HAY CREEK SUBDIVISION

WATER RESOURCES REPORT

For Hay Creek Subdivision

December 12, 2024

Prepared By:

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Executive Summary:

Water Resources Report – Hay Creek Subdivision

W. James Tilton and Ryan W. Farr of Monson, Cummins, Shohet & Farr, LLC, on behalf of the Applicant, James D. Hull ("Owner"), provide the following Water Resources/Wastewater Disposal Report in support of the Hay Creek Subdivision. The attorneys at Monson, Cummins, Shohet & Farr, LLC ("MCSF") have extensive experience in water related matters, with Mr. Farr having practiced water law almost exclusively for over 11 years. MCSF has substantial experience with Denver Basin groundwater resources, augmentation plans, designated basin replacement plans, subdivision proceedings, and rural water usage. Given his experience, Mr. Farr should be considered a "qualified professional" as concerns water resources, as discussed at Section 8.4.7(B)(1)(c) of the El Paso County Land Development Code. This report, overseen by Mr. Farr and prepared in conjunction with other professionals, is intended to demonstrate to the El Paso County Planning Commission and the Board of County Commissioners the sufficiency in terms of quantity and dependability, of the water rights and resources to be utilized in the proposed Black Squirrel Minor Subdivision (the "Subdivision"), in El Paso County, Colorado.

The property consists of approximately 30.05 acres located at the current street address of 3405 Hay Creek Road, Colorado Springs, CO 80921 located in the SE¼ of Section 33, Township 11 South, Range 67 West of the 6th P.M., County of El Paso, State of Colorado. The six residential lots in the Subdivision are to be provided water and sewer/septic services through on-site individual wells and Individual Septic Disposal Systems ("ISDS"). The proposed subdivision includes six residential lots. Lot 1 has an existing residence and will be approximately 5.0 acres. The remaining lots are currently unimproved and range in size from 3.54 acres to 5 acres.

It is expected that each of the residential homes on each lot in the Subdivision will require an average of 0.26 annual acre-feet of water supply, for a total of 1.56 annual acre-feet for in-house uses with additional amounts for use on each of the lots for a total of 2.8 acre-feet for all lots annually, to be provided through one individual well to the not-nontributary Dawson aquifer and four individual wells to the not-nontributary Denver aquifer, consistent with the decree in Case No. 21CW3056, as issued by the Water Court, Division 2, on April 22, 2022, confirming the Ruling of Referee issued on March 29, 2022 ("Decree"). The Decree provides for a 300-year water supply for the residential lots within the Subdivision, with each residential lot utilizing ISDS of a non-evaporative nature.

The water resources to be utilized on the residential lots in the Subdivision are typical of rural residential development in El Paso County, Colorado. Case No. 21CW3056 and the Augmentation Plan decreed by the Water Court, demonstrates a sufficient quantity and reliability of water to support compliance with El Paso County's 300-year water supply rules for subdivisions of this nature.

I. INTRODUCTION

The purpose of this report is to provide a preliminary outline of the water resources, and associated wastewater requirements, necessary for approval of the Hay Creek Subdivision, as proposed.

1.1 New Development Description: The Subdivision consists of approximately 30.05 acres at 3405 Hay Creek Road, Colorado Springs, CO 80921 located in the SE¼ of Section 33, Township 11 South, Range 67 West of the 6th P.M., County of El Paso, State of Colorado. The Property will be subdivided into six lots. **Exhibit A**, attached hereto, is a plat for the Subdivision as proposed, prepared by Polaris Surveying, Inc.

II. PROJECTION OF WATER NEEDS

2.1 Analysis of Water Demands: It is expected that the six residential lots in the Subdivision will utilize six individual wells. One of these wells is an existing exempt domestic well, pursuant to C.R.S. § 37-92-602 and Division of Water Resources Well Pemit No. 163509, drilled to the Denver aquifer which will remain exempt and is not subject to the decreed augmentation plan. The remaining five wells will include one well to the not-nontributary Dawson aquifer and four wells to the not-nontributary Denver aquifer, all to be used for domestic-type uses, irrigation, stock water, ponds, fire protection, and for storage and augmentation of those uses. It is anticipated that each of these five lots will utilize a maximum of 0.7 acre-feet of water, with 0.26 acre-feet to be used in-house, consistent with Section 8.4.7(B)(7)(d), and the remaining amount of 0.44 acre-feet per lot will be allocated for other approved uses under the augmentation plan.

Based on the existing well data, and data of other wells in vicinity of this property, wells drilled to the Dawson and Denver aquifers produce at approximately 10 to 15 gallons per minute. Based on past experience with the numerous Dawson and Denver aquifer wells serving rural residential properties throughout El Paso County, this rate of production should be more than sufficient to meet demand for in-house use.

III. PROPOSED WATER RIGHTS AND FACILITIES

3.1 Water Rights: An Augmentation Plan for utilizing the underlying Dawson and Denver aquifers was decreed by the Water Court, Division 2, in Case No. 21CW3056 on April 22, 2022. A copy of the recorded decree is attached hereto as **Exhibit B** ("Decree"). The Decree vested the following specific quantities of water:

AQUIFER	Saturated Thickness (ft)	Total Water Adjudicated (Acre-feet)	Annual Average Withdrawal – 300 Years (Acre-feet)[1]
Dawson (NNT)	75	451	1.5
Denver (NNT)	225	850	2.8
Arapahoe (NT)	350	1,790	5.9
Laramie Fox Hills (NT)	180	811	2.7

The 850 acre-feet available in the Denver aquifer does not include 300 acre-feet of water that was reserved for existing Well Permit No. 163509, the exempt well on Lot 1, per the Decree. All depletions are augmented in time, place, and amount through septic return flows during pumping. Post-pumping depletions will be replaced by water reserved in the Arapahoe and Laramie-Fox Hills aquifers. The available supplies will meet both legal and physical needs on a 300-year basis.

3.2 Source of Supply: Rural residential water supply demand will be met using one to-be-constructed not-nontributary Dawson aquifer formation well and four to-be-constructed not-nontributary Denver aquifer formation wells. Consistent with El Paso County Land Development Code Section 8.4.7(B)(3)(c)(v), a subdivision utilizing individual wells need not make a further showing as to source of supply.

3.3 Pumping Rates for Service: Both the Dawson and the Denver aquifers in the location of the Subdivision are generally known to produce approximately 10-15 gallons per minute, more than sufficient for single family residential and accessory uses, and such production is consistent with the historical use of Permit No. 163509. A copy of the well permit file from the Division of Water Resources for Permit No. 163509 is attached hereto as **Exhibit C**. Such flow rates are typical of individual wells on subdivisions within the area, including for typical firefighting purposes.

IV. WASTEWATER AND WASTEWATER TREATMENT – While soils, geology and geotechnical analysis has been provided by other of Applicant's consultants, Applicant provides a summary of ISDS to be utilized herein, as relates to water usage and resulting return flows which support the approved Augmentation Plan.

4.1 Septic/Wastewater Loads: Septic projections are based on similar Denver Basin residential uses on rural residential lots. Average daily wastewater loads are expected to be approximately 180 gallons per day per single-family residence. Maximum daily wastewater loads are expected to be roughly 210 gallons per day per single-family residence, assuming residential in-house use at the 0.26 acre-feet per year rate described in the Decree.

[1] All four aquifer annual withdrawal figures represent not the 100-year aquifer life discussed at C.R.S. § 37-90-137(4), but rather a 300-year aquifer life consistent with provision of a 300-year water supply in compliance with El Paso County, Colorado land development code as applicable to the subdivision of Applicant's Property. The 100-year annual average withdrawals are 4.51, 8.5, 17.9, and 8.11 acre-feet, respectively.

4.2 On-Site Wastewater Treatment Systems: The six residential lots within the Subdivision will be served by individual on-site wastewater treatment systems. There is an existing and approved on-site 21C wastewater treatment system on one lot, and the other five will be constructed at the other residential lots upon approval of the Subdivision. Based on such historical use, the site is suitable for on-site wastewater treatment system/ISDS. The on-site wastewater treatment system will be evaluated and installed according to El Paso County Guidelines and properly maintained to prevent contamination of surface and subsurface water resources.

Respectfully submitted this 12th day of December, 2024.

MONSON, CUMMINS, SHOHET & FARR, LLC

/s/ W. James Tilton

W. James Tilton

Exhibits:
A – Location Map/Plat of Property
B – Decree
C – Existing Well Permit Files