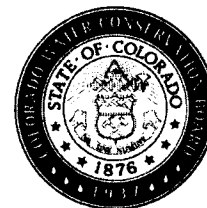


STATE OF COLORADO

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TO: Colorado Water Conservation Board Members

FROM: Ryan Edwards, P.E. *MEB*
Tim Feehan, P.E., Chief *TF*
Finance Section

DATE: July 1, 2011

SUBJECT: **Agenda Item 26c, July 12-13, 2011 Board Meeting**
Finance Section – New Project Loans
Thunderbird Water and Sanitation District – Lambert Ranch Water Rights Purchase

Introduction

The Thunderbird Water and Sanitation District (District) is applying for a loan for the Lambert Ranch Water Rights Purchase (Project). The purchase will enable the District to enlarge its water supply, thereby increasing system reliability, providing the redundancy necessary to allow for system maintenance, and protecting against depletions within the Denver Basin aquifer. The loan request is for 90% of the estimated \$350,000 total purchase price. See the attached Project Data Sheet for a location map and project summary.

Staff Recommendation

Staff recommends the Board approve a loan, from the Construction Fund, not to exceed \$318,150 (\$315,000 for project costs and \$3,150 for a 1% Loan Service Fee) to the Thunderbird Water and Sanitation District for the Lambert Ranch Water Rights Purchase. The loan term shall be 20 years at a rate of 4.25% per annum (reduced from a middle-income municipal base rate of 4.50% per a 30-year term). Security for the loan shall be in compliance with CWCB Financial Policy #5.

Background

The current water supply system for the District consists of two groundwater wells, Well No. 1 and Well No. 3, and two storage tanks to serve its 175 customers located within the Indian Creek Subdivision. A third well was shut down at the request of the Colorado Department of Public Health and Environment (CDPHE) due to high radon levels. Historically the two functioning wells combined for a yield of approximately 170 gpm (55 gpm for Well No. 1 and 115 gpm for

Well No. 3). In 2002 the District was advised by their consultant that Well No. 1 needed to be replaced due to deterioration in its casing. The well was re-drilled in 2003; however, the average yield of the new well dropped to 25 gpm, a loss of 30 gpm from the initial Well No. 1.

The drop in production has been an ongoing concern for the District in the event that Well No. 3 goes offline due to an emergency or for maintenance purposes. When supplemented by the storage tanks, Well No. 1 is marginally able to sustain the water demand for only indoor use, let alone outside irrigation or fire protection. Upon depletion of the tanks, Well No. 1 would be unable to meet even the daily demands for indoor uses.

In addition to the already reduced well yield, the South Metro Water Supply Study, dated December 2003, concluded that regional ground water levels are dropping. The lower water table and dewatering of the Denver Basin is expected to reduce the yield of existing and future wells. The Study also projects that well to well interference (caused by placing new wells in proximity to existing wells) further reduces well yield projections.

The nearly 990-acre Lambert Ranch (Ranch), adjacent to the northern boundary of the District, has placed a portion of their water rights for sale. The purchase of these water rights is the most economical way for the District to satisfy current and future water supply demands. Adding a well on the Ranch and the infrastructure necessary to tie in to the existing water supply system will provide redundancy for the District's water supply, allowing them to perform required maintenance without forcing water restrictions or minimizing fire protection capabilities as well as protecting customers against aquifer depletions.

Loan Feasibility Study

Leonard Rice Engineers, Inc. prepared the Feasibility Study titled "Thunderbird Water and Sanitation District – Loan Feasibility Study for Water Rights Purchase", dated April 4, 2011. Assistance was provided by Larry Morris, President of the Thunderbird Waters and Sanitation District. The feasibility study was prepared in accordance with the CWCB guidelines and is accompanied by a ground water rights appraisal, prepared by Leonard Rice and dated March 28, 2011. Leonard Rice prepared a feasibility study addendum letter, dated June 15, 2011, to expand on project history and existing system conditions.

Thunderbird Water and Sanitation District

The District, governed by a five-member board of directors, is a Title 32 District with taxing authority that provides potable water service for 175 customers within the District boundary. The boundary includes approximately 2,420 acres and serves a residential subdivision in Douglas County that is located two miles west of Sedalia, Colorado.

On average, the District delivers 55 acre-feet (AF) annually, with a peak demand of 75 AF (2002). Based on the reduced yield of Well No. 1 and the anticipated depletions of the existing aquifers, the District has determined the need to expand its capacity in order to maintain a reliable long-term supply to its customers. In a November 2010 ballot, voters approved an increase in real estate taxes to fund the purchase of the Ranch water rights and the future construction of a well and supporting infrastructure.

Water Rights

Water rights for the District are comprised of pre-Senate Bill 213 water rights that were adjudicated in case W-6333 and changed in Case 90CW200, and Denver Basin water rights decreed in Case 97CW249, for a total of 1,315AF. The District also has pending water court application Case 06CW208 to capture irrigation return flows using alluvial wells. The current water supply for the District is drawn exclusively from the Arapahoe aquifer through wells No. 1 and No. 3.

TABLE 1a: EXISTING WATER RIGHTS

Case	Designation	Denver Aquifer (AF)	Arapahoe Aquifer (AF)	Laramie-Fox Hills Aquifer (AF)
W-6333/Case 90CW200	Nontributary	256	64	---
Case 97CW249	Not nontributary	217	449	---
Case 97CW249	Nontributary	---	24	305
TOTAL		473	537	305

With this project the District is looking to expand its portfolio by purchasing 895.9 AF of the ground water rights decreed in Case No. 87CW300 from Valley Development Group, LLC. The purchase will include Denver Basin decreed ground water that underlies the property known as Lambert Ranch. The Ranch consists primarily of native vegetation and is home to several low-density residential properties. The proposed purchase accounts for approximately 73% of the overall 1,230 AF decreed, and includes the following:

TABLE 1b: CASE NO. 87CW300 PROPOSED WATER RIGHTS PURCHASE

Aquifer	Designation	Average Annual Amount (AF/yr)	Decreed Use
Denver	Not Nontributary	333.6	Multi-purpose
Arapahoe	Nontributary	420.8	Multi-purpose
Laramie-Fox Hills	Nontributary	141.5	Multi-purpose
TOTAL		895.9	

The water rights are decreed to be used, reused, successively used and otherwise disposed of for all purposes including: municipal, domestic, industrial, commercial, fire protection, irrigation, stock watering, recreation, fish and wildlife purposes, sanitary purposes, storage, augmentation and exchange. The District anticipates drilling an Arapahoe aquifer well to put this water to use for municipal and domestic purposes by the end of 2013.

Project Description

The District considered the following alternatives for addressing the groundwater supply shortage:

Alternative No. 1 – No immediate action: This alternative would allocate the Ranch water rights to any future purchaser of the property, likely resulting in further reductions of well yields within the District.

Alternative No. 2 – Divert from Meadows Ditch: Meadows Ditch on Indian Creek is the closest surface water to the District. The ditch is approximately 0.4 miles downstream from the northern boundary of the District. This option is not economically feasible, nor reliable as the surface rights are intermittent and would require a network of pipes, pumps and storage facilities. Additionally, the distance required to divert water (surface or non-tributary ground water) from other neighboring sources is not economically feasible.

(*Selected*) Alternative No. 3 – Purchase of Lambert Ranch water rights: This alternative includes a \$315,000 purchase of 895.9 AF of Denver Basin ground water that underlies the Ranch. A proposed well site and corresponding access easements are included in the purchase agreement for the water rights. With a projected yield of 50-90 gpm from the Arapahoe aquifer, this alternative satisfies the District goal of enlarging its water supply in order to address current and future needs. The appraised value of the water rights is estimated between \$315,000 and \$506,000 per the ground water rights appraisal prepared by Leonard Rice Engineers, Inc. The District plans to have the design and construction of the new well and associated infrastructure necessary to connect to the existing water supply system within two years of purchasing the water rights.

TABLE 2: TOTAL PROJECT COST SUMMARY

Task	Cost
Water Rights Purchase	\$315,000
Engineering and Administrative Services	\$35,000
Total	\$350,000

Financial Analysis

Based on the median household income of the area, the interest rate for the District is the middle-income municipal interest rate of 4.50% based on a 30-year term. The District has chosen a 20-year term, thereby reducing the interest rate to 4.25% (per Financial Policy #7).

TABLE 3: FINANCIAL SUMMARY

Total Project Cost	\$350,000
CWCB Loan Amount (90% of total Project cost)	\$315,000
CWCB Loan Amount (including 1% Service Fee)	\$318,150
CWCB Annual Loan Payment	\$23,931
CWCB Loan Obligation (including 10% debt reserve funding)	\$26,324
Number of Taps	175
Annual Increase in Real Estate Tax to Cover Project*	up to \$35,000
Project Cost per AF (895.9 AF)	\$391

*per 2010 Ballot

Creditworthiness:

The Company has two outstanding loans with the Colorado Water Resources and Power Development Authority (CWRPDA) for the drilling and installation of Well No. 3 and re-drilling of Well No. 1. The loans, issued in 1999 and 2002 respectively, have an outstanding balance totaling \$404,878 (\$170,146 for Well No. 3 and \$234,732 for Well No. 1). The combined annual payments total \$49,132 and both loans are in good standing with the Authority. Both are 20-year loans with a general obligation pledge for collateral.

The District generates revenue from the collection of usage fees and real estate taxes from its constituents. In November 2010, the residents voted in favor of increasing District taxes up to \$35,000 per year to finance a CWCB loan for the purchase of the Ranch water rights and up to \$45,000 per year for construction of water supply infrastructure. The infrastructure costs are estimated at \$500,000 and will be financed in full by the voter approved tax.

TABLE 4: FINANCIAL RATIOS

Financial Ratio	2007-2009	Future w/ Project
Operating Ratio (operating revenues/operating expenses) weak: <100% - average: 100% - 120% - strong: >120%	145% (strong) \$177K/\$122K	143% (strong) \$212K/\$148K
Debt Service Coverage Ratio (operating revenues - operating expenses)/debt service weak: <100% - average: 100% - 120% - strong: >120%	212%* (strong) (\$177K-\$73K)/\$49K	185%** (strong) (\$212K-\$73K)/\$75K
Cash Reserves to Current Expenses weak: <50% - average: 50% - 100% - strong: >100%	332% (strong) \$405K/\$122K	250% (strong) \$370K/\$148K
Average Residential Water Bill (monthly) weak: >\$60 - average: \$30 - \$60 - strong: <\$30	\$41.93 (average)	\$41.93 (average)
Debt per Tap (Total Debt Service/taps) weak: >\$5,000 - average: \$2,500-\$5,000 - strong: <\$2,000	\$2,314 (average) \$405K/175	\$4,132 (average) \$723K/175

* Past Debt Service totals \$49,132 and is comprised of two revolving loans with the CWRPDA; from 1999 (current balance of \$170,146, with an annual payment of \$24,310, maturity date of 2019) and 2002 (current balance of \$234,732, with an annual payment of \$24,822, maturity date of 2022).

** Future Debt Service (\$75,456) includes the Past Debt Service (\$49,132) in addition to the Proposed Debt Service (\$26,324)

Collateral: As collateral for the loan, the District will pledge its full faith and credit and a property tax mill levy, in accordance with its November 2010 voter-approved ballot question, and annual financial reporting. This is in compliance with the CWCB Financial Policy #5 (Collateral).

Staff Recommendation

Staff recommends the Board approve a loan, from the Construction Fund, not to exceed \$318,150 (\$315,000 for project costs and \$3,150 for a 1% Loan Service Fee) to the Thunderbird Water and Sanitation District for the Lambert Ranch Water Rights Purchase. The loan term shall be 20 years at a rate of 4.25% per annum (reduced from a middle-income municipal base rate of 4.50% per a 30-year term). Security for the loan shall be in compliance with CWCB Financial Policy #5.

cc: Larry Morris, President, Thunderbird Water and Sewer District
Susan Schneider, AGO
Peter Johnson, AGO

Attachment: Water Project Loan Program – Project Data Sheet

Water Project Loan Program – Project Data Sheet

Borrower: Thunderbird Water and Sanitation District

County: Douglas

Project Name: Lambert Ranch Water Rights Purchase

Project Type: Water Rights Purchase

Drainage Basin: South Platte, District 8

Water Source: Denver Basin Aquifer

Total Project Cost: \$350,000

Funding Source: Construction Fund

Type of Borrower: Middle-Income Municipal

Avg. Annual Delivery: 55 AF

CWCB Loan: \$318,150 (w/ 1% service fee)

Interest Rate: 4.25% **Term:** 20 years

The Thunderbird Water and Sanitation District (District) provides potable water service for the Indian Creek Ranch subdivision, consisting of 2,420 acres and 175 customers. The District is applying for a loan to purchase 895.9 AF of Denver Basin decreed ground water rights that underlie the property known as Lambert Ranch. On average, the District delivers approximately 55 AF annually. The increase would enable the District to enlarge its available supply; thereby increasing system reliability, providing the redundancy necessary to allow for system maintenance and protect against aquifer depletions.

Location Map

