

STATE OF COLORADO

Colorado Water Conservation Board

Department of Natural Resources

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TO: Colorado Water Conservation Board Members

FROM: Anna Mauss, P.E., Project Manager
Kirk Russell, P.E., Chief
Finance and Administration Section

DATE: October 18, 2013

SUBJECT: **Agenda Item 8b, October 21, 2013 Special Board Meeting**
Finance – Emergency Loans
Left Hand Ditch Company – Emergency Left Hand Ditch System Repairs

Introduction

The Left Hand Ditch Company (Company) is applying for an Emergency Loan for the Emergency Left Hand Ditch System Repairs 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. Sections of the Company's system were entirely wiped out and other portions were severely damaged. The purpose of this Project is to restore the system water can be delivered to shareholders. The Company's total Project cost is estimated to be \$3,243,620. See attached Project Data Sheet for a location map and project summary.

Staff Recommendation

Staff recommends the Board approve a loan not to exceed \$3,276,056 (\$3,243,620 for project cost and \$32,436 for the 1% service fee) to the Left Hand Ditch Company for 100% of engineering and construction costs related to the Emergency Left Hand Ditch System Repairs Project from the Severance Tax Perpetual Base Fund, up to the approved loan amount. The loan terms shall be three years of no interest followed by 27-years at a blended interest rate of 2.30% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.

Staff additionally 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) calendar days after receipt of said funds.

Background

The Company owns five reservoirs containing about 4,800 acre feet (AF) of water: Lake Isabell, Left Hand Park, Gold Lake, Allens' Lake, and Left Hand Valley Reservoir. All of the reservoirs are operated by the company in a coordinated fashion with the goal for maximizing the water yield to its shareholders.

The Company's service area is roughly located along Left Hand Creek from the foothills of the Front Range east to Niwot, Colorado. The service area of for the Company includes approximately 15,000 acres of irrigated farm land in Boulder County, Colorado. As part of its operations the Company operates and exchange agreement with the Left Hand Water District (District) whereby it stores and delivers water to the District for potable water supply. Other municipal shareholders of the company include the Town of Jamestown, Town of Ward, City of Boulder,

In supplying water to its shareholders, the Company makes delivers to the lateral headgates along Left Hand Creek. The Company owns the diversion dams, headgates, ditch, and appurtenant facilities down to and including the Parshall flume of each lateral diverting from Left Hand Creek. Below each Parshall Flume, the individual lateral ditch company assumes ownership, maintenance and operations responsibility.

The extraordinary flooding occurred in September of 2013 brought massive damage to the Company's System, wiping out major portions of the system and severely damaging others. The Company, with assistance from staff of the Natural Resources Conservation Service, surveyed the damage to the system.

Loan Feasibility Study

Robert Crifasi, Mutual Irrigation Ditch Company Consultant, along with Duane Smith, P.E., Smith Geotechnical, prepared the Loan Feasibility Study titled "*Emergency Loan Application and Feasibility Study*," dated October 2013. The study includes an alternative analysis and preliminary engineering design and cost estimates. The study was prepared in accordance with the CWCBC guidelines.

Borrower – Left Hand Ditch Company

The Company is a Mutual Ditch Company formed on February 27, 1866. The Company diverts water from Left Hand and St. Vrain creeks for delivery across its 15,000-acre service area for the purpose of irrigating farms, ranches, public parks, open space and golf courses. The Company includes 360 shareholders and 16,647 shares of stock.

The Company is governed by a five-member board of directors authorized to oversee the general management of the delivery system and all water flowing into the ditches and reservoirs. Shareholders vote on annual assessment rates at the annual shareholder meeting held in February and a shareholder majority vote is required for the Company to take on debt. The board has authority to assess interest on any delinquent assessments, terminate water deliveries, and can sell stock that is delinquent by two years or more.

Water Rights

The Company owns the 33 most senior direct flow rights on Left Hand Creek totaling 294.58 cfs

and effectively controlling the entire flow of Left Hand Creek. The Company also owns two direct flow priorities out of South St Vrain Creek totaling 726 cfs. Water diverted from South St. Vrain Creek represents a majority of the total supply of the Left Hand Ditch Company. On average the Company annually delivers 22,700 AF of water.

TABLE 1: STORAGE RIGHTS

Storage Rights						
Source	Reservoir Name	Appropriation Date	Adjudication Date	Administration No.	Amount Decreed	Notes
South Fork St. Vrain Creek	Lake Isabelle	9/15/1907	6/1/1926	21076.0	208.38 ac-ft	
		9/15/1907	6/1/1926	21076.0	601.42 ac-ft	
					Total 809.8 ac-ft	
James Creek	Gold Lake	9/1/1879	3/13/1907	11841.10836	354 ac-ft	
		5/18/1904	3/13/1907	19861.0	82 ac-ft	1 st Enlargement
		12/31/1929	7/23/1951	29219.0	290.66 ac-ft	Refill
		12/31/1929	7/23/1951	29219.0	145.34 ac-ft ⁽¹⁾	Refill - Aban
					Total 726.66 ac-ft	
Left Hand Creek	Left Hand Park Reservoir	8/5/1891	3/13/1907	15192.0	185 ac-ft	
		8/1/1961	2/25/1971	40755.0	1102.32 ac-ft	1 st Enlargement
					Total 1287.32 ac-ft	
	Allens Lake	12/2/1918	7/23/1951	21076.0	134.2 ac-ft	
		5/17/1927	7/23/1951	21076.0	569.5 ac-ft	1 st Enlargement
		12/31/1929	7/23/1951	18832.00	703.7 ac-ft	Refill
					Total 1407.4 ac-ft	
	Left Hand Valley Reservoir	5/15/1945	7/23/1951	18832.00	10572.6 ac-ft	
					Total 10572.6 ac-ft	

TABLE 2: DIRECT FLOW WATER RIGHTS

Direct Flow Rights					
Source	Ditch Name	Appropriation Date	Adjudication Date	Administration No.	Amount Decreed
St. Vrain Creek	Left Hand Ditch	6/1/1863	6/2/1882	4900.0	40.77 cfs
		6/1/1870	6/2/1882	7457.0	685.23 cfs
					Total 726.00 cfs
Left Hand Creek	Cochran Ditch	9/1/1860	6/2/1882	3987.0	0.32 cfs
		6/15/1866	6/2/1882	6010.0	8.28 cfs
	Hombaker Ditch	5/15/1861	6/2/1882	4153.0	3.88 cfs
		7/15/1864	6/2/1882	5310.0	1.70 cfs
		6/1/1865	6/2/1882	5631.0	18.66 cfs
	Williamson - Cavey Ditch	5/31/1862	6/2/1882	4534.0	2.68 cfs
		6/1/1863	6/2/1882	4869.0	4.50 cfs
		5/1/1865	6/2/1882	5600.0	6.80 cfs
	Holland Ditch	5/1/1863	6/2/1882	4869.0	2.00 cfs
		5/1/1866	6/2/1882	5965.0	1.28 cfs
		10/21/1873	6/2/1882	8695.0	69.40 cfs
	Bader No. 2 Ditch	5/31/1863	6/2/1882	4899.0	1.46 cfs
		3/15/1870	6/2/1882	7379.0	6.72 cfs
	Farmers Ditch	6/1/1863	6/2/1882	4900.0	1.63 cfs
		6/15/1865	6/2/1882	5645.0	2.03 cfs
		11/1/1870	6/2/1882	7610.0	11.61 cfs
	Baum Goynditch	9/26/1863	6/2/1882	5017.0	3.96 cfs
		5/1/1867	6/2/1882	6330.0	6.78 cfs
	Bader No. 1 Ditch	5/31/1864	6/2/1882	5265.0	9.16 cfs
	Altona Ditch	5/31/1865	6/2/1882	5630.0	2.01 cfs
	Table Mountain Ditch	4/15/1875	6/2/1882	9236.0	8.66 cfs
		6/25/1866	6/2/1882	6020.0	15.30 cfs
	Way Ditch	4/15/1874	6/2/1882	8871.0	26.43 cfs
		5/1/1868	6/2/1882	6696.0	4.20 cfs
	Toll Gate Ditch	4/1/1870	6/2/1882	7396.0	2.63 cfs
		5/1/1874	6/2/1882	8887.0	2.72 cfs
		5/3/1879	6/2/1882	10715.0	3.94 cfs
	Star Ditch	4/1/1873	6/2/1882	7761.0	25.68 cfs
	Crocker Ditch	5/1/1871	6/2/1882	7791.0	3.83 cfs
		5/1/1872	6/2/1882	8157.0	14.98 cfs
	Johnson Ditch	4/1/1873	6/2/1882	8992.0	8.55 cfs
	Lake Ditch	5/15/1874	6/2/1882	8871.0	8.92 cfs
		4/15/1879	6/2/1882	10697.0	3.88 cfs
					Total 294.58 cfs

Project Description

The purpose of this loan request is to restore the Company system to its pre-flood condition.

The Company has retained Duane H. Smith, P.E. of Smith Geotechnical/Engineering Consultants as the primary engineer for this project. Because of the extensive nature of the damage to the system, and the urgency to move forward on various components simultaneously, the Company may retain other Professional Engineers to develop plans and designs for individual structural project components.

Alternatives considered were:

Alternative 1 – Do Nothing: Failure to repair the Left Hand Ditch system would lead to the abandonment of multiple water rights within the system. Numerous irrigators within the system would be unable to receive water. The Company would not be able to supply water to the Left Hand Water District which would harm the potable water supply for the Left Hand Valley area.

Alternative 2 – Rebuilding Collaboratively with Improvements: The Company identified flood mitigation measures and possible fish passage structures that could enhance its system beyond its pre-flood condition. Depending on the availability of funding and the feasibility of enhancements, the Company would be willing to consider implementing these items on a case by case basis. However, because funding sources for enhancements are unidentified, implementing this alternative is not practicable at this time.

Selected Alternative 3 – Restore system to pre-flood condition:

Left Hand Creek Parshall Flume and Recorder Station

- Replace Parshall flume and recorder station. Ensure device operates to EO's Standards.

Left Hand Valley Reservoir

- Debris removal at the inlet into the lake.
- Repair Dam spillway, dam access road, secondary spillway.

Left Hand Valley Diversion

- Restore Left Hand Creek to its pre-flood channel in this area.
- Repair Left Hand Valley filler ditch. Ensure measuring device operates to SEO's Standards.

Crocker Ditch

- Restore Left Hand Creek to its pre-flood channel in this area.
- Remove debris from ditch. Ensure device operates to SEO's Standards.

Allen's Lake Filler Canal Head Gate (Also Lake Ditch inlet and Toll Gate Ditches headgate)

- Survey and design new dam and headgate structure.
- Replace diversion dam and headgate structure. Ensure device operates to SEO's Standards.
- Coordinate with Boulder County Transportation .
- Perform grade survey to determine if the Parshall Flume is still useable.
- Replace upper section of the ditch

Allen's Lake Filler Canal at Geer Canyon Road

- Replace culvert where ditch crosses Geer Canyon at road.
- Remove debris in this area.

Table Mountain Ditch

- Survey and design new dam and headgate structure.
- Remove/Replace destroyed and unusable diversion dam and headgate structure.
- Ensure measuring device operates to SEO's Standards.
- Restore Left Hand Creek to its pre-flood channel in this area.
- Remove debris and Repair ditch.
- Evaluate and install possible fish passage structures to enhance the ability of fish to move through the structure.

Bader Ditch

- Survey and design new dam and headgate structure.
- Replace diversion dam and headgate structure. Ensure device operates to SEO's Standards.
- Evaluate if it is cost effective to consolidate the Bader and Table Mountain Diversions because of their close proximity. (This may cost less than building two separate structures.)
- Remove debris in ditch. Repair ditch.

Hinman Ditch

- Remove debris in ditch.
- Ensure measuring device operates to Repair ditch.

Star Ditch

- Survey and design new dam and headgate structure.
- Replace diversion dam and headgate structure.
- Ensure measuring device operates to SEO's Standards.
- Remove debris in ditch. Repair Ditch
- Stabilize Left Hand Creek around the diversion dam.

Holland Ditch

- Remove debris in this area. Repair Ditch
- Ensure measuring device operates to State Engineer's Office Standards.

Williamson Ditch

- Replace or repair headgate wheel.
- Remove sediment from secondary headgate wheel well.
- Ensure measuring device operates to SEO's Standards.
- Stabilize Left Hand Creek surrounding the diversion dam.
- Evaluate and install possible fish passage structures to enhance the ability of fish to move through the structure.

Gold Lake Filler Ditch

- Repair ditch breaches.

Due to the agricultural exemption, this alternative is believed to be exempt from the Clean Water Act and therefore a U.S. Army Corps of Engineers permit will not be required. Boulder County Land Use will be contacted to determine if any county permits are required.

The estimated engineering and construction cost of the selected alternative is \$3,243,620.

TABLE 3: PROJECT COST SUMMARY

Task	Cost
Design	\$442,000
Permitting	\$22,000
Construction	\$2,100,125
Other (includes bonding, mobilization)	\$166,670
Contingency	\$512,825
Total	\$3,243,620

Collaboration: The borrower is encouraged to consider rebuilding a river diversion system that enhances consumptive and nonconsumptive 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 of the Project is expected to commence in October of 2011. The Project is expected to take approximately 18 months. The entire schedule will be rushed to the maximum amount practicable to minimize impacts to shareholders in the 2014 irrigation season. However, because diversion dams must be designed and then built during times of appropriate low flows, it may be difficult to have some facilities installed prior to the 2014 irrigation season.

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 2.30% with the principal amortized over 27-years (Ownership: 46% Agriculture, 38% Middle-Income Municipal, and 16% High-Income Municipal). Staff is recommending an exemption to Financial Policy #11 to allow for 100% funding of eligible Project costs.

TABLE 4: FINANCIAL SUMMARY

Total Project Cost	\$3,243,620
CWCB Loan Amount (100% of total Project cost)	\$3,243,620
CWCB Loan Amount (Including 1% Service Fee)	\$3,276,056
CWCB Annual Loan Payment	\$164,231
CWCB Loan Obligation (Including 10% Reserve)	\$180,654
Number of Shares	16,647
Annual Cost Per Share for Loan (with Reserve Account)	\$11
Current Assessment per Share	\$17
Future Assessment per Share	\$28

Creditworthiness: The Company has two existing loans with the CWCB as summarized below:

TABLE 5: EXISTING DEBT

Contract Number	Original Balance	Current Balance	Annual Payment	Maturity Date	Collateral
C153804	\$560,000	\$384,027	\$33,875	June 1, 2029	Left Hand Valley Dams and Reservoirs
C150336	\$1,157,157	\$1,157,157	\$54,918	TBD (Note: this project is not substantially complete as of 10/1/13)	Pledge of assessment revenues

TABLE 6: FINANCIAL RATIOS

Financial Ratio	Past 2 Years	Future w/ Project
Operating Ratio (revenues/expenses) weak: <100% - average: 100% - 120% - strong: >120%	111% (Average) \$319K/\$287K	100% ⁽¹⁾ (Weak/Average) \$522K/\$522K
Debt Service Coverage Ratio (revenues-expenses)/debt service weak: <100% - average: 100% - 120% - strong: >120%	194% ⁽²⁾ (Strong) \$319K-\$253K \$34K	100% (Average) \$522-\$253K \$269K
Cash Reserves to Current Expenses weak: <50% - average: 50% - 100% - strong: >100%	189% (Strong) \$541K/\$287K	104% (Strong) \$541K/\$522K
Annual Operating Cost per Acre-Foot (22,700 AF) weak: >\$20 - average: \$10 - \$20 - strong: <\$10	\$12.64 (Average) \$287K/22.7 AF	\$23.01 (Weak) \$522K/22.7 AF

(1) Assumes a future assessment of \$31/share.

(2) Only includes C153804 debt service as C150336 is not yet in repayment.

Collateral: As security for the loan, the Company will pledge its assessment revenues backed by a rate covenant and the Left Hand Valley Dam and Reservoir. This is in compliance with the CWCB Financial Policy #5 (Collateral).

cc: Robert Crifasi, Mutual Irrigation Ditch Company Consultant
Terry Plummer, VP of Operations, Left Hand Ditch Company
Susan Schneider/Jennifer Mele, Colorado's Attorney General Office

Attachment: Water Project Loan Program – Project Data Sheet

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

C150370

Borrower: Left Hand Ditch Company

County: Boulder

Project Name: Left Hand Ditch System
Repairs

Project Type: Ditch Rehabilitation

Drainage Basin/ District: South Platte / 5

Water Source: Left Hand &
St. Vrain Creeks

Total Project Cost: \$3,243,620

Funding Source: Severance Tax PBF

Type of Borrower: Blended

Average Annual Diversion: 22,700 AF

CWCB Loan: \$3,276,056
(with 1% service fee)

Interest Rate: 2.30% **Term:** 30-years
(46% Ag, 38% Mid, 16% High)

The Company plans to restore its system to pre-flood condition which includes: Replacement of Left Hand Creek Parshall Flume and Recorder Station, repair of Left hand Valley Diversion repair of several ditches: Crocker, Table mountain, Bader, Hunman, Star, Holland, Williamson, and Gold Lake Filler Ditch, replace the diversion dam and headgate structure at Allen's Lake Filler Canal Head Gate

