



COLORADO

**Colorado Water
Conservation Board**

Department of Natural Resources

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TO: Colorado Water Conservation Board Members

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

DATE: May 17-18, 2017 Board Meeting

AGENDA ITEM: 27a. Water Project Loans
Florida Consolidated Ditch Company – Hess Lateral Improvement

Introduction

The Florida Consolidated Ditch Company (Company) is applying for a loan for the Hess Lateral Improvement (Project). The Hess Lateral is an earth-lined, open irrigation ditch. The proposed Project involves piping 4 miles of ditch. The Project is required due to a Colorado Department of Transportation (CDOT) highway widening project along Highway 550 south of Durango. CDOT is providing the Company with \$950,000 in Project funding. The Company was also approved for a \$775,000 WSRF grant at the September 2015 CWCB meeting. The Company is now seeking a CWCB loan to cover the balance of Project costs, estimated at \$1,075,000. See attached Project Data Sheet for a location map and Project summary.

Staff Recommendation

Staff recommends the Board approve a loan not to exceed \$1,085,750 (\$1,075,000 for Project costs and \$10,750 for the 1% service fee) to the Florida Consolidated Ditch Company, for costs related to the Hess Lateral Improvement Project, from the Severance Tax Perpetual Base Fund. The initial loan terms shall be 30 years at the agricultural interest rate of 1.80% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.



Background

The Company is located in the San Juan River and Animas River Basins of La Plata County, Colorado. It owns and operates 82 miles of irrigation canals, ditches, and laterals. The Company provides water from the Florida River to 18,700 acres of irrigated agriculture. In addition, the Company provides water to Pastorius Reservoir, a Colorado State Wildlife Area.

In 1963 the U.S. Bureau of Reclamation constructed Lemon Reservoir as part of the Florida Project. It provides supplemental and sole-supply Florida Project water to irrigate up to 19,450 acres of agricultural land, most of which is located on the Florida Mesa and is served by the Company's conveyance system. As a result, there are water users that receive water via the Company's system but are not shareholders in the Company. The Florida Water Conservancy District pays the Company for delivery of the Florida Project water.

The Hess Lateral, part of the Company's conveyance system, is located seven miles south of Durango on the Florida Mesa. The lateral serves approximately 67 water users who irrigate over 1,500 acres of hay and pasture lands.

A portion of the Hess Lateral parallels Colorado Highway 550. CDOT plans on expanding Colorado Highway 550 in the near future. This expansion requires relocating over 21,000 feet of the Hess Lateral along the Highway Right-of-Way. CDOT is cooperating with the Company on the relocation and has committed \$950,000 to the Project in lieu of relocating the lateral during the highway expansion.

The Company, in conjunction with the Natural Resources Conservation Service (NRCS), estimates this Project will result in a water savings of 400-600 acre-feet (AF) per year due to reduction of losses from seepage and evaporation. Additional benefits from this Project include lower operational and maintenance costs, decreased conveyance times, and reduced energy use for irrigators who currently pump from the open ditch. Also, pressurizing the Hess Lateral will enable the on-farm conversion from flood irrigation to more efficient irrigation methods such as center pivot sprinkler systems, further increasing overall Company's system efficiency and eliminating an estimated 136.8 tons per year of salt load into the Animas River, according to NRCS.

Loan Feasibility Study

Peter Foster, P.E. with Wright Water Engineers, Inc., prepared the Loan Feasibility Study titled, "FCDC Hess Lateral Improvement - CWCB Loan Feasibility Study," dated May 2017. The feasibility study was prepared in accordance with CWCB guidelines and includes an analysis of alternatives, preliminary engineering design, and construction cost estimates.

Borrower - Florida Consolidated Ditch Company

The Company is a mutual ditch company in good standing with the Colorado Secretary of State. It was incorporated in 2014 through the consolidation of four existing mutual ditch companies: Florida Farmers Ditch Company (formed in 1889), Florida Canal Company (1893), Florida Enlargement Canal Company (1908), and Florida Co-Operative Ditch Company (1910). Upon merging, the shares in the individual ditch companies were consolidated and redistributed as Class A, Class B, Class C, and Class D shares. There are 6,200 shares of stock and 280 shareholders.

The Company is governed by a seven-member board of directors; however, shareholders must approve the annual budget each year at the annual shareholder meeting. The Board has the authority to enforce assessments by ceasing water deliveries until the sum due is paid.

Water Rights

The total water rights decreed for the four ditches are summarized in Table 1. Based on Colorado Division of Water Resources diversion records (1964-2014) for the Florida Canal and Florida Farmers Ditch, the system carries an average of 43,000 AF per irrigation season.

TABLE 1: WATER RIGHTS

Original Ditch Co. (Share class)	Adjudication Date	Appropriation Date	Case Number	Decreed Rate or Volume	Use
Florida Canal (B)	11/8/1923	9/29/1888	CA1751	24 cfs	Irrigation
Florida Canal (B)	11/8/1923	3/9/1893	CA1751	16 cfs	Irrigation
Florida Canal (B)	11/8/1923	5/29/1911	CA1751	970 AF	Irrigation (Pastorius Reservoir)
Florida Canal Enlargement (C)	11/8/1923	3/13/1907	B-1751	31 cfs	Irrigation
Florida Canal Enlargement (C)	11/8/1923	3/13/1907	CA1751	40 cfs	Irrigation
Florida Farmers Ditch (A)	11/8/1923	12/5/1883	CA1751	12.08 cfs	Irrigation
Florida Farmers Ditch (A)	11/8/1923	5/15/1887	CA1751	1.33 cfs	Irrigation
Florida Farmers Ditch (A)	11/8/1923	5/16/1888	CA1751	8.58 cfs	Irrigation
Florida Farmers Ditch (A)	11/8/1923	2/15/1889	CA1751	23 cfs	Irrigation
Florida Farmers Ditch (A)	11/8/1923	3/13/1907	W0306	31 cfs	Irrigation
Florida Farmers Ditch (A)	3/21/1966	6/5/1946	B-1751	110 cfs	Irrigation
Florida Coop Ditch (D)	11/8/1923	11/10/1910	B-1751	4 cfs	Irrigation
Florida Coop Ditch (D)	11/8/1923	11/10/1910	CA1751	26 cfs	Irrigation

Project Description

The purpose of the Project is to relocate the Hess Lateral outside of the Highway 550 right-of-way. In doing so, the Company also hopes to improve the efficiency of the canal conveyance system. To achieve this, three alternatives were analyzed:

Alternative 1 - No Action: This alternative was not selected due to CDOT's plan to widen Highway 550. If the Company does not relocate the Hess Lateral outside of the right-of-way, CDOT will realign the open channel ditch for the Company and the additional Project benefits will not be realized.

Selected Alternative 2 - Replacement of Existing Open Ditch within Buried Irrigation Pipeline: This alternative roughly follows the current alignment of the Hess Lateral and CDOT's proposed alignment of Highway 550. It is composed of approximately 21,700 feet of pipeline and 16 headgates (turnouts). The Opinion of Probable Cost is \$2,800,000, which includes engineering services and contingency.

Alternative 3 - New Buried Irrigation Pipeline Alignment: This alternative is composed of approximately 21,070 feet of pipeline and 21 headgates, which increases the number of service turnout points to water users in comparison to Alternative No.2. The alignment goes through existing subdivisions and would require new easements. The Opinion of Probable Cost is \$3,280,000 which includes engineering services and contingency.

The Company selected Alternative 2 because of the lower cost and it will provide the most benefit to the to the major agricultural producers along the lateral. The major Project components of Selected Alternative 2 include: a pipeline ranging from 27 inches at the beginning to 8 inches at the end; an intake pond for sedimentation; replacement of the Short Lateral; and an extension referred to as the Seal Extension. There are additional water users along the alignment that could opt in to the Project prior to construction if they choose to receive pressurized water.

TABLE 2: PROJECT COST

Task	Cost
Materials (pipe, etc.)	\$1,600,000
Construction (mobilization & earthwork)	\$400,000
Engineering (design and construction management)	\$400,000
Contingency	\$400,000
TOTAL	\$2,800,000

Permitting: The Environmental Assessment (EA) conducted by CDOT for the Highway 550 Widening Project does not consider the proposed alignment of the Hess Lateral to be within any jurisdictional wetland area for the portion of the Project within the CDOT limits. Sections of the Hess Lateral outside of the extent of the EA were reviewed and are, in the Company's engineer's opinion, are not associated with a tributary that feeds the Florida or Animas River. The Company's engineer expects the Project will be exempt from 404 permitting due to agricultural water use exemptions. Air quality permits may be necessary due to material screening and land disturbance operations and will be obtained prior to construction, if necessary. A Stormwater permit will be obtained before construction. The environmental review found no adverse effects to threatened and endangered species.

Schedule: Final design and permitting efforts are scheduled to begin in the fall of 2017 and are expected to take one year. Construction will likely begin in the fall of 2018.

Financial Analysis

Table 3 provides a summary of the Project's financial aspects. The agricultural interest rate of 1.80% was used after evaluating the shareholders along the lateral.

TABLE 3: FINANCIAL SUMMARY

Total Project Cost	\$2,800,000
CDOT Funding	\$950,000
WSRF (Approved September 2015) ⁽¹⁾	\$775,000
CWCB Loan Amount	\$1,075,000
CWCB Loan Amount (Including 1% Service Fee)	\$1,085,750
CWCB Annual Loan Payment	\$47,156
CWCB Annual Loan Obligation (1 st Ten Years)	\$51,871
Current Assessment per share	\$37.50
Approximate average annual loan cost per user along lateral ⁽²⁾	\$1,150

- (1) The CWCB Project Manager will distribute grant funds first (up to the contracted retainage amount) and will then disburse loan funds. All disbursements will be based on invoices submitted for Project costs.
- (2) The average annual loan obligation per user along the lateral was estimated based on the anticipated cfs to users along the lateral. This is an estimate only and the individual payments will vary depending on actual delivery.

Creditworthiness: The Company has no existing debt. While this loan will be secured by a pledge of assessment revenues from the Company, the Company is proposing to assess a special assessment for the pressurized water in order to repay the loan based on each water user allocation.

TABLE 4: FINANCIAL RATIOS

Financial Ratio	Past 3 Years	Future w/ Project
Operating Ratio (revenues/expenses) weak: <100% - average: 100% - 120% - strong: >120%	103% (average) \$461K/\$447K	103% (average) \$513K ⁽¹⁾ /\$499K
Debt Service Coverage Ratio (revenues-expenses)/debt service weak: <100% - average: 100% - 120% - strong: >120%	N/A	127% (strong) \$513K ⁽¹⁾ -\$447K/ \$51.9K
Cash Reserves to Current Expenses weak: <50% - average: 50% - 100% - strong: >100%	38% (weak) \$168K/\$447K	34% (weak) \$168K/\$499K
Annual Cost Per Acre Foot (based on 43,000 AF) weak: >\$20 - average: \$10- \$20 - strong: <\$10	\$10.40 (average) (\$447K/43,000AF)	\$11.60 (average) (\$499K/43,000AF)

(1) Future revenues are an estimate based on a special assessment from Project users to cover annual CWCB debt obligation.

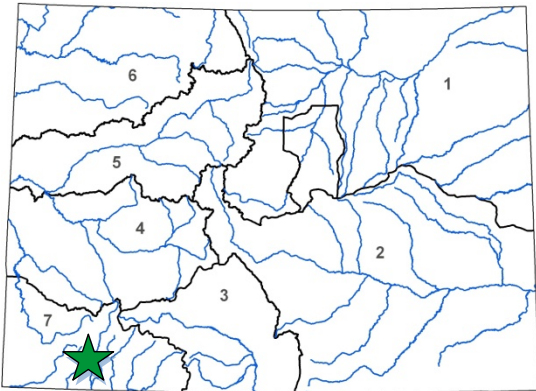
Collateral: Security for this loan will be a pledge of assessment revenues backed by a rate covenant and the Project itself (intake pond, Hess Lateral pipeline, and turnouts). This security is in compliance with the CWCB Financial Policy #5 (Collateral).

cc: Roger Cole, Florida Consolidated Canal Company, Board President
Pete Foster, Wright Water Engineers, Inc.
Jennifer Mele, Colorado Attorney General's Office

Attachment: Water Project Loan Program - Project Data Sheet



L O A N D E T A I L S	
Project Cost:	\$2,800,000
CWCB Loan:	\$1,085,750
Loan Term and Interest Rate:	30-years @ 1.80%
Funding Source:	Severance Tax Perpetual Base Fund
B O R R O W E R T Y P E	
Agriculture	Municipal
100%	0%
Commercial	
0%	
P R O J E C T D E T A I L S	
Project Type:	Ditch Rehabilitation
Average Annual Diversion:	43,000 AF



The Hess Lateral, part of the Florida Consolidated Ditch Company water conveyance system, is located 7 miles south of Durango, CO on the Florida Mesa. The lateral serves approximately 67 users irrigating over 1,500 acres of hay and pasture land. The project will replace the open ditch with buried gravity-pressurized pipeline and relocate approx. 21,100 feet of the Hess Lateral due to expansion of HWY 550. CDOT has committed \$950,000 to the project. The company also received approval of a \$775,000 WSRF grant at the September 2015 meeting. Final design of the project is expected to begin in the fall of 2017 and construction will likely follow one year later.

L O C A T I O N	
County:	La Plata
Water Source:	Animas River
Drainage Basin:	San Juan/Dolores River
Division:	7
District:	30

