COLORADO
Colorado Water Conservation Board
Department of Natural Resources

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TO: Colorado Water Conservation Board Members

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

DATE: November 19-20, 2014 Board Meeting

AGENDA ITEM: 27e. - Water Project Loan
West Reservoir and Ditch Company
Repair of West Reservoir No.1 Outlet Works

Introduction

West Reservoir and Ditch Company (Company) is applying for a loan for the Repair of West Reservoir No.1 Outlet Works (Project). The Company is under a no-fill storage restriction due to deterioration of the outlet works conduit, which will need to be replaced, along with improvements including an intake structure for a manually-operated slide gate and trash racks, downstream stilling basin, and upstream riprap slope protection. The total Project cost is estimated at $471,577. The Company was awarded a WSRA grant of $225,658 at the September 2014 CWCB Board Meeting, contingent upon approval of a loan to cover the remaining $245,919 Project costs.

The attached Project Data Sheet provides a location map and a Project summary.

Staff Recommendation

Staff recommends the Board approve a loan not to exceed $248,378 ($245,919 for project costs and $2,459 for the 1% Loan Service Fee) from the Severance Tax Perpetual Base Fund to the West Reservoir and Ditch Company for costs associated with engineering and construction of the Repair of West Reservoir No.1 Outlet Works project. The loan terms shall be 30 years at the agricultural interest rate of 2.00% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.

Staff also recommends that no funds be disbursed until the Company prepares and records an easement encompassing the West Reservoir No. 1 high water limits and additional perimeter maintenance access.

Background / Purpose of Project
West Reservoir and Ditch Company was originally founded for the purposes of the construction of West Reservoir No. 1 and the Wakefield Ditch in 1905. Those structures were designed to convey irrigation water from branches of Jay Creek, eastward across Oak Mesa for delivery to the Basin and Wakefield Mesa near Paonia. The water is used as stock water as the ditch runs east across 1,100 acres of private land, then onto 600 acres of BLM grazing lease. From there it is used to irrigate three ranches' hay fields and pastures. Return flows enter Roatcap Creek, augmenting irrigation water for the Overland Ditch and the Fire Mountain Canal.

The West Reservoir was improved in the 1950s, but is now in need of repair. As a result of an annual inspection of West Reservoir by the Dam Safety Branch of the State Engineer's Office (SEO) and video inspection of the dam outlet pipe in May of 2103, the SEO delivered a "no fill" storage restriction order for the reservoir. The SEO determined that the existing deteriorated outlet pipe is not a candidate for rehabilitation using cast-in-place pipe lining or traditional grouted in-place slip-lining because of the condition of the existing pipe, the change in grade, and a gap in the pipe located about 36 feet from the downstream end. In a June 2013 letter the SEO requested a design for replacement of the outlet pipe be developed. The reservoir was subsequently drained by the use of pumps rather than the existing outlet pipe.

Loan Feasibility Study
Nick Hughes, President of the Company, with assistance from Doug Neighbors, P.E. of RJH Consultants, Inc., prepared a Loan Feasibility Study titled "*West Reservoir and Ditch Outlet Repair Project*", dated September 2014. The Study was prepared in accordance with CWCB guidelines and includes preliminary engineering and the engineers' estimate of probable costs.

Borrower - West Reservoir and Ditch Company
West Reservoir and Ditch Company is a non-profit mutual ditch company founded in 1908. The Company, in good standing with the Secretary of State, comprises three shareholders, who respectively own 969, 396, and 96 shares of the Company's total 1,200 shares. The Company's only source of revenue comes from shareholder assessments. Per the Company's bylaws, Company stock can be assessed for "construction, operation, maintenance, repairs, and betterment of the system". Assessments are set annually at the shareholders' meeting, based upon Company projections of expenses for each coming year.

Water Rights
West Reservoir is an off-stream reservoir, collecting run-off water from the mountains surrounding the Jay Creek drainage and the Roatcap Creek drainage. Company water rights include 454 acre feet of storage rights, and 55.3 CFS of surface water rights to meet the storage right. The 454 acre feet storage has an appropriation date of 1905.

TABLE 1: IMPACTED WATER RIGHTS

Name	Amount	Appropriation Date	Adjudication Date	Water Court Case No.
WEST RESERVOIR	454.5 AF	1905-10-19	1914-06-23	CA0617
WEST RES SUPPLY D EXT	36 CFS	1950-10-03	1954-03-20	CA3503
WEST RES SUP D EX NO 2	19.3 CFS	1950-10-01	1964-01-31	CA4808

The average annual diversions of the Company are 604 AF.

Project Description
Two alternatives were considered for this project:

> Alternative 1 – No action: The no-action alternative is considered unacceptable to the Company, as they are presently without the ability to store water.

Alternative 2 – Rehabilitate dam: The project comprises three elements: safely emptying the reservoir without using the existing damaged outlet pipe, engineering design, and construction. The Company has already emptied the reservoir using pumps and temporary piping over the dam. The Company will hire a contractor to excavate through the dam to remove the existing outlet conduit, construct a new intake structure, place a new outlet works conduit, construct a new stilling basin, replace the embankment fill, and place upstream riprap slope protection.

The cost of the Project is estimated to be $471,577 as shown in Table 2 below.

TABLE 1: ESTIMATED PROJECT COST

Task Description	Amount
Drain Reservoir	$ 45,260
Construction	$ 428,706
Engineering	$ 42,871
Total	$ 471,577

CWCB will disburse funds for Project related expenses at a rate of 50% loan to 50% grant for each invoice amount, up to the approved loan and grant limits.

Schedule: Draining of the reservoir has already been accomplished; upon loan approval, the engineering design and bidding phase will commence, followed by groundbreaking in spring 2015, and construction completion targeted for fall of 2015.

Financial Analysis

The Company qualifies for a 2% agricultural interest rate for a 30-year repayment term.

The Company was approved for a grant from the CWCB Water Supply Reserve Account (WSRA) in the amount of $225,658, contingent upon the approval of this loan application. Grant funds will be used for the borrower match requirement customary for a CWCB loan. The Company will cover any costs that exceed the estimated Project cost.

TABLE 2: FINANCIAL SUMMARY

Total Project Cost	$ 471,577
WSRA Grant (48% of Project Cost)	$ 225,658
CWCB Loan (52% of Project Cost)	$ 245,919
CWCB Loan (Including 1% Service Fee)	$ 248,378
CWCB Annual Loan Payment	$ 11,090
CWCB Annual Loan Obligation (including 10% debt reserve funding)	$ 12,199
Cost of Project per acre-foot of water storage (454 AF Restored)	$ 1,039
Current Assessment per Share	$ 3.88
Future Assessment per Share	$ 12.40

Creditworthiness:
At this time the Company has no existing debt. The Company meets annually and assesses shareholders for anticipated expenses for the coming year. The Company plans to levy a special assessment per share throughout the life of the loan to cover debt obligation created by this loan.

TABLE 3: FINANCIAL RATIOS

Financial Ratio	Past 3 Years	Future w/ Project
Operating Ratio (revenues/expenses) weak: <100% - average: 100% - 120% - strong: >120%	113% (average) $18.2K/$16.1K	100% (average) $28.4K/$28.3K
Debt Service Coverage Ratio (revenues-expenses)/debt service weak: <100% - average: 100% - 120% - strong: >120%	No Debt	101% (average) ($28.4K-$16.1K)/$12.2K
Cash Reserves to Current Expenses weak: <50% - average: 50% - 100% - strong: >100%	108% (strong) $17.4K/$16.1K	62% (average) $6.3K/$28.3K
Annual Operating Cost per Acre-Foot (604) weak: >$20 - average: $10 - $20 - strong: <$10	$36 (weak) $16.1K/604 AF	$27 (weak) $28.3K/604 AF

Notes:
1. *Operating revenues and expenses are averaged over three years.*

Collateral: As security for the loan, the Company will pledge assessment revenues and the water rights described in Table 1. This is in compliance with the CWCB Financial Policy #5 (Collateral).

cc: Nick Hughes, President, West Reservoir and Ditch Company
Susan Schneider/Jennifer Mele, Colorado Attorney General's Office

Attachment: Project Data Sheet

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West Reservoir And Ditch Outlet Repair Project

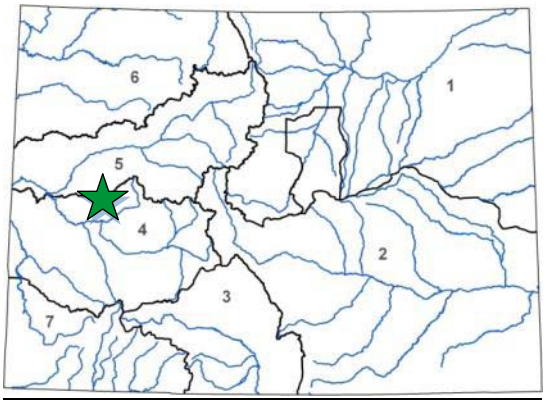
West Reservoir and Ditch Company

November **2014 Board Meeting**

LOAN DETAILS	
Project Cost:	$ 471,577
CWCB Loan (with Service Fee):	$248,378
Loan Term and Interest Rate:	30 Years @ 2%
Funding Source:	

BORROWER TYPE		
Agriculture	*Municipal*	*Commercial*
100%	0%	0%

PROJECT DETAILS	
Project Type:	Outlet Rehabilitation
Average Annual Diversion:	604 AF



LOCATION			
County:			Delta
Water Source:			Jay Creek
Drainage Basin:			Gunnison
Division:	*4*	*District:*	40

The West Reservoir and Ditch Company operates West Reservoir No. 1, providing water seven miles eastward via Wakefield Ditch to Wakefield Mesa. The water is available for livestock as it traverses east Oak Mesa, and irrigates approximately 600 acres of hay and pasture. The current landowners use the Oak Mesa Reservoir and Ditch water for spring irrigation, and, when those flows are exhausted, use the West Reservoir flows for mid-summer to fall irrigation. The West Reservoir was improved in the early 1950s, but is now under a storage restriction order from the Office of the State Engineer due to deterioration of the outlet pipe. This project will include a low-level outlet sized to meet SEO release requirements, an outlet stilling basin structure downstream of the dam for energy dissipation, and an intake structure for a manually-operated slide gate and trash racks. Construction is scheduled for Spring of 2015.