STATE OF COLORADO

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TO: Colorado Water Conservation Board Members

FROM: Anna Mauss, P.E., Project Manager
Kirk Russell, P.E., Chief
Finance Section

DATE: September 18, 2012

SUBJECT: **Agenda Item 22c, September 27-28, 2012 Board Meeting**
Finance Section – New Construction Fund Loans
Fort Morgan Reservoir and Irrigation Company – River Diversion Rehabilitation Project

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Introduction

The Fort Morgan Reservoir and Irrigation Company (Company) is applying for a loan for the River Diversion Rehabilitation (Project). The diversion structure was built in the early 1900s and has reached the end of its useful life. The total Project cost is estimated at $1,440,000. The Company is applying for a loan to cover 90% of the project cost with a 30-year CWCB loan. 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 $1,308,960 ($1,296,000 for project costs and $12,960 for the 1% Loan Service Fee) to the Fort Morgan Reservoir and Irrigation Company for costs associated with construction of the River Diversion Rehabilitation Project from the Construction Fund. The loan terms shall be 30 years at a blended rate of 1.85% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.

Background

The Company, located in Morgan County, runs an irrigation ditch system that delivers surface water to approximately 15,000 acres of irrigated land, and operates a recharge and augmentation plan that provides augmentation water for approximately 90 wells used for agricultural irrigation. Both irrigation and augmentation water are diverted from the South Platte River. Water deliveries are made through the Fort Morgan Canal to recharge sites and irrigation of lands lying south of the South Platte River between Weldona and Brush, Colorado.

The Company is undertaking repairs to its headgate river diversion structure to ensure that it can continue to divert water from the South Platte River. The two components that allow the Company to pull water from the river are the river diversion structure and the ditch intake.

The river diversion uses a board system to divert flow into the ditch. It has suffered damage during times of high flow in the river. The structure has lost effectiveness due to the large amount of sand that has accumulated upstream from the diversion. The sand bar causes excessive amounts of sand to be drawn into the canal. Additionally, debris (mainly trees) gets caught on the structure, causing continual maintenance issues. The ditch intake is a concrete structure with three steel radial gates that can adjust flows into the Company's canal.

Loan Feasibility Study
The Loan Feasibility Study titled, *Feasibility of the Fort Morgan Reservoir & Irrigation Company Diversion Structure*, dated July 2012, was prepared by Brent Nation, P.E. with Nation Engineering Services, LLC. The study was prepared in accordance with the CWCB guidelines and includes an alternative analysis, engineering design and cost estimates.

Fort Morgan Reservoir and Irrigation Company
The Company is a mutual non-profit ditch company organized in 1882. There are 117 shareholders and 2,844 shares. The Company is managed by a five-member board of directors. The board has the authority to set annual assessments to be paid by the shareholders, to take on debt, and the power to offer shareholders' stock for sale to pay assessments that remain delinquent.

Water Rights
The Company has the right to divert up to 323 cfs for irrigation use from the South Platte River under an 1882 decree. While annual diversions vary, the average is 74,890 acre feet. The Company also has water rights for augmentation use in recharge sites.

Project Description
The intent of this Project is repair the ditch intake and river diversion structure so the Company can continue delivering water to its shareholders. Three alternatives were considered.

Alternative No. 1 – Dredging in the River Channel: This option would be a temporary fix to remove the sand bar above the diversion. Due to the temporary nature of this fix and permitting issues, this alternative was not selected.

Selected Alternative - Alternative No. 2 – Replace portions of the diversion structure with a 6-foot bladder gate system: This alternative consists of replacing portions of the diversion structure with bladder gates. A 100' long section of 6' tall bladder gates would replace part of the current board system. A 30'long section of 5' tall section of bladder gates would replace the current intake gates. The remaining diversion would be left intact. This alternative would not only reduce wear on the system during times of high flow, the structure would also reduce the sand bar that forms upstream of the current diversion. The cost estimate for this alternative is $1,440,000.

Alternative No. 3 – Replace portions of the diversion structure with an 8-foot bladder gate system: This alternative is identical to No. 2 but with taller gates. The benefits would be similar; however, the taller gates would allow for more sand to be removed in front of the Company's

diversion. This alternative was estimated to be $1,950,000 and was not chosen because of the higher price.

Selected Alternative: The selected alternative, No. 2, includes sheet piling and pipe piling around all new concrete structures during construction, monolithic steel reinforced concrete floors for the bladder gates, and wing walls. The river diversion will be a 100-foot by 6-foot Obermeyer pneumatic spillway gate system. The intake structure will be a 30-foot by 5-foot Obermeyer pneumatic spillway gate system.

Schedule: The Company plans on beginning construction in November of 2012. Construction is expected to be complete by January of 2013.

TABLE 1: PROJECT COST

Construction	$ 1,295,000
Engineering	$ 25,000
Contingency	$ 120,000
TOTAL	$ 1,440,000

Financial Analysis

The Company shares are held by a mix of 85% agricultural, 14% low-income municipal, and 1% commercial owners. Blending these under the current interest rates, the Company qualifies for a 1.85% loan for a 30-year term.

TABLE 2: FINANCIAL SUMMARY

Total Project Cost	$1,440,000
CWCB Loan Amount (90% of Total Project Cost)	$1,296,000
CWCB Loan Amount (Including 1% Service Fee)	$1,308,960
Borrower Contribution	$144,000
CWCB Loan Payment	$57,246
CWCB Loan Payment (Including 10% Reserve)	$62,971
Current Assessment per share	$118.40
Cost of Loan (with Reserve Account) per share (2,844 Shares)	$22

Creditworthiness: The Company has the following two loans.

TABLE 3: EXISTING DEBT

Loan	Maturity Date	Remaining Amount	Annual Payment
CWCB – Augmentation Pipeline Project	2042*	$1,494,800	$75,281
Bank of the West- Land/water rights acquisition**	2017	$181,601	$17,400

** Estimated maturity date. The previous project has not been substantially completed and is not yet in repayment.*

*** This loan does not have a lien associated with the Company revenues.*

TABLE 4: FINANCIAL RATIOS

Financial Ratio	Past 3 Years	Future w/ Project
Operating Ratio (revenues/expenses) weak: <100% - average: 100% - 120% - strong: >120%	114% (Average) $490K/$428K	100% (Average) $563K/$563K
Debt Service Coverage Ratio (revenues-expenses)/debt service weak: <100% - average: 100% - 120% - strong: >120%	410% (Strong) $490K-408K/ $20K	103% (Average) $563K-408K/ $155K
Cash Reserves to Current Expenses weak: <50% - average: 50% - 100% - strong: >100%	61% (Average) $260K/$482K	21% (Weak) $116K/$563K
Annual Operating Cost per Acre-Foot (74,890 AF) weak: >$20 - average: $10 - $20 - strong: <$10	$5.72 (Strong) $428K/74,890 AF	$7.52 (Strong) $563K/74,890 AF

Collateral: As security for the loan, the Company will pledge its assessment revenues backed by a rate covenant and annual financial reporting, and the Project itself (the 100-foot by 6-foot Obermeyer pneumatic spillway gate system and 30-foot by 5-foot Obermeyer pneumatic spillway gate system). This is in compliance with the CWCB Financial Policy #5 (Collateral).

cc: Cynthia Vassios, Office Manager, Fort Morgan Reservoir and Irrigation Company
Susan Schneider, AGO
Peter Johnson, AGO

Attachment: Project Data Sheet

CWCB Construction Loan Program
Project Data Sheet

Borrower: Fort Morgan Res. & Irrigation Co**.**

County: Morgan

Project Name: River Diversion Rehabilitation

Project Type: River Diversion

Drainage Basin: South Platte / District: 1

Water Source(s): South Platte River

Total Project Cost: $1,440,000

Funding Sources: Construction Fund

Type of Borrower: Blended (Ag & Municipal & Commercial)

Average Diversions: 74,890 AF

Loan Amount: $1,308,960 (Including 1% fee)

Interest Rate: 1.85% **Term:** 30 years

The Company operates a ditch system that delivers surface water to approximately 15,000 acres of irrigated land between Weldona and Brush, and operates a recharge and augmentation plan that provides augmentation water for approximately 90 irrigation wells. Through this loan, the Company plans on repairing its river diversion structure to ensure that it can continue to divert water from the South Platte River. Both the river diversion structure and ditch intake structure will be upgraded with bladder gates. This will allow the Company to more efficiently operate its system and reduce sand build up. Construction is expected to begin in November of 2012 with completion estimated in early 2013.