

STATE OF COLORADO

Colorado Water Conservation Board Department of Natural Resources

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TO: Colorado Water Conservation Board Members

FROM: Ryan Edwards, P.E. *[Signature]*
Tim Feehan, P.E., Chief *[Signature]*
Finance Section

DATE: May 6, 2011

SUBJECT: **Consent Agenda Item 4, May 17-18, 2011 Board Meeting**
Finance Section – New Project Loans
Big Thompson and Platte River Ditch Company and Bee Line Ditch Company –
Ditch Rehabilitation Project

John W. Hickenlooper
Governor

Mike King
DNR Executive Director

Jennifer L. Gimbel
CWCB Director

Introduction

The Big Thompson and Platte River Ditch Company (BTPRD) and the Bee Line Ditch Company (BLD) are applying for a loan for the installation of a flow measurement structure and rehabilitation of ditch and structures. The project has been identified as the Big Thompson and Platte River Ditch Company and Bee Line Ditch Company Ditch Rehabilitation Project (Project). The loan request is for 90% of the estimated \$150,000 total cost of the project. See the attached Project Data Sheet for a location map and a project summary.

Staff Recommendation

Staff recommends the Board approve a loan not to exceed \$136,350 (\$135,000 for project costs and \$1,350 for a 1% Loan Service Fee) to the Big Thompson and Platte River Ditch Company and the Bee Line Ditch Company for engineering and construction costs related to the ditch rehabilitation project from the Construction Fund. The loan terms shall be 30 years at the agricultural rate of 2.75% per annum. Both Companies will enter into a single loan contract with the CWCB, which will make them jointly and severally liable for the debt obligation. Security for the loan shall be in compliance with CWCB Financial Policy #5.

Background

The BTPRD and BLD Companies are operated and maintained jointly and are combining for the sponsorship of this project. They provide direct flow irrigation and augmentation water to their respective service areas, located to the north and east of the Town of Milliken. In 2010, the BTPRD Company was contacted by Jason Smith, the District 4 Water Commissioner, and notified of the need to measure bypass flows at the headgate along the Big Thompson River. Measurement of the

bypass flow is necessary during times when the City of Greeley, City of Evans, and others are passing augmentation flows through the Big Thompson River, upstream of the BTPRD headgate, and have a need to deliver the water downstream to the South Platte River. The diversion dam associated with the BTPRD headgate is also leaking and in need of repair.

This project includes: installation of a measurement structure and control gate at the BTPRD headgate on the Big Thompson River to address the concerns of the water commissioner, repair of both the Big Thompson and Little Thompson diversion dams, and rehabilitation of several other structures within the ditch systems that are in disrepair. The rehabilitation portion of this project is necessary in order to maintain efficient water deliveries for irrigation and augmentation purposes.

Loan Feasibility Study

Noco Engineering Inc. prepared the Loan Feasibility Study titled, "Feasibility of the Rehabilitation of the Big Thompson and Platte River Ditch and Bee Line Ditch Structures," dated March 2011. Assistance was provided by Gene Kammerzell and Dave Bernhardt of the BTPRD and BLD Companies. The study was prepared in accordance with the CWCBC guidelines.

BTPRD Company and BLD Company

The BTPRD Company and BLD Company are both non-profit corporations located within Weld County, providing direct flow irrigation and augmentation water to shareholders. The BTPRD Company, established in 1865, operates the Big Thompson and Platte River Ditch system, which diverts water from the Big Thompson River. The BLD Company, established in 1887, operates the Bee Line Ditch system, diverting water from the Little Thompson River.

The BTPRD and BLD Companies service a combined area of approximately 3,040 acres. In a water rights exchange case (Case No. 05CW053) a total of 7 shares (out of 119.6 total shares) of BTPRD Company were changed to augmentation use, delivered to a headgate, and released back to the Big Thompson River. Both the BTPRD and the BLD are unlined canals and flow generally from west to east. The BTPRD spans approximately 1.8 miles from its headgate on the Big Thompson River to the confluence with the BLD. The BLD is approximately 0.6 miles in length from the headgate on the Little Thompson River to the confluence with the BTPRD. From the point of confluence, a single ditch continues for approximately 4.6 miles.

There are a total of 25 shareholders owning 119.6 shares in the BTPRD Company and 108 shares in the BLD Company. Currently both companies are managed by the same three-member Board of Directors. Each board has the power to set annual share assessments on behalf of its shareholders and the power to curtail ditch deliveries on unpaid assessments. Each company requires shareholder approval prior to entering in to debt in excess of \$10,000. Revenues are generated from the collection of annual assessments which were increased at the 2011 shareholder meeting (held annually in the first quarter of every year) to offset the debt obligation incurred by this project. Current assessments are \$185 per share for the BTPRD and \$160 per share for the BLD.

Water Rights

The water rights for the Big Thompson and Platte River Ditch (fed from the Big Thompson River) and the Bee Line Ditch (fed from the Little Thompson River) combine for an average annual yield of 12,000 AF. There are no additional water rights associated with this Project. The following tables summarize the water rights for both the BTPRD Company and BLD Company:

TABLE 1a: BIG THOMPSON and PLATTE RIVER DITCH WATER RIGHTS

Adjudication Date	Appropriation Date	Amount	Use
5/28/1883	11/18/1865	35 cfs	Irr./Aug.
5/28/1883	5/15/1876	60 cfs	Irr./Aug.
12/31/2002*	11/19/2002	100 cfs	Irr./Aug.

TABLE 1b: BEE LINE DITCH WATER RIGHTS

Adjudication Date	Appropriation Date	Amount	Note
6/29/1916	5/31/1887	40 cfs	Irr./Aug.
12/31/2002*	11/19/2002	100 cfs	Irr./Aug.

**each ditch has a dedicated water right as noted in the table*

Project Description

The following alternatives were considered to address the water commissioner's concerns and the outstanding rehabilitation needs of the ditch delivery systems:

Alternative No. 1 – Install stilling well and recorder: This alternative would utilize the existing bypass structure (consisting of a concrete channel with stop boards) and a stilling well and recorder incorporated for measuring flows. This alternative was considered unacceptable due to the complexity of generating accurate flow measurements and the overall poor condition of the structure.

Alternative No. 2 – Modify existing bypass: This alternative includes the modification of the existing bypass structure by replacing the stop boards with a steel hinge gate. This alternative would require a new concrete apron be integrated with the existing gate and reinforcement of the existing wing walls to accommodate the new flows. This alternative was not chosen based on the dewatering complexities required during construction and the need to monitor both gage height and gate position for accurate flow measurements.

Selected Alternative No. 3 – Construct a new measured bypass structure: This alternative includes the installation of a new measured bypass structure while leaving the existing bypass in place. The new bypass will include a gated diversion between the existing bypass structure and the BTPRD headgate. This alternative offers the benefit of constructing the gate while the river is diverted through the existing bypass. This alternative was selected due to its minimal flow interference during construction of the flume, alleviating the difficulties associated with Alternative No. 2, and utilizing a less complicated measuring device.

In addition to the construction of the new gate, flume and flow measurement device associated with the selected alternative, the companies will rehabilitate various structures in order to maintain the function of the ditch. Without these repairs the ditch is susceptible to system failures. The existing easements and rights-of-way are sufficient to address the access and construction aspects of this project and no known permits are anticipated. The installation of the new bypass gate, as well as several of the rehabilitation tasks were completed between March and early April to avoid impacting the 2011 irrigation season. The estimated completion of the Project is scheduled for April 2012, and is estimated to cost \$150,000. The following is a summary of projected costs:

TABLE 2: TOTAL PROJECT COST SUMMARY

Task	Cost
Engineering	\$3,000
Measurement Bypass Structure	\$77,800
Ditch System Rehabilitation (includes repair of 8 headgates, 2 diversion dams, conveyance flume, drainage check structure, meter house and rip-rap installation)	\$67,200
Administrative Expenses	\$2,000
Total	\$150,000

Financial Analysis

Table 3 provides a summary of the financial criteria of the loan request. The Companies qualify for an agriculture interest rate of 2.75% for a 30-year term.

TABLE 3: FINANCIAL SUMMARY

Total Project Cost	\$150,000
CWCB Loan Amount (90% of total Project cost)	\$135,000
CWCB Loan Amount (including 1% Service Fee)	\$136,350
CWCB Annual Loan Payment	\$6,734
CWCB Loan Obligation (including 10% debt reserve funding)	\$7,407
Number of Shares of BTPRD	119.6
Number of Shares of BLD	108
Current Assessment per Share of BTPRD	\$185
Current Assessment per Share of BLD	\$160

Creditworthiness:

The Companies have no outstanding debt service with the CWCB nor anyone else. Being not-for-profit corporations, minimal cash reserves are on hand; however share assessments have been increased to account for the proposed debt, the annual 10% debt reserve contribution, and to cover the remaining 10% of the total project cost.

TABLE 4: FINANCIAL RATIOS

Financial Ratio	2009-2010	Future w/ Project
Operating Ratio (operating revenues/operating expenses) weak: <100% - average: 100% - 120% - strong: >120%	137% (strong) \$35.7K/\$26.0K	129% (strong) \$43.1K/\$33.4K
Debt Service Coverage Ratio (total eligible revenues-operating expenses)/total debt service weak: <100% - average: 100% - 120% - strong: >120%	No Current Debt (strong) (\$35.7K-\$26.0K)/\$0K	131% (strong) (\$43.1K-\$33.4K)/\$7.4K
Cash Reserves to Current Expenses weak: <50% - average: 50% - 100% - strong: >100%	34% (weak) \$8.9K/\$26.0K	27% (weak) \$8.9K/\$33.4K
Annual Operating Cost per Acre-Foot (based on 12,000 AF) weak: >\$20 - average: \$10 - \$20 - strong: <\$10	\$2.17 (strong) \$26.0K/12,000	\$2.79 (strong) \$33.4K/12,000

Collateral: As security for the loan, the Companies will pledge assessment revenues backed by a rate covenant and the water rights as listed in Tables 1a and 1b. This is in compliance with the CWCB Financial Policy #5 (Collateral).

Staff Recommendation

Staff recommends the Board approve a loan not to exceed \$136,350 (\$135,000 for project costs and \$1,350 for a 1% Loan Service Fee) to the Big Thompson and Platte River Ditch Company and the Bee Line Ditch Company for engineering and construction costs related to the ditch rehabilitation project from the Construction Fund. The loan terms shall be 30 years at the agricultural rate of 2.75% per annum. Both Companies will enter into a single loan contract with the CWCB, which will make them jointly and severally liable for the debt obligation. Security for the loan shall be in compliance with CWCB Financial Policy #5.

cc: Gene Kammerzell, President, Big Thompson and Platte River Ditch Company
Susan Schneider, AGO
Peter Johnson, AGO

Attachment: Water Project Loan Program – Project Data Sheet

Water Project Loan Program – Project Data

Borrower: Big Thompson and Platte River Ditch Company / Bee Line Ditch Company

County: Weld County

Project Name: Big Thompson and Platte River Ditch and Bee Line Ditch Rehabilitation

Project Type: Ditch Rehabilitation

Drainage Basin: South Platte, District 4

Water Source: Big Thompson and Little Thompson Rivers

Total Project Cost: \$150,000

Funding Source: Construction Fund

Type of Borrower: Agricultural

Avg. Annual Diversion: 12,000 AF (combined)

CWCB Loan: \$136,350 (\$135,000 w/ 1% service fee) **Interest Rate:** 2.75% **Term:** 30 years

The Big Thompson and Platte River Ditch (BTPRD) Company and the Bee Line Ditch (BLD) Company, operated and maintained jointly, provide irrigation and augmentation water to their respective service areas (totaling 3,040 acres), just north and east of the Town of Milliken. In 2010 the BTPRD Company was contacted by the District 4 water commissioner and notified of the need to measure bypass flows at the headgate along the Big Thompson River. This project includes the installation of a measurement structure and control gate at the BTPRD headgate on the Big Thompson River, in addition to rehabilitation of several other structures within the ditch systems. The rehabilitation of these various structures is necessary to maintain efficient water deliveries for irrigation and augmentation purposes.

Location Map

