



March 25, 2024

Ryan Howser, Project Manager
 El Paso County Community & Development Services
 Transmitted via EDARP: epcdevplanreview.com

Re: Peerless Farms Preliminary Plan
File #: SP217, Applicant: Robert S. and Wendy K. Williams
 Part of the N ½ of the NW ¼ of Section 13, Twp. 13 South, Rng. 64 West, 6th P.M.
 Water Division 2, Water Association 10
 Upper Black Squirrel Creek Designated Basin
 CDWR Subdivision No. 29052 - 6th Letter

Dear Ryan Howser:

We have reviewed the re-referral for an application to subdivide a parcel of 40 acres described as part of the N ½ of the NW ¼ of Section 13, Twp. 13 South, Rng. 64 West, 6th P.M. into 7 residential lots. The proposed water supply is individual on lot wells producing from the Denver, Arapahoe, and Laramie-Fox Hills aquifers underlying the property allocated under Determination of Water Right nos. 4475-BD, 4476-BD, and 4477-BD. This letter supersedes our comments on the Peerless Farms development dated March 8, 2024 and is provided to be consistent with the March 15, 2024 comments provided by this office for the Peerless Farms File # EA20165.

Water Supply Demand

The proposed water use is household use and irrigation. The estimated water demand is 0.76 acre-feet/year per home or 5.32 acre-feet/year for all 7 homes.

Source of Water Supply

The proposed water supply is individual on lot wells producing from the Denver, Arapahoe, and Laramie-Fox Hills aquifers underlying the property allocated under Determination of Water Right nos. 4475-BD, 4476-BD, and 4477-BD. Determination nos. 4475-BD, 4476-BD, and 4477-BD were approved pursuant to section 37-90-107(7), C.R.S. on January 25, 2023 and allocated the Denver Basin groundwater underlying the subject property for domestic in-house; irrigation of lawn, garden, and greenhouse; domestic animal and stock watering; commercial; firefighting; and replacement purposes. A summary of Determination of Water Right nos. 4475-BD, 4476-BD, and 4477-BD allocations is provided in Table 1.

Table 1. Summary of Determination of Water Right nos. 4475-BD, 4476-BD, and 4477-BD.

Aquifer	Determination No.	Aquifer Type ¹	Acre-Feet/Year (based on 100-year aquifer life)	Acre-Feet/Year (based on 300-year aquifer life)
Laramie-Fox Hills	4475-BD	NT	12.9	4.3
Arapahoe	4476-BD	NT	13.6	4.53
Denver	4477-BD	NT	0.446	0.148
		NNT-Actual	9.87	3.29
Total ²	-	-	26.946	8.978

¹ NT = nontributary; NNT-Actual = not-nontributary (actual impact replacement) where a replacement plan is required.
² Total does not include the NNT-Actual water since such water cannot be withdrawn without a Commission-approved replacement plan.



The subdivision lies within the allowed place of use of Determination nos. 4475-BD, 4476-BD, and 4477-BD, and the proposed uses are allowed by the Determinations.

A review of our records shows well permit no. 8141 located on the subject property. Permit no. 8141 withdraws from the alluvial aquifer and the not-nontributary (actual impact replacement requirement) portion of the Denver aquifer. According to information provided in the most recent referral, this well will be plugged and abandoned upon subdivision approval. **The Applicant is required to submit a Well Abandonment Report (form [GWS-09](#)) to affirm that the well was plugged.**

The proposed source of water for this subdivision is bedrock aquifers in the Denver Basin. The State Engineer's Office does not have evidence regarding the length of time for which this source will be a physically and economically viable source of water. According to section 37-90-107(7)(a), C.R.S., "Permits issued pursuant to this subsection (7) shall allow withdrawals on the basis of an aquifer life of 100 years." Based on this allocation approach, the annual amounts of water determined in Determination nos. 4475-BD, 4476-BD, and 4477-BD are equal to one percent of the total amount, which is shown in column 4 of Table 1, as determined by rule 5.3.2.1 of the Designated Basin Rules, 2 CCR 410-1. Therefore, the water may be withdrawn in those annual amounts for a maximum of 100 years.

The *El Paso County Land Development Code*, Section 8.4.7.(B)(7)(b) states:
“(7) Finding of Sufficient Quantity

(b) Required Water Supply. The water supply shall be of sufficient quantity to meet the average annual demand of the proposed subdivision for a period of 300 years.”

The State Engineer's Office does not have evidence regarding the length of time for which this source will “meet the average annual demand of the proposed subdivision.” However, treating El Paso County's requirement as an allocation approach based on 300 years, the allowed average annual amount of withdrawal would be reduced to one third of that amount as shown in column 5 of Table 1 which is greater than the annual demand for this subdivision. As a result, the water may be withdrawn in those annual amounts for a maximum of 300 years.

The Applicant should be aware that the majority of the Denver Aquifer water allocated under determination no. 4477-BD can only be withdrawn pursuant to a Commission-approved replacement plan. Only 0.148 acre-feet/year based on a 300-year supply is available in the nontributary portion of the Denver aquifer which does not require a replacement plan and would not be sufficient to supply one single-family home. Information available to this office shows that the Arapahoe aquifer is approximately 685 to 1,160 feet below the ground surface and the Laramie-Fox Hills aquifer is approximately 1,460 and 1,760 feet below the ground surface. If the wells will be constructed in the Arapahoe and Laramie-Fox Hills aquifers, we note for the County's consideration, that the well construction expense will be substantially greater than for wells in similar development that are proposed to be completed in shallower aquifers. **In addition, , prior to further review, the Applicant must specify the source of water for each lot, so that the proposed water supply is clear to future lot owners.**

Applications for on lot well permits, submitted by an entity other than the current water right holder (Robert S. and Wendy K. Williams), must include evidence that the applicant has acquired the right to the portion of water being requested on the application.

The amounts of water in the Denver Basin aquifer, and identified in this letter, are calculated based on estimated current aquifer conditions. The source of water is from non-renewable aquifers, the allocations of which are based on a 100-year aquifer life. The county should be aware that the economic life of a water supply based on wells in a given Denver Basin aquifer may be less than the 100 years (or 300 years) used for allocation due to anticipated water level declines. We recommend

that the county determine whether it is appropriate to require development of renewable water resources for this subdivision to provide for a long-term water supply.

Additional Comments

According to the submitted material, stormwater detention structure(s) will be developed on the site. The Applicant should be aware that, unless the structure can meet the requirements of a “storm water detention and infiltration facility” as defined in Designated Basin Rule 5.11, the structure may be subject to administration by this office. The Applicant should review Rule 5.11 to determine whether the structure meets the requirements of the Rule and ensure any notification requirement is met.

State Engineer's Office Opinion

Based upon the above and pursuant to section 30-28-136(1)(h)(I) and 30-28-136(1)(h)(II), C.R.S. it is our opinion that the proposed water supply is **not adequate** and **cannot** be provided without causing injury to decreed water rights. **Prior to further review of the subdivision water supply plan, the following information is required:**

- If some lots will be limited to the Arapahoe aquifer and some lots to the Laramie-Fox Hills aquifer, then the Applicant must clarify which lots will use the Arapahoe aquifer and which lots will use the Laramie-Fox Hills aquifer and this information must be added to the plat so that the information is available to future lot owners. Given the depth intervals for the Arapahoe and Laramie-Fox Hills aquifers, as mentioned above the County should consider the economic cost of drilling such wells.
- A second option would be to allow use of the Arapahoe aquifer for 242 years and the Laramie-Fox Hills aquifer for the remaining 58 years of the 300 year period.

Please contact Wenli Dickinson at (303) 866-3581 x8206 or Wenli.Dickinson@state.co.us with any questions.

Sincerely,



Ioana Comaniciu, P.E.
Water Resource Engineer

Ec: Well permit no. 8141 file
Upper Black Squirrel Ground Water Management District