

STATE OF COLORADO

Colorado Water Conservation Board

Department of Natural Resources

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TO: Colorado Water Conservation Board Members

FROM: Anna Mauss, P.E., Project Manager
Kirk Russell, P.E., Chief
Finance and Administration Section

DATE: November 13, 2013

SUBJECT: **Agenda Item 31g, November 19-20, 2013 Board Meeting**
Finance – Emergency Loans
City of Evans – Emergency Evans Town Ditch Repair

Introduction

The City of Evans (City) is applying for an Emergency Loan for the Emergency Evans Town Ditch Repairs Project (Project). During the unprecedented flood of September 2013 in the tributaries to the South Platte River, a significant number of diversion structures and dams along the river corridor were damaged. The purpose of this Project is to repair the ditch to allow the City to deliver water to users. The total Project cost is estimated to be \$715,000. See attached Project Data Sheet for a location map and project summary.

Staff Recommendation

Staff recommends the Board approve a loan not to exceed \$722,150 (\$715,000 for project cost and \$7,150 for the 1% service fee) to the City of Evans, acting by and through its Water Activity Enterprise, for 100% of engineering and construction costs related to the Emergency Evans Town Ditch Repair Project from the Severance Tax Perpetual Base Fund, up to the approved loan amount. The loan terms shall be three years of no interest followed by 27-years at the middle-income municipal interest rate of 2.75% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.

Staff additionally recommends the following contract condition:

Any future grant funds obtained for the purpose of this Project shall be submitted to CWCB to be applied to the balance of the loan within thirty (30) calendar days after receipt of said funds.

Background

Construction of the Evans Town Ditch, referred to as the Evans Ditch, began in the 1880's. It is the 6th oldest ditch system in the State of Colorado. The original purpose of the ditch was to transport water for irrigation purposes to the Town of Evans and adjoining farms. Today, the ditch serves 59 users and provides non-potable water for irrigation to residences, businesses, parks, city buildings, open space and school grounds. The ditch also provides water to two small agricultural irrigation companies for nearby farms. The ditch is a very important source of water that helps reduce the city's reliance on treated surface water.

The Evans Ditch originates from the north bank of the Big Thompson River east of the confluence of the Little Thompson and St. Vrain Rivers and about 1.75 miles upstream of the confluence of the Big Thompson River with the South Platte River. There are approximately 20 miles of open ditch as well as various sized pipes and structures, that transfer water east into and through the city of Evans.

The system consists of an unlined, earthen open channel and pipe distribution system originating at the headworks diversion and runs parallel to the Big Thompson and S. Platter Rivers into town. The ditch and all its structures and controls were in very good condition prior to the flood. This is credited to the fact that the City conducted a Canal Modernization Study in 2006 to identify and design improvements to the ditch. The majority of recommended upgrades have been implemented with the exception of the installation of SCADA controls.

The September flood caused wide-spread flooding to the Big Thompson River upstream of Evans resulting in very high flows and massive amounts of debris and silt which have damaged the Evans Ditch, its diversion structures and controls, and the headworks access road. A large part of the project will be the removal of debris and sediment and the restoration of embankments that were washed out.

Loan Feasibility Study

Fred Starr, City Public Works Director, prepared the Loan Feasibility Study titled "*Emergency Loan Application and Feasibility Study*," dated November 2013. The study includes an alternative analysis and cost estimates. Preliminary Engineering was provided by HDR Engineers. The study was prepared in accordance with the CWCB guidelines.

Borrower – City of Evans, Water Activity Enterprise

The City is operated under a Home Rule Charter, established in 1973. It operates its water service through a Water Activity Enterprise with revenues generated by user fees. On average, the City delivers 2,475 AF of water annually to its 5,765 water rate payers.

Because the City delivers more than 2,000 AF annually, it is a covered entity as defined by the Water Conservation Act of 2004, requiring an approved Water Conservation Plan prior to executing a loan with the CWCB. The City does have a CWCB approved plan.

Water Rights

The water rights impacted by this project include

TABLE 1: IMPACTED WATER RIGHTS

Name	Amount (cfs)	Average Annual Yield (AF)	Appropriation Date	Adjudication Date
Evans Town Ditch	29.28	8,151	7/15/1893	8/2/1918

Project Description

Alternative 1 – Do Nothing: The alternative to do nothing is considered unacceptable because the failure to complete the repairs, replacements and clean-up needed would prevent the diversion of the city's water rights leading to the abandonment of the water rights and the ditch and significantly increasing the city's water costs to provide treated surface water to the irrigation customers currently supplied by the ditch.

Alternative 2 – Rebuilding Collaboratively with Improvements: Since the ditch is completely owned and operated by the City, there are minimal opportunities for collaboration with other users. The diversion structures and ditch were in excellent condition prior to the flood and costs are associated with repairing/replacing gates, controls and other equipment, cleaning up debris and sediment, and shoring up berms and embankments washed out by high water.

Since 2006, the City has planned to upgrade the ditch operations by adding SCADA controls to better measure water use and operate the system, but has not yet had funds to budget for these improvements. The estimated cost of SCADA controls of \$40,000 is included in the current loan request.

Selected Alternative 3 – Evans Town Ditch Repair: The City has been overwhelmed by massive flooding of two mobile home parks, damage to its wastewater treatment plant, and other major flooding problems. Consequently, the cost estimates prepared by staff and consulting engineer, Matt Gough of HDR Engineers, are early estimates which will be refined as access to the headworks and ditch is improved. The primary obstacle to more refined cost estimates is due to the fact that about 1500 linear feet of the access road to the headworks was washed away and the only vehicles that can reach the diversion structure are pick-up trucks. Once the access road is repaired, the City will have access for heavy equipment to allow for debris removal at the headworks, so that it can better examine the structure to determine the exact repairs needed. The current estimate for the headworks is a worse-case estimate that assumes replacing all the gates, air bladders and controls.

The repairs/replacements in the preliminary cost estimates include:

- Repairs/replacement of 1500 linear feet of the access road to the headworks;
- Channel sediment and debris removal in multiple locations at structures and in the channel;
- Debris removal and access culvert replacement at the Two Rivers Drop Structure;
- Replacement of the gates, bladders, and air controls at the headworks;
- Placement of material to shore up berms and embankments at various locations; and,
- Installation of SCADA controls to better operate the system.

The City does not anticipate needing permits because all work will be done as repairs to existing structures.

The estimated construction cost of the selected Alternative is \$715,000 and is further broken down as follows:

TABLE 2: PROJECT COST SUMMARY

Task	Cost
Design and Construction Engineering	\$112,500
Permitting	\$0
Construction	\$476,100
SCADA Controls	\$40,000
Contingency	\$86,400
Total	\$715,000

Collaboration: The borrower is encouraged to consider rebuilding a river diversion system that enhances consumptive and nonconsumptive uses of water within the river corridor. Examples include improved fish passage, improved rafting/boating navigation, and possible shared ownership/use of a single diversion structure where possible. If needed, loan funds may be used for the construction of temporary diversion until such time that a multi-beneficial structure can be designed and constructed.

Schedule: Project construction began in October 2013. Project completion is expected to occur by December 31, 2013.

Financial Analysis

Table 3 provides a summary of the Project's financial aspects. The first three years of the loan will be assessed a 0% interest rate. The remaining term of the loan will be assessed at the middle-income municipal interest rate of 2.75% with the principal amortized over 27-years. Staff is recommending an exemption to Financial Policy #11 to allow for 100% funding of eligible Project costs.

TABLE 3: FINANCIAL SUMMARY

Total Project Cost	\$715,000
CWCB Loan Amount (100% of total Project cost)	\$715,000
CWCB Loan Amount (Including 1% Service Fee)	\$722,150
CWCB Annual Loan Payment	\$38,243
CWCB Loan Obligation (Including 10% Reserve)	\$42,067
Number of Taps	5,765
Monthly Cost Per Tap for Loan (Including 10% Reserve)	\$0.61

Creditworthiness: The City's Water Activity Enterprise has the following debt:

TABLE 4: EXISTING DEBT

Lender	Original/Current Balance	Annual Payment	Maturity Date	Collateral
Colorado Water Resources and Power Development Authority	\$1,500,000	\$86,418	11/1/2023	Pledge of water rate revenues

TABLE 5: FINANCIAL RATIOS

Financial Ratio	Past 2 Years	Future w/ Project
Operating Ratio (revenues/expenses) weak: <100% - average: 100% - 120% - strong: >120%	164% (Strong) \$4.1M/\$2.5M	152% (Strong) \$4.1M/\$2.7M
Debt Service Coverage Ratio (revenues-expenses)/debt service weak: <100% - average: 100% - 120% - strong: >120%	N/A (CWRPDA debt was not in repayment)	1250% (Strong) <u>\$4.1M - \$2.5M</u> \$128K
Cash Reserves to Current Expenses weak: <50% - average: 50% - 100% - strong: >100%	19% (Weak) \$478K/\$2.5M	18% (Weak) \$478K/\$2.7M
Debt per Tap (Based on 5,765Taps) weak: >\$5,000 - average: \$2,500 - \$5,000 - strong: <\$2,500	N/A (CWRPDA debt was not in repayment)	\$382 (Strong) \$2.2M/5,765
Average Monthly Water Bill weak: <\$60 - average: \$30 - \$60 - strong: >\$30	\$44 (Average)	\$44 (Average)

Collateral: As security for the loan, the City will pledge its Water Activity Enterprise fees backed by a rate covenant. This is in compliance with the CWCBC Financial Policy #5 (Collateral).

cc: Fred Starr, Public Works Director, City of Evan
Susan Schneider/Jennifer Mele, Colorado's Attorney General Office

Attachment: Water Project Loan Program – Project Data Sheet

**CWCB Water Project Loan Program
Project Data Sheet**

C150387

Borrower: City of Evans, Water Activity
Enterprise

Project Name: Emergency Evans
Town Ditch Repairs

Drainage Basin/ District: South Platte / 4

Total Project Cost: \$715,000

Type of Borrower: Blended

CWCB Loan: \$722,150
(with 1% service fee)

County: Weld

Project Type: Ditch Rehabilitation

Water Source: Big Thompson

Funding Source: Severance Tax PBF

Average Annual Diversion: 8,151 AF

Interest Rate: 2.75% **Term:** 30-years
(Middle-Income Municipal)

The Evans Town Ditch was constructed in the 1880's. It is the 6th oldest ditch system in the State of Colorado. The original purpose of the ditch was to transport water for irrigation purposes to the Town of Evans and adjoining farms. Today, the ditch serves 59 users and provides non-potable water for irrigation to residences, businesses, parks, city buildings, open space and school grounds. The ditch also provides water to two small agricultural irrigation companies for nearby farms. The September 2013 flood caused wide-spread flooding to the Big Thompson River upstream of Evans resulting in very high flows and massive amounts of debris and silt which have damaged the Evans Ditch, its diversion structures and controls, and the headworks access road.

