



COLORADO

**Colorado Water
Conservation Board**

Department of Natural Resources

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TO: Colorado Water Conservation Board Members

FROM: Jonathan Hernandez, P.E., Project Manager
Kirk Russell, P.E., Finance Section Chief

DATE: July 18-19, 2018 Board Meeting

AGENDA ITEM: 20c. Water Project Loans
Roxborough Water and Sanitation District - Ravenna Development Interconnect

Introduction

The Roxborough Water and Sanitation District (District), acting by and through its water activity enterprise, is applying for a loan for the Ravenna Development Interconnect (Project). The Ravenna Development (Ravenna) recently switched from a non-renewable water supply to a renewable water supply provided by the District. The District currently provides treated water to Ravenna through a single emergency interconnect built in 2017. The purpose of this Project is to provide a permanent and reliable water source to Ravenna by constructing two additional interconnects between the District and Ravenna. The total Project cost is estimated to be \$1,763,750. The District received a grant from Douglas County to cover the engineering cost of the Project and is requesting this loan to cover the construction cost. See attached Project Data Sheet for a location map and Project summary.

Staff Recommendation

Staff recommends the Board approve a loan not to exceed \$1,584,690 (\$1,569,000 for Project costs and \$15,690 for the 1% service fee) to the Roxborough Water and Sanitation District, acting by and through its water activity enterprise, for costs related to the Ravenna Development Interconnect Project, from the Construction Fund. The loan terms shall be 30 years at the high-income municipal interest rate of 3.15% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.



Background

The District was established in 1971 and is located in unincorporated northwest Douglas County and provides water and sewer service within its service area. The District currently provides water service to approximately 3,650 Equivalent Residential Units (EQRs), with a planned build out of 4,361 EQRs. Its water supply comes from a perpetual lease with Aurora water and is a renewable water supply.

Ravenna is an upscale real estate development consisting of 243 home sites, a golf course, and one small commercial property. At full build-out, Ravenna will include 246 EQRs, of which approximately 70 are currently developed. Water service was originally supplied by the Ravenna Metropolitan District (RMD) which received its water from United Water and Sanitation District (United) via non-tributary wells located south of Castle Rock. Water was conveyed via East Plum Creek to United's diversion, through 10 miles of pipeline to a water treatment plant (WTP). The WTP was undersized to meet Ravenna's water demands at full build-out, and in 2015 the WTP's capacity was further reduced due to membrane fouling caused by poor maintenance and the lack of water pre-treatment. Further, the water supply system was experiencing periods of water supply interruptions as the 10-mile long pipeline was prone to breaks. Faced with the need for significant upgrades to the existing water delivery and treatment system, and the desire and need to switch from a non-renewable to a renewable water supply, RMD had TST Infrastructure, LLC prepare a feasibility study to evaluate water supply alternatives. That study was completed in September 2016 and evaluated four options to address RMD's potable water supply and treatment requirements, including a no action alternative which would still require RMD to upgrade the WTP and install an emergency interconnect with the District. That study concluded that becoming part of the District and receiving the District's treated water was the lowest cost option that met the goal of finding a renewable and potable water supply.

In November 2016, Ravenna held an election where voters unanimously approved the inclusion into the District. In April 2017, the District successfully renegotiated its water supply agreement with Aurora to allow the District to provide water service to its new service area of Ravenna. In summer of 2017, due to a system failure within United's 10-mile pipeline, a single emergency interconnect between the District and Ravenna was placed into service and has been Ravenna's only source of potable water ever since. In November 2017, the inclusion agreement between the District and Ravenna was finalized. The inclusion agreement requires that in addition to the emergency interconnect, two additional interconnects between the District and Ravenna be constructed in order to provide a permanent and reliable water supply to Ravenna.

Loan Feasibility Study

Michael Gerstner, P.E., with TST Infrastructure, LLC, prepared the Loan Feasibility Study titled, "Renewable Water Supply for Ravenna Metropolitan District Loan Feasibility Study," dated May 2018. The feasibility study was prepared in accordance with CWCB guidelines and includes an alternative analysis, conceptual designs, cost estimates, and financial reports audited by Poysti & Adams, LLC. A copy of TST Infrastructure's September 2016 Feasibility Study prepared on behalf of RMD was attached as an appendix to the loan feasibility study.

Borrower - Roxborough Water and Sanitation District

The Roxborough Park Metropolitan District was formed in 1971 as a special district under Title 32 of Colorado State Statutes and was authorized to provide water, sewer, and fire protection service to its customers. Fire protection was transferred to the West Metro Fire Protection District in 1999 and the name of the District changed in 2006 to the Roxborough Water and Sanitation District to more accurately reflect its services. The District is governed by a five-member Board of Directors elected by the residents.

Sources of revenues for the District include ad valorem taxes, user charges, rates, fees, and tolls. The District runs its water utility as a water activity enterprise which receives 10% or less of its revenues from taxes, and as such, its water utility is exempt from Colorado Constitution Article X Section 20 (TABOR) requirements. The Board of Directors have the power to set water user fees and surcharges, and when Ravenna voters approved the inclusion into the District, they also approved the payment of all required District fees, rates, tolls, charges, and taxes associated with the inclusion of and the provision of water service to Ravenna.

The District has a Water Conservation Plan adopted by its Board in March 2011. It was developed as part of a regional Douglas County Regional Water Conservation Planning Program.

Water Rights

The District's water supply is based entirely on renewable water delivered under a 2017 water supply agreement with Aurora. In that agreement Aurora agreed to provide up to 2,235 AF of raw water supply to the District on a contract basis, of which 1,950 AF is available for domestic use and 285 AF is available for irrigation water for Arrowhead Golf Course and Roxborough Village Metropolitan District. The leased water is diverted from the South Platte River and is delivered to the District's water treatment plant through water supply facilities owned and operated by Aurora. The agreement allows the District to use the water at any location within its boundaries, and provides an adequate supply to serve the District's new service area of Ravenna. The primary term of the agreement is 90 years and automatically and continuously renews thereafter for periods of 90 years.

Project Description

The purpose of the Project is to carry out the requirements of the 2017 inclusion agreement between the District and Ravenna, thereby providing Ravenna with a permanent and reliable water supply. Multiple alternatives for Ravenna's water supply including repairing and expanding its WTP, or finding different sources of renewable water supply, were evaluated in the September 2016 feasibility study.

Alternative 1 - No Action: This alternative would keep the emergency interconnect as the sole source of water supply for Ravenna. This connection only provides water to the existing high pressure zone and is not sufficient to fully provide service to the entire service area at full build out, nor does it provide important redundancy to the Ravenna water system. Therefore, this alternative is not acceptable.

Alternative 2 - Construct Interconnects: This alternative will complete the infrastructure modifications necessary to fully integrate the District's water system with Ravenna's water system. Modifications include two new interconnects, a segment of transmission pipeline, and the relocation of a pressure reducing valve (PRV). Under this alternative, the existing Ravenna WTP (owned by United and not currently in service) will not be needed, but the existing Ravenna storage tank (now owned by the District) will be put back into service.

The total cost estimate associated with the Project is \$1,763,750 as shown in Table 1.

TABLE 1: ESTIMATED PROJECT COST

Task	Total
North Interconnect	\$408,000
East Interconnect	\$326,000
Gravity Pipeline	\$390,000
PRV Relocation	\$22,000
Grading, Erosion, and Sediment Control	\$80,000
Subtotal	\$1,226,000
Contingency (25%)	\$307,000
Utility Investigation	\$20,000
Easements	\$16,000
Design & Construction Engineering Services	\$194,750
TOTAL	\$1,763,750

Permitting: Easements will be required from landowners including RMD, Roxborough Park Foundation, and River Canyon Real Estate Investments. The District holds a blanket easement with both RMD and Roxborough Park foundation and therefore most easements are already acquired. The final list of landowners will be developed during final design.

Schedule: Final design, right-of-way acquisition, and county approval is scheduled to be completed by fall 2018. Construction is expected to begin late 2018 and continue into the early part of 2019.

Financial Analysis

Table 2 provides a summary of the Project's financial aspects. The District qualifies for the high-income municipal interest rate of 3.15% for a 30-year term.

TABLE 2: FINANCIAL SUMMARY

Total Project Cost	\$1,763,750
Douglas County Grant (Engineering)	\$194,750
CWCB Loan Amount	\$1,569,000
CWCB Loan Amount (Including 1% Service Fee)	\$1,584,690
CWCB Annual Loan Payment	\$82,425
CWCB Annual Loan Obligation (1 st Ten Years)	\$90,668
Monthly Loan Obligation per District Tap (3,650 EQR)	\$2.07
Monthly Loan Obligation per Ravenna Tap (246 EQR)	\$30.71

Creditworthiness: The District's water activity enterprise has \$13,379,257 in existing debt made up of a 2013 CWCB loan as shown in Table 3. That loan was to acquire the permanent raw water supply lease from Aurora, and is in good standing.

The District will repay this new loan from a \$31/month per EQR user surcharge fee that will only be assessed to EQRs within Ravenna. It should be noted that with the inclusion of Ravenna into the District, customers located in Ravenna will see an approximately \$20/month per EQR reduction in their sewer bills by no longer being assessed for out-of-district sewer service. Therefore, the total net monthly impact for the District's customers within Ravenna will be an increase of approximately

\$11/month. Currently only 70 of the total 246 Ravenna EQRs are built out, but a past agreement requires River Canyon Real Estate to pay monthly user fees on all undeveloped EQRs.

TABLE 4: WATER ACTIVITY ENTERPRISE FINANCIAL RATIOS

Financial Ratio	Prior Years	Future w/ Project
Operating Ratio (revenues/expenses) Weak: <100% - average: 100% - 120% - strong: >120%	100% (average) \$3.7M/\$3.7M	100% (average) \$3.8M/\$3.8M
Debt Service Coverage Ratio (revenues-expenses)/debt service Weak: <100% - average: 100% - 120% - strong: >120%	100% (average) (\$3.7MK-\$2.7M) \$1.0M	100% (average) (\$3.8M-\$2.7M) \$1.1M
Cash Reserves to Current Expenses Weak: <50% - average: 50% - 100% - strong: >100%	670% (strong) \$6.7M/\$1.0M	609% (strong) \$6.7M/\$1.1M
Debt per Tap (3,650 EQRs) Weak: >\$5,000 - average: \$2,500 - \$5,000 - strong: <\$2,500	\$4,767 (average) \$17.4M/3,650EQRs	\$5,205 (weak) \$19.0M/3,650EQRs
Average Monthly Water Bill Weak: >\$60 - average: \$30 - \$60 - strong: <\$30	\$98 (weak)	\$129 ¹ (weak)

¹ Average annual cost of water is 1.45% of Roxborough Park's area median household income (MHI) and falls within water rate affordability ranges set forth by the EPA (<2.0%-2.5% of MHI) and the CDPHE (<1.5% of MHI).

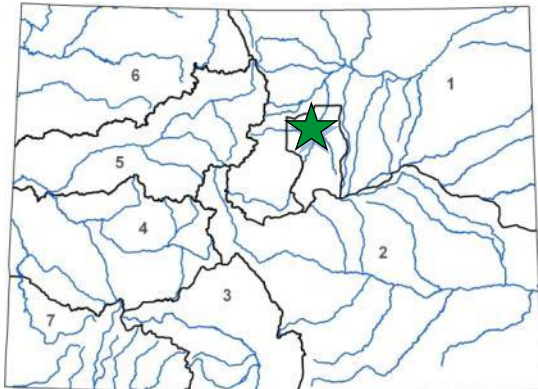
Collateral: Security for this loan will be a pledge of the District's water activity enterprise revenues backed by a rate covenant as evidenced by annual financial reporting. This security is in compliance with the CWCB Financial Policy #5 (Collateral).

cc: Barbara Biggs, General Manager, Roxborough Water and Sanitation District
 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:	\$1,763,750
CWCB Loan (with Service Fee):	\$1,584,690
Loan Term and Interest Rate:	30 Years @ 3.15%
Funding Source:	TBD
B O R R O W E R T Y P E	
Agriculture	Municipal Commercial
0%	0% Low - 0% Mid - 100% High 0%
P R O J E C T D E T A I L S	
Project Type:	Municipal Water Supply System New
Average Annual Diversions:	1,200 AF



L O C A T I O N	
County:	Douglas
Water Source:	South Platte River
Drainage Basin:	South Platte
Division:	1 District: 8

The Roxborough Water and Sanitation District was established in 1971 and provides water and sewer service within its service area in northwest Douglas County. In 2017 the District included the Ravenna Development (Ravenna) into its water service area. Ravenna sought inclusion into the District as a means to replace its non-renewable water supply (non-tributary groundwater wells) with a renewable water supply and as a means to efficiently provide potable water to the residents of Ravenna.

In summer of 2017, the District installed a single emergency interconnect with Ravenna and has been the sole source of potable water for Ravenna since. The inclusion agreement requires that in addition to the emergency interconnect, two additional interconnects between the District and Ravenna be constructed in order to provide a permanent and reliable water supply to Ravenna. Construction will include two new interconnections, a new pipeline, and the relocation of a pressure reducing valve. Final design, right-of-way acquisition, and county approvals is scheduled to be completed by fall 2018. Construction is expected to begin late 2018 and continue into the early part of 2019.

