



**COLORADO**

**Colorado Water  
Conservation Board**

Department of Natural Resources

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**TO:** Colorado Water Conservation Board Members

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

**DATE:** May 18-19, 2016 Board Meeting

**CONSENT AGENDA ITEM:** 5a- Change to Existing Loans  
Oligarchy Irrigation Company - Dam Outlet Works Rehabilitation

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### Guidance

At the May 2005 Board Meeting, the Board authorized staff to present as Consent Agenda items increases to existing loans that are less than 20% of the original loan request. This request is for an increase of approximately 15% of the original loan amount.

### Introduction

The Oligarchy Irrigation Company (Company) received approval of a \$781,740 CWCB loan (CT2016-1597) at the July 2015 Board Meeting to finance the Dam Outlet Works Rehabilitation (Project). The purpose of the Project is to meet the State Engineer's Office Dam Safety Branch (SEO) requirements by constructing a new outlet works gate vault, outlet works piping, intake structure, and discharge structure. The total Project cost was originally estimated at \$860,000. After completing final design and receiving contractor bids, the revised Project cost is estimated at \$992,200. The Company is requesting a loan increase to cover approximately 90% of the revised Project costs. See attached Project Data Sheet for a location map and Project summary.

### Staff Recommendation

Staff recommends the Board approve a loan increase of \$120,190 (\$119,000 for Project costs and \$1,190 for the 1% Loan Service Fee), for a total loan not to exceed \$901,930 (\$893,000 for Project cost and \$8,930 for the 1% Loan Service Fee) to the Oligarchy Irrigation Company for engineering and construction costs related to the Dam Outlet Works Rehabilitation Project, from the Construction Fund. The loan terms shall remain 30 years at a blended interest rate of 2.40% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.



## Background

The Company serves approximately 2,700 irrigated acres in Boulder and Weld Counties north of Longmont. The Oligarchy No. 1 Reservoir and Dam (Reservoir), also known as Burch Lake, is classified as a Significant Hazard Dam by the SEO. It is an off stream reservoir filled by the St. Vrain Creek via the Palmerton Ditch. The Reservoir's outlet releases flow into the Oligarchy Ditch, which extends easterly approximately 15 miles. Shareholders use water for agricultural uses and irrigation of municipal parks and schools.

The Reservoir's dam embankment is 18 feet high with a crest width of 12 feet and upstream and downstream slopes of 2.5 to 1. The Reservoir was constructed in 1889 with a storage capacity of 1,080 AF. Subsequent enlargements have brought the decreed storage volume to 2,129.4 AF though the current physical volume is 1,737 AF at normal high water line. The existing outlet works system dates back to 1910. A 2012 SEO dam inspection noted the poor condition of the outlet conduit due to its pressurized conduit through the embankment, difficult access for inspection, and the difficult operation of the valve. This Project will prevent a storage restriction as it will address the SEO's concerns by demolishing the existing outlet and rebuilding a new outlet structure including a new intake structure, gate vault, discharge structure, and conduits.

## Water Rights

The storage rights impacted by this project are listed in Table 1.

TABLE 1: STORAGE WATER RIGHTS

Name	Storage (AF)	Appropriation Date	Adjudication Date
Oligarchy Res 1 - Original	1,080	7/2/1889	3/22/1890
Oligarchy Res 1 - 1 <sup>st</sup> Enlargement	357.4	3/31/1890	3/13/1907
Oligarchy Res 1 - 2 <sup>nd</sup> Enlargement	386	11/14/1892	3/13/1907
Oligarchy Res 1 - 3 <sup>rd</sup> Enlargement	306	11/1/1911	6/1/1926
Oligarchy Res 1 - Refill	272	12/31/1929	7/23/1951
Oligarchy Res 1 - Conditional Refill	1,858	12/31/1929	7/23/1951

The Company provides an average of 8,000 AF per year for irrigation use, with approximately 795 AF coming from the Oligarchy Res No. 1 storage water.

## Project Update

During final design, the Dam Safety Branch of the State Engineer's Office (SEO) identified additional items to be added to the construction project. These items included replacing the existing blanket and toe drain on the downstream face of the dam and additional riprap. The Company's engineer, Deere & Ault Consultants, added these elements into the Project and the SEO approved the final design on March 1, 2016.

The project was advertised for bid and a pre-bid meeting was held on March 21, 2016. Sealed bids were received on April 4, 2016. After reviewing the three bids received, the Company selected Moltz Constructors, who was also the low bidder at \$682,300. Adding in the actual cost for design engineering and permitting as well as the budgeted cost for construction engineering, the original Project cost estimate was exceeded by only 1%. However, this leaves the Company in an unfavorable position of having no contingency funds available. Deere & Ault has advised the Company to budget for a 15% contingency to account for unknown site conditions as this is a SEO jurisdictional dam with an old embankment and infrastructure. The revised Project cost is shown in Table 2.

**TABLE 2: UPDATED COST ESTIMATE**

Task	Original Estimate	Updated Cost
Design Engineering	\$105,000	\$106,700 <i>(final cost)</i>
Permitting	\$15,000	\$14,600 <i>(final cost)</i>
Construction Engineering	\$75,000	\$75,000 <i>(budgeted)</i>
Construction	\$522,000	\$682,300 <i>(bid amount)</i>
Subtotal	\$717,000	\$878,600
Contingency	\$143,000 <i>(20% of subtotal)</i>	\$113,600 <i>(15% of construction eng. and construction)</i>
<b>TOTAL</b>	<b>\$860,000</b>	<b>\$992,200</b>

**Schedule:** Final design is completed and has been accepted by the SEO for construction. Construction is scheduled to begin summer 2016 and be completed by fall 2016.

#### Financial Analysis

Table 3 provides a summary of the Project's financial aspects. The Company's blended interest rate of 2.40% for a 30-year term (Ownership: 25% Agricultural, 75% Mid Municipal) will remain as per the terms of the original contract. In response to the financial needs of this Project and the Company's emergency flood project in 2013, share assessments were doubled from \$105/share to \$210/share. The Company successfully collected the higher share assessments in 2014 and 2015.

**TABLE 3: FINANCIAL SUMMARY**

	Original Approval	Current Request
Total Project Cost	\$860,000	\$992,200
Borrower Match (10% of total Project costs)	\$86,000	\$99,200
CWCB Loan Amount	\$774,000	\$893,000
CWCB Loan Amount (Including 1% Service Fee)	\$781,740	\$901,930
CWCB Annual Loan Payment	\$36,853	\$42,520
CWCB Loan Obligation (1st Ten Years)	\$40,539	\$46,772
Number of Shares	300	300
Annual Loan Obligation Per Share	\$135	\$156
Current Assessment per Share	\$210	\$210
Future Assessment per Share	\$218	\$240
Cost of Project per AF of stored water (1,737 AF)	\$495	\$571

**Creditworthiness:** The Company has \$488,942 in existing debt made up of a CWCB emergency loan used to finance the repair of damage to its headgate structure sustained in the September 2013 flood. That project was successfully completed and only required \$1,073,069 of the approved \$1,262,500. Additionally the Company has already paid down that principal by \$584,127 using FEMA reimbursements they received for the emergency project. The emergency loan is in good standing and its first annual payment is due on December 1, 2017

TABLE 4: EXISTING DEBT

Lender	Contracted Amount	Current Balance	Annual Payment	Maturity Date	Collateral
CWCB (CT2015-025)	\$1,262,500	\$488,942	\$25,120 <sup>1</sup>	2044	Assessment Revenues, Ditch Headgate

<sup>1</sup> This emergency loan will be amended at the end of the three year period of no interest and payments to reflect actual loan balance. Annual payment shown is for a final loan balance of \$488,942.

TABLE 5: FINANCIAL RATIOS

Financial Ratio	Past 2 Years	Future w/ Project
Operating Ratio (revenues/expenses) weak: <100% - average: 100% - 120% - strong: >120%	190% (Strong) \$139K/\$73.2K	100% (Average) \$148K/\$147.6K
Debt Service Coverage Ratio (revenues-expenses)/debt service weak: <100% - average: 100% - 120% - strong: >120%	NA <sup>2</sup>	101% (Average) \$148K-\$73.2K \$74.4K
Cash Reserves to Current Expenses weak: <50% - average: 50% - 100% - strong: >100%	177% (Strong) \$130K/\$73.2K	21% (Weak) \$30.8K/\$147.6K
Annual Operating Cost per Acre-Foot (7,966 AF) weak: >\$20 - average: \$10 - \$20 - strong: <\$10	\$9 (Strong) \$73.2K/7,966 AF	\$19 (Average) \$147.6K/7,966 AF

<sup>2</sup> The Company has not yet started repayment of its emergency loan.

**Collateral:** Security for the loan will remain a pledge of assessment revenues backed by an assessment covenant and the Project itself (Oligarchy Reservoir No. 1 outlet works). This is in compliance with the CWCB Financial Policy #5 (Collateral).

cc: Nelson Tipton, President, Oligarchy Irrigation Company  
Susan Schneider/Jennifer Mele, Colorado Attorney General's Office

Attachment: Water Project Loan Program - Project Data Sheet



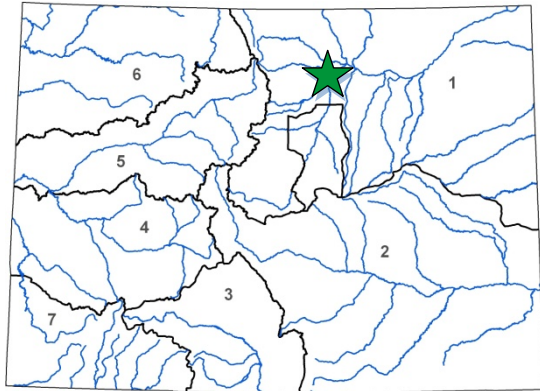
## Dam Outlet Works Rehabilitation

Oligarchy Irrigation Company

May 2016 Board Meeting

(Loan Increase)

L O A N   D E T A I L S	
Project Cost:	\$992,200
CWCB Loan (with Service Fee):	\$901,930
Loan Term and Interest Rate:	30 Years @ 2.40%
Funding Source:	Construction Fund
B O R R O W E R   T Y P E	
Agriculture	Municipal (TBD)
25.4%	0% Low - 74.6% Mid - 0% High
Commercial	0%
P R O J E C T   D E T A I L S	
Project Type:	Dam Rehabilitation
Average Annual Delivery:	7,966 AF
Water Supply Storage Preserved:	1,737 AF



L O C A T I O N	
County:	Boulder
Water Source:	St Vrain Creek
Drainage Basin:	South Platte
Division:	1
District:	5

The Oligarchy Irrigation Company owns and operates the Oligarchy Res No. 1 Reservoir, also known as Burch Lake. The reservoir stores 1,737 acre-feet of water and is classified as a significant hazard dam by the Office of the State Engineer (SEO). The purpose of the project is to avoid a SEO storage restriction by rehabilitate the reservoir's outlet works. Work is to include a new unpressurized outlet pipe, an upstream guard gate, and a way to inspect the outlet works system. Bids were received in April 2016 and were higher than the original construction estimate. Construction is expected to start in summer 2016 and be complete by fall 2016.

