



## COLORADO

### Colorado Water Conservation Board

Department of Natural Resources

1313 Sherman Street, Room 718  
Denver, CO 80203

January 24, 2017

Jessie Shaffer, Manager  
Chilcott Ditch Company  
1845 Woodmoor Drive  
Monument, CO 80132

Re: Jimmy Camp Creek Siphon Reconstruction

Mr. Shaffer:

I am pleased to inform you that on January 23, 2017, the Colorado Water Conservation Board approved your loan request for the Jimmy Camp Creek Siphon Reconstruction as described in the application and approved Loan Feasibility Study titled "Feasibility of Reconstruction for the Chilcott Ditch Jimmy Creek Siphon", dated December 2016. The Board approved a loan not to exceed \$580,750 (\$575,000 for Project costs and \$5,750 for the 1% service fee). The loan terms shall be 2.20% per annum for 20 years.

I have attached a copy of the updated Board memo dated January 24, 2017 that includes the Board's approval. After the Board approves a loan there are a few steps that remain in the loan process including:

**Contracting:** An executed loan contract must be in place before funds can be disbursed for eligible project expenses. Peg Mason, Loan Contracts Manager, will contact you to initiate the loan contracting process. She can be reached at (303) 866-3441 x3227.

**Design/Construction:** You must adhere to the CWCB Design and Construction Administration Procedures including an invitation to the Prebid, Preconstruction and Bid Opening meetings. Derek Johnson, P.E., will be the Project Manager for this phase of the process and will work with you on the disbursements of your loan funds. He can be reached at (303) 866-3441 x3254.

On behalf of the Board, I would like to thank you for your interest in a loan from the CWCB.

Sincerely,

Kirk Russell, P.E., Chief  
Finance Section

Attachment: Updated Board Memo

E-mail Copy (Including Attachments): Alan Hamel, CWCB Board Member - Arkansas River Basin





**COLORADO**

**Colorado Water  
Conservation Board**

Department of Natural Resources

1313 Sherman Street  
Denver, CO 80203

P (303) 866-3441  
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John Hickenlooper, Governor

Robert Randall, DNR Executive Director

James Eklund, CWCB Director

**TO:** Colorado Water Conservation Board Members

**FROM:** Derek Johnson, P.E., Project Manager  
Kirk Russell, P.E. Finance Section Chief

**DATE:** January 24, 2016 Board Meeting (**Updated January 24, 2017**)

**AGENDA ITEM:** 15b. Water Project Loans  
Chilcott Ditch Company - Jimmy Camp Creek Siphon Reconstruction

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### Introduction

The Chilcott Ditch Company (Company) is applying for a loan for the Jimmy Camp Creek Siphon Reconstruction (Project). The Company seeks to replace the existing Jimmy Camp Creek Siphon, a key element of its delivery infrastructure that has reached the end of its reliable service life. Estimated Project costs are \$575,000. The Company is requesting a loan from the CWCB for 100% of Project costs. See attached Project Data Sheet for a location map and Project summary.

### Staff recommendation (Board approved Staff Recommendation on January 24, 2017)

Staff recommends the Board approve a loan not to exceed \$580,750 (\$575,000 for Project costs and \$5,750 for the 1% service fee) from the Construction Fund to the Chilcott Ditch Company for costs related to the Jimmy Camp Creek Siphon Reconstruction Project. The loan terms shall be 20 years at the reduced middle-income municipal interest rate of 2.20% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.



## **Background**

The Chilcott Ditch Company provides water through the Chilcott Ditch for irrigation to approximately 2,200 acres of actively cultivated property within in El Paso County, and for use in augmentation and for supplemental water supplies in municipal service areas. The Company's ditch diverts from Fountain Creek, just north of the Town of Fountain. Water deliveries are made through the Company's 8-mile ditch to service areas historically irrigated under the ditch and to an augmentation station that measures direct flow water returns to Fountain Creek on behalf of shareholders. A critical element of the Company's distribution system is a 42-inch diameter 1,300-foot-long siphon that conveys ditch water under Jimmy Camp Creek to farmland south of the City of Fountain. During the 1940s, the siphon was constructed from asphalt-dipped corrugated steel pipe, which has been in service for nearly 76 years. The structure has been repaired numerous times over its history due to pipe failures. Over the past 5 years, failures have become excessive, with three failures having been repaired and three more that have created sinkholes in the drainageway of Jimmy Camp Creek, jeopardizing needed water deliveries to downstream shareholders. In reviewing the siphon's age, maintenance history, and number of failures, the Company has concluded that the siphon has reached the end of its useful life, and thus intends to rebuild the siphon prior to the 2017 irrigation season.

## **Loan Feasibility Study**

John P. Schwab, P.E. of JPS Engineering prepared the Loan Feasibility Study titled "Feasibility of Reconstruction for the Chilcott Ditch Jimmy Creek Siphon", dated December 2016. The feasibility study, prepared in accordance with CWCB guidelines, includes an analysis of alternatives, preliminary engineering design, and construction cost estimates.

## **Borrower – Chilcott Ditch Company**

The Company is a mutual ditch company and a non-profit corporation registered in the State of Colorado. The Company was established in 1897 and is in good standing with the Secretary of State. There are currently six shareholders that own 105 shares of Company stock. Currently, shareholders within the Company are entirely comprised of Special Districts, School Districts, Home Rule Cities and local governmental agencies within El Paso County. Company shareholders vote to levy assessments at their annual meeting of shareholders or at a special meeting called for that purpose. A majority vote of the outstanding stock or shares represented is required for debt authorizations where the debt amortization is greater than one year; such debt authorizations will be voted on at a special meeting or annual stockholders' meeting. The Company has the power to curtail water deliveries to shareholders that fail to pay assessments, and to offer stock for sale to pay back assessments. Revenues derive from assessments and carriage agreement fees.

## Water Rights

The source of water for the Company is direct flow water rights from Fountain Creek. Along with the Company's own water rights, water rights of owners outside the Company are contractually conveyed to various owners via carriage agreements. All current carriage agreement owners are also shareholders within the Company. The Company has the following decreed water rights:

TABLE 1: WATER RIGHTS

Name	Amount	Appropriation Date	Adjudication Date
CHILCOTTE DITCH	27 cfs	3/21/1866	3/6/1882
CHILCOTTE DITCH	20.63 cfs	3/21/1874	3/6/1882
CHILCOTTE DITCH	30.95 cfs	12/18/1905	6/2/1919

The Company, in an average year, diverts 4,961 AF of water, with more than half of that amount (2,584 AF/year) being consumptive use.

## Project Description

The purpose of this project is to provide a means for the Company to continue providing irrigation and augmentation water to shareholders, while minimizing the occurrence of future failures, which could result in curtailment of water deliveries and crop failure risks. Three alternatives were considered:

**Alternative 1 - No action:** This course of action was considered unacceptable since it means the Company would continue to incur a great amount of risk and potential liability for not meeting its obligations for water deliveries to shareholders in the event that the siphon fails and cannot be repaired for an extended period of time.

**Alternative 2 - Slip line existing pipe:** This alternative was ruled out due to maintenance concerns surrounding repair of the slip-lining product; existing siphon pipe offsets creating slip-lined restrictions; and a possibility of future shear failures of the slip-lining product due to host pipe movements.

### ***Selected Alternative 3 - Reconstruct the siphon pipeline using low-head Polyvinyl Chloride (PVC) Pipe:***

This alternative was selected for being the least costly approach with the best long-term value, providing the necessary reliability and ease of maintenance that the Company desires. This alternate involves removal of the existing 42-inch corrugated metal pipe and installation of the new 42-inch PVC pipe, along with connections at the existing concrete inlet and outlet structures.

**TABLE 2: PROJECT COST**

Task	Cost
Design	\$47,700
Construction	\$469,800
Contingency (10%)	\$57,500
<b>Total</b>	<b>\$575,000</b>

**Permitting:** All easements and rights of way have previously been obtained. A City of Fountain Street Cut Permit will be obtained by the Contractor after award of the construction contract. The Company expects to be exempt from 404 permitting by statutory exemption, which will be confirmed with the Army Corps of Engineers.

**Schedule:** JPS Engineering has completed final design and specifications for bidding, the solicitation of which is planned through January 2017. Construction is to be accomplished within a 60-day timeline, with completion prior to the 2017 irrigation season.

### Financial Analysis

The Company qualifies for the middle-income municipal interest rate of 2.45% for a 30-year term. The Company is seeking a 20-year term, allowing a reduction in this rate of 0.25% per Financial Policy #7. The Company's resulting interest rate for 20 years will be 2.20% per annum. Table 3 provides a summary of the Project's financial aspects.

**TABLE 3: FINANCIAL SUMMARY**

Total Project Cost	\$ 575,000
CWCB Loan Amount	\$ 575,000
CWCB Loan Amount (Including 1% Service Fee)	\$ 580,750
CWCB Annual Loan Payment	\$ 36,206
CWCB Annual Loan Obligation (1st ten years)	\$ 39,827
Annual Loan Obligation (105 Shares)	\$ 379.30/share
Current Assessment	\$ 1,450/share
Cost per Acre-foot Diverted	\$ 117

**Creditworthiness:** The Company's outstanding debt consists of a single loan from CWCB in good standing per Table 4 below. The Company has undergone a change in ownership in recent years from mostly private individuals and farmers to being owned by municipality and local governmental agencies that tend to focus more on short- and long-term financial and planning efforts. In response to the accumulation of deferred maintenance over time, shareholders approved assessment increases to address company needs and to develop reserves so that unplanned events or system failures could be addressed immediately. For this reasoning, the Company increased shareholder assessments dramatically from \$825 per share in 2015 to \$1450 per share in 2016. Having met their immediate

short-term goals, shareholder assessments are planned to be reduced 10% in 2017, but incremental increases in coming years are expected according to Company needs and planning.

TABLE 4: EXISTING DEBT

Lender	Project	Original Balance	Current Balance	Annual Payment	Maturity Date	Collateral
CWCB C150029	Rehabilitation of Diversion Dam	\$250,000	\$152,717	\$14,457,52	2030	Fountain Creek Diversion Structure and Assessments

TABLE 5: FINANCIAL RATIOS

Financial Ratio	Past 3 Years	Future w/ Project
Operating Ratio (revenues/expenses) weak: <100% - average: 100% - 120% - strong: >120%	144% (strong) \$230K / \$160K	104% (average) \$207K / \$199K
Debt Service Coverage Ratio (revenues-expenses)/debt service weak: <100% - average: 100% - 120% - strong: >120%	588% (strong) (\$230K-\$145K) / \$14.5K	114% (average) (\$207K-\$145K) / \$54.3K
Cash Reserves to Current Expenses weak: <50% - average: 50% - 100% - strong: >100%	55% (average) \$87K / \$160K	48% (weak) \$94.7K / \$199K
Annual Operating Cost per Acre-Foot Diversions (4,961 AF) weak: >\$20 - average: \$10 - \$20 - strong: <\$10	\$32 (weak) \$160K / 4,961 AF	\$40 (weak) \$199K / 4,961 AF

**Collateral:** Security for this loan will be a pledge of the Company's assessment revenue backed by an assessment covenant and the new Jimmy Camp Creek Siphon structure. This is in compliance with the CWCB Financial Policy# 5 (Collateral).

cc: Jessie Shaffer, Manager, Chilcott Ditch Company  
Jennifer Mele, Colorado Office of the Attorney General

Attachment: Water Project Loan Program - Project Data Sheet

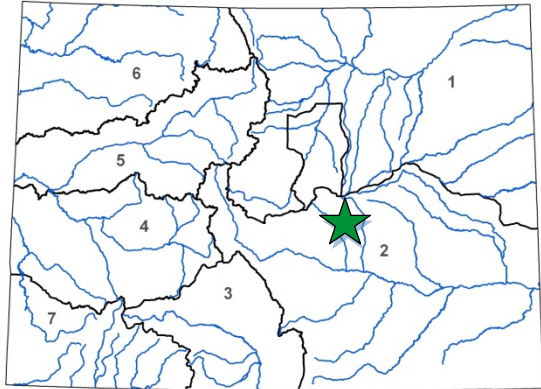




## Jimmy Camp Creek Siphon Reconstruction

Chilcott Ditch Company  
January 2017 Board Meeting

L O A N   D E T A I L S	
Project Cost:	\$575,000
CWCB Loan (with Service Fee):	\$ 580,750
Loan Term and Interest Rate:	20 Years @ 2.20%
Funding Source:	Construction Fund
B O R R O W E R   T Y P E	
Agriculture	Municipal      Commercial
0%	0% Low - 100% Mid - 0% High      0%
P R O J E C T   D E T A I L S	
Project Type:	Ditch Rehabilitation
Average Annual Delivery:	4,961 AF



L O C A T I O N	
County:	El Paso
Water Source:	Fountain Creek
Drainage Basin:	Pueblo
Division:	2      District: 10

The Chilcott Ditch Company, located in El Paso County, operates the Chilcott Ditch for the benefit of its shareholders by providing direct flow Zirrigation water. The ditch diverts from Fountain creek, just north of the Town of Fountain, and water deliveries are made through the Company's eight mile ditch to service historically irrigated areas under the ditch as well as to an augmentation station that measures direct flow water returning back to Fountain creek on behalf of shareholders. A 42-inch diameter 1,300 foot long siphon conveys ditch water flows under Jimmy Camp Creek to historically irrigated farmland to the south of the City of Fountain. During the 1940's the siphon was constructed from asphalt dipped corrugated steel pipe and has been in service for nearly 76 years. The structure has required significant repairs over the last few years. In reviewing the siphon's age, maintenance history and number of failures, the Company has concluded that the siphon has reached its useful life and the Company intends to rebuild the siphon prior to the 2017 irrigation season.

