

# STATE OF COLORADO

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## 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



October 15, 2012

Mr. Steve Cassin, CFO  
Colorado Parks and Wildlife  
1313 Sherman St, 6<sup>th</sup> Floor  
Denver, CO 80203

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John W. Hickenlooper  
Governor

Mike King  
DNR Executive Director

Jennifer L. Gimbel  
CWCB Director

Re: Beaver Park Dam Rehabilitation Project  
Contract Number C150343

Mr. Cables:

I am pleased to inform you that on September 28, 2012 the Colorado Water Conservation Board approved your loan request for the Beaver Park Dam Rehabilitation Project as described in the application and approved Loan Feasibility Study titled "*Beaver Park Dam Alternatives Report*". The Board approved a loan not to exceed \$10,000,000 with no interest for 30 years.

I have attached a copy of the updated Board memo dated September 28, 2012, that includes the Board's approval.

After the Board approves a loan there are a few steps that remain in the loan process including:

- A) Contracting: An approved Interagency Agency Agreement must be in place before funds can be disbursed. Peg Mason will contact you to initiate the process for this project. When all of the contract conditions are met and the contract is executed the Parks and Wildlife may request loan funds to cover eligible project expenses. You can contact Peg at (303) 866-3441 x3227.
- B) Design/Construction: You must adhere to the CWCB Design and Construction Administration Procedures. I will be the Project Manager for this phase of the process. I will make construction site visits, which will be the basis of pay estimates for disbursement of your loan funds. You can contact me at (303) 866-3441 x3232.

On behalf of the Board, I would like to thank you for your interest in a loan from the Colorado Water Conservation Board.

Sincerely,

A handwritten signature in blue ink, appearing to read "K. Russell", with a stylized, cursive script.

Kirk Russell, P.E., Chief  
Finance Section  
Colorado Water Conservation Board

Attachment: Updated Board Memo

E-mail Copy (Including Attachments)

Travis Smith, CWCB Board Member – Rio Grande River Basin  
CWCB Finance Section Staff

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TO: Colorado Water Conservation Board Members

FROM: Tim Feehan, P.E., Assistant Director *TF*  
Kirk Russell, P.E., Chief, Finance Section *KR*

DATE: September 18, 2012 (UPDATED September 28, 2012)

SUBJECT: **Agenda Item 24, September 27-28, 2012 Board Meeting**  
**Finance Section - New Severance Tax Trust Fund Perpetual Base Account Loan**  
**Colorado Division of Parks and Wildlife – Beaver Park Dam Rehab. Project**

### Introduction

The Colorado Division of Parks and Wildlife (CPW) is applying for a loan for the Beaver Park Dam Rehabilitation Project (Project). The Beaver Park Reservoir (Reservoir) was originally constructed in 1914 and provides for general recreation, fishing, and water storage. In 2010, a sinkhole along the left abutment was observed by the State Engineer's Office (SEO), which resulted in the SEO placing a 20-foot fill restriction on the Reservoir. The restriction resulted in the Reservoir's capacity being reduced from 4,758 to 2,557 acre-feet. To remove the restriction, CPW intends to construct a downstream filter/drain system, an upstream high density liner, and a spillway chute. The total Project cost for the alternative selected is \$15,939,606. The General Assembly authorized CPW for a \$10,000,000 loan, at a 0% interest rate, through the 2012 Projects Bill (SB12S-002) to assist in constructing the Project, contingent upon final loan approval by the Colorado Water Conservation Board (CWCB). The remaining funds to construct the Project will come directly from CPW. See attached Project Data Sheet for project location and summary.

### Staff Recommendation (Board Approved Staff Recommendation on September 28, 2012)

Staff recommends the Board approve a loan not to exceed \$10,000,000 from the Construction Fund to the Colorado Division of Parks and Wildlife, for permitting, engineering and construction costs related to the Beaver Park Dam Rehabilitation Project. The loan terms shall be 30 years at an interest rate of 0% per annum. The Colorado Division of Parks and Wildlife, in coordination with the Department Controller, will encumber from its Wildlife Cash Fund, an amount of \$333,333 to be transferred on September 1<sup>st</sup> of each year to CWCB's Construction Fund, until such time as its debt obligation is paid in full.

## **Background**

### **Beaver Park Reservoir**

The Reservoir is located approximately 5 miles south of South Fork in Rio Grande County. The high hazard dam was constructed in 1914 as a concrete-faced rock filled structure, to a height of 87 feet. The dam was raised 10 feet in 1951 and an additional 17 feet in 1988, bringing the height of the Reservoir to 114 feet and its capacity to 4,758 acre-feet. At capacity, the Reservoir encompasses a surface area of approximately 94 acres, with an upstream drainage area of 47 square miles.

In 2010, a sinkhole was observed by SEO along the left abutment of the Reservoir. The major concerns considered by SEO from the 2010 inspection was head cutting along the spillway and piping through the left abutment moraine. In 2010, CPW hired the services of URS Consulting Engineers to evaluate various alternatives to address the safety concerns identified and to remove the imposed SEO restriction.

### **Rio Grande Cooperative Project (Cooperative Project)**

The Reservoir over the years has served as a recreation destination, fishery and water storage facility. The Reservoir is also a key component to the overall success of the Cooperative Project, which involves the rehabilitation of the Rio Grande Reservoir and Beaver Park Reservoir. The Cooperative Project is vital to protect CPW's pre-compact storage rights. CPW also owns significant transmountain water rights, which upon execution of storage lease with the San Luis Valley Irrigation District, can be stored in the Rio Grande Reservoir, thereby allowing the Reservoir to store and protect its pre-compact decree rights. Storage and releases of these extremely valuable water rights can be optimized between the two reservoirs to maximize streamflow, riparian and wildlife benefits, and provide basin administration that benefits CPW, the Division Engineer and all basin users.

As part of the Cooperative Project, the General Assembly authorized a \$10,000,000 loan to CPW, at a 0% interest rate to construct the Project. This approval was part of CWCB's 2012 Project Bill (SB12S-002), which was signed by the Governor in May of 2012. The funds have been transferred from the Severance Tax Trust Fund Perpetual Base Account to the Construction Fund. The approval was contingent on CPW obtaining final loan approval from the CWCB Board. In the past, the CWCB Board has made a loan to CPW under similar terms and conditions. In January of 2001, the CWCB Board approved a \$1,700,000 loan to the former Colorado Division of Parks and Outdoor Recreation, at a 0% interest rate for 30 years, for improvements to Jackson Reservoir located near Fort Morgan, Colorado.

## **Project Description**

Alternatives were considered throughout the design process. The alternatives described below were developed based on the following objectives established by CPW:

- Reduce risks associated with seepage and piping along the left abutment;
- Accommodate a 3-foot increase in normal maximum pool height;
- Address primary spillway concerns indentified by SEO;
- Improve the reliability of the outlet works, operation; and
- Removal of the current SEO storage restriction.

**No Action:** Because of dam safety concerns at the site, it is expected that further restrictions will be imposed by the SEO. A long-term reduction in storage volume would impact CPW's ability to provide a healthy fishery, recreation amenity and a reliable storage vessel. For this reason, the no-action alternative was dismissed.

**1A. Left Abutment Filter and Drain System:** This alternative involves the construction of a left abutment filter and drain system to control piping, a HDPE linear along the concrete parapet wall, and the rehabilitation of the spillway and outlet works. Estimated cost = \$14,100,000.

**1B. Left Abutment Cutoff Wall:** This alternative is the same as Alternative 1A, with the addition of constructing a concrete cutoff wall along the left abutment to eliminate future seepage or piping, versus trying to control future piping with a filter and drain system. Estimated cost = \$40,461,300.

**2. New Roller Compacted Concrete (RCC) Dam:** This alternative constructs a new RCC dam, new spillway and outlet works, and additional work to control seepage along the left abutment. Estimated cost = \$45,120,600

Alternative 1A was selected since it satisfactorily met all of CPW's objectives stated above, at the least cost, and only at a slightly smaller risk reduction than the other two more expensive alternatives.

In all, the Project components include: left abutment downstream filter and drain system, outlet works rehabilitation and gate reconfiguration, primary spillway concrete chute, crest modification and landslide filter and drain system.

The Project is currently in design, with review and approval expected by SEO in July 2013. Pending plan approval and having all permits in place, construction is expected to begin in the summer/fall of 2013.

**TABLE 1: TOTAL PROJECT COST SUMMARY**

Task	Cost
Left Abutment Filter & Drain System	\$6,541,100
Outlet Works Rehabilitation	\$3,892,000
Primary Spillway Concrete Chute	\$1,704,300
Crest Modification (HDPE Liner)	\$1,237,600
1914 Landslide Filter and Drain System	\$725,000
<b>Alternative 1A Total:</b>	<b>\$14,100,000</b>
Preliminary Planning/Eng. & Contingency	\$1,839,606
<b>Project Total:</b>	<b>\$15,939,606</b>

*\*Note: All construction estimates identified above include design and construction engineering, permitting and contingency.*

### Financial Analysis

The estimated cost to complete the Project is \$15,939,606. CPW is requesting a \$10,000,000 CWCB loan, at 0% interest rate for 30 years, with the remaining \$5,939,606 to be paid directly by CPW. CPW's annual payment will be \$333,333, which includes the 1% service fee. To guarantee its annual payment will be made each year, the CPW, in coordination with the Department Controller, will encumber from its Wildlife Cash Fund an amount of \$333,333 to be transferred on September 1<sup>st</sup> of each year to CWCB's Construction Fund until such time as its debt obligation is paid-in-full. The annual encumbrance and payment will commence upon completion of the project and approval by SEO. Since the loan is at 0%, interest during construction will not accumulate.

In January of 2001, the CWCB Board approved CPW for a \$1,700,000 loan, at an interest rate of 0% for 30 years, to reconstruct the dam at Jackson Lake Reservoir. The current loan balance on the loan is \$1,133,333, with an annual payment of \$56,667. The annual payment of \$56,667 for this loan is encumbered by the Department Controller from CPW's Lottery Cash Fund, and is transferred on September 1<sup>st</sup> of each year to CWCB's Construction Fund. The Attorney General's Office and the Office of the State Controller have previously indicated that there are no fundamental or constitutional or statutory barriers to this type of loan.

TABLE 2: FINANCIAL SUMMARY	
Total Project Cost:	\$15,939,606
CWCB Loan Amount	\$10,000,000
CPW Cost Share	5,939,606
CWCB Loan Payment (Includes 1% Service Fee)	\$333,333

**Collateral:** CPW will coordinate directly with the Department Controller to encumber from its Wildlife Cash Fund, an amount of \$333,333 to be transferred on September 1<sup>st</sup> of each year to CWCB's Construction Fund, until such time its debt obligation is paid in full. In fiscal year 2011-12, CPW's net cash balance within the Wildlife Cash Fund was approximately \$6,000,000.

cc: Tom Spezze, CPW  
Susan Hunt, CPW  
Steve Cassin, CPW  
Susan Schneider, AGO  
Peter Johnson, AGO



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

**Borrower:** Colorado Parks and Wildlife

**County:** Rio Grande

**Project Name:** Beaver Park Dam

**Project Type:** Reservoir Rehabilitation

**Drainage Basin:** Rio Grande Basin

**Water Source:** Beaver Creek

**Total Project Cost:** \$15,939,606

**Funding Source:** Construction Fund

**Type of Borrower:** State Agency

**Average Annual Diversion:** 4,434 AF

**Restricted Capacity Reclaimed:** 2,201 AF

**CWCB Loan:** \$10,000,000

**Interest Rate:** 0%    **Term:** 30-year

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