

1313 Sherman Street, Room 821 Denver, CO 80203

September 27, 2018

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

RE: Hunsinger Subdivision

Sec. 28, Twp. 12S, Rng. 66W, 6<sup>th</sup> P.M. Water Division 2, Water District 10 CDWR Assigned Subdivision No. 25076

To Whom It May Concern,

We have received the submittal concerning the above referenced proposal to subdivide a 16.0± acres tract of land into five new lots. All of the lots will be approximately equal in size with the smallest being 2.53± acres and the largest being 3.06± acres. Our records indicate that there are a number of existing wells on located on the property with permit no's: 172650, 172651, 250314, and 250314-A. The proposed supply of water to the subdivision will be individual on-lot wells for each lot, with wastewater being disposed of through individual on-lot septic disposal systems.

## **Water Supply Demand**

According to the Water Supply Information Summary received in the submittal, the estimated water demand for the development is 1.656 acre-feet/year. Based on the Division 2 Water Court case no. 2016CW3088 this amount breaks down to 0.306 acre-feet/year for two Denver aquifer wells each serving one-single family residence, and 0.348 acre-feet/year for three Arapahoe aquifer wells each serving one-single family residence. Additional uses such as lawn and garden irrigation or animal watering are not specifically called out in the plan for augmentation.

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.



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## Source of Water Supply

The anticipated source of water is to be provided by on-lot wells producing from the Denver or Arapahoe aquifer that will operate pursuant to the augmentation plan decreed by the Division 2 Water Court in case no. 2016CW3088. This case adjudicated water in the Denver, Arapahoe and Laramie-Fox Hills aquifers underlying the 16.62 acres of land which makes up the entire proposed Hunsinger Subdivision.

According to the decrees entered by the Division 2 Water Court in case no. 2016CW3088, the following amounts of water shown in Table 1, below, were determined to be available underlying the 16.62 acre property.

Table 1 - Denver Basin Ground Water Rights

			Annual	Annual
A	Tributary	Volume	Allocation	Allocation
Aquifer	Status	(AF)	100 Year	300 Year
			(AF/Year)	(AF/Year)
Denver	NNT	184	1.8	0.613
Arapahoe	NNT	678	6.8	2.26
Laramie-Fox	NT	449	4.5	1.5

The plan for augmentation decreed in Division 2 Water Court case no. 2016CW3088 allows for diversion of 0.612 acre-foot annually from Denver aquifer and 1.044 acre-feet annually from the Arapahoe aquifer, each for a maximum of 300 years.

Permit No's. 172650, 172651, 250314, and 250314-A were issued pursuant to CRS 37-92-602 for domestic uses and all permits are located in the NW ¼ of Section 28, Twp 12S, Rng 66W, 6<sup>th</sup> P.M. It appears that these wells are located on the property and the applicant has proposed to continue to utilize the existing wells pursuant to the decreed plan for augmentation. **This will require that** the applicant apply for, and obtain a new well permits issued pursuant to Section 37-90-137(4) C.R.S., or plug and abandon these wells.

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)(l), 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:



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"-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 <u>allocation</u> approach based on three hundred years, the annual estimated demand, for the entire subdivision, is 1.656 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)(l), 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(2) 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 Division 2 Water Court case no. 2016CW3088, 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 <u>allocation</u> 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(2) C.R.S.



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

Sincerely,

Ivan Franco, P.E.

Water Resource Engineer

cc: Bill Tyner, Division 2 Engineer

Doug Hollister, District 10 Water Commissioner

