



**COLORADO**

**Colorado Water  
Conservation Board**

Department of Natural Resources

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**TO:** Colorado Water Conservation Board Members

**FROM:** Cole Bedford, P.E., Project Manager  
Kirk Russell, P.E., Finance Section Chief

**DATE:** September 15-16, 2021 Board Meeting

**AGENDA ITEM:** 6. Water Project Loans  
Billings Ditch Company - Billings Ditch Implementation Project

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#### **Staff Recommendation**

Staff recommends the Board approve a loan not to exceed \$172,710 (\$171,000 for Project costs and \$1,710 for the service fee) to the Billings Ditch Company for costs related to the Billings Ditch Implementation Project, from the Construction Fund. The loan terms shall be 30 years at an agricultural interest rate of 1.10% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.

#### **Introduction**

The Billings Ditch Company (Company) is applying for a CWCB loan for the Billings Ditch Implementation (Project). The Company operates and maintains an irrigation ditch system that diverts from the north side of the Rio Grande channel east of Monte Vista in Rio Grande and Alamosa Counties. The ditch system typically diverts about 4,551 AF annually for 11 agricultural shareholders. The main component of this project will be the replacement of the diversion structure and headgate, which are in poor condition. Bank stabilization work will also take place in the vicinity of the diversion. This work will improve the diversion efficiency, reduce maintenance costs, improve aquatic habitat, and enhance recreation by allowing for fish and boat passage. The total Project cost is estimated at \$719,000. In addition to this loan, it will be paid for by a combination of a North American Wetland Conservation Act (NAWCA) grant, and if approved at this Board meeting, a CWCB Water Plan Grant. See attached Project Data Sheet for a location map and Project summary.



### **Borrower - Billings Ditch Company**

The Company is a mutual ditch company incorporated in 1884 whose irrigation infrastructure is located in Rio Grande and Alamosa Counties. The water diverted by the Company is used to irrigate 3,500 acres of crops and hayfields for the Company's 11 shareholders. The Company is governed by a board of three Directors—President, Vice President, and Secretary/Treasurer—and a ditch rider who serves as an executive officer. The Directors serve for three year terms and the ditch rider for a one year term. The Board of Directors are empowered to “manage the business affairs of the Corporation, direct its operations, take care that the duties required by the law... are faithfully performed by those under their control, and to perform all acts and discharge all duties necessary to the proper conduct of the business and affairs of the Corporation.” Article IV Section IV of the Company Bylaws allows the Company to take on debt by order of the Board of Directors or resolution of the shareholders.

### **Background**

As a result of a comprehensive study of the Upper Rio Grande Basin, a need to improve the health and function of the river in the San Luis Valley was recognized as early as 2001. In order to address concerns raised by this study, the Rio Grande Watershed Restoration Strategic Plan and Rio Grande Stream Management Plan were developed in 2007 and 2020, respectively. The 2007 Strategic Plan highlighted the importance of projects that improved riparian habitat, diversion and headgate functionality, and more efficient flow management. The 2020 Stream Management Plan, furthermore, specifically identified the Billings Ditch headgate as severely impaired and its diversion and surrounding stream condition as profoundly impaired.

The Billings Ditch diversion is a low dam of rock and debris across the Rio Grande that directs flows into a short feeder channel. A headgate is located some distance down the channel and consists of a welded steel plate headwall and gate. Currently, the gate does not close securely and sediment collects in the feeder canal impeding diversions. Additionally, a Parshall flume located a short distance down the ditch from the headgate is too large to accurately measure the relatively small flows directed through it. Lastly, the diversion is located at the apex of a tight bend in the river and is at risk of being cut off should the river's course shift. Stabilizing the stream channel will both protect the diversion and improve the wildlife habitat in the vicinity.

### **Loan Feasibility Study**

The Loan Feasibility Study titled “Feasibility Study, Billings Ditch Implementation Project” dated July 2021 was prepared by Rio Grande Headwaters Restoration Project staff with support from Chris Pitcher, P.E. of Southwest River Engineering. It is in accordance with CWCB guidelines and includes an analysis of alternatives, preliminary engineering design, a construction cost estimate, and recent years' annual financial reports prepared by the Company.

### **Water Rights**

The Billings Ditch water right is detailed in case number 13CW3016 with an appropriation date of April 1, 1887 and an adjudication date of May 1, 1896. The total decreed diversion rate from the Rio Grande is 34.9 cfs and its annual average diversion is about 4,551 acre-feet (AF). This amount varies, however, from between 1,700 AF and 5,200 AF depending on hydrologic conditions. The diversion location is about two miles northeast of the City of Monte Vista.

### Project Description

The purpose of the Project is to ensure the continued diversion of water in a safe and efficient manner and improve the riparian habitat in the vicinity of the diversion.

**Alternative 1 - No Action:** This alternative would entail continuing to use the existing diversion structure and headgate in their current deteriorated state. It is not desirable as it would maintain the existing status quo and risk associated with the aging structure. It would not improve the safety or efficiency of the structure nor the riparian habitat in the vicinity of the diversion.

**Alternative 2 - Replacement of the Diversion Structure Upstream of Current Location:** This alternative would replace the diversion structure and headgate and relocate them to a more stable location upstream. The cost estimate of this alternative is \$609,980 excluding unknown easement acquisition. This alternative is feasible and achieves the project purpose, but was not chosen due to the difficulty of adjusting the diversion point in the Billings Ditch water decree, uncertainty about how the ditch would function in the new location, and the time and cost associated with acquiring new easements.

**Selected Alternative 3 - Replacement of the Diversion Structure at Current Location:** This alternative was selected as the preferred alternative as it achieves the project purpose and does so while minimizing administration and coordination complications. It consists of replacing the diversion structure and headgate at their current location. It will also reduce the risk of the river shifting away from the diversion and improve the riparian area by stabilizing the streambanks in the vicinity.

The cost estimate of this alternative is \$719,000 as shown in Table 1.

TABLE 1: ESTIMATED PROJECT COST

Task	Total
Survey, Design, and Permitting	\$60,500
Diversion Replacement	\$280,400
Headgate Replacement	\$193,100
Streambank Stabilization and Riparian Restoration	\$104,550
Project Monitoring	\$55,400
Project Management and Administration	\$25,000
<b>TOTAL</b>	<b>\$719,000</b>

**Permitting:** Required construction access to the site has been secured during the planning period. Furthermore, it is expected that the in-stream work will fall under Nationwide 404 permit allowance by the Army Corps of Engineers. This will be confirmed prior to soliciting contractor bids.

**Schedule:** Preliminary design documents are complete and will be followed by final design documents in October 2021. Project construction is anticipated to take place during the irrigation off-season between fall 2021 and spring 2022.

### Financial Analysis

Table 2 provides a summary of the Project's financial aspects. On the loan, the Company qualifies for the Agricultural interest rate of 1.10% for a 30-year term.

**TABLE 2: FINANCIAL SUMMARY**

Total Project Cost	\$719,000
Water Plan Grant (Pending)	\$298,000
North American Wetland Conservation Act Grant (Secured)	\$250,000
CWCB Loan Amount	\$171,000
CWCB Loan Amount (Including 1% Service Fee)	\$172,710
CWCB Annual Loan Payment	\$6,778
CWCB Annual Loan Obligation (1 <sup>st</sup> Ten Years)	\$7,456
Number of Shares	383
Current Assessment per Share	\$40.00
Annual Loan Obligation per Share	\$19.47

**Creditworthiness:** The Company has no outstanding debt. Per the Company’s Bylaws, a resolution of the shareholders will be adopted at a special meeting prior to contracting to approve the CWCB loan contract conditions and take on the debt. Table 3 shows the Company’s financial ratios.

**TABLE 3: FINANCIAL RATIOS**

Financial Ratio	Prior Years	Future w/ Project <sup>1</sup>
Operating Ratio (revenues/expenses) weak: <100%   average: 100% - 120%   strong: >120%	100% (average) \$15.3K/\$15.3K	100% (average) \$22.8K/22.8K
Debt Service Coverage Ratio (revenues-expenses)/debt service weak: <100%   average: 100% - 120%   strong: >120%	N/A	100% (average) <u>\$22.8K-\$15.3K</u> \$7.5K
Cash Reserves to Current Expenses weak: <50%   average: 50% - 100%   strong: >100%	261% (strong) \$40.0K/\$15.3K	175% (strong) \$40.0K/\$22.8K
Annual Operating Cost per Acre-Foot (4,551 AF) weak: >\$20   average: \$10 - \$20   strong: <\$10	\$3.40 (strong)	\$5.07 (strong)

<sup>1</sup>Future w/ Project Ratios assume a future assessment per share of \$59.47

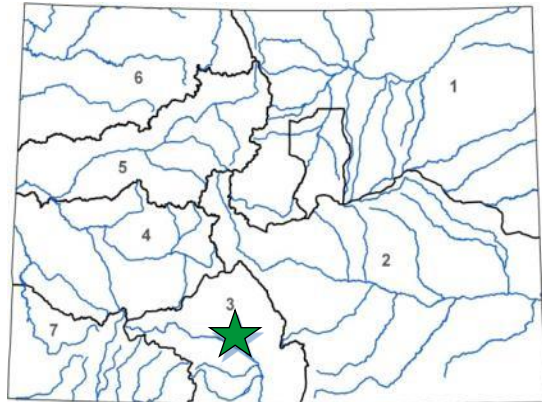
**Collateral:** Security for this loan will be a pledge of assessment revenues and the project itself (the Billings Ditch Company Diversion Structure). This security is in compliance with the CWCB Financial Policy #5 (Collateral).

cc: Segundo Diaz, President, Billings Ditch Company  
 Emma Reesor, Executive Director, Rio Grande Headwaters Restoration Project  
 Jennifer Mele, Colorado Attorney General’s Office

Attachment: Water Project Loan Program - Project Data Sheet



L O A N   D E T A I L S	
Project Cost:	\$719,000
Water Plan Grant:	\$298,000
NAWCA Grant:	\$250,000
CWCB Loan (with 1% Service Fee):	\$172,710
Loan Term and Interest Rate:	30 Yrs @ 1.10%
Funding Source:	Construction Fund
B O R R O W E R   T Y P E	
Agriculture	Municipal      Commercial
100%	0% Low - 0% Mid - 0% High      0%
P R O J E C T   D E T A I L S	
Project Type:	Diversion Structure Rehabilitation
Average Annual Diversions:	4,551 AF



L O C A T I O N	
County:	Rio Grande/Alamosa
Water Source:	Rio Grande River
Drainage Basin:	Rio Grande
Division:	3      District: 20

The Billings Ditch Company (Company) is a non-profit corporation formed in 1884. It currently supplies surface water for irrigation to 11 shareholders east of the City of Monte Vista.

The Company has partnered with the Colorado Rio Grande Restoration Foundation, the fiscal agent for the Rio Grande Headwaters Restoration Project, to organize and raise funds for the project. Funding will come from a combination of this loan, a requested Water Plan Grant, and a North American Wetland Conservation Act grant from the U.S. Fish and Wildlife Service to cover the costs of final design, permitting, and construction. The project will include replacing the aging headgate and diversion structure, rehabilitating the nearby unstable streambanks, and enhancing associated riparian areas. Construction is expected to begin in the fall of 2021 and finish in the spring of 2022.

