

STATE OF COLORADO

Colorado Water Conservation Board Department of Natural Resources

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TO: Colorado Water Conservation Board Members

FROM: Anna Mauss, PE
Mike Serlet, PE, Chief
Water Supply Planning & Finance Section

DATE: March 10, 2009

SUBJECT: **Agenda Item 14a, March 17-18, 2009 Board Meeting**
Water Supply Planning and Finance Section – New Project Loans
Deuel and Snyder Improvement Company – River Sand Gate Structure Project

Bill Ritter, Jr.
Governor

Harris D. Sherman
DNR Executive Director

Jennifer L. Gimbel
CWCB Director

Dan McAuliffe
CWCB Deputy Director

Introduction

The Deuel and Snyder Improvement Company (Company) is applying for a \$90,000 loan to construct its River Sand Gate Structure Project (Project). The existing sand gate is a vent section through a concrete rollover wall, which is currently operated by boards. Operating the sand gate is a major safety concern to the Company, so it plans on replacing the existing board gate with a new radial gate. The Project cost estimate is \$100,000. This loan request is for 90% of the estimated Project cost. See attached Project Data Sheet.

Staff Recommendation

Staff recommends the Board approve a loan not to exceed \$90,900 (\$90,000 for project costs and \$900 for the 1% Loan Service Fee) to the Deuel and Snyder Improvement Company to construct its River Sand Gate Structure Project from the Severance Tax Trust Fund Perpetual Base Account. The loan terms shall be 30 years at the agricultural interest rate of 2.5% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.

Background

The Company provides irrigation water to a 1,650 acre service area located in Morgan County. The area extends from about one mile north to about six miles northeast of Fort Morgan along the north side of the South Platte River.

The Company diverts water from the South Platte into the Deuel and Snyder Canal (Canal). Flow into the Canal is controlled by one large diversion structure that runs across the entire width of the

river. This diversion is used by the Company and its neighbor, the Upper Platte and Beaver Canal Company. The Upper Platte and Beaver Canal Company diverts water from the south side of the river and just slightly downstream from the Deuel and Snyder diversion. The Upper Platte and Beaver Canal Company's diversion rate (200 cfs) is much greater than Deuel and Snyder's rates (21 cfs and 63 cfs). The diversion is a large concrete rollover wall with a series of slide gates for river control. The slide gates on the south side of the river are controlled by the Upper Platte and Beaver Canal Company.

The Deuel and Snyder Improvement Company operates a sand gate located on the north side of the river diversion structure. The sand gate is a vent section through the concrete rollover wall which is boarded up when diversions are required by the Company or by the Upper Platte and Beaver Canal Company. Boards must be removed during the winter to allow excess sand (which builds up in front of the Company's diversion point) to wash down river. Due to the Company's small rate of diversion, the shallow nature of the diversion point, and the narrow channel, the sand buildup at this location must be washed down river during the winter or a sandbar could form that would prevent the Company from diverting altogether.

Currently, in order to remove boards and open the gate, a Company employee must walk several yards along the crest of the rollover wall to reach the sand gate. There is not a walkway or handrail for safety. Depending upon the Upper Platte and Beaver Canal Company's operation, there can be water going over the crest of the diversion. Given this major safety concern, the Company has evaluated alternatives to both improve the safety conditions for its employees and more efficiently operate the gate.

Loan Feasibility Study

Brent Nation, P.E., Nation Engineering Services, LLC, prepared the Loan Feasibility Study titled "*Feasibility of the Rehabilitation of the Deuel and Snyder Improvement Company River Sand Gate Structure*," dated February 2009. The study was prepared in accordance with the CWCB guidelines and includes preliminary engineering design and cost estimates.

Deuel and Snyder Improvement Company

The Company is a Colorado mutual ditch company and non-profit corporation. It was established in 1920 to construct and operate the Deuel and Snyder Canal for the benefit of its shareholders. There are 15 shareholders and 161 total shares. The shares are split into two categories based upon the two different types of water rights owned. One division of the Company is made up of 21 shares associated with the Company's Meadow Rights. The remaining 140 shares are associated with the Company's traditional irrigation water rights. The Company is controlled by a five-member Board of Directors. The Board has the ability to set assessments and take on debt as they deem necessary.

Water Rights

The shareholders of the Company have the ability to divert 21 cfs from the South Platte River under the Meadow Rights and 63 cfs under the traditional irrigation rights. The Meadow Rights are called such because they were originally developed to irrigate meadows for pasture grass and are only available in the spring and early summer (which was the only time of year the river was dependable

for diversions when these rights were put in place). The Meadow Rights have two separate appropriations: April 2, 1871 for 13 cfs and July 1, 1874 for 8 cfs. This water can only be diverted between April 10th and July 10th, as defined in the decree. The traditional irrigation rights (which can be used during the entire irrigation season) also have two appropriations: April 7, 1884 for 32 cfs and November 1, 1888 for 31 cfs. The Company and its shareholders also have a recharge plan which was decreed in 2003 with the Company's plan for augmentation. The Company's average annual diversion is 4,590 AF for all water diverted into the Canal.

Project Description

A range of alternatives to address the rehabilitation of the sand gate structure were considered, including: 1) No action; 2) Rebuild the sand gate using a slide gate; 3) Rebuild the sand gate using a radial gate; and 4) Replace 25 feet of the river diversion structure with a new bladder gate system.

Alternative 1 – No Action: If the Company continues to operate with its current system, the danger to its ditch personnel remains a concern; therefore, this option was not acceptable.

Alternative 2- Rebuild the sand gate using a slide gate: This alternative consists of replacing a portion of the river diversion with a five foot slide gate. This alternative would create a platform over the rollover wall. A slide gate of this size would likely require multiple personnel to operate. The cost of this alternative is approximately \$80,000.

Alternative 3 – Rebuild the sand gate using a radial gate: This alternative consists of replacing a portion of the diversion with a five foot wide radial gate. This alternative is identical to alternative #2 except for the style of gate. The advantage of this alternative is that a radial gate can be operated by one individual. The cost of this alternative is approximately \$100,000.

Alternative 4 – Replace 25 feet of the river diversion structure with a new bladder gate system: This alternative consists of replacing a portion of the diversion with a 25 foot wide inflatable bladder gate. This alternative will eliminate the safety concerns for personnel and increase the ability to remove sand from the Company's point of diversion. The cost of this alternative is approximately \$250,000.

Selected Alternative: The Company has chosen Alternative 3 and will replace a five foot section of the diversion structure with a radial gate, which will address the safety concerns and allow the Company to more easily operate the gate.

The Project design is expected to be completed in March 2009. Construction is anticipated to take place in the fall of 2009.

Financial Analysis

Table 1 shows a summary of the financial aspects of the loan request. The Company is made up entirely of agricultural owners, so an interest rate of 2.5% for a 30 year loan applies.

TABLE 1
FINANCIAL SUMMARY

PROJECT/LOAN	
Total Project Cost	\$100,000
CWCB Loan (90% of the Project cost)	\$90,000
CWCB Loan (Including 1% Service Fee)	\$90,900
CWCB Annual Loan Payment	\$4,300
CWCB Loan Obligation (including 10% debt reserve funding)	\$4,343
Number of Shareholders	15
Numbers of Shares	161
Annual Cost Per Share for Project	\$27/Share
Annual Cost of Loan per AF (based on 4,590 AF average diversion)	\$0.95AF

Creditworthiness: The Company's current assessments are \$165/share for the standard shares (140 total shares) and \$150/meadow right share (21 total shares). Rates have been increased to \$192/standard share and \$177/meadow right share to cover the new CWCB debt service. The shareholders met at the Company's annual meeting on February 28, 2009 and approved the \$27 increase in assessments for the Project. This assessment will be applied to the 2009 billing and will generate an additional \$4,347 for the Company this year. These funds (in addition to a portion of the cash reserve) will be used for the Company's 10% match for the Project.

The Company has an existing repayment obligation for \$1,100/year to the Upper Platte and Beaver Canal Company for the Upper Platte and Beaver Canal Company's CWCB loan for rehabilitation of its diversion structure since both companies benefit from the structure. The remaining balance is \$4,400 with a maturity date of October 1, 2012. Other than the payments to Upper Platte and Beaver Canal Company, the Company has no other debt service.

TABLE 2
FINANCIAL RATIOS

Financial Ratio	Past 2 Years	Future w/ Project
Operating Ratio (revenues/expenses) weak: <100% - average: 100% - 120% - strong: >120%	102% (Average) \$48/47K	100% (Average) \$52/52K
Debt Service Coverage Ratio (revenues-expenses)/debt service weak: <100% - average: 100% - 120% - strong: >120%	128% (Strong) \$47.7-46.3/1.1K	106% (Average) \$52.0-46.3/5.4K
Cash Reserves to Current Expenses weak: <50% - average: 50% - 100% - strong: >100%	17% (Weak)* \$8/47K	5% (Weak)* \$2.4/52K
Annual Operating Cost per Acre-Foot (4,590 AF) weak: >\$20 - average: \$10 - \$20 - strong: <\$10	\$10.32 (Average) \$47/4.6K AF	\$11.27 (Average) \$52K/4.6K AF

*Note on the cash reserves: It is not unusual for nonprofit ditch companies to operate with small reserves and simply assess members enough to cover existing expenses.

Collateral – As security for the loan, the Company will provide a pledge of assessment revenues backed by a rate covenant and the Project itself, which is the radial gate. This is in compliance with CWCB Financial Policy #5 (Collateral).

Staff Recommendation

Staff recommends the Board approve a loan not to exceed \$90,900 (\$90,000 for project costs and \$900 for the 1% Loan Service Fee) to the Deuel and Snyder Improvement Company to construct its River Sand Gate Structure Project from the Severance Tax Trust Fund Perpetual Base Account. The loan terms shall be 30 years at the agricultural interest rate of 2.5% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.

cc: Scott Kembel, President, Deuel and Snyder Improvement Company
 Brent Nation, Nation Engineering Services, LLC
 Susan Schneider, AGO

CWCB Construction Loan Program Project Data Sheet

Borrower: Deuel and Snyder Improvement Company

County: Morgan

Project Name: River Sand Gate Structure Project

Project Type: Diversion Structure
Rehabilitation

Drainage Basin: South Platte

Water Source: South Platte River

Total Project Cost: \$100,000

Funding Sources: Severance Tax

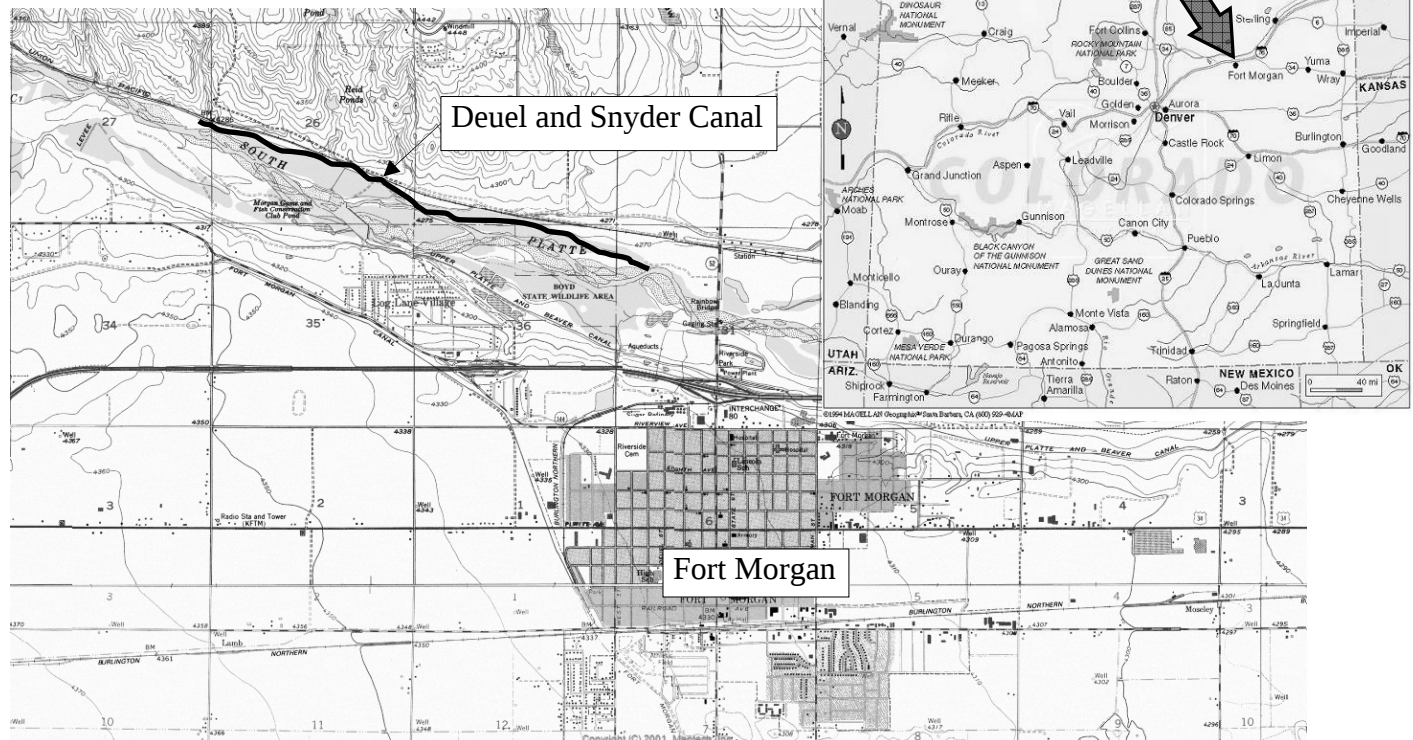
Type of Borrower: Agricultural

Average Diversion: 4,590 acre-feet

Loan Amount: \$90,900 (including 1% service fee)

Interest Rate: 2.5% **Term:** 30 years

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Location Map