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: May 23-24, 2018 Board Meeting

AGENDA ITEM: 9a. Water Project Loans
San Luis Valley Canal Company – San Luis Valley Canal Headgate Construction

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Introduction

The San Luis Valley Canal Company (Company) is applying for a loan for the San Luis Valley Canal Headgate Construction (Project). The Project is a structural and riparian improvement project that will improve the Company's ability to divert its water right as well as meet non-consumptive needs of the area by replacing a poorly functioning headgate and stabilizing streambanks. The total Project cost is estimated to be $569,000. This Project is one of the projects that the Colorado Rio Grande Restoration Foundation grouped together for a single WSRF grant request, titled "Five Ditches: Rio Grande Diversion and Headgate Improvement Project." That grant request was presented and approved at the September 2017 Board Meeting. The Company is requesting this loan to cover 100% of its Project cost share. See attached Project Data Sheet for a location map and Project summary.

Staff Recommendation

Staff recommends the Board approve a loan not to exceed $303,000 ($300,000 for Project costs and $3,000 for the 1% service fee) to the San Luis Valley Canal Company for costs related to the San Luis Valley Canal Headgate Construction Project, from the Severance Tax Perpetual Base Fund. The loan terms shall be 20 years at a reduced agricultural interest rate of 1.45% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.

Background

The Company operates the San Luis Valley Canal (Canal). Its service area is north of the Rio Grande between Monte Vista to the west, Alamosa to the east, and Hooper to the north. The Canal's headgate structure is located approximately four miles east of Monte Vista on the Rio Grande, adjacent to the Colorado Parks and Wildlife's Rio Grande State Wildlife Area. The Company has approximately 120 miles of canals and provides irrigation water to approximately 20,200 acres. The headgate was built in 1916, is in poor condition, and the debris and sedimentation that accumulates in front of the headgate is a regular maintenance problem for the Company. Additionally, the streambanks upstream and downstream of the headgate are unstable causing concerns that the river could move into old river channels or into the canal, causing significant problems for the canal and downstream diversions.

In consideration of these issues, this Project was highlighted as a river rehabilitation priority in a 2001 study known as the Rio Grande Headwater Restoration Project (RGHRP). That study analyzed the condition of riparian habitats and structures along a 91-mile reach of the Rio Grande from the town of South Fork to Alamosa, and was sponsored by the San Luis Valley Water Conservancy District and funded with a grant from the CWCB. A 2007 Rio Grande Watershed Restoration Strategic Plan highlighted the importance of continued efforts to implement the RGHRP.

The Colorado Rio Grande Restoration Foundation (Foundation) is the fiscal agent for the RGHRP and partnered with the Company, as well as four other ditch companies, to organize and raise funds for diversion and headgate improvement projects that also incorporate streambank stabilization and riparian restoration. The Foundation consolidated the individual ditch projects into a single WSRF Grant request known as "Five Ditches: Rio Grande Diversion and Headgate Improvement Project" (Five Ditches). The Foundation received a WSRF Grant to help cover the implementation cost of Five Ditches at the CWCB September 2017 Board Meeting. Other CWCB funding for Five Ditches include CWCB loans to the Centenial Irrigating Ditch Company and to the Consolidated Ditch and Headgate Company for their respective improvement projects. Additionally, the Foundation, at the CWCB May 2017 Board Meeting, received a WSRF Grant to cover the cost of engineering design for three headgate improvement projects around the Rio Grande State Wildlife Area, which included this Project.

Loan Feasibility Study

Emma Reesor, Executive Director, Rio Grande Headwaters Restoration Project prepared the Loan Feasibility Study titled, "Feasibility Study – San Luis Valley Canal Implementation Project," dated April 1, 2018. The feasibility study was prepared in accordance with CWCB guidelines. Chris Pitcher, P.E., with Riverbend Engineering provided an analysis of alternatives and engineering cost estimates. Additional engineering cost estimates were provided by the Natural Resources Conservation Service (NRCS). Financial statements were provided by the Company.

Borrower – San Luis Valley Canal Company

The Company is a Mutual Ditch Company incorporated in 1923. It operates as a nonprofit corporation and is in good standing with the Colorado Secretary of State. The Company is governed by a seven-member board of directors responsible for general supervision over the affairs of the Company. Nearly all revenues are derived from annual stockholder assessments.

The Company is made up of 13,318 shares held by 78 stockholders. Assessments are set annually by the stockholders but the Board has the power to set assessments necessary for the maintenance and repair of the Company's ditch system if the stockholders fail to do so. To enforce assessments, the Company's Bylaws state that no water is to be delivered to any stockholder until assessments have been paid. The Board has the power to further enforce unpaid assessments through the eventual sale of delinquent stock certificates.

Water Rights

The water rights shown in Table 1 are owned by the Company and are diverted and carried through the San Luis Valley Canal. Water is either directly applied to irrigation use or, as allowed under water court Case No. 96CW46, recharged into the unconfined aquifer of the Closed Basin to sustain irrigation practices.

TABLE 1: WATER RIGHTS

Name	Amount (CFS)	Appropriation Date	Adjudication Date	Water Court Case No.[1]
San Luis Valley Canal	92.90	1/5/1885	5/1/1896	5/1/1896
Kenilworth Canal	4.10	Various	5/1/1896	5/1/1896
San Luis Valley Canal	358.08	Various	4/9/1903	4/9/1903
Blanca Canal	69.68	Various	4/9/1903	4/9/1903
San Luis Valley Canal	50.00	12/31/1890	9/13/1916	9/13/1916

[1] *Date of Adjudication was the historic Rio Grande water court naming convention.*

The Company provides an average annual delivery of 24,000 AF.

Project Description

The objective of the Project is to improve diversion efficiency, reduce headgate maintenance, enhance water quality, improve riparian conditions, increase the sediment transport capacity of the Rio Grande, improve aquatic and wildlife habitat, and promote public involvement in water improvement activities. During development of the design for the structural work, Project stakeholders evaluated the following alternatives:

Alternative 1 – No Action: This alternative was not selected because the headgate is in poor condition, is inefficient, and requires extensive maintenance activities due to sedimentation build up.

Alternative 2 – New Headgate, Diversion Dam, and Channel Shaping: This alternative was developed by the NRCS and includes replacing the existing headgate with a new concrete structure and constructing a new steel and rock diversion dam, in addition to channel shaping and streambank stabilization. The preliminary cost estimate for the headgate and diversion dam was $1,055,000 (2013 dollars). This alternative was not selected because the cost was prohibitive for the Company.

Selected Alternative 3 – New Headgate, Grade Control, and Channel Shaping: This alternative was developed by Riverbend Engineering and includes replacing the existing headgate with a new concrete structure and constructing a rock sill grade control structure, in addition to channel shaping and streambank stabilization. The new headgate structure will resemble the existing with four gates but will be located closer to the river to reduce sedimentation and will have an automated gate to help regulate canal flows which will improve diversion accuracy and accounting. The existing diversion location does not have a diversion dam. This alternative will not install a traditional diversion dam, but will instead install a rock sill grade control structure to control channel grade and reduce erosion at the headgate location. A floating steel pipe trash rack will be installed to deflect trash and debris similar to what is currently used at the headgate. Additionally, a sluice channel may be constructed to help remove debris and sediment in front of the new headgate, depending on final costs. Eroding streambanks within the Project area will be sloped, stabilized, and revegetated. Willow transplants will be planted throughout the Project site for bank protection and improved riparian habitat.

The total cost estimate associated with the Project is $569,000 as shown in Table 2.

TABLE 2: ESTIMATED PROJECT COST

Task	Total
Engineering Design	$32,000
Headgate Replacement	$427,500
Rock Sill, Channel Shaping, & Streambank Stabilization	$42,500
Monitoring (Construction Management)	$42,000
Administration	$25,000
TOTAL	**$569,000**

Permitting: Work will occur within existing ditch easements and rights-of-way. Project partners have met with the US Army Corps of Engineers and work is planned to fall under the Nation Wide Permits.

Schedule: Final design will be completed by spring 2018. Construction is anticipated to occur between the 2018 and 2019 irrigation seasons.

Financial Analysis

Table 3 provides a summary of the Project's financial aspects. The Company qualifies for an agricultural interest rate of 1.70% for a 30-year term. The Company is seeking a 20-year term and thus the interest rate will be reduced by 0.25% to 1.45% per CWCB Financial Policy #7 (Lending Rate Determination).

TABLE 3: FINANCIAL SUMMARY

Total Project Cost	$569,000
RGHRP (In-Kind)	$6,000
RGHRP May 2017 WSRF Grant (Engineering Design)	$32,000
RGHRP Sept 2017 WSRF Grant (Construction)	$231,000
CWCB Loan Amount	$300,000
CWCB Loan Amount (Including 1% Service Fee)	$303,000
CWCB Annual Loan Payment	$17,562
CWCB Annual Loan Obligation (1st Ten Years)	$19,318
Number of Shares	13,318
Annual Loan Obligation per Share	$1.45/share
Current Assessment per Share	$11.00/share
Future Assessment per Share	$12.50/share

Creditworthiness: The Company has no existing debt. Assessments were raised in 2017 from $9/share to $11/share and were successfully collected. The Company and shareholders anticipate raising assessments to $12.50/share as a result of this Project.

TABLE 4: FINANCIAL RATIOS

Financial Ratio	Prior Years	Future w/ Project
Operating Ratio (revenues/expenses) Weak: <100% - average: 100% - 120% - strong: >120%	114% (average) $147K/$129K	113% (average) $167K/$148K
Debt Service Coverage Ratio (revenues-expenses)/debt service Weak: <100% - average: 100% - 120% - strong: >120%	NA	200% (strong) ($167K-$129K) $19K
Cash Reserves to Current Expenses Weak: <50% - average: 50% - 100% - strong: >100%	47% (weak) $60K/$129K	41% (weak) $60K/$148K
Annual Operating Cost per Acre-Foot (24,000 AF) Weak: >$20 - average: $10 - $20 - strong: <$10	$5.38 (strong) $129K/24,000 AF	$6.17 (strong) $148K/24,000 AF

Collateral: Security for this loan will be a pledge of assessment revenues back by an assessment covenant and the Project itself (headgate structure). This security is in compliance with the CWCB Financial Policy #5 (Collateral).

cc: Terry Chiles, President, San Luis Valley Canal Company
Jennifer Mele, Colorado Attorney General's Office

Attachment: Water Project Loan Program – Project Data Sheet

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San Luis Valley Canal Headgate Construction

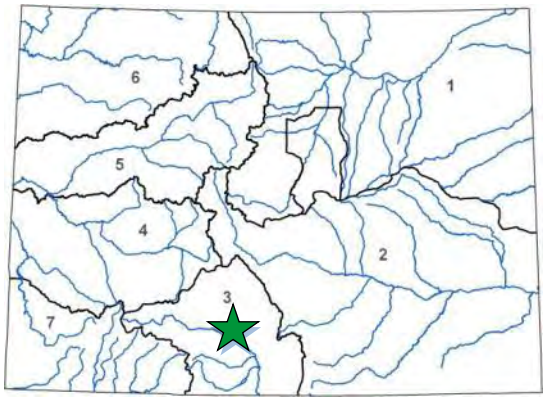
San Luis Valley Canal Company

May 2018 Board Meeting

LOAN DETAILS	
Project Cost:	$569,000
CWCB Loan (with service fee):	$303,000
Loan Term and Interest Rate:	20 Years @ 1.45%
Funding Source:	Severance Tax PBF and WSRF Grant

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

PROJECT DETAILS	
Project Type:	Headgate Replacement
Average Annual Diversions:	24,000 AF



LOCATION			
County:			Rio Grande
Water Source:			Rio Grande
Drainage Basin:			Rio Grande
Division:	3	*District:*	20

The San Luis Valley Canal Company (Company) was incorporated as a mutual ditch company in 1923. It diverts water from the Rio Grande into the San Luis Valley Canal 4 miles east of the town of Monte Vista. The irrigation system serves 78 shareholders covering 20,200 irrigated acres. The Project is a structural and riparian improvement project that will improve the Company's ability to divert its water right as well as meet non-consumptive needs of the area by replacing a poorly functioning headgate and stabilizing streambanks.

The Colorado Rio Grande Restoration Foundation (Foundation) is the fiscal agent for the RGHRP and partnered with the Company, as well as four other ditch companies, to organize and raise funds for diversion and headgate improvement projects that also incorporate streambank stabilization and riparian restoration. The Foundation consolidated the individual ditch projects into a single WSRF Grant request known as "Five Ditches: Rio Grande Diversion and Headgate Improvement Project" (Five Ditches). The Foundation received a WSRF Grant to help cover the implementation cost of Five Ditches at the CWCB September 2017 Board Meeting. Additionally, the Foundation, at the CWCB May 2017 Board Meeting, received a WSRF Grant to cover the cost of engineering design for three headgate improvement projects around the Rio Grande State Wildlife Area, which included this Project. In total, $263,000 in WSRF grant funding is allocated to the San Luis Valley Headgate Construction Project.

Final Design is expected to be completed in spring 2018 with construction occurring between the 2018 and 2019 irrigation seasons.


San Luis Valley Canal Headgate