

STATE OF 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., Chief
Finance and Administration Section

DATE: July 3, 2013

SUBJECT: **Agenda Item 25b, July 16-17, 2013 Board Meeting**
Finance – New Water Project Loans
Boulder and Left Hand Irrigation Company – Tracy Lateral Pipeline at the
Wederquist “Y” Project

Introduction

The Boulder and Left Hand Irrigation Company (Irrigation Company) is applying for a loan for the Tracy Lateral Pipeline at the Wederquist “Y” Project (Project). The purpose of the Project is to improve the hydraulic efficiency of the ditch while reducing the Irrigation Company’s operation and maintenance cost. The total Project cost is estimated to be \$175,000. The Irrigation Company is requesting a loan from the CWCB for approximately 90% of Project costs. See attached Project Data Sheet for a location map and project summary.

Staff Recommendation

Staff recommends the Board approve a loan not to exceed \$159,075 (\$157,500 for project costs and \$1,575 for the 1% Loan Service Fee) to the Boulder and Left Hand Irrigation Company for engineering and construction costs related to the Tracy Lateral Pipeline at the Wederquist “Y” Project from the Construction Fund. The loan terms shall be 30 years at the blended interest rate of 2.35% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.

Contract Conditions will include:

1) An easement for the pipeline through Mr. Wederquist’s property must be obtained prior to disbursement of CWCB loan funds.

Background

The Irrigation Company's service area includes approximately 2,000 acres of farm land extending from the Boulder city limits northeasterly approximately 14 miles to Dry Creek near U.S. Highway 287, south of Longmont. The Irrigation Company is made up of 136 shares that are held by 38 shareholders, of which 52% are agricultural owners and 48% are High Income Municipal owners. Agricultural use includes the irrigation of corn, alfalfa, small grains, pinto beans, beets, and pasture grasses. The City and County of Boulder is the primary municipal shareholder.

The Irrigation Company shares a common diversion dam and head-gate with the Boulder and White Rock Ditch Company and North Boulder Farmers Ditch Company to divert water from the north bank of Boulder Creek near 12th and Broadway in Boulder. The three companies share a common ditch for approximately two-thirds of a mile before the Boulder and White Rock Ditch separates. The Boulder and Left Hand Ditch and North Boulder Farmers then share a ditch for approximately 1.5 miles before they separate near the Foothills Parkway east of Boulder. The Boulder and Left Hand Ditch then travels in a generally northeast direction for approximately 14 miles before emptying into Dry Creek near U.S. 287 south of Longmont.

The Wederquist "Y" is located in the town of Niwot in Boulder County, on the portion of the ditch run solely by the Irrigation Company. The Boulder and Left Hand Ditch meanders several times on the east side of 79th Street before it bifurcates at a check/drop structure known as the Wederquist "Y" diversion. Approximately 60% of the ditch flow continues east past the "Y" and 40% is diverted into the Tracy Lateral where it meanders back to the north and west towards the 79th Street crossing.

Loan Feasibility Study

The Loan Feasibility Study titled "Feasibility of the Tracy Lateral Pipeline at the Wederquist "Y"," dated June 2013, was prepared for the Irrigation Company by Mike Serlet, P.E. with Serlet Project Consulting, LLC, with engineering provided by Deere & Ault Consultants, Inc. The study was prepared in accordance with the CWCB guidelines and includes an alternative analysis and preliminary engineering design and cost estimates.

Borrower - Boulder and Left Hand Irrigation Company

The Irrigation Company is a Colorado Mutual Ditch Company and Non-Profit Corporation. The Irrigation Company acquired the Boulder and Left Hand Ditch Company in March 1921. The Boulder and Left Hand Ditch Company had been operating the ditch system since approximately 1873. Income comes from service fees and stock assessment fees.

The Irrigation Company's bylaws indicate the ability to borrow money for corporate purposes whenever deemed necessary by its Board of Directors. The Irrigation Company obtained a vote of approval from the shareholders at their February 16, 2013 annual meeting to contract for the CWCB loan and increase the annual assessments to service the loan payments.

Water Rights

The Irrigation Company owns direct flow and storage water rights from Boulder Creek. It also has a 26.88% ownership in the North Boulder Farmers Ditch Company which has direct flow rights from Boulder Creek. The Irrigation Company's water rights are summarized in the tables below.

TABLE 1
IRRIGATION COMPANY'S DIRECT FLOW WATER RIGHTS

Appropriation Date	Adjudication Date	Amount (CFS)	Admin Number
June 1, 1862	June 2, 1882	1.7	4535.00000
December 1, 1873	June 2, 1882	82.8	8736.00000

TABLE 2
IRRIGATION COMPANY'S STORAGE WATER RIGHTS

Water Right	Appropriation Date	Adjudication Date	Amount (AF)	Admin Number
Twin Lakes Nos. 1 & 2	April 18, 1910	June 21, 1926	137.0	22022.00000
Twin Lakes Nos. 1 & 2 Enl.	October 30, 1947	September 28, 1953	81.0	35731.00000
Hayden Reservoir	July 21, 1905	September 28, 1953	190.1	27930.20290
Hayden Reservoir Enl.	June 21, 1930	September 28, 1953	311.7	29391.00000
Hayden Reservoir Refill	September 1, 1938	September 28, 1953	501.8	32385.00000

In total, the average annual total water diverted for the Irrigation Company's shareholders is approximately 2,869 acre-feet, or approximately 21 acre-feet per share.

Project Description

The Wederquist "Y" diversion structure is located several hundred yards from the ditch access drive at 79th Street and is in poor condition, making diversions to the Tracy Lateral difficult. The Tracy Lateral is an open ditch between the Wederquist "Y" and 79th Street. The lateral in the area is heavily lined by very mature cottonwood trees and other deciduous trees and shrubs, making access to the ditch very difficult. This creates a debris problem in the ditch resulting in flow constraints and blockages in the ditch at the 79th Street crossing, often requiring daily cleanout of the culvert's inlet. By installing a new diversion structure upstream of the Wederquist "Y" and no longer using that structure for Tracy Lateral diversions, several long maintenance and diversion trips to the structure for the ditch superintendent will be eliminated. Four alternatives were considered for the desired ditch improvements described above:

Alternative No. 1 – Do Nothing: This alternative is not viable for the Tracy Lateral to continue to efficiently operate.

Alternative No. 2 – Replace Wederquist "Y" and Reclaim Tracy Lateral: This alternative is to replace the Wederquist "Y" diversion structure with a new structure at the same location and to continue use of the meandering section of the Tracy Lateral. The use of this Tracy Lateral section for normal operations would require the removal of all the large trees and vegetation along the sides of the lateral for approximately 1,500 feet, as well as the replacement of three deteriorated drop structures. The removal of all the large trees and vegetation along the Tracy Lateral is estimated to

be over \$100,000 alone. That together with the reconstruction of the ditch, three drop structures, and the Wederquist “Y” would make this alternative the most expensive.

Alternative No. 3 – New Tracy Lateral Diversion Structure and Concrete Pipe: This alternative is to replace the Wederquist “Y” diversion structure with a new diversion structure upstream and replace the meandering Tracy Lateral with a concrete pipe commencing at the new diversion structure and flowing in a more direct alignment to the 79th Street crossing. The Wederquist “Y” will remain in place as there is a head gate in the structure which delivers water to the property to the Northeast of the “Y.” The diversion off the “Y” into the Tracy Lateral will be boarded closed. It is anticipated that the irrigation of the upstream field will provide return flows sufficient to sustain the existing vegetation and large trees though the Irrigation Company has agreed to allow small spot flows through the Wederquist “Y” as needed to supplement their water requirement. This alternative meets all project goals and has an estimated project cost of \$247,750.

Selected Alternative No. 4 – New Tracy Lateral Diversion Structure and HDPE Pipe: This alternative is identical to Alternative No. 3 with the exception of changing the pipe material from concrete to a high density polyethylene (HDPE) plastic pipe. This alternative not only meets all project goals but is also the most cost efficient with an estimated project cost of \$175,000.

Alternative #4 will improve the hydraulic efficiency of the Tracy lateral by piping this ditch section, enhance access to the ditch diversions by relocating the diversions closer to the Irrigation Company’s right-of-way gate, reduce average annual maintenance costs by approximately \$5,000, and eliminate ditch loss due to phreatophytes under normal operating conditions.

A summary of the cost is shown in the table below:

TABLE 4: TOTAL PROJECT COST SUMMARY

Task	Cost
Engineering (Design Engineering, Project Planning, Right-of-way)	\$35,000
Construction	\$112,150
Construction Contingency (15%)	\$27,850
Total	\$175,000

Schedule: The Irrigation Company plans to have the final design done by September 2013 with construction starting in October 2013. Substantial Completion is estimated to occur December 2013.

Financial Analysis

Table 5 provides a summary of the Project’s financial aspects. The term of the loan will be 30 years and the blended interest rate will be 2.35% (52% of shareholders are agricultural at a rate of 1.75% and 48% of shareholders are high income municipal at a rate of 3.00%).

TABLE 5: FINANCIAL SUMMARY

Total Project Cost	\$175,000
Borrower Match (10% of total Project cost)	\$17,500
CWCB Loan Amount (90% of total Project cost)	\$157,500
CWCB Loan Amount (Including 1% Service Fee)	\$159,075
CWCB Annual Loan Payment	\$7,449
CWCB Loan Obligation (Including 10% Reserve)	\$8,194
Project Cost per Acre Foot (~1200 AF Through Lateral)	\$145/AF
Number of Shares	136
Number of Shareholders	38
Current Assessment (Operational, Capital, & Existing Debt Service)	\$493/share
2013 Special Assessment for New Loan Borrower Match	\$128/share
Future Annual Debt Assessment for New Loan Debt Service	\$61/share

Creditworthiness: The Irrigation Company has \$54,121 in existing debt made up of one existing CWCB loan (C15009). This loan financed the Irrigation Company's Twin Lakes Outlet Repair project and has an annual payment of \$7,196. This loan will be paid off in 2021 and is in good standing.

TABLE 6: FINANCIAL RATIOS

Financial Ratio	Past 3 Years	Future w/ Project
Operating Ratio (revenues/expenses) weak: <100% - average: 100% - 120% - strong: >120%	106% (Average) \$86.5k/\$81.5k	106% (Average) \$94.8k/\$89.7k
Debt Service Coverage Ratio (revenues- expenses)/debt service weak: <100% - average: 100% - 120% - strong: >120%	169% (Strong) (\$86.5k-\$74.3k) \$7.2k	133% (Strong) (\$94.8k-\$74.3k) \$15.4k
Cash Reserves to Current Expenses weak: <50% - average: 50% - 100% - strong: >100%	45% (Weak) \$36.7k/\$81.5k	45% (Weak) \$40.6k/89.7k
Annual Operating Cost per Acre-Foot (2,869 AF) weak: >\$20 - average: \$10 - \$20 - strong: <\$10	\$28 (weak) \$81.5k/2.9k AF	\$31 (weak) \$89.7k/2.9k AF

Collateral: As security for the loan, the Irrigation Company will offer a pledge of assessment revenues backed by rate covenant and the Project itself (installed structure and pipeline). This is in compliance with the CWCB Financial Policy #5 (Collateral).

cc: John Brunner, President, Boulder and Left Hand Irrigation Company
 Susan Schneider/Jennifer Mele, Colorado Attorney General's Office

Attachment: Water Project Loan Program – Project Data Sheet

**CWCB Water Project Loan Program
Project Data Sheet**

Borrower: Boulder and Left Hand Irrigation Company

County: Boulder

Project Name: Tracy Lateral Pipeline at the Wederquist "Y"

Project Type: Ditch Rehabilitation

Drainage Basin/ District: South Platte / 6

Water Source: Boulder Creek

Total Project Cost: \$175,000

Funding Source: Construction Fund

Type of Borrower: Municipal/Agricultural

Average Annual Diversion: 2,869

CWCB Loan: \$159,075 (with 1% service fee)

Interest Rate: 2.35% **Term:** 30-years
(Blended)

The Boulder and Left Hand Irrigation Company is a Mutual Ditch Company and Non-Profit Corporation. The Irrigation Company acquired Boulder and Left Hand Ditch Company in 1921, which had operated the ditch system since 1873. The Irrigation Company serves approximately 2,000 acres of farm land between Boulder, CO and Longmont, CO. The Tracy Lateral Pipeline at the Wederquist "Y" project will improve the hydraulic efficiency of the Tracy Lateral while reducing the operational and maintenance cost of the Irrigation Company by replacing a 1500 ft problem section of the Tracy Lateral with a pipeline. Construction is expected to commence in the fall of 2013.

