COLORADO
Division of Water Resources
Department of Natural Resources

John W. Hickenlooper
Governor

Robert Randall
Executive Director

Kevin G. Rein, P.E.
Director/State Engineer

March 29, 2018

Nina Ruiz
El Paso County Development Services Department
DSDcomments@elpasoco.com

RE: Hudson Minor Subdivision
Part of the SW ¼ of the NW ¼ and the NW ¼ of the SW ¼, Section 5, T11S, R65W, 6th P.M.
Water Division 1, Water District 8

Dear Ms. Ruiz,

We have reviewed the submittal documents related to Hudson Minor Subdivision, concerning the above referenced proposal to subdivide a 38 acre parcel into 4 single-family residential lots (greater than 5 acres per lot).

Water Supply Demand

Based on the water supply information summary provided, the estimated annual demand for each residential lot is 0.815 acre-feet per year for 300 years, which will be used for in house use (0.26 acre-feet), irrigation of 0.2 acres of irrigated area (1.8 acre-feet), and stockwatering of up to 8 large domestic animals (0.099 acre-feet) and other uses not limited to drinking and sanitary purposes inside principal house and in stand-alone home offices or guest cottages, for livestock watering, for landscape and garden irrigation, hot tubs, swimming pools and decorative uses such as decorative ponds and fountains and augmentation through septic system return flows (0.321 acre-feet). The total annual water requirement for the four proposed lots is 3.26 acre-feet.

Source of Water Supply

The proposed water source is individual on lot wells constructed in the Dawson aquifer operating pursuant to the decreed augmentation plan in consolidated case nos. 2016CW3180 (Division 1) and 2016CW3090 (Division 2). The decree quantified the amount of water underlying the subject 38.02 acre parcel. According to the decree the following amounts of water were determined to be available underlying the 38.02-acre parcel:

Aquifer	Annual amount available for 38.02 acre parcel (acre-feet)	
	Based on 100 year allocation approach	Based on 300 year allocation approach
Dawson	35	11.7
Denver	27.5	9.2
Arapahoe	17.5	5.8
Laramie-Fox Hills	11.4	3.8

There is an existing well on the property with well permit no. 81832-F. This well is constructed in the Dawson aquifer and operates pursuant to the decreed augmentation plan in Division 1 Water Court Case no. 16CW3180 and may withdraw 0.815 acre-foot/year for household use inside one single family dwelling, livestock watering and the irrigation of home lawn and garden.

The decreed augmentation plan in Division 1 Water Court Case no. 16CW3180 allows for the annual withdrawal of 4.89 acre-feet from the not nontributary Dawson aquifer for up to six individual on lot wells, based on a 300 year allocation approach. The augmentation plan states the ground water allocation for each residential lot is 0.815 acre-feet per year for 300 years, which will be used for indoor uses for drinking and sanitary purposes in the principal houses and in stand-alone home offices or guest cottages, for livestock watering, for landscape and garden irrigation, hot tubs, swimming pools and decorative uses such as decorative ponds and fountains and augmentation through septic system return flows.

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 in consolidated case nos. 16CW3180 and 16CW3090 are equal to one percent of the total amount, 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 annual 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 demand for the subdivision is less than the allowed average annual amount of withdrawal of 4.89 acre-feet/year, allowed by the augmentation plan. 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 entities other than the water court Applicants, must include evidence that the Applicant has acquired the right to the portion of the water being requested on the application.

State Engineer's Office Opinion

Based upon the above and pursuant to Section 30-28-136(1)(h)(I) and Section 30-28-136(1)(h)(II), C.R.S., it is our opinion that the proposed water supply is adequate and can be provided without causing injury to decreed water rights.

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 existing water commitments and the demands of the proposed subdivision.

Our opinion is qualified by the following:

The Division 1 Water Court has retained jurisdiction over the final amount of water available pursuant to the above-referenced decree, pending actual geophysical data from the aquifer.

The amounts of water in the Denver Basin aquifers, and identified in this letter, are 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 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.

Should you or the Applicant have any questions, please contact Ailis Thyne of this office at 303-866-3581 x8216.

Sincerely,

Joanna Williams, P.E.
Water Resource Engineer