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: January 25-26, 2016 Board Meeting

AGENDA ITEM: 19a. Change to Existing Loans
North Poudre Irrigation Company – Reservoir No. 4 Rehabilitation

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Introduction

The North Poudre Irrigation Company (Company) received approval of a $1,636,200 CWCB loan (contract number CT2015-003, C150378) to finance the Reservoir No. 4 Rehabilitation (Project) at the November 2013 Board Meeting. The purpose of the Project is to remove the State Engineer's Office Dam Safety Branch's (SEO) storage restriction on the reservoir and allow storage of its full decree. This will be accomplished by rehabilitating the reservoir's aging outlet works, constructing a larger spillway, and mitigating dam seepage issues. Project costs have increased by approximately 38% of the feasibility cost estimate as a result of design changes and bids received in September 2015. The Company is requesting a loan increase to cover 90% of the current Project costs. See attached Project Data Sheet for a location map and Project summary.

Staff Recommendation

Staff recommends the Board approve a loan increase of $627,210 ($621,000 for Project cost and $6,210 for the 1% Loan Service Fee), for a total loan not to exceed $2,263,410 ($2,241,000 for Project cost and $22,410 for the 1% Loan Service Fee) to the North Poudre Irrigation Company for Project costs related to the Reservoir No. 4 Rehabilitation Project, from the Construction Fund. The loan terms shall remain 30 years at a blended interest rate of 2.35% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.

Background

The Company's service area includes approximately 28,000 irrigated acres of farm land in northeastern Larimer County extending from Ft. Collins to north of Wellington. The Company operates 21 storage reservoirs, five flood control dams, and approximately 200 miles of ditches. The irrigated acreage within the service area is primarily used to grow corn, sugar beets, soybeans, hay, and feed crops.

Reservoir No. 4 is an off-stream reservoir with a drainage basin of approximately 320 acres. The dam was constructed in the late 1880s, enlarged in the 1920s, and the outlet works were replaced in the late 1950s. The reservoir has decreed water rights allowing storage of 1,781 acre feet (AF) of water at full capacity with a 918 AF refill right. The reservoir is used to irrigate approximately 150 acres of land downstream, in exchanges to other irrigation companies, and for mitigation of water losses on other portions of the Company's system.

The SEO restricted the reservoir due to aging outlet works, an inadequate spillway, and seepage at the toe of the dam over thirty years ago. Under this restriction the reservoir capacity is approximately 1,107 AF, representing a storage loss of 674 AF. Though the Company has long desired to make the repairs necessary to remove the storage restriction, other projects continued to take precedence. However, the aging outlet works have now deteriorated to the point that the entire reservoir is at risk if these repairs are not performed soon.

Water Rights

The water rights impacted by this project include

TABLE 1: IMPACTED WATER RIGHTS

Name	Amount (AF)	Appropriation Date	Adjudication Date
Reservoir No 4	1,074	11/1/1889	12/9/1904
Reservoir No 4	707	5/15/1903	4/22/1922
Reservoir No 4 (Refill)	918	12/31/1921	9/10/1953

Average annual delivery of the Company is 44,400 AF.

Project Update

Final design has been completed by Ron Slosson, P.E., and was approved by the SEO for construction. During the SEO's design review, the Company was notified that there was a possibility of the dam classification changing from a significant to a high-hazard dam in the future. In response, the Company decided to re-design the spillway so it would pass the Probable Maximum Precipitation (PMP) flood, as would be required for a high-hazard classification dam. It is estimated that this change added at least $100,000 to construction cost for drop and overflow structures in the spillway, in addition to extra design engineering fees.

Construction was split into three phases. The first phase included the removal of cottonwood trees that had taken root within the reservoir's high water line as a result of the Company not storing its full decree for the past thirty years. A local professional arborist was hired to conduct a study and inventory the trees. The study identified winter as the best season to remove the trees to minimize wildlife impacts, and found that more trees than originally planned would not survive if the reservoir were allowed to store its full decree. This work was bid separately due to the specialized nature, timing, and size of the work. This phase was successfully completed in winter 2014 but exceeded the original estimate by $110,000.

The second phase of the Project includes repairs to the dam, outlet works, and spillway. Four contractors submitted bids for this phase, ranging from $1,556,000 to $2,366,000. Zak Dirt was the low bidder, was determined to be qualified, and was therefore the selected contractor. It was noted in all

bids a significantly higher riprap cost overall from the feasibility level cost estimate. Reasons for this include additional quantity due to the high-hazard spillway design as well as an overall rise in materials cost over the last two years due to high local demand and because the local quarry is not currently producing riprap.

The third and final construction phase includes moving the reservoir's high water line and flood inundation level off of neighboring property and, where needed, acquiring neighboring property so that the reservoir no longer impacts non-Company owned land. Included with this work is the relocation of the driveway and parking areas onto Company owned land. Negotiations have been successfully completed with all impacted property owners. As the successful bidder for Phase 2, Zak Dirt is entering into a negotiated bid contract for Phase 3. $20,000 has already been spent on regrading the construction entrance and parking area, and the engineer estimates $125,000 will be needed for the remaining grading operations which includes fill on acquired easements, inlet ditch grading, and additional fence work.

The updated construction cost is $2,490,000 as shown in Table 2. This represents an overall increase of 38% from the feasibility cost estimate.

TABLE 2: UPDATED PROJECT COST

Task	Cost Estimate	Notes
Design Engineering	$249,000	Completed
Phase 1 Construction	$228,900	Completed
Phase 2 Construction	$1,556,000	Contractor's approved bid
Phase 3 Construction	$145,000	Engineer's estimated construction cost
Construction Management	$86,000	Engineer's approved contract
Contingency	$155,600	10% of Phase 2
Easements	$69,500	Projected cost
Total	$2,490,000	

Schedule: Phase 1 construction occurred in January 2014. Phase 2 construction began in November 2015 and is scheduled for completion in May 2016. Phase 3 will occur in conjunction with Phase 2 and is also scheduled for completion in May 2016.

Financial Analysis

Table 3 provides a summary of the Project's financial aspects. The terms of the contract will remain 30 years at a blended interest rate of 2.35% (Ownership: 37% Agriculture, 1% Low Municipal, 57% Mid Municipal, 4% High Municipal, <1% Commercial).

TABLE 3: FINANCIAL SUMMARY

	Original	Current
Total Project Cost	$1,800,000	$2,490,000
Borrower Match (10% of total Project cost)	$180,000	$249,000
CWCB Loan Amount (90% of total Project cost)	$1,620,000	$2,241,000
CWCB Loan Amount (Including 1% Service Fee)	$1,636,200	$2,263,410
CWCB Annual Loan Payment	$76,619	$105,989
CWCB Loan Obligation (Including 10% Reserve)	$84,281	$116,588
Number of Shares	10,000	10,000
Annual Cost Per Share for Loan	$8.42	$11.66
Current Assessment per Share	$120	$130
Future Assessment per Share	$131	$200
Project Cost per AF of Storage (1,781 AF)	$1,011	$1,398

Creditworthiness: The Company has $3,580,188 in existing long-term debt made up of eight CWCB loans as summarized in Table 4. Additionally the Company has been approved for an $876,680 CWCB loan for the Emergency Fossil Creek Reservoir Inlet Diversion Structure Repair (C150368). That project is under construction and still in the loan disbursement phase. All loans are in good standing. In response to current construction projects and future planned projects, the company increased assessments to $200 in 2015 and were successful in collecting that amount.

TABLE 4: EXISTING DEBT

Lender	Original Balance	Current Balance	Annual Payment	Maturity Date	Collateral
CWCB (C153833)	$500,000	$133,807	$36,889	9/1/2019	Undivided 100% Interest in North Poudre Reservoirs #5 & #6
CWCB (C153385)	$1,331,704	$551,644	$77,612	5/1/2024	Undivided 100% Interest Fossil Creek Dam and Reservoir
CWCB (C150013)	$623,778	$341,858	$46,061	5/1/2024	Undivided 100% Interest Fossil Creek Dam and Reservoir
CWCB (C153449)	$1,152,909	$558,114	$67,192	5/1/2026	Undivided 100% Interest Fossil Creek Dam and Reservoir
CWCB (C150170)	$735,280	$495,961	$50,572	2/1/2027	Undivided 100% Interest North Poudre Res #1 (Miner's Lake)
CWCB (C153496)	$404,502	$231,034	$23,574	5/1/2029	Undivided 100% Interest Fossil Creek Dam and Reservoir
CWCB (C153572)	$340,551	$215,094	$19,847	5/1/2031	Undivided 100% Interest Fossil Creek Dam and Reservoir
CWCB (C153637)	$1,761,096	$1,052,676	$64,378	5/1/2035	Undivided 100% Interest in North Poudre Reservoirs #5 & #6
Subtotal (Existing Debt)		$3,580,188	$386,125		
CWCB (C150368) (In Progress)	*$876,680*	*In Disbursement*	*$44,220*	11/1/2045	*Undivided 100% Interest in Fossil Creek Res Inlet Diversion, Assessments*
Total		$4,456,868	$430,345		

TABLE 6: FINANCIAL RATIOS

Financial Ratio	Past 2 Years (2013-2014)	Future w/ Project
Operating Ratio (revenues/expenses) weak: <100% - average: 100% - 120% - strong: >120%	102% (Average) $2.11M/$2.07M	125% (Strong) $2.81M/$2.24M
Debt Service Coverage Ratio (revenues-expenses)/debt service weak: <100% - average: 100% - 120% - strong: >120%	110% (Average) $2.11M-$1.68M $0.39M	202% (Strong) $2.81M-$1.68M $0.56M
Cash Reserves to Current Expenses weak: <50% - average: 50% - 100% - strong: >100%	22% (Weak) $461K/$2.07M	21% (Weak) $461K/$2.24M
Annual Operating Cost per Acre-Foot (44,400 AF) weak: >$20 - average: $10 - $20 - strong: <$10	$47 (Weak) $2.07M/44.4K AF	$50 (Weak) $2.24M/44.4K AF

Collateral: Security for the loan will remain a pledge of assessment revenues backed by an assessment covenant and an undivided 100% interest in Reservoir No. 4 Dam and Reservoir. This is in compliance with the CWCB Financial Policy #5 (Collateral).

cc: Scott Hummer, Manager, North Poudre Irrigation Company
Susan Schneider/Jennifer Mele, Colorado Attorney General's Office

Attachment: Water Project Loan Program – Project Data Sheet

COLORADO
Colorado Water Conservation Board
Department of Natural Resources

Reservoir No. 4 Rehabilitation

North Poudre Irrigation Company

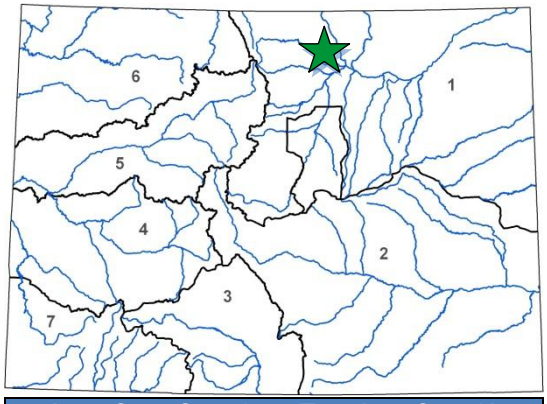
January 2016 Board Meeting

(Loan Increase)

LOAN DETAILS	
Project Cost:	$2,490,000
CWCB Loan (with Service Fee):	$2,263,410
Loan Term and Interest Rate:	30 Years @ 2.35%
Funding Source:	Construction Fund

BORROWER TYPE		
Agriculture	*Municipal*	*Commercial*
37%	1% Low - 57% Mid - 4% High	<1%

PROJECT DETAILS	
Project Type:	Reservoir Rehabilitation
Average Annual Delivery:	44,400 AF
Storage Preserved:	1,781 AF



LOCATION			
County:			Larimer
Water Source:			Cache la Poudre River
Drainage Basin:			South Platte
Division:	1	*District:*	3

The North Poudre Irrigation Company is a mutual ditch company established in 1901. The Company's office is located in Wellington with a service area of approximately 28,000 irrigated acres of farm land. Reservoir No. 4 is an off stream reservoir constructed in the late 1880s, enlarged in the 1920s, and had the outlet works replaced in the late 1950s. The Reservoir No. 4 Rehabilitation Project will modify the dam including its slope, outlet works, drains, spillway, and measurement structure and will also provide a new parking area and floodplain improvements. The purpose of the project is to lift the State Engineer's storage restriction on the reservoir and dam and improve the overall reservoir facility. Project costs have increased from the feasibility cost estimate as a result of design changes and bids received in September 2015. Reservoir construction began in November 2015 and is scheduled for completion in May 2016.