

August 29, 2023

Ryan Howser, Project Manager El Paso County Development Services Department Transmitted via EPC EDARP Portal: epcdevplanreview.com

Re: Falcon Acres Final Plat (4<sup>th</sup> Letter)

Part of the NE ¼ of Section 4, Twp. 14 South, Range 64 West, 6<sup>th</sup> P.M.

Water Division 2, Water District 10

Upper Black Squirrel Creek Designated Basin

## Dear Ryan Howser:

We have reviewed your submittal concerning the above-referenced proposal for the subdivision of approximately 49 acres into 8 residential lots of 5+ acres. The proposed water supply for the lots is individual on lot wells producing from the not-nontributary (4% replacement requirement) Arapahoe aquifer which will operate pursuant to Determination of Water Right no. 1146-BD. This letter supersedes our most recent comments on this subdivision dated April 20, 2023.

## Water Supply Demand

The proposed water uses and estimated water requirements for each lot are as follows: use in 1 single-family home (0.3 acre-feet/year); the irrigation of 4,000 square-feet of lawn, garden, and trees (0.2 acre-feet/year); and the watering of 4 large domestic animals (0.05 acre-feet/year), for a total water demand of 0.55 acre-feet/year/lot. The total water demand for all 8 lots is 4.4 acre-feet/year.

## Source of Water Supply

The proposed water supply for the lots is individual on lot wells producing from the not-nontributary (4% replacement requirement) Arapahoe aquifer to operate pursuant to Determination of Water Right no. 1146-BD. Determination of Water Right no. 1146-BD was issued by the Ground Water Commission ("Commission") on April 16, 2007 for an allowed average annual amount of withdrawal of groundwater of 14.2 acre-feet from the Arapahoe Aquifer (based on an aquifer life of 100 years) to be used on 49.2 acres generally described as the NE  $\frac{1}{4}$  of the NE  $\frac{1}{4}$  and the E  $\frac{1}{2}$  of the E  $\frac{1}{2}$  of the NW  $\frac{1}{4}$  of the NE  $\frac{1}{4}$  of Section 4, Township 14 South, Range 64 West, 6<sup>th</sup> P.M. ("Overlying Land"). The allowed uses of the water are domestic, commercial, industrial, irrigation, and replacement supply. The proposed water uses and proposed place of use are allowed by the determination.

According to our records, there are 3 small capacity wells located on the property with well permit nos. 74444-A, 113499, and 211298. It was not clear from the referral whether these wells would be plugged and abandoned or used in the subdivision since the referral materials stated that there are "two wells on this site which may be reused" (August 2023 cover letter) but the letter dated July 12, 2023 from Eric K. Trout state that the 3 wells will not be used in the subdivision. Upon approval of this subdivision, the conditions under which these permits were issued would no longer exist, rendering the wells out of compliance with their well permits. Continued use of the wells would require that they be re-permitted. As the wells would be located within a post-June 1, 1972 subdivision, material injury to other water rights would be a consideration in re-permitting the wells, which would require that the Denver aquifer wells (74444-A and 113499) be re-permitted pursuant to Determination of Water Right no. 1147-BD and that all wells (permit nos. 74444-A, 113499, and 211298) be covered by a Commission-approved replacement plan. Prior to further review of the subdivision water supply plan, the Applicant must clarify if these wells will be plugged and abandoned prior to subdivision approval or if the Denver wells will be re-permitted to



operate pursuant Determination no. 1146-BD and provide evidence that all wells will be covered by a Commission-approved replacement plan.

The proposed source of water for this subdivision is a bedrock aquifer 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 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 <u>allocation</u> approach, the annual amount of water determined in Determination of Water Right no. 1146-BD is equal to one percent of the total amount or 14.2 acre-feet/year, as determined by Rule 5.3.2.1 of the Designated Basin Rules, 2 CCR 410-1. Therefore, the water may be withdrawn in that annual amount 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 <u>allocation</u> approach based on 300 years, the allowed average annual amount of withdrawal of 14.2 acre-feet/year from the Arapahoe aquifer would be reduced to one third of that amount, or 4.73 acre-feet/year, which exceeds the annual demand of 4.4 acre-feet/year for this subdivision. As a result, the water may be withdrawn in that annual amount for a maximum of 300 years.

Applications for on lot well permits, submitted by an entity other than the current water right holder (Thousand Hills Land and Cattle Co., LLC) must include evidence that the well permit applicant has acquired the right to the portion of water being requested on the application.

## State Engineer's Office Opinion

Based upon the above and pursuant to section 30-28-136(1)(h)(l), C.R.S., this office has not received enough information to determine whether the proposed water supply is adequate or can be provided without causing injury to decreed water rights. It appears that in order to obtain a favorable opinion from this office on the proposed water supply to this subdivision, the Applicant must clarify if well nos. 74444-A, 113499, and 211298 will be plugged and abandoned prior to <u>subdivision approval</u> or if the Denver wells (74444-A and 113499) will be re-permitted to operate pursuant Determination no. 1146-BD and provide evidence that all wells (permit nos. 74444-A, 113499, and 211298) will be covered by a Commission-approved replacement plan.

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

Sincerely,

Howaw Com Ioana Comaniciu, P.E. Water Resources Engineer

Ec: Upper Black Squirrel Creek GWMD

Well permit nos. 74444-A, 113499, and 211298

Subdivision referral no. 20707