



February 27, 2019

Kari Parsons
El Paso County Development Services Department
kari.parsons@elpasoco.com

RE: Paint Brush Hills, Filing No. 13E
Sections 25 and 26, T12S, R65W, 6th P.M.
Water Division 2, Water District 10
Upper Black Squirrel Creek Designated Basin

Dear Ms. Parsons:

We have again looked at your October 1, 2018 submittal concerning the above referenced proposal to subdivide 172.08 acres into 158 single-family units, and open space. Our office previously commented on Paint Brush Hills Filing No. 13E in letters dated August 15 and October 12, 2018. This letter supersedes those letters.

Water Supply Demand

According to the submittal, the estimated water requirements of Paint Brush Hills Filing No. 13E are 56.88 acre-feet annually (0.36 acre-feet/year per lot for 158 single-family lots). This estimated demand equals 17,064 acre-feet over a period of 300 years.

Source of Water Supply

The proposed water supplier is the Paint Brush Hills Metropolitan District ("District"). The District provided a letter dated September 7, 2018 summarizing and reaffirming its commitments to supplying a total of 185.4 acre-feet per year to serve 515 single-family equivalent (SFE) units within Paint Brush Hills Filing 13, consisting of Filing No. 13C (135 SFEs), Filing No. 13D (97 SFEs), Filing No. 13E (158 SFEs), and an additional unidentified 125 SFEs. That letter provides clarification that the 515 single family equivalent units and 185.4 acre-feet of estimated water requirement committed to in that letter are an aggregate of commitments made in previous "Will Serve Letters" the District issued for Filing No. 13 dated March 30, 2015 and June 24, 2016.

The District's sources of water are bedrock aquifers in the Denver Basin that are being operating pursuant to both 37-90-107(7)(a) and 107(7)(b), C.R.S. The State Engineer's Office does not have evidence regarding the length of time for which these sources will be a physically and economically viable source of water.

1. According to 37-90-107(7)(a), "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 those water rights operating pursuant to 107(7)(a) are equal to one percent of the total amount, as determined by Rule 5.3.2.1 of the Designated Basin Rules, 2 CCR 410-1. Therefore, those rights may be withdrawn in those annual amounts for a maximum of 100 years. Withdrawing those rights over a period of 300 years would require those annual withdrawals to be



- reduced to one-third of one percent of the total amounts.
2. According to 37-90-107(7)(b), "Any right to the use of groundwater entitling its owner or user to construct a well, which right was initiated prior to November 19, 1973, as evidenced by a current decree, well registration statement, or an unexpired well permit issued prior to November 19, 1973, shall not be subject to the provisions of paragraph (a) of this subsection (7)." Therefore, the annual amount of the water right operating pursuant to 107(7)(b) may be withdrawn in that amount indefinitely so long as there is water in the aquifer physically available to the well.

The *El Paso County Land Development Code*, effective May, 2016, states:

Chapter 8, Section 8.4.7.(B)(5):

"Finding of Sufficient Dependability - The proposed water supply shall meet the following criteria to be found sufficient in terms of dependability:

- The supply is of sufficient quantity to meet the needs of the proposed subdivision for 300 years."

Chapter 8, Section 8.4.7.(B)(7)(b):

"(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."

Chapter 8, Section 8.4.7.(A)(2):

"Applicability" ...

- "The effective date of this Section is originally November 20, 1986, and this Section shall fully apply to any subdivision which does not have preliminary plan approval prior to that date;"

Our files indicate that the District supplies subdivisions for which preliminary plat approval occurred prior to November 20, 1986. It is our understanding that El Paso County required the water supply of such subdivisions to be sufficient for a period of 100 years.

Treating El Paso County's code as requiring a legal supply of water for 300 years for this proposed subdivision, the Office of the State Engineer's review of the quantity of the District's water rights in terms of providing a legal source of water for 300 years is as follows.

Due to the fact that the District's rights operate pursuant to both 107(7)(a) and 107(7)(b), the review entails quantifying the water available from those rights over 300 years, and comparing that volume to the volume of commitments to supply water the District has made over 300 years, as described below.

1. The water rights available to the District total 122,050 acre-feet over a period of 300 years (= 98,050 acre-feet plus 24,000 acre-feet, as described below).
 - a. The water rights that are subject to an allocation based approach pursuant to 107(7)(a) total a volume of 98,050 acre-feet. These rights may be withdrawn at a maximum rate of 981 acre-feet/year for a maximum of 100 years, or at a maximum rate of 327 acre-feet per year for a period of 300 years.
 - b. The water right that is subject to 107(7)(b) may withdraw water at a rate of 80 acre-feet per year indefinitely so long as there is water in the aquifer physically available

- to the well. This right may produce 24,000 acre-feet over a period of 300 years.
2. The District's commitments to supply water total 114,298 acre-feet over a period of 300 years (= 31,432 acre-feet plus 82,866 acre-feet, as described below).
 - a. The District supplies subdivisions for which preliminary plat approval occurred prior to November 20, 1986, and schools, and greenbelt and park irrigation, for which it has a 100 year commitment to serve. Those commitments total 31,432 acre-feet over 100 years.
 - b. The District has committed to supply subdivisions for which preliminary plat approval occurred after November 20, 1986, for which it has a 300 year commitment to serve. Those commitments total 82,866 acre-feet over 300 years. Those commitments include this subdivision, Paint Brush Hills, Filing No. 13E.

The District has 7,752 acre-feet of water rights remaining uncommitted (= 122,050 acre-feet minus 114,298 acre-feet). Further details on our office's evaluation of the water rights available to the District, and the District's commitments, are shown on the attached table.

State Engineer's Office Opinion

Based upon the above and pursuant to Sections 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 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 volume of water that is legally available, according to the statutory allocation approach for those rights operating pursuant to 107(7)(a), for the proposed uses, on the subdivided land, is greater than the volume of water required to supply existing water commitments.

Our opinion is qualified by the following:

1. **The amounts of water in the Denver Basin aquifer, 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.**
2. Our understanding is that the District is supplying subdivisions for which its commitment to supply water will not extend beyond 100 years, and our office's consideration of the District's water rights when evaluating its rights for purposes of supplying this subdivision assumed the District will no longer have a commitment to supply those subdivisions beyond 100 years.

Should you have any questions, please contact myself at keith.vanderhorst@state.co.us.

Sincerely,



Keith Vander Horst, P.E.
Chief of Water Supply, Basins

cc: Upper Black Squirrel Creek GWMD

PaintbrushFiling13E_2019Feb

Paint Brush Hills Metropolitan District

Updated:	27-Feb-2019										
SUPPLY											
Determination or Permit no.	Aquifer	NT / NNT Status	Replacement Plan	Total allocation (af)	Total Allocation (af/yr)	100-yr Availability (af/yr)	300-yr Availability (af/yr)	Volume Available (af)	Comments	Type of Use	Place of Use
Subject to 37-90-107(7)(a).											
719-BD	Tdw	NNT-Actual	Still needed	23,710	237.1	0	0	0	Replacement Plan needed. 215-BD cancelled upon issuance of 719-BD.	municipal, domestic, livestock, lawn irrigation, commercial, replacement	PBHMD service area
214-BD	Tdk	NNT-4%		29,750	297.5	297.5	99.17	29,750		municipal, domestic, livestock, lawn irrigation, commercial, replacement	945 acre PBHMD service area
30593-F	Ka	na		11,300	113	113	37.67	11,300	113 af/yr based on 11-21-1990 SBU and reservation of 113 af/yr to this permit when permit no. 46553-F was issued. Inappropriately listed as a well field under 46553-F in Curt Wells' February 2013 Water Supply Summary table.	domestic, commercial, municipal & industrial	PBHMD service area, by implication
46553-F	Ka	NT		18,200	182	182	60.67	18,200	Other wells in well field: 55193-F, 60862-F, 64086-F	municipal	PBHMD service area
47813-F	Klf	NT		38,800	388	388	129.33	38,800	Other wells in well field: 50877-F, 55192-F, 63429-F, 64084-F	municipal	PBHMD service area
subtotal					981	327	98,050				
Subject to 37-90-107(7)(b).											
17048-F	Tkd & Ka	na		na	80	80	80	24,000	The amount of its water right is currently uncertain. 80 af/yr is conservatively assumed based on 50 gpm test pump rate on a Well Completion Report and a SBU submitted March 13, 1975.	Industrial, Municipal, Domestic, Fire	PBHMD (formerly Latigo Ranch)
Total Bedrock Supply											
612-RFP (no reference to 27554-F)	Alluvium	renewable		0	0	0	0	122,050	Paint Brush Hills previously claimed 85 af/yr from permit 612-RFP. July 22, 2013 letter from Meridian Service Metro District states PBH leases this water, but it is not a permanent supply.		
Total Supply (af)											
								122,050			

Paint Brush Hills Metropolitan District

Updated:	27-Feb-2019									
COMMITMENTS										
Paint Brush Hills	Phase	# of Lots	Date of SEO opinion	Demand per af/yr/lot	Total commitment per year (af/yr)	Total commitment for 100 yrs (af)	Total commitment for 300 yrs (af)	Total commitment (af)	Comments	Comments
100 year commitments										
Filing 4	II	164	1/22/1987	0.56	91.8	9,184		9,184	Per El Paso County, Filings 4 - 9 approved based on a 100 yr supply	
Filing 5		31	6/19/1995		17.4	1,736		1,736		
Filing 6		48	5/1/1996		26.9	2,688		2,688		
Filing 7		57	6/27/1997		31.9	3,192		3,192		
Filing 8		109	4/9/1999		61.0	6,104		6,104		
Filing 9		88	5/31/2000		49.3	4,928		4,928		
Falcon Middle School					22.0	2,200		2,200	22 af/yr per Curtis Wells Feb. 2013 table and 2-26-2013 letter.	
District Greenbelt/Park irrig.					14.0	1,400		1,400	14 af/yr per Curtis Wells Feb. 2013 table and 2-26-2013 letter.	
Subtotal		497					31,432		Per El Paso County, approved based on a 100 yr supply	
300 year commitments ¹										
Filing 10		90	3/24/2003	0.40	36.0		10,800	10,800		
Filing 11		81	4/17/2003	0.40	32.4		9,720	9,720		
Filing 12		51	4/17/2003	0.40	20.4		6,120	6,120		
Church					0.2		60	60	0.2 af/yr per Curtis Wells Feb. 2013 table and 2-26-2013 letter.	
Filing 13a		17	6/9/2013		6.9		2,070	2,070	a.k.a. Filing 13 - Phase I	
Scenic View & park		90	2/6/2014	0.36	32.36		9,708	9,708	a.k.a. Filing 14	park uses 0.36 af/yr
Filing 13b		21	2/26/2014	0.36	7.56		2,268	2,268	a.k.a. Filing 13 - Phase 2	
Filing 13c		135	10/24/2016	0.36	48.6		14,580	14,580	Note: Filing 13C reduced from 150 lots to 135 lots.	
Filing 13d		97	10/24/2016	0.36	34.92		10,476	10,476		
Filing 13e		158	2/27/2019	0.36	56.88		17,064	17,064		
Subtotal					533.7			82,866		
¹ El Paso County requires a 300 year water supply as of Nov. 20, 1986, per El Paso County Land Development Code sections 8.4.7.(A)(2) and 8.4.7.(B)(7)(b).										
Total Commitments (af)							114,298			
UNCOMMITTED SUPPLY (AF)							7,752			