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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: March 20-21, 2019 Board Meeting

AGENDA ITEM: 10a. Water Project Loans
Groundwater Management Subdistrict of Central Colorado Water Conservancy District – Pioneer Reservoir

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Introduction

The Groundwater Management Subdistrict (Subdistrict) of Central Colorado Water Conservancy District (CCWCD) is applying for a loan for the Pioneer Reservoir (Project). The Project involves the purchase of a slurry wall lined gravel pit that will be reclaimed into a water storage reservoir. Water stored in the Pioneer Reservoir will be used in the Subdistrict's plan for augmentation as a replacement supply for depletions caused by pumping of member alluvial wells. The purpose of the Project is to increase irrigation opportunities for agricultural production within the Subdistrict's service area by increasing the Subdistrict's reliable water supplies, which will allow for an increased well pumping quota. The total Project cost is estimated to be $8,611,000. The Subdistrict is seeking a CWCB loan for 100% of Project costs. See attached Project Data Sheet for a location map and Project summary.

Staff Recommendation

Staff recommends the Board approve a loan not to exceed $8,697,110 ($8,611,000 for Project costs and $86,110 for the 1% loan service fee) to the Groundwater Management Subdistrict of Central Colorado Water Conservancy District for the Pioneer Reservoir Project, from the Severance Tax Perpetual Base Fund. The loan terms shall be 10 years at the reduced agricultural rate of 1.20% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.

Background
CCWCD was formed in 1965 to develop, manage, and protect water resources in northeast Colorado. Over 750 square miles in Adams, Weld, and Morgan Counties are included in CCWCD boundaries, which include approximately 210,000 acres of irrigated agricultural lands. Within CCWCD are two subdistricts: Groundwater Management Subdistrict formed in 1973 and the Well Augmentation Subdistrict formed in 2004. Both subdistricts are separate legal entities with distinct legal boundaries and each provide augmentation water for different alluvial groundwater wells under separate decreed plans for augmentation. This loan is to the Groundwater Management Subdistrict (Subdistrict).

The Subdistrict was formed to coordinate and operate an augmentation plan to replace depletions caused by the pumping of alluvial wells owned by its constituent members. The Subdistrict's boundaries are similar to the boundaries of CCWCD but does not include Lost Creek Drainage. There are currently 892 constituent wells contracted for coverage in the Subdistrict's augmentation plan, distributed among 518 allotment contracts. The Subdistrict also replaces evaporation losses associated with two unlined gravel pits.

Subdistrict allotment contracts currently total 67,000 AF. Due to limited water supplies, the Subdistrict issues a quota which represents a percentage of each member's contracted augmentation supply amount and is an allocation of overall augmentation supplies. The quota for the year is heavily dependent on the amount of water recharged in prior years, and the amount of available water in storage at the beginning of each irrigation season. The annual quota has recently averaged around 50%. In 2018 the quota was set to 55% (45% of well pumping was curtailed). The curtailment of well pumping emphasizes the need for the Subdistrict to develop additional long-term projectable replacement water supplies. Therefore, it continually looks for additional recharge and water storage sites that can provide replacement water consistent with the amount and timing of depletions from well pumping.

Loan Feasibility Study
Ed Armbruster, P.E., with White Sands Water Engineers, Inc., prepared the Loan Feasibility Study titled, "CWCB Loan Feasibility Study, Pioneer Reservoir Project," dated January 2019. The feasibility study was prepared in accordance with CWCB guidelines and includes an alternative analysis and construction costs estimates. Audited financial statements were provided by Poysti & Adams and the Adams Group for 2016 and 2017, respectively.

Borrower – Groundwater Management Subdistrict of Central Colorado Water Conservancy District
The Subdistrict was created by the Weld County District Court on April 23, 1973, pursuant to the "Water Conservancy Act," § 37-45-101, C.R.S. It has the power to acquire and sell water rights, construct and operate facilities, exercise eminent domain, levy taxes, and contract with other agencies. The Subdistrict is governed by the same 15-member Board of Directors as its parent district, CCWCD.

The primary source of revenues are ad valorem property taxes and member assessments. The Subdistrict is subject to Article X Section 20 of the Colorado Constitution (TABOR) though the Subdistrict was de-Bruced in 2014 removing TABOR's revenue restrictions. This debt will be authorized pursuant to a bond authorization approved by voters at the November 2018 election as further discussed in the Financial Analysis section of this memo.

Water Rights
The decree for the Subdistrict's plan of augmentation (Division 1 Water Court Case No. 02CW335) was signed in 2005. Its portfolio of water rights consists of changed senior direct flow, junior storage, recharge, and exchange rights that have been decreed or are pending adjudication. Individual wells

covered by the augmentation plan have priority dates ranging from 1906 to 1991 and 85% of the wells are senior to 1960.

The plan for augmentation requires annual projections of future operations demonstrating sufficient water supplies will be available to replace out-of-priority well depletions in order to allow additional well pumping. During the irrigation season, augmentation supplies come from changed direct flow water rights, storage releases, and recharge accretions. During the non-irrigation season, the augmentation supplies are primarily storage releases and recharge accretions. Fully consumable water including municipal effluent may also be used as a replacement supply on a short-term lease basis.

Project Description
The purpose of the Project is to increase irrigation opportunities for agricultural production within the Subdistrict's service area by increasing the Subdistrict's reliable water supplies, which will allow for an increased well pumping quota

Alternative 1 – No Action: Under this alternative the Subdistrict would only rely on existing infrastructure and water rights to provide water supplies to constituent members. This alternative is unacceptable because the amount of water available is less than the augmentation member's needs.

Alternative 2 – Alternative Storage Locations: The Subdistrict continually seeks to develop additional reservoir storage at alternative locations. The selection of the Pioneer Reservoir site will not eliminate the need to pursue other future project sites. However, projects evaluated in recent years showed unit costs for finished storage ranging from $5,000 to $6,500 per AF. Alternative storage locations are therefore less economically favorable at this time.

Selected Alternative 3 – Pioneer Reservoir: Pioneer Reservoir is located in Weld County near the confluence of the South Platte River and the Cache la Poudre. This alternative will convert the existing lined gravel pit (Journey Ventures Pit aka J2 Pit) into the Pioneer Reservoir. The reservoir is just east of the Subdistrict's Nissen Reservoir. The two reservoirs will have nearly identical operations and water will be delivered to both via the Plumb Ditch. Development of Pioneer Reservoir will occur in two phases:

- Phase 1 – Final reclamation including completion of sand and gravel mining operations. This will be completed by the gravel pit operator. The Subdistrict has a contract to purchase the lined gravel pit for $2,700 per AF of storage. It's estimated the final reservoir storage capacity will be between 1,800 – 2,000 AF.
- Phase 2 – Constructing inlet, outlet, measurement facilities and Plumb Ditch improvements. The inlet to Pioneer Reservoir will consist of: a new check structure in Plumb Ditch, an approach channel and broad crested flume, a pipeline, and grouted rip-rap rundown channel. The outlet from Pioneer Reservoir will consist of a pump station capable of discharging up to 10 cfs which will be delivered to the Plumb Ditch through a new outlet structure and flow measurement device.

Pioneer Reservoir will divert water from the South Platte River under a new junior water right to be filed in 2019. The Subdistrict is proposing to annually divert up to 4,000 AF (2,000 AF initial fill and 2,000 AF refill) from the South Platte River at the Plumb Ditch diversion. Based on a point flow model, the Subdistrict anticipates the average storage and release volume will be approximately 1,500 AF per year on a long-term basis. Water will be conveyed through the Plumb Ditch to the reservoir under the same excess capacity agreement between the Subdistrict and the Plumb Ditch Company used for Nissen Reservoir.

The total Project cost is estimated to be $8,611,000 as shown in Table 1.

TABLE 1: ESTIMATED PROJECT COST

Tasks	Cost
Inlet Infrastructure	$655,000
Outlet Infrastructure	$1,406,000
Construction Subtotal	$2,061,000
Engineering/Permitting (10% Construction Cost)	$206,000
Contingency (10% Construction Cost)	$206,000
Construction Engineering, Surveying, Slurry Wall Test	$280,000
Construction Total	$2,753,000
Lined Gravel Pit Purchase (2,000 AF)	$5,858,000
TOTAL	**$8,611,000**

Permitting: The gravel pit is operated and will be reclaimed under permit M-2008-080 issued by the Division of Reclamation, Mining and Safety (DRMS). The operator and Subdistrict will amend the DRMS permit to include the construction of the inlet and outlet infrastructure. Work within the Plumb Ditch is expected to fall under the U.S. Army Corps of Engineer's agricultural exemption. No additional easements will be required.

Schedule: The Subdistrict is scheduled to initially close on the property in May 2019. Final closing will occur January 31, 2022 or sooner, if mining and reclamation is complete. Final reservoir infrastructure construction will be completed by early 2022.

Financial Analysis

Table 2 provides a summary of the Project's financial aspects. The Subdistrict qualifies for the agricultural interest rate of 1.85% for a 30-year term. Because the Subdistrict is requesting a 10-year term, the interest rate is reduced by 0.65% for a final interest rate of 1.20% per CWCB Financial Policy #7 (Lending Rate Determination).

TABLE 2: FINANCIAL SUMMARY

Project Cost	$8,611,000
CWCB Loan Amount	$8,611,000
CWCB Loan Amount (including 1% Service Fee)	$8,697,110
CWCB Annual Loan Payment	$928,139
Project Cost per AF of storage (2,000 AF)	$4,306/AF

Creditworthiness: As of December 31, 2018, the Subdistrict has $5,277,455 in existing long-term debt made up of one CWCB loan (C150117) as shown in Table 3. That loan is in good standing and the current balance reflect principal prepayments of approximately $4.65 million made in 2018. The prepayments accelerated the loan's maturity date from 2035 to 2027. Also in 2018, the Subdistrict paid in full early CWCB loan C150160 in the approximate amount of $3.15 million (original maturity date of 2035). Therefore, the annual payment of the loan C150160 is reflected in the "Past Years" column of Table 5 but is not included in the "Future w/ Project" column.

TABLE 3: EXISTING DEBT

Lender	Original Balance	Current Balance	Annual Payment[1]	Maturity Date	Collateral
CWCB (C150117)	$15,000,000	$5,277,455	$740,766	2027	Pledge of Nov 2002 approved tax revenues

2018 Bond Authorization: During the November 2018 election, voters approved the Subdistrict for a $48.7 million bond issue which shall bear interest at a maximum interest rate of 5.5%, allowing up to $4.4 million annually to be collected through an ad valorem property tax of up to 6 mills. Using this authorization, the Subdistrict received approval of a $9,847,500 CWCB loan at the September 2018 CWCB Board Meeting for the Walker Recharge Project. That loan is pending approval in the 2019 Project's Bill as part of a $15 million loan package for the Walker Recharge Project.

Including this loan for the Pioneer project, the Subdistrict will have $30,155,390 remaining under the 2018 Bond Authorization. It is likely that some of this remaining authorization will be taken out by the Subdistrict before the Pioneer or Walker projects are contracted. Therefore, for the purposes of this financial analysis and the financial ratios of Table 5, CWCB assumes the Subdistrict will sell a 20-year bond at 5.5% for the full remaining 2018 bond authorization resulting in a new annual debt service of $2.52 million. Parity will be required of all existing debt issued under the November 2018 Bond Authorization as it actually exists at the time of contracting.

TABLE 4: 2018 BOND AUTHORIZATION SUMMARY

Debt	Total Debt	Annual Debt Obligation	Estimated Required Mills[1]
CWCB Walker Recharge Loan (Pending)	$9,847,500	$467,192	0.170
CWCB Pioneer Reservoir Loan (Pending)	$8,697,110	$928,139	0.338
Remaining Bond To Be Issued (Assumed 20-yr @ 5.5%)	$30,155,390	$2,523,383	0.919
Total	$48,700,000	$3,918,714	1.427

[1] Based on Subdistrict's valuation of $2,747,006,018 for property taxes collected in 2019.

TABLE 5: FINANCIAL RATIOS

Financial Ratio	Past Years	Future w/ Project
Operating Ratio (revenues/expenses) weak: <100% - average: 100% - 120% - strong: >120%	140% (strong) $2.93M/$2.10M	126% (strong) $7.33M/$5.80M
Debt Service Coverage Ratio (revenues-expenses)/debt service weak: <100% - average: 100% - 120% - strong: >120%	186% (strong) ($2.93M-$1.14M) $0.96M	133% (strong) ($7.33M-$1.14M) $4.66M
Cash Reserves to Current Expenses Weak: <50% - average: 50% - 100% - strong: >100%	184% (strong) $3.86M/$2.10M	67% (average) $3.86M/$5.80M

Collateral: Security for this loan will be a pledge of the revenues from the ad valorem property tax mill levy approved at the November 2018 election. This security is in compliance with CWCB Financial Policy #5 (Collateral).

cc: Randy Ray, Executive Director, Central Colorado Water Conservancy District
Jennifer Mele, Colorado Attorney General's Office

Attachment: Water Project Loan Program – Project Data Sheet

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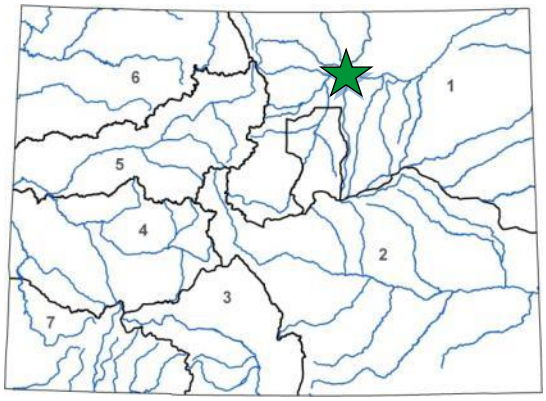
Groundwater Management Subdistrict of Central Colorado Water Conservancy District

March 2019 Board Meeting

LOAN DETAILS	
Project Cost:	$8,611,000
CWCB Loan (with Service Fee):	$8,697,110
Loan Term and Interest Rate:	10 years @ 1.20%
Funding Source:	Severance Tax PBF

BORROWER TYPE		
Agriculture	*Municipal*	*Commercial*
100%	0 % Low - 0% Mid -0% High	0%

PROJECT DETAILS	
Project Type:	Reservoir New
Storage Created:	2,000 AF



LOCATION			
County:			Weld
Water Source:			South Platte River
Drainage Basin:			South Platte
Division:	1	*District:*	2

The Central Colorado Water Conservancy District (CCWCD) was formed in 1965 to develop, manage, and protect water resources in northeast Colorado. CCWCD includes approximately 210,000 acres of irrigated agricultural lands. The Groundwater Management Subdistrict, formed in 1973, is a Subdistrict to CCWCD and operates an augmentation plan for alluvial irrigation wells.

The Pioneer Reservoir Project is located east of Greeley in Weld County near the confluence of the South Platte River and the Cache la Poudre. The Project involves the purchase of a slurry wall lined gravel pit which will be reclaimed into a water storage reservoir. Water stored in the reservoir will be used in the Subdistrict's plan for augmentation as a replacement supply for depletions caused by pumping of member alluvial wells. The purpose of the Project is to increase irrigation opportunities for agricultural production within the Subdistrict's service area by increasing the Subdistrict's reliable water supplies. Diversions into and out of the reservoir will occur via the Plumb Ditch off the South Platte River. Mining and reclamation of the pit is expected to be complete by 2021 and infrastructure improvements are expected to be completed by 2022.