COLORADO
Colorado Water Conservation Board
Department of Natural Resources

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Dan Gibbs, DNR Executive Director
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TO: Colorado Water Conservation Board Members

FROM: Cole Bedford, P.E., Project Manager
Kirk Russell, P.E., Finance Section Chief

DATE: November 16-17, 2022 Board Meeting

AGENDA ITEM: 6b. Water Project Loans
Groundwater Management Subdistrict of the Trinchera Water Conservancy District
Alpha Hay Farms Augmentation

Staff Recommendation

Staff recommends the Board approve a loan not to exceed $2,251,290 ($2,229,000 for project costs and $22,290 for the 1% service fee) to the Groundwater Management Subdistrict of the Trinchera Water Conservancy District, acting by and through its water activity enterprise, for costs related to the Alpha Hay Farms Augmentation Project, from the Severance Tax Perpetual Base Fund. The loan terms will be 30 years at an interest rate of 2.10% per annum. Security for the loan shall be in compliance with CWCB Financial Policy #5.

Introduction

The Groundwater Management Subdistrict of the Trinchera Water Conservancy District (Groundwater Management Subdistrict) is applying for a loan for the Alpha Hay Farms Augmentation (Project). Under its Plan of Water Management approved by the State Engineer, the Groundwater Management Subdistrict is required to replace stream depletions on Trinchera Creek, the Conejos River, and the Rio Grande caused by groundwater pumping from wells. In order to replace a portion of those depletions, four irrigated circles and their associated water rights will be purchased from Alpha Hay Farms. Approximately half of the purchase will be made by the Groundwater Management Subdistrict and the remainder will be made by Special Improvement District No. 3 of the Rio Grande Water Conservancy District (Subdistrict No. 3). The surface water rights will be changed from an irrigation use to an augmentation use. In addition, Subdistrict No. 3 will construct a pipeline connecting a groundwater well on the property to the Heads Mill & Irrigation Ditch. The total Project cost is estimated at $5,158,575. See attached Project Data Sheet for a location map and Project summary.

Borrower – Groundwater Management Subdistrict

The Groundwater Management Subdistrict of the Trinchera Water Conservancy District was formed in 2008. It is required to replace stream depletions caused by groundwater well pumping on Trinchera Creek, the Conejos River, and the Rio Grande. There are 177 wells under the Groundwater Management Subdistrict's jurisdiction. In February 2017, the Subdistrict established a water activity enterprise whose primary source of revenue is fees assessed to groundwater well users. These fees are based on the total volume of water pumped and the type of use (irrigation, commercial, etc.). The Groundwater Management Subdistrict is governed by a 5-member Board of Directors, which has the power to borrow and commit to the repayment of debts.

Background

In recent years, the Groundwater Management Subdistrict has been able to replace all of the stream depletions to Trinchera Creek through agreements with surface water right holders—known as forbearance agreements—and have likewise had significant success on the Conejos River and Rio Grande. However, replacement water has yet to be secured for 3,531 AF of depletions occurring on the Conejos River and the Rio Grande. The Groundwater Management Subdistrict needs to secure sources of augmentation water to directly replace depletions on the Conejos River and Rio Grande.

Alpha Hay Farms consists of fifteen quarter-section, center-pivot irrigated fields immediately south of the Conejos River near Antonito, Colorado. Four of these, which are closest to the river are known by their numbered designations: #11, #12, #13, and #14. These fields have typically been rotated between alfalfa and small grain crops. Water is provided to the four fields from both surface water diverted from the Conejos River and a single groundwater well on Field #12. If irrigation were ceased on the four fields, the water could be used instead for augmentation to replace depletions on the Conejos River and the Rio Grande.

Loan Feasibility Study

Monty Smith, Subdistrict President, with assistance from Jason Lorenz, P.E., Agro Engineering, Inc. prepared the Loan Feasibility Study titled, "Feasibility of Alpha Hay Farms Water Right and Land Purchase," dated September 2022. The feasibility study was prepared in accordance with CWCB guidelines and includes preliminary engineering, an analysis of alternatives, and costs. Audited financial statements were provided by the Subdistrict and were prepared by Wall, Smith, Bateman and Associates, CPA.

Water Rights

The Groundwater Management Subdistrict currently includes 177 wells that have historically consumed an average of 25,000 AF per year. The Groundwater Management Subdistrict is required to replace 15,000 AF per year of stream depletions caused by pumping from these wells. The four irrigated fields on Alpha Hay Farms have historically consumed 1,093 AF per year. The Groundwater Management Subdistrict will purchase two of the four fields, which represent 569 AF of historic consumptive use to replace stream depletions on the Conejos River and the Rio Grande. The rights associated with this water are shown in Table 1.

TABLE 1: WATER RIGHTS

Source Name	Rate or Volume	Adjudication Date	Appropriation Date	Water Court Case No.
Heads Mill & Irrigation Ditch	2.35 cfs	10/22/1883	06/01/1855	Division 22 Historic Decree[1]
J.F. Chacon No. 2 Ditch	6.155 cfs	10/22/1883	10/15/1877	00CW0011[1]
Groundwater Well	2,500 gpm	05/14/1969		W0490

[1]Alpha Hay Farms utilizes only a portion of the total water rights associated with these cases. The remainder are used on other nearby properties.

Project Description

The purpose of this Project is to progress towards the total replacement of stream depletions due to groundwater pumping in the Groundwater Management Subdistrict and the continued ability to utilize groundwater for irrigation, commercial, and other critical uses.

Alternative 1 – No Action: Taking no action would result in the inability of the Groundwater Management Subdistrict to replace stream depletions and the possible curtailment of pumping from 177 groundwater wells. Because this alternative would result in a significant economic impact to those relying on groundwater in the Groundwater Management Subdistrict, it was not selected.

Alternative 2 – Additional Agreements with Surface Water Rights Holders: Forbearance agreements are contracts to compensate surface water right holders for an injurious stream depletion with an asset other than wet water. Most frequently, forbearance agreements consist of a cash payment, however the cost of these payments per acre-foot has been increasing and are becoming unaffordable for the Groundwater Management Subdistrict. Furthermore, many of the agreements are made on an annual basis, which make them uncertain from one year to the next. Because of the high cost of additional forbearance agreements and their long-term unreliability, this alternative was not selected.

Selected Alternative 3 – Alpha Hay Farms Augmentation Project: This alternative involves the purchase of the Alpha Hay Farms property and its associated water rights. The Groundwater Management Subdistrict will purchase Fields #13 and #14 and Subdistrict No. 3 will purchase Fields #11 and #12. The Groundwater Management Subdistrict will be able to utilize the surface water rights to replace stream depletions by diverting the water through an augmentation station and then returning it back to the Conejos River. Subdistrict No. 3 will also construct an 18” augmentation pipeline connecting the groundwater well on Field #12 to the Heads Mill & Irrigation Ditch 5,000 feet away. This alternative will meet a portion of the Groundwater Management Subdistrict’s replacement needs and will be a reliable source year over year. The estimated cost of this alternative is $5,158,575 as shown in Table 2.

TABLE 2: ESTIMATED PROJECT COST

Tasks	Total Cost	Subdistrict No. 3	Groundwater Management Subdistrict
Land Purchase Price	$4,600,000	$2,187,210	$2,412,790
18" Augmentation Pipeline	$300,000	$300,000	-
Other Augmentation Infrastructure	$50,000	$50,000	-
Legal and Engineering	$81,575	$76,000	$5,575
Construction Contingency	$127,000	$127,000	-
TOTAL	**$5,158,575**	**$2,740,210**	**$2,418,365**

Permitting: The water rights associated with the Project have historically been used for irrigation and will need to be changed to an augmentation use. A temporary change will be secured first via a Substitute Water Supply Plan followed by a permanent change through a water court case. No other authorizations will be needed on the Project.

Schedule: The Groundwater Management Subdistrict, along with Subdistrict No. 3, currently have a first option to purchase the Alpha Hay Farms property. The option will be exercised before June 2023 when it expires. The pipeline component of the project will be bid and a contractor selected immediately afterwards. Construction will be completed before the end of 2023.

Financial Analysis

Table 3 provides a summary of the Project's financial aspects. The Groundwater Management Subdistrict qualifies for a blended interest rate of 2.10% for a 30-year loan (Ownership: 91% Agricultural, 2% Low-Income Municipal, and 7% Commercial). All interest rate evaluations are per CWCB Financial Policy #7 (Lending Rate Determination).

TABLE 3: FINANCIAL SUMMARY

Project Cost	$5,158,575
Groundwater Management Subdistrict Contribution	$2,418,365
CWCB Loan Amount	$2,229,000
CWCB Loan Amount (Including 1% Service Fee)	$2,251,290
CWCB Annual Loan Payment	$101,907
CWCB Annual Loan Obligation (1st Ten Years)	$112,098
Average Annual Acre-Feet Pumped	25,000
Current Average Fee per Acre-Foot (Irrigation, Commercial, Etc.)	$32.45
Annual Loan Obligation per Acre-Foot Pumped	$4.48
Future Average Fee per Acre-Foot (Estimate)	$36.93

Creditworthiness: The Groundwater Management Subdistrict currently has one open loan with CWCB (CT2022-3040) for their Augmentation Pipeline Project. The construction phase of the will close out in Spring 2023 and it is expected that the final loan amount to be repaid will be about $225,000 as shown in Table 4. Financial Ratios are shown in Table 4.

TABLE 4: EXISTING DEBT

Lender	Original Balance	Current Balance	Annual Payment	Maturity Date	Collateral
CWCB (CT2022-3040)	$225,000	$225,000	$9,237	2053	Revenues

TABLE 5: FINANCIAL RATIOS

Financial Ratio	Past Years	Future w/ Project
Operating Ratio (revenues/expenses) weak: <100% | average: 100% - 120% | strong: >120%	220% (strong) $550K/$250K	152% (strong) $550K/$362K
Debt Service Coverage Ratio (revenues-expenses)/debt service weak: <100% | average: 100% - 120% | strong: >120%	N/A	162% (strong) $550K-$353K $121K
Cash Reserves to Current Expenses weak: <50% | average: 50% - 100% | strong: >100%	360% (strong) $900K/$250K	247% (strong) $900K/$362K
Annual Operating Cost per Acre-Foot (25,000 AF) weak: >$20 | average: $10 - $20 | strong: <$10	$10.00 (weak) $250K/25K AF	$14.48 (average) $362K/25K AF

Collateral: Security for this loan will be a pledge of revenues backed by a rate covenant as evidenced by annual financial reporting. This security is in compliance with the CWCB financial Policy #5 (Collateral).

cc: Monty Smith, President, Groundwater Management Subdistrict of the Trinchera Water Conservancy District
Jennifer Mele, Colorado Attorney General's Office

Attachments: Water Project Loan Program – Project Data Sheet

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Alpha Hay Farms Augmentation

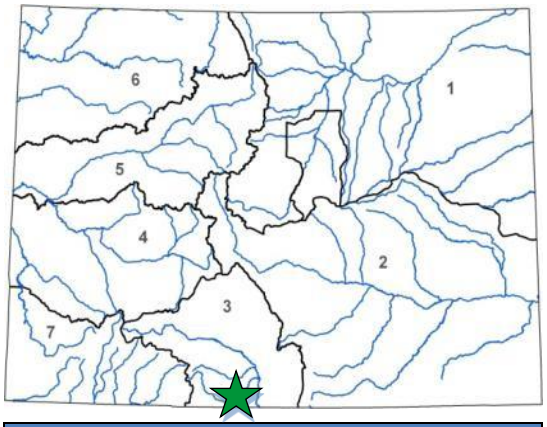
Groundwater Management Subdistrict of the TWCD

November 2022 Board Meeting

LOAN DETAILS	
Project Cost:	$5,158,575
CWCB Loan (with 1% Service Fee):	$2,251,290
Loan Term and Interest Rate:	30 Yrs @ 2.10%
Funding Source:	Severance Tax Perpetual Base Fund

BORROWER TYPE		
Agriculture	*Municipal*	*Commercial*
91%	2% Low - 0% Mid - 0% High	7%

PROJECT DETAILS	
Project Type:	Water Rights Purchase
Average Annual Withdrawals:	25,000 AF



LOCATION			
County:			Conejos
Water Source:			Conejos River
Drainage Basin:			Rio Grande
Division:	3	*District:*	22

The Groundwater Management Subdistrict of the Trinchera Water Conservancy District (Groundwater Management Subdistrict) was formed in 2018 in order to pursue a Ground Water Management Plan as an alternative to individual augmentation plans. The Subdistrict consists of 177 wells used located in the confined and unconfined aquifers in Costilla County.

The project will include the purchase of land and associated water rights for two center-pivot irrigation circles northeast of Antonito for augmentation and replacement of depletions. These surface water rights will provide 569 AF of consumptive use to replace depletions on the Conejos River and the Rio Grande. Currently the water is leased by agreement with the landowner, Alpha Hay Farms, LLC. The purchase will be made in the spring of 2023.