STATE OF COLORADO

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TO: Colorado Water Conservation Board Members

FROM: Jonathan Hernandez, P.E., Project Manager
Kirk Russell, P.E., Chief
Finance Section

DATE: May 9, 2014

SUBJECT: **Agenda Item 31b, May 21-22, 2014 Board Meeting**
Plaza Project Phase 3: Prairie Ditch Implementation Project
Prairie Ditch Company (CWCB LOAN)

Introduction

The Prairie Ditch Company (Company) is requesting a loan for the Plaza Project Phase 3: Prairie Ditch Implementation Project (Project). The purpose of the Project is to improve the existing Prairie Ditch diversion structure and headgate on the Rio Grande River. The total Project cost is estimated to be $975,000. The Company is requesting a loan from the CWCB for the Companys share of the Project costs (approximately 13%). 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 $131,300 ($130,000 for Project costs and $1,300 for the 1% Loan Service Fee) to the Prairie Ditch Company for the Plaza Project Phase 3: Prairie Ditch Implementation Project, from the Construction Fund. The loan terms shall be 10 years at the reduced agricultural interest rate of 1.25% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.

Background

The Prairie Ditch diversion structure and headgate is located seven miles northwest of Monte Vista, Colorado on the Rio Grande River. The Company's service area covers approximately 23,000 irrigated acres. The diversion and headgates were constructed in the early 1900s and were most recently reworked in 1962. They are now deteriorating, presenting a growing concern the diversion structure may soon completely wash out. Both the diversion and headgate were highlighted as river rehabilitation priorities in a 2001 study titled "Rio Grande Headwaters Restoration Project." The study analyzed the condition of riparian habitats and structures along a 91-mile reach of the Rio Grande from the town of South Fork to Alamosa, and triggered a more localized effort known as the Plaza Project.

The Plaza Project is a multi-phased project intended to improve the health and function of the Rio Grande River in the Sevenmile Plaza area through stream bank restoration, wetland restoration, and the replacement of aging and inefficient diversion and headgate structures. Phase 1 was a planning phase and identified several diversion and headgate structures in need of replacement. Phase 2 (McDonald Ditch Implementation Project) was the Plaza Project's first implementation project and was funded in part with a CWCB Loan (C150334) and WSRA grant (C150492). Phase 3 is the second implantation project and the subject of this loan request. Project Tasks include the final engineering design and construction of new Prairie Ditch diversion and headgate, as well as stream bank stabilization, monitoring, outreach, and education. The Company is only responsible for a portion of funds that will cover the Prairie diversion and headgate improvements (Tasks 2 and 3 of the Phase 3 Plaza Project).

Project funding comes from a variety of grants, this CWCB loan, and in-kind services. Concurrent with this request (See Agenda Item 31a), the Colorado Rio Grande Restoration Foundation (CRGRF) is seeking approval of a Water Supply Reserve Account (WSRA) Grant to help finance Phase 3.

Loan Feasibility Study

The Rio Grande Headwaters Restoration Project and the Natural Resources Conservation Service (NRCS) prepared the Loan Feasibility Study titled *"Feasibility Study, The Plaza Project – Phase 3: Prairie Ditch Implementation Project,"* dated February 1, 2014. The study was prepared in accordance with CWCB guidelines and includes an alternative analysis, preliminary engineering design, cost estimates, and financial statements.

Borrower - Prairie Ditch Company

The Company is a Mutual Ditch Company formed in 1887. It operates as a nonprofit corporation and is in good standing with the Colorado Secretary of State. The Company is governed by a five-member board of directors responsible for general supervision over the affairs of the corporation. The Board has general powers in connection with any and all of the business in which the corporation may engage, and is authorized to set assessments should the shareholders fail to set an assessment at its annual meeting. The Board is authorized to incur debt up to $25,000; accordingly a shareholder resolution is required to authorize this loan request.

The Company is made up of 257 shares held by 65 shareholders. The Company's Articles of Incorporation require that water rights of the Company shall be used only for agricultural irrigation or incidental domestic use. Revenues are primarily derived from annual shareholder assessments. The Company's By-laws provides the Board authority to restrict water deliveries, and allows for the sale of delinquent shares.

Water Rights

The Prairie Ditch is comprised of 18 water rights decreed between 5/1/1896 and 4/9/1903 with appropriation dates ranging from 1872 to 1901. These rights combine for a total decreed flow of 367.02 AF, and have an average total annual diversion of 16,000 AF (62.25 AF per share).

Project Description

The objective of this Project is to replace the deteriorating and inefficient Prairie Ditch diversion structure and headgate as a part of Phase 3 of the Plaza Project. The NRCS performed preliminary surveys of the project elements and developed initial design and cost estimates for a variety of alternatives. The following alternatives were analyzed by Plaza Stakeholders, a diverse group of 34 individuals with an interest within the Sevenmile Plaza and the greater community of the San Luis Valley.

Alternative 1 – Concrete Diversion: This alternative would include building a concrete structure that spans the entire width of the river. This would have the highest initial cost but the lowest maintenance cost. The structure would not be passable to fish or boaters unless a side fish passage was included at additional cost.

Alternative 2 – Steel and Grouted Rock Diversion: This alternative would include building a steel and grouted rock dam that spans the entire width of the river. This would offer a lower initial cost than Alternative 1 but would have higher maintenance cost. This alternative would also be more natural looking than Alternative 1 but would also not be fish and boat passable unless a side fish passage was included at additional cost.

Alternative 3 – Abandon Diversion, use McDonald Ditch Diversion: This alternative would include removing the diversion dam and moving the headgate 2,000 feet upstream to the location of the McDonald Ditch headgate (subject diversion of Plaza Project Phase 2). As well as construction requirements to modify the McDonald headgates and increase the capacity of the McDonald ditch, the Company would also have to file for a change in water right moving its decreed location. These costs could easily eliminate any cost savings seen by combining with McDonald Ditch.

Selected Alternative 4 – Rock Diversion: This alternative will include a rock dam spanning the entire width of the river. The dam will be composed of very large rocks stacked tight enough to stay in place without being grouted. The rocks will create a series of drop structures allowing for fish and boat passage, improving habitat and recreation. This will have less initial cost than Alternatives 2 and 3 but will also have higher maintenance cost than Alternatives 2 and 3. This alternative will include a sluice to move sediment and debris past the headgate.

In addition to the dam, the Project will also install four headgates consisting of three manual gates and one solar-powered automated gate to regulate ditch flows, improving diversion accuracy and accounting. The manual gates can also be used to regulate ditch flows if the automated gate malfunctions.

Table 1 provides a summary of the cost related to the entire Project. The Company will be responsible for a cost share of only the diversion and headgate (Task 2 & 3).

TABLE 1: PLAZA PROJECT COST SUMMARY

Task	Total Cost	Company Share
Task 1: Finalize Design	$90,000	-
Task 2: Diversion Replacement	$481,000	$98,000
Task 3: Headgate Replacement	$332,000	$32,000
Task 4: Channel Shaping and Stream bank Stabilization	$12,000	-
Task 5: Monitoring	$4,500	-
Task 6: Outreach and Education	$3,500	-
Task 7: Administration	$52,000	-
Plaza Project Phase 3 Total	$975,000	$130,000

***Schedule*:** Construction of the Prairie Ditch diversion and headgate is expected to occur in the fall of 2014, and be completed by December 2014. The remainder of the Project (Tasks 4-7) is expected to continue until 2017.

Financial Analysis

The Company qualifies for an agricultural interest rate of 1.25% for a 10-year term (reduced from a 1.75% agricultural rate for a 30-year term). Table 2 provides a summary of the financial aspects of the Project.

TABLE 2: FINANCIAL SUMMARY

Total Project Cost	$975,000
Additional Funding Sources	
WSRA Rio Grande Basin Grant (Pending award to the CRGRF)	*$21,500*
WSRA Statewide Grant (Pending award to the CRGRF)	*$408,500*
Cooperative Cons. Partnership Initiative Grant (awarded to the CRGRF)	*$315,000*
NRCS (In-Kind)	*$90,000*
RGHRP (In-Kind)	*$ 10,000*
Total	$845,000
CWCB Loan Amount	$130,000
CWCB Loan Amount (including 1% Service Fee)	$131,300
CWCB Annual Loan Payment	$14,050
CWCB Annual Loan Obligation (incl. 10% debt reserve)	$15,454
Number of Shares	257
Annual Loan Obligation per Share	$60/share
Current Assessment per Share	$300/share
Future Assessment per Share	$360/share
Total Project Cost per Acre Foot (16,000 AF)	$61/AF

Tasks 2 & 3 are being funded through this CWCB loan ($130,000 or 16%), the pending WSRA grant ($368,000 or 45%), and the Cooperative Conservation Partnership Initiative grant ($315,000 or 39%).

Creditworthiness: The Company has no existing debt.

TABLE 3: FINANCIAL RATIOS

Financial Ratio	Past 3 Years	Future w/ Project[1]
Operating Ratio (operating revenues/operating expenses) weak: <100% - average: 100% - 120% - strong: >120%	104% (Average) $78K/$75K	103% (Average) $93K/$90K
Debt Service Coverage Ratio (total eligible revenues-operating expenses)/total debt service weak: <100% - average: 100% - 120% - strong: >120%	NA	120% (Average) ($93K-$75K) $15K
Cash Reserves to Current Expenses weak: <50% - average: 50% - 100% - strong: >100%	89% (Average) $67K/$75K	74% (Average) $67K/$90K
Annual Operating Cost per Acre-Foot (based on 16,000 AF) weak: >$20 - average: $10 - $20 - strong: <$10	$4.70 (Strong) $75K/16K AF	$5.60 (Strong) $90K/16K AF

Collateral: Security for this loan will be a pledge of assessment revenues backed by an assessment covenant, and the Project itself (diversion dam and headgate structure). This is in compliance with CWCB Financial Policy #5 (Collateral).

cc: LaVern Hart, President, Prairie Ditch Company
Susan Schneider/Jennifer Mele, Colorado Attorney General's Office

Attachment: Water Project Loan Program – Project Data Sheet

C150400

CWCB Water Project Loan Program
Project Data Sheet

Borrower: The Prairie Ditch Company

County: Rio Grande

Project Name: Plaza Project Phase 3: Prairie Ditch Implementation Project

Project Type: Ditch Rehabilitation

Drainage Basin/ District: Rio Grande / 20

Water Source: Rio Grande River

Total Project Cost: $975,000

Funding Source: Construction Fund, WSRA Grants

Type of Borrower: Agricultural

Average Annual Diversion: 16,000 AF

CWCB Loan: $131,300 (with 1% service fee)

Interest Rate: 1.25% **Term:** 10-years

The Prairie Ditch Company is a Mutual Ditch Company formed in 1887. The Prairie Ditch diversion structure and headgate is located seven miles northwest of Monte Vista, Colorado on the Rio Grande River and has a service area of approximately 23,000 acres. The diversion and headgates were constructed in the early 1900s and was most recently reworked in 1962. They are now deteriorating, presenting a growing concern the diversion structure may soon completely wash out. Both the diversion and headgate were highlighted as river rehabilitation priorities in a 2001 study titled "Rio Grande Headwaters Restoration Project." The study analyzed the condition of riparian habitats and structures along a 91-mile reach of the Rio Grande from the town of South Fork to Alamosa and triggered a more localized effort known as the Plaza Project.

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