



**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., Finance Section Chief

**DATE:** November 19-20, 2014 Board Meeting

**AGENDA ITEM:** 27b. Water Project Loans  
Supply Irrigating Ditch Company - Emergency Supply Ditch Rehabilitation Project

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### Introduction

The Supply Irrigating Ditch Company (Company) is applying for a loan for the Emergency Supply Ditch Rehabilitation Project (Project). During the unprecedented flood of September 2013 in the tributaries to the South Platte River, a significant number of diversion structures and dams along the river corridor were damaged. The Company's ditch received significant damage as a result of this flood. The Company completed temporary repairs to allow for water diversions during the 2014 irrigation season. The purpose of the Project is to fund permanent repairs. The total Project cost is \$321,000. The Company is requesting a loan from CWCB for 100% of the Project cost which will serve as a bridge loan until FEMA provides reimbursement funds. See attached Project Data Sheet for a location map and Project summary.

### Staff Recommendation

Staff recommends the Board approve a loan not to exceed \$324,210 (\$321,000 for Project cost and \$3,210 for the 1% service fee) to the Supply Irrigating Ditch Company, for engineering and construction costs related to the Emergency Supply Ditch Rehabilitation Project from the Severance Tax Perpetual Base Fund, up to the approved loan amount. The loan terms shall be 3 years of no interest followed by 27 years at a blended interest rate of 2.25% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.

Additionally, staff recommends the following contract condition:

Any future grant funds obtained for the purpose of this Project shall be submitted to CWCB to be applied to the balance of the loan within thirty (30) days after receipt of said funds.



## Background

The Supply Irrigating Ditch Company (Company) operates the Supply Ditch for the benefit of its shareholders by providing irrigation water through an existing diversion and ditch system off the St. Vrain Creek in Lyons. Approximately 2,500 acres are irrigated by the Company's 172 shareholders.

During the unprecedented flood of September 2013 in the tributaries of the South Platte River, a significant number of diversion structures and dams along the river corridor were damaged including the Company's ditch system. Prior to the flood, the Company diverted water with a concrete dam stretching across the river. This directed the river into a channel where the Company's headgate structure is located. The flood event scoured the diversion dam, eventually causing it to collapse, leaving only a small portion of the original structure intact. The headgate and its structure, located off-river, were not structurally damaged by the flood though significant sedimentation occurred downstream in the channel, eventually blocking the twin box culvert under the highway. At a tunnel farther down the ditch, flood debris accumulated at the trash rack causing the ditch to back up and overflow its south bank.

The Company was able to perform an initial ditch cleaning and build a temporary boulder dam in order to divert water during the 2014 irrigation season. The Company worked with FEMA to develop a Project Worksheet to cover permanent repairs to its ditch system.

## Loan Feasibility Study

Dan Grant, Secretary and Treasurer of the Supply Irrigating Ditch Company, with assistance from Mark McLean, P.E., with Deere and Ault Consultants, prepared the Loan Feasibility Study, titled "Emergency Loan Application and Feasibility Study," dated September 17, 2014. The study includes an alternative analysis and construction cost, and relied on a Scope of Work analysis by Deere and Ault dated December 20, 2013. The feasibility study was prepared in accordance with the CWCB guidelines.

## Borrower - Supply Irrigating Ditch Company

The Company is a mutual ditch company and was incorporated in 1909. The Company's office is located in Longmont. It operates as a nonprofit corporation and is in good standing with the Colorado Secretary of State. The Company has issued 400 shares of stock, owned by 172 shareholders. The Company's revenues are primarily derived from assessments charged on shares of stock owned by the stockholders, and income derived from fish and recreation leases.

The Company's Articles of Incorporation require the shareholders to approve incurring debt over \$250,000. A special shareholders meeting will be held this November or December. The Articles of Incorporation and By-laws (1989) provide the Board of Directors with authority to levy assessments to meet the necessary expenses of operation and maintenance of the Company, and to enforce unpaid assessments by ceasing water deliveries and eventually by selling the outstanding stock.

## Water Rights

The water rights impacted by this project include:

TABLE 1: IMPACTED WATER RIGHTS

Name	Amount	Appropriation Date	Adjudication Date	Water Court Case No.
Supply Ditch	92.2 CFS	5/31/1878	6/2/1882	CA1387

On average, annual diversions of the Company are 4,650 AF.

## Project Description

The goal of this Project is to restore full water right diversions by performing permanent repairs to the flood damaged ditch system.

**Alternative 1 - Do Nothing:** This alternative was considered unacceptable. The temporary diversion structure does not provide a reliable means to divert the Company's water right. Failure to bring the ditch into a reliable operating condition could prevent the diversions of the Company's water rights, leading to the abandonment of the water rights and the ditch.

**Alternative 2 - Rebuilding Collaboratively:** The Company has been in discussions with the Town of Lyons, City of Longmont, Boulder County Wildlife and Environment, and the St. Vrain and Left Hand Water Conservancy District, for the possibility of a collaborative project that incorporates a multi-objective design into the Project. To date, these discussions have not yielded a project concept. Future discussions are planned but in order to move the loan funding forward, the Company is pursuing funding based on Alternative 3. CWCB encourages a collaborative and multi-objective approach. If needed, loan funds may be used to pursue this option further, up to the approved loan amount.

**Selected Alternative 3 - Reconstruct to Pre-Flood Conditions:** This alternative will reconstruct the damaged diversion dam in the same location, size, and for the same function as the pre-flood structure. The structure itself will be improved by incorporating a hydraulic cutoff and energy dissipation to provide additional protection from future flood events, and will be changed from a concrete dam to a grouted boulder dam. Repair of the ditch bank at the tunnel will require removal of the temporary fill, subgrade preparation, and the import and placement of suitable fill material. CDOT has removed a significant amount of sedimentation from the culverts crossing Highway 66 but some additional sediment removal is anticipated.

During the Project assessment phase, the Company determined the existing flume has deteriorated to the point where continued accurate operation is in jeopardy. Though the flood may have contributed to its current condition, the flume will be replaced separately from FEMA funding as the Company believes FEMA will classify this work to be "deferred maintenance" and not an eligible expense.

The total Project cost is estimated to be \$321,000 as shown in Table 2.

TABLE 2: Construction Cost

Task	Cost
Engineering and Permitting	\$37,000
Construction - Ditch Repairs	\$56,000
Construction - Diversion Dam Repairs	\$127,000
Construction - Flume Replacement	\$35,000
Contingency (30% of Construction)	\$66,000
Total	\$321,000

**Schedule:** The Company is currently selecting an engineer to provide final design using FEMA's procurement procedures. Construction is expected to begin late fall or winter of 2014/2015 and be completed prior to the 2015 irrigation season.

**Federal (FEMA) Funding:** Through the Project Worksheet, dated January 7, 2014, FEMA has determined that costs associated with the diversion dam and headgate structures are 100% eligible and that cost associated with down ditch repairs are 15.56% eligible. Costs associated with cleaning the box culverts and replacing the flume are not eligible for reimbursement. FEMA provides reimbursement at a rate of 75% of eligible cost after a final accounting of actual construction costs.

## Financial Analysis

Table 3 provides a summary of the Project's financial aspects. The first three years of the loan will be assessed a 0% interest rate. The remaining term of the loan will be assessed a blended interest rate of

2.25% with the principal amortized over 27 years (Ownership: 86% Agriculture, 5% Mid Municipal, 7% High Municipal, 2% Commercial). Staff is recommending an exemption to Financial Policy #11 to allow for 100% funding of eligible Project cost.

**TABLE 3: FINANCIAL SUMMARY**

Total Project Cost	\$321,000
CWCB Loan Amount	\$321,000
CWCB Loan Amount (Including 1% Service Fee)	\$324,210
CWCB Annual Loan Payment	\$16,153
CWCB Annual Loan Obligation (1 <sup>st</sup> Ten Years)	\$17,768
Number of Shares	400
Annual Loan Obligation per Share	\$44
Current Assessment per Share	\$160/share
Future Assessment per Share	\$160/share

**Creditworthiness:** The Company has \$69,660 in existing debt as summarized in Table 4. The Company was previously approved for CWCB loans in 2003 and 2008. Both loans were not contracted and were ultimately deauthorized as the respective projects did not move forward.

**TABLE 4: EXISTING DEBT**

Lender	Original Balance	Current Balance	Annual Payment	Maturity Date	Collateral
Guaranty Bank and Trust Company	\$88,467	\$69,660	\$8,820	July 2016 (w/ balloon payment)	Deed of Trust (Ditch Rider Residence)

**TABLE 5: FINANCIAL RATIOS**

Financial Ratio	Past 3 Years	Future w/ Project <sup>1</sup>
Operating Ratio (revenues/expenses) weak: <100% - average: 100% - 120% - strong: >120%	112% (Average) \$139K/\$124K	105% (Average) \$139K/\$133K
Debt Service Coverage Ratio (revenues-expenses)/debt service weak: <100% - average: 100% - 120% - strong: >120%	267% (Strong) (\$139K-\$115K) \$9K	133% (Strong) (\$139K-\$115K) \$18K
Cash Reserves to Current Expenses weak: <50% - average: 50% - 100% - strong: >100%	135% (Strong) \$167K/\$124K	79% (Average) \$110K/\$140K
Annual Operating Cost per Acre-Foot (4,650 AF) weak: >\$20 - average: \$10 - \$20 - strong: <\$10	\$27 (Weak) \$124K/4.7KAF	\$29 (Weak) \$133K/4.7K AF

<sup>1</sup>Assumes payoff of the Guaranty Bank and Trust Company prior to the first CWCB loan payment

**Collateral:** Security for this loan will be a pledge of the Company's assessment revenues backed by an assessment covenant, and the Project itself (diversion dam, headgate structure, and flume). This is in compliance with the CWCB Financial Policy #5 (Collateral).

cc: Dan Grant, Secretary/Treasurer, Supply Irrigation Ditch Company  
Susan Schneider/Jennifer Mele, Colorado Attorney General's Office

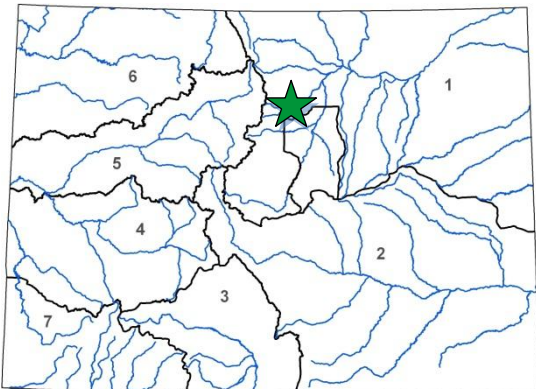
Attachment: Water Project Loan Program - Project Data Sheet



# Emergency Supply Irrigating Ditch Repair Project

Supply Irrigating Ditch Company  
November 2014 Board Meeting

L O A N   D E T A I L S	
Project Cost:	\$321,000
CWCB Loan (with Service Fee):	\$324,210
Loan Term and Interest Rate:	27 Years @ 2.25%
Funding Source:	Severance Tax Perpetual Base Fund
B O R R O W E R   T Y P E	
Agriculture	Municipal      Commercial
86%	0% Low - 5% Mid - 7% High      2%
P R O J E C T   D E T A I L S	
Project Type:	Ditch Rehabilitation
Average Annual Diversion:	4,650 AF



L O C A T I O N			
County:		Boulder	
Water Source:		Saint Vrain Creek	
Drainage Basin:		South Platte	
Division: 1		District: 5	

During the unprecedented flood of September 2013 in the tributaries to the South Platte River, a significant number of diversion structures and dams along the river corridor were damaged including the Company's ditch system. Floodwaters destroyed the diversion dam, caused heavy sedimentation in the ditch, and damaged 750 LF of ditch.

Temporary repairs were completed in order to allow the Company to divert a portion of its water rights during the 2014 irrigation season. The Company has received approval of its Project Worksheet from FEMA to fund a portion of the permanent repairs. This loan will cover the remaining cost associated with the repairs and provide upfront funding for the FEMA reimbursement funds. Construction is scheduled to be complete prior to the 2015 irrigation season.

