

# 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



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Governor

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DNR Executive Director

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CWCB Director

Dan McAuliffe  
CWCB Deputy Director

TO: Colorado Water Conservation Board Members

FROM: Kirk Russell, PE  
Mike Serlet, PE, Chief  
Water Supply Planning & Finance Section

DATE: January 20, 2009

SUBJECT: **Agenda Item 11b , January 27-28, 2009 Board Meeting**  
**Water Supply Planning and Finance Section – New Project Loans**  
**Water Supply & Storage Company – Grand River Ditch Project & Kluver**  
**Reservoir Outlet Project**

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### Introduction

The Water Supply & Storage Company (Company) is applying for a \$835,000 loan for the Grand River Ditch Project (Ditch Project) and the Kluver Reservoir Outlet Project (Outlet Project). The total cost estimate for both projects is \$1,227,000, which includes design and construction costs. The repair work is necessary in order to maintain the use of the facilities and deliver water to the Company shareholders. The loan request is for approximately 90% of the Company's project costs. See attached Project Data Sheet.

### Staff Recommendation

Staff recommends the Board approve a loan not to exceed \$843,350 (\$835,000 for project costs and \$8,350 for the 1% Loan Service Fee) to The Water Supply & Storage Company for two rehabilitation projects, the Grand River Ditch Project and the Kluver Reservoir Outlet Project from the Construction Fund Account. The loan terms shall be a blended interest rate of 3.70% per annum for 30 years. Staff will have the option to utilize two separate contracts which in aggregate will not exceed the approved limit. Security for the loan shall be in compliance with CWCB Financial Policy #5.

## **Background**

The Company annually collects, diverts and delivers about 55,500 AF of water primarily from direct flow rights in the Cache la Poudre River and two trans-mountain diversions. The Larimer County Ditch distributes to shareholders water from its headgate on the Cache la Poudre River. The Company is about 35% agricultural and 65% municipal and delivers water between mid May through the first week of September. The Company presently uses all the water it diverts for agricultural purposes. The municipal owners lease their water to farmers in the area.

### **Grand River Ditch Pipe Project**

The Ditch Project site is located in Rocky Mountain National Park, about two miles from the Continental Divide at La Poudre Pass. The project includes installing a conduit at a sharp bend in the Ditch commonly known as “Windy Point”. The Ditch is in an 1891 Act easement and has been in operation since 1890. It is located at elevation 10,200 feet in the Never Summer Range in the Kawuneeche Valley, north of Lulu City and the Colorado River Trailhead. The Ditch is a collection facility for water diverted over the Continental Divide into La Poudre Pass Creek. The water diverted by the Grand River Ditch is an important source of water for the irrigation of about 40,000 acres of farmland. The Grand River Ditch provides about 18,000 AF annually.

On May 29, 2003, the Grand River Ditch breached at Windy Point due to an avalanche. The Company shut down the ditch and installed temporary pipes through the breach area. It has been the Company’s intention since 2003 to formally repair the breached area and return the Ditch to its decreed capacity. The Project was delayed pending the final settlement of the National Park Service’s claim against the Company for damages caused by the breach. The \$9 million settlement was executed in May 2008. The Company is responsible for \$4 million after insurance covered \$5 million.

### **Kliver Reservoir Outlet Project**

The Outlet Project is the repair of the Travis Road crossing of the inlet/outlet canal between Kliver Reservoir and Reservoir #4 in Larimer County. The reservoirs are filled by a common ditch which serves as the inlet for Reservoir #4 as well as an inlet and outlet for Kliver Reservoir. Travis Road crosses the canal and provides the only access to homes along the north and east shore of Kliver Reservoir. The road embankment has concrete retaining walls that have failed or are about to fail, and the road surface has partially collapsed.

The Company and the County will jointly fund a project to reconstruct Travis Road and the water control facilities in the Project area. The cost will be split approximately 50/50 between the entities.

## **Loan Feasibility Study**

The Loan Feasibility Study, titled “Feasibility of Rehabilitation of Grand River Ditch at Windy Point Pipe Project & Kliver Reservoir Outlet/Travis Road Embankment”, dated December 2008, was prepared by Dennis Harmon, General Manager. The study includes engineering design and estimates prepared by John Andrew, PhD, P.E. and Larimer County Road and Bridge. The study was prepared in accordance with the CWCB guidelines.

## **The Water Supply & Storage Company**

The Water Supply & Storage Company, a non-profit Colorado mutual ditch corporation, was founded in 1891 and has 600 shares and about 165 shareholders. The shareholder group includes: Thornton, Fort Collins, East Larimer County Water District, Greeley and other municipal type borrowers totaling 390 shares or 65% of outstanding shares. The remaining shares are owned by about 160 family farmers. All the water owned by the Company is and has been historically diverted for agricultural uses, principally flood and sprinkler irrigation of about 40,000 acres in northern Colorado. The Company's office is located in Fort Collins, Colorado.

The Company's bylaws indicate the Board of Directors may enter into a loan contract with CWCB and has the power to sell stock for non-payment of assessments. The Company's annual meeting is January 23, 2009, at which annual assessments are approved. The Directors anticipate keeping assessments at their current level.

## **Water Rights**

The Company collects, diverts and delivers about 55,500 AF of water annually from three principal sources. Those sources are direct flow rights in the Cache la Poudre River and two trans-mountain diversions that include: (1) diversion from the headwaters of the Colorado River in the Kawuneeche Valley of Rocky Mountain National Park via the Grand River Ditch and over the Continental Divide at la Poudre Pass; (2) diversion from the headwaters of the Laramie River via the Rawah Ditch (via the Laramie-Poudre Tunnel); and (3) Skyline Ditch, which diverts directly into Chambers Lake.

All water diverted from outside the Cache la Poudre basin flows either into Long Draw Reservoir or Chambers Lake, and then into the Cache la Poudre River. All waters taken by the Company for distribution to its shareholders is taken out about 50 miles downstream through its headgate on the Cache la Poudre River just south of Ted's Place near the intersection of US 287 & SH 14. That headgate is the upper end of the Company's main distribution canal called the Larimer County Canal. Through that headgate the Company also draws exchanged flows for shares of C-BT water.

Water is distributed to shareholders based upon a schedule set by the Company's Board of Directors. Deliveries are usually made 4 or 5 days per week from about mid-May through the first week of September. The schedule is variable, depending on water supplies and the frequency and sufficiency of natural rainfall over the service area.

## **Project Description**

### Grand River Ditch Project - Alternatives Considered

*No Action alternative* - The Company quickly dismissed a No Action alternative, as it would result in surrendering a portion of its adjudicated water rights for the Grand River Ditch.

*Tunnel alternative* - It is possible that the Windy Point section of the Ditch could be tunneled through the brow of the ridge. Estimated at a ¼ mile long bore and assuming a ten foot diameter bore, the amount of material removed would be about 5,000 cubic yards. Preliminary estimates are

\$5 to \$6 million dollars. It is a difficult work site which complicates the prospect of boring a tunnel including: the tunnel site is at 10,200 feet elevation; there is steep mountainside access; 20 miles away from power grid; NPS prohibits wasting material within the Park; a full environmental impact study would be required; and there is no suitable housing for the work force near.

*A Third Pipe alternative* - The Company considered excavating a new trench immediately adjacent to the two temporary pipes installed in 2003 and the installation of a third pipe. The pipe would be identical to the two pipes installed previously and would increase the capacity of the system through the breach zone by 50%. Widening of the bench into the mountainside would be difficult and expensive due to the steepness of the terrain.

*Plate Arch pipe alternative* – (SELECTED) This includes the removal and replacement of the two temporary pipes with a large corrugated galvanized steel plate arch pipe. The new plate arch pipe would be assembled on site and installation would not require widening of the existing rock bench. A single conduit eliminates the potential for clogging due to the obstruction created by multiple pipes. This alternative is somewhat more expensive than other alternatives and may cause disruption to ditch operations during construction; however it is the best solution to the problem. Final design plans will soon be underway and construction may start in the summer or fall of 2009.

#### Kliver Reservoir Outlet Project – Alternatives Considered

*No Action alternative* - Because of the imminent danger of road failure and collapse of the concrete retaining walls into the pipe and headgates, a No Action alternative is infeasible. The damage would require an abandonment of one or more reservoirs. A void beneath the northbound lane has caused the County to close the unsafe road. Since this is the only access to the homes located in the area, this is not an option.

*Repair of Road and Water Related Facilities alternative* - The County and Company considered repairing the road and water related facilities; however, the age, condition and height of the concrete retaining walls were beyond repair. Engineers representing both parties agree that repairs would be more expensive than the complete replacement. Most of the water components have reached the end of their useful life. A future failure of those components could require another complete excavation of the road and embankment.

*Remove and Rebuild Water Facilities and Road Embankment alternative* – (SELECTED) This alternative requires a complete demolition and reconstruction of the existing road and water related facilities. The existing concrete retaining walls, headgates and pipe will all be removed. The new embankment will be constructed from on-site material except for a new clay core and sand filter, as required by SEO. The total Outlet Project cost estimate is \$617,000. The Company has agreed to pay for a schedule of construction line items that total \$318,000. The County anticipates bidding construction in February and beginning construction in the spring of 2009.

### Project Cost Estimate

Grand River Ditch Project			
Engineering		\$40,000	
Construction		\$570,000	
	Subtotal		\$610,000
Kliver Reservoir Outlet Project			
Larimer County contribution			\$299,000
Engineering (Company portion)		\$90,000	
Construction (Company portion)		\$228,000	
	Subtotal		<u>\$318,000</u>
Total			\$1,227,000

### Financial Analysis

Table 1 shows a summary of the financial aspects of the loan request. The blended interest rate for the Company is based on a breakdown of ownership of 35% agricultural, 53% high income, 9% middle income, 3% low income municipal rate. The rate was determined to be 3.70% for 30 years (Per Financial Policy #7).

**Table 1. Financial Summary**

PROJECT/LOAN		
Grand River Ditch Project Cost		\$610,000
Grand River Ditch Loan (90%)		\$549,000
Kliver Reservoir Outlet Total Project Cost		\$617,000
Kliver Reservoir Outlet Project Cost – Company Obligation (approx. 50%)		\$318,000
Kliver Reservoir Outlet Project Loan (90%)		\$286,000
Total CWCB Loan (\$549K + \$286K)		\$835,000
CWCB Loan (Including 1% Service Fee)		\$843,350
CWCB Annual Loan Payment		\$47,000
CWCB Loan Obligation (including 10% debt reserve funding)		\$51,700
Annual Loan Payment per AF (using 55,500AF)		\$0.85/AF
Assessments		Before After*
Assessments per irrigated acre (500,000 acres)		\$2,300/share \$2,300/share

\* Assessments are projected to remain the same in 2009 (Annual Mtg 1/23/09)

**Creditworthiness:** The Company's ownership, formed 120 years ago, is 35% agricultural and 65% municipal interests. The Company owns 2087 shares of CB-T valued at \$10,000/share. The Company also owns 2/3 of the Tunnel Water Company. The Tunnel Water Company has two CWCB loans with a balance of \$3.5 million amortized through 2032. The Company has one outstanding loan and one court judgment obligation listed below:

	Balance	Annual Pmt	Maturity Date
First National Bank	\$1,000,000	**\$130,000	6/2010
Federal Court Judgment/Rocky Mtn N.P.	\$3,000,000	\$0	*** 6/2010

\*\* Payment includes an interest only payment (based on Prime Rate) plus \$100,000 principal payment.

\*\*\* All \$3,000,000 is due on June 2010.

Table 2 shows the Financial Ratios for the Company.

**Table 2. Financial Ratios**

<b>Financial Ratio</b>	<b>Past Years</b>	<b>Future</b>
Operating Ratio (revenues/expenses) weak: <100% - average: 100% - 120% - strong: >120%	122% (Strong) \$1.40M/1.15M	117% (Average) \$1.40M/1.20M
Debt Service Coverage Ratio (revenues-expenses)/debt service weak: <100% - average: 100% - 120% - strong: >120%	192% (Strong) \$1.40-1.15/0.13M	111% (Strong) \$1.40-1.20/0.18M
Cash Reserves to Current Expenses weak: <50% - average: 50% - 100% - strong: >100%	26% (Weak) \$0.30/1.15M	25% (Weak) \$0.30/1.20M
Annual Operating Cost per Acre-Foot (55,500 AF) weak: >\$20 - average: \$10 - \$20 - strong: <\$10	\$21/AF (Weak) \$1.15M/55.5K	\$22/AF (Weak) \$1.20M/55.5K

**Collateral** - Security for the loan shall be the Company's pledge of assessment revenues backed by a rate covenant. This is in compliance with CWCB Financial Policy #5 (Collateral).

### **Staff Recommendation**

Staff recommends the Board approve a loan not to exceed \$843,350 (\$835,000 for project costs and \$8,350 for the 1% Loan Service Fee) to The Water Supply & Storage Company for two rehabilitation projects, the Grand River Ditch Project and the Kluver Reservoir Outlet Project from the Construction Fund Account. The loan terms shall be a blended interest rate of 3.70% per annum for 30 years. Staff will have the option to utilize two separate contracts which in aggregate will not exceed the approved limit. Security for the loan shall be in compliance with CWCB Financial Policy #5.

cc: Dennis Harmon, General Manager  
Susan Schneider, AGO

Attachment: Water Project Loan Program – Project Data Sheet

## CWCB Construction Loan Program Project Data Sheet

**Borrower:** Water Supply & Storage Company

**County:** Larimer, Weld

**Project Name:** Grand River Ditch Project and  
Kluver Reservoir Outlet Project

**Project Type:** Ditch Rehabilitation

**Drainage Basin:** South Platte

**Water Source:** Colorado River (Transbasin)  
Cache la Poudre River

**Total Project Cost:** \$928,000

**Funding Sources:** CWCB

**Type of Borrower:** Agricultural-Municipal  
(Low-Mid-High) Blend

**Average Delivery:** Project = 18,000AF/yr  
Total = 55,500AF/yr

**Loan Amount:** \$843,350 (Including 1% fee)

**Interest Rate:** 3.70% **Term:** 30 years

The Company is applying for a loan for two repair projects within its delivery system. The Grand River Ditch Project is located in Rocky Mountain National Park near the Continental Divide at 10,200 feet near La Poudre Pass. The Ditch is a collection ditch for transbasin water diverted into La Poudre Pass Creek. The water is diverted again into the Larimer County Canal which delivers about 18,000AF of the Company's 55,500AF annual delivery. In 2003, the Ditch failed and temporary pipes were installed to restore flows quickly. A long term repair was delayed pending a final settlement with the NPS's claim against the Company for damages caused by the breach. Design and construction are scheduled for summer/fall of 2009.

The Kluver Reservoir Outlet Project is located in Larimer County between Kluver Lake and Reservoir #4. Travis Road is a County road which passes over the outlet ditch. The retaining walls have begun to fail and the road surface is partially undermined. The Company and the County are jointly funding project repair costs of the repair. Construction scheduled for the summer of 2008.

