

# STATE OF COLORADO

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## Colorado Water Conservation Board Department of Natural Resources

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TO: Colorado Water Conservation Board Members

FROM: Tim Feehan, P.E., Project Manager  
Water Supply Planning and Finance Section

DATE: November 10, 2009

SUBJECT: **Agenda Item 27b, November 16-18, 2009 Board Meeting**  
**Water Supply Planning and Finance Section – Changes to Existing Loans**  
**Supply Irrigating Ditch Co. – Knouth Reservoir Dam Rehabilitation**

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### Introduction

At the March 2008 board meeting, the Colorado Water Conservation Board (CWCB) approved a loan to the Supply Irrigating Ditch Company (Company) in the amount of \$904,960 from the Severance Tax Trust Fund Perpetual Base Account. The loan was for the rehabilitation of Knouth Reservoir.

The Company is requesting an increase of \$610,040 to the Company's 2008 authorization of \$904,960. The requested loan increase is due to higher than anticipated engineering and construction costs.

### Staff Recommendation

Staff recommends that the Board approve an increase of \$610,040 (\$604,000 for project costs and \$6,040 for a 1% Loan Service Fee) to the Company from the Severance Tax Trust Fund Perpetual Base Account, at its current interest rate of 2.6% for 30 years. The Company's total amended loan amount will be \$1,515,000 (\$1,500,000 for project costs and \$15,000 for a 1% Loan Service Fee) for the rehabilitation of the Knouth Reservoir. Security for the loan shall be collateral in compliance with CWCB Financial Policy No. 5.

See further staff recommendations on Page 5.

## **Background**

Supply Irrigating Ditch Company services approximately 8,500 acres of irrigated farm land in Boulder County, between Lyons and Mead. The Company diverts water from St. Vrain Creek, near Lyons, and delivers water through a 15 mile open channel ditch system. The Company also delivers water from Beaver Park Reservoir, located in Boulder County, near the continental divide. Beaver Park Reservoir is owned by the St. Vrain Reservoir and Fish Company, in which the Company owns a 51% interest. The Company has an average annual diversion of 4,800 acre-feet, of which 800 is diverted from Beaver Park Reservoir.

Knouth Reservoir (Reservoir) is located in Boulder County about 4 miles northwest of Longmont, and has not held water since the 1970s. Sometime during the 70s the Reservoir was filled on a trial basis to see how it would perform when full. It was determined that the Reservoir had an extensive seepage problem and was consequently drained due to safety concerns. Repairs to the Reservoir to address the seepage concerns were never completed and the Reservoir is currently under a zero fill restriction by the State Engineer's Office (SEO).

In 2001, the Company investigated the potential rehabilitation and enlargement of the Reservoir. The proposed project involved raising the dam crest 10 feet to gauge height 30, adding toe drains, a clay liner, new outlet works, and a new 200 foot wide spillway. The proposed project would have increased the capacity of the Reservoir from 220 to 540 acre-feet. The Company, however, elected not to pursue the project based on the estimated \$2,000,000 cost to complete the work.

Given the long-term benefit of having an equalizer reservoir in its system, the Company elected to pursue the project again in 2003. One of the main concerns of the stockholders in 2001 was the extensive long-term debt associated with the project. To offset its long-term debt obligation, the Company proposed to sell 125 acre-feet of its Beaver Park Reservoir water, at an estimated value of \$1,000,000. With a revised 2003 engineer's estimate of \$2,163,000 to improve and enlarge the Reservoir, and an in-kind Company contribution in excess of \$1,000,000, the CWCB approved a loan to the Company to construct the project in March of 2003.

From 2003 to 2007, the Company was still not in agreement on the overall economic value of the project. The stockholders were not convinced that the overall benefit of the project outweighed the \$4,000 per acre-foot to construct the project. In an attempt to better quantify the actual need of the Company, the Reservoir was filled again in 2007 under the observation of URS Engineering Consultants and the SEO. In addition to the findings associated with the fill analysis, the Company also investigated the need to enlarge the Reservoir. After further evaluation of the engineering and economic aspects of the Reservoir, the Company elected not to pursue raising the dam crest and developed a revised approach to address the seepage. Given the significant changes to the project scope, the Company elected to have its 2003 authorization de-authorized in November 2007, and requested a new CWCB loan in 2008.

In March of 2008, the Company's modified reservoir rehabilitation project was presented to the CWCB for approval. The project now involved vegetation removal, reshaping of the dam face, selective placement of a clay liner, rip rap, and a new spillway. The estimated cost to complete these improvements was \$995,000. In addition, the ownership of the Reservoir would be under a new corporation called the Knouth Reservoir Corporation (Corporation). The ownership of the

Corporation will remain as proposed in the 2008 loan request and will be the Brand family (40%), the Company (40%), and the Little Thompson Water District (20%). Over the course of the next five years, the Little Thompson Water District will pay off its 20% share of the project costs, therefore reducing the Company's long term debt obligation. Based on these new parameters, the CWCB approved a loan to the Company in the amount of \$904,960 or 90% of the construction cost.

The 1<sup>st</sup> payment received in 2010 from Little Thompson Water District will be used by the Company to cover its required 10% project match. The remaining four annual payments from the District to the Company will be sent to CWCB as a principal reduction payment to its loan. Upon receipt of the final payment, CWCB will amend and re-amortizes the Company's loan based on the final adjusted principal balance at that time.

## Discussion

As a condition of the 2008 CWCB loan approval, the Company received SEO approved plans and specifications in September 2009. Bids for the project were received in October 2009. The low bid, from the four bids received, was from DeFalco Construction, Longmont, Colorado in the amount of \$1,199,400. The engineer's estimate was \$1,473,000 and the bids ranged from \$1,199,400 to \$1,758,000.

A comparison of the total cost of the project with that originally estimated is summarized below in Table 1.

**Table 1. Project Cost Comparison**

<b>Construction Items</b>	<b>March 2008 Est.</b>	<b>Current Est.</b>
1. Engineering Design	\$64,000	\$117,872
2. Construction Engineering	\$65,000	\$99,300
3. Construction	\$866,000	\$1,214,400
4. Construction Administration (Permits, SEO Review Fee, Contracts, etc.)	\$0	\$35,315
<b>Sub-total:</b>	\$995,000	\$1,466,887
5. Contingency (14%)	\$0	\$199,780
<b>Totals:</b>	<b>\$995,000</b>	<b>\$1,666,667</b>

The overall project is approximately \$672,000 over budget. One of the main contributing factors to the cost overrun was the change in the foundation design for the reservoir. The original foundation design involved a large keyway excavation to be backfilled with engineered material and tied into with a clay liner along the dam face. Given the amount of groundwater to control during excavation, and the problems associated with a large open cut, the design was changed to a slurry wall along the toe. This resulted in an increase in engineering and construction costs. In addition, the overall engineering scope of services was expanded to meet the needs of the project. Therefore, the overall project has increased by approximately \$672,000, for a total adjusted rounded final project cost of approximately \$1,670,000.

The Company is requesting an increase of \$610,040 to its current loan authorization of \$904,960 to cover 90% of the total cost. The new total amended loan amount for the Company will be \$1,515,000 at its original interest rate of 2.6% for 30 years. The new annual payment will be \$80,687, which includes the 10% reserve requirement. The Company's current loan of \$904,960 has an annual payment of \$48,200.

## Financial Analysis

A summary of the financial aspects of the project are presented below in Table 2.

**Table 2. Financial Summary**

Total Project Cost	\$1,670,000
CWCB Loan Amount (90% of Project Cost and 1% Service Fee)	\$1,515,000
CWCB Loan Payment	\$73,352
CWCB Loan Payment (Including 10% Reserve)	\$80,687
Annual Cost per Share for Loan	\$202
Number of Shares	400
Current Assessment per Share	\$140
New Assessment per Share	\$342
Cost of Project per Acre-foot Stored (220 AF)	\$7,600

### *Creditworthiness:*

The Company's assessments will be increased by \$202 per share to cover the debt services associated with the CWCB loan. The increase will be presented to the shareholders for approval in January of 2010.

The financial ratios for the Company are shown in Table 3 below.

**Table 3. Financial Ratios**

<i>Financial Ratio</i>	<i>Past 3 Years</i>	<i>With amended project 2010+</i>
<p>Operating Ratio (revenues/expenses)</p> <p>weak: &lt;100% - average: 100% - 120% - strong: &gt;120%</p>	<p>124% (strong)</p> <p>\$129k/104k</p>	<p>114% (average)</p> <p>210k/184k</p>
<p>Debt Service Coverage Ratio (revenues-expenses)/debt service</p> <p>weak: &lt;100% - average: 100% - 120% - strong: &gt;120%</p>	<p>n/a</p>	<p>131% (strong)</p> <p>210k-104k/81k</p>
<p>Cash Reserves to Current Expenses</p> <p>weak: &lt;50% - average: 50% - 100% - strong: &gt;100%</p>	<p>23% (weak)</p> <p>24k/104k</p>	<p>13% (weak)</p> <p>(24k/184k)</p>
<p>Annual Operating Cost per Acre-Ft. ( 4,800AF)*</p> <p>weak: &gt;\$ 20 - average: \$10 - \$20 - strong: &lt;\$10</p> <p>*total water delivered by the system.</p>	<p>\$22 (Weak)</p> <p>104k/4,800 af</p>	<p>\$38 (weak)</p> <p>184k/4,800 af</p>

***Collateral:*** As security for the loan, the District will continue to pledge its assessment revenues. This is in compliance with CWCB Financial Policy #5 (Collateral).

## **Recommendation**

Staff recommends that the Board approve an increase of \$610,040 (\$604,000 for project costs and \$6,040 for a 1% Loan Service Fee) to the Company from the Severance Tax Trust Fund Perpetual Base Account at its current interest rate of 2.6% for 30 years. The Company's total amended loan amount will be \$1,515,000 (\$1,500,000 for project costs and \$15,000 for a 1% Loan Service Fee) for the rehabilitation of Knouth Reservoir. Security for the loan shall be collateral in compliance with CWCB Loan Policy No. 5.

Staff further recommends the following conditions that will supersede all previous conditions:

- 1) To utilize CWCB funding in a timely manner, the Company will have a one-year time limit from the time of CWCB approval to execute a funding contract. If a contract is not executed within one year of Board approval, the \$1,515,000 will be de-authorized unless the Board specifically approves a time extension.
- 2) Prior to contract execution:
  - a. The Brand Family's storage decree in Knouth Reservoir shall be transferred to the Knouth Reservoir Corporation.
  - b. The Company will provide to the CWCB executed copies of its corporate documents to verify the legal formation of the Knouth Reservoir Corporation.
- 3) The loan contract shall have the following provision:
  - a. As identified in the separate Memorandum of Understanding between the Company and the Little Thompson Water District (District), the District shall pay the Company over a 5 year period for its portion of the Knouth Reservoir Rehabilitation Project. With the exception of the first payment, all payments received by the Company from the District will be sent to CWCB within 60 days of receipt of the funds, to repay the Company's loan.
  - c. Dan Grant, Secretary – Supply Irrigating Ditch Company  
Susan Schneider, AGO