

STATE OF COLORADO

Colorado Water Conservation Board

Department of Natural Resources

1313 Sherman Street, Room 721

Denver, Colorado 80203

Phone: (303) 866-3441

Fax: (303) 866-4474

www.cwcb.state.co.us



Bill Ritter, Jr.
Governor

Harris D. Sherman
DNR Executive Director

Jennifer L. Gimbel
CWCB Director

Dan McAuliffe
CWCB Deputy Director

TO: Colorado Water Conservation Board Members

FROM: Anna Mauss, P.E.
Mike Serlet, P.E., Chief
Water Supply Planning & Finance Section

DATE: March 10, 2009

SUBJECT: **Agenda Item 14b, March 17-18, 2009 Board Meeting**
Water Supply Planning and Finance Section – New Project Loans
South Metro Water Supply Authority – Water Supply Pipeline Capacity
Acquisition Project

Introduction

The South Metro Water Supply Authority (Authority) is applying for a \$5,040,000 loan for its Water Supply Pipeline Capacity Acquisition Project (Project). The Authority is made up of 13 independent water providers that serve communities in the southern area of metro Denver. The Project consists of purchasing capacity in the East Cherry Creek Valley (ECCV) Northern Supply Pipeline (Pipeline). The Authority is looking for opportunities to reduce its dependence on groundwater aquifers. The acquisition of capacity in the ECCV pipeline will aid participating Authority members in conveying renewable water supplies, recapturing consumable return flows, and will increase operational flexibility. The total Project cost is \$25,700,000. Only four members of the Authority (Arapahoe County Water and Wastewater Authority, Meridian Metropolitan District, Pinery Water and Wastewater District, and Stonegate Village Metropolitan District) are seeking funding from the CWCB. See attached Project Data Sheet.

Staff Recommendation

Staff recommends the Board approve a loan not to exceed \$5,090,400 (\$5,040,000 for project costs and \$50,400 for the 1% Loan Service Fee) to the South Metro Water Supply Authority for its Water Supply Pipeline Capacity Acquisition Project from the Construction Fund. The loan terms shall be 30 years at an interest rate of 4.5% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.

Staff further recommends additional approval conditions prior to contracting with the CWCB:

- 1) Water Conservation Plan: Pinery Water and Wastewater District must have a State approved water conservation plan in place.

Water Supply Protection • Watershed Protection & Flood Mitigation • Stream & Lake Protection • Water Supply Planning & Finance
Water Conservation & Drought Planning • Intrastate Water Management & Development

- 2) Purchase/Operating Agreements: The Authority must have a final purchase agreement and final operating agreement executed with copies submitted to the CWCB.
- 3) Prior to signing a contract with the CWCB, the Authority must provide an executed step up provision (as part of the Authority's participation agreement) whereby, in the event of default by one of the borrowers, all of the remaining participants in the Project (Castle Pines North Metropolitan District, Centennial Water and Sanitation District, Cottonwood Water and Sanitation District, Inverness Water and Sanitation District, and the Town of Castle Rock) will be required to pay for the defaulting party's commitment and that the payments due must be sufficient to enable the Authority to meet the CWCB debt service requirements. This step-up provision must be signed by all participants in the Project. The terms of the step-up provision shall be as agreed upon by the CWCB and Authority prior to execution with participants.
- 4) To utilize construction funds in a timely manner, the Authority will have a two-year time limit from CWCB approval to execute a funding contract with the CWCB. If a contract is not executed within two years of Board approval, the Project will be recommended for loan de-authorization unless the Board specifically approves a time extension.

Background

The Authority is made up of 13 independent water providers that serve communities in the southern area of metro Denver. The 13 members are:

Table 1. South Metro Water Authority Member Agencies

Arapahoe County Water and Wastewater Authority (ACWWA)
Meridian Metropolitan District (Meridian)
Pinery Water and Wastewater District (Pinery)
Stonegate Village Metropolitan District (Stonegate)
Castle Pines North Metropolitan District *
Centennial Water and Sanitation District*
Cottonwood Water and Sanitation District*
Inverness Water and Sanitation District*
Town of Castle Rock*
East Cherry Creek Valley Water and Sanitation District (ECCV)
Castle Pines Metropolitan District**
Parker Water and Sanitation District**
Roxborough Park Metropolitan District**

Note: **Bold** indicates members seeking funding from the CWCB for this Project; * indicates members of the Authority participating in the Project with independent (non-CWCB funding); ** indicates members of the Authority but not currently purchasing pipeline capacity in this Project.

The members of the Authority have been working together to identify new supplies of water and opportunities to share resources and infrastructure in Adams, Denver, Arapahoe, and Douglas Counties. Currently, the members rely mainly on the bedrock groundwater aquifer to supply the area's municipal

and industrial needs. The groundwater does not have sufficient natural recharge to match withdrawal rates, and is therefore considered to be nonrenewable.

The groundwater does provide a cost effective means to meet current demands; however, continued use of groundwater may not meet anticipated future needs without additional renewable supply sources. The proposed Project will allow participating members in the Authority to acquire capacity in the ECCV Northern Supply Pipeline and thereby will aid these members in conveying renewable water supplies, recapturing consumable return flows, and will increase operational flexibility.

Money from the CWCB loan will provide funding for four members: Arapahoe County Water and Wastewater Authority, Meridian Metropolitan District, Pinery Water and Wastewater District, and Stonegate Village Metropolitan District. The remaining members that are participating in the Project will purchase the capacity through their own independent financing.

The ECCV Northern Supply Pipeline was constructed in 2006. It is a 48-inch steel pipe that runs from Barr Lake to ECCV's service area located east of the Cherry Creek Reservoir. The pipeline is approximately 31 miles long and the capacity is 47 million gallons/day (mgd). The pipeline is a regional transmission line that delivers water to a point near Cherry Creek Reservoir. The pipeline will ultimately be connected to additional infrastructure that will deliver water to both to storage reservoirs and directly to Authority members who will then deliver water through their distribution systems. Potential surface water storage sites include: Centennial's South Platte Reservoir, Chatfield Reservoir, and Cherry Creek Reservoir, and in Rueter-Hess Reservoir.

Loan Feasibility Study

The Loan Feasibility Study titled "*Loan Feasibility Study – Water Supply Pipeline Capacity Acquisition*," dated February 2009, was prepared by Camp Dresser & McKee Inc. The study includes information on the long term water demands for the members of the Authority (including the Authority's Regional Water Master Plan, and estimated cost of the Project. The study was prepared in accordance with the CWCB guidelines.

South Metro Water Supply Authority

The Authority was formed in August 2004 pursuant to the South Metro Water Supply Authority Intergovernmental Agreement under Title 29, Colorado Revised Statutes. It is governed by a five-member Board of Directors. The Board has the ability to contract to borrow money and set rates for its members.

The Authority was formed from the Douglas County Water Resource Authority and the South Metro Water Supply Study Board after other larger water providers requested to work with one regional entity. By taking a unified approach to regional water rights and allocation, the Authority tries to best serve its members through its increased negotiating power and support on water projects.

Water Rights

Members of the Authority have individual portfolios of water rights including: extensive Denver Basin groundwater rights, direct flow and storage rights on the South Platte and its tributaries, alluvial ground

water rights and leasing/exchange/recapture of reusable effluent. The Authority itself does not own any water rights but will allow its members to convey their own rights through the ECCV system.

In the Authority's Regional Water Master Plan dated June 2007, total water demand projections were estimated for the interim (2010), mid-term (2020), and long-term (2030). Table 2 shows the estimated interim water demands for the members participating in the Project. Per these projections, it is estimated that Project participants will need 41 mgd by 2010. Through the acquisition of space in the ECCV Northern Pipeline, they will have the means to convey nearly 32 mgd of water towards that need.

Table 2. 2010 Water Demands

Member	Acre-Feet/Year	MGD
Arapahoe County Water and Wastewater Authority	3,680	3.3
Meridian Metropolitan District	2,644	2.3
Pinery Water and Waste Water District	3,833	3.4
Stonegate Village Metropolitan District	2,770	2.5
Castle Pines North Metropolitan District	2,290	2.0
Centennial Water and Sanitation District	19,500	17.4
Cottonwood Water and Sanitation District	1,264	1.1
Inverness Water and Sanitation District	1,626	1.5
Town of Castle Rock	8,600	7.7
Total	46,207	41.2

Project Description

In order to address the needed infrastructure to meet the Authority's overall Master Plan, the Authority considered the following options:

1. Participating in Aurora's Prairie Water Project;
2. Building a dedicated Authority transmission system;
3. Purchase the excess capacity in the ECCV Northern Supply Pipeline.

Alternative No. 1 – The Authority considered partnering with Aurora on the Prairie Waters Project. It would have been dependent on sharing costs: capital investment, and sharing operations and maintenance costs. In addition, it would have had to negotiate the terms: peak/off peak delivery schedules and quantities, raw versus treated water deliveries, and the inclusion/exclusion of water rights. Because of these significant uncertainties, this alternative was not selected.

Alternative No. 2 – The Authority evaluated construction of its own dedicated transmission line. Capital costs for the pipeline alone were estimated to be \$122.2 million. The size of the pipe evaluated was a 42-inch line with a capacity of 31.8 mgd, which equates to a unit cost of \$3.8M/mgd.

Selected Alternative No. 3 – The Authority evaluated acquiring space in the existing ECCV Northern Supply Pipeline. Individual members of the Authority currently own 5.73 mgd of firm capacity in the

Pipeline. The Authority is negotiating acquiring an additional 8.25 mgd firm capacity and 18.00 mgd variable capacity at a cost of \$25.7 million.

This price was based on escalated construction costs (to 2008 dollars) for building the ECCV Northern Supply Pipeline, which were calculated to be \$70 million for the 48-inch line that can deliver 47.0 mgd. This equates to \$1.5M/mgd for firm capacity. The Authority negotiated a rate of \$0.75M/mgd for the variable capacity. Combining the space to be purchased and the previously purchased space, members of the Authority will have a maximum capacity of 31.98 mgd with 13.98 being firm capacity and 18.00 mgd being variable capacity in the pipeline. Additionally, this alternative will not require any permitting and will be easier to implement than the other options.

The water in the pipeline will be of potable quality but will have relatively high total dissolved solids (TDS); therefore, the water will be blended to reduce the TDS prior to delivery to end users. Based on the Authority's master plan projections, it is estimated that 16,870 AF will be delivered to members' systems directly and 10,250 AF will be delivered to raw water surface storage for later delivery and treatment.

The Authority is in the process of negotiating the final terms of the purchase agreement and the operating agreement. General conditions of the operating agreement will specify how ECCV is going to manage the delivery, and what the monthly pro-rata operating costs will be (including a 5% administrative fee). The Authority will bill participating members and make payments to ECCV. It is expected that these negotiations will be complete by April 2009.

The Authority will also enter into participation agreements with all members participating in the Project in order to collect the fees to pay to ECCV. The CWCB will require that this agreement include a step-up provision in the event that one of the borrowers is unable to cover its debt service.

In the immediate term, the pipeline capacity will be used to convey and exchange existing water rights owned by Authority members. In the future, the pipeline will be used to convey consumable return flows (members' own or purchased), acquired water rights from agricultural transfers, or new junior storage.

A summary of the capacity and cost of pipe that the four members that will be acquiring through CWCB financing is provided in Table 3.

Table 3. Borrower Summary

Member	Firm Capacity (MGD)	Variable Capacity (MGD)	Cost
Arapahoe County Water and Wastewater Authority	0	3.5 (3,921 AF)	\$2.6M
Meridian Metropolitan District	.55 (616 AF)	0	\$0.8M
Pinery Water and Waste Water District	.50 (560 AF)	1.0 (1,120 AF)	\$1.5M
Stonegate Village Metropolitan District	0	1.0 (1,120 AF)	\$0.7M
Total	(x \$1.5M/mdg)	(x \$0.75M/mdg)	\$5.6M

Note: Firm capacity is defined as the capacity available to members of the Authority at all times. Variable capacity is the space ECCV owns in the pipeline but will not use during off-peak hours. During peak demand, ECCV will likely use its entire allotted space. There will be times in the day, however, when ECCV is not using all of its capacity and will allow other members of the Authority access to this space.

Financial Analysis

Table 4 shows a summary of the financial aspects of the loan request. Based on the median household income of the Authority's members' service areas, a high-income municipal interest rate of 4.5% for a 30-year term will be used.

Table 4. Financial Summary

PROJECT/LOAN	
Total Project Cost	\$25,700,000
Project Cost for CWCB Loan Borrowers	\$5,600,000
CWCB Loan (90% of Borrowers portion)	\$5,040,000
CWCB Loan (Including 1% Service Fee)	\$5,090,400
CWCB Annual Loan Payment	\$312,500
CWCB Annual Loan Obligation (Including 10% Reserve Funding)	\$343,800
Current Number of Taps (served by all four borrowing members combined)	10,700
Average Monthly Cost Per Tap for Project	\$2.45

Creditworthiness: The Authority has no existing debt. The Authority will collect assessments from Arapahoe County Water and Wastewater Authority, Meridian Metropolitan District, Pinery Water and Wastewater District, and Stonegate Village Metropolitan District to cover the CWCB debt service and reserve account.

In the event of default by one of the borrowers, the CWCB contract will have a step up provision whereby the remaining participants in the Project will be required to pay for the defaulting party's commitment. The payments due must be sufficient to enable the Authority to meet the CWCB debt service requirements.

Table 5 shows the financial ratios for each of the Authority members borrowing money from the CWCB. The Authority does not have any financial history of its own, so financial ratios for the Authority are not included in the table below. However, the ratios for each of the members borrowing funds from the CWCB are set forth to show the individual members' financial strength.

Table 5. Financial Ratios – Future (with Project)

Financial Ratio	ACWWA	Meridian	Pinery	Stonegate
Operating Ratio (revenues/expenses) weak: <100% - average: 100% - 120% - strong: >120%	113% (Average) \$9.6M/8.5M	119% (Average) \$1.9M/1.6M	88% (Weak) \$4.4M/5.0M	141% (Strong) \$4.8M/3.4M
Debt Service Coverage Ratio (revenues-expenses)/debt service weak: <100% - average: 100% - 120% - strong: >120%	158% (Strong) \$9.6M- 6.6M/1.9M	625% (Strong) \$1.9M- 1.6M/48K	63% (Weak) \$4.4M- 3.4M/1.6M	3400% (Strong) \$4.8M- 3.3M/44K
Cash Reserves to Current Expenses weak: <50% - average: 50% - 100% - strong: >100%	178% (Strong) \$15.1M/8.5M	63% (Average) \$1.0M/1.6M	104% (Strong) \$5.2M/5.0M	218% (Strong) \$7.4M/3.4M
Monthly Residential Water Bill weak: >\$60 - average: \$30 - \$60 - strong: <\$30	\$134 (Weak)	\$49 (Average)	\$111 (Weak)	\$126 (Weak)

Collateral – As security for the loan, the Authority will pledge assessment revenues backed by a rate covenant and a security interest in the pipeline capacity purchased by the Authority with the proceeds of this loan. This is in compliance with CWCB Financial Policy #5 (Collateral).

Staff Recommendation

cc: Rod Kuharich, Executive Director, South Metro Water Supply Authority
 Rick Brown, CDM
 Susan Schneider, AGO

Attachment: Water Project Loan Program – Project Data Sheet

CWCB Construction Loan Program Project Data Sheet

Borrower: South Metro Water Supply Authority

County: Adams, Denver, Arapahoe,
Douglas

Project Name: Water Supply Pipeline Capacity
Acquisition Project

Project Type: Pipeline

Drainage Basin: South Platte

Water Source: South Platte River

Total Project Cost: \$25,700,000

Funding Sources: CWCB / Independent

Type of Borrower: Municipal

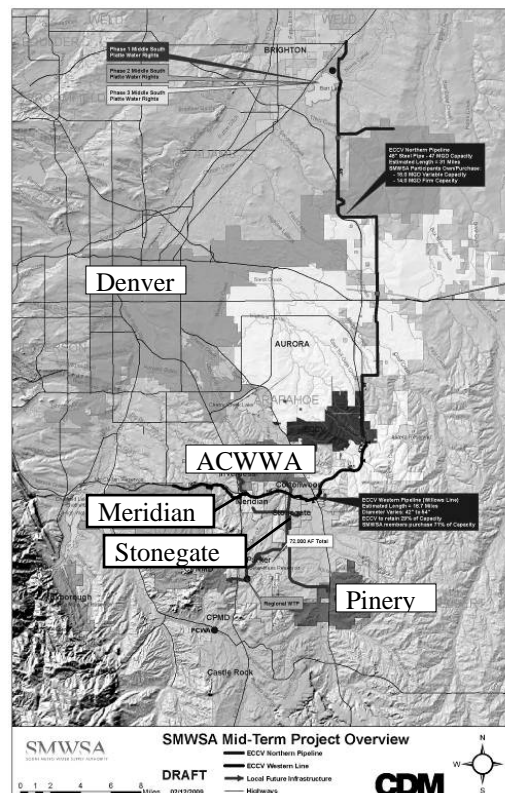
Average Delivery: 10,750 acre-feet

Loan Amount: \$5,090,400 (including 1% service fee)

Interest Rate: 4.5%

Term: 30 years

South Metro Water Supply Authority (Authority) is made up of 13 independent water providers that serve communities in the southern area of metro Denver. Currently, the Authority members rely mainly on groundwater aquifers to supply the area's M&I needs. Because this source is nonrenewable, members have been working to identify new supplies of water and opportunities to share resources and infrastructure to reduce dependence on groundwater. The Authority intends to acquire capacity in the East Cherry Creek Valley Water and Sanitation District (ECCV) Northern Supply Pipeline (Pipeline) as a means to convey renewable water supplies, recapture consumable return flows, and increase operational flexibility. The Pipeline is a 48 inch steel pipe that runs from Barr Lake to ECCV's service area (located to the east of Cherry Creek Reservoir). The capacity is 47 million gallons/day (mgd) capacity. The Pipeline delivers water both to storage reservoirs and directly to end users in the Authority's member's delivery areas. The Authority is acquiring 26.25 mgd of excess capacity from ECCV. Final purchase and operating agreements are still under negotiation. It is expected that the purchase will take place in late spring 2009.



Location Map