

# Black Squirrel Minor Subdivision

## PRELIMINARY WATER RESOURCES REPORT

please title water  
resources report

### For Black Squirrel Minor Subdivision

SF2426

December 9, 2024

Prepared By:



13511 Northgate Estates Dr., Ste. 250, Colorado Springs, Colorado 80921

## **Executive Summary:**

### **Preliminary Water Resources Report – Black Squirrel Minor Subdivision**

W. James Tilton and Ryan W. Farr of Monson, Cummins, Shoheit & Farr, LLC, on behalf of the Applicant, Chris Team Living Trust, c/o Christine Tschamler (“Owner”), provide the following Water Resources/Wastewater Disposal Report in support of the Black Squirrel Minor Subdivision. The attorneys at Monson, Cummins, Shoheit & Farr, LLC (“MCSF”) have extensive experience in water related matters, with Mr. Farr having practiced water law almost exclusively for nearly 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 19.39 acres located in the N½ NW¼ NE¼ of Section 14, Township 11 South, Range 65 West of the 6<sup>th</sup> P.M; El Paso County, Colorado, designated as Parcel No. 5114000019. Each of the potential three (3) lots in the Subdivision are to be provided water and sewer/septic services by means of on-site individual wells and Individual Septic Disposal Systems (“ISDS”). The proposed minor subdivision has one existing well on Lot 2, which is 6.39 acres in size. The remaining 13 acres of land that makes up Lots 1 and 3 is currently unimproved. Lot 1 and Lot 3 will each have an individual well and ISDS and are approximately 6.38 and 6.4 acres in size, respectively.

The existing well on Lot 2 has been re-permitted as part of the approved replacement plan. This well is permitted to pump up to one (1) acre-foot of water annually. Lots 1 and 3 in the Minor Subdivision will each pump up to 0.5 annual acre-feet of water, for a total of 2.0 annual acre-feet being withdrawn from the not-nontributary Dawson aquifer annually by means of three individual wells constructed to the not-nontributary Dawson aquifer, consistent with a subsequently applied for and issued Replacement Plan by the Colorado Ground Water Commission. Such water supply demand is similar to other rural residential homes’ historical demand. The proposed Replacement Plan will provide for a 300-year water supply for each lot within the Subdivision, with each lot utilizing a non-evaporative ISDS. This 300-year water supply is sustainable based on initial estimates of Dawson aquifer supplies.

The water resources to be utilized on the residential lots in the Subdivision are typical of rural residential development in this area of El Paso County, Colorado. Estimates of availability of water supplies demonstrate 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 Black Squirrel Minor Subdivision, as proposed.

1.1 New Development Description: The Subdivision consists of 19.39 acres located in the N $\frac{1}{2}$  NW $\frac{1}{4}$  NE $\frac{1}{4}$  of Section 14, Township 11 South, Range 65 West of the 6<sup>th</sup> P.M; El Paso County, Colorado. The Property will be subdivided into up to three lots. **Exhibit A**, attached hereto, is the plan for the Subdivision as proposed, prepared by APEX Land Surveying and Mapping, LLC. This analysis accounts for water reserved for an existing, exempt well, and the 300-year supply necessary for two additional augmented wells.

## **II. PROJECTION OF WATER NEEDS**

2.1 Analysis of Water Demands: It is expected that the three residential lots in the Subdivision will utilize three individual wells (one well per lot) drilled to the Dawson aquifer for domestic-type uses, including in-house, landscape/irrigation of lawn and gardens, watering of domestic animals and stock, and fire protection. An existing well with Permit No. 73654 will provide water supply to Lot 2 of the proposed subdivision. This well has been re-permitted to be included in this replacement plan. It is anticipated that the residence on Lot 2 will utilize a minimum of 0.26 acre-feet and up to 1.0 acre-feet annually for in-house residential purposes, irrigation of lawn and garden, and watering of livestock. Additionally, Lots 1 and 3 will utilize individual wells to be subject of a replacement plan. It is anticipated that the residences on Lots 1 and 3 will each utilize a minimum of 0.26 acre-feet and up to 0.5 acre-feet annually. The existing well, permitted under Permit No. 73654, is constructed to and will produce from the not-nontributary Dawson aquifer at a flow rate of 10 to 15 gallons per minute, based upon past production. The two wells to be constructed will also produce from the not-nontributary Dawson aquifer at similar flow rates.

There are no other wells currently constructed on the property. Based on past experience with the numerous Dawson 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: A Replacement Plan utilizing the underlying Dawson aquifer will be sought from the Colorado Ground Water Commission. The proposed Replacement Plan will likely be consistent with the following estimated quantities of water supplies that will meet both legal and physical needs on a 300-year basis:

AQUIFER	Saturated Thickness (ft)	Total Water Adjudicated (Acre Feet)	Annual Average Withdrawal – 100 Years (Acre Feet)	Annual Average Withdrawal – 300 Years (Acre Feet)
Dawson (NNT)	444.2	1,727	17.27	5.75
Denver (NT)	349.4	1,155	11.55	N/A
Arapahoe (NT)	269.3	886	8.86	N/A
Laramie Fox Hills (NT)	189.3	549	5.49	N/A

All depletions will be augmented in time, place and amount through septic return flows during pumping. Being within a designated basin, there is no need to reserve water resources to provide for post-pumping replacement.

3.2 Source of Supply: Rural residential water supply demand will be met using an existing not-nontributary Dawson aquifer formation well and two additional not-nontributary wells to be constructed to the Dawson aquifer, in accordance with any issued Replacement Plan. Consistent with El Paso County Land Development Code Section 8.4.7(B)(3)(c)(v), a minor subdivision utilizing individual wells need not make a further showing as to source of supply.

3.3 Pumping Rates for Service: The Dawson aquifer in the location of the Subdivision is generally known to produce approximately 10-15 gallons per minute, more than sufficient for single family residential and accessory uses.

**IV. WASTEWATER AND WASTEWATER TREATMENT** – While soils, geology and geotechnical analysis will be provided by other consultants hired by the Owners, the Owners provide 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 232 gallons per day per single-family residence assuming residential in-house use at the conservative 0.26 acre-feet per year rate for augmentation supplies based on the El Paso County Land Development Code residential demand standard of 0.26 acre-feet per year.

4.2 On-Site Wastewater Treatment Systems: The three residential lots within the Subdivision will be served by on-site non-evaporative ISDS. The on-site non-evaporative ISDS have and will be installed according to El Paso County Guidelines and properly maintained to prevent contamination of surface and subsurface water resources.

Respectfully submitted this \_\_\_ day of \_\_\_\_\_, 2024.

MONSON, CUMMINS, SHOHET & FARR, LLC

/s/ W. James Tilton

W. James Tilton

Ryan W. Farr

Exhibits:

A – Plat of the Property

B – Replacement Plan (Pending)

C – Basin Determinations (Pending)

documentation is missing. a full review of this document cannot be completed

Please provide and ensure a new water resources report that meets Section 8.4.7 of the LDC

Please check your estimated demand for irrigation. 3 acres is 130,680 square feet. At 0.0566 acre-foot/1,000 square feet, which is the presumptive use value in the LDC, 7.4 annual acre-feet would be required to meet this demand.