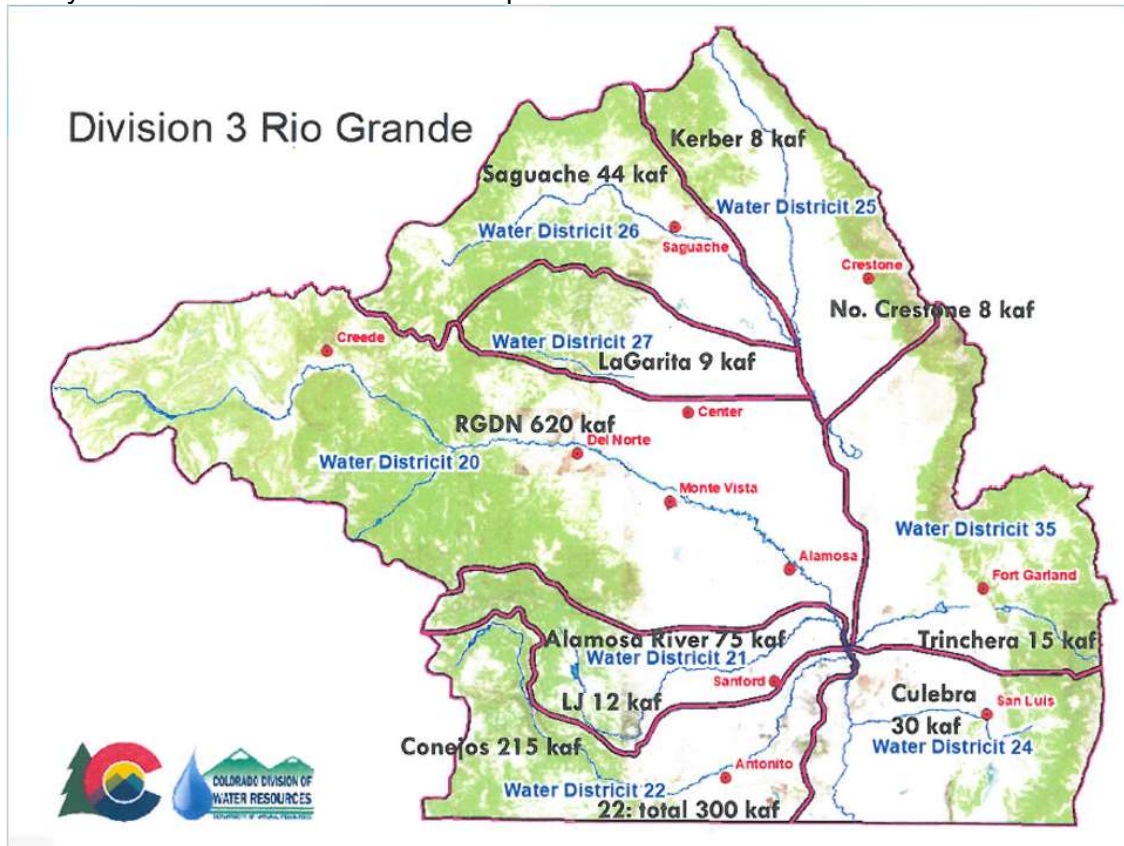


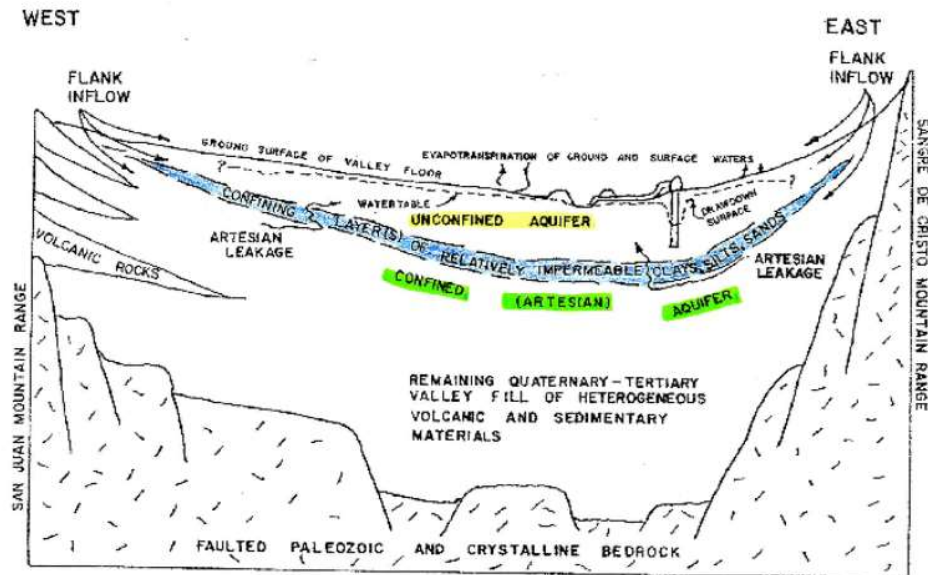
**Presentation by Pat McDermott, Colorado Division of Water Resources (DWR)
SCRO Work Session on October 16, 2025**

Pat McDermott gave a presentation on the various options our community might have for finding a relatively sustainable source of water for cisterns. His main points were:

- Mr. McDermott and his team (Division 3 Office) are located in Alamosa
- His team covers the administration of water rights in the upper Rio Grande Basin, from Poncha Pass down to the state line, and from La Veta Pass over to Wolf Creek Pass and Stony Pass. His team also issues well permits.



- Colorado Division of Water Resources (DWR) is divided into seven regional divisions. Division 3 manages the upper Rio Grande Basin (see above map). The Ranches are located in Water Division 3.
- Water Division 3 is divided into water districts; the Ranches are located in Water District 35.
- The major stream system in WD35 is Trinchera Creek; the less major stream systems in WD35 are Sangre de Cristo Creek, Ute Creek, and Medano Creek.



Diagrammatic Cross Section of San Luis Valley, Colorado
(No scale! Maximum distance across valley is about 50 miles; maximum estimated depth to bedrock is 10,000 to 30,000 feet)



COLORADO
Division of Water Resources
Department of Natural Resources

San Luis Valley geology

- The San Luis Valley (SLV) is a very complex geological phenomenon.
- SLV is the world's largest intermontane valley (in other words, surrounded by mountains on all sides) with 8,200 sq miles of valley.
- Across a portion of the valley, there is a confining layer of relatively impermeable blue clay, silts, and sands (highlighted in blue in the above diagram); that layer was deposited millions of years ago as an ancient lake bottom.
- Below that confining layer is a confined (artesian) aquifer (highlighted in green); this artesian aquifer exists only in the parts of the valley where the confining layer exists (the confining layer is required to create the confined artesian aquifer).
- Above the confining layer is an unconfined aquifer (highlighted in yellow).

Upper Rio Grande Basin

- San Luis Valley contains several different basins; the Rio Grande Basin is the most significant basin.
- The northern one-third of the Rio Grande Basin is an internally drained "closed" basin (in other words, there is no natural water flow out of the aquifer). The southern two-thirds of the basin feeds into the massive Rio Grande River. The Ranches are located in the area that supplies the Rio Grande River.
- DWR Division 3 manages the upper Rio Grande Basin, which encompasses all of the "closed" portion of the basin as well as the portion of the basin that drains into the Rio Grande River.

Surface water

- Water can be obtained from "ground water" (water in the confined aquifer and the unconfined aquifer) and from "surface water" (water from rivers, which is diverted into irrigation ditches and used for crops and livestock).

- SLV is the home of the earliest/oldest continuously used surface water right in the state (Culebra Creek, San Luis Peoples Ditch, appropriated in 1852); the valley hosts many of the state's most senior surface water rights.
- From 1880-1891, the state's most extensive system of surface water distribution systems was developed in the valley.

Artesian wells (a type of ground water)

- In the late 1800s, settlers discovered that artesian wells (from the confined aquifer) could be successfully drilled in certain locations; the confined aquifer has enough natural pressure that the water does not need to be pumped.
- By around 1920, more than 3,000 flowing artesian wells existed in the valley.



4. ESPINOSA WELL, BORED IN 1888.

- For example, in 1891, the Espinosa Well jetted 33¾ inches high, as recorded by Professor Carpenter, who reported that it originally had a jet 41 inches high. The well is 265 feet deep. From: Siebenthal, 1910.
- Artesian wells were commonly used, without constraint, from 1880 to 1972.

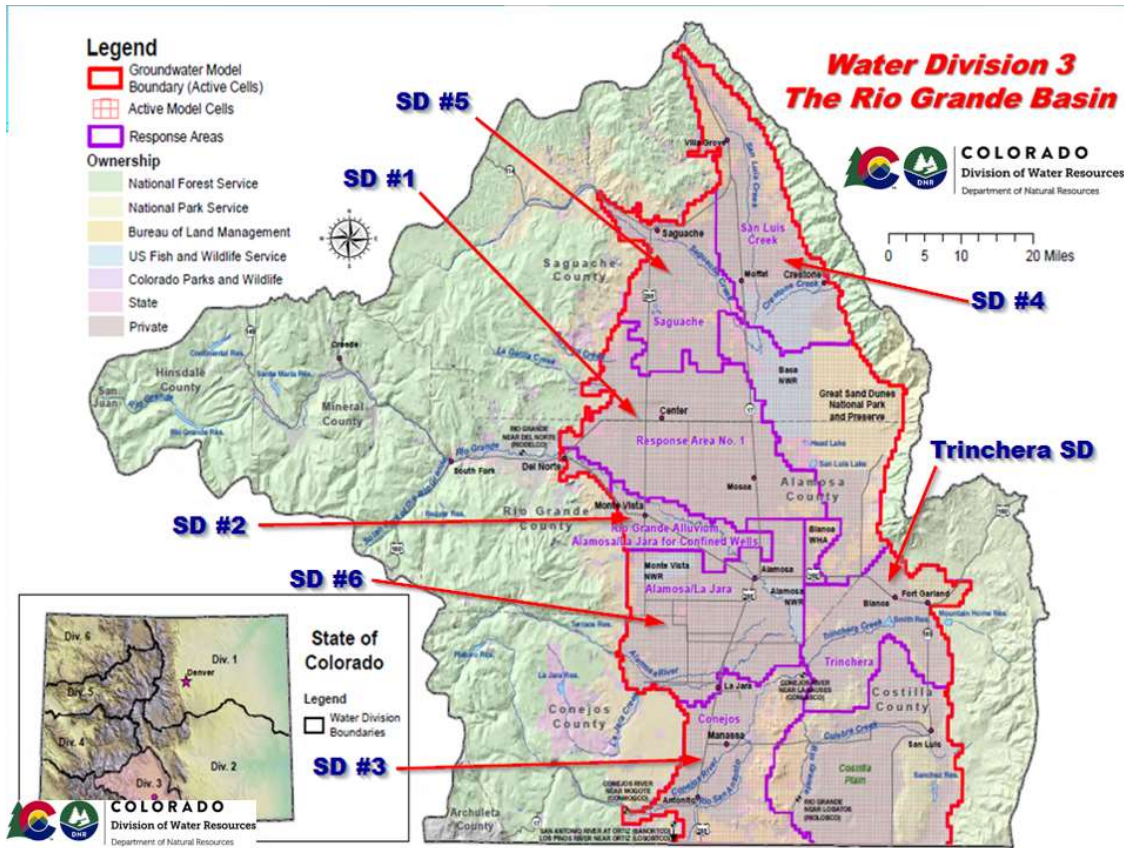
Pumped wells (also a type of ground water)

- Pumped wells (from the unconfined aquifer) were commonly used, without constraint, from 1930s to 1981.

- Eventually, it became clear that the available water (both surface and ground) had been over-appropriated; SLV's pumped wells started becoming unreliable in the 1950s.
- The over-appropriation was compounded by the fact that surface rights were managed completely separately from ground water rights despite the two "separate" sources existing in nature as a single integrated natural resource.

Administration of water rights

- In 1969, Colorado's Water Right Determination and Administration Act was passed, which established a modern system of managing water rights by integrating the two existing management systems; the new system was based on the prior appropriation doctrine. This act created the seven water divisions (i.e., Division 3) and their corresponding water courts for adjudicating water rights, and it introduced legal mechanisms like augmentation plans to allow for out-of-priority water use. It also created a system of division engineers (i.e., Mr. McDermott) to administer the decrees.
- In 1972, a moratorium was placed on new appropriations from the SLV confined aquifer (in other words, no new artesian wells could be drilled).
- In 1975, the first attempts were made to promulgate constraints on the drilling and use of wells in the SLV to ensure sufficient flow to senior irrigation ditches and the Rio Grande River.
- In 1981, a moratorium was placed on new appropriations from the unconfined aquifer in the SLV.
- There was a very significant drought in 2001-2002
- The Confined Aquifer New Use Rules, adopted by Water Division 3 in 2004, recognize that there is no unappropriated water available in SLV's confined aquifer (nor will there be in the future); all water rights have already been spoken for. In other words, if you want water, you must acquire existing water rights from whomever currently owns those rights. These new rules helped ensure water was not being exported from the basin for use elsewhere.
- Per the Water Measurement Rules adopted by Water Division 3 in 2005, most wells that produce more than 50 gpm must be metered.
- A formal irrigation season (Apr 1 – Nov 1) was established in the basin by Water Division 3 in 2010 (later decreed by the Division 3 Water Court as part of the 2015 Groundwater Rules).
- In 2015, Water Division 3 filed the Ground Water Use Rules (Case No. 2015CW3024) that require replacement of injurious depletions to the sustainability of streams and aquifers; the court decree was entered in 2019 and the rules went into full effect in 2021.
- Decisions concerning the impact of Division 3 non-exempt wells (i.e., municipal wells, irrigation wells, industrial wells) on the sustainability of surface water rights are made based upon the Rio Grande Decision Support System (RGDSS) by utilizing response functions (mathematical calculations). The RGDSS is a system that integrates data and analysis software to help water users and water managers make more informed decisions.



Water Conservancy Districts

- The Rio Grande Water Conservation District (RGWCD, www.rgwcd.org) is a special district – in other words, an independent governmental entity – akin to other special districts like fire districts, school districts, sanitation districts, metro districts, etc. RGWCD is divided into six groundwater management subdistricts (#1-6, see map above). These districts are allowed to tax their users and to charge for pumping water.
- The Trinchera Water Conservancy District (www.trincheraconservancy.com) is a peer to the RGWCD and it has one groundwater subdistrict commonly known as “Trinchera Subdistrict” (see map above). The Ranches subdivision is serviced by the Trinchera district/subdistrict rather than the RGWCD district/subdistricts.
- While most of the land surface associated with the Ranches subdivision is not directly included in the Trinchera subdistrict; the wells that are supposed to be augmenting the subdivision are geographically located in the Trinchera subdistrict. Thus, the Ranches are, technically, serviced by the Trinchera subdistrict.
- Trinchera subdistrict is located in the northern part of Costilla County. The southern part of Costilla County is known as the Costilla Plain; rules have not yet been promulgated for the Costilla Plain.
- These districts and subdistricts are not managed by Water Division 3. However, the district/subdistricts collaborate with Water Division 3, as well as with local irrigation ditch companies (i.e., the Trinchera Irrigation Company).
- Entities who own water rights can petition to become a member of their local subdistrict. Members of the subdistrict work together to manage the supply and demand of water among the members to ensure the collective use of water does not exceed the annual allocation. For example, if one member pulls augmented water from the system, they might

return the water through another member's infrastructure, or one member might purchase or exchange seasonal water flow with another member.

- Allocations of water to each subdistrict are determined based upon the current level of the aquifers. The big drought in 2002/2003 severely depleted the aquifers when farmers compensated for the lack of surface water by drawing more water from the aquifers. The various agencies are still working to restore the aquifers.

Augmentation Plans

- An alternative way to obtain water is through an augmentation plan. An augmentation plan provides a means for pulling water from the aquifer/ditch system, beneficially using it, and then returning it to the system without negatively impacting more senior water rights further "downstream."
- One-for-one augmentation plans specify how an individual stakeholder will return every gallon of water they pull and use. Blanket augmentation plans specify how a subdistrict or a district will return every gallon of water that is collectively pulled and used by the members of a district/subdistrict. Blanket augmentation plans are a relatively new form of augmentation plans.
- Water for the Ranches subdivision is provided through a 1973 augmentation plan (Case No. W-3147). Sangre de Cristo Water Service, Inc., owns the water rights; the residents of the Ranches use a portion of the associated water and then return the water to the aquifer through septic systems. The Ranches' augmentation plan is a one-for-one augmentation plan. The Trinchera subdistrict does not yet utilize a blanket augmentation plan.

SUMMARY OF AUGMENTATION PLAN FOR:
SANGRE DE CRISTO RANCHES, INC.
PHASES I - XIV

W - 3147

Errol Ryland
 Blanca, Colorado 81123

3507004

RESPONSIBLE REPORTING PARTY:
 Same as above or assign.

REPORTING DATE:
 May 1 of each year.

INFORMATION TO BE REPORTED:

1. Total number of residences constructed.
2. Total residences served by cisterns.
3. Total residences served by wells.

PHYSICAL CHARACTERISTICS OF PLAN:

1. Land to be developed: 65,790 acres east and south of Fort Garland; to be divided into 7,740 individual residential lots, 5890 in the Trinchera drainage, 1850 in the Rito Seco and Culebra drainages. These lots will be used primarily for vacation homes.
2. water rights to be used:

Subd 27

		Well Number	Location	Reg. No.	cfs
<i>Yes</i>	<i>Trinchera Ranch</i>	<i>3505191</i>	7, W-572	SWNW, 10-31-72	2889-F 4.46 <i>close to Hwy 159</i>
<i>No</i>	"	<i>3505186</i>	2, W-572	SESE, 32-30-71	7298 1.18 <i>on ranch had water only 2019</i>
<i>Yes</i>	"	<i>3505391</i>	1, W-1836	NESW, 35-30-72	6858 4.56 <i>just below North Home Ave</i>

- The average consumptive use of these wells has been 210 a.f./yr. In the event that the production from these wells is curtailed by the Division Engineer, then the following water rights shall be used: 2.0 cfs from the Manuel Vigil Ditch and 1.0 cfs from the Buffalo Ditch, priority #33, also 1.0 cfs from the Hoffman Ditch, priority #56. The average consumptive use of these rights has been 136 a.f./yr.
3. Water supply: 4,880 individual wells allowing up to 3000 square feet of lawn irrigation and 2860 cisterns. The cisterns are to be supplied from wells #7, W-572, and #1, W-1836, and may be used for in-house-use only.
 4. As each of the 7740 individual lots are supplied with water, the production of the irrigation wells will be reduced by 0.0593 a.f./yr.
 5. Maximum consumptive use of the development at completion will be 203 a.f./yr.

CONDITIONS OF APPROVAL:

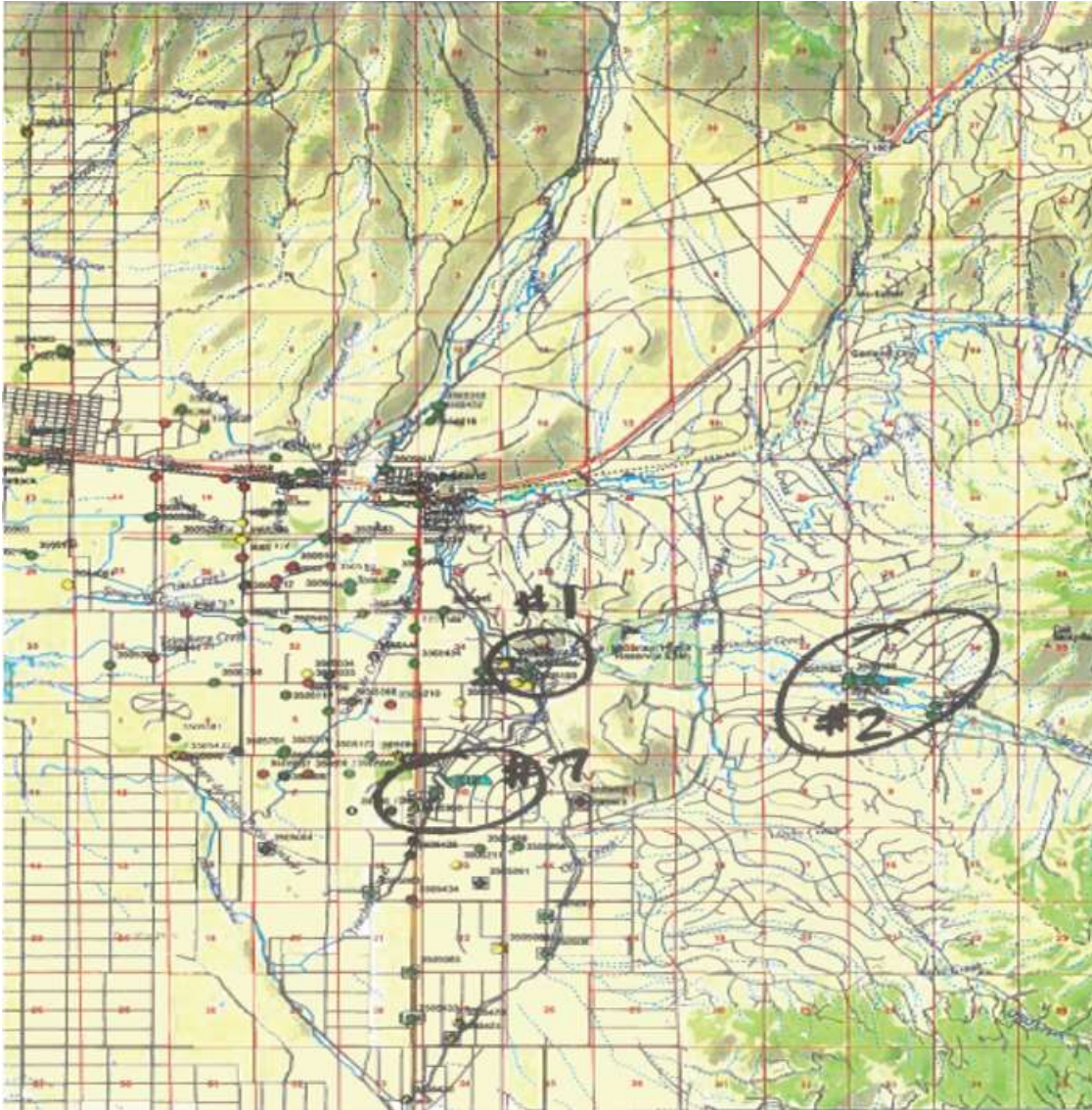
1. Applicant must submit to the court a quadrennial report documenting compliance with the proportionate reduction of the irrigation wells.
2. Permit applications must be accompanied with a verified statement from an officer of Sangre de Cristo Ranches attesting to the applicant's ownership in the subdivision. *\$500 Deal: 100% approved*

CONTINUING JURISDICTION:

None.

Cu. 0.395"

- This (above) is Water Division 3's summary of the augmentation plan for water usage in the Ranches. The plan identifies three wells (wells #1, 2, & 7) that belong to Trinchera Ranch and that historically have been used to irrigate farmland. Trinchera Ranch agreed to a reduction in their use of these wells proportionate to the number of wells drilled in the subdivision and the number of cisterns supplied from Trinchera's wells. For many years, Trinchera Ranch supplied the Ranches' cisterns through a delivery service provided by Sangre de Cristo Water Services, Inc., by pulling water from wells #1 & 7. In the final years during which the water service delivered water, they were pulling water from a different well known as the Polo Field Well rather than from wells #1 & 7. This violated the augmentation plan.
- In 2020, Trinchera Ranch (Trinchera Land Holdings, LLC & Blanca Land Holdings, LLC) filed a new augmentation plan that was very recently approved by a water court judge. Due to this new augmentation plan, the Ranch is now allowed to provide water for delivery from the Polo Field Wall, in addition to wells #1 & 7.



- This map (above) shows the locations of wells #1, 2, & 7. The Polo Field Well is located very near well #2; the Polo Field Well and well #2 are located near the Trinchera Ranch headquarters; they are not located in the Trinchera subdistrict. Trinchera Ranch likely does not want residents of the Ranches driving on the property near their headquarters to get water on a daily basis.
- Wells #1 & 7 are located in/adjacent to the Ranches subdivision and within the Trinchera subdistrict. Trinchera Ranch management may have a more relaxed attitude about residents driving up to wells #1 & 7 to access water.

Sangre de Cristo Water Services, Inc.
24492 Trinchera Ranch Road, PO Box 149
Fort Garland, CO 81133
Tel: (719) 379-3263
Fax: (719)-379-3266

December 27, 2022

In April and July, we sent notices to alert customers of new regulatory barriers that could prevent future water deliveries. While we have been able to accommodate some water deliveries in the second half of 2022, it has become clear both that Sangre de Cristo Water Services, Inc. ("Services") will not be able to continue deliveries after the end of the year and that the past customer base has found alternatives to deliveries by Services.

As reported previously, the Colorado Department of Public Health and Environment ("CDPHE") required Services to cease deliveries unless legally compliant and expensive systems are installed. This regulatory requirement, in conjunction with the drop in demand for water deliveries in 2021 and 2022, leaves no alternative but to cease deliveries. In the second half of 2022, the multi-year trend of declining requests for water delivery turned into a nose-dive, leaving no sustainable customer base to serve. Taking into account the cost of regulatory compliance and lack of demand, continued delivery service would cost orders of magnitude more per load in the future, making it cost-prohibitive for any potential customers.

Therefore, water deliveries will cease permanently as of January 15, 2023.

There are a number of alternative water sources available to customers, including:

- Deliveries by other providers or by neighbors
- Water pick-up from public sources, including East Alamosa Water and Sanitation District
- Drilling of water wells

If you would like to better understand the process of obtaining a well permit and drilling a well, you can obtain further information from the Colorado Division of Water Resources, 301 Murphy Drive, Alamosa, CO 81101. Telephone number (719) 589-6683. We understand that more lot owners have applied for permits in 2022 and have drilled wells.

We thank you for your business over the years.

Regards,

Sangre de Cristo Water Services, Inc.

- In December of 2022, Sangre de Cristo Water Services, Inc. announced it would be ceasing water delivery (see above letter) due to their unwillingness to install water treatment infrastructure as required by the Colorado Department of Public Health and Environment (CDPHE), and due to a reduction in demand for cistern water.
- Mr. McDermott is not taking a position on whether Sangre de Cristo Water Services, Inc. had the legal right to cease water delivery to cisterns within the Ranches. The Water Division 3 can require well permit holders to cease using the water for unauthorized uses, but they cannot force permit holders to continue using the water, in perpetuity, for authorized uses. (Only the water court can compel such action.)

Potential solutions to domestic water needs in Costilla County

- These potential solutions are listed in no particular order with no guarantee of success.
- Some of the options would require the water court to decree a change in water rights. While that step would be challenging, it is not impossible because the water used by cisterns in Costilla County is no more than 5 af/year, which is a relatively small amount. For example, an irrigation well feeding a center pivot system can use 200 af/year.

1. Bulk water sales from the Fort Garland Water & Sanitation District (FGWSD):
 - This is already in place – the well is legal and it meets CDPHE requirements.
 - This water can go anywhere in the county, which serves the community, both within the Ranches and beyond (the residents of the Ranches were not the only off-grid folks impacted by the crisis).
 - FGWSD can vote to stop bulk sales anytime (they are not legally required to provide water to anyone located outside of the district), which would place the community back into a water crisis.
 - There is a good chance that FGWSD is going to need, within the next 20 years, more water than they currently have, which could impact their willingness to sell water.
2. Bulk water sales from Town of Blanca:
 - This is already in place – the well is legal and it meets CDPHE requirements.
 - However, Blanca does not seem willing to be part of a long-term solution, largely because it would require them to upgrade their infrastructure.
3. Bulk water sales from East Alamosa Water & Sanitation District:
 - Right now, this district can sell water only to those who reside within their district. However, WDR is working to change that so they could sell to parts of Costilla County.
4. Bulk water delivery from Trinchera Ranch wells:
 - Would require Sangre de Cristo Water Services, Inc. (or successor) to restart water delivery.
 - Would require Trinchera Ranch to build a very expensive water treatment facility to meet CDPHE chlorination requirements.
 - If Trinchera Ranch pulled the water from wells #1 & 7, that water could only serve cisterns within the Ranches subdivision (without a change in water rights).
 - If Trinchera Ranch pulled the water from the Polo Field Well, that water could serve all of Costilla County, including the Ranches.
5. Transfer water credits to other wells in the County:
 - This option would include taking the water (more specifically, the water credits) from an existing well and transferring them to a centrally-located well.
 - Costs associated with this option include:
 - Purchasing the water credit/rights
 - Drilling a new well or retro-fitting an existing well
 - Installing a water flow metering device
 - Building a chlorination system
 - Ensuring the well was a member of the Trinchera subdistrict
 - Installing suitable driveways, staging areas, and loading areas
 - Applying to the water court for a change in rights (typically take years to accomplish), which includes significant legal fees
 - A couple of local business ventures are already working on this option
 - Would not be dependent upon other entities (municipalities, districts, subdistricts, Trinchera Ranch, etc.) continuing to provide access to water in perpetuity.
6. Develop a new water & sanitation district:
 - The process of developing a special district is overwhelming, in and of itself.
 - Involves all of the development and legal costs listed in option #5.

7. Transfer water rights from Trinchera Ranch wells to a new well:
 - This option is the same as option 5 except it would involve taking the water (more specifically, the water credits) that Trinchera Ranch would otherwise be using for water delivery and transferring those credits to a different well.
 - If the credits came from Trinchera Ranch's wells #1 & 7, that water could only serve cisterns within the Ranches subdivision (without a change in water rights).
 - If the credits came from Trinchera Ranch's Polo Field Well, that water could serve all of Costilla County, including the Ranches.
8. Acquire the right to use one of the Trinchera Ranch wells:
 - Trinchera Ranch would not likely be agreeable to the general public (or even delivery trucks) coming onto their headquarters property on a daily basis to pull water from the Polo Field Well.
 - If the acquired well was well #1 or #7, the water would not be available to off-grid folks outside of the Ranches (without a change in water rights).
 - Leasing the well would only provide access to cistern water for the term of the lease; purchasing the well would provide long-term access but would be more expensive.
 - The costs associated with option 5 will apply to this option, as well.
 - In order to own the well, one would need to also own the land on which the well sits.