COLORADO
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., Finance Section Chief

DATE: July 15-16, 2015 Board Meeting

AGENDA ITEM: 12a - Change to Existing Loans
Pisgah Reservoir and Ditch Company – Mount Pisgah Dam/Wrights Reservoir Outlet Works Rehabilitation Project

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Introduction

The Pisgah Reservoir and Ditch Company (Company) received approval of a $161,345 CWCB loan (C150341) and a matching $161,345 WSRA grant (C150505) to finance the Mount Pisgah Dam/Wrights Reservoir Outlet Works Rehabilitation Project (Project) at the September 2012 CWCB Board Meeting. The purpose of the Project is to make improvements to the Pisgah Dam outlet works, per the State Engineer's Office direction. The loan and grant together funded approximately 90% of the Project's 2012 estimated cost of $362,690. The Company returned to CWCB to seek additional funds based on final engineering and were approved for a total loan of $543,655 at the November 2014 CWCB Board Meeting; the WSRA grant remained unchanged. As a result of the bids received in May 2015, the Company is requesting an additional increase to its loan, but is not seeking an increase to its WSRA grant. See attached Project Data Sheet for a location map and Project summary.

Staff Recommendation

Staff recommends the Board approve a loan increase of $623,170 ($617,000 for Project costs and $6,170 for the 1% Loan Service Fee) for a total loan not to exceed $1,172,261 ($1,160,655 for Project cost and $11,606 for the 1% Loan Service Fee) to the Pisgah Reservoir and Ditch Company for engineering and construction costs related to the Mount Pisgah Dam/Wrights Reservoir Outlet Works Rehabilitation Project from the Construction Fund. The loan terms shall remain at 30 years at a blended interest rate of 1.75% per annum. Security for the loan shall be a pledge of assessment revenues backed by an assessment covenant and the Wrights Reservoir (aka Mount Pisgah Reservoir) and Mount Pisgah Dam including all associated appurtenances, rights-of-ways, easements, and the underlying parcel, which is in compliance with CWCB Financial Policy #5.

Background

The Company owns and operates Wrights Reservoir and Pisgah Dam (Pisgah), located in Teller County, for the benefit of its shareholders. The reservoir is an on-channel reservoir along Fourmile Creek and has a normal storage capacity of 2,192 acre-feet (AF). After release from the reservoir, Fourmile Creek conveys the Company's water to the Arkansas River, where it passes through Pueblo Reservoir before being diverted to shareholders through the Catlin Canal.

Pisgah was originally constructed in 1911. It is classified as a significant hazard dam and stands 69 feet high, 610 feet long, and 12 feet wide at the crest. As the result of an upstream slope failure in 1928, a new outlet conduit was constructed through the right abutment, and the original outlet works were abandoned. In 1988, the spillway was enlarged to pass the 100-yr, 24-hr rain event in accordance with the State Engineer's Office (SEO) guidelines. An additional spillway study began in 2010 using the SEO's Extreme Precipitation Analysis Tool (EPAT) but is on hold in the expectation that the SEO will resolve the errors and inconsistencies which have been found in EPAT.

The SEO inspected Pisgah in June 2011. The Engineer's Inspection Report issued by the SEO identified multiple deficiencies and safety concerns and placed conditional requirements on the full storage capacity of the reservoir. To avoid a storage level restriction order, the Company is required to modify the outlet works and replace the existing control valves.

Project Update

The Project is intended to improve the safety and operation of the dam's low level outlet works through the right abutment and properly abandon the dam's original outlet conduits. Final design and construction plans were completed and approved by the SEO in October 2014. Project changes between the preliminary and final design included: replacing both gate valves instead of eliminating one and only replacing one; using the new upstream sluice gate as solely a guard gate and using new mid-dam knife gate valves for flow control; and properly abandoning the old outlet works. With the exception of the proper abandonment of the old outlet works which was identified as a need during a 2013 SEO inspection of the old outlet, these elements were identified as alternatives in the original 2012 Feasibility Study.

Because of the specialized underwater construction work, bids were solicited from pre-qualified contractors. The Company's design engineer, RJH Consultants, Inc., reviewed the three bids received, and the low-bidder, Inland Potable Services (Contractor), was awarded the contract. The Contractor has divided the work into three separate phases which includes the following:

> ***Phase I – Abandoned Outlet Works:*** Proper abandonment of the dual non-functioning 16-inch diameter outlet conduits originally abandoned in 1928. Includes grouting the conduits and installing a filter diaphragm and drainage system at the discharge end of the conduits.
>
> ***Phase II - Sluice Gate:*** Installation of an upstream gate to allow for an unpressurized outlet. Includes installation of a sluice gate on the intake structure, hydraulic cylinder, hydraulic control and vent piping, and removal and replacement of the trash rack.
>
> ***Phase III – Gate Valves:*** Replacement of the outlet control valves. Includes the removal of existing gate valve operators and valve stems, installation of discharge pipe liners, installation of new knife gate valves, installation of hydraulic controls and piping, replacement of the access ladder, replacement of the valve operator building, and concrete tunnel repairs.

The updated Project cost, updated by the Contractor's bid amount, is shown in Table 1.

TABLE 1: UPDATED PROJECT COST SUMMARY

Task	2014 Project Cost	Updated Project Cost
Design Engineering	$80,000	$141,000
Construction		
Phase I – Abandoned Outlet Works		*$90,000*
Phase II – Sluice Gate		*$240,000*
Phase III – Gate Valves		*$441,000*
Total	$495,000	$771,000
Construction Management		
Phase I – Abandoned Outlet Works		*$48,000*
Phase II – Sluice Gate		*$72,000*
Phase III – Gate Valves		*$96,000*
Final Documentation		*$39,000*
Total	$70,000	$255,000
Contingency	$100,000	$195,000
Total	$745,000	$1,362,000

The Company can complete Phases I and II with the currently secured funds. As these two phases can be completed independently of Phase III, and each represent a safety improvement to the dam, CWCB staff has approved the Notice to Proceed for Phase I and II. CWCB staff will not approve the disbursement of loan funds for Phase III until the Company demonstrates it has the funds necessary to successfully complete Phase III.

Schedule: The current construction schedule is as follows:

Phase	JUN '15	JUL '15	AUG '15	SEP '15	OCT '15	NOV '15
I – Abandoned Outlet Works						
II – Sluice Gate						
III – Gate Valves						

Financial Analysis

Table 2 provides a summary of the Project's financial aspects. The Company's blended interest rate of 1.75% for a 30-year term (Ownership: 93% agricultural, 7% low-income municipal), will remain as per the terms of the original contract.

TABLE 2: FINANCIAL SUMMARY

	2014 Approval	Current Request
Total Project Cost	$745,000	$1,362,000
Borrower's Contribution	$40,000	$40,000
WSRA Grant		
Arkansas River Basin	*$25,000*	*$25,000*
Statewide	*$136,345*	*$136,345*
TOTAL WSRA GRANT	$161,345	$161,345
CWCB Loan Amount	$543,655	$1,160,655
CWCB Loan Amount (Including 1% Service Fee)	$549,091	$1,172,261
CWCB Annual Loan Payment	$23,682	$50,559
CWCB Loan Obligation (Including 10% Reserve)	$26,050	$55,615
Number of Shares	25,000	25,000
Annual Cost Per Share for Loan	$1.04/share	$2.22/share
Current Assessment per Share	$3/share	
Future Assessment per Share	$3/share	
Cost of Project per AF to Preserve Storage (2,192 AF)	$340/AF	$621/AF

The original (2012) funding request was approved with ratios of 45% loan, 45% grant, and 10% borrower's contribution. These ratios will be maintained until the original budget of $362,690 is reached. Project cost in excess of $362,690 will be 100% covered by the loan, up to the approved loan limit. After all disbursements are made, the final loan amount will be approximately 85% of the Project cost.

Creditworthiness: The Company has no other existing debt. In anticipation of this Project, the Company raised its assessments to $3 per share in 2011 and has successfully collected that amount each successive year. Assessments will not need to be raised above the current assessment of $3 per share in order to cover the future debt service and normal operating expenses.

TABLE 3: FINANCIAL RATIOS

Financial Ratio	Past 2 Years	Future w/ Project
Operating Ratio (revenues/expenses) weak: <100% - average: 100% - 120% - strong: >120%	470% (Strong) $75K/$16K	103% (Average) $75K/$73K
Debt Service Coverage Ratio (revenues-expenses)/debt service weak: <100% - average: 100% - 120% - strong: >120%	N/A	104% (Average) $75K-$16K $57K
Cash Reserves to Current Expenses weak: <50% - average: 50% - 100% - strong: >100%	1225% (Strong) $196K/$16K	42% (Weak) $31K/$73K
Annual Operating Cost per Acre-Foot (860 AF) weak: >$20 - average: $10 - $20 - strong: <$10	$19 (Average) $16K/860 AF	$85 (Weak) $73K/860 AF

Collateral: Security for the loan will change from a pledge of assessment revenues backed by an assessment covenant and the Project itself (slide gate and gate operator) to a pledge of assessment revenues backed by an assessment covenant and the Wrights Reservoir (aka Mount Pisgah Reservoir) and Mount Pisgah Dam including all associated appurtenances, rights-of-ways, easements, and the underlying parcel. This remains in compliance with the CWCB Financial Policy #5 (Collateral).

cc: Wayne Whittaker, Secretary, Pisgah Reservoir and Ditch Company
Susan Schneider/Jennifer Mele, Colorado Attorney General's Office

Attachment: Water Project Loan Program – Project Data Sheet

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Mt. Pisgah Dam/Wrights Reservoir Outlet Works Rehabilitation

Pisgah Reservoir and Ditch Company

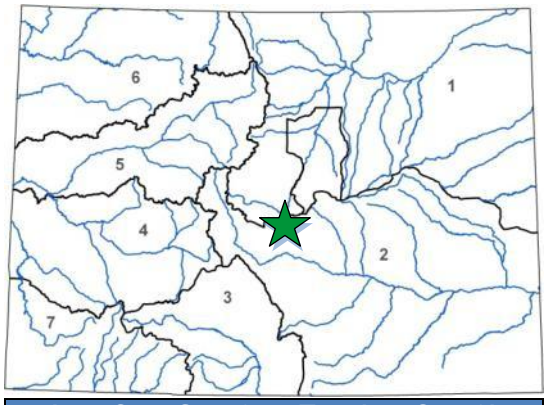
September 2015 Board Meeting

(Loan Increase)

LOAN DETAILS	
Project Cost:	$1,362,000
CWCB Loan (with Service Fee):	$1,160,655
Loan Term and Interest Rate:	30 Years @ 1.75%
Funding Source:	*Construction Fund*

BORROWER TYPE		
Agriculture	*Municipal*	*Commercial*
93%	7% Low - 0% Mid - 0% High	0%

PROJECT DETAILS	
Project Type:	Reservoir Rehabilitation
Average Annual Diversion:	860 AF
Water Supply Storage Preserved:	2,192 AF



LOCATION			
County:			Teller
Water Source:			Fourmile Creek
Drainage Basin:			Arkansas
Division:	2	*District:*	12

The Pisgah Reservoir and Ditch Company provides raw water for the irrigation of approximately 20,000 acres of agricultural land across an 18 mile stretch from Manzanola to La Junta. Primary shareholders include Catlin Canal Company, Canon Heights Irrigation and Reservoir Company, Park Center Water District, City of Rocky Ford, Colorado Parks and Wildlife, and individual agricultural users.

The Company was approved for a $161,345 loan and a $161,345 WSRA grant at the September 2012 CWCB Board Meeting to modify the operational inlet and outlet works and replace existing control valves on Pisgah Dam, in compliance with an SEO conditional order. The scope increased during final design resulting in an increase to the loan. In response to bids received, the Company is again seeking an increase to its CWCB loan. Work to be done includes the proper abandonment of the abandoned outlet, the installation of a sluice gate on the outlet's intake, and the replacement of the flow control gate valves. Construction began in June 2015 and is scheduled for completion in November 2015.