



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: May 17-18, 2022 Board Meeting

AGENDA ITEM: 7a. New Loan
City of Grand Junction - Kannah Creek Flowline Replacement

Staff Recommendation:

Staff recommends the Board approve a loan not to exceed \$3,232,000 (\$3,200,000 for Project costs and \$32,000 for the 1.0% service fee) to the City of Grand Junction acting by and through its water activity enterprise for costs related to the Kannah Creek Flowline Replacement Project, from the Severance Tax Perpetual Base Fund. The loan terms shall be 20 years at a reduced low-income municipal interest rate of 1.65% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.

Introduction:

The City of Grand Junction (City) is applying for a loan for the Kannah Creek Flowline Replacement (Project). The Kannah Creek Flowline is a gravity pipeline that conveys raw water from Kannah Creek to the City's Water Treatment Plant. The flowline consists of 18- and 20-inch diameter pipe. It is 17.5 miles long. This project will replace 3 miles of pipe that has reached the end of its useful life. The City plans to utilize this loan and a \$300,000 grant from the Bureau of Reclamation to cover project costs; currently estimated at \$3,500,000. See attached Project Data Sheet for a location map and Project Summary.



Borrower - The City of Grand Junction

The City of Grand Junction is a Colorado Home Rule municipality which operates under its charter adopted September 14, 1909. The City's Utilities Department oversees the Water Services Division which is responsible for operation and maintenance of the water supply, treatment, and distribution system. This system serves a population of about 30,000 and is expected to increase to about 49,000 by 2069. Operations, expenses, and capital projects associated with the system are funded by the Water Enterprise Fund, the revenues for which include water service charges and tap fees. The City's average annual diversion from all supply sources is about 5,300 acre-feet.

Background:

The City's primary water supply is the Kannah Creek watershed, which covers 200 square miles on the top and west side of the Grand Mesa. The Kannah Creek Flowline conveys water diverted from Kannah Creek into the City's primary storage facility, Juniata Reservoir. From the Reservoir, the Purdy Mesa Flowline is the primary conveyance to carry water to the Grand Junction Water Treatment Plant. The Kannah Creek Flowline, however, parallels the Purdy Mesa Flowline to the Treatment Plant, to provide redundancy and supplemental supply. Both flowlines were originally installed in the mid-20th century and have reached the end of their useful lives. In recent years, the City has been replacing the lines incrementally with new PVC pipe. The City was awarded a CWCB Water Project Loan for the final portion of the Purdy Mesa Flowline Replacement at the September 2020 Board Meeting. This loan request is for the remaining unimproved portion of the Kannah Creek Flowline Replacement.

Loan Feasibility Study

Staff of the City's Utilities Department Water Services Division prepared the Loan Feasibility Study titled "Loan Feasibility Study: City of Grande Junction, Kannah Creek Flow Line." The feasibility study was prepared under the direction of Randi Kim, P.E. and is in accordance with CWCB guidelines. It includes an analysis of alternatives, preliminary engineering design, construction cost estimates, and previous studies. Also submitted were recent years' Comprehensive Annual Financial Reports prepared under the direction of Jodi Romero CPA, Director of the City's Finance Department.

Water Rights:

The City has three major diversion rights and one storage right within the Kannah Creek watershed including the most senior right on Kannah Creek. The City's water utility also has agreements with two other water supply entities, Clifton Water District and Ute Water Conservancy, for treated water to supplement their regular supply under rare or emergency circumstances. These rights are detailed in Table 1.

TABLE 1: WATER RIGHTS

Source Name	Rate or Volume	Adjudication Date	Appropriation Date	Water Court Case No.
Direct Diversion Rights				
Kannah Creek (summer)	7.81 cfs	1/11/1911	12/30/1881	1818
Kannah Creek (winter)	3.908 cfs	7/25/1941	5/1/1929	5812
Gunnison River	18.6 cfs abs. 101.4 cfs con.	7/21/1959	1/22/1957	W130 8303
Colorado River	12.38 cfs abs. 6.19 cfs abs. 2.49 cfs abs. 78.94 cfs con.	7/21/1959	2/17/1947	94CW215 85CW22 85CW37 05CW160
Storage Rights				
Juniata Reservoir	400.094 AF	11/1/1911	7/25/1941	5812
1 st Enlargement	2313 AF	6/7/1953	7/21/1959	8303
2 nd Enlargement	4156.6 AF	4/2/1967	12/31/1970	82CW280
	919 AF	12/31/1993	12/15/2002	93CW263
Carson Lake	637 AF	6/3/1946	7/21/1959	8303
Non-Decreed Treated Water Agreements				
Clifton Water District	4.5 mgd	-	-	-
Ute Water Conservancy	n/a - informal agreement	-	-	-

Project Description:

The purpose of the Project is to ensure the City’s continued ability to convey water to the Grand Junction Water Treatment Plant via the Kannah Creek Flowline. The following alternatives were analyzed:

Alternative 1 - No Action: This alternative would entail continuing to use the flowline in its current condition. It is unacceptable because it does not address risk associated with the aging infrastructure and would eventually result in the failure of the flowline. It does not accomplish the Project purpose.

Alternative 2 - Replacement with 24-inch PVC: This alternative would both replace the aging Kannah Creek Flowline infrastructure and increase its capacity. The increased capacity, however, would only be utilized during peak demand days until increased population necessitated more frequent use of the excess capacity. The cost of this alternative is \$4,000,000. While this alternative accomplishes the Project purpose, it does so at a high cost for an increased capacity that can not be fully utilized for several decades. For these reasons, it was not selected.

Selected Alternative 3 - Replacement with 20-inch PVC: This alternative replaces the aging Kannah Creek Flowline infrastructure and creates a smaller capacity increase than Alternative 2. It was selected as the preferred alternative as it achieves the Project purpose and does so while minimizing costs. On peak demand days, the City can utilize reservoir storage at the Grand Junction Treatment Plant to supplement water supply. This arrangement will be adequate to meet expected demand for the life of the new infrastructure.

The cost estimate of this alternative is \$3,500,000 as shown in Table 2.

TABLE 2: ESTIMATED PROJECT COST

Task	Total
Engineering/Survey/Environmental	\$200,000
20-inch PVC Pipe Material	\$2,300,000
20-inch PVC Pipe Installation	\$448,000
Other Construction (Mobilization, Erosion Control, etc.)	\$182,000
Easements and Construction Quality Assurance	\$70,000
Contingency	\$300,000
TOTAL	\$3,500,000

Permitting: The City will submit a Pre-Construction Notification application to the United States Army Corps of Engineers for a 404 Permit. At several locations, the project alignment deviates from the existing alignment and new easements will need to be established with property owners.

Schedule: Engineering, permitting, and design efforts are currently underway. Bidding will take place in July 2022 and construction is expected to begin in September. Substantial Completion of the project is expected in January 2023.

Financial Analysis:

Table 3 provides a summary of the Project’s financial aspects. The City qualifies for a low-income municipal interest rate of 1.90% for a 30-year term. The City is applying for a 20-year term; therefore, the interest rate is decreased by 0.25% for a final interest rate of 1.65% per CWCB Financial Policy #7 (Lending Rate Determination).

TABLE 3: FINANCIAL SUMMARY

Total Project Cost	\$3,500,000
Bureau of Reclamation Grant	\$300,000
CWCB Loan Amount	\$3,200,000
CWCB Loan Amount (Including 1% Service Fee)	\$3,232,000
CWCB Annual Loan Payment	\$191,046
CWCB Annual Loan Obligation (1 st Ten Years)	\$210,151
Number of Taps	9,967
Monthly Loan Obligation per Tap (9,967)	\$1.76

Creditworthiness: The City has six existing loans tied to its water fund revenue; three from the Colorado Water Resources and Power Development Authority (CWRPDA), one with CWCB currently in repayment, and two with CWCB currently in the construction phase. The City’s payments on these loans are currently up-to-date. Table 4 details the City’s loans in repayment. Table 5 details the CWCB loans in the construction phase. The expected annual debt service for those loans in the construction phase, including the Kannah Creek Flowline Replacement loan, is \$1,167,525.

The City’s current average monthly water bill is \$25.00 and rates have been steady in recent years, however water rates will be increased by 5% annually between 2022 and 2025 and then 2% thereafter. A resolution adopting these rate increases was passed by the City Council in 2021.

TABLE 4: 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 5: CONSTRUCTION PHASE CWCB LOANS

Project	Loan Authorization	Current Disbursed Funds	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 ¹ (CT2021-3110)	\$4,343,000	\$2,122,557	\$504,397	2033	Water revenues
Kannah Creek Flowline Replacement	\$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 8a.

TABLE 6: 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) <u>\$9.00M-\$5.59M</u> \$0.66M	351% (strong) <u>\$12.30M-\$5.87M</u> \$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	\$25.00 (strong)	\$30.00 (average)

2. Assumes the completion of the three projects in Table 5 at their full loan authorization; and the City's expected revenue, expenses, and rates for 2030.

Collateral: Security for this loan will be 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

Attachment: Water Project Loan Program - Project Data Sheet

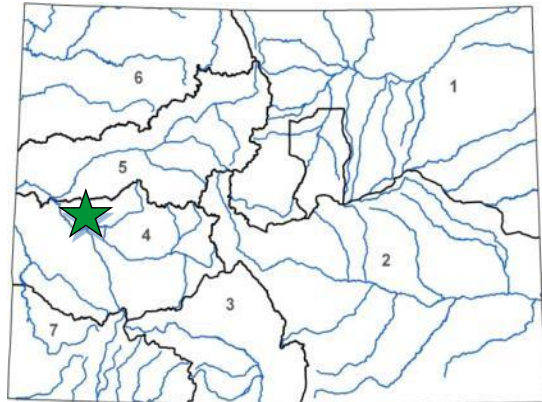


Kannah Creek Flow Line Replacement

City of Grand Junction

May 2022 Board Meeting

L O A N D E T A I L S		
Project Cost:	\$3,500,000	
CWCB Loan (with 1% Service Fee):	\$3,232,000	
Loan Term and Interest Rate:	20 Yrs @ 1.65%	
Funding Source:	Severance Tax Perpetual Base Fund	
B O R R O W E R T Y P E		
Agriculture	Municipal	Commercial
0%	100% Low - 0% Mid - 0% High	0%
P R O J E C T D E T A I L S		
Project Type:	Municipal System Rehabilitation	
Average Annual Diversions:	5,300 AF	



L O C A T I O N			
County:	Mesa		
Water Source:	Kannah Creek		
Drainage Basin:	Gunnison Basin		
Division:	4	District:	42

The City of Grand Junction, acting by and 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.

30,000 residents, however, this number is

The 17.5 mile Kannah Creek Flowline (KCFL or Line) supplies water from Kannah Creek to Juniata Reservoir and acts as a secondary supply line to carry water from the Creek directly to the Grand Junction water treatment plant in case the Purdy Mesa Flowline is unavailable. The Line has reached the end of its useful life as shown by numerous breaks that necessitated replacement of most of the Line. This project will replace approximately 3 miles of the upper segment of the Line with a 20" PVC pipe providing a new design life of 100 years and an increase in capacity to 9.8 MGD. The project will be funded in conjunction with a \$300,000 Bureau of Reclamation grant. Construction is expected to begin in the fall of 2022 and be completed in early 2023.

