

- To: Andrew Makings 12172 Goodson Road Colorado Springs, CO 80908
- From: David Mijares, PE Catamount Engineering
- Date: February 17, 2023
- RE: Water Resources Report, Makings Minor Development ("MMD") 12172 Goodson Road, Colorado Springs, CO 80908

This Water Resources Report was completed by David Mijares of Catamount Engineering, a Licensed Professional Engineer (PE), on behalf of Andrew Makings ("Applicant") in accordance with the requirements of the El Paso County Land Development Code described in Section 8.4.7 (B)(1)(c). Mr. Mijares has over 25 years' experience in drainage and hydrologic analysis. He has been involved in evaluating water supply and drainage for subdivisions in El Paso County for over 20 years. This report presents the data, documentation, and analysis in sufficient detail to determine sufficiency of the proposed subdivision's water supply in terms of dependability, quantity, and quality.

1.0 Summary of the Proposed Subdivision

The Makings' property (Attachment 1) consists of a 38.83-acre parcel, located in the Southeast ¼ of the Northeast ¼ of Section 14, Township 12 South, Range 65 West, of the 6th P.M. The Property is situated within District 3 of the Upper Black Squirrel Creek Designated Groundwater Management District having the address 12172 Goodson Road, Colorado Springs, CO 80908, in El Paso County, Colorado ("Property"). There are no wells or existing homes on the Property.

It is proposed that the 38.83-acre property will be subdivided to create a 4-lot subdivision. Lot 1 is proposed to be 23.80-acres and Lots 2,3, and 4 are proposed to be 5.01-acres each, respectively. The following is a list of the size of each proposed lot.

Proposed Lots Acreages		
23.80		
5.01		
5.01		
5.01		



2.0 Information Regarding Sufficient Quantity of Water

2.1 Calculation and Quantity of Water Available and Supply Source

Groundwater underlying the Property will be used as the source of water supply for the subdivision. Determination of Water Rights for the two underlying groundwater aquifers: Denver (462-BD) and Dawson (463-BD) was approved by the Colorado Groundwater Commission ("Commission") on March 16, 2004. Specific volumes of groundwater were conveyed to Andrew and Emilee Makings (the "Makings"), current owners of the MMD, via a quit claim deed dated August 22, 2022, and recorded on August 22, 2022 at Reception No. 222110915 in the records of the El Paso County Clerk and Recorder. Table 1 quantifies the groundwater underlying the property in each of the two aquifers.

The following volumes were deeded to the Makings and were approved for commercial, domestic, irrigation, industrial, fish and wildlife propagation, aesthetic, and for augmentation purposes on the MMD. The groundwater in the Dawson Aquifer is not-non tributary and requires replacement of actual depletions, and the groundwater in the Denver Aquifer is not-non tributary and requires a 4% replacement. The annual amounts below are based on a 300-year withdrawal period.

Determination No.	Aquifer	Annual Amount
462-BD	Denver (4% NNT)	6.675 acre-feet
463-BD	Dawson (NNT)	9.04 acre-feet

The Dawson aquifer is the shallow most aquifer and was determined to have 2,712 acre-feet of available groundwater. Removal of this groundwater over 300 years would allow for 9.04 acre-feet/ year to be used by the subdivision.

2.2 Water Demand

The Makings applied for a Dawson Aquifer Replacement Plan with the Colorado Ground Water Commission on November 15, 2022, and it is still pending. The replacement plan application requests the following uses on the MMD:

- One Well-Lot 1 (23.89 Acres)
 - Up to 2 single-family dwellings or their equivalent
 - 0.3 acre-feet per unit per year
 - 0.6 acre-feet per year total



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- \circ ~ Up to 1 acre of irrigation
 - 2 acre-feet per year
- In-building Commercial Sanitary Use
 - 0.3 acre-feet per year
- Watering of up to 80 large Domestic Animals
 - 1 acre-foot per year
- Total Use = 3.9 acre-feet per year for 300 years
- Three Wells-Lot 2, Lot, 3, Lot 4 (5.01 Acres each)
 - One single-family dwelling
 - 0.3 acre-feet per year per well
 - 0.9 acre-feet per year total
 - o 6,000 square-feet of irrigation
 - 0.3 acre-feet per year per well
 - 0.9 acre-feet per year total
 - Watering of up to 8 large domestic animals
 - 0.1 acre-feet per year per well
 - 0.3 acre-feet per year total
 - Each Well = 0.7 acre-feet per year for 300 years
 - Total Use = 2.1 acre-feet per year for 300 years
- MMD TOTAL ANNUAL USE = 6 acre-feet per year for 300 years.

2.3 Meeting Replacement Requirements

The groundwater in the Dawson Aquifer is not-nontributary and requires replacement of actual depletions, and the groundwater in the Denver Aquifer is not-nontributary and requires a 4% replacement. The annual amounts below are based on a 300-year withdrawal period.

Replacement of the depletions will occur from recharge from individual on-site wastewater treatment systems. The onsite wastewater treatment systems will be installed and maintained according to the El Paso County Guidelines and approved by the El Paso County Department of Health.

The Makings applied for a Dawson Aquifer Replacement Plan with the Colorado Ground Water Commission on November 15, 2022, and it is still pending.

3.0 Information Regarding Sufficient Dependability of Water Supply

3.1 Proof of Ownership



321 W. Henrietta Ave Suite A • Woodland Park, CO 80863 • (719) 426–2124 Attachment 1 provides the Warranty Deed for the property and its legal description. Specific volumes of groundwater were conveyed to Andrew and Emilee Makings (the "Makings"), current owners of the MMD, via a quit claim deed dated August 22, 2022, and recorded on August 22, 2022 at Reception No. 222110915 in the records of the El Paso County Clerk and Recorder. The Makings are listed as owner in the Determination of Water Rights and the transfer of water rights for the Denver and Dawson aquifers, the source of water supply, will occur with the sale of each lot such that each lot will be allocated water (based on lot size).

3.2 Water Supply

The proposed 4 new wells for the 4 lots will utilize two aquifers; The groundwater in the Dawson Aquifer is not-non tributary and requires replacement of actual depletions, and the groundwater in the Denver Aquifer is not-non tributary and requires a 4% replacement.

4.0 Information Regarding Sufficient Quality

Water quality samples have not yet been collected and testing is pending.

5.0 Information Regarding Sufficient Quality

The proposed subdivision of 38.83 acres will create 4 new lots. The purpose of the Water Resources Report is to provide the data, documentation, and analysis in sufficient detail to determine sufficiency of the proposed subdivision's water supply in terms of dependability, quantity and quality. Water delivered by wells completed in the not non tributary Denver and Dawson aquifers underlying the Property will be used to supply each home. The Determination of Water Rights 462-BD and 463-BD were approved by the Colorado Groundwater Commission on March 16, 2004. Based on the proposed uses and quantification of available groundwater, there is sufficient quantity to meet the County required 300 year water supply criteria providing each home/lot. The Denver and Dawson aquifer has successfully been a primary source of water supply for similar homes at sufficient rates and duration to meet similar uses; the source is a dependable supply. The quality of the Denver and Dawson aquifers groundwater underlying the new proposed lot is under evaluation based on the parameters specified in the Land Development Code and will be available shortly.

$HAYES POZNANOVIC KORVER_{\rm LLC}$

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Re: Water Supply for Makings Minor Development 12172 Goodson Road, Colorado Springs, CO, 80908

To Whom It May Concern,

The following provides an overview of the water supplies that will provide service to the 4 lots of the Makings Minor Development ("MMD"). The MMD is on a 38.83-acre parcel, generally located in the SE1/4 of the NE1/4 of Section 14, Township 12 South, Range 65 West of the 6th P. M., also known as 12172 Goodson Road, Colorado Springs, CO, 80908, in El Paso County. This letter is based on amounts of groundwater quantified in Determination Nos. 462-BD (Denver Aquifer) and 463-BD (Dawson Aquifer), issued by the Colorado Ground Water Commission on March 16, 2004. Specific volumes of groundwater were conveyed to Andrew and Emilee Makings (the "Makings"), current owners of the MMD, via a quit claim deed dated August 22, 2022, and recorded on August 22, 2022 at Reception No. 222110915 in the records of the El Paso County Clerk and Recorder. This letter provides no opinion on the actual physical supply of groundwater available. This letter is not a title opinion and makes no conclusion about ownership of the groundwater described below.

Deeded Annual Amounts

The following volumes were deeded to the Makings and were approved for commercial, domestic, irrigation, industrial, fish and wildlife propagation, aesthetic, and for augmentation purposes on the MMD. The groundwater in the Dawson Aquifer is not-nontributary and requires replacement of actual depletions, and the groundwater in the Denver Aquifer is not-nontributary and requires a 4% replacement. The annual amounts below are based on a 300-year withdrawal period.

Determination No.	Aquifer	Annual Amount
462-BD	Denver (4% NNT)	6.675 acre-feet
463-BD	Dawson (NNT)	9.04 acre-feet

Proposed Replacement Plan

The Makings applied for a Dawson Aquifer Replacement Plan with the Colorado Ground Water Commission on November 15, 2022, and it is still pending. The replacement plan application requests the following uses on the MMD:

- One Well
 - Up to 2 single-family dwellings or their equivalent
 - 0.3 acre-feet per unit per year
 - 0.6 acre-feet per year total
 - Up to 1 acre of irrigation
 - 2 acre-feet per year
 - In-building Commercial Sanitary Use
 - 0.3 acre-feet per year
 - Watering of up to 80 large Domestic Animals
 - 1 acre-foot per year
 - Total Use = 3.9 acre-feet per year for 300 years
- Three Wells

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- One single-family dwelling
 - 0.3 acre-feet per year per well
 - 0.9 acre-feet per year total
- o 6,000 square-feet of irrigation
 - 0.3 acre-feet per year per well
 - 0.9 acre-feet per year total
- Watering of up to 8 large domestic animals
 - 0.1 acre-feet per year per well
 - 0.3 acre-feet per year total
- Each Well = 0.7 acre-feet per year for 300 years
- \circ Total Use = 2.1 acre-feet per year for 300 years
- MMD TOTAL ANNUAL USE = 6 acre-feet per year for 300 years.

Current Supply

There are currently no wells on the MMD. Well permits will need to be applied for and approved prior to drilling of any wells.

Adequacy of the Water Supply

The proposed replacement plan, as outlined above, along with the available supplies of groundwater, are sufficient to provide water to the MMD for 300 years. Further, if necessary, the Denver Aquifer can be used as a backup supply for each lot. All groundwater underlying each lot of the MMD will be conveyed to the successor in interest.

If you have any questions or comments, please feel free to call.

Sincerely,

HAYES POZNANOVIC KORVER, LLC

Eric K. Trout