COLORADO
Colorado Water Conservation Board
Department of Natural Resources

1313 Sherman Street
Denver, CO 80203

P (303) 866-3441
F (303) 866-4474

Jared Polis, Governor

Dan Gibbs, DNR Executive Director

Rebecca Mitchell, CWCB Director

TO: Colorado Water Conservation Board Members

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

DATE: May 17-18, 2022 Board Meeting

AGENDA ITEM: 8a. Change to Existing Loan
City of Grand Junction – Carson Reservoir Dam Rehabilitation

Staff Recommendation

Staff recommends the Board approve a loan not to exceed $4,343,000 ($4,300,000 for Project costs and $43,000 for the 1% service fee) to the City of Grand Junction for costs related to the Carson Reservoir Dam Rehabilitation Project, from the Severance Tax Perpetual Base Fund. This is an increase of $1,313,000 ($1,300,000 for Project costs and $13,000 for the 1% service fee). The loan term shall remain 10 years at 1.00% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.

Introduction

The City of Grand Junction (City) received approval of a $3,030,000 CWCB loan (Contract number CT2021-3110) to finance the Carson Reservoir Dam Rehabilitation (Project) at the November 2020 CWCB Board Meeting at the low-income rate reduced for a 10-year term. The Carson Reservoir Dam, also known as the Hogchute Reservoir Dam, is a high hazard dam located on Kannah Creek. It provides water storage for domestic water supply, irrigation use, and recreation. In 2017 the State Engineer's Office completed a Comprehensive Dam Safety Evaluation and rated the dam as "Conditionally Satisfactory" but raised some concerns to be addressed by improvements to the spillway, outlet works, drain seepage collection system, instrumentation, and installation of an early flood warning system. Construction of these features began last fall and unexpected site conditions have led to cost increases. See the attached Project Data Sheet for a location map and a Project Summary and the original board memo dated November 2020.

Project Update

Prior to construction, historical records indicated that the existing embankment fill material could be reused on the improved dam embankment. During the 2021 construction season the contractor encountered material that was inconsitent with the records, did not meet specifications, and could not be reused. As a result, suitable embankment material had to be excavated from the reservoir bottom and offsite sources. Furthermore, the actual condition of the dam outlet pipe did not match the as-built drawings and additional pipe length was needed for the replacement. These changes along with the cost of winterization and remobilization have increased construction costs.

TABLE 1: UPDATED PROJECT COST ESTIMATE

Task	Original	Current
Engineering	$350,000	$350,000
Mobilization	$259,000	$400,000
Concrete	$271,000	$271,000
Earthwork	$1,279,000	$2,100,000
Utilities	$104,000	$104,000
Other (plumbing, electrical, etc.)	$412,000	$750,000
Construction Contingency	$675,000	$675,000
TOTAL	**$3,350,000**	**$4,650,000**

Permitting: No new permits are anticipated for the Project.

Schedule: In addition to the unexpected construction cost increases, the construction schedule was also delayed. It is expected that substantial completion will take place in October 2022.

Financial Analysis

Table 2 provides a summary of the Project's financial aspects. The loan term shall remain 10 years at the November 2020 reduced low-income municipal interest rate of 1.00% per annum.

TABLE 2: UPDATED FINANCIAL SUMMARY

Project Item	Original	Current
Total Project Cost	$3,350,000	$4,650,000
City Covered Engineering Costs	$350,000	$350,000
CWCB Loan Amount	$3,000,000	$4,300,000
CWCB Loan Amount (Including 1% Service Fee)	$3,030,000	$4,343,000
CWCB Annual Loan Payment	$319,914	$458,543
CWCB Annual Loan Obligation (1st Ten Years)	$351,905	$504,397
Number of Taps	9,967	9,967
Monthly Loan Obligation per Tap (9,967)	$2.94	$4.22
Cost per Acre-Foot to Preserve the Storage (637af)	$5,259/AF	$7,300/AF

Creditworthiness: Changes to the City's debt are reflected in Tables 3 and 4. Table 3 details that the City has continued to make regular payments on their existing loans. Table 4 details the additional debt the City has assumed to complete capital improvement projects.

TABLE 3: EXISTING DEBT

Lender	Original Balance	Current Balance	Annual Payment	Maturity Date	Collateral
2002 CWRPDA	$3,566,522	$495,650	$270,000	2022	Water revenues
2010 CWRPDA	$3,783,923	$2,058,160	$244,738	2030	Water revenues
2016 CWRPDA	$1,615,100	$1,245,061	$91,315	2036	Water revenues
2017 CWCB (CT2017-916)	$764,821	$611,717	$49,759	2037	Water revenues
TOTAL		$4,410,588	$655,812		

TABLE 4: CONSTRUCTION PHASE CWCB LOANS

Project	Loan Authorization	Current Balance	Expected Annual Payment	Expected Maturity Date	Collateral
Purdy Mesa Flowline Replacement (CT2021-2857)	$7,070,000	$0	$452,977	2044	Water revenues
Carson Reservoir Dam Rehabilitation (CT2021-3110)	$4,343,000	$2,122,557	$504,397	2033	Water revenues
Kannah Creek Flowline Replacement[1]	$3,232,000	$0	$210,151	2044	Water revenues
TOTAL	$14,645,000	$2,122,557	$1,167,525		

1. May 2022 Board Meeting Agenda Item 7a.

TABLE 5: UPDATED FINANCIAL RATIOS

Financial Ratio	Prior Years	Future w/ Project[2]
Operating Ratio (revenues/expenses) weak: <100% | average: 100% - 120% | strong: >120%	144% (strong) $9.00M/$6.25M	160% (strong) $12.30M/7.70M
Debt Service Coverage Ratio (revenues-expenses)/debt service weak: <100% | average: 100% - 120% | strong: >120%	517% (strong) $9.00M-$5.59M $0.66M	351% (strong) $12.30M-$5.87M $1.83M
Cash Reserves to Current Expenses weak: <50% | average: 50% - 100% | strong: >100%	128% (strong) $8.00M/$6.25M	104% (strong) $8.00M/$7.70M
Debt per Tap (9,967 Taps) weak: >$5,000 | average: $2,500 - $5,000 | strong: <$2,500	$501 (strong) $4.99M/9,967	$1,912 (strong) $19.06M/9,967
Average Monthly Water Bill weak: >$60 | average: $30 - $60 | strong: <$30	$22.62 (strong)	$30.00 (average)

2. Assumes the completion of the three projects in Table 4 at their full loan authorization; and the City's expected revenue, expenses, and rates for 2030.

Collateral: Security for this loan will remain a pledge of revenues backed by a rate covenant and annual financial reporting. This security is in compliance with the CWCB Financial Policy #5 (Collateral).

cc: Randi Kim, Utilities Director, the City of Grand Junction Utilities Department
Jennifer Mele, Colorado Attorney General's Office

Attachments: Water Project Loan Program – Project Data Sheet
Original Board Memo (November 2020)

COLORADO
Colorado Water Conservation Board
Department of Natural Resources

Carson Reservoir Dam Rehabilitation

City of Grand Junction

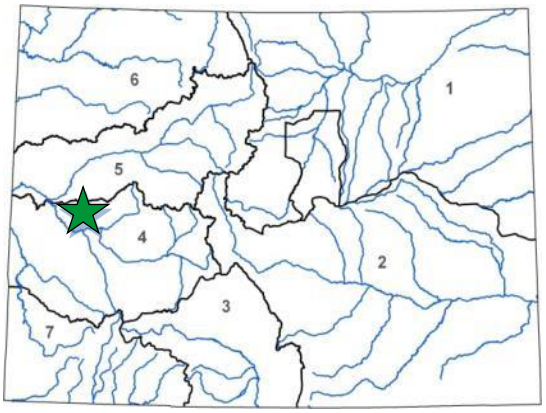
(loan increase)

November 2020 Board Meeting

LOAN DETAILS	
Project Cost:	$4,300,000
CWCB Loan (with 1% Service Fee):	$4,343,000
Loan Term and Interest Rate:	10 years @ 1.00%
Funding Source:	Severance Tax Perpetual Base Fund

BORROWER TYPE		
Agriculture	*Municipal*	*Commercial*
0%	100% Low - 0% Mid - 0% High	0%

PROJECT DETAILS	
Project Type:	Dam Rehabilitation
Average Annual Diversions:	5300 AF
Preserved Storage:	637 AF



LOCATION			
County:			Mesa
Water Source:			Kannah Creek
Drainage Basin:			Gunnison
Division:	4	*District:*	42

The City of Grand Junction, through its Water Activity Enterprise, has numerous water and storage rights on the Grand Mesa, as well as water rights in the Gunnison and Colorado Rivers. These rights can be used to provide for the municipal water supply needs of a portion of the City. Due to poor water quality, however, the water rights on the Gunnison and Colorado Rivers are largely unused. The City currently serves approximately 30,000 residents, however, this number is projected to grow to 49,000 by 2069.

The City of Grand Junction owns and operates Carson (a.k.a. Hogchute) Reservoir located in the Grand Mesa National Forest. The reservoir provides water storage for the City's domestic water supply, downstream irrigation use, and fishing recreation. The dam is classified as high hazard and is currently rated as "Conditionally Satisfactory" by the State Engineer's Office (SEO); however, SEO has provided guidance for needed dam Improvements to avoid a potential future storage restriction. The loan will be used to address these improvements including rehabilitating the existing spillway, outlet works, and toe drain seepage collection system in addition to installing an early warning system. Construction is expected to begin in the summer of 2021.