



**COLORADO**  
Division of Water Resources  
Department of Natural Resources

March 31, 2023

Mr. Jason Lorenz, P.E.  
Agro Engineering, LLC  
0210 Road 2 South  
Alamosa, CO 81101

**Re: Groundwater Management Subdistrict ("Trinchera Subdistrict") of the Trinchera Water Conservancy District Substitute Water Supply Plan  
Alpha Hay Fields No. 13 and 14  
Secs. 16, 21, 22, Twp. 33N, Rng. 9E, N.M.P.M. Conejos County  
Water Division 3  
SWSP Plan ID 9416**

**Approval Period: April 1, 2023 to November 1, 2023 (subject to Condition of Approval #3)**  
*Contact information for Mr. Lorenz: (719) 850-4011; Jason@agro.com*

Dear Mr. Lorenz:

We have reviewed your letter of February 1, 2023 requesting a substitute water supply plan ("SWSP") on the behalf of the Groundwater Management Subdistrict ("Trinchera Subdistrict" or "Applicant") of the Trinchera Water Conservancy District pursuant to §37-92-308(5), C.R.S. Notice was sent on February 1, 2023 to all subscribers to the Division 3 SWSP Notification List. No comments were received during the statutory 35-day comment period. The statutory \$300 filing fee has been received and given receipt no. 10026966.

An application for approval of a change of water right or plan for augmentation has not been filed with the water court and the depletions associated with the proposed water uses will not exceed five years, therefore this request has been submitted pursuant to §37-92-308(5), C.R.S. In accordance with §37-92-308(5), C.R.S., SWSPs may be approved for new water use plans involving out-of-priority diversions or a change of water right, if no application for approval of a plan for augmentation or a change of water right has been filed with the water court and the depletions associated with such water use plan or change will be for a limited duration not to exceed five years. **This is the first year of approval of this SWSP.**

## **SUBDISTRICT OPERATION**

The Trinchera Subdistrict was established by order of the court in Case No. 2007CV66 and authority to develop and implement a groundwater management plan was confirmed by Order Granting Trinchera Subdistrict's Motion For Determination of Question of Law Regarding Authority to Implement a Groundwater Management Plan (2015CW3024). Members of the Trinchera Subdistrict and owners of wells included by contract are landowners within the Trinchera Water Conservancy District who rely on groundwater for all or part of their commercial, municipal, industrial and/or irrigated agricultural practices within the area



defined by the Rio Grande Decision Support System Groundwater Model and the Rules Governing the Withdrawal of Groundwater in Water Division No. 3, District Court, Water Division No. 3, Case No. 15CW3024, as the Trinchera Response Area. The principal goals of the Trinchera Subdistrict are to protect senior surface water rights, to allow Subdistrict Wells to continue to pump in accordance with the Groundwater Management Plan (“GMP”) and Annual Replacement Plan (“ARP”), to maintain a Sustainable Trinchera Water Supply, and to avoid unreasonable interference with the state’s ability to fulfill its obligations under the Rio Grande Compact.

This SWSP is being sought in order to provide a part of the water supplies to be used by Trinchera Subdistrict No 7 (20CW3001) to meet the requirements of the Subdistrict’s Plan of Water Management (“Plan”) as approved by the State Engineer.

The overall objective of each Subdistrict Plan is to provide a water management alternative to individual plans for augmentation or state-imposed regulations that limit the use of wells within the Subdistrict; that is a system of self-regulation using economic-based incentives that promote responsible groundwater use and management and ensures protection of senior surface water rights. As part of each Plan, Subdistricts must submit an Annual Replacement Plan (“ARP”) for the State Engineer’s review and approval, showing the portfolio of water rights and other actions the Subdistricts will take to replace injurious depletions to senior water rights caused by groundwater withdrawal by Subdistrict Wells during the plan year. This SWSP application is intended to provide a part of the water supplies to be used in the Trinchera Subdistrict’s ARP or by separate contract with other Subdistricts, only after prior approval by the Division Engineer.

## **SWSP OPERATION**

Trinchera Subdistrict has a lease/purchase contract with Alpha Hay Farms for irrigated lands and water rights. Fields 13 (currently 130 acres of center pivot irrigation) and 14 (currently 131 acres of center pivot irrigation) are the subject of this SWSP (as shown in attached Figure). Trinchera plans to forgo irrigation of the subject lands in order to make available historical consumptive use (“HCU”) credit water for use by Trinchera Subdistrict for replacement of depletions. This SWSP is being requested to change the place and purpose of use of the water allocations to include augmentation and replacement of depletions by storage or direct use. The HCU analysis calculated 569.06 acre-feet of HCU water which would be available from the dry-up of 261 acres on the two fields, resulting in 2.18 acre-feet per acre.

The source of irrigation water on these lands is the Headsmill Irrigation Ditch (WDID 2200554) and the JF Chacon No. 3 (WDID 2200562). Details of these water rights are shown in the table below:

Water Right Name	WDID	Priority Number	Total (cfs)	Alpha Hay Portion (cfs)	Transferred to Trinchera (cfs)	Percent of Total Priority Transferred to Trinchera
Heads Mill Irrigation Ditch	2200554	2	15	5.25	2.9	19.3%
JF Chacon No. 3	2200562	38	18.31	6.155	6.155	33.62%

A HCU analysis was performed using StateCU. The study period used was from 1978 through 2020, and the irrigated acreage was measured from aerial photos and interpolation of the available photos. Crop types included small grains and alfalfa. Precipitation, frost dates, and temperature data was used from the Mansassa Climate Station, and supplemented by the Alamosa Sam Luis Valley Regional Airport Station as needed.

## DEPLETIONS

Lands under the ditches are center pivot irrigated, and an efficiency of 83% was used. The canal efficiency was 64%. The Applicant is proposing to divert the consumptive use credit at a point downstream of the flume and measure it back to the river. The calculated ditch loss portion (36% of Trinchera's share of the water right(s) in priority) will be left in the ditch, to simulate the historical ditch loss, and the return flow portion (10.88% of Trinchera's share of the water right(s) in priority) will be diverted to recharge structures to recharge on the on-farm return flows for fields 13 and 14 and allow the water to return to the Conejos River. The recharge structures will either be the existing ponds described in the SWSP for Alpha Farm Fields 11 and 12 (SWSP ID 9364) or another pond as approved by the Division Engineer.

In order to account for the evaporation from the recharge ponds, sufficient water to replace depletions will also be diverted. The evaporation loss will be calculated based on the size of the pond and the following table:

Month	Monthly Evap %	Monthly Evap in	Daily Evap acre-ft/acre	Daily Evap cfs/acre
April	9%	4.50	0.013	0.006
May	13%	6.25	0.017	0.008
June	16%	7.75	0.022	0.011
July	16%	8.00	0.022	0.011
August	13%	6.50	0.017	0.009
September	11%	5.50	0.015	0.008
October	8%	3.75	0.010	0.005

For a pond surface area of 0.8 acres, the resulting amount of water available for augmentation use is estimated in Table 3 below:

**Table 3. Monthly Augmentation Credit Limitations.**

Month	April	May	June	July	August	September	October	Total
Average HCU (acre-ft)	15.56	101.89	157.77	126.24	98.87	50.62	18.11	569.06
Evaporation (acre-ft)*	0.30	0.42	0.52	0.53	0.43	0.37	0.25	2.82
Augmentation (acre-ft)	15.26	101.47	157.25	125.71	98.44	50.25	17.86	566.24

\* Evaporation from 0.8 acre pond

The subject parcels will not be irrigated during the 2023 irrigation season. Should the anticipated dry-up result in growth due to subirrigation or seepage, the Applicant must notify the Division Engineer, and the Division Engineer will determine if any required adjustments to the HCU credits are necessary, or if other actions are required.

When the monthly consumptive use limits in Table 3 are reached, any additional priority water may be stored by exchange to Platoro Reservoir for delivery at a later date within the same year, with appropriate transit losses and diverted as with the earlier water deliveries. This will mimic the historical use of the water rights.

## REPLACEMENTS

Replacement for the ditch loss, return flows, and evaporation loss will involve diverting these portions of the daily allocation at the headgate. The ditch loss portion will be left in the ditch. The return flow portions must be recharged in the recharge structures as described above to replicate the historical return flows. The evaporation loss portion will also be diverted to the recharge ponds as described above.

## MEASUREMENT & ACCOUNTING

Daily accounting will be required to ensure that the daily allocation as presented in Table 10 below is not exceeded.

**Table 10 – Daily Allocation of Surface Water Supply for F13 & F14**

	April	May	June	July	August	September	October
On-Farm Return Flows (cfs)	0.05	0.34	0.54	0.42	0.33	0.17	0.06
Ditch Loss (cfs)	0.18	1.12	1.80	1.39	1.09	0.58	0.20
Consumptive Use (cfs)	0.26	1.66	2.65	2.05	1.66	0.85	0.29

## CONDITIONS OF APPROVAL

This SWSP is hereby approved pursuant to §37-92-308(5), C.R.S., subject to the conditions stated below:

1. This SWSP shall be valid for the period of April 1, 2023 through November 1, 2023 unless otherwise revoked. Any request for an additional SWSP is subject to the provisions of §37-92-308(5) (b), C.R.S., and the statutory fee of \$300 will be required pursuant to §37-92-308(8), C.R.S. Any request for an additional SWSP must be submitted to this office no later than **January 1, 2024**.
2. In accordance with § 37-92-308(5), C.R.S., this SWSP cannot be renewed or approved for more than five years and the depletions associated with the proposed water uses must not exceed five years. **This is the first year of approval of this SWSP.**
3. The approval period of this SWSP is the 2023 irrigation season. The Division Engineer has the authority to adjust the irrigation season dates based on local conditions as allowed by State Engineer's Policy 2010-1. The 2023 irrigation season is projected to begin April 1 and end November 1, 2023.
4. Approval of this SWSP is for the purposes stated herein. Additional diversion structures and/or additional uses for the water that is the subject of this SWSP will be allowed only if a new SWSP is approved for those additional structures/uses. The replacement water, which is the subject of this SWSP, cannot be sold or leased to any other entity during the term of this SWSP without prior approval of the Division Engineer.
5. Changes to water rights will be limited to the Heads Mill Irrigation Ditch, the JF Chacon No. 3 Ditch, and the shares/parcels identified in this approval. Changes to include additional parcels/shares for the ditches, or changes to include additional ditches will be allowed only if a new SWSP is approved for those additional shares/ditches. Should a new SWSP be requested, the provisions of C.R.S. § 37-92-308(5)(b) shall apply. The statutory fee of \$300 will be required pursuant to C.R.S. § 37-92-308(8).
6. For the purposes of this SWSP, the Applicant's methodology, claimed historical consumptive use, and StateCU parameters are being accepted. However, as Division 3 staff continue to assess the uses and operations, these values may be subject to modification.
7. The Applicant shall perform an inspection and provide verification that the land associated with Fields 13 and 14 in this SWSP have been removed from irrigation during the term of this SWSP. Verification of dry-up must be in the form of an affidavit signed by an individual with personal knowledge of the dry-up for the entire irrigation season for each parcel of land associated with the change of water right in this SWSP. **By October 31, 2023**, the Applicant shall provide an affidavit to the Water Commissioner and Division Engineer that confirms dry-up during the **2023** irrigation season.

8. In order to prevent injury to other water rights, the Division Engineer and Water Commissioner must be able to ensure the delivery of the Heads Mills Irrigation Ditch and JF Chacon No. 3 Ditch water to non-participating users on the ditches. In the event that delivery past dry-up points is not being achieved, for which a carriage or use agreement with a third party is required, the applicant shall be responsible for securing such agreement. If such a situation arises, until the Applicant provides a copy of the carriage or use agreement to the Division Engineer and Water Commissioner, no credit will be allowed for replacement of depletions to the Rio Grande.
9. During the irrigation season, short term timing issues caused by pumping, equipment failures or other unforeseen problems can be resolved using the Compact delivery on a very short term basis; however, an alternative delivery system must be online to cause as little impact to the daily administration as possible. This could be done through a storage release, backup pump(s) or other acceptable method approved by the Division Engineer. All shortages during the irrigation season must be rectified as quickly as possible.
10. Any delivery by exchange of Subdistrict CU credits must meet all statutory requirements, DWR policies, conditions and MOUs as set forth for exchanges.
11. Prior to the operation of any exchange, the Applicant is required to notify the water commissioner and obtain the Water Commissioner's approval for the operation of the exchange at least 48 hours prior to operation, or less if allowed by the Water Commissioner. The Applicant is required to obtain the Water Commissioner's approval on a daily basis or other interval as required by the Water Commissioner. The proposed exchanges are limited to operating only at times there is a continuous live stream between the exchange from and exchange to points and at times sufficient exchange potential exists to operate the exchange without injury to other water users.
12. All diversions shall be measured in a manner acceptable to the Division Engineer. The Applicant shall install and maintain such measuring devices as required by the Division Engineer for operation of this SWSP.
13. The Applicant shall provide accounting of water attributed to recharge and pumped from the wells on a **monthly** basis. The accounting must be submitted to the Division Engineer via email. Please contact Michelle Lanzoni at [michelle.lanzoni@state.co.us](mailto:michelle.lanzoni@state.co.us) for all accounting with the subject line "Trinchera Subdistrict - Alpha Hay Fields 13 & 14 SWSP". Accounting must be submitted within 7 days after the end of the month for which the accounting applies and included in all monthly accounting for Trinchera Subdistrict ARP. Accounting and reporting procedures are subject to approval and modification by the Division Engineer. Accounting and reporting procedures are subject to approval and modification by the Division Engineer. **Frequent, if not daily, contact with the Water Commissioner is required to ensure daily administration and to prevent injury to other parties.**
14. The name, address, and phone number of the contact person who will be responsible for the operation and accounting of this SWSP must be provided with the accounting

forms to the Division Engineer and Water Commissioner.

15. The State Engineer may revoke this SWSP or add additional restrictions to its operation if at any time the State Engineer determines that injury to other vested water rights has occurred or will occur as a result of the operation of this SWSP. Should this SWSP expire without renewal or be revoked prior to adjudication of a permanent plan for augmentation, all use of water under this SWSP must cease immediately.
16. The decision of the State Engineer shall have no precedential or evidentiary force, shall not create any presumptions, shift the burden of proof, or serve as a defense in any pending water court case or any other legal action that may be initiated concerning the SWSP. This decision shall not bind the State Engineer to act in a similar manner in any other applications involving other SWSPs or in any proposed renewal of this SWSP, and shall not imply concurrence with any findings of fact or conclusions of law contained herein, or with the engineering methodologies used by the Applicant. Any appeal of a decision made by the State Engineer concerning an SWSP pursuant to § 37-92-308(5), C.R.S., shall be to the Division 3 Water Judge within thirty days of the date of this decision.

Should you have any questions, please contact Kate Fuller of this office or David Hoffman, Assistant Subdistrict Coordinator, in the Division 3 office in Alamosa at (719) 589-6683.

Sincerely,



Jeff Deatherage, P.E.  
Chief of Water Supply

Attachments: Figure (from page 13 of HCU analysis)

cc: Craig Cotten, Division Engineer  
Deb Sarason, Subdistrict Coordinator  
David Hofmann, Assistant Subdistrict Coordinator  
Pat McDermott, Staff Engineer  
Kevin Boyle, Water Rights Researcher

## Conejos Subdistrict

### Alpha Farms Fields 11&12 and 13&14

