**FLYING HORSE NORTH WATER**

 **PRELIMINARY ANALYSIS AND CONCERNS**

**This is a preliminary review and analysis of Applicant’s current proposed water supply for Flying Horse North subdivision. This DOES NOT constitute a formal water review pursuant to Chapter 8 of the El Paso County Land Development Code, but rather, is a courtesy review for the Applicant to identify concerns and issues that need to be addressed prior to completing a formal water review.**

Applicant has proposed several different numbers and plans for its water supply over the last couple of years. Applicant has not provided an updated concise water supply plan or water resources report for their latest proposal, and therefore, the following analysis and issues or concerns are drawn from a review of numerous of Applicant’s and Applicant’s attorney’s communications and water decrees that, taken together, appear to indicate a different current proposed water plan. Therefore, based on this collective information, this analysis is my understanding of the current proposed water supply for Flying Horse North subdivision.

**Primary Water Supply—Demand and Supply**

The following is my understanding of the current proposed supply for in-house use, stock watering, on-lot irrigation, and common area irrigation.

**Demand**

283 lots

X 0.7 AF/Lot/YR \*

198 AF/YR

X 300 YRS

59,400 AF demand for 300 years

\*(Includes new plan for watering 300 horses on “horse lots” per attorney Allan Hill, 03/15/18 Letter)

28.06 AF/YR (Common area irrigation per Alan Hill 03/15/18)

X 300 YRS

8,418 AF demand for 300 years

59,400 AF

+8,418 AF

67,818 AF total demand for 300 years

**Supply**

201 AF/YR Dawson 701 Acre Parcel (94CW023(B))(Wismer Decree)

515 AF/YR Dawson 640 Acre Parcel (04CW098)(State Board Land Commr’s SBLC Decree)

716 AF/YR

X 100 YRS

71,600 AF available supply

71,600 AF

-59,400 AF 300 YR demand in-house & lot irrigation

12,200 AF remainder

- 8,418 AF 300 YR demand common area irrigation

 3,782 AF surplus

**Concerns**: Dependability, because of the SBLC Lease, raises concerns, which must be resolved with the Escrow Agreement. In addition, Planning and Community Development (“PCD”) advises that the approved PUD did not address, and does not allow, horses either on lots or in a stable. PCD further advises that in order to have these equestrian uses, Applicant will have to amend the PUD. **APPLICANT MUST ADDRESS THESE CONCERNS.**

**Conclusion**: Based on the information above, but reserving the concerns identified that will need to be addressed, unless different information is received, it appears that Applicant will have enough Dawson Aquifer water to provide a 300 year supply for both in-house/stock watering/on-lot irrigation and common area irrigation.

**Augmentation Supply**

16CW3190 Decree and Plan for Augmentation

 PRI#2, LLC

Replaces Dawson Aquifer water to be used on 283 lots from individual on-lot wells.

The Plan for Augmentation is based on 198 AF/YR demand for 283 lots for total withdrawal of 59,400 AF.

Para. 2.5.1 itemizes the demand:

 84.9 AF/YR In-house use

 113.1 AF/YR On-lot irrigation and open space

 198.0 AF/YR total annual diversion Dawson Aquifer

**Replacement during 300 years of pumping**:

 Non-evaporative septic system return flows

**Replacement of post-pumping depletions**:

 Laramie-Fox Hills Aquifer (LFH) water

Replacement Supply—LFH Aquifer:

 204 AF/YR x 100 YRS = 20,400 AF (Wismer Decree)

 182 AF/YR x 100 YRS = 18,200 AF (SBLC Decree)

 208 AF/YR x 100 YRS = 20,800 AF (2 Lazy H Ranch Decrees—Douglas County)

 594 AF/YR 59,400 AF

**Concerns**:

1. While the 59,400 AF of post- pumping depletions supply matches the 300-year demand of withdrawals for in-house use, stock watering, and on-lot irrigation, and while Para. 2.2 of the Augmentation Decree allows Dawson Aquifer water to be used for common area irrigation and common area amenities, the Decree DOES NOT appear to address the 28.06 AF/YR of Dawson Aquifer water required for common area irrigation, and thus the available LFH water does not appear to cover the additional withdrawal of 8,418 AF of Dawson Aquifer water over 300 years. **APPLICANT MUST ADDRESS THIS CONCERN**.
2. The 208 AF/YR of Lazy H Ranch LFH water is located in Douglas County, which is not identified as part of the “Subject Property” in the Decree and Plan for Augmentation from which the water may be withdrawn and on which the water may be used. I believe the Lazy H Decrees allow that water to be used off-site, but while it may be implied, it is not clear that the Augmentation Decree allows the Lazy H LFH water to be used at Flying Horse. The Augmentation Decree also does not explain how the Lazy H LFH water will replace depletions to the South Platte River drainage. The Decree states that the HOA will be responsible for drilling a replacement well for the LFH water, but it does not address the probable need to drill a 2d well on the Lazy H Ranch in Douglas County. Applicant intends to make the HOA responsible for complying with the Plan for Augmentation, but it is not clear how the HOA would be able to access the Lazy H Ranch property and drill a LFH well there, as may be necessary. I assume there at least would have to be some permanent easement on all or a portion of the Lazy H Ranch property in favor of the Flying Horse North HOA to allow such access. This 208 AF of Lazy H Ranch LFH water will have to be conveyed to the Flying Horse North HOA, but the same or similar dependability concerns that arose with using Lazy H water for the golf course now arise with using that same water source for augmentation given that the water is located in Douglas County on property not legally associated with the Flying Horse North HOA. The Applicant needs to address how it will provide for getting this LFH augmentation supply to the HOA and to the South Platte River drainage. **APPLICANT MUST ADDRESS THESE CONCERNS.**

**Conclusion**: Based on the above, and given the concerns, the augmentation supply appears to be questionable.

**Golf Course Supply**

Applicant has proposed a broadly outlined new plan for its golf course water by e-mail dated 05/23/18. This is my understanding of what Applicant proposes.

**Demand**

180 AF/YR

X300 YRS

54,000 AF total demand

**Supply**

239 AF/YR Arapahoe (SBLC Decree)

X 100 YRS

23,900 AF

23,900 AF supply

-54,000 AF demand

-30,100 AF shortfall

577 AF/YR Denver (SLBC Decree)

X 100 YRS

57,700 AF

57,700 AF

 -30,100 AF shortfall

 27,600 AF surplus

 239 AF/YR or 23,900 AF total Arapahoe, based on Applicant’s estimated demand of 180 AF/YR = 132 years of supply. Therefore, 168 years would yet need to be covered:

 168 YRS

X 180 AF/YR

30,240 AF shortfall

57,700 AF

-30,240 AF

27,460 surplus

**Concern**: Applicant indicates in its 5/23/18 e-mail that it intends to request a condition that will allow them to proceed with development without having their additional augmentation plans necessary for the golf course water approved by the Water Court, and will request 5 years to complete that process. To my knowledge and recollection, no other development of this size has proceeded to final plat without having their water supply, including augmentation plan, approved by the Water Court and in place. I would not be in favor of the requested 5 year condition**. APPLICANT MUST ADDRESS THIS CONCERN**.

**Conclusion**: Under either analysis above, but reserving the concern, by using both the Arapahoe and Denver Aquifer sources for the golf course water, it appears that Applicant will have enough water to meet the water quantity requirement; however, as with the primary supply, the dependability issue created by the performance of the requirements under the SLBC Lease must be addressed by the Escrow Agreement. That Agreement will now be even more critical, and may require additional safeguards, because Applicant is now relying on 4 instead of 2 aquifers (Dawson, Denver, Arapahoe, and LFH Aquifers) subject to that Lease. In other words, nonperformance of the Lease terms would put the entire primary, replacement, and golf course water supplies in jeopardy.