

# STATE OF COLORADO

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## Colorado Water Conservation Board Department of Natural Resources

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TO: Colorado Water Conservation Board Members

FROM: Derek Johnson, P.E., Project Manager  
Kirk Russell, P.E., Chief  
Finance Section

DATE: May 9, 2014

SUBJECT: **Agenda Item 30c, May 21-22, 2014 Board Meeting**  
**Water Infrastructure and Supply Efficiency (WISE) Project Loans**  
**Parker Water and Sanitation District**

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### Introduction

The Parker Water & Sanitation District (Parker or District), acting by and through its water activity enterprise, is requesting a loan for its participation in the Water Infrastructure and Supply Efficiency (WISE) Project. The WISE Project is included in the CWCB Projects Bill (HB14-1333). For the purposes of this loan, the Project is defined as the District's participation therein. The goal of the Project is to reduce the District's dependence on non-renewable water sources. The District is requesting a loan from the CWCB for 90% of its \$17,310,000 project cost. See attached Project Data Sheet for a location map and a project summary.

### Staff Recommendation

Staff recommends the Board approve a combined total loan amount not to exceed \$15,734,790 (\$15,579,000 for Project costs and \$155,790 for the 1% Loan Service Fee) to the Parker Water & Sanitation District, acting by and through its water activity enterprise, for its participation in the Water Infrastructure and Supply Efficiency (WISE) Project from the Construction Fund. The loan terms shall be 20 years at the high-income municipal interest rate of 2.75% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.

(INFORMATION IN SMALL CAPS IS COMMON TO ALL WISE LOANS)

### **WISE Project Overview**

THE WISE PROJECT IS THE RESULT OF REGIONAL COOPERATIVE PLANNING EFFORTS BETWEEN DENVER WATER, AURORA WATER, AND 10 REGIONAL WATER PROVIDERS IN THE SOUTH METROPOLITAN AREA.

WATER PROVIDERS IN THE SOUTH METROPOLITAN DENVER AREA RELY PRIMARILY ON BEDROCK GROUNDWATER TO SUPPLY MUNICIPAL AND INDUSTRIAL WATER NEEDS. ALTHOUGH THERE IS A SUBSTANTIAL AMOUNT OF GROUNDWATER IN BEDROCK AQUIFERS UNDERLYING THE DENVER AREA, THESE SUPPLIES DO NOT HAVE A NATURAL SOURCE OF REPLENISHMENT AND ARE THUS CONSIDERED TO BE NON-RENEWABLE. GROUNDWATER AND WELL PRODUCTION DATA INDICATE THAT GROUNDWATER LEVELS ARE DECLINING IN MANY AREAS AS A RESULT OF GROUNDWATER PUMPING. AREA WATER PROVIDERS RECOGNIZE THE NEED TO TRANSITION TO RENEWABLE WATER SUPPLY SOURCES.

THE SOUTH METRO WISE AUTHORITY (WISE AUTHORITY) IS COMPRISED OF TEN GOVERNMENTAL WATER PROVIDERS IN DOUGLAS AND ARAPAHOE COUNTIES BOUND TOGETHER BY A 2013 INTERGOVERNMENTAL AGREEMENT. STAFF IS RECOMMENDING FOUR WISE AUTHORITY MEMBERS FOR LOAN FUNDING THROUGH CWCBC.

THE WISE PROJECT WILL UTILIZE EXCESS CAPACITY IN AURORA'S PRAIRIE WATERS PROJECT AND AS-AVAILABLE REUSABLE RETURN FLOWS FROM DENVER WATER AND AURORA WATER TO CREATE A NEW SURFACE WATER SUPPLY FOR WISE AUTHORITY MEMBERS. REUSABLE RETURN FLOWS WILL BE DELIVERED FROM THE SOUTH PLATTE RIVER THROUGH AURORA'S PRAIRIE WATERS SYSTEM TO ITS BINNEY WATER PURIFICATION FACILITY. TREATED WATER WILL THEN BE DELIVERED TO A MASTER METER FOR FURTHER DISTRIBUTION TO WISE AUTHORITY MEMBERS.

WATER DELIVERIES RESULTING FROM THE WISE PROJECT WILL BE VARIABLE AND, AT TIMES, INTERMITTENT. WATER DELIVERIES THROUGH THE WISE PROJECT CAN BE DIRECTLY USED IN PARTICIPANTS' DISTRIBUTION SYSTEMS WHEN DEMANDS COINCIDE WITH THE AVAILABILITY OF SUPPLIES. TO THE DEGREE THAT DELIVERIES EXCEED DEMAND (IN ANY GIVEN MONTH OR DAY), EXCESS WATER CAN BE PUT INTO STORAGE FOR LATER WITHDRAWAL. STORAGE SITES THAT MAY BE UTILIZED INCLUDE RUETER-HESS RESERVOIR AND AQUIFER STORAGE AND RECOVERY (ASR).

WATER WILL BE DELIVERED TO PARTICIPANTS BASED ON THE AMOUNTS DEFINED IN THE WATER DELIVERY AGREEMENT BETWEEN AURORA WATER, DENVER WATER AND THE WISE AUTHORITY. THIS DEFINED VOLUME IS REFERRED TO AS THE SUBSCRIPTION LEVEL, AND IS BASED ON AVERAGE ANNUAL WATER DELIVERIES OVER A 10-YEAR BLOCK OF TIME IN ACRE-FEET PER YEAR. THE FOLLOWING *TABLE 1: WISE PARTICIPANTS & DELIVERIES* LISTS THE AMOUNT OF WATER TO WHICH EACH WISE AUTHORITY MEMBER HAS COMMITTED IN THE WATER DELIVERY AGREEMENT.

**TABLE 1: WISE PARTICIPANTS & DELIVERIES**

<b>WISE Authority Member</b>	<b>10-Year Guar. Delivery (acre-feet)</b>	<b>Subscription Level (acre-feet per year)</b>
<b>Cottonwood *</b>	<b>4,000</b>	<b>400</b>
<b>Inverness *</b>	<b>5,000</b>	<b>500</b>
<b>Parker *</b>	<b>12,000</b>	<b>1,200</b>
<b>Pinery *</b>	<b>5,000</b>	<b>500</b>
Rangeview	5,000	500
Castle Rock	10,000	1,000
Centennial	10,000	1,000
Dominion	13,250	1,325
Stonegate	5,000	500
Meridian	3,000	300
<b>Totals</b>	<b>72,250</b>	<b>7,225</b>
<i>* Entities shown in bold are requesting CWCB loans.</i>		

FACILITIES TO BE CONSTRUCTED OR ACQUIRED FOR THE WISE PROJECT CAN BE CONSIDERED CORE OR LOCAL COMPONENTS. CORE INFRASTRUCTURE COMPONENTS ARE THOSE DOWNSTREAM OF AURORA'S BINNEY WATER PURIFICATION FACILITY (BWPF) CLEARWELL AND MASTER METER THAT ARE NECESSARY FOR SERVICE TO ALL OR MOST OF THE PARTICIPANTS, AND RELATED COSTS THEREFORE ARE DISTRIBUTED AMONG ALL WISE AUTHORITY PARTICIPANTS ACCORDING TO THEIR COMMITTED DELIVERY SUBSCRIPTION LEVEL. LOCAL INFRASTRUCTURE COMPONENTS ARE NECESSARY ELEMENTS FOR INDIVIDUAL OR SMALLER GROUPS OF WISE AUTHORITY PARTICIPANTS: THOSE COSTS ARE THEREFORE DIRECTLY APPLIED TO THE BENEFITING MEMBERS. THE CWCB LOANS FOR THE OVERALL PROJECT HAVE BEEN DIVIDED INTO 4 SEPARATE LOANS ACCORDING TO FUNDING, TIMELINE, AND LOCATION:

CONTRACT #1 - EAST CHERRY CREEK VALLEY (ECCV) PIPELINE PURCHASE: DELIVERIES TO THE WISE AUTHORITY MEMBERS WILL BE BROUGHT SOUTH THROUGH AURORA'S PRAIRIE WATERS PIPELINE TO A DELIVERY AND MASTER METER POINT LOCATED AT AURORA'S BWPF. SUBSEQUENT DELIVERY TO AREAS WEST WILL BE MADE VIA THE ECCV WESTERN PIPELINE. THE WISE AUTHORITY WILL PURCHASE AN 85% OWNERSHIP INTEREST IN THE 15-MILE ECCV WESTERN PIPELINE, WITH THE REMAINING 15% OWNERSHIP TO BE HELD BY DENVER WATER. ECCV WILL RETAIN RIGHTS TO CARRYING CAPACITY IN THE PIPELINE.

CONTRACT #2 - PHASE 1 INFRASTRUCTURE: COMPONENTS INCLUDED IN THIS PHASE/LOAN INCLUDE A TEMPORARY DIRECT CONNECTION TO AURORA'S DISTRIBUTION SYSTEM TO PROVIDE SHORT-TERM DELIVERIES, AND MODIFICATIONS TO THE ECCV WESTERN PIPELINE NECESSARY TO MAKE WISE WATER DELIVERIES. LOCAL COMPONENTS CONSIST OF SEVERAL TURNOUTS TO BE CONSTRUCTED TO DELIVER WATER DIRECTLY TO WISE PARTICIPANTS WITH SYSTEMS ADJACENT TO THE PIPELINE. ADDITIONAL PUMP STATIONS WILL BE CONSTRUCTED TO DELIVER WATER TO STORAGE IN RUETER-HESS RESERVOIR AND CONVEY WATER TO PARTICIPANTS LOCATED SOUTH OF RUETER-HESS RESERVOIR. THIS PHASE INCLUDES TWO PUMP STATIONS, AND 45 MILES OF NEW PIPELINES VARYING BETWEEN 8- AND 42- INCHES IN DIAMETER.

CONTRACT #3 - PHASE 2 INFRASTRUCTURE: COMPONENTS INCLUDED IN THIS PHASE/LOAN INCLUDE A PUMP STATION AND PIPELINE FROM THE BWPF TO THE EXISTING ECCV PIPELINE, REPLACING THE

TEMPORARY INTERCONNECT WITH THE AURORA DISTRIBUTION SYSTEM AND INCREASING THE CAPACITY OF THE OVERALL SYSTEM. WATER WILL BE PUMPED GENERALLY WEST TO A HIGH POINT, THEN WEST ALONG THE HIGHWAY E-470/C-470 CORRIDOR THROUGH THE EXISTING ECCV WESTERN PIPELINE.

CONTRACT #4 - DENVER INTERNATIONAL AIRPORT (DIA) CONNECTION: THE DIA CONNECTION PROJECT COMPONENT, A 24-INCH 6 MILE PIPELINE INTERCONNECTION BETWEEN DENVER WATER'S TREATED DISTRIBUTION SYSTEM NEAR DIA AND AURORA'S PRAIRIE WATERS PIPELINE, WILL PROVIDE BLEND WATER DELIVERIES FOR THE WISE AUTHORITY MEMBERS. DENVER WATER WILL OWN AND OPERATE THE DIA CONNECTION.

**TABLE 2: WISE AUTHORITY PROJECT COSTS**

WISE Authority Member	ECCV Pipeline Purchase	Phase 1 & 2 Infrastructure	DIA Connection	Totals
<b>Cottonwood *</b>	\$ 420,000	\$ 4,140,000	\$ 400,000	\$ 4,960,000
<b>Inverness *</b>	\$ 2,030,000	\$ 2,870,000	\$ 500,000	\$ 5,400,000
<b>Parker *</b>	\$ 4,870,000	\$ 11,226,000	\$ 1,210,000	\$ 17,306,000
<b>Pinery *</b>	\$ 2,030,000	\$ 8,390,000	\$ 500,000	\$ 10,920,000
Range view	\$ 2,030,000	\$ 3,903,900	\$ 500,000	\$ 6,433,900
Castle Rock	\$ 4,060,000	\$ 34,934,900	\$ 1,000,000	\$ 39,994,900
Centennial	\$ 4,060,000	\$ 4,046,900	\$ 1,000,000	\$ 9,106,900
Dominion	\$ 5,370,000	\$ 37,008,400	\$ 1,330,000	\$ 43,708,400
Meridian	\$ 1,220,000	\$ 1,272,700	\$ 300,000	\$ 2,792,700
Stonegate	\$ 2,030,000	\$ 4,304,300	\$ 500,000	\$ 6,834,300
Component Totals	\$ 28,120,000	\$ 112,097,100	\$ 7,240,000	\$ 147,457,100

*\* Entities in bold are recommended for CWCB funding.*

**SCHEDULE:** ALL FACILITIES ARE SCHEDULED TO BE CONSTRUCTED BY MID-2020. MAJOR MILESTONES TO NOTE INCLUDE:

- ALL AGREEMENTS WILL BE FINALIZED BY THE MIDDLE OF 2014
- PURCHASE OF THE ECCV PIPELINE IS EXPECTED IN 2014
- DESIGN OF PHASE 1 INFRASTRUCTURE AND A DIRECT CONNECTION TO AURORA WATER'S DISTRIBUTION SYSTEM WILL BEGIN IN 2014. CONSTRUCTION OF THESE COMPONENTS WILL BEGIN IN 2015 AND IS PLANNED TO BE COMPLETED MID-2016.
- DESIGN OF PERMANENT PHASE 2 INFRASTRUCTURE TO REPLACE THE TEMPORARY CONNECTION TO THE AURORA WATER DISTRIBUTION SYSTEM WILL BEGIN IN 2018. CONSTRUCTION OF THESE COMPONENTS WILL BEGIN IN 2019 AND IS PLANNED TO BE COMPLETED MID-2020.
- DENVER WATER HAS AGREED TO DESIGN AND CONSTRUCT THE DIA CONNECTION ON OR BEFORE MAY 31, 2020.

### **Borrower - Parker Water and Sanitation District**

Parker Water and Sanitation District is a quasi-municipal corporation and political subdivision of the State of Colorado created in 1962 in Douglas County, for the purpose of providing water and sanitary sewer services its users.

The District is a party to a Service Agreement with the Town of Parker, Colorado, Cherry Creek South Metropolitan District No. 1, Cherry Creek South Metropolitan District No. 2, and Stroh Ranch Development Limited Partnership.

Average day water demand is approximately 5.5 million gallons. As of December 2013 the District served a total of 13,744 accounts representing a total of 17,403 Single Family Equivalents (SFEs). In 2013, the District provided 5,965 acre-feet in water sales to its users.

User service charges are utilized to meet the operation and maintenance expenses of the water and sanitary sewer system.

### **Water Rights**

The District currently has 46 wells from which it may divert its decreed water rights. The District currently has, by decree, the right to withdraw approximately 25,000 acre-feet of water per year from the Denver basin aquifer and nearly 15,500 acre-feet per year of consumptive use water from the Cherry Creek alluvium at build out. The Colorado Water Court has approved an augmentation plan that increases the District's rights by approximately 8,000 acre-feet per year.

The District also owns 13 farms in Logan County that encompass approximately 4,665 acres, 2,765 acres of which have been historically irrigated. The historically-irrigated lands on the District farms can produce approximately 5,000 ac-ft/yr of senior, fully-consumable water. In addition to senior surface water rights, the District also owns 24 irrigation wells, that can produce approximately 45 cubic feet per second, operating pursuant to the Lower Logan Water Users Association augmentation plan, making these junior well water rights reliable. The District also owns storage in Prewitt Reservoir that provides supplemental irrigation water to the irrigated lands on District farms. The water associated with the farms is available for the District's future use as a reliable and renewable water supply.

### **Borrower's Participation**

Parker has subscribed to 1,200 acre-feet of water on an average annual basis through the WISE Project. The District expects that in average and wet years, when WISE is delivering an average yield, close to 100% of the District's water supply will come from renewable sources. In dry years, the loss in water deliveries from renewable sources will be made up through pumping additional non-tributary ground water, water from aquifer storage, or from Rueter-Hess Reservoir.

Parker will take the lead on construction of 20,300 feet of new 42-inch pipeline from near the intersection of Chambers Road and E-470 to the Parker Water Treatment Plant located just south of Rueter-Hess Reservoir. Southward from the treatment plant a 16.5 million gallons per day pumping station will be constructed, followed by 9,000 feet of new 24-inch pipe that will allow WISE water to be conveyed to Rueter-Hess Reservoir for storage. Parker's facilities will be oversized for use by other WISE Authority members.

The estimated total project cost for all of the WISE Project components is \$147.5M. The amount that each WISE Authority member is required to pay depends on the amount of water each WISE Authority member has committed to taking, as well as the amount of local infrastructure that must be constructed to deliver each member's WISE water. The District's funding is shown in Table 3.

**TABLE 3: CONTRACTING SUMMARY**

Contract	Earliest Contract Date	Time of Performance	Project Cost	CWCB Loan Contract Amount (w/o service fee)	Project Activity
1	7/1/2014	2 Years	\$ 4,870,000	\$ 4,383,000	ECCV Pipeline Purchase
2	1/1/2015	4 Years	\$ 7,464,600	\$ 6,718,140	Phase 1 Infrastructure
3	1/1/2015	8 Years	\$ 3,760,900	\$ 3,384,810	Phase 2 Infrastructure
4	7/1/2014	8 Years	\$ 1,210,000	\$ 1,089,000	DIA Connection
<b>Totals</b>			<b>\$ 17,305,500</b>	<b>\$ 15,574,950</b>	

\* Project Cost is defined as the District's participation cost in the overall WISE Project.

**Contracting:** In anticipation of a multi-year and multi-phased project, CWCB will enter into multiple contracts, for increments of the approved loan limit. This will put the District into repayment on completed portions of the Project and allow CWCB to best utilize its loan funds. CWCB will enter into contracts for project activities no sooner than the dates shown in the above table. Given the potentially long Time of Performance of each contract, interest during construction will be required to be paid annually unless otherwise approved by CWCB.

### Loan Feasibility Study

Black & Veatch prepared a Loan Feasibility on behalf of the WISE Authority dated October 23, 2013 and titled “*Water Infrastructure and Supply Efficiency Project Loan Feasibility Study*”. This study was prepared in accordance with CWCB guidelines and includes an alternatives analysis, conceptual design descriptions, exhibits, cost estimates, and financial statements audited by Clifton Gunderson LLP. Additional clarification and information was provided by Eric Hecox and Rick Marsicek, P.E. of South Metro Water Supply Authority (SMWSA).

### Financial Analysis

Table 4 shows a summary of the financial aspects of the Project. Based on the median household income of its members, the District’s interest rate is the reduced high municipal income rate of 2.75% for a 20-year term.

**TABLE 4: PROJECT FINANCIAL SUMMARY**

Total Project Cost	\$ 17,305,500
Borrower Match	\$ 1,730,550
CWCB Loan	\$ 15,574,950
CWCB Loan (Including 1% Service Fee)	\$ 15,730,700
CWCB Annual Loan Payment	\$ 1,033,062
CWCB Loan Obligation (including 10% debt reserve funding)	\$ 1,136,368
Monthly Cost of Loan per SFE (incl. debt reserve)	\$ 4.95
Cost per Acre-Foot of Subscribed Deliveries	\$ 14,421

CWCB will disburse loan funds at a rate of up to 90% of Project Cost, up to the approved loan contract limit.

**Creditworthiness:** The District has \$103,703,978 in existing debt tied to its Water and Sewer Enterprise Revenues, and \$91,790,000 General Obligation debt as shown in Table 5 below.

**TABLE 5: EXISTING DEBT**

Lender	Outstanding Balance	Current Year Debt Service	Collateral
Revenue Bond and CWRPDA loans total	\$ 52,218,978	\$ 5,576,803	Enterprise Revenues
WTP Loan (Build American Bond)	\$ 51,485,000	\$ 2,940,995	Enterprise Revenues
General Obligation Debt (2004 Loan & 2012 Refunding Bond)	\$ 91,790,000	\$ 5,574,875	General Obligation
Subtotal	\$ 91,790,000	\$ 5,574,875	General Obligation
Subtotal	\$ 103,703,978	\$ 8,517,798	Enterprise Revenues
Total	\$ 195,493,978	\$ 14,092,673	

**TABLE 6: FINANCIAL RATIOS**

Financial Ratio	Past 3 Years	Future w/ Project
Operating Ratio (revenues/expenses) weak: <100% - average: 100% - 120% - strong: >120%	112% (average) \$26.1M/ (\$8.5M+\$14.7M)	108% (average) \$26.1M/ (\$9.7M+\$14.7M)
Debt Service Coverage Ratio (revenues-expenses)/debt service weak: <100% - average: 100% - 120% - strong: >120%	134% (strong) (\$26.1M- \$14.7M)/\$8.5M	121% (average) (\$26.4M- \$14.7M)/\$9.7M
Cash Reserves to Current Expenses weak: <50% - average: 50% - 100% - strong: >100%	200% (strong) \$46.6M/\$23.3M	191% (strong) \$46.6M/\$24.4M
Debt per Tap (17,403 SFEs) weak: >\$5,000 - average: \$2,500 - \$5,000 - strong: < \$2,500	\$5,959 (weak) \$103.7M / 17,403 SFEs	\$6,855 (weak) \$119.3M / 17,403 SFEs
Monthly Residential Water Bill weak: >\$60 - average: \$30 - \$60 - strong: <\$30	\$49.20 (Average)	\$50.68 (Average)

Notes: \*\* Debt service utilizing enterprise revenues only

**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. Parity status will be required with all existing revenue-secured loans. This security is in compliance with CWCB Loan Policy #5 (Collateral).

cc: Ron R. Redd, P.E., District Manager, Parker Water & Sanitation District  
Eric Hecox, Executive Director, South Metro Water Supply Authority  
Susan Schneider/Jennifer Mele, Colorado Attorney General's Office

Attachment: Water Project Loan Program – Project Data Sheet



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

**C150410**

<b>Borrower:</b> Parker Water & Sanitation District	<b>County:</b> Douglas & Arapahoe
<b>Project Name:</b> Water Infrastructure and Supply (WISE) Efficiency Project	<b>Project Type:</b> New Water Supply
<b>Drainage Basin/ District:</b> South Platte / 8	<b>Water Source:</b> South Platte
<b>Total Project Cost:</b> \$17,305,500	<b>Funding Source:</b> Construction Fund
<b>Type of Borrower:</b> High-income Municipal	<b>Average Annual Delivery:</b> 5,000 AF
<b>CWCB Loan:</b> \$15,734,790 (with 1% service fee) <b>Interest Rate:</b> 2.75% <b>Term:</b> 20 years	

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The WISE Project is the result of regional cooperative planning efforts between Denver Water, Aurora Water, and 10 regional water providers in the south metropolitan area. The South Metro WISE Authority (WISE Authority) is comprised of ten governmental water providers in Douglas and Arapahoe Counties bound together by a 2013 Intergovernmental Agreement. The WISE Project will reduce dependence on non-renewable groundwater resources.

