



CHEROKEE METROPOLITAN DISTRICT

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Water Provider's Supplement to the Water Resources Report for Tract F Claremont Ranch Filing No. 7

Commitment Number 2022-02

February 18th, 2021

This document was prepared to satisfy the requirements of El Paso County for a Water Provider's Report in support of **the development of Tract F of Claremont Ranch Filing 7** at the **southeast corner of Marksheffel Road & Meadowbrook Parkway.**

Introduction

Cherokee Metropolitan District (CMD) is a Title 32 special District which provides water and wastewater to an approximately 5000-acre enclave of unincorporated El Paso county surrounded by the City of Colorado Springs. Currently CMD serves approximately 8000 residential taps and 600 commercial taps in addition to bulk users in eastern El Paso County including Schriever Air Force Base.

CMD water is sourced entirely from groundwater in two regions. The majority is recovered from the alluvial Upper Black Squirrel (UBS) Aquifer in eastern El Paso County through 20 wells. The remainder is sourced from two wells in deep bedrock aquifers in the northern part of the county on the “Sundance Ranch” property. Water from eight of the 20 wells in the eastern part of the county can only be used to serve a fixed set of customers. Water for the main service area of CMD comes only from the remaining 12 wells in UBS along with the two wells in Black Forest.

Calculation of Anticipated Water Demand

Estimated water demand for the proposed development was calculated in two parts: domestic use and irrigation use. Cherokee’s 10 year maximum average per-tap use for multi-family apartments similar to the proposed development is 0.20 AFY. The proposed development will include 150 units which yields an expected water supply requirement of 30.0 AFY. Using the County estimate of 2.43 feet of water for traditionally irrigated areas and the developer’s estimate of 3.31 acres of fully irrigated terrain with none of the project area designated for reduced watering yields an outdoor watering demand estimate of 8.04 AFY. The total expected water demand for this development is 38.0 AFY.

Water Supplies

Cherokee has eight wells that are restricted to serving a maximum of 653 AFY to specified in-basin customers. Excess allocation for these wells is unavailable for new developments, even if they are inside the Basin, so this water is tracked separately from CMD’s general supply portfolio. CMD’s other alluvial wells are available for export outside the UBS basin. The total annual volume available to CMD from these exportable supplies is 3,953.5 AFY (Table 1). The physical yield of these wells is significantly higher than their annual appropriation, allowing flexibility in satisfying summer peak demand.

Table 1: Water rights and tributary status of Exportable Wells

Well Number	Water Right (AFY)	2020 Use (AFY)	Permit Number	Aquifer	Aquifer Status
Well 9	176	175	14145-FP-R	UBS Alluvium	Tributary
Well 10	176	143	14146-FP-R	UBS Alluvium	Tributary
Well 11	244	174	6821-FP-R	UBS Alluvium	Tributary
Well 12	244	166	11198-FP	UBS Alluvium	Tributary
Well 13	1268	830	49988-F	UBS Alluvium	Tributary
Well 14	0	0	52429-F	UBS Alluvium	Tributary
Well 15*	281	117	54070-F	UBS Alluvium	Tributary
Well 16*	219	115	54069-F	UBS Alluvium	Tributary
Well 17*	175	123	63094-F	UBS Alluvium	Tributary
Well 18	225	161	16253-RFP-R	UBS Alluvium	Tributary
Well 19	95	65	20567-RFP-R	UBS Alluvium	Tributary
Well 20	400	94	4332-RFP	UBS Alluvium	Tributary
Well 21	258.5	224	81782-F	UBS Alluvium	Tributary
DN-4**	110	88	78315-F	Denver Aquifer	Non-Tributary
AR-1***	347.7	306	75881-F	Arapahoe Aquifer	Non-Tributary
Total	4153.2	2464			

*Wells 15-17 can produce a total of 609 AFY instead of their nominal total of 675 AFY. This limitation is reflected in the 3984.7 AFY total available production.

**CMD holds additional water rights in the Denver Aquifer associated with the Sundance Ranch property but this particular well has a maximum annual recorded yield of 110 AFY.

***As of December 2019 AR-1 has 2040 AF of banked water which allows actual pumping to exceed allocation on a limited basis.

CMD is developing owned water supplies to increase available water and improve flexibility in provision of summer peak flows. The District has a set of owned but undeveloped water rights which can contribute 458 AFY of capacity to the CMD system (Table 2) as they are completed for a total of 4,443.0 AFY. Since 2011, actual demand from CMD customers has fallen 30-35% below commitments, partially due to some currently committed developments being incomplete but largely due to water saving measures undertaken by CMD customers.

Table 2: New water supplies available for connection to system

Well Number	Water Right (AFY)	Permit Number	Aquifer	Aquifer Status
Well 22	153.5	27571-FP	UBS Alluvium	Tributary
DA-1	40.3	83604-F	Dawson	Not Non-Tributary
DA-4	64.5	83603-F	Dawson	Not Non-Tributary
Total	258.3			

CMD has 4,411.5 AFY of exportable water supply available in its portfolio from alluvial and deep bedrock aquifers. Further development in the Denver Basin is not planned at this time and instead CMD is focusing on acquiring new renewable supplies proximate to existing infrastructure.

Water Commitments

CMD’s water commitments stand at 4238.9 AFY before the addition of the proposed development (Table 3). The Tipton and Kane commitments are related to an arrangement from the mid-2000’s where developers reserved commitments on two new wells. The water from these wells is considered fully committed to these developers even if they have not yet begun the projects associated with the reserved commitments. Due to a complex legal history, the “Kane” water right was not tied to a specific physical water well but instead operates as a commitment served from CMD’s general supply portfolio. The “Tipton” water right corresponds to CMD’s Well 18.

Table 3: CMD Commitments before addition of new development

Commitments	AFY
In-District (2015)	2693
Committed Since 2015	588.0
Schriever Air Force Base	537
Kane	200
Tipton	225
Construction	25
Parks	25
Total	4293.0

Water Balance

With 4,411.5 AFY of exportable supply and 4,293.0 AFY of commitments, CMD has a water balance of 118.5 AFY before the subject development. After commitment of 38.0 AFY to this development, the District will have 80.5 AFY remaining for additional commitments.

Table 4: Water balance with new development

Water Balance Before New Commitment	118.5 AFY
New Commitment: Tract F Claremont Ranch Filing 7	38.0 AFY
Water Balance Remaining	80.5 AFY

Other Relevant Information

Recent Water Acquisitions/Losses

CMD has not acquired any new water rights since 2015 but has been developing owned water rights. CMD has not engaged in any water trades nor lost any water rights in the last year. The District is not currently under contract to purchase new water rights although CMD is investigating purchases of renewable water rights proximate to its existing infrastructure on an ongoing basis.

New Augmentation Plans

CMD is currently pursuing a replacement plan in partnership with Meridian Service Metropolitan District (MSMD) in order to maximize the efficiency of its water supplies.

Major Water System Capital Improvements

CMD has been actualizing owned water by drilling wells and beginning production on several well sites. In February of 2020 CMD brought its well 21 (81782-F) online after a year of planning and construction. The District recently completed drilling of the Albrecht Well (Well 22) which after connection to the system will contribute 153.5 AFY annually.

CMD is currently preparing to install pumps in two existing wells in the Dawson Aquifer (83603-F & 83604-F). Beyond these projects, additional well construction in the Denver Basin is not anticipated at this time, although CMD has a substantial amount of undeveloped water rights in the Denver Basin Aquifers.

Smaller-scale improvements to the distribution system to improve reliability and resiliency have been ongoing and include deeper computer integration, upgrades to treatment systems, rehabilitation of tanks, and emergency generator refurbishment.