 AF, conditional	Storage for recreational, aesthetic, piscatorial purposes, M&I	1998/2005

Project Description

The Reservoir dam is a homogenous earth embankment with a rock toe drain. According to records of the State Engineer's Office (SEO) and construction drawings, the dam was originally constructed to a height of about 15 feet in 1931, and raised to 39 feet around 1940. The present height of the Reservoir Dam is 33.5 feet, the crest length is about 340 feet, and the crest width varies from 8 to 12 feet. The existing spillway is an unlined 16 foot wide open-cut channel. The outlet consists of an 18 inch pipe. The dam is presently classified as a Small Dam (20 to 50 feet high, 100 AF to 4000 AF storage); however, new dam safety regulations likely will identify the dam as a High Hazard Classification.

Several maintenance and regulatory upgrades are required for both the Ditch and the Reservoir such as: spillway upgrades, dam raised for 5 foot free board requirement, dam crest widened, outlet pipe rehabilitation, outlet gate rehabilitation, ditch head gate upgrade, and open ditch to be replaced with pipe.

Several alternatives were evaluated. With the exception of Alternative 1, all include improvements to the Ditch and headgate. Those improvements include a new headgate, 860 feet of 30 inch pipe joint

repairs and 1,900 feet of new pipe. Construction estimate for the Ditch improvements is \$342,000.

Alternative No. 1 - No Action - This option is not considered viable since the existing dam and spillway do not meet current dam safety regulations. There would likely be significant loss in storage capacity, if a SEO restriction were placed on the reservoir water level. The Ditch would continue to periodically overtop and ditch failures would occur causing erosion on the hillside below.

Alternative No. 2 - Repair and rehabilitate the existing dam - This alternative would not increase capacity of the dam; however, it would avoid a potential future SEO restriction. This alternative does not assist with the Town's long term goals for meeting existing and growing water needs. Construction estimate for the dam is \$2,150,000 for a total of \$2,500,000.

Alternative No. 3 (SELECTED) - Repair and enlarge dam (685 AF) - This alternative will maximize storage and maintain current SEO rating of the dam. The dam's height could be raised 9.5 feet, to 49 feet. This would raise the crest height of the dam 14.5 feet with the crest width extended to 20 feet. Approximately 254 AF of additional storage (685 AF total) would be added to the reservoir. The outlet pipe would be replaced and the spillway modified. Construction estimate for the dam is \$2,820,000 for a total of \$3,162,000.

Alternative No. 4 - Repair and enlarge dam (947 AF) - This alternative will increase storage to the decreed capacity with a dam height increase of 19.5 ft and the crest height 24.5 ft. The dam height would be approximately 59 ft (69 ft total). This alternative requires an increase in several dam safety components and therefore is not cost beneficial. Construction estimate for the dam is \$3,653,000 for a total of \$3,995,000.

Project Cost Estimate

LEDE Ditch Construction			
Engineering/Permitting/Mitigation/Legal		\$122,000	
Construction		\$183,000	
Construction Contingency (20%)		\$37,000	
	Subtotal		\$342,000
LEDE Reservoir Construction			
Engineering/Permitting/Mitigation/Legal		\$820,000	
Construction		\$1,667,000	
Construction Contingency (20%)		\$333,000	
	Subtotal		<u>\$2,820,000</u>
	Total		<u>\$3,162,000</u>

The cost of the enlargement portion for the Project would be \$11,100/AF for the 254 AF of enlargement. Design and permitting is expected to occur in 2009/2010 with pipeline construction starting in late 2009 and dam construction starting in 2011.

Financial Analysis

Table 1 shows a summary of the financial aspects of the loan request. The interest rate for the Town is based on Municipal - High Income interest rate for a 30 year loan of 4.5% (Financial Policy #7).

Table 1. Financial Summary

PROJECT/LOAN	
Total Project Cost	\$3,162,000
Total CWCB Loan (approx. 85%)	\$2,663,100
CWCB Loan (Including 1% Service Fee)	\$2,689,731
CWCB Annual Loan Payment	\$165,100
CWCB Loan Obligation (including 10% debt reserve funding)	\$181,600
Annual Debt Service per Tap (using 2,040 Taps)	\$89/Tap

Creditworthiness: The Town operates its water related services through a Water Enterprise pursuant to TABOR. The Town's water activity enterprise has one outstanding long-term debt totaling approximately \$300,000 with the Colorado Water Resources & Power Development Authority with an annual payment of \$60,000 and a maturity date of 2014. The Town anticipates retiring this loan prior to signing a CWCB Loan Contract.

Table 2 shows the Financial Ratios for the Town.

Table 2. Financial Ratios

Financial Ratio	Past Years	Future (2012) With Project
Operating Ratio (revenues/expenses) weak: <100% - average: 100% - 120% - strong: >120%	121% (Strong) \$980K/808K	106% (Average) \$1.01M/957K
Debt Service Coverage Ratio (revenues-expenses)/debt service weak: <100% - average: 100% - 120% - strong: >120%	373% (Strong) \$980-745K/0.06K	129% (Strong) \$1.01-775K/0.18K
Cash Reserves to Current Expenses weak: <50% - average: 50% - 100% - strong: >100%	334% (Strong) \$2.7M/808K	209% (Strong) \$2.0M/957K
Average Monthly Water Bill weak: >\$60 - average: \$60 - \$30 - strong: <\$30	\$25/Month (Strong)	\$25/Month (Strong)

Collateral - Security for the CWCB loan will be a pledge of the Town's water activity enterprise revenues backed by a rate covenant and annual financial reporting. This is in compliance with CWCB Financial Policy #5 (Collateral).

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cc: Jeff Schroll, Town Manager
Ramsey Kropf, Patrick Miller and Kropf, PC
Tom Zancanella, Zancanella & Assoc.
Susan Schneider, AGO

Attachment: Water Project Loan Program – Project Data Sheet

CWCB Construction Loan Program Project Data Sheet

Borrower: Town of Gypsum

County: Eagle

Project Name: LEDE Ditch & Reservoir
Upgrade Project

Project Type: Reservoir Rehabilitation

Drainage Basin: Colorado River

Water Source: Gypsum Creek

Total Project Cost: \$3,162,000

Funding Sources: Construction Fund

Type of Borrower: High Income Municipal

Average Delivery: 1,200 AF

New Storage: 254 AF

Loan Amount: \$2,689,731 (Including 1% fee)

Interest Rate: 4.5% **Term:** 30 years

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General Locations

