

# 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: Jonathan Hernandez, P.E., Project Manager *JH*  
Kirk Russell, P.E., Chief *KR*  
Finance Section

DATE: May 9, 2014

SUBJECT: **Agenda Item 29d, May 21-22, 2014 Board Meeting**  
**Chatfield Reallocation Project Loans**  
**Center of Colorado Water Conservancy District**

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### Introduction

The Center of Colorado Water Conservancy District (District) is requesting a loan for its participation in the Chatfield Reallocation Project (Reallocation). The Reallocation is included in the 2014 CWCB Projects Bill (HB14-1333). For the purposes of this loan, the District's participation in the Reallocation is defined as the Project. The goal of the Project is to improve the operation of the District's augmentation plan. The District's total participation cost (Project cost) is estimated to be \$931,000. The District is requesting a loan from CWCB for approximately 65% of its Project cost. See attached Project Data Sheet for a location map and a Project summary.

### Staff Recommendation

Staff recommends the Board approve a loan not to exceed \$606,000 (\$600,000 for Project costs and \$6,000 for the 1% Loan Service Fee) to the Center of Colorado Water Conservancy District, for its participation in the Chatfield Reallocation Project, from the Severance Tax Perpetual Base Fund. The loan terms shall be 15 years at the middle-income municipal interest rate of 2.50% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.

(INFORMATION IN SMALL CAPS IS COMMON TO ALL CHATFIELD REALLOCATION LOANS)

**CHATFIELD REALLOCATION PROJECT**

CHATFIELD DAM AND LAKE (CHATFIELD) IS AN ON-STREAM RESERVOIR BUILT IN 1973. IT IS LOCATED IMMEDIATELY DOWNSTREAM OF THE SOUTH PLATTE RIVER AND PLUM CREEK CONFLUENCE ABOUT 8 MILES SOUTH (UPSTREAM) OF DENVER. CHATFIELD CONSISTS OF AN EARTHFILL DAM APPROXIMATELY 13,000 FEET LONG WITH A TOP WIDTH OF 30 FEET AND A MULTI-PURPOSE RESERVOIR WITH A STORAGE CAPACITY BELOW THE SPILLWAY OF APPROXIMATELY 235,000 ACRE-FEET (AF). DENVER WATER IS CURRENTLY THE SOLE USER OF CHATFIELD FOR WATER SUPPLY AND HAS THE EXCLUSIVE RIGHT TO STORE WATER IN THE CONSERVATION POOL (BETWEEN 5423 AND 5432 MSL). COLORADO PARKS & WILDLIFE MANAGES CHATFIELD’S RECREATIONAL AND FISH AND WILDLIFE USE THROUGH CHATFIELD STATE PARK. THE US ARMY CORPS OF ENGINEERS (CORPS) MANAGES THE FLOOD CONTROL USE, PROVIDING FLOOD PROTECTION TO THE DENVER METRO AREA.

IN THE MID-1990S, THE COLORADO DEPARTMENT OF NATURAL RESOURCES (DNR), ACTING THROUGH THE COLORADO WATER CONSERVATION BOARD (CWCB) AND ON BEHALF OF NUMEROUS LOCAL WATER PROVIDERS, REQUESTED THE CORPS TO REALLOCATE A PORTION OF CHATFIELD’S FLOOD CONTROL STORAGE TO CONSERVATION STORAGE FOR WATER SUPPLY PURPOSES. THE CORPS’ CHATFIELD ANTECEDENT FLOOD STUDY (2005) SHOWED THAT FLOOD CONTROL STORAGE SPACE BETWEEN ELEVATIONS 5432 AND 5444 MSL COULD BE REALLOCATED WITHOUT COMPROMISING THE FLOOD PROTECTION OFFERED BY CHATFIELD.

TO EVALUATE THE ENVIRONMENTAL, SOCIAL, AND ECONOMIC EFFECTS OF THE PROPOSED REALLOCATION, THE CORPS INITIATED THE FEDERAL FEASIBILITY REPORT AND ENVIRONMENTAL IMPACT STATEMENT (FR/EIS) IN 1999. THE FINAL FR/EIS WAS RELEASED BY THE CORPS IN JULY 2013 AND THE PUBLIC COMMENT PERIOD HAS ENDED. THE FR/EIS RECOMMENDS A REALLOCATION FROM FLOOD CONTROL TO CONSERVATION AND WATER SUPPLY OF 20,600 AF. THE CORPS IS EXPECTED TO ISSUE THE FINAL RECORD OF DECISION IN 2014.

THE CURRENT WATER PROVIDERS INVOLVED IN THE REALLOCATION ARE SHOWN IN TABLE 1 BELOW:

**TABLE 1: CHATFIELD REALLOCATION PARTICIPANTS**

<b>PARTICIPANTS</b>	<b>STORAGE AMOUNT</b>	<b>% OF TOTAL</b>
<b>COLORADO WATER CONSERVATION BOARD</b>		
<i>SHARES TRANSFERRED OR PENDING TRANSFER FROM:</i>		
<i>CITY OF AURORA</i> 3,561.0 AF		
<i>WESTERN MUTUAL DITCH COMPANY</i> 1,425.0 AF	6,586.0 AF	31.97%
<i>COLORADO PARKS &amp; WILDLIFE</i> 1,000.0 AF		
<i>ROXBOROUGH</i> 500.0 AF		
<i>PERRY PARK</i> 100.0 AF		
<b>CENTENNIAL WATER AND SANITATION DISTRICT</b>	6,434.9 AF	31.24%
<b>CENTRAL COLORADO WATER CONSERVANCY DISTRICT</b>	2,849.0 AF	13.83%
<b>SOUTH METRO WATER SUPPLY AUTHORITY</b>		
<i>ENTITIES TO RECEIVE SHARES:</i>		
<i>CENTENNIAL WATER AND SANITATION DISTRICT</i> 487.2 AF		
<i>TOWN OF CASTLE ROCK</i> 487.2 AF		
<i>ACWWA</i> 121.6 AF		
<i>CASTLE PINES NORTH METRO DISTRICT</i> 64.3 AF	1,418.6 AF	6.89%
<i>COTTONWOOD</i> 64.3 AF		
<i>STONEGATE</i> 64.3 AF		
<i>PINERY</i> 64.3 AF		
<i>ROXBOROUGH</i> 64.3 AF		
<i>CASTLE PINES METRO DISTRICT</i> 1.1 AF		
<b>TOWN OF CASTLE ROCK</b>	1,013.1 AF	4.92%
<b>CASTLE PINES NORTH METRO DISTRICT</b>	941.5 AF	4.57%
<b>CASTLE PINES METRO DISTRICT</b>	785.6 AF	3.81%
<b>MOUNT CARBON METRO DISTRICT</b>	400.0 AF	1.94%
<b>CENTER OF COLORADO WATER CONSERVANCY DISTRICT</b>	131.3 AF	0.64%
<b>DENVER BOTANIC GARDENS AT CHATFIELD</b>	40.0 AF	0.19%
<b>TOTAL</b>	<b>20,600 AF</b>	<b>100.00%</b>

## **Background**

The District, with a service area that encompasses all of Park County, co-owns and manages a blanket augmentation plan with the Upper South Platte Water Conservancy District through the Headwater Authority of the South Platte. The District is dedicated to buying senior water rights within Park County, changing and finding storage for those rights, and providing augmentation water to bring out-of-compliance subdivisions, businesses, public institutions and households into compliance with Colorado water law.

## **Loan Feasibility Study**

James Culichia, Attorney for the District, prepared the Loan Feasibility Study titled “*Loan Feasibility Report - Chatfield Reservoir Reallocation*,” dated March 13, 2014. The study was prepared in accordance with CWCB guidelines and includes an alternative analysis, cost estimates, and financial statements. The feasibility study relies on the FR/EIS prepared by the Corps, and the Fish, Wildlife and Recreation Mitigation Plan (FWRMP) prepared by the Reallocation Participants in accordance with C.R.S. 37-60-122.2.

## **Borrower – Center of Colorado Water Conservancy District**

The District is a Colorado Title 37 Special District established in 1997 with the purpose of preserving and developing the water resources of Park County. Revenues come from a 1.0 mill levy assessed on all taxable real property located in Park County. The District “de-Bruced” in 2000. This allows it to retain all excess collected tax revenues.

The District is governed by a five-member Board of Directors, appointed by the Park County District Court. In November 2010, voters authorized the District to incur debt for its participation in the Reallocation.

## **Water Rights**

The District owns water rights related to its augmentation plan adjudicated in Case No. 02CW389. Water rights capable of use in Chatfield include changed senior water rights on Tarryall Creek, Michigan Creek, and Deer Creek (Case Nos. 05CW111 and 06CW270). The average annual yield of the District’s changed senior water rights exceeds 700 AF. The District has pending rights in Case No. 12CW50 that would include Chatfield as a storage location for augmentation water for the District’s regional augmentation plan. The CWCB has filed a statement of opposition to 12CW50 in order to ensure terms and conditions in the final decree are sufficient to prevent injury to its instream flow water rights. In December 2013, the District applied for a junior water storage right for the District’s reallocated portion of Chatfield in Case No. 13CW3148.

## **CHATFIELD REALLOCATION DESCRIPTION**

THE GOAL OF THE REALLOCATION IS TO HELP ENABLE WATER PROVIDERS SUPPLY WATER TO LOCAL USERS IN RESPONSE TO RAPIDLY INCREASING DEMAND. THE STATEWIDE WATER SUPPLY INITIATIVE 2010 REPORT (SWSI 2010) HAS IDENTIFIED THE PROJECTED GAP IN MUNICIPAL & INDUSTRIAL (M&I) AND SELF-SUPPLIED INDUSTRIAL (SSI) USE IN THE METRO BASIN ALONE WILL BE BETWEEN 180,000 AND 280,000 AF PER YEAR BY THE YEAR 2050. THE CHATFIELD REALLOCATION PROJECT IS IDENTIFIED IN SWSI 2010 AS AN IDENTIFIED PROJECT AND PROCESS (IPP) FOR THE METRO AND SOUTH PLATTE BASINS. WITH THE COMPLETION OF ALL METRO BASIN IPPS, THE M&I AND SSI GAP IS EXPECTED TO BE REDUCED BY 140,000 AF PER YEAR. THE REALLOCATION IS EXPECTED TO PROVIDE AN AVERAGE YEAR YIELD OF 8,539 AF OF NEW WATER SUPPLY.

SEVERAL CONCEPTS WERE INITIALLY DEVELOPED AND SCREENED USING THE CORP'S PLANNING PROCESS. FOR CONSISTENT COMPARISON PURPOSES, EACH ALTERNATIVE WAS DESIGNED TO PROVIDE THE SAME AVERAGE YEAR YIELD OF A FULL REALLOCATION. DURING THE CORPS' SCREENING PROCESS, MANY ALTERNATIVES WERE ELIMINATED FROM FURTHER EVALUATION, WHILE THE FOUR ALTERNATIVES BELOW WERE IDENTIFIED FOR FINAL CONSIDERATION.

***ALTERNATIVE 1 – NO CHATFIELD REALLOCATION, NEW RESERVOIR, NEW GRAVEL PIT STORAGE:*** WITHOUT CHANGES TO CHATFIELD'S OPERATIONS, WATER PROVIDERS ABOVE CHATFIELD WOULD SEEK TO CONSTRUCT PENLEY RESERVOIR, AND WATER PROVIDERS BELOW CHATFIELD WOULD SEEK TO DEVELOP GRAVEL PIT STORAGE TO MAKE UP THE WATER YIELD A REALLOCATED CHATFIELD WOULD PROVIDE. THE COST OF THIS ALTERNATIVE IS \$283.4 MILLION.

***ALTERNATIVE 2 – NO CHATFIELD REALLOCATION, NON-TRIBUTARY GROUNDWATER WELLS, NEW GRAVEL PIT STORAGE:*** THE LEAST-COST ALTERNATIVE TO REALLOCATING CHATFIELD, WOULD BE FOR WATER PROVIDERS ABOVE CHATFIELD TO RELY ON MORE NON-TRIBUTARY GROUNDWATER WELLS AND WATER PROVIDERS BELOW CHATFIELD DEVELOP GRAVEL PIT STORAGE. NON-TRIBUTARY GROUNDWATER IS CONSIDERED A NON-RENEWABLE WATER SUPPLY AND THUS NOT A PERMANENT WATER SUPPLY SOLUTION. THE COST OF THIS ALTERNATIVE IS \$186.1 MILLION.

***ALTERNATIVE 3 – MINIMUM CHATFIELD REALLOCATION (7,700 AF):*** REALLOCATION OF STORAGE LESS THAN 7,700 AF WAS CONSIDERED BY THE WATER PROVIDERS TO PROVIDE TOO LITTLE WATER SUPPLY BENEFITS FOR THE COST INVOLVED. THIS ALTERNATIVE WOULD PROVIDE AN AVERAGE YEAR YIELD OF LESS THAN 8,539 AF, WITH THE SHORTFALL BE MADE UP BY DEVELOPING ADDITIONAL WATER SOURCES OF NON-TRIBUTARY GROUNDWATER AND GRAVEL PITS. THE COST OF THIS ALTERNATIVE IS \$180.2 MILLION.

***SELECTED ALTERNATIVE 4 – MAXIMUM CHATFIELD REALLOCATION (20,600 AF):*** THE SELECTED ALTERNATIVE RECOMMENDED IN THE FINAL FR/EIS WILL PROVIDE 20,600 AF OF STORAGE IN CHATFIELD BETWEEN THE ELEVATIONS 5432 AND 5444 MSL FOR M&I WATER SUPPLY AND OTHER PURPOSES INCLUDING AGRICULTURE, ENVIRONMENTAL RESTORATION, AND RECREATION AND FISHERY HABITAT PROTECTION AND ENHANCEMENT. THE STORAGE WILL BE PROVIDED THROUGH A REALLOCATION FROM THE EXCLUSIVE FLOOD CONTROL POOL TO A JOINT CONSERVATION/FLOOD CONTROL POOL. TO MITIGATE FOR THE INUNDATION OF RECREATION AND ENVIRONMENTAL RESOURCES, THIS ALTERNATIVE INCLUDES RELOCATION AND MODIFICATIONS OF EXISTING RECREATION FACILITIES AND COMPENSATORY ENVIRONMENTAL MITIGATION FEATURES WITH MONITORING AND ADAPTIVE MANAGEMENT. IMPLEMENTATION OF THE POOL RISE AND USE OF THE REALLOCATED STORAGE SPACE WILL OCCUR IN INCREMENTS AS THE RECREATION MODIFICATIONS AND PORTIONS OF THE ENVIRONMENTAL MITIGATION FEATURES ARE COMPLETED.

THE FR/EIS RECOMMENDS THIS ALTERNATIVE BECAUSE IT MAXIMIZES THE NATIONAL ECONOMIC DEVELOPMENT (NED) COST, IS THE LEAST COST ALTERNATIVE, AND THE LOCALLY-PREFERRED PLAN. THIS ALTERNATIVE MEETS ALL FEDERAL NED GOALS, CORPS PLANNING GOALS, AND ENVIRONMENTAL OPERATING PRINCIPALS. NEITHER THE PRIMARY FLOOD RISK MANAGEMENT PURPOSE NOR OTHER AUTHORIZED PURPOSE OF CHATFIELD WILL BE SIGNIFICANTLY AFFECTED BY THE REALLOCATION.

INCLUDING REOCCURRING COST SUCH AS OPERATION AND MAINTENANCE, THE COST OF THIS ALTERNATIVE IN FY 2013 DOLLARS IS ESTIMATED AT \$178.7 MILLION. COSTS TO BE PAID THROUGH THIS LOAN ARE THE UPFRONT COST OF STORAGE, ENGINEERING, AND CONSTRUCTION RELATED TO THE FEDERAL AND STATE REQUIRED MITIGATION. THESE COST TOTAL \$145.5 MILLION (\$7,063/ACRE-FOOT). THE REALLOCATION PARTICIPANTS ARE RESPONSIBLE FOR A PRO-RATA SHARE BASED ON THEIR STORAGE ALLOTMENT. SEE TABLE 2 FOR A SUMMARY OF THE REALLOCATION COST.

**TABLE 2: REALLOCATION COST SUMMARY**

Task	Cost
Cost of Storage	\$16,300,000
Federal Required Mitigation	\$107,100,000
State Required Mitigation	\$8,900,000
Subtotal	\$132,000,000
Contingency (10%)	\$13,200,000
<b>Total</b>	<b>\$145,500,000</b>

**Borrower's Participation:** The District is participating in the Reallocation with the intent of using the storage space to make releases of augmentation water to downstream senior calling rights, for storage of its upstream changed senior water rights, as a storage for a junior water storage right in Case No. 13CW3148, and as a structure to facilitate adjudicated exchanges of stored water to the District's upstream storage reservoirs located in Park County. No additional water right acquisitions or infrastructure improvements will be necessary for the District to utilize storage in Chatfield.

Of the 20,600 AF of storage to be reallocated, the District will receive 131.3 AF, or 0.64% of the total reallocation. Therefore, the District's Project cost is approximately \$930,000 (\$145,500,000 x 0.64%). The Project is expected to develop an average yield of 54.4 AF per year for the District from junior storage rights. The District plans to also fill its allotted storage using existing senior rights already adjudicated for storage in Chatfield.

**SCHEDULE:** THE CORPS' RECORD OF DECISION (ROD) IS EXPECTED IN 2014. UPON THE SIGNED ROD, THE CORPS WILL COMPLETE NEGOTIATIONS WITH DNR AND ENTER INTO A WATER STORAGE AGREEMENT. DNR WILL ENTER INTO THIRD PARTY SUB-AGREEMENTS WITH THE REALLOCATION PARTICIPANTS. PROJECT ACTIVITIES WILL BEGIN WHEN ALL NECESSARY AGREEMENTS HAVE BEEN EXECUTED (ESTIMATED FALL 2014). REALLOCATION PARTICIPANTS EXPECT TO PAY IN FULL THE COST OF STORAGE AS WELL AS BEGIN FINAL ENGINEERING UPON PROJECT START. THE RECREATIONAL FACILITY MODIFICATIONS AND ON-SITE MITIGATIONS ARE EXPECTED TO TAKE 5 YEARS. OFF-SITE MITIGATIONS AND MITIGATION MONITORING ARE EXPECTED TO LAST 13 YEARS OR MORE.

**Financial Analysis**

The District qualifies for a middle-income municipal interest rate of 2.50% for a 15-year term (reduced from a 2.75% rate per CWCB Loan Policy #7). The District is limiting its loan request to \$600,000 and a 15-year term in accordance with the ballot language that authorized this loan. The District will use cash reserves to fund its required match. Table 3 shows a summary of the financial aspects of the Project.

**TABLE 3: PROJECT FINANCIAL SUMMARY**

Total Project Cost (0.64% of Reallocation Cost)	\$930,000
Borrower Match	\$330,000
Project Loan	\$600,000
Project Loan (Including 1% Service Fee)	\$606,000
Project Annual Loan Payment	\$48,944
Project Annual Loan Obligation (incl. 10% debt reserve)	\$53,839
Project Cost per Acre-Foot of Storage (131.3 AF)	\$7,063

**Contracting:** In anticipation of a multi-year and multi-phased Project, CWCB may enter into multiple contracts under 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 all contracts no sooner than September 1, 2014. In recognition of the long time of performance for Contracts 2 and 3, interest accrued prior to Project completion shall be paid annually unless otherwise approved by CWCB.

CWCB will disburse loan funds at a rate of no greater than 90% of Project Cost, up to the approved loan limit. Because the District is only requesting funds for approximately 65% of its Project cost, it is projected the debt limit of \$600,000 will be reached in Contract 2, potentially eliminating the need for Contract 3. The breakdown of the contract components are listed in Table 4.

**TABLE 4: CONTRACTING SUMMARY**

Contract	Time of Performance	Project Cost	Estimated Contract Amount (Not Incl. Service Fee)	Project Activity
1	1 Year	\$104,000	\$93,700	Cost of storage
2	5 Years	\$598,000	\$506,300	Engineering, recreation facilities construction, on-site mitigation, off-site mitigation, mitigation monitoring
3	13 Years	\$229,000	\$0	Off-site mitigation, mitigation monitoring

**Creditworthiness:** The District has \$659,144 in existing debt, consisting of two CWCB loans as shown in Table 5. These two loans are current and in good standing.

**TABLE 5: EXISTING DEBT**

Lender	Original Balance	Current Balance	Annual Payment	Maturity Date	Collateral
CWCB (C150276)	\$454,500	\$291,204	\$54,650	2019	Pledge of Tax Revenues
CWCB (C150335)	\$404,000	\$367,940	\$46,161	2023	Pledge of Tax Revenues
Total		\$659,144	\$100,811		

The first payment for loan C150335 was made in 2014. Thus, the loan debt service is not included in the "Past 3 Years" column of Table 6. In 2013, the District paid off a large debt which carried a debt service of approximately \$225,000. That debt had contributed to revenues of the District due to a cost share agreement with another water supplier. With the debt paid off, the District will no longer be in receipt of that revenue source.

**TABLE 6: FINANCIAL RATIOS**

Financial Ratio	Past 3 Years	Future w/ Project
Operating Ratio (revenues/expenses) weak: <100% - average: 100% - 120% - strong: >120%	133% (Strong) \$677K/\$510K	108% (Average) \$430K/\$385K
Debt Service Coverage Ratio (revenues-expenses)/debt service weak: <100% - average: 100% - 120% - strong: >120%	160% (Strong) (\$677K-\$230K) \$280K	129% (Average) (\$430K-\$230K) \$155K
Cash Reserves to Current Expenses weak: <50% - average: 50% - 100% - strong: >100%	147% (Strong) \$750K/\$510K	105% (Strong) \$420K/\$400K

*Collateral* - Security for this loan will be a pledge of the District's 1.0 mill tax in accordance with its November 2010 voter approved ballot question, and annual financial reporting. This security is in compliance with CWCB Loan Policy #5 (Collateral).

cc: Jim Culichia, Felt, Monson & Culichia, LLC  
 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**

**C150406**

**Borrower:** Center of Colorado Water Conservancy District

**County:** Park

**Project Name:** Chatfield Reallocation Project

**Project Type:** Reservoir Storage

**Drainage Basin:** South Platte

**Water Source:** South Platte River  
Plum Creek

**Total Project Cost:** \$931,000

**Funding Source:** Severance Tax Perpetual Base Fund

**Type of Borrower:** Middle-income Municipal

**Average Annual Diversion:** 700 AF

**Added Water Supply Storage:** 131.3 AF

**CWCB Loan:** \$606,000 (with 1% service fee) **Interest Rate:** 2.5% **Term:** 15-years

The Center of Colorado Water Conservancy District co-owns and manages a blanket augmentation plan with the Upper South Platte Water Conservancy District through the Headwater Authority of the South Platte. The District is participating in the Chatfield Reallocation Project in order to improve its augmentation operations by needed storage space at the lower reaches of its augmentation plan. Of the 20,600 acre-feet proposed to be reallocated, the District would receive 131.3 acre-feet of storage, or 0.64% of the total reallocation. The District will use Chatfield storage to store senior and junior rights as authorized in water court Case Nos. 12CW50 and 13CW3148.

The US Army Corps of Engineers issued the Project's Feasibility Report and Environmental Impact Statement (FR/EIS) in July 2013 and a Record of Decision is expected in 2014. The Selected Alternative recommended in the Final FR/EIS will provide 20,600 acre-feet of storage in Chatfield between the elevations 5432 and 5444 msl for M&I water supply and other purposes including agriculture, environmental restoration, and recreation and fishery habitat protection and enhancement. Project participants completed the Project's Fish, Wildlife and Recreation Mitigation Plan, in accordance with C.R.S. 37-60-122.2 in January 2014.

