



COLORADO

**Colorado Water
Conservation Board**

Department of Natural Resources

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TO: Colorado Water Conservation Board Members

FROM: Rachel Pittinger, P.E., Project Manager
Kirk Russell, P.E., Finance Section Chief

DATE: May 15-16, 2019 Board Meeting

AGENDA ITEM: 14a. Water Project Loans
Town of Empire - Guanella Reservoir Storage Purchase

Introduction

The Town of Empire (Town), acting by and through its water activity enterprise, is applying for a loan for the Guanella Reservoir Storage Purchase (Project). The Town and reservoir are located in Clear Creek County approximately 10 miles west of Idaho Springs. The purpose of the Project is to create a reliable and sustainable water system for the Town that allows for growth and operational efficiency. The Town will use CWCB loan funds to exercise a contractual option to acquire the right to use 10 acre-feet of storage capacity in Guanella Reservoir, in perpetuity. The Project cost is estimated at \$123,000. The Town is requesting a loan for 100% of Project costs. See attached Project Data Sheet for a location map and Project summary.

Staff Recommendation for CWCB Loan

Staff recommends the Board approve a loan not to exceed \$124,230 (\$123,000 for the Project costs and \$1,230 for the 1% service fee) to the Town of Empire, acting by and through its water activity enterprise, for costs related to the Guanella Reservoir Storage Purchase, from the Construction Fund. The loan terms shall be 30 years at a low-income municipal interest rate of 2.50% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.



Background

Guanella Reservoir is located up-stream and west of the Town of Empire. The reservoir is off channel, adjacent to the West Fork of Clear Creek. Guanella Reservoir is filled via a diversion channel along the south bank of the Creek. The primary water supply for Empire is an 1863 direct flow water right on Mad Creek, a tributary to West Clear Creek and from an alluvial well in the West Clear Creek valley at the west end of town. The Town has an annual delivery of water out of Guanella Reservoir through the Water Delivery and Storage Agreement dated November 17, 2003 with the City of Golden (Golden Agreement).

The City of Golden constructed Guanella Reservoir in 2003 just upstream from the Town. During construction of the reservoir, negotiations between Empire and Golden yielded an agreement that allowed Empire the delivery of up to 6.3 acre-feet of water per year from Guanella Reservoir. In addition to the yearly delivery, Empire has the option to purchase or lease 10 acre-feet of perpetual storage in the reservoir. The purchase/lease option of the Golden Agreement expires in September of 2033.

Loan Feasibility Study

James R. Ford, P.E., with Ford Research Group prepared the Loan Feasibility Study titled, "Feasibility of the Purchase of Storage in Guanella Reservoir," dated March 2019. The feasibility study was prepared in accordance with CWCB guidelines and includes an analysis of alternatives, preliminary engineering, and estimated engineering costs. The financial statements were provided by the Town.

Borrower - Town of Empire

The Town was incorporated in 1882. It lies within the Union Mining District that was organized in early 1860 by several prospectors. Initially named Empire City, later that year, the citizen committees drafted laws, defined boundaries, and named mountains and streams. The Town has a water activity enterprise that was established in 1995 by Ordinance 95-213. This water enterprise fund allows the Town to establish water rates and to take on debt. The revenue sources for the Town's water enterprise fund are through the water usage rates for customers, tap fees, and system development fees to both commercial and residential customers.

Water Rights

The water rights associated with the Project are shown in Table 1. The Town's primary water supply is from Mad Creek. In 1983, the Town obtained an Augmentation Plan 82CW227 that supplements the Town's water supply through diversion of groundwater from Well No. 1 (Permit No. 25963F) to replace the Town's municipal depletions. In March 1983, the Town entered into a 50-year lease with Amax, Inc. for the augmentation water delivered to West Fork. In 2004, an amended augmentation plan allows for 16.3 acre-feet of water to be stored in Guanella Reservoir, with 6.3 acre-feet being the delivered water and 10 acre-feet is the proposed storage purchase with the CWCB loan pursuant to the Golden Agreement. In May 2009, the Town amended the lease agreement to revise the lessor name to Climax Molybdenum Company and did not alter the lease term. Empire has 178 water taps that serve the municipal domestic, commercial, and industrial customers within the Town's boundaries.

In 2018, the annual water diverted from Mad Creek was 50 acre-feet and the Town's total annual average of water diverted in Empire's 2018 diversions was 58 acre-feet, mostly from the Mad Creek diversion and the remainder from Well No. 1.

TABLE 1: TOWN OF EMPIRE WATER RIGHTS

Name	Amount	Date	Water Court Case No.
Mad Creek	1.82 cfs	12/31/1863	CA41340

Project Description

The purpose of the Project is to create a reliable and sustainable water system for the Town that allows for drought preparation, future growth and operational efficiency.

Alternative 1 - No Action: Failure to purchase the additional storage will result in inadequate drought protection and future water supply availability.

Alternative 2 - Ball Placer Reservoir: This alternative would include constructing a new reservoir. The Ball Placer Reservoir site is south of Empire adjacent to Bard Creek. The Town acquired the storage water right from Clear Creek County and the Clear Creek Economic Development Corporation (Economic Development Corp) in 2013. Ball Placer Reservoir was one of five reservoirs that the County and Economic Development Corp filed for in the Clear Creek and Bear Creek basins in 2001 and decreed in 2006. Clear Creek County and Economic Development Corp sold the reservoir and the diversion pipeline to the Town in June 2013. The off-channel reservoir has a decreed volume of 110 acre-feet and would be filled through a pipeline on Bard Creek. The alternative was not selected because it is more efficient for operations of the water supply to obtain storage in Guanella Reservoir, Selected Alternative 3, prior to constructing Ball Placer Reservoir.

Selected Alternative 3 - Guanella Reservoir: This alternative consists of purchasing storage in Guanella Reservoir. Guanella Reservoir is an existing reservoir with a decreed storage right of 2600-acre feet and a total direct flow diversion right of 60 cfs from West Fork of Clear Creek. This alternative gives the Town a water supply of 10 acre-feet for its future water demand. The perpetual storage purchase price is defined in the Golden Agreement and calculated as $\$9,000/\text{acre-foot} \times (1.00005479)^n$ where n equals the number of days between execution of the Golden Agreement, November 17, 2003, and closing on the Storage Option. Based on this equation and an estimated closing date, the cost for this alternative is \$123,000.

In the future, the Town may construct a pump station to directly feed water from the reservoir to its water treatment plant. The distance to the treatment plant is approximately 2,250 feet and the elevation difference is approximately 400 feet. Acquiring storage space in Guanella Reservoir prior to constructing the Ball Placer Reservoir is desirable because Guanella Reservoir: (1) is an existing facility; (2) is closer to the Town's water treatment plant; and (3) will entail lower energy expenditures; since Guanella is located above the Town.

TABLE 2: ESTIMATED PROJECT COST

Tasks	Cost
Guanella Reservoir Storage Purchase	\$123,000
TOTAL	\$123,000

Permitting: The Town does not anticipate the need to obtain any permits for this Project.

Schedule: The Town anticipates the water purchase to be complete by August 2019.

Financial Analysis

Table 3 provides a summary of the Project's financial aspects. The Town qualifies for a low-income municipal interest rate of 2.50% for a 30-year term.

TABLE 3: FINANCIAL SUMMARY

Project Cost	\$123,000
CWCB Loan Amount	\$123,000
CWCB Loan Amount (Including 1% Service Fee)	\$124,230
CWCB Annual Loan Payment	\$5,935
CWCB Annual Loan Obligation (1 st Ten Years)	\$6,529
Number of Taps	178
Monthly Loan Obligation per Tap (178 taps)	\$3/tap

Creditworthiness: The Town's water activity enterprise fund has no existing debt.

TABLE 4: FINANCIAL RATIOS

Financial Ratio	Past Years	Future w/ Project
Operating Ratio (revenues/expenses) weak: <100% - average: 100% - 120% - strong: >120%	101% (average) \$123K/\$121.6K	101% (average) \$129.7K/\$128K
Debt Service Coverage Ratio (revenues-expenses)/debt service weak: <100% - average: 100% - 120% - strong: >120%	N/A	125% (strong) (\$129.7K-\$121.6K) \$6.5K
Cash Reserves to Current Expenses weak: <50% - average: 50% - 100% - strong: >100%	134% (strong) \$162.6K/\$121.6K	127% (strong) \$162.6K/\$128K
Debt per Tap (178 taps) weak: >\$5,000 - average: \$2,500 - \$5,000 - strong: <\$2,500	N/A	\$698 (strong) \$124.2K/178tap
Average Monthly Water Bill weak: >\$60 - average: \$30 - \$60 - strong: <\$30	\$43 (average)	\$46 (average)

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

cc: Mr. Richard Sprague, Mayor, Town of Empire
Jennifer Mele, Colorado Attorney General's Office

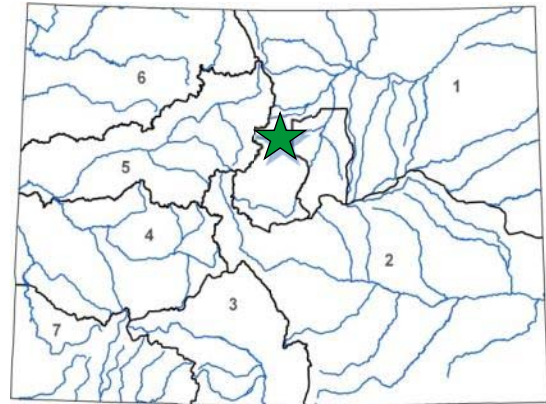
Attachment: Water Project Loan Program - Project Data Sheet



Guanella Reservoir Storage Purchase

Town of Empire
 May 2019 Board Meeting

L O A N D E T A I L S		
<i>Project Cost:</i>	\$123,000	
<i>CWCB Loan (with 1% Service Fee):</i>	\$124,230	
<i>Loan Term and Interest Rate:</i>	30 years @ 2.50%	
<i>Funding Source:</i>	Construction Fund	
B O R R O W E R T Y P E		
<i>Agriculture</i>	<i>Municipal</i>	<i>Commercial</i>
0%	100% Low - 0% Mid - 0% High	0%
P R O J E C T D E T A I L S		
<i>Project Type:</i>	Reservoir Storage	
<i>Average Annual Diversions:</i>	50 AF	

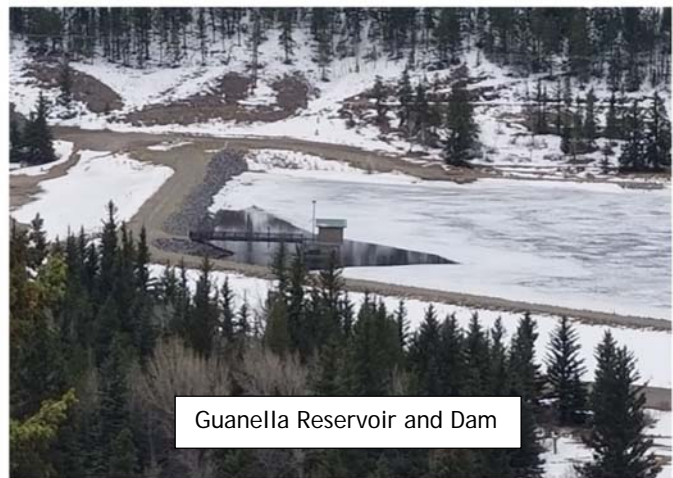


The City of Golden constructed Guanella Reservoir in 2003 just upstream from the Town of Empire. During construction of the reservoir, negotiations between Empire and Golden yielded an agreement that allowed Empire the delivery of up to 6.3 acre-feet of water per year from Guanella Reservoir. In addition to the yearly delivery, the Town of Empire has the option to purchase or lease 10 acre-feet of perpetual storage in the reservoir. The term of the purchase/lease option of the Golden Agreement expires in 2033. This project will secure the 10 acre-feet of storage space in Guanella Reservoir. The purchase is anticipated to occur in 2019.

L O C A T I O N			
<i>County:</i>	Clear Creek		
<i>Water Source:</i>	West Fork of Clear Creek		
<i>Drainage Basin:</i>	South Platte		
<i>Division:</i>	1	<i>District:</i>	7



Guanella Reservoir looking south



Guanella Reservoir and Dam



Guanella Reservoir

Town of Empire

Hwy 40