

# 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: Jonathan Hernandez, P.E., Project Manager  
Kirk Russell, P.E., Chief  
Finance and Administration Section

DATE: November 13, 2013

SUBJECT: **Agenda Item 31f, November 19-20, 2013 Board Meeting**  
**Finance – Emergency Loans**  
**Green Ditch Company – Emergency Green Ditch Channel Repair**

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### Introduction

The Green Ditch Company (Company) is applying for an Emergency Loan for the Emergency Green Ditch Channel Repair 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 Green Ditch received significant damage as a result of this flood. The purpose of the Project is to repair the diversion structure and ditch channel to allow the Company to divert its decreed water rights. The total Project cost is estimated to be \$525,000. See attached Project Data Sheet for a location map and project summary.

### Staff Recommendation

Staff recommends the Board approve a loan not to exceed \$530,250 (\$525,000 for Project cost and \$5,250 for the 1% service fee) to the Green Ditch Company for 100% of engineering and construction costs related to the Emergency Green Ditch Channel Repair 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 2.50% 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 Company serves approximately 1,300 irrigated acres in Boulder County between the City of Boulder and the Town of Erie. Its Green Ditch diverts from Boulder Creek approximately a half mile downstream of the Boulder Creek and South Boulder Creek confluence. 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 Green Ditch.

The Green Ditch was appropriated in 1862 and currently serves seven shareholders. In addition to irrigation water for farms and ranches, the water is also used to irrigate Boulder County Open Space, agricultural property preserved under conservation easements by the City of Boulder, and for snowmaking activities at Eldora Mountain Resort. Its existing diversion dam spans the length of the channel creating a barrier for fish passage. The Green Ditch is located in a stretch of Boulder Creek that has an instream flow water right decreed in Case No. 1-90CW193.

During the 2013 flood, the diversion structure and headgate were damaged. Additionally, the flood event relocated the reach of Boulder Creek at this location, and water no longer flows to the Green Ditch headgate.

## Loan Feasibility Study

Anne Smith, President of The Green Ditch Company, with assistance from Olsson Associates, prepared the Loan Feasibility Study titled “*Emergency Loan Application and Feasibility Study*,” dated November 1, 2013. The study includes an alternative analysis and preliminary engineering cost estimates. The study was prepared in accordance with the CWCBC guidelines.

## Borrower – The Green Ditch Company

The Company is a mutual ditch company that incorporated in 1972. 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 32 shares of stock. The Company’s revenues are primarily derived from assessments charged on shares of stock owned by the stockholders.

The Company’s by-laws (1993) authorize the Board of Directors to manage the business and affairs of the Company and to borrow money through a resolution of the directors. The Board has the authority to take measures to enforce assessments, including the suspension of water deliveries for failure to pay assessments.

## Water Rights

The water right(s) impacted by this project include:

**TABLE 1: IMPACTED WATER RIGHTS**

Name	Amount	Appropriation Date	Adjudication Date
Green Ditch	34.68 cfs	9/15/1862	6/2/1882

Average annual diversions of the Company are 1,847 AF.

## Project Description

The goal of this project is to restore the operation of the Green Ditch. The Company has retained the services of ERO Resources and Olsson Associates to plan and design a practical and environmentally sensitive restoration of the ditch.

**Alternative 1 – Do Nothing:** This alternative is considered unacceptable. Failure to either realign the stream to its pre-flood alignment or relocate the diversion structure to the post-flood alignment would prevent the Company from diverting its water rights, leading to possible abandonment of the water rights and ditch.

**Alternative 2 – Reestablish the Pre-Flood Condition:** This alternative would relocate Boulder Creek to its pre-flood alignment and repair the damaged diversion and headgate structure. Various stakeholders have indicated that this is not the most environmentally sensitive approach because the river channel moved to a location that is considered to be more environmentally friendly. This alternative is estimated to cost \$200,000.

**Selected Alternative 3 – Rebuild Collaboratively with Improvements:** This alternative would leave Boulder Creek in its post-flood alignment. Various stakeholders have indicated Boulder Creek's post-flood alignment is more environmentally friendly than the pre-flood alignment due to enhanced riparian ecological conditions in the post-flood alignment area. To allow for diversions in the post-flood condition, a new point of diversion for the Green Ditch would be established upstream of the breach. This new diversion will be designed to allow fish passage while still enabling the Company to divert, even as times of low flows. A new piping system would connect the new headgate to the existing ditch. This alternative will help improve the watershed's connectivity by removing a barrier in the stream.

The Company has applied for a CWCB/Northern grant in the amount of \$25,000 and will use any grant funds received to reduce this loan's principal. Additionally the Company plans to seek other grant funds from CWCB to help cover the "environmental improvements" aspect of this alternative (Project cost in excess of Alternative 2). That request is not a part of this loan application and this loan approval assumes no future grant funds are received.

The projected cost of Alternative 3 is estimated to be \$525,000. The Company has not yet obtained a shareholder resolution approving the full loan amount of Alternative 3 and it is possible the shareholders do not authorize a loan in excess of Alternative 2. The estimated engineering and construction cost of Alternative 3 is broken down in Table 2.

**TABLE 2: PROJECT COST SUMMARY**

<b>Task</b>	<b>Cost</b>
Engineering	\$40,000
Permitting	\$10,000
Construction	\$429,000
Subtotal	\$479,000
Contingency (~10%)	\$46,000
Total	\$525,000

**Collaboration:** The borrower is encouraged to consider rebuilding a river diversion system that enhances consumptive and non-consumptive uses of water within the river corridor. Examples include improved fish passage, improved rafting/boating navigation, and possible shared ownership/use of a single diversion structure where possible. If needed, loan funds may be used for the construction of temporary diversion until such time that a multi-beneficial structure can be designed and constructed.

**Schedule:** Construction is expected to begin in December 2013 and be completed by April 2014.

## 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 2.5% with the principal amortized over 27 years (Ownership: 21% Agriculture, 58% Mid Municipal, 5% 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	\$525,000
CWCB Loan Amount	\$525,000
CWCB Loan Amount (Including 1% Service Fee)	\$530,250
CWCB Annual Loan Payment	\$27,243
CWCB Loan Obligation (Including 10% Reserve)	\$29,967
Number of Shares	32
Annual Cost Per Share for Loan	\$936
Current Assessment per Share	\$225
Future Assessment per Share	\$1,161

**Creditworthiness:** The Company has no existing debt.

**TABLE 4: FINANCIAL RATIOS**

Financial Ratio	Past 3 Years	Future w/ Project
Operating Ratio (revenues/expenses) weak: <100% - average: 100% - 120% - strong: >120%	117% (Average) \$10.5K/\$9K	104% (Average) \$40.5K/\$39K
Debt Service Coverage Ratio (revenues-expenses)/debt service weak: <100% - average: 100% - 120% - strong: >120%	No Existing Debt	105% (Average) \$40.5K-\$9K \$30K
Cash Reserves to Current Expenses weak: <50% - average: 50% - 100% - strong: >100%	206% (Average) \$18.5K/\$9K	47% (Weak) \$18.5K/\$39K
Annual Operating Cost per Acre-Foot (1,847 AF) weak: >\$20 - average: \$10 - \$20 - strong: <\$10	\$5 (Average) \$9K/1,847 AF	\$21 (Weak) \$39K/1,847 AF

**Collateral:** As security for the loan, the Company will pledge its assessment revenues backed by a rate covenant and the Project itself (Green Ditch diversion, headgate, pipeline). This is in compliance with the CWCB Financial Policy #5 (Collateral).

cc: Anne Smith, President, Green Ditch 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**

**C150383**

**Borrower:** Green Ditch Company

**County:** Boulder

**Project Name:** Emergency Green  
Ditch Channel Repair

**Project Type:** Ditch Rehabilitation

**Drainage Basin/ District:** South Platte / 6

**Water Source:** Boulder Creek

**Total Project Cost:** \$525,000

**Funding Source:** Severance Tax PBF

**Type of Borrower:** Blended

**Average Annual Diversion:** 1,847 AF

**CWCB Loan:** \$530,250  
(with 1% service fee)

**Interest Rate:** 2.50% **Term:** 30-years  
(21% Ag, 58% Mid, 5% Com)

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 Green Ditch. Additionally the flood relocated Boulder Creek at this location and water no longer flows to the Green Ditch headgate. Various stakeholders have indicated the creek's new alignment is more environmentally friendly alignment. In an effort of collaboration the Company plans to relocate their point of diversion upstream of the breach and build a fish friendly diversion structure. A new pipeline will connect the new diversion structure with the existing ditch.

