November 1, 2023

Ryan Howser
El Paso County Development Services Department
2880 International Circle, Suite 110
Colorado Springs, CO 80910

RE: Forest Heights Estates Subdivision
SW1/4 of the Sec. 9, Twp. 12S, Rng. 65W, 6th P.M.
Water Division 2, Water District 10
CDWR Assigned Subdivision No. 27462

To Whom It May Concern,

We have received the submittal to subdivide a 32.168-acre property into 4 single-family residential lots and 2 tracts. The water supply to these lots will be provided by four proposed wells with wastewater being disposed of through individual on-lot septic disposal systems. This office previously provided comments on the proposed subdivision in a letter dated June 13, 2022. The comments in this letter shall supersede those previously provided.

Water Supply Demand

The Water Supply Information Summary, included with the submittal, estimated a total annual use for the subdivision of 3.08 acre-feet per year pursuant to Division 2 Water Court Case No. 22CW3060. The decree allows for the use of four wells to each pump up to 0.77 acre-feet per year for use in one single-family dwelling and outdoor uses for irrigation of lawns and gardens, stock water, and fire protection.

Please note that standard water use rates, as found in the Guide to Colorado Well Permits, Water Rights, and Water Administration, are 0.3 acre-foot/year for each ordinary household, 0.05 acre-foot/year for four large domestic animals, and 0.05 acre-foot/year for each 1,000 square feet of lawn and garden irrigation (2.2 acre-foot/year/acre).

Source of Water Supply

The anticipated source of water is to be provided by four on-lot wells. These wells will produce from the Dawson aquifer. The wells will operate pursuant to the amended augmentation plan decreed in case no. 22CW3060, which amended the decree in case no. 18CW3026 (Division 2)/18CW3057 (Division 1). The water underlying this property was adjudicated and the applicant is the owner of the Dawson, Denver, Arapahoe, and Laramie Fox-Hills aquifers.

According to the decree in case no. 22CW3060, the following amounts of water shown in Table 1, below, were determined to be available underlying the 35 ± acre tract of land owned by the applicant:

Table 1 – Denver Basin Ground Water Rights

Aquifer	Tributary Status	Volume (AF)	Annual Allocation 100 Year (AF/Year)	Annual Allocation 300 Year (AF/Year)
Dawson	NNT	2,270*	25.7*	7.56*
Denver	NNT 4%	2,130	21.3	7.10
Arapahoe	NT	1,450	14.5	4.83
Laramie-Fox Hills	NT	951	9.51	3.17

The plan for augmentation decreed in case no. 22CW3060 allows for annual diversion of 3.08 acre-feet from the Dawson aquifer for the uses proposed in the subdivision referral.

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 37-90-137(4)(b)(I), C.R.S., "Permits issued pursuant to this subsection (4) shall allow withdrawals on the basis of an aquifer life of one hundred years." Based on this **allocation** approach, the annual amounts of water decreed is equal to one percent of the total amount available as determined by Rules 8.A and 8.B of the Statewide Nontributary Ground Water Rules, 2 CCR 402-7. Therefore, the water may be withdrawn in those amounts for a maximum of 100 years.

In the El Paso County Land Development Code, effective November, 1986, Chapter 5, Section 49.5, (D), (2) states:

> "-Finding of Sufficient Quantity – The water supply shall be of sufficient quantity to meet the average annual demand of the proposed subdivision for a period of three hundred (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 three hundred years, the annual estimated demand, for the entire subdivision, is a maximum of 3.08 acre-feet as allowed by the augmentation plan. As a result, the water may be withdrawn in that annual amount for a maximum of 300 years.

State Engineer's Office Opinion

Based on the above, it is our opinion, pursuant to CRS 30-28-136(1)(h)(I), that the anticipated water supply can be provided without causing material injury to decreed water rights so long as the applicant obtains well permits issued pursuant to C.R.S. 37-90-137(4) and the plan for augmentation noted herein, for all wells in the subdivision and operates the wells in accordance with the terms and conditions of any future well permits.

Our opinion that the water supply is **adequate** is based on our determination that the amount of water required annually to serve the subdivision is currently physically available, based on current estimated aquifer conditions.

Our opinion that the water supply can be **provided without causing injury** is based on our determination that the amount of water that is legally available on an annual basis, according

to the statutory **allocation** approach, for the proposed uses is greater than the annual amount of water required to supply the demands of the proposed subdivision.

Our opinion is qualified by the following:

The Division 2 Water Court has retained jurisdiction over the final amount of water available pursuant to the above-referenced decrees, pending actual geophysical data from the aquifer.

The amounts of water in the Denver Basin aquifers, and identified in case no. 18CW3026 (Division 2)/18CW3057 (Division 1) and amended in case no. 22CW3060 was calculated based on estimated current aquifer conditions. For planning purposes, 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 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. Furthermore, that applicant will need to apply for, and obtain a new well permits issued pursuant to Section 37-90-137(4) C.R.S.

Should you or the applicant have questions regarding any of the above, please contact me at this office.

Sincerely,

K. Fuller

Kate Fuller, P.E.
Water Resource Engineer

cc: Rachel Zancanella, Division 2 Engineer