STATE OF COLORADO

Colorado Water Conservation Board
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TO: Colorado Water Conservation Board Members

FROM: Ryan Edwards, P.E., Project Manager
Kirk Russell, P.E., Chief
Finance Section

DATE: July 6, 2012

SUBJECT: **Agenda Item 17b, July 17-18, 2012 Board Meeting**
Finance Section – New Construction Fund Loans
The Left Hand Ditch Company – Allen Lake and Lake Isabelle Repair Project

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Introduction
The Left Hand Ditch Company (Company) is applying for a loan for the Allen Lake and Lake Isabelle Repair Project (Project). The purpose of the Project is to make safety improvements to the dams. The loan request is for 90% of the estimated $1,273,000 total cost of the Project. See the attached Project Data Sheet for a location map and project summary.

Staff Recommendation
Staff recommends the Board approve a loan, from the Construction Fund, not to exceed $1,157,157 ($1,145,700 for project costs and $11,457 for the 1% Loan Service Fee) to The Left Hand Ditch Company for the Allen Lake and Lake Isabelle Repair Project. The loan terms shall be 30 years at a blended interest rate of 2.45% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.

Background
The Company, located in Boulder County, provides irrigation water to a service area of approximately 15,000 acres due north of Boulder. The service area follows Left Hand Creek from the Front Range foothills east to the Town of Niwot, and spans from the northern edge of Boulder Reservoir up to Foothills Reservoir. The Company owns and maintains five reservoirs used for storage and the controlled release of the Company's water rights. Two of the reservoirs, Allen Lake and Lake Isabelle, are in need of rehabilitation.

Allen Lake is an off-channel reservoir owned and operated by the Company. It is fed from the Lake Ditch and has a storage capacity of 704 acre-feet. The upstream face of the 24.5-foot tall dam is lined with hand placed rip-rap on a typical slope of 2H:1V. The grade is even steeper in some locations due to years of wave action that has displaced rip-rap and eroded some of the

embankment. The State Engineer's Office (SEO) has expressed a concern over the reliability of the dam. Without repairs to the rip-rap and flattening out of the slope the Company is facing the potential of a SEO restriction in the near future.

At an elevation of nearly 11,000 feet, Lake Isabelle is the highest elevation reservoir in the Left Hand Ditch system. It lies within the Indian Peaks Wilderness which is operated by the U.S. Forest Service, and it is only accessible by foot or helicopter. At full storage the capacity of the reservoir is 550 acre-feet. A rock tunnel is used to divert water through a mountainside to an outlet structure. The outlet structure consists of a gate valve located at the bottom of a 60-foot shaft. The gate valve is used to control release rates during the irrigation season and shut off releases to refill the reservoir during winter months. The valve can no longer be reliably operated from the control tower atop the shaft, thereby requiring an operator to climb down the shaft to manually control the valve. A series of wooden platforms and ladders descending the shaft is the only way to access the valve. When descending the shaft confined space protocols, as prescribed by the Occupational Safety and Health Administration (OSHA), must be followed, which includes air quality monitoring and the availability of emergency rescue equipment.

Loan Feasibility Study

The loan feasibility study, titled "Feasibility Study for Allen Lake and Lake Isabelle," dated May 2012, was prepared by Clint Brown, P.E. from Smith Geotechnical. Support was provided by Terry Plumber, Vice President of Maintenance & Operations for The Left Hand Ditch Company; and legal services were provided by Clark G. Edwards from Hutchinson Black and Cook, LLC. The study was prepared in accordance with CWCB guidelines and includes preliminary engineering and an engineer's estimate of probable cost that were used in determination of the total Project cost.

The 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 16,800 shares of stock. The water delivery system includes an elaborate network of ditches, laterals, reservoirs, headgates, flumes and weir structures.

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, located in the South Platte River Basin, District 5, owns numerous direct flow and storage water rights appropriated as far back as 1860. Included in their portfolio are the 33 most senior direct flow rights on Left Hand Creek, totaling 294.58 cfs and two direct flow priorities out of South St. Vrain Creek, totaling 726 cfs. Storage rights in their five reservoirs, including refill rights, total 14,804 acre-feet. On average the Company annually delivers 22,700 AF of water.

Project Description

The object of this Project is to make repairs to the Allen Lake Dam and the Lake Isabelle outlet works, increasing system safety and reducing operational expenses. Smith Geotechnical was hired by the Company to inspect both reservoirs and assist in analyzing repair alternatives.

Allen Lake: Alternatives for addressing the erosion concerns included a no-action analysis, re-grade and repair with rock riprap, and re-grade and repair with concrete. The Company selected rip-rap as the preferred method of slope protection based on its cost, durability, and ease of construction.

Lake Isabelle: Alternatives for improving the outlet works included a no-action analysis, upgrading the control tower and valve access, and relocation of the existing control gate. The Company selected relocating the control gate to a downstream location near the end of the tunnel, repairing the outlet pipe and sealing off the shaft. The decision was based on the future control reliability for the valve and ease of access should the valve require manual operation, thereby reducing safety concerns and operational expenses.

Preliminary engineering documents have been prepared and used for estimating the total project cost summary. Table 1 provides a summary of estimated project expenses. Final engineering documents for Allen Lake have been submitted to the SEO and approval is anticipated by mid July 2012. Lake Isabelle has a no public hazard SEO classification; therefore, SEO approval is not required.

TABLE 1: TOTAL PROJECT COST SUMMARY

Task	Cost
Engineering: Allen Lake	$83,000
Lake Isabelle	$93,000
Construction: Allen Lake	$411,000
Lake Isabelle	$465,000
Permitting	$45,000
Contingency (16%)	$176,000
Total	$1,273,000

Construction on Allen Lake is expected to begin in the fall of 2012, with completion expected in December 2012. Construction on Lake Isabelle is scheduled to begin in the summer of 2013, with completion expected by October 2013. Due to its remote location, Lake Isabelle is only accessible on foot or by helicopter. The total project cost summary assumes all labor will access the site by hiking in and material and equipment deliveries will be by helicopter. A U.S. Forest Service permit has been obtained, allowing the Company to conduct construction activities within the Indian Peaks Wilderness for work on Lake Isabelle.

Financial Analysis
The Company qualifies for a blended (46% agricultural, 38% middle-income municipal, 16% high-income municipal) interest rate of 2.45% for a 30-year term. Table 2 provides a financial summary of the loan request.

TABLE 2: PROJECT FINANCIAL SUMMARY

Total Project Cost	$1,273,000
Borrower Contribution	$127,300
CWCB Loan Amount (90% of total Project cost)	$1,145,700
CWCB Loan Amount (including 1% Service Fee)	$1,157,157
CWCB Annual Loan Payment	$54,918
CWCB Loan Obligation (including 10% debt reserve funding)	$60,410
Number of Shareholders	360
Number of Shares	16,800
Current Annual Assessment (per Share)	$15.00
Annual Cost of Project (per Share)	$3.60
Cost of Project per AF to Preserve Storage (based on 1,254 AF)	$1,015

CWCB will disburse funds at a rate of no greater than 90% of invoice amount for Project related expenses, up to the approved limit of $1,145,700.

Creditworthiness:
The Company has sufficient cash reserves on hand to cover its portion of the estimated total project cost. The Company generates revenue through annual share assessments. The assessments are evaluated annually and set at a rate sufficient to cover projected operation, maintenance and debt service obligations.

The Company has an existing loan with the CWCB (C153804). The $560,000 loan, approved January 12, 1998, has a 30-year term at a rate of 4.375%. The loan was for a spillway repair project on Left Hand Valley Reservoir. The payment, in the amount of $33,875, is due annually on June 1. The principal balance as of July 6, 2012 is $375,660 and the loan is scheduled to mature in 2029. The Company has a history of making its payments to CWCB on time.

TABLE 3: FINANCIAL RATIOS

Financial Ratio	2010-2011	Future w/ Project
Operating Ratio (operating revenues/operating expenses) weak: <100% - average: 100% - 120% - strong: >120%	114% (average) $304K/$266K	100% (average) $326K/$326K
Debt Service Coverage Ratio (total eligible revenues-operating expenses)/total debt service weak: <100% - average: 100% - 120% - strong: >120%	212% (strong) ($304K-$232K)/$34K	100% (average) ($326K-$232K)/$94K
Cash Reserves to Current Expenses weak: <50% - average: 50% - 100% - strong: >100%	204% (strong) $541K/$266K	127% (strong) $414K/$326K
Annual Operating Cost per Acre-Foot (based on 22,700 AF) weak: >$20 - average: $10 - $20 - strong: <$10	$11.72 (average) $266K/22,700	$14.36 (average) $326K/22,700

Collateral: As security for the loan, the Company will pledge assessment revenues backed by a rate covenant and the Company will provide annual financial reporting. This is in compliance with the CWCB Financial Policy #5 (Collateral).

cc: Richard Behrmann, President, Left Hand Ditch Company
Susan Schneider, AGO
Peter Johnson, AGO

Attachment: Water Project Loan Program – Project Data Sheet