



# Water Resources and Water Quality Report

## **Greaves Subdivision Filing No. 1**

**MVE Project No. 61211**

**April 19, 2024**

**PCD File No. VR**

Prepared for  
**Alan Greaves and Judith Greaves**  
2935 Underwood Pt, #10  
Colorado Springs, CO 80920  
(610) 476-9485

Prepared by  
**M.V.E., Inc.**  
1903 Lelaray Street, Suite 200  
Colorado Springs, CO 80909  
(719) 635-5736

# Water Resources and Water Quality Report

For

## Greaves Subdivision Filing No. 1

**Project No. 61211**

**April 19, 2024**

**PCD File No. VR**

Prepared for

**Alan Greaves and Judith Greaves**

2935 Underwood Pt, #10

Colorado Springs, CO 80920

(610) 476-9485

Prepared by

**M.V.E., Inc.**

1903 Lelaray Street, Suite 200

Colorado Springs, CO 80909

(719) 635-5736

# Contents

<b>Introduction .....</b>	<b>1</b>
<b>Expected Water Demands .....</b>	<b>2</b>
<b>Amounts Decreed and Available.....</b>	<b>3</b>
<b>Wastewater and Wastewater Treatment.....</b>	<b>3</b>
<b>Augmentation .....</b>	<b>3</b>
<b>Water Quality .....</b>	<b>4</b>
<b>Appendix.....</b>	<b>6</b>

## Introduction

This Waer Resources Report describes the water supply to serve the two (2) residential lots proposed in the Greaves Subdivision Filing No. 1 minor subdivision of 10.364 acres located within the northwest one-quarter of Section 5, Township 12 South, Range 65 west of the 6th principal meridian in El Paso County, Colorado (Subject Property). This report is intended to demonstrate the sufficiency in terms of quantity, quality, and dependability, of the water rights and resources to be utilized in the proposed subdivision. The proposed two proposed lots of the subdivision are 5.348 acres in area and 5.018 acres. Each of the lots are to be provided with water and sewer service through individual wells and individual Onsite Wastewater Treatment Systems (OWTS).

A water court decree facilitated by Monson, Cummins, Shohet & Farr, LLC, attorneys at law, is attached to this report showing the decreed amounts of the Dawson aquifer groundwater, along with the Denver, Arapahoe, and Laramie-Fox aquifers' groundwater, underlying the Subject Property. The document also approves a plan for augmentation for use of up to two (2) wells in the Dawson aquifer to serve each lot for a 300-year water supply period. Greaves Wells No. 1 is an existing well (Permit No. 170426). Greaves Well No. 2 is a proposed well to be constructed following platting of the property into two lots.

## Expected Water Demands

It is expected that the two residential lots in the subdivision will utilize two individual wells (one well per lot) drilled to the Dawson aquifer for domestic type uses, including indoor use, household uses including pool/hot tub, irrigation of lawn and garden and watering of horses, goats, chicken, or equivalent livestock. It is anticipated that the residences on the lots will each utilize up to 0.26 acre-feet annually for indoor use and up to 0.04 acre-feet for additional household uses. It is projected that each lot will also use 0.295 acre-feet per year for irrigation of lawn and garden and 0.24 acre-feet annually for the watering of four horses or equivalent livestock for a maximum total use of 0.835 acre- of water per lot as consistent with the decree in Case No. 22CW3072 and the El Paso County Land Development Code Section 8.4.7. The expected water uses and demands are presented in the table below.

Uses for the Existing Greaves Well No. 1 and the To Be Constructed Greaves Well No. 2	
Indoor and household use	0.30 acre-feet per year per unit for total of <b>0.60 acre-feet</b> per year
Irrigation use	0.295 acre-ft per year per unit for total of <b>0.59 acre-feet</b> per year limited to irrigation of 2,380 square feet of lawn or garden per unit for total of 4,760 square feet
Stock-watering use	0.24 acre-feet per year per unit limited to watering of 4 head per unit for total of

	<b>0.48 acre-feet</b> per year for total of 8 horses or equivalent livestock
Total annual Use per lot	<b>0.835 acre-feet</b> per year
Total annual Use in subdivision = 2 x 0.835 =	<b>1.67 acre-feet</b> per year
Total amount over 300 years = 300 x 1.67 =	<b>501 acre-feet</b>
Total decreed Dawson aquifer water (22CW3072) = <b>951 acre-feet</b> (See Decreed Amounts Below)	

The existing Greaves Well No. 1 and To Be Constructed Greaves Well No. 2 are expected to produce from the not-nontributary Dawson aquifer at a flow rate of 10 to 15 gallons per minute, based upon past production in the immediate area. The existing well will be re-permitted in accordance with the referenced Decree. There are no other wells currently constructed on the subject property except as listed above. 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.

#### Amounts Decreed and Available

The decreed amount of Dawson aquifer groundwater is not-nontributary. The decreed amounts of the Denver aquifer groundwater, Arapahoe aquifer groundwater and Laramie-Fox Hills aquifer groundwater are nontributary. The referenced decree sets forth withdrawal amounts based on 100-year aquifer life required by the State of Colorado as well as the El Paso County required 300-year aquifer life. The following annual amounts are decreed and are based on annual withdrawals over a 300-year period (one acre-foot is 325,851 gallons).

Annual withdrawals of the Existing Greaves Well No. 1 and To-Be-Constructed Greaves Well No. 2 from the Dawson aquifer (not-nontributary) shall not exceed 0.835 acre-feet each, nor more than 1.67 acre-feet total per year.

A copy of the Decree entered in Case No. 22CW3072 is attached in the appendix, including the following specific quantities of water anticipated to be available for and utilized in Greaves Subdivision Filing No. 1:

AQUIFER	Annual Average Withdrawal – 100 Years (Acre Feet)	Annual Average Withdrawal – 300 Years (Acre Feet)	Total Withdrawal (Acre Feet)
Dawson (NNT)	9.51	3.17	951
Denver (NT)	7.91	2.63	791
Arapahoe (NT)	4.31	1.43	431
Laramie-Fox Hills (NT)	2.87	0.95	287

Based on the anticipated water demands, the water supply for the residential lots using two (2) Dawson aquifer wells pursuant to the augmentation plan approved in the referenced Decree is sufficient and satisfies the 300-year supply requirement of El Paso County.

### **Wastewater and Wastewater Treatment**

A Soils and Geology Study and a Wastewater Study was prepared for this subdivision by Entech Engineering, Inc., both dated and revised March 17, 2022. The reports address the suitability of the site to support the use of individual On-site Wastewater Treatment Systems (OWTSs) which are to be utilized. The site has been evaluated for the use of on-site wastewater treatment systems to be located on each of the new lots. Based on such evaluation, the site is suitable for on-site wastewater treatment systems.

Septic projections are based on similar Denver Basin residential uses on rural residential lots. Average daily wastewater loads are expected to be approximately 160 gallons per day per single-family residence assuming residential in-house use at the 0.20 acre-feet per year rate described in the approved Augmentation Plan. Maximum daily wastewater loads are expected to be approximately 210 gallons per day per single-family residence based on the El Paso County Land Development Code residential demand standard of 0.26 acre-feet per year.

All single-family homes within Greaves Subdivision Filing No. 1 shall be served by individual on-site wastewater treatment systems which will be installed according to El Paso County and State Guidelines and properly maintained to prevent contamination of surface and subsurface water resources.

### **Augmentation**

Consistent with the Plan for Augmentation decreed in Water Division 2 Case No. 22CW3072, it is anticipated that each single-family residence will utilize a maximum of 0.835 annual acre feet of water through individual wells, with total demand for all four lots estimated at a maximum of 1.67 annual acre feet. Of this pumping, it is anticipated that 0.30 annual acre feet will be utilized for indoor and household purposes, with the remainder of pumping available for other uses authorized under the augmentation plan.

A plan for augmentation utilizing the underlying Denver Basin aquifers has been decreed by the District Court, Water Division 2, in Case No. 22CW3072. As particularly described in the attached Decree, a 300-year water supply is demonstrated in the Dawson aquifer, with all depletions augmented in time, place and amount through septic return flows during pumping, and through dedication of nontributary groundwater in the Arapahoe and Laramie-Fox Hills aquifers for replacement of injurious post-pumping depletions. Applicants shall reserve 220 acre-feet of the total 431 acre-feet of their decreed nontributary Arapahoe aquifer water and the entire 185 acre-

feet of their decreed Laramie-Fox Hills aquifer water for the replacement of post-pumping depletion.

Rural residential water supply demand will be met using not-nontributary Dawson formation wells, consistent with the plan for augmentation decreed in Case No. 22CW3072. Only one of the proposed two wells which will ultimately provide water supply to the lots within Greaves Subdivision Filing No. 1 has been drilled, to date.

The augmentation plan decreed in Case No. 22CW3072 will provide for a 300-year water supply for each of the anticipated lots within Greaves Subdivision Filing No. 1, with each lot utilizing an OWTS of a non-evaporative nature. The water resources to be utilized in the subdivision are typical to 5-acre rural residential development near the Black Forest and other parts of rural northeastern El Paso County, Colorado. The plan for augmentation decreed in Case No. 22CW3072 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.

### **Water Quality**

M.V.E., Inc. has examined water quality testing results for the existing Greaves Well No. 1 (permit No. 170426) located within the subject property. Testing for the required contaminants was performed by the Colorado-certified testing laboratories, Colorado Analytical Laboratories, Inc. and Hazen Research, Inc. The examined reports contain tests for each of the required contaminants for a confined aquifer in accordance with the Land Development Code of El Paso County (LDC). M.V.E. Inc. compared the test results to the Maximum Contaminant Level (MCL) for each substance and found the results to be within acceptable levels in accordance with El Paso County standards contained in the LDC. Copies of those testing results are collectively attached hereto as Exhibit E.

So as to ensure compliance with LDC Section 8.4.7(B)(3)(d), and all provisions of the LDC Section 8.4.7(B)(10), a full spectrum water quality testing on said well was obtained, including chemical analysis (see LDC Section 8.4.7(B)(10)(a)), testing against all applicable MCL's established by the EPCPH (see LDC Section 8.4.7(B)(10)(b)), and analysis of all major ions (see LDC Section 8.4.7(B)(10)(c)). The water samples were drawn from the closest available outdoor spigot connected to the State of Colorado permitted well of the Dawson Aquifer at 7030 Snow Mass Drive, Colorado Springs, CO 80908 on 3/1/2024. Said samples were collected by the applicant's consultant pursuant to instructions provided by Colorado Analytical Laboratories, Inc., who likewise assisted in maintaining a proper chain of custody on all such samples (see LDC Section 8.4.7(B)(10)(d)). All samples tested by Colorado Analytical Laboratories were obtained from the Dawson aquifer at an existing well on the project site and within ½ mile (see LDC Section 8.4.7(B)(10)(e)).

In accordance with LDC Section 8.4.7(B)(3)(d)(3), the owner has identified no unusual or atypical on-site or off-site sources of potential contamination, which is likely to, or has the real potential to, contaminate the confined Dawson aquifer from which the owner's source water is to be obtained. The requested subdivision of the subject property into approximately 5-acre lots is typical of the

region, as is the proposed water source. Potential contaminates would be non-compliant or poorly located septic systems (which will not be permitted within the subdivision), hazardous material spills, and sources of contamination contrary to existing law and regulation, and beyond the owner's control. Barring such misfeasance or malfeasance, the owner does not believe any on or off-site hazards of note exist.

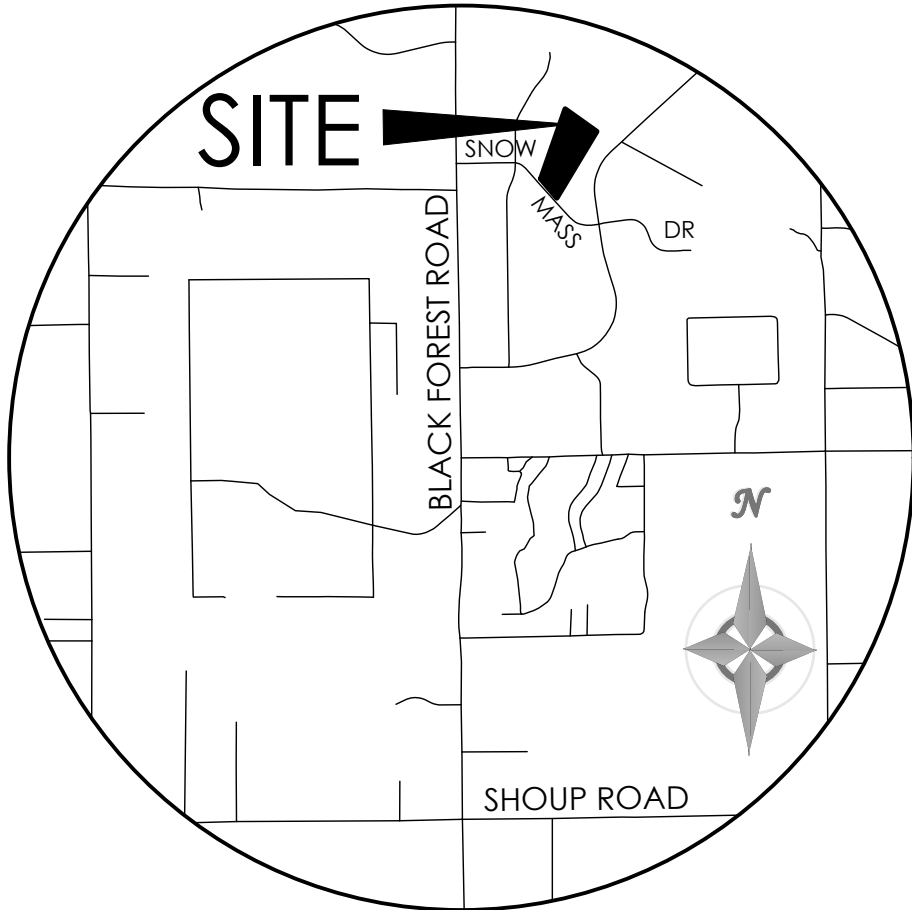
Based on these findings we recommend that the El Paso County Public Health and El Paso County Attorney's office make a finding of sufficiency for water quality for the Greaves Subdivision Filing No. 1 final plat. The existing Greaves Well No. 1 and To-Be-Constructed Greaves Well No. 2 will meet all such regulatory requirements regarding quality testing before being utilized as a residential water source.



# Appendix

Exhibit A	Vicinity Map and Site Map
Exhibit B	Water Decree (Water Division 2 Case No. 22CW3072)
Exhibit C	Well Permit (Permit No. 170426)
Exhibit D	Water Supply Information Summary (Form No. GWS-76)
Exhibit E	Water Quality Testing Results

## **Exhibit A    Vicinity Map and Site Map**

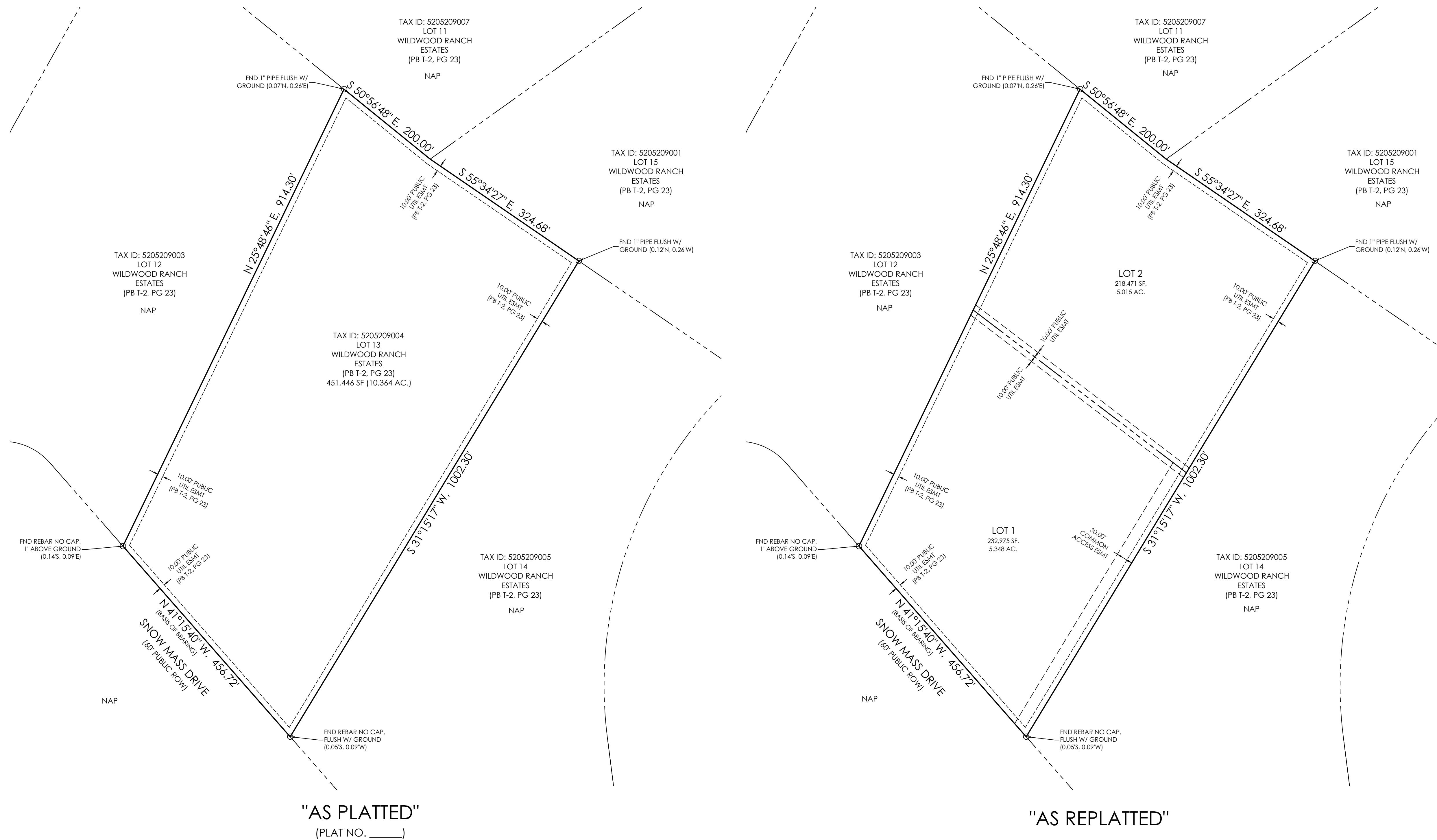


# VICINITY MAP

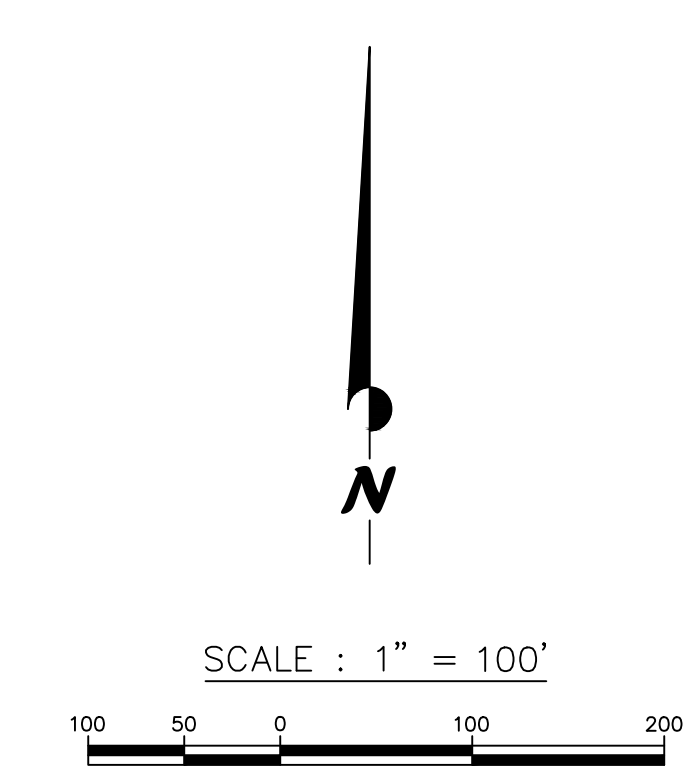
NOT TO SCALE

# GREAVES SUBDIVISION FILING NO. 1

A REPLAT OF LOT 13, WILDWOOD RANCH ESTATES FILING 7  
 NORTHWEST QUARTER OF SECTION 5, TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE 6TH P.M.  
 EL PASO COUNTY, COLORADO



- LEGEND**
- PROPOSED BOUNDARY LINE
  - - - PROPOSED LOT LINE
  - - - PROPOSED EASEMENT
  - - - SECTION LINE
  - FOUND CORNER AS SHOWN
  - SET #5 REBAR W/ ALUMINUM CAP MARKED "POLARIS, PLS 27605" FLUSH WITH THE GROUND
  - ( 15980 ) ADDRESS NUMBER
  - PUDE PUBLIC UTILITY AND DRAINAGE EASEMENT
  - NAP NOT A PART OF THIS SUBDIVISION (NO AREAS OUTSIDE OF THE SHOWN BOUNDARY ARE A PART OF THIS SUBDIVISION)



REGISTERED LAND SURVEYOR IN THE STATE OF COLORADO, NO 27605 FOR AND ON BEHALF OF POLARIS SURVEYING, INC. NOTICE: ACCORDING TO COLORADO LAW, YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT, MAY ANY ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF CERTIFICATION SHOWN HEREON.

**GREAVES SUBDIVISION FILING NO. 1**  
 A REPLAT OF LOT 13, WILDWOOD RANCH ESTATES FILING 7  
 NORTHWEST QUARTER OF SECTION 5, TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE 6TH P.M.  
 EL PASO COUNTY, COLORADO

REVISIONS			
ZONE	REV	DESCRIPTION	DATE

DRAWN BY: TJW  
 CHECKED BY: RDH  
 JOB NO: 231102  
 DATE: 12/27/2023  
 DRAWING NO: 231102\_PLAT  
 SHEET: 2 OF 2

**POLARIS SURVEYING, INC.**  
 1903 Lelary Street, Suite 102  
 COLORADO SPRINGS, CO 80909  
 (719)448-0844 FAX (719)448-9225

PCD FILE NO:  
 GREAVES SUBDIVISION  
 FINAL PLAT  
 For:  
 ALAN & JUDITH GREAVES

**Exhibit B      Water Decree (Water Division 2 Case No.  
22CW3072)**

<b>DISTRICT COURT, WATER DIVISION 2, COLORADO</b>  Court Address: 501 North Elizabeth Street, Suite 116 Pueblo, CO 81003  Phone Number: (719) 404-8832	DATE FILED: May 10, 2023 2:29 PM CASE NUMBER: 2022CW3072
<b>CONCERNING THE APPLICATION FOR WATER RIGHTS OF:</b>  <b>ALAN GREAVES &amp; JUDITH ANN GREAVES</b>  <b>IN EL PASO COUNTY</b>	<p style="text-align: center;">▲ COURT USE ONLY ▲</p> <hr/> Case No.: 22CW3072
<b>FINDINGS OF FACT, CONCLUSIONS OF LAW, RULING OF REFEREE AND DECREE: ADJUDICATING DENVER BASIN GROUNDWATER AND APPROVING PLAN FOR AUGMENTATION</b>	

THIS MATTER comes before the Water Court on the Application filed by Alan and Judith Ann Greaves, and having reviewed said Application and other pleadings on file, and being fully advised on this matter, the Water Court makes the following findings and orders:

#### GENERAL FINDINGS OF FACT

1. The applicants in this case are Alan and Judith Ann Greaves, whose address is 3880 Inspiration Drive, Colorado Springs CO 80917 ("Applicants"). The Applicants are the owner of the land totaling approximately 10.34 acres on which the structure sought to be adjudicated and augmented herein is located, and under which lies the Denver Basin groundwater described in this decree, and is the owner of the place of use where the water will be put to beneficial use ("Applicants' Property").

2. The Applicants filed this Application with the Water Courts for Water Division 2 on October 31, 2022. The Application was referred to the Water Referee in Division 2 on October 31, 2022.

3. The time for filing statements of opposition to the Application expired on the last day of December 2022. No statements of opposition were filed.

4. The Clerk of this Court has caused publication of the Application filed in this matter as provided by statute and the publication costs have been paid. Publication occurred in Douglas and El Paso Counties. On November 21, 2022, proof of publication in the *Douglas County News Press* within Douglas County was filed with Division 2 Water Court. On November 28, 2022, proof of publication in the *The Gazette* within El Paso

County was filed with Division 2 Water Court. All notices of the Application have been given in the manner required by law.

5. Pursuant to C.R.S. §37-92-302(2), the Office of the State Engineer has filed Determination of Facts for each Denver Basin aquifer with this Court on January 13, 2023, which have been considered by the Court in the entry of this decree.

6. Pursuant to C.R.S. §37-92-302(4), the office of the Division Engineer for Water Division No. 2 filed its Consultation Report dated February 21, 2023. Applicants have addressed all matters raised in the Consultation Report in this Decree, and provided a Response to Consultation Report as part of their Motion for Entry of Decree dated, March 30, 2023, consistent with the Order of this Court dated March 3, 2023. The Consultation Report has been considered by the Water Court in the entry of this decree.

7. The Water Court has jurisdiction over the subject matter of these proceedings and over all who have standing to appear as parties whether they have appeared or not. The land and water rights involved in this case are not within a designated groundwater basin.

## **GROUNDWATER RIGHTS**

8. The Applicants seek quantification and adjudication of underground water rights for the existing well ("Greaves Well No. 1"), as is constructed to the Dawson aquifer, and Greaves Well No. 2, which is planned to be constructed on the property following subdivision of the Applicants' Property, and any additional or replacement wells associated therewith, for withdrawal of Applicants' full entitlements of supply under the plan for augmentation decreed herein. Applicants also requested quantification and adjudication of water uses from the Denver, Arapahoe, and Laramie-Fox Hills aquifers. The following findings are made with respect to such underground water rights.

9. The land overlying the groundwater subject to the adjudication in this case is owned by the Applicants and consists of approximately 10.34 acres located in the NE $\frac{1}{4}$  of the NW $\frac{1}{4}$  of Section 5, Township 12 South, Range 65 West of the 6<sup>th</sup> P.M. in El Paso County, Colorado, more specifically described as Lot 13 of Wildwood Ranch Estates, filing 7, with an address of 7030 Snow Mass Drive, Colorado Springs, CO 80908 ("Applicants' Property"). All groundwater adjudicated herein shall be withdrawn from the overlying land, consistent with Rule 4.A.8 of the Statewide Nontributary Groundwater Rules and C.R.S. § 37-90-137(4)(b)(II), unless there is a further order of this Court allowing otherwise following the filing of a new water court application.

10. In accordance with the notice requirements of C.R.S. §37-92-302(2)(b),

Proof of Notice to Lienholder on the Applicant’s Property was filed with the Division 2 Water Court on November 15, 2022.

11. Greaves Well: Greaves Well No. 1 is located on the Applicants’ Property and is currently permitted and constructed as an exempt well pursuant to C.R.S. §37-92-602 under Well Permit No. 170426. Applicants are awarded the vested right to use the Greaves Well No. 1, and Greaves Well No. 2, along with any necessary additional or replacement wells associated with such structures, for the extraction and use of groundwater from the not-nontributary Dawson aquifer pursuant to the Plan for Augmentation decreed herein. Applicants waive the 600 foot spacing requirement for all wells located on the Applicants’ Property. Upon entry of this decree and submittal by the Applicants of a complete well permit application and filing fee, the State Engineer shall conduct an analysis and issue a revised permit for the Greaves Well No. 1 pursuant to C.R.S. §37-90-137(4) if determined appropriate, consistent with and referencing the Plan for Augmentation decreed herein.

12. Of the statutorily described Denver Basin aquifers, the Dawson, Denver, Arapahoe, and Laramie-Fox Hills aquifers all exist beneath the Applicants’ Property. The Dawson aquifer underlying the Applicants’ Property contains not-nontributary water, while the water in the Denver, Arapahoe, and Laramie-Fox Hills aquifers underlying the Applicants’ Property is nontributary. The quantity of water in the Denver Basin aquifers exclusive of artificial recharge underlying the Applicants’ Property is as follows:

<b>AQUIFER</b>	<b>NET SAND (ft)</b>	<b>Total Withdrawal (Acre Feet)</b>	<b>Annual Avg. Withdrawal 100 Years (Acre Feet)</b>	<b>Annual Avg. Withdrawal 300 Years (Acre Feet)</b>
Dawson (NNT)	460	951*	9.51	3.17
Denver (NT)	450	791	7.91	2.63
Arapahoe (NT)	245	431	4.31	1.43
Laramie-Fox Hills (NT)	185	287	2.87	0.95

\* These values reflect the water available in the Dawson, according to the State Engineer’s Determination of Facts, upon the re-permitting of Greaves Well No. 1 following the issuance of this decree. If the well is not re-permitted the water available in the Dawson aquifer will be 818 acre-feet, with an annual average withdrawal amount of 8.18 acre-feet.

13. Pursuant to C.R.S. §37-90-137(9)(c.5)(I), the augmentation requirements for wells in the Dawson aquifer require the replacement to the effected stream systems of actual stream depletions on an annual basis. The Applicants’ Property is located less than one mile from any point of contact with a surface stream. Applicants shall not be entitled to construct a well or use water from the not-nontributary Dawson aquifer except pursuant to an approved augmentation plan in accordance with C.R.S. §37-90-137(9)(c.5), including as decreed herein.



14. Subject to the augmentation requirements described in Paragraphs 15 and 22 and the other requirements and limitations in this decree, Applicants shall be entitled to withdraw all legally available groundwater in the Denver Basin aquifers underlying Applicants' Property. Said amounts can be withdrawn over the 100-year life for the aquifers as set forth in C.R.S. §37-90-137(4), or withdrawn over a longer period of time based upon local governmental regulations or Applicants' water needs provided withdrawals during such longer period are in compliance with the augmentation requirements of this decree. This decree describes a pumping period of 300-years, consistent with El Paso County, Colorado Land Development Code § 8.4.7(C)(1). The average annual amounts of ground water available for withdrawal from the underlying Denver Basin aquifers, based upon the 300-year aquifer life, are determined and set forth above, based upon the January 13, 2023 Office of the State Engineer Determination of Facts described in Paragraph 5.

15. Applicants shall be entitled to withdraw an amount of groundwater in excess of the average annual amount decreed herein from the Denver Basin aquifers underlying Applicants' Property, so long as the sum of the total withdrawals from wells in each of the aquifers does not exceed the product of the number of years since the date of issuance of the original well permit or the date of entry of the decree herein, whichever comes first, and the average annual volume of water which Applicants are entitled to withdraw from each of the aquifers underlying Applicants' Property, subject to the requirement that such banking and excess withdrawals do not violate the terms and conditions of the plan for augmentation decreed herein and any other plan for augmentation decreed by the Court that authorizes withdrawal of the Denver Basin groundwater decreed herein.

16. Subject to the terms and conditions in the plan for augmentation decreed herein and final approval by the State Engineer's Office pursuant to the issuance of well permits consistent with C.R.S. §§37-90-137(4) or 37-90-137(10), the Applicants shall have the right to use the ground water for beneficial uses upon the Applicants' Property consisting of domestic (including long and short-term rentals), irrigation, stock water, recreation, commercial (home office), wildlife, fire protection, and also for storage and augmentation purposes associated with such uses. The amount of groundwater decreed for such uses upon the Applicants' Property is reasonable as such uses are to be made for the long-term use and enjoyment of the Applicants' Property and is to establish and provide for adequate water reserves. The nontributary groundwater may be used, reused, and successively used to extinction, both on and off the Applicants' Property subject, however, to the limitations imposed on the use of the Laramie-Fox Hills aquifer groundwater by this decree and the requirement under C.R.S. §37-90-137(9)(b) that no more than 98% of the amount withdrawn annually shall be consumed. Applicant may use such water by immediate application or by storage and subsequent application to the

beneficial uses and purposes stated herein. Provided however, as set forth above, Applicants shall only be entitled to construct a well or use water from the not-nontributary Dawson aquifer pursuant to a decreed augmentation plan entered by the Court, including that plan for augmentation decreed herein.

17. Withdrawals of groundwater available from the nontributary Denver, Arapahoe, and Laramie-Fox Hills aquifers beneath the Applicants' Property in the amounts determined in accordance with the provisions of this decree will not result in injury to any other vested water rights or to any other owners or users of water.

### **PLAN FOR AUGMENTATION**

18. The structures to be augmented Greaves Well Nos. 1 and 2, constructed to the not-nontributary Dawson aquifer underlying the Applicants' Property. Greaves Well No. 1 will be re-permitted pursuant to the plan for augmentation described herein, and any additional or replacement wells associated therewith.

19. Prior to drilling any new or replacement wells on Applicants' Property a site specific evaluation shall be conducted with each well permit to identify the aquifer intervals at the planned location.

20. Pursuant to C.R.S. §37-90-137(9)(c.5), the augmentation obligation for the Greaves Well Nos. 1 and 2, and any additional or replacement wells constructed to the Dawson aquifer requires the replacement of actual stream depletions. The water to be used for augmentation during pumping is the septic system return flows of the not-nontributary Dawson aquifer pumped via the Greaves Well Nos. 1 and 2 as set forth in this plan for augmentation. The water to be used for augmentation after pumping is the reserved portion of Applicants' nontributary water rights in the Laramie-Fox Hills aquifer. Applicants shall provide for the augmentation of stream depletions caused by pumping the Graves Well Nos. 1 and 2 as approved herein. Water use criteria is as follows:

A. Use: The Greaves Well Nos. 1 and 2 may pump 1.67 acre feet annually from the Dawson aquifer. Indoor use will utilize an estimated 0.26 acre-feet of water per year for each single-family dwelling based upon applicable El Paso County Development Code, for total in-house uses of 0.52 acre feet annually, with the remaining 1.15 acre-feet per year pumping entitlement available for other uses on the Applicants' Property, including household uses, irrigation of lawn and garden, pool/hot tub, and the watering of horses, goats, chickens, or equivalent livestock. The foregoing figures assume the use of two septic systems, one for each residence.

B. Depletions: Maximum annual stream depletions over the 300-year pumping period will amount to approximately 21.45% of pumping. Maximum annual

depletions for total residential pumping from the two wells are therefore 0.358 acre-feet in year 300. Should Applicants' pumping be less than the total 1.67 annual acre-feet described herein, resulting depletions and required replacements will be correspondingly reduced. If Applicant's indoor uses are not sufficient to supply return flows then Applicant will identify additional sources of supply or what uses to curtail to reduce depletions on the stream system.

C. Augmentation of Depletions During Pumping Life of Well: Pursuant to C.R.S. §37-90-137(9)(c.5), Applicants are required to replace actual stream depletions attributable to pumping of the Dawson aquifer well. Applicants have shown that depletions during pumping will be effectively replaced by residential return flows from non-evaporative septic systems. The annual consumptive use for non-evaporative septic systems is estimated at 10% per year per residence. For determining return flows Applicant uses the conservative assumption that one single-family household will use 0.20 acre feet per year, with return flows of 0.18 acre feet annually for each residence, or 0.36 acre feet combined return flows. Thus, during pumping, total maximum annual stream depletions will be adequately augmented.

D. Augmentation of Post Pumping Depletions: This plan for augmentation shall have a pumping period of a minimum of 300 years. For the replacement of post-pumping depletions which may be associated with the use of the Greaves Well Nos. 1 and 2, and any additional or replacement wells, Applicants will reserve up to 220 acre feet of water from the nontributary Arapahoe aquifer, and the entirety of the nontributary Laramie-Fox Hills aquifer groundwater decreed herein, to replace post-pumping depletions. The amount of nontributary Arapahoe aquifer and Laramie-Fox Hills aquifer groundwater reserved may be reduced as may be determined through this Court's retained jurisdiction as described in this decree. If the Court, by order, reduces the Applicants' obligation to account for and replace such post-pumping depletions for any reason, it may also reduce the amount of Arapahoe aquifer, or Laramie-Fox Hills aquifer, groundwater reserved for such purposes, as described herein. Applicants also reserve the right to substitute other legally available augmentation sources for such post pumping depletions upon further approval of the Court under its retained jurisdiction. Even though this reservation is made, under the Court's retained jurisdiction, Applicants reserve the right in the future to prove that post pumping depletions will be noninjurious. Pursuant to C.R.S. §37-90-137(9)(b), no more than 98% of water withdrawn annually from a nontributary aquifer shall be consumed. The total post pumping depletions to be replaced are 501 acre feet. Applicant has reserved the entirety of the Laramie-Fox Hills aquifer, and 220 acre feet of water from the Arapahoe to sufficiently meet this post pumping obligation.

E. Permit: Upon entry of a decree in this case, the Applicants will be eligible to apply to the State Engineer for, and receive, a new well permit for the Greaves

Well No. 1 for the uses in accordance with this decree, consistent with C.R.S. §37-90-137(4).

21. This decree, upon recording, shall constitute a covenant running with Applicants' Property, benefitting and burdening said land, and requiring construction of well(s) to the nontributary Arapahoe and Laramie-Fox Hills aquifers and pumping of water to replace post-pumping depletions under this decree. Subject to the requirements of this decree, in order to determine the amount and timing of post-pumping replacement obligations under this augmentation plan, Applicants or their successors shall use information commonly used by the Colorado Division of Water Resources for augmentation plans of this type at the time. Pursuant to this covenant, the water from the nontributary Laramie-Fox Hills aquifer reserved herein may not be severed in ownership from the Applicants' Property, nor can up to 220 acre feet of water in the nontributary Arapahoe aquifer. This covenant shall be for the benefit of, and enforceable by, third parties owning vested water rights who would be injured by the failure to provide for the replacement of post-pumping depletions under the decree, and shall be specifically enforceable by such third parties against the owner of the Applicants' Property.

22. Applicants or their successors shall be required to initiate pumping from the Arapahoe and Laramie-Fox Hills aquifers for the replacement of post-pumping depletions when either: (i) the absolute total amount of water available from the Dawson aquifer allowed to be withdrawn under the plan for augmentation decreed herein (501 acre feet) has been pumped; (ii) the Applicants or their successors in interest have acknowledged in writing that all withdrawals for beneficial use through the Greaves Well No. 1 and Greaves Well No. 2 have permanently ceased, (iii) a period of 10 consecutive years where no withdrawals of groundwater has occurred, or (iv) accounting shows that return flows from the use of the water being withdrawn are insufficient to replace depletions caused by the withdrawals that already occurred.

23. Unless modified by the Court under its retained jurisdiction, Applicants and their successors shall be responsible for accounting and replacement of post-pumping depletions as set forth herein. Should Applicants' obligation hereunder to account for and replace such post-pumping stream depletions be reduced or abrogated for any reason, Applicants may petition the Court to also modify or terminate the reservation of the Laramie-Fox Hills aquifer groundwater and the 220 acre feet of Arapahoe aquifer groundwater.

24. The term of this augmentation plan is for a minimum of 300 years, however, the length of the plan for a particular well or wells may be extended beyond such time provided the total plan pumping allocated to such well or wells is not exceeded. Should the actual operation of this augmentation plan depart from the planned diversions described in Paragraph 20 such that annual diversions are increased or the duration of

the plan is extended, the Applicants must prepare and submit a revised model of stream depletions caused by the actual pumping or intended schedule. This analysis must utilize depletion modeling acceptable to the State Engineer, and to this Court, and must represent the water use under the plan for the entire term of the plan to date. The analysis must show that return flows have equaled or exceeded actual stream depletions throughout the pumping period and that reserved nontributary water remains sufficient to replace post-pumping depletions.

25. Consideration has been given to the depletions from Applicants' use and proposed uses of water, in quantity, time and location, together with the amount and timing of augmentation water which will be provided by the Applicants, and the existence, if any, of injury to any owner of or person entitled to use water under a vested water right.

26. It is determined that the timing, quantity and location of replacement water under the protective terms in this decree are sufficient to protect the vested rights of other water users and eliminate injury thereto. The replacement water shall be of a quantity and quality so as to meet the requirements for which the water of senior appropriators has normally been used, and provided of such quality, such replacement water shall be accepted by the senior appropriators for substitution for water derived by the exercise of the Greaves Well Nos. 1 and 2. As a result of the operation of this plan for augmentation, the depletions from the Greaves Well Nos. 1 and 2 and any additional or replacement wells associated therewith will not result in injury to the vested water rights of others.

### **CONCLUSIONS OF LAW**

27. The application for adjudication of Denver Basin groundwater and approval of plan for augmentation was filed with the Water Clerks for Water Divisions 2, pursuant to C.R.S. §§37-92-302(1)(a) and 37-90-137(9)(c.5).

28. The Applicants' request for adjudication of these water rights is contemplated and authorized by law, and this Court and the Water Referee have exclusive jurisdiction over these proceedings. C.R.S. §§37-92-302(1)(a), 37-92-203, and 37-92-305.

29. Subject to the terms of this decree, the Applicants are entitled to the sole right to withdraw all the legally available water in the Denver Basin aquifers underlying the Applicants' Property, and the right to use that water to the exclusion of all others.

30. The Applicants have complied with C.R.S. §37-90-137(4), and the groundwater is legally available for withdrawal by the requested nontributary well(s), and legally available for withdrawal by the requested not-nontributary well(s) upon the entry of this decree approving an augmentation plan pursuant to C.R.S. §37-90-137(9)(c.5),

and the issuance of a well permit by the State Engineer's Office. Applicants are entitled to a decree from this Court confirming their rights to withdraw groundwater pursuant to C.R.S. §37-90-137(4).

31. The Denver Basin water rights applied for in this case are not conditional water rights, but are vested water rights determined pursuant to C.R.S. §37-90-137(4). No applications for diligence are required. The claims for nontributary and not-nontributary groundwater meet the requirements of Colorado Law.

32. The determination and quantification of the nontributary and not-nontributary groundwater rights in the Denver Basin aquifers as set forth herein is contemplated and authorized by law. C.R.S. §§37-90-137, and 37-92-302 through 37-92-305.

33. The Applicants' request for approval of a plan for augmentation is contemplated and authorized by law. If administered in accordance with this decree, this plan for augmentation will permit the uninterrupted diversions from the Greaves Well Nos. 1 and 2 without adversely affecting any other vested water rights in the Arkansas River or its tributaries and when curtailment would otherwise be required to meet a valid senior call for water. C.R.S. §§37-92-305(3), (5), and (8).

**IT IS THEREFORE ORDERED, ADJUDGED AND DECREED AS FOLLOWS:**

34. All of the foregoing Findings of Fact and Conclusions of Law are incorporated herein by reference, and are considered to be a part of this decretal portion as though set forth in full.

35. The Application for Adjudication of Denver Basin Groundwater and Plan for Augmentation filed by the Applicants is approved, subject to the terms of this decree.

A. Applicants are awarded a vested right to 951 acre feet of groundwater from the not-nontributary Dawson aquifer underlying Applicants' Property, as quantified in Paragraph 12 or as modified by the Court under its retained jurisdiction. Of this total amount, 516.4 acre feet may be pumped pursuant to the plan for augmentation decreed herein.

B. Applicants are awarded a vested right to 791 acre feet of groundwater from the nontributary Denver aquifer underlying Applicants' Property, as quantified in Paragraph 12 or as modified by the Court under its retained jurisdiction. Subject to the provisions of Rule 8 of the Denver Basin Rules, 2 CCR 402-6, limiting consumption to ninety-eight percent of the amount withdrawn, and the other terms and

conditions of this decree, Applicants' Denver aquifer groundwater may be utilized for all purposes described in Paragraph 18.

C. Applicants are awarded a vested right to 431 acre feet of groundwater from the nontributary Arapahoe aquifer underlying Applicants' Property, as quantified in Paragraph 12 or as modified by the Court under its retained jurisdiction. Subject to the provisions of Rule 8 of the Denver Basin Rules, 2 CCR 402-6, limiting consumption to ninety-eight percent of the amount withdrawn, and the other terms and conditions of this decree, Applicants' Arapahoe aquifer groundwater may be utilized for all purposes described in Paragraph 19, subject to the reservation of 220 acre feet of the 431 total acre feet awarded to be utilized only for replacement of post-pumping depletions under the plan for augmentation decreed herein, as described in Paragraph 21.D., above.

D. Applicants are awarded a vested right to 287 acre feet of groundwater from the nontributary Laramie-Fox Hills aquifer underlying Applicants' Property, as quantified in Paragraph 12 or as modified by the Court under its retained jurisdiction. Subject to the provisions of Rule 8 of the Denver Basin Rules, 2 CCR 402-6, limiting consumption to ninety-eight percent of the amount withdrawn, and the other terms and conditions of this decree, Applicants' Laramie-Fox Hills aquifer groundwater may be utilized for all purposes described in Paragraph 16, subject to the reservation of up to the entirety of the water from the nontributary Laramie-Fox Hills aquifer awarded to be utilized only for replacement of post-pumping depletions under the plan for augmentation decreed herein, as described in Paragraph 20.D., above.

E. All determinations decreed herein are subject to the Court's retained jurisdiction, pursuant to CRS §37-92-305(11), and governed by the Denver Basin Rules and the Statewide Nontributary Ground Water Rules as provided in §37-90-137(9)(a), CRS.

36. The Applicants have furnished acceptable proof as to all claims and, therefore, the Application for Adjudication of Denver Basin Groundwater and Plan for Augmentation, as filed by the Applicants, is granted and approved in accordance with the terms and conditions of this decree. Approval of this Application will not result in any injury to senior vested water rights.

37. The Applicants shall comply with C.R.S. §37-90-137(9)(b), requiring the relinquishment of the right to consume two percent (2%) of the amount of the nontributary groundwater withdrawn annually. Ninety-eight percent (98%) of the nontributary groundwater withdrawn annually may therefore be consumed. No plan for augmentation shall be required to provide for such relinquishment. Applicants shall be required to

demonstrate to the State Engineer prior to the issuance of a well permit that no more than ninety-eight percent of the groundwater withdrawn annually will be consumed.

38. The Greaves Well Nos. 1 and 2, and any replacement or additional wells, shall be operated such that combined pumping from all wells does not exceed the annual (1.67 acre feet) and total (501 acre feet) pumping limits for the Dawson aquifer as decreed herein, and is in accordance with the requirements of the plan for augmentation described herein. The State Engineer, the Division Engineer, and/or the Water Commissioner shall not curtail the diversion and use of water by the Greaves Well Nos. 1 and 2 or any additional and replacement wells so long as the return flows from the annual diversions associated with the Greaves Well Nos. 1 and 2 and such other wells accrue to the stream system pursuant to the conditions contained herein. To the extent that Applicants or one of its successors or assigns is ever unable to provide the replacement water required, then the Greaves Well Nos. 1 and 2 and any additional or replacement wells shall not be entitled to operate under the protection of this plan, and shall be subject to administration and curtailment in accordance with the laws, rules, and regulations of the State of Colorado. Pursuant to C.R.S. §37-92-305(8), the State Engineer shall curtail all out-of-priority diversions which are not so replaced as to prevent injury to vested water rights. In order for this plan for augmentation to operate, return flows from the septic system(s) discussed herein shall at all times during pumping be in an amount sufficient to replace the amount of stream depletions, and cannot be sold, leased, traded, assigned, or otherwise used for any purpose inconsistent with the augmentation plan decreed herein. Applicants shall be required to have any wells pumping on the Applicants' Property providing water for in-house use and generating septic system returns prior to pumping the wells for any of the other uses identified in Paragraphs 16 or 20.A.

39. The Court retains jurisdiction over this matter to make adjustments in the allowed average annual amount of withdrawal from the Denver Basin aquifers, either upwards or downwards, to conform to actual local aquifer characteristics, and the Applicants need not file a new application to request such adjustments

A. At such time as adequate data may be available, Applicants or the State Engineer may invoke the Court's retained jurisdiction as provided in this Paragraph 39 for purposes of making a final determination of water rights as to the quantities of water available and allowed average annual withdrawals from any of the Denver Basin aquifers quantified and adjudicated herein. Any person seeking to invoke the Court's retained jurisdiction for such purpose shall file a verified petition with the Court setting forth with particularity the factual basis for such final determination of Denver Basin water rights under this decree, together with the proposed decretal language to effect the petition. Within four months of the filing of such verified petition, the State Engineer's Office shall utilize such information as available to make a final determination of water rights finding,



and shall provide such information to the Court, Applicant, opposer, and the petitioning party.

B. If no protest is filed with the Court to such findings by the State Engineer's Office within sixty (60) days, this Court shall incorporate by entry of an Amended Decree such "final determination of water rights", and the provisions of this Paragraph 38 concerning adjustments to the Denver Basin ground water rights based upon local aquifer conditions shall no longer be applicable. In the event of a protest being timely filed, or should the State Engineer's Office make no timely determination as provided in Paragraph 38.A., above, the "final determination of water rights" sought in the petition may be made by the Water Court after notice to all parties and following a full and fair hearing, including entry of an Amended Decree, if applicable in the Court's reasonable discretion.

40. Pursuant to C.R.S. §37-92-304(6), the Court shall retain continuing jurisdiction over the plan for augmentation decreed herein for reconsideration of the question of whether the provisions of this decree are necessary and/or sufficient to prevent injury to vested water rights of others, as pertains to the use of Denver Basin groundwater supplies adjudicated herein for augmentation purposes. The Court also retains continuing jurisdiction for the purpose of determining compliance with the terms of the augmentation plan. The Court further retains jurisdiction should the Applicants later seek to amend this decree by seeking to prove that post-pumping depletions are noninjurious, that the extent of replacement for post-pumping depletions is less than the amount of water reserved herein, and other post-pumping matters addressed in Paragraph 21.D. The Court's retained jurisdiction may be invoked using the process set forth in Paragraph 41.

41. Except as otherwise specifically provided in Paragraphs 37-40, above, pursuant to the provisions of §37-92-304(6) and §37-92-305(11), C.R.S., this plan for augmentation decreed herein shall be subject to the reconsideration of this Court on the question of material injury to vested water rights of others, for a period of five years. Any person, within such period, may petition the Court to invoke its retained jurisdiction. Any person seeking to invoke the Court's retained jurisdiction shall file a verified petition with the Court setting forth with particularity the factual basis for requesting that the Court reconsider injury to petitioner's vested water rights associated with the operation of this decree, together with proposed decretal language to effect the petition. The party filing the petition shall have the burden of proof of going forward to establish a prima facie case based on the facts alleged in the petition. If the Court finds those facts are established, Applicants shall thereupon have the burden of proof to show: (i) that the petitioner is not injured, or (ii) that any modification sought by the petitioner is not required to avoid injury

to the petitioner, or (iii) that any term or condition proposed by Applicants in response to the petition does avoid injury to the petitioner. The Division of Water Resources as a petitioner shall be entitled to assert injury to the vested water rights of others. If no such petition is filed within such period and the retained jurisdiction period is not extended by the Court in accordance with the provisions of the statute, this matter shall become final under its own terms.

42. Pursuant to C.R.S. §37-92-502(5)(a), the Applicants shall install and maintain such water measurement devices and recording devices as are deemed necessary by the State Engineer or Division Engineers, and the same shall be installed and operated in accordance with instructions from said entities. Applicants are to install and maintain a totalizing flow meter on Greaves Well Nos. 1 and 2, or any additional or replacement wells associated therewith. Applicants shall read and record the well meter readings and submit to the Commission bi-annually, on October 31<sup>st</sup> and March 31<sup>st</sup>, or as otherwise requested by the Water Commissioner.

43. The vested water rights, water right structures, and plan for augmentation decreed herein shall be subject to all applicable administrative rules and regulations, as currently in place or as may in the future be promulgated, of the offices of Colorado State and Division Engineers for administration of such water rights, to the extent such rules and regulations are uniformly applicable to other similarly situated water rights and water users. The Greaves Wells Nos. 1 and 2 shall be permitted as a non-exempt structure under the plan for augmentation decreed herein. The State Engineer shall identify in any permits issued pursuant to this decree the specific uses which can be made of the groundwater to be withdrawn, and, to the extent the well permit application requests a use that has not been specifically identified in this decree, shall not issue a permit for any proposed use, which use the State Engineer determines to be speculative at the time of the well permit application or which would be inconsistent with the requirements of this decree, any separately decreed plan for augmentation, or any modified decree and augmentation plan.

44. This Ruling of Referee, when entered as a decree of the Water Court, shall be recorded in the real property records of El Paso County, Colorado. Copies of this ruling shall be mailed as provided by statute.

DATED: April 10, 2023.

BY THE REFEREE:



Kate Brewer, Water Referee



Water Division 2


**DECREE**

THE COURT FINDS THAT NO PROTEST WAS MADE IN THIS MATTER, THEREFOR THE FORGOING RULING IS CONFIRMED AND APPROVED, AND IS HEREBY MADE THE JUDGMENT AND DECREE OF THIS COURT.

DATED: May 10, 2023



BY THE COURT:

  
LARRY C. SCHWARTZ, WATER JUDGE  
WATER DIVISION 2

**Exhibit C      Well Permit (Permit No. 170426)**

RECEIVED  
JUL 11 '94

WATER RESOURCES  
STATE ENGINEER  
1000

1. WELL PERMIT NUMBER 170426 170426

2. OWNER NAME(S) Michael & Tracey Cranford  
Mailing Address 7030 Snowmass Drive  
City, St. Zip Colo. Spgs, CO. 80908  
Phone (719 ) 574-5905

3. WELL LOCATION AS DRILLED: NE 1/4 NW 1/4, Sec. 5 Twp. 12 S Range 65 W  
DISTANCES FROM SEC. LINES:  
956 ft from North Sec. line. and 1490 ft from West Sec. line.  
(north or south) (east or west)  
SUBDIVISION: WILDWOOD RANCH ESTATES LOT 13 BLOCK \_\_\_\_\_ FILING(UNIT) 7  
STREET ADDRESS AT WELL LOCATION: 7030 Snowmass Drive

4. PUMP DATA: Type Submersible Installation Completed 7-6-94  
Pump Manufacturer Red Jacket Pump Model No. 14BC100SE1  
Design GPM 10 at RPM 3450, HP 1, Volts 230, Full Load Amps 10.2  
Pump Intake Depth 290 Feet, Drop/Column Pipe Size 1" Inches, Kind PVC

ADDITIONAL INFORMATION FOR PUMPS GREATER THAN 50 GPM:

TURBINE DRIVER TYPE:  Electric  Engine  Other \_\_\_\_\_  
Design Head \_\_\_\_\_ feet. Number of Stages \_\_\_\_\_ Shaft size \_\_\_\_\_ inches.

5. OTHER EQUIPMENT:  
Airline Installed  Yes  No, Orifice Depth ft. \_\_\_\_\_ Monitor Tube Installed  Yes  No, Depth ft. \_\_\_\_\_  
Flow Meter Mfg. \_\_\_\_\_ Meter Serial No. \_\_\_\_\_  
Meter Readout  Gallons,  Thousand Gallons,  Acre feet,  Beginning Reading \_\_\_\_\_

6. TEST DATA:  Check box if Test data is submitted on Supplemental Form.  
Date 7-6-94  
Total Well Depth 320 Time A M  
Static Level 240 Rate (GPM) 10  
Date Measured 7-6-94 Pumping Lvl. 280

7. DISINFECTION: Type HTH Powder Amt. Used 1 cup

8. Water Quality analysis available.  Yes  No

9. Remarks Flow rate is based on a four hour test  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

10. I have read the statements made herein and know the contents thereof, and that they are true to my knowledge.  
[Pursuant to Section 24-104 (13)(a) C.R.S., the making of false statements herein constitutes perjury in the second degree and is punishable as a class 1 misdemeanor.]

CONTRACTOR PAUL FLETCHER & SONS, INC. Phone (719) 481-3589 Lic. No. 797  
Mailing Address 797 Hwy 105 Palmer Lake, CO. 80133

Name/Title (Please type or print) Thomas Fletcher/V.P.	Signature <u>Thomas Fletcher</u>	Date 7-7-94
---	-------------------------------------	----------------

WELL CONSTRUCTION AND TEST REPORT  
STATE OF COLORADO, OFFICE OF THE STATE ENGINEER

For Office Use only

RECEIVED

JUL 11 1994

WATER RESOURCES  
STATE ENGINEER  
COLORADO

1. WELL PERMIT NUMBER 170426

2. OWNER NAME(S) Michael & Tracey Cranford  
 Mailing Address 7030 Snowmass Drive  
 City, St. Zip Colo. Spgs. CO. 80908  
 Phone (719) 574-5905

3. WELL LOCATION AS DRILLED: NE 1/4 NW 1/4, Sec. 5 Twp. 12 S Range 65 W  
 DISTANCES FROM SEC. LINES:  
956 ft. from North Sec. line. and 1490 ft. from West Sec. line. OR  
(north or south) (east or west)  
 SUBDIVISION: WILDWOOD RANCH ESTATES LOT 13 BLOCK \_\_\_\_\_ FLUNG(UNIT) 7  
 STREET ADDRESS AT WELL LOCATION: 7030 Snowmass Drive

4. GROUND SURFACE ELEVATION unknown ft. DRILLING METHOD Rotary  
 DATE COMPLETED July 5, 1994 TOTAL DEPTH 320 ft. DEPTH COMPLETED 320 ft.

5. GEOLOGIC LOG:

Depth	Description of Material (Type, Size, Color, Water Location)
0-1	Topsoil
1-220	Sand & grav. m/w brown clay
220-238	Sand & grav. m/w tan clay
238-310	Sand & grav. w/s tan clay stringers
310-320	Sand & grav. m/w brown clay

6. HOLE DIAM. (in.)

From (ft)	To (ft)
0	20
20	320

7. PLAIN CASING

OD (in)	Kind	Wall Size	From(ft)	To(ft)
6"	Steel	1.38	0	20
4"	PVC	200	5	220

PERF. CASING: Screen Size:

From(ft)	To(ft)
220	320

8. FILTER PACK:	9. PACKER PLACEMENT:
Material <u>Quartz</u>	Type _____
Size <u>8-12</u>	Depth _____
Interval <u>220-320</u>	

10. GROUTING RECORD:

Material	Amount	Density	Interval	Placement
Cement	230	14	5-20	pumped
Enviropluc 50		10.2	20-220	grout

REMARKS:

11. DISINFECTION: Type HTH Powder Amt. Used 1 cup

12. WELL TEST DATA:  Check box if Test Data is submitted on Supplemental Form.  
 TESTING METHOD Blown by air  
 Static Level 240 ft. Date/Time measured 7-5-94 P.M. Production Rate 11 gpm.  
 Pumping level 280 ft. Date/Time measured 7-5-94 P.M. Test length (hrs.) 4  
 Remarks \_\_\_\_\_

13. I have read the statements made herein and know the contents thereof, and that they are true to my knowledge. (Pursuant to Section 24-1-104 (13)(a) C.R.S., the making of false statements herein constitutes perjury in the second degree and is punishable as a class 1 misdemeanor.)

CONTRACTOR PAUL FLETCHER & SONS, INC. Phone (719) 481-3589 Lic. No. 797  
 Mailing Address 797 Hwy 105 Palmer Lake, CO. 80123

Name/Title (Please type or print) <u>Thomas Fletcher/V.P.</u>	Signature <u>Thomas Fletcher</u>	Date <u>7-7-94</u>
--	-------------------------------------	-----------------------

INSTRUCTIONS FOR THE COMPLETION OF CHANGE IN OWNERSHIP-ADDRESS FORM

The form must be typewritten or printed in BLACK INK. Initial and date any changes you make on the form.

THIS FORM MAY BE REPRODUCED BY PHOTOCOPYING OR WORD PROCESSING MEANS.

INCOMPLETE FORMS ARE NOT ACCEPTABLE AND WILL BE RETURNED. ATTACH ADDITIONAL SHEETS IF MORE SPACE IS NEEDED.

A \$1.00 FILING FEE IS REQUIRED, PAYABLE TO THE STATE ENGINEER.

1. Print the current owner's name and include the mailing address and phone number.
2. Indicate if the change in ownership/address is for a well permit, livestock water tank or erosion control dam. Be sure to include the proper permit, tank or dam number.
3. Complete the well location information. If the address of the well location is different than the mailing address of the owner, include the address where the well is located. If the owner has more than one well, provide well name or number as designated by the owner, i.e. North Well. The actual well location must include 1/4, 1/4, Range, Township and Section. Check the appropriate boxes for North or South and East or West directions. Complete the Subdivision, Lot, Block and Filing information, if applicable.
4. Complete the location information for the livestock water tank or erosion control dam. The actual location must include 1/4, Section, Township, Range and P.M. Check the appropriate boxes for North or South and East or West directions.
5. Check the reason for submitting the Change in Ownership-Address form, whether it is a change in ownership and or address.

All other types of changes concerning well permits including clerical location errors may require the filing of a new application for a permit which is to be accompanied by a \$80.00 filing fee. Contact the Denver Office or the Division Office for further information.

All other types of changes concerning Livestock Water Tanks and Erosion Control Dams should be submitted on the standard Permit Application form and be accompanied by a \$1.00 filing fee.

6. The owner of the structure must sign. Print or type your name in the first block if it is different from Item No. 1. If signing as a representative of a company who owns the structure, then your title must also be included in the first block. Sign the second block and date the last block.

If you have questions, contact the Denver or the Division Office where your well is located.

DIVISION 1  
209 ARIX BUILDING  
800 8TH AVE.  
GREELEY, CO 80631  
(303) 352-8712

DIVISION 2  
219 W. 5TH RM. 223  
PUEBLO, CO. 81003  
(719) 542-3388

DIVISION 3  
422 4TH ST.  
ALAMOSA, CO 81101  
(719) 589-6683

DIVISION 4  
308 S. FIRST ST.  
MONTROSE, CO. 81402  
(303) 249-6622

DIVISION 5  
1429 GRAND AVENUE  
GLNWD SPGS. CO. 81801  
(303) 945-5665

DIVISION 6  
320 LINCOLN AVE. STE. E  
STMBT SPGS., CO. 80477  
(303) 879-0272

DIVISION 7  
1474 MAIN ST.  
DURANGO, CO. 81302  
(303) 247-1845

DENVER OFFICE  
RM. 823  
1313 SHERMAN ST.  
DENVER, CO. 80203  
(303) 866-3581

OFFICE OF THE STATE ENGINEER  
COLORADO DIVISION OF WATER RESOURCES

818 Centennial Bldg., 1313 Sherman St., Denver, Colorado 80203  
(303) 866-3581

WELL PERMIT NUMBER	<u>170426</u>
DIV. 2	CNTY. 21
WD 10	DES. BASIN MD

APPLICANT

KRISTIN KELSALL  
6364 DEL MONACO DR  
COLORADO SPRINGS CO 80919

(719)528-5522

Lot: 13 Block: Filing: 7 Subdiv: WILDWOOD RANCH ESTATES

APPROVED WELL LOCATION  
EL PASO COUNTY

NE 1/4 NW 1/4 Section 5  
Twp 12 S RANGE 65 W 6th P.M.

DISTANCES FROM SECTION LINES

956 Ft. from North Section Line  
1490 Ft. from West Section Line

PERMIT TO CONSTRUCT A WELL

ISSUANCE OF THIS PERMIT DOES NOT CONFER A WATER RIGHT  
CONDITIONS OF APPROVAL

- 1) This well shall be used in such a way as to cause no material injury to existing water rights. The issuance of the permit does not assure the applicant that no injury will occur to another vested water right or preclude another owner of a vested water right from seeking relief in a civil court action.
- 2) The construction of this well shall be in compliance with the Water Well Construction and Pump Installation Rules 2 CCR 402-2, unless approval of a variance has been granted by the State Board of Examiners of Water Well Construction and Pump Installation Contractors in accordance with Rule 17.
- 3) Approved pursuant to CRS 37-92-602(3)(b)(II)(A) as the only well on a residential site of 10.34 acres described as Lot 13, Filing 7, Wildwood Ranch Estates Subdivision, El Paso County.
- 4) The use of ground water from this well is limited to ordinary household purposes inside a single family dwelling and the watering of the user's noncommercial domestic animals. The ground water shall not be used for irrigation or other purposes.
- 5) The total depth of the well shall not exceed 1,100 feet, which corresponds to the base of the Dawson aquifer.
- 6) The maximum pumping rate shall not exceed 15 GPM.
- 7) The return flow from the use of the well must be through an individual waste water disposal system of the non-evaporative type where the water is returned to the same stream system in which the well is located.
- 8) This well shall be constructed not more than 200 feet from the location specified on this permit.

Note: To insure a maximum productive life of this well, perforated casing should be set through the entire producing interval of the approved zone or aquifer indicated above. GRG 6/7/93

APPROVED  
GRG

*Hal D. Simpson*  
\_\_\_\_\_  
State Engineer

*John W. Bittaly*  
\_\_\_\_\_  
By

Receipt No. 0352102

DATE ISSUED JUN 09 1993

EXPIRATION DATE JUN 09 1995



COLORADO DIVISION OF WATER RESOURCES  
818 Centennial Bldg., 1313 Sherman St., Denver, Colorado 80203

RECEIVED

APR 27 '93

510

PERMIT APPLICATION FORM

Application must be complete where applicable. Type or print in **BLACK INK**. No overstrikes or erasures unless initialed.

(X) A PERMIT TO USE GROUND WATER  
(X) A PERMIT TO CONSTRUCT A WELL  
FOR: (X) A PERMIT TO INSTALL A PUMP

WATER RESOURCES  
STATE ENGINEER  
COLORADO

( ) REPLACEMENT FOR NO. \_\_\_\_\_  
( ) OTHER \_\_\_\_\_  
WATER COURT CASE NO. \_\_\_\_\_

170426

(1) APPLICANT - mailing address

NAME Kristin Kelsall  
STREET 6364 Del Monico Dr.  
CITY Colo Spgs CO. 80919  
(State) (Zip)  
TELEPHONE NO. 719-528-5522

FOR OFFICE USE ONLY: DO NOT WRITE IN THIS COLUMN

Receipt No. 352/02 / \_\_\_\_\_  
Basin \_\_\_\_\_ Dist. \_\_\_\_\_

CONDITIONS OF APPROVAL

<sup>elev 7645</sup>  
This well shall be used in such a way as to cause no material injury to existing water rights. The issuance of the permit does not assure the applicant that no injury will occur to another vested water right or preclude another owner of a vested water right from seeking relief in a civil court action.

*no plat there filing  
pre...*

(2) LOCATION OF PROPOSED WELL

County EI PASO  
NE 1/4 of the NW 1/4, Section 5  
Twp. 12 S., Rng. 65 W., 6th P.M.  
(N.S) (E.W)

(3) WATER USE AND WELL DATA

Proposed maximum pumping rate (gpm) 15  
Average annual amount of ground water to be appropriated (acre-feet): 1  
Number of acres to be irrigated: 0  
Proposed total depth (feet): 300'  
Aquifer ground water is to be obtained from:  
DAWSON  
Owner's well designation \_\_\_\_\_

GROUND WATER TO BE USED FOR:

(X)  HOUSEHOLD USE ONLY - no irrigation (0)  
( ) DOMESTIC (1) ( ) INDUSTRIAL (5)  
( ) LIVESTOCK (2) ( ) IRRIGATION (6)  
( ) COMMERCIAL (4) ( ) MUNICIPAL (8)  
(X) OTHER (9) User's non-comm domestic animals  
DETAIL THE USE ON BACK IN (11)

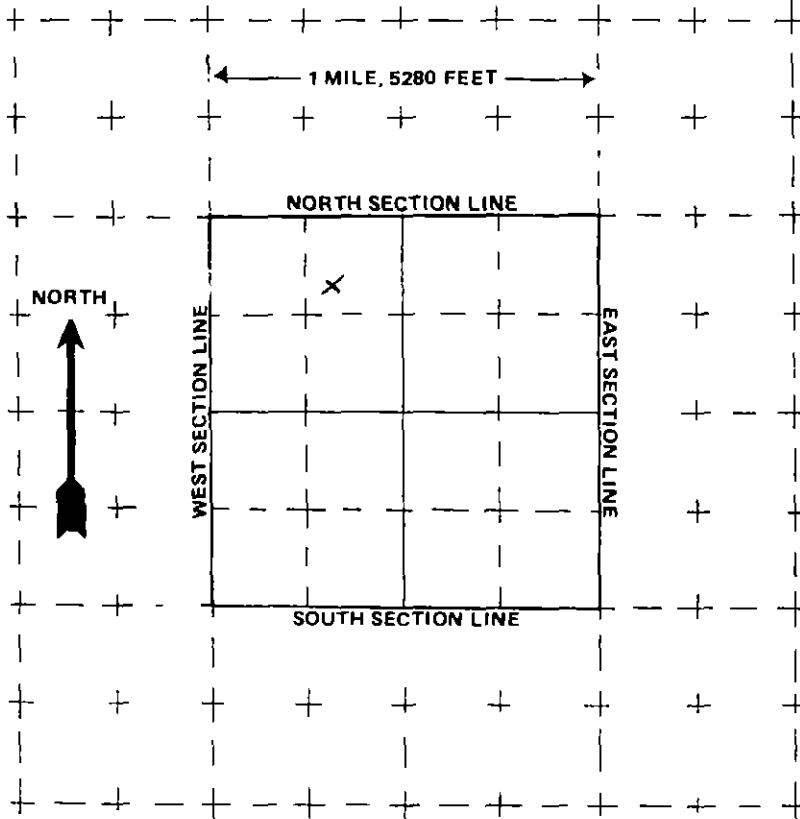
APPLICATION APPROVED

PERMIT NUMBER \_\_\_\_\_  
DATE ISSUED \_\_\_\_\_  
EXPIRATION DATE \_\_\_\_\_  
\_\_\_\_\_  
(STATE ENGINEER)  
BY \_\_\_\_\_  
I.D. 2 COUNTY 21-10

(4) DRILLER

Name Paul Fletcher & Sons Inc  
Street 797 Hwy. 105  
City Palmer Lake, CO. 80133  
(State) (Zip)  
Telephone No. 481-3589 Lic. No. 797

(5) **THE LOCATION OF THE PROPOSED WELL** and the area on which the water will be used must be indicated on the diagram below. Use the CENTER SECTION (1 section, 640 acres) for the well location.



The scale of the diagram is 2 inches = 1 mile  
Each small square represents 40 acres.

**WATER EQUIVALENTS TABLE (Rounded Figures)**

An acre-foot covers 1 acre of land 1 foot deep  
1 cubic foot per second (cfs) . . . 449 gallons per minute (gpm)  
A family of 5 will require approximately 1 acre-foot of water per year.  
1 acre-foot . . . 43,560 cubic feet . . . 325,900 gallons.  
1,000 gpm pumped continuously for one day produces 4.42 acre-feet.

(6) **THE WELL MUST BE LOCATED BELOW** by distances from section lines.

956 ft. from North (north or south) sec. line  
1490 ft. from West (east or west) sec. line

LOT 13 BLOCK \_\_\_\_\_ FILING # 7  
SUBDIVISION Wildwood Ranch Ests

(7) **TRACT ON WHICH WELL WILL BE LOCATED** Owner: K. Kelsall

No. of acres 10.34 Will this be the only well on this tract? YES

(8) **PROPOSED CASING PROGRAM**

Plain Casing  
4 in. from 0 ft. to 200 ft.  
4 in. from 280 ft. to 300 ft.  
Perforated casing  
4 in. from 200 ft. to 280 ft.  
\_\_\_\_\_ in. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(9) **FOR REPLACEMENT WELLS** give distance and direction from old well and plans for plugging it:

N/A

(10) **LAND ON WHICH GROUND WATER WILL BE USED:**

Owner(s): Kristin Kelsall No. of acres: 10.34  
Legal description: Lot 13, Wildwood Ranch Estates, Fil. # 7

(11) **DETAILED DESCRIPTION** of the use of ground water: Household use and domestic wells must indicate type of disposal system to be used.

In house use, watering non-comm. domestic animals. Will have county approved septic system with leachfield.

(12) **OTHER WATER RIGHTS** used on this land, including wells. Give Registration and Water Court Case Numbers.

Type or right	Used for (purpose)	Description of land on which used
<u>NONE</u>		

(13) **THE APPLICANT(S) STATE(S) THAT THE INFORMATION SET FORTH HEREON IS TRUE TO THE BEST OF HIS KNOWLEDGE.**

Kristin Kelsall  
SIGNATURE OF APPLICANT(S)

APPLICANT: KRISTIN KELSALL

RECEIPT NO. 352102

06/07/93

LOCATION: NE1/4 OF NW1/4 OF SEC. 5, T.12S., R.65W. (956 NSL, 1490 WSL)

Ground Elevation: 7645

Number of Acres: 10.34

AQUIFER	ELEVATION		NET SAND	DEPTH TO		ANNUAL APPROP A-F	STATUS
	BOT.	TOP		BOT.	TOP		
UPPER DAWSON	6546	7465	460.0	1099	180	9.51	NNT
LOWER DAWSON	-----	-----	-----	-----	-----	-----	----
DENVER	5638	6561	450.9	2007	1084	7.93	NT
UPPER ARAPAHOE	5100	5593	245.1	2545	2052	4.31	NT
LOWER ARAPAHOE	-----	-----	-----	-----	-----	-----	----
LARAMIE-FOX HILLS	4511	4850	186.5	3134	2795	2.89	NT

note: E indicates location is at aquifer boundary and values  
may be more approximate.

FORM NO. GWS-11 10/90

STATE OF COLORADO  
OFFICE OF THE STATE ENGINEER  
818 Centennial Bldg., 1313 Sherman St., Denver, Colorado 80203  
(303) 866-3581

For Office Use only

RECEIVED

AUG 30 '93

WATER RESOURCES  
STATE ENGINEER  
COLORADO

1.00  
CHECKNO 88-31-93CL-59576

PRIOR TO COMPLETING FORM, SEE INSTRUCTIONS ON REVERSE SIDE

### CHANGE IN OWNERSHIP / ADDRESS

WELL PERMIT, LIVESTOCK TANK OR EROSION CONTROL DAM

1. CURRENT OWNER

NAME(S) MICHAEL V. & TRACY L. CRANFORD  
Mailing Address 4985 IRON HORSE TRAIL  
City, St Zip COLORADO SPRINGS, CO 80917  
Phone (719) 574-8905

2. THIS CHANGE IS FOR ONE OF THE FOLLOWING:

- WELL PERMIT NUMBER 170426
- LIVESTOCK WATER TANK NUMBER \_\_\_\_\_
- EROSION CONTROL DAM NUMBER \_\_\_\_\_

3. WELL LOCATION: COUNTY EL PASO OWNER'S WELL DESIGNATION \_\_\_\_\_

7030 SNOWMASS DRIVE, BLACK FOREST, COLORADO 80908  
(Address) (City) (State) (Zip)

NE 1/4 of the NW 1/4, Sec. 5 Twp. 12  N. or  S., Range 6S  E. or  W. 10<sup>th</sup> P.M.

Distances from Section Lines 956 Ft. from  N. or  S. Line, 1490 Ft. from  E. or  W. Line.

Subdivision WILDWOOD RANCH ESTATES Lot 13 Block \_\_\_\_\_ Filing (Unit) 7

4. LIVESTOCK TANK OR EROSION CONTROL DAM LOCATION: COUNTY \_\_\_\_\_

1/4, Sec. \_\_\_\_\_ Twp. \_\_\_\_\_  N. or  S., Range  E. or  W. \_\_\_\_\_ P.M.

5. The above listed owner(s) say(s) that he (they) own the structure described herein.

The existing record is being amended for the following reason(s):

- Change in name of owner.
- Change in mailing address.

6. I (we) have read the statements made herein, know the contents thereof, and state that they are true to my (our) knowledge.

[Pursuant to Section 24-4-104 (13)(a) C.R.S., the making of false statements herein constitutes perjury in the second degree and is punishable as a class 1 misdemeanor.]

Name/Title (Please type or print) <u>MICHAEL V. CRANFORD</u> <u>TRACY L. CRANFORD</u>	Signature <u>Michael V. Cranford</u> <u>Tracy L. Cranford</u>	Date <u>8/27/93</u>
---	---	------------------------

FOR OFFICE USE ONLY

ACCEPTED FOR A CHANGE IN OWNERSHIP AND MAILING ADDRESS

Hal D. Simpson  
State Engineer

Al Davis  
By

SEP 13 1993  
Date

Court Case No. \_\_\_\_\_ Div. \_\_\_\_\_ Co. \_\_\_\_\_ WD \_\_\_\_\_ Basin \_\_\_\_\_ MD \_\_\_\_\_ Use \_\_\_\_\_

Form No. GWS-11 7/2011	<b>STATE OF COLORADO OFFICE OF THE STATE ENGINEER</b> 821 Centennial Bldg., 1313 Sherman St., Denver, CO 80203 Phone- Info: (303)866-3581 Main: (303)866-3581	For Office Use Only
---------------------------	---	---------------------

**CHANGE IN OWNER NAME/ ADDRESS  
CORRECTION OF THE WELL LOCATION**

**Review instructions on the reverse side prior to completing the form.**

Name, address and phone of person claiming ownership of the well permit:

NAME(S): Noah Hogan

Mailing Address: 9443 Old Plantation Cove

City, ST. Zip: Germantown, TN, 38139

Phone: 901 439 3223

RECEIVED

APR 24 2015

WATER RESOURCES  
STATE ENGINEER  
COLO

This form is filed by the named individual/entity claiming that they are the owner of the well permit as referenced below. This filing is made pursuant to C.R.S. 37-90-143.

WELL LOCATION: Well Permit Number: 170426 Receipt Number: 0352102 Case Number: \_\_\_\_\_ County: El Paso  
Well Name or # (optional): \_\_\_\_\_  
7030 Snow Mass Drive, Colorado Springs, CO 80908  
NE1/4 of the NW1/4, Sec.5, Twp. 12.0  N. or  S., Range 65.0  E. or  W., SIXTH P.M.

Distance from Section Line: 956 Ft. From  N. or  S., 1490 Ft. From  E., or  W. Line.  
**OR:** GPS well location information in UTM format. You must check GPS unit for required settings as follows:  
Format must be UTM,  zone 12 or  zone 13; Units must be meters; Datum must be NAD83; Unit must be set to true north.

Easting 526373.0 Northing 4321211.0

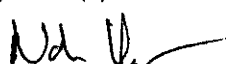
Subdivision Name WILDWOOD RANCH ESTATES Lot 13, Block , Filing/Unit 7

The above listed owner(s) say(s) that he, she, (they) own the well permit described herein. the existing record is being amended for the following reasons:

Change in the name of owner  Change in the mailing address  Correction of location for exempt wells permitted prior to May 8, 1972 and non-exempt wells permitted before May 17, 1965.



Please see the reverse side for further information regarding correction of the well location.

I (we) claim and say that I (we) (are) the owner(s) of the well permit described above, know the contents of the statements made herein, and state that they are true to my (our) knowledge.

Signature(s) of the new owner 	Please print the Signer's Name & Title Noah Hogan	Date 4/20/15
--	--	-----------------

It is the responsibility of the new owner of this well permit to complete and sign this form. Signatures of agents are acceptable if an original letter of agency signed by the owner is attached to the form upon its receipt.

Please send confirmation of acceptance of change in owner name/address via:  Email address listed above  US Mail

	For Office Use Only	<b>ACCEPTED AS A CHANGE IN OWNERSHIP AND/OR MAILING ADDRESS.</b>
State Engineer	By 	Date 8/9/15



**ORIGINAL PERMIT APPLICANT(S)**

NOAH HOGAN

**APPROVED WELL LOCATION**

Water Division: 2	Water District: 10
Designated Basin: N/A	
Management District: N/A	
County: EL PASO	
Parcel Name: WILDWOOD RANCH ESTATES	
Lot: 13	Block: Filing: 7
Physical Address: N/A	
NE 1/4 NW 1/4 Section 5 Township 12.0 S Range 65.0 W Sixth P.M.	

**UTM COORDINATES (Meters, Zone:13, NAD83)**

Easting: 526373.4 Northing: 4321211.1

See the original well permit file for permit conditions of approval and additional details. The original permit file can be viewed using the Well Permit Search Tool at <https://dwr.colorado.gov/>

[See Original Permit](#)

Date Issued: 6/9/1993

Issued By \_\_\_\_\_

Expiration Date: 6/9/1995

**PERMIT HISTORY**

12-05-2023	PERMIT CANCELED (SEE RECEIPT NO. 10032810.)
06-30-2015	CHANGE IN OWNER NAME/MAILING ADDRESS

**Exhibit D      Water Supply Information Summary  
(Form No. GWS-76)**

FORM NO.  
GWS-76  
05/2011

**WATER SUPPLY INFORMATION SUMMARY**  
STATE OF COLORADO, OFFICE OF THE STATE ENGINEER  
1313 Sherman St., Room 821, Denver, CO 80203  
Main (303) 866-3581 [dwr.colorado.gov](http://dwr.colorado.gov)

Section 30-28-133,(d), C.R.S. requires that the applicant submit to the County, "Adequate evidence that a water supply that is sufficient in terms of quantity, quality, and dependability will be available to ensure an adequate supply of water."

1. NAME OF DEVELOPMENT AS PROPOSED: Greaves Subdivision Filing No. 1

2. LAND USE ACTION: Minor Subdivision

3. NAME OF EXISTING PARCEL AS RECORDED:  
SUBDIVISION: Wildwood Ranch Estates, FILING No. 7, BLOCK 1, LOT 13

4. TOTAL ACREAGE: 10.364 5. NUMBER OF LOTS PROPOSED 2 PLAT MAP ENCLOSED?  YES or  NO

6. PARCEL HISTORY – Please attach copies of deeds, plats, or other evidence or documentation.

A. Was parcel recorded with county prior to June 1, 1972?  YES or  NO

B. Has the parcel ever been part of a division of land action since June 1, 1972?  YES or  NO

If yes, describe the previous action: Final Plat of Wildwood Ranch Estates Filing No. 7

7. LOCATION OF PARCEL – Include a map delineating the project area and tie to a section corner.

1/4 of the NW 1/4, Section 5, Township 12, Range 65, E or W

Principal Meridian (choose only one):  Sixth  New Mexico  Ute  Costilla

Optional GPS Location: GPS Unit must use the following settings: Format must be UTM, Units must be meters, Datum must be NAD83, Unit must be set to true N, Zone 12 or Zone 13

Easting: \_\_\_\_\_

Northing: \_\_\_\_\_

8. PLAT – Location of all wells on property must be plotted and permit numbers provided.

Surveyor's Plat:  YES or  NO If not, scaled hand drawn sketch:  YES or  NO

9. ESTIMATED WATER REQUIREMENTS

USE	WATER REQUIREMENTS		10. WATER SUPPLY SOURCE	
	Gallons per Day	Acre-Feet per Year	<input checked="" type="checkbox"/> EXISTING WELL	<input type="checkbox"/> DEVELOPED SPRING
(2 units at 0.30 ac-ft/yr each) HOUSEHOLD USE # 2 of units	_____	0.60	WELL PERMIT NUMBERS 170426	
COMMERCIAL USE # _____ of S. F (2 units at 2,380 sf irrigation at 0.124 ac-ft/1000 sf/yr ea)	_____	_____	_____	
IRRIGATION # 0.20 of acres	_____	0.59	_____	
(4 head per unit at 0.06 ac-ft/yr ea) STOCK WATERING # 8 of head	_____	0.48	<input type="checkbox"/> MUNICIPAL <input type="checkbox"/> ASSOCIATION <input type="checkbox"/> COMPANY <input type="checkbox"/> DISTRICT NAME _____ LETTER OF COMMITMENT FOR SERVICE <input type="checkbox"/> YES or <input type="checkbox"/> NO	
OTHER: _____	_____	_____	<input checked="" type="checkbox"/> NEW WELLS - PROPOSED AQUIFERS – (CHECK ONE) <input type="checkbox"/> ALLUVIAL <input type="checkbox"/> UPPER ARAPAHOE <input checked="" type="checkbox"/> UPPER DAWSON <input type="checkbox"/> LOWER ARAPAHOE <input checked="" type="checkbox"/> LOWER DAWSON <input type="checkbox"/> LARAMIE FOX HILLS <input type="checkbox"/> DENVER <input type="checkbox"/> DAKOTA <input type="checkbox"/> OTHER: _____	
TOTAL	_____	1.67	WATER COURT DECREE CASE NUMBERS: 22CW3072	

11. WAS AN ENGINEER'S WATER SUPPLY REPORT DEVELOPED?  YES or  NO IF YES, PLEASE FORWARD WITH THIS FORM. (This may be required before our review is completed.)

12. TYPE OF SEWAGE DISPOSAL SYSTEM

SEPTIC TANK/LEACH FIELD  CENTRAL SYSTEM

LAGOON  VAULT DISTRICT NAME: \_\_\_\_\_

ENGINEERED SYSTEM (Attach a copy of engineering design.) LOCATION SEWAGE HAULED TO: \_\_\_\_\_

OTHER: \_\_\_\_\_



## **Exhibit E      Water Quality Testing Results**

**Analytical Results**

**TASK NO: 240301008**

**Report To:** David R Gorman, P.E.

**Company:** Monument Valley Engineers - MVE Civil  
1903 Lelaray St  
Suite 200  
Colorado Springs CO 80909

**Bill To:** David R Gorman, P.E.

**Company:** Monument Valley Engineers - MVE Ci  
1903 Lelaray St  
Suite 200  
Colorado Springs CO 80909

**Task No.:** 240301008  
**Client PO:**  
**Client Project:** Greaves Subdivision 61211

**Date Received:** 3/1/24  
**Date Reported:** 3/28/24  
**Matrix:** Water - Drinking

Lab Number	Customer Sample ID	Sample Date/Time	Test	Result	Method	Date Analyzed
240301008-01C	001-009	3/1/24 8:45 AM	Total Coliform	Absent	SM 9223	3/2/24
			E-Coli	Absent	SM 9223	3/2/24

**Abbreviations/ References:**

Absent = Coliform Not Detected  
Present = Coliform Detected - Chlorination Recommended  
Date Analyzed = Date Test Completed  
SM = "Standard Methods for the Examination of Water and Wastewater"; APHA; 19th Edition; 1995



DATA APPROVED FOR RELEASE BY

# Drinking Water Chain of Custody



Commerce City Lab  
10411 Heinz Way  
Commerce City CO 80640

Lakewood Service Center  
610 Garrison Street, Unit E  
Lakewood CO 80215

Phone: 303-659-2313

www.coloradolab.com

<b>Report To Information</b>		<b>Project Information</b>	
Company Name: <u>MVE</u>	PWSID: <u>6211</u>		
Contact Name: <u>DAVE GORMAN</u>	System Name:		
Address: <u>1903 LELRAY ST</u>	Compliance Samples: Yes <input type="checkbox"/> No <input type="checkbox"/>	Send Results to CDPHE: Yes <input type="checkbox"/> No <input type="checkbox"/>	
City: <u>C/S</u> State: <u>CO</u> Zip: <u>80909</u>	Task Number (Lab Use Only):		
Phone: <u>719-635-5736</u>	<b>CAL Task</b>		
Email: <u>DAVEG@MVECLVL.COM</u>	<b>240301008</b>		
Sample Collector: <u>TOM WENDLAND</u>	<b>KES</b>		
Sample Collector Phone: <u>719-330-8365</u>	PO Number:		

PHASE I, II, V Drinking Water Analyses (check requested analysis)		Subcontract Analyses	
Date	Time	Client Sample ID / Sample Pt ID	Analysis
3/1	8:45	001-009	Chloride
			Uranium
			Radon
			Radium 226/228
			Gross Alpha/Beta
			SUA, UV 254 (Circle)
			TOC, DOC (Circle)
			Alk./Lang. Index (Circle)
			Inorganics
			Fluoride
			Nitrite
			Nitrate
			Lead/Copper
			552.2 HAAs
			524.2 THMs
			549.2 Diquat
			548.1 Endothal
			547 Glyphosate
			531.1 Carbamates
			525.2 SOCs-Pest
			524.2 VOCs
			515.4 Herbicides
			505 Pests/PCBs
			504.1 EDB/DBCP
			Total Coliform P/A
			P/A Samples Only
			Residual Chlorine (mg/L)
			No. of Containers

**Instructions:**

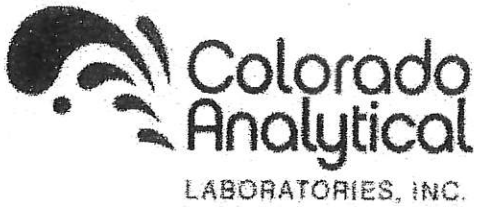
Seals Present Yes  No  Headspace Yes  No

Delivered Via: Hand Temp. <sup>o</sup>C/Ice Y

Relinquished By: [Signature] Date/Time: 3/1-10-16

Received By: [Signature] Date/Time: 3-1-24 10:18a

Relinquished By: [Signature] Date/Time: 3-1-24 10:18a



CAL Task  
240301008

KES

**Bottle Order  
Test Detail**

Order ID: QBO24020124

Date Created: 2/26/24

**Ship To:** Monument Valley Engineers - MVE Civil  
1903 Lelaray St  
Suite 200  
Colorado Springs CO 80909

**Attention:** David R Gorman, P.E.

719-635-5736

**\*\*Verify All Shipping Addresses\*\***

**Shipping Options:**

Ship Via: UPS Cooler: Yes

Chain of Custody Drinking Water: 1  
Standard:

**Customer Needs By: 3/1/24**

**Ships From: Commerce City**

**Project:**

Greaves Subdivision 61211

**Qty. Bottle / Preservative / Test**

1 100 ml sterile - Na2S2O3  
Total Coliform P/A - Water - Drinking

1 1L - Unpreserved  
Gross Alpha/Beta (Sub) - Water - Drinking

1 4 - 1L - Unpreserved  
Radium 226 (Sub) - Water - Drinking  
Radium 228 (Sub) - Water - Drinking

1 500 ml Cylinder - HNO3  
Ag - Total - Water - Drinking  
Al - Total - Water - Drinking  
As - Total - Water - Drinking  
Ba - Total - Water - Drinking  
Be - Total - Water - Drinking  
Cd - Total - Water - Drinking  
Cr - Total - Water - Drinking  
Fe - Total - Water - Drinking  
Hg - Water - Drinking  
Mn - Total - Water - Drinking  
Sb - Total - Water - Drinking  
Se - Total - Water - Drinking

**\*\*Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.\*\***

**Internal Shipping Instructions:**

Shipped By: \_\_\_\_\_

Date: \_\_\_\_\_

Checked By: \_\_\_\_\_

10411 Heinz Way / Commerce City, CO 80640 / 303-659-2313  
Mailing Address: P.O. Box 507 / Brighton, CO 80601-0507

**Ship To:** Monument Valley Engineers - MVE Civil  
1903 Lelaray St  
Suite 200  
Colorado Springs CO 80909

**CAL Task**  
240301008

**Shipping Options:**

Ship Via: UPS Cooler: Yes

Chain of Custody Drinking Water: 1  
Standard:

**Attention:** David R Gorman, P.E.

KES

**Customer Needs By: 3/1/24**  
**Ships From: Commerce City**

719-635-5736

**\*\*Verify All Shipping Addresses\*\***

**Project:**

Greaves Subdivision 61211

**Qty. Bottle / Preservative / Test**

TI - Total - Water - Drinking  
Zn - Total - Water - Drinking

1 **500 ml Cylinder - NaOH**  
Cyanide-Total - Water - Drinking

1 **500 ml Cylinder - Unpreserved**  
Chloride - Water - Drinking  
Fluoride - Water - Drinking  
Langelier Index - Water - Drinking  
Nitrate Nitrogen - Water - Drinking  
Nitrate/ Nitrite Nitrogen - Water - Drinking  
Nitrite Nitrogen - Water - Drinking  
Sulfate - Water - Drinking

**\*\*Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.\*\***

**Internal Shipping Instructions:**

Shipped By: \_\_\_\_\_

Date: \_\_\_\_\_

Checked By: \_\_\_\_\_

10411 Heinz Way / Commerce City, CO 80640 / 303-659-2313  
Mailing Address: P.O. Box 507 / Brighton, CO 80601-0507

**Analytical Results**

**TASK NO: 240301008**

**Report To:** David R Gorman, P.E.

**Company:** Monument Valley Engineers - MVE Civil  
1903 Lelaray St  
Suite 200  
Colorado Springs CO 80909

**Bill To:** David R Gorman, P.E.

**Company:** Monument Valley Engineers - MVE Ci  
1903 Lelaray St  
Suite 200  
Colorado Springs CO 80909

**Task No.:** 240301008  
**Client PO:**  
**Client Project:** Greaves Subdivision 61211

**Date Received:** 3/1/24  
**Date Reported:** 3/28/24  
**Matrix:** Water - Drinking

**Customer Sample ID** 001-009  
**Sample Date/Time:** 3/1/24 8:45 AM  
**Lab Number:** 240301008-01

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Bicarbonate	47.6 mg/L as CaCO3	SM 2320-B	0.2 mg/L as CaCO3	3/5/24	-	JCB
Calcium as CaCO3	32.0 mg/L	EPA 200.7	0.1 mg/L	3/5/24	-	JJA
Carbonate	ND mg/L as CaCO3	SM 2320-B	0.2 mg/L as CaCO3	3/5/24	-	JCB
Hydroxide	ND mg/L as CaCO3	SM 2320-B	0.2 mg/L as CaCO3	3/5/24	-	JCB
Langelier Index	-1.55 units	SM 2330-B	units	3/7/24	-	SAN
pH	6.98 units	SM 4500-H-B	0.01 units	3/1/24	-	AKF
Temperature	20 °C	SM 4500-H-B	1 °C	3/1/24	-	AKF
Total Alkalinity	47.6 mg/L as CaCO3	SM 2320-B	4.0 mg/L as CaCO3	3/5/24	QC71696	JCB
Total Dissolved Solids	97 mg/L	SM 2540-C	5 mg/L	3/6/24	QC71728	ISG

Abbreviations/ References:

RL = Reporting Limit = Minimum Level  
mg/L = Milligrams Per Liter or PPM  
ug/L = Micrograms Per Liter or PPB  
mpn/100 mls = Most Probable Number Index/ 100 mls  
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.  
(s) Spike amount low relative to the sample amount.  
ND = Not Detected at Reporting Limit.

**Analytical QC Summary**

**TASK NO: 240301008**

**Report To:** David R Gorman, P.E.  
**Company:** Monument Valley Engineers - MVE Civil

**Receive Date:** 3/1/24  
**Project Name:** Greaves Subdivision 61211

Test	QC Batch ID	QC Type	Result	Method	Prep Date
Total Alkalinity	QC71696	Blank	ND	SM 2320-B	3/4/24
Total Dissolved Solids	QC71728	Blank	ND	SM 2540-C	3/5/24

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Total Alkalinity	QC71696	Duplicate	0 - 20	-	1.0	SM 2320-B
		LCS	90 - 110	104.0	-	
		LCS-2	90 - 110	101.6	-	
Total Dissolved Solids	QC71728	Duplicate	0 - 10	-	1.4	SM 2540-C
		LCS	85 - 115	97.2	-	

All analyses were performed in accordance with approved methods under the latest revision to 40 CFR Part 136 unless otherwise identified. Based on my inquiry of the person or persons directly responsible for analyzing the wastewater samples and generating the report (s), the analyses, report, and information submitted are, to the best of my knowledge and belief, true, accurate, and complete.



DATA APPROVED FOR RELEASE BY

Abbreviations/ References:

RL = Reporting Limit = Minimum Level  
 mg/L = Milligrams Per Liter or PPM  
 ug/L = Micrograms Per Liter or PPB  
 mpn/100 mls = Most Probable Number Index/ 100 mls  
 Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.  
 (s) Spike amount low relative to the sample amount.  
 ND = Not Detected at Reporting Limit.

# Drinking Water Chain of Custody



LABORATORIES, INC.

<b>Report To Information</b>		<b>Project Information</b>	
Company Name: <u>MVE</u>	Company Name: _____	PWSID: <u>6211</u>	System Name: _____
Contact Name: <u>DAVE GORMAN</u>	Contact Name: _____	Compliance Samples: Yes <input type="checkbox"/> No <input type="checkbox"/>	Send Results to CDPHE: Yes <input type="checkbox"/> No <input type="checkbox"/>
Address: <u>1903 LELBRAY ST</u>	Address: _____	Task Number (Lab Use Only): _____	CAL Task: <u>240301008</u>
City: <u>C/S</u> State: <u>CO</u> Zip: <u>80909</u>	City: _____ State: _____ Zip: _____	Phone: <u>719-635-5736</u>	KES
Email: <u>DAVEG@MVECIVIL.COM</u>	Email: _____	Sample Collector: <u>TOM WENDLAND</u>	
Sample Collector Phone: <u>719-330-8365</u>	Sample Collector Phone: _____	PO Number: _____	

Commerce City Lab  
10411 Heinz Way  
Commerce City CO 80640

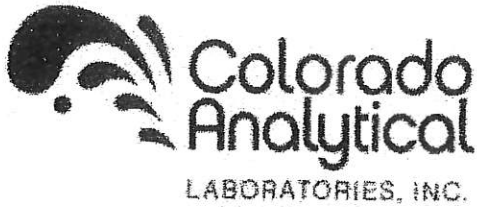
Lakewood Service Center  
610 Garrison Street, Unit E  
Lakewood CO 80215

Phone: 303-659-2313

www.coloradolab.com

Report To Information		Project Information		PHASE I, II, V Drinking Water Analyses (check requested analysis)															Subcontract Analyses												
Date	Time	Client Sample ID / Sample Pt ID	No. of Containers	Residual Chlorine (mg/L)	P/A Samples Only	Total Coliform P/A	504.1 EDB/BCP	505 Pests/PCBS	515.4 Herbicides	524.2 VOCs	525.2 SOCs-Pest	531.1 Carbamates	547 Glyphosate	548.1 Endothal	549.2 Diquat	524.2 TTHMs	552.2 HAAs	Lead/Copper	Nitrate	Nitrite	Fluoride	Inorganics	Alk./Lang. Index (Circle)	TOC, DOC (Circle)	SUA, UV 254 (Circle)	Gross Alpha/Beta	Radium 226/228	Radon	Uranium	Chlorite	
3/1	8:45	001-009																													
Date/Time: 3/1/16		Received By: <u>Tom Wendland</u>		Date/Time: 3/1/16		Received By: <u>Hand</u>		Date/Time: 3-1-24		C/S Charge: <u>108</u>		Temp: <u>10.8</u> °C/ice <u>Y</u>		Sample Pres. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Date/Time: 3-1-24		Received By: <u>Hand</u>		Date/Time: 10:18a		Seals Present Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Headspace Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>							





CAL Task  
240301008

KES

**Bottle Order  
Test Detail**

Order ID: QBO24020124

Date Created: 2/26/24

<p><b>Ship To:</b> Monument Valley Engineers - MVE Civil 1903 Lelaray St Suite 200 Colorado Springs CO 80909</p> <p><b>Attention:</b> David R Gorman, P.E.</p> <p>719-635-5736 <b>**Verify All Shipping Addresses**</b></p>	<p><b>Shipping Options:</b></p> <p>Ship Via: UPS                      Cooler: Yes</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Chain of Custody                      Drinking Water: 1 Standard:</p> </div> <p><b>Customer Needs By: 3/1/24</b> <b>Ships From: Commerce City</b></p> <p><b>Project:</b></p> <p>Greaves Subdivision 61211</p>
---	---

Qty.	Bottle / Preservative / Test
1	<b>100 ml sterile - Na2S2O3</b> Total Coliform P/A - Water - Drinking
1	<b>1L - Unpreserved</b> Gross Alpha/Beta (Sub) - Water - Drinking
1	<b>4 - 1L - Unpreserved</b> Radium 226 (Sub) - Water - Drinking Radium 228 (Sub) - Water - Drinking
1	<b>500 ml Cylinder - HNO3</b> Ag - Total - Water - Drinking Al - Total - Water - Drinking As - Total - Water - Drinking Ba - Total - Water - Drinking Be - Total - Water - Drinking Cd - Total - Water - Drinking Cr - Total - Water - Drinking Fe - Total - Water - Drinking Hg - Water - Drinking Mn - Total - Water - Drinking Sb - Total - Water - Drinking Se - Total - Water - Drinking

**\*\*Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.\*\***

<b>Internal Shipping Instructions:</b>	<b>Shipped By:</b> _____
	<b>Date:</b> _____
	<b>Checked By:</b> _____

10411 Heinz Way / Commerce City, CO 80640 / 303-659-2313  
Mailing Address: P.O. Box 507 / Brighton, CO 80601-0507

**Ship To:** Monument Valley Engineers - MVE Civil  
1903 Lelaray St  
Suite 200  
Colorado Springs CO 80909

**CAL Task**  
240301008

**Attention:** David R Gorman, P.E.

KES

719-635-5736

**\*\*Verify All Shipping Addresses\*\***

**Shipping Options:**

Ship Via: UPS

Cooler: Yes

Chain of Custody      Drinking Water: 1  
Standard:

**Customer Needs By: 3/1/24**  
**Ships From: Commerce City**

**Project:**

Greaves Subdivision 61211

**Qty.      Bottle / Preservative / Test**

TI - Total - Water - Drinking

Zn - Total - Water - Drinking

1      **500 ml Cylinder - NaOH**  
Cyanide-Total - Water - Drinking

1      **500 ml Cylinder - Unpreserved**  
Chloride - Water - Drinking  
Fluoride - Water - Drinking  
Langelier Index - Water - Drinking  
Nitrate Nitrogen - Water - Drinking  
Nitrate/ Nitrite Nitrogen - Water - Drinking  
Nitrite Nitrogen - Water - Drinking  
Sulfate - Water - Drinking

**\*\*Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.\*\***

**Internal Shipping Instructions:**

Shipped By: \_\_\_\_\_

Date: \_\_\_\_\_

Checked By: \_\_\_\_\_

10411 Heinz Way / Commerce City, CO 80640 / 303-659-2313  
Mailing Address: P.O. Box 507 / Brighton, CO 80601-0507



**Hazen Research, Inc.**

4601 Indiana Street  
Golden, CO 80403 USA  
Tel: (303) 279-4501  
Fax: (303) 278-1528

Lab Control ID: 24H01409

Received: Mar 04, 2024

Reported: Mar 27, 2024

Purchase Order No.

None Received

Customer ID: 05377Z

Account ID: Z01034

Rebecca Manzanares  
Colorado Analytical Laboratories, Inc.  
10411 Heinz Way  
Commerce City, CO 80640

# ANALYTICAL REPORT

*Report may only be copied in its entirety.  
Results reported herein relate only to discrete samples  
submitted by the client. Hazen Research, Inc. does not warrant  
that the results are representative of anything other than the  
samples that were received in the laboratory*

By: *Roxanne Sullivan*

Roxanne Sullivan  
Analytical Laboratories Director

Customer ID: 05377Z  
 Account ID: Z01034

**ANALYTICAL REPORT**

Rebecca Manzanares  
 Colorado Analytical Laboratories, Inc.

<b>Lab Sample ID</b>		24H01409-001						
<b>Customer Sample ID</b>		240301008-01D - Greaves Subdivision - 61211 - 001-009 sampled on 03/01/24 @ 0845						
<b>Parameter</b>	<b>Units</b>	<b>Code</b>	<b>Result</b>	<b>Precision* +/-</b>	<b>Detection Limit</b>	<b>Method</b>	<b>Analysis Date / Time</b>	<b>Analyst</b>
Gross Alpha	pCi/L	T	1.9	1.7	0.1	SM 7110 B	03/13/24 @ 1322	KT
Gross Beta	pCi/L	T	5.3	2.6	3.4	SM 7110 B	03/13/24 @ 1322	KT

<b>Lab Sample ID</b>		24H01409-002						
<b>Customer Sample ID</b>		240301008-01E - Greaves Subdivision - 61211 - 001-009 sampled on 03/01/24 @ 0845						
<b>Parameter</b>	<b>Units</b>	<b>Code</b>	<b>Result</b>	<b>Precision* +/-</b>	<b>Detection Limit</b>	<b>Method</b>	<b>Analysis Date / Time</b>	<b>Analyst</b>
Radium-226	pCi/L	T	0.5	0.2	0.1	SM 7500-Ra B	03/18/24 @ 1235	KT
Radium-228	pCi/L	T	1.1	0.6	0.2	EPA pg.19	03/13/24 @ 0944	KR

Sample required filtering for radium-226 and radium-228 analyses.

Certification ID's: CO/EPA CO00008

\*Variability of the radioactive decay process (counting error) at the 95% confidence level, 1.96 sigma.

Codes: (T) = Total (D) = Dissolved (S) = Suspended (R) = Replicate Sample (AR) = As Received < = Less Than

**Batch QC Summary Form**

Analyte: Gross Alpha

Control Standard/LFB: ID: C11-005 pCi/mL: 57.4 (use 1 diluted)

Spike Solution: ID: C11-005 pCi/mL: 57.4 (use 1 mL)

Spike Recovery Calculation: Sample: Tap\*

$$\text{Calculation: } \frac{(328.5) - (0.200) - (0.0)}{57.4} \times 100 = 114\%$$

Batch QC Evaluation:

Parameter	Criteria	Pass	Fail	N/A
Control Std./LFB	+/- 30 %	x		
Spike Recovery	70 - 130 %	x		
Blank	< or = 3 x Uncertainty	x		
Duplicate 1	95% confidence interval overlap	x		
Duplicate 2 *	95% confidence interval overlap	x		

\* Required for batch size greater than 10 samples.

Conclusions:

    x Batch QC Passes\*\*  
     Batch QC Fails  
     Batch QC Passes, with exceptions\*\*:

Reruns Required: \_\_\_\_\_

Narrative:

\*\*All QC data provided in this section of the report met the acceptance criteria specified in the analytical methods and procedures. State Maximum Contamination Levels (MCLs) are not evaluated in this report.

Batch Listing by Lab Control Number:

<u>24H01416</u>	<u>24H01401</u>
<u>24H01356</u>	<u>24H01404</u>
<u>24H01357</u>	<u>24H01409</u>
<u>24H01362</u>	<u>24H01412</u>
<u>24H01368</u>	<u>24H01230</u>
<u>24H01370</u>	<u>23H03211</u>
<u>24H01373</u>	<u>24H01051</u>
<u>24H01374</u>	_____
<u>24H01375</u>	_____
<u>24H01399</u>	_____

Evaluator:

 \_\_\_\_\_

03/21/2024

Date

**Batch QC Summary Form**

Analyte: Gross Beta

Control Standard/LFB: ID: C11-005 pCi/mL: 44 (use 1 diluted)

Spike Solution: ID: C11-005 pCi/mL: 44 (use 1 mL)

Spike Recovery Calculation: Sample: Tap\*

$$\text{Calculation: } \frac{(215.3) - (0.200) - (1.6) - (0.200)}{44} \times 100 = 97.1\%$$

Batch QC Evaluation:

Parameter	Criteria	Pass	Fail	N/A
Control Std./LFB	+/- 30 %	x		
Spike Recovery	70 - 130 %	x		
Blank	< or = 3 x Uncertainty	x		
Duplicate 1	95% confidence interval overlap	x		
Duplicate 2 *	95% confidence interval overlap	x		

\* Required for batch size greater than 10 samples.

Conclusions:

    x Batch QC Passes\*\*  
       Batch QC Fails  
       Batch QC Passes, with exceptions\*\*:

Reruns Required: \_\_\_\_\_

Narrative:

\*\*All QC data provided in this section of the report met the acceptance criteria specified in the analytical methods and procedures. State Maximum Contamination Levels (MCLs) are not evaluated in this report.

Batch Listing by Lab Control Number:

<u>24H01416</u>	<u>24H01401</u>
<u>24H01356</u>	<u>24H01404</u>
<u>24H01357</u>	<u>24H01409</u>
<u>24H01362</u>	<u>24H01412</u>
<u>24H01368</u>	<u>24H01230</u>
<u>24H01370</u>	<u>23H03211</u>
<u>24H01373</u>	<u>24H01051</u>
<u>24H01374</u>	_____
<u>24H01375</u>	_____
<u>24H01399</u>	_____

Evaluator:

 \_\_\_\_\_

03/13/2024

Date

**Batch QC Summary Form**

Analyte: Radium-226

Control Standard/LFB: ID: C73-004 pCi/mL: 21.1 (use 2 diluted)

Spike Solution: ID: C73-004 pCi/mL: 21.1 (use 2 mL)

Spike Recovery Calculation: Sample: 24H01403-01c

$$\text{Calculation: } \frac{(42.3) (1.000) - (1.5) (1.000)}{42.2} \times 100 = 97\%$$

Batch QC Evaluation:

Parameter	Criteria	Pass	Fail	N/A
Control Std./LFB	+/- 20 %	x		
Spike Recovery	80 - 120 %	x		
Blank	< or = 3 x Uncertainty	x		
Duplicate 1	95% confidence interval overlap	x		
Duplicate 2 *	95% confidence interval overlap			x

\* Required for batch size greater than 10 samples.

Conclusions:

    x Batch QC Passes\*\*  
     Batch QC Fails  
     Batch QC Passes, with exceptions\*\*:

Reruns Required: \_\_\_\_\_

Narrative: Sample duplicate failed the first run. It was recounted and passed the 2nd run.

\*\*All QC data provided in this section of the report met the acceptance criteria specified in the analytical methods and procedures. State Maximum Contamination Levels (MCLs) are not evaluated in this report.

Batch Listing by Lab Control Number:

24H01401 \_\_\_\_\_  
24H01403 \_\_\_\_\_  
24H01404 \_\_\_\_\_  
24H01405 \_\_\_\_\_  
24H01409 \_\_\_\_\_  
24H01410 \_\_\_\_\_  
24H01412 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Evaluator:  
 \_\_\_\_\_

03/26/2024  
 Date \_\_\_\_\_

**Batch QC Summary Form**

Analyte: Radium-228

Control Standard/LFB: ID: C6-007 pCi/mL: 14.1 (use 5 diluted)

Spike Solution: ID: C6-007 pCi/mL: 14.1 (use 5 mL)

Spike Recovery Calculation: Sample: 24H01403-002b

$$\text{Calculation: } \frac{(71.2) (1.000) - (2.7) (1.000)}{70.5} \times 100 = 97.2\%$$

Batch QC Evaluation:

Parameter	Criteria	Pass	Fail	N/A
Control Std./LFB	+/- 20 %	x		
Spike Recovery	80 - 120 %	x		
Blank	< or = 3 x Uncertainty	x		
Duplicate 1	95% confidence interval overlap	x		
Duplicate 2 *	95% confidence interval overlap			x

\* Required for batch size greater than 10 samples.

Conclusions:

    x Batch QC Passes\*\*  
       Batch QC Fails  
       Batch QC Passes, with exceptions\*\*:

Reruns Required: \_\_\_\_\_

Narrative:

\*\*All QC data provided in this section of the report met the acceptance criteria specified in the analytical methods and procedures. State Maximum Contamination Levels (MCLs) are not evaluated in this report.

Batch Listing by Lab Control Number:

24H01401 \_\_\_\_\_  
24H01403 \_\_\_\_\_  
24H01404 \_\_\_\_\_  
24H01405 \_\_\_\_\_  
24H01409 \_\_\_\_\_  
24H01410 \_\_\_\_\_  
24H01412 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Evaluator:  
 \_\_\_\_\_

\_\_\_\_\_ 03/19/2024  
 Date



24H 01409



Ship To: H.  
Preserved: Y/N  
HNO3 Lot #: 20210414/2  
Date Preserved: 3/1/24

<b>Report To Information</b> Company Name <u>Colorado Analytical Laboratory</u> Report To: <u>Rebecca Manzanarez</u> E-Mail: <u>rebeccamanzanarez@coloradolab.com</u>	<b>Bill To Information: (if different from report to)</b> <u>61211 Greaves Subdivision</u>	<b>Project Name</b> <u>61211 Greaves Subdivision</u>
<b>Address:</b> <u>10411 Heinz Way</u> <u>Commerce City, CO 80640</u> Phone: <u>303-659-2313</u>	<b>CAL TASK</b> <u>240301008</u> <u>KES</u>	<b>Compliance Samples:</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> <b>Submit Data to CDPHE:</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

**Tests Requested**

Radium 228 (Sub)											
Gross Alpha/Beta (Sub)											
Radium 226 (Sub)											

Sample Date/Time	Sample ID	Matrix	Container Type
3/1/24 8:45 AM	240301008-01D - 001-009	Water - Drinking	1L - Unpreserved
3/1/24 8:45 AM	240301008-01E - 001-009	Water - Drinking	4 - 1L - Unpreserved

HNO3  
HNO3

Comment:

Initial pH Check on 3/4/24  
Secondary pH Check on 3/4/24  
pH 7.2

749360

RECEIVED MAR 04 2023

Received by: [Signature] Date: 3/4/24 0900

Relinquished by: [Signature] Date: 3/4/24 0900

Received by: [Signature] Date: 3/4/24 1245

**Report To:** David R Gorman, P.E.

**Company:** Monument Valley Engineers - MVE Civil  
1903 Lelaray St  
Suite 200  
Colorado Springs CO 80909

**Bill To:** David R Gorman, P.E.

**Company:** Monument Valley Engineers - MVE Ci  
1903 Lelaray St  
Suite 200  
Colorado Springs CO 80909

**Task No.:** 240301008  
**Client PO:**  
**Client Project:** Greaves Subdivision 61211

**Date Received:** 3/1/24  
**Date Reported:** 3/28/24  
**Matrix:** Water - Drinking

**Customer Sample ID** 001-009  
**Sample Date/Time:** 3/1/24 8:45 AM  
**Lab Number:** 240301008-01

Test	Result	Method	RL	MCL	Date Analyzed	QC Batch ID	Analyzed By
Nitrate/ Nitrite Nitrogen	0.58 mg/L	Calculation	0.05 mg/L		3/4/24	-	NRP
Chloride	1.0 mg/L	EPA 300.0	0.1 mg/L	250	3/1/24	QC71687	NRP
Fluoride	0.25 mg/L	EPA 300.0	0.10 mg/L	4	3/1/24	QC71688	NRP
Nitrate Nitrogen	0.58 mg/L	EPA 300.0	0.05 mg/L	10	3/1/24	QC71684	NRP
Nitrite Nitrogen	ND mg/L	EPA 300.0	0.03 mg/L	1	3/1/24	QC71685	NRP
Sulfate	2.3 mg/L	EPA 300.0	0.1 mg/L	250	3/1/24	QC71689	NRP
Cyanide-Total	ND mg/L	EPA 335.4	0.005 mg/L		3/5/24	QC71738	JCB
<b>Total</b>							
Iron	0.023 mg/L	EPA 200.7	0.005 mg/L		3/5/24	QC71705	JJA
Aluminum	0.033 mg/L	EPA 200.8	0.001 mg/L	0.05	3/6/24	QC71770	MBN
Antimony	ND mg/L	EPA 200.8	0.0012 mg/L	0.006	3/6/24	QC71770	MBN
Arsenic	ND mg/L	EPA 200.8	0.0006 mg/L	0.01	3/6/24	QC71770	MBN
Barium	0.0552 mg/L	EPA 200.8	0.0007 mg/L	2	3/6/24	QC71770	MBN
Beryllium	ND mg/L	EPA 200.8	0.0001 mg/L	0.004	3/6/24	QC71770	MBN
Cadmium	ND mg/L	EPA 200.8	0.0001 mg/L	0.005	3/6/24	QC71770	MBN
Chromium	ND mg/L	EPA 200.8	0.0015 mg/L	0.1	3/6/24	QC71770	MBN
Manganese	ND mg/L	EPA 200.8	0.0008 mg/L	0.05	3/6/24	QC71770	MBN
Mercury	ND mg/L	EPA 200.8	0.0001 mg/L	0.002	3/6/24	QC71770	MBN
Selenium	0.0011 mg/L	EPA 200.8	0.0008 mg/L		3/6/24	QC71770	MBN
Silver	ND mg/L	EPA 200.8	0.0005 mg/L	0.1	3/6/24	QC71770	MBN

**Abbreviations/ References:**

RL = Reporting Limit = Minimum Level  
mg/L = Milligrams Per Liter or PPM  
ug/L = Micrograms Per Liter or PPB  
mpn/100 mls = Most Probable Number Index/ 100 mls  
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.  
(s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

MCL = Maximum contaminant level per the EPA  
ND = Not Detected at Reporting Limit.

**Analytical Results**

**TASK NO: 240301008**

**Report To:** David R Gorman, P.E.

**Company:** Monument Valley Engineers - MVE Civil  
1903 Lelaray St  
Suite 200  
Colorado Springs CO 80909

**Bill To:** David R Gorman, P.E.

**Company:** Monument Valley Engineers - MVE Ci  
1903 Lelaray St  
Suite 200  
Colorado Springs CO 80909

**Task No.:** 240301008  
**Client PO:**  
**Client Project:** Greaves Subdivision 61211

**Date Received:** 3/1/24  
**Date Reported:** 3/28/24  
**Matrix:** Water - Drinking

**Customer Sample ID** 001-009  
**Sample Date/Time:** 3/1/24 8:45 AM  
**Lab Number:** 240301008-01

Test	Result	Method	RL	MCL	Date Analyzed	QC Batch ID	Analyzed By
<i>Total</i>							
Thallium	ND mg/L	EPA 200.8	0.0002 mg/L	0.002	3/6/24	QC71770	MBN
Zinc	0.004 mg/L	EPA 200.8	0.001 mg/L	5	3/6/24	QC71770	MBN

Abbreviations/References:

RL = Reporting Limit = Minimum Level  
mg/L = Milligrams Per Liter or PPM  
ug/L = Micrograms Per Liter or PPB  
mpn/100 mls = Most Probable Number Index/ 100 mls  
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.  
(s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

MCL = Maximum contaminant level per the EPA  
ND = Not Detected at Reporting Limit.

**Report To:** David R Gorman, P.E.  
**Company:** Monument Valley Engineers - MVE Civil

**Receive Date:** 3/1/24  
**Project Name:** Greaves Subdivision 61211

Test	QC Batch ID	QC Type	Result	Method	Prep Date
Chloride	QC71687	Blank	ND	EPA 300.0	3/1/24
Cyanide-Total	QC71738	Blank	ND	EPA 335.4	3/5/24
Fluoride	QC71688	Blank	ND	EPA 300.0	3/1/24
Aluminum	QC71770	Method Blank	ND	EPA 200.8	3/1/24
Antimony	QC71770	Method Blank	ND	EPA 200.8	3/1/24
Arsenic	QC71770	Method Blank	ND	EPA 200.8	3/1/24
Barium	QC71770	Method Blank	ND	EPA 200.8	3/1/24
Beryllium	QC71770	Method Blank	ND	EPA 200.8	3/1/24
Cadmium	QC71770	Method Blank	ND	EPA 200.8	3/1/24
Chromium	QC71770	Method Blank	ND	EPA 200.8	3/1/24
Manganese	QC71770	Method Blank	ND	EPA 200.8	3/1/24
Mercury	QC71770	Method Blank	ND	EPA 200.8	3/1/24
Selenium	QC71770	Method Blank	ND	EPA 200.8	3/1/24
Silver	QC71770	Method Blank	ND	EPA 200.8	3/1/24
Thallium	QC71770	Method Blank	ND	EPA 200.8	3/1/24
Zinc	QC71770	Method Blank	ND	EPA 200.8	3/1/24
Iron	QC71705	Method Blank	ND	EPA 200.7	3/1/24
Nitrate Nitrogen	QC71684	Blank	ND	EPA 300.0	3/1/24
Nitrite Nitrogen	QC71685	Blank	ND	EPA 300.0	3/1/24
Sulfate	QC71689	Blank	ND	EPA 300.0	3/1/24

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Chloride	QC71687	Duplicate	0 - 20	-	0.4	EPA 300.0
		LCS	90 - 110	103.1	-	
		MS	75 - 125	101.5	-	
Cyanide-Total	QC71738	Duplicate	0 - 20	-	19.1	EPA 335.4
		LCS	90 - 110	103.6	-	
		MS	75 - 125	106.0	-	
Fluoride	QC71688	Duplicate	0 - 20	-	1.5	EPA 300.0
		LCS	90 - 110	99.9	-	
		MS	75 - 125	97.3	-	
Aluminum	QC71770	LCS	90 - 110	101.4	-	EPA 200.8
		MS	70 - 130	116.0	-	
		MSD	0 - 10	-	1.4	
Antimony	QC71770	LCS	90 - 110	100.6	-	EPA 200.8
		MS	70 - 130	106.4	-	
		MSD	0 - 10	-	1.3	
Arsenic	QC71770	LCS	90 - 110	103.1	-	EPA 200.8
		MS	70 - 130	111.0	-	
		MSD	0 - 10	-	0.2	
Barium	QC71770	LCS	90 - 110	109.2	-	EPA 200.8

**Abbreviations/ References:**

RL = Reporting Limit = Minimum Level  
 mg/L = Milligrams Per Liter or PPM  
 ug/L = Micrograms Per Liter or PPB  
 mpn/100 mls = Most Probable Number Index/ 100 mls  
 Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.  
 (s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

MCL = Maximum contaminant level per the EPA  
 ND = Not Detected at Reporting Limit.

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Beryllium	QC71770	MS	70 - 130	90.4	-	EPA 200.8
		MSD	0 - 10	-	0.4	
		LCS	90 - 110	105.5	-	
Cadmium	QC71770	MS	70 - 130	95.1	-	EPA 200.8
		MSD	0 - 10	-	2.5	
		LCS	90 - 110	107.9	-	
Chromium	QC71770	MS	70 - 130	104.3	-	EPA 200.8
		MSD	0 - 10	-	0.1	
		LCS	90 - 110	101.5	-	
Manganese	QC71770	MS	70 - 130	106.5	-	EPA 200.8
		MSD	0 - 10	-	1.5	
		LCS	90 - 110	102.2	-	
Mercury	QC71770	MS	70 - 130	97.4	-	EPA 200.8
		MSD	0 - 10	-	1.5	
		LCS	90 - 110	98.6	-	
Selenium	QC71770	MS	70 - 130	102.5	-	EPA 200.8
		MSD	0 - 10	-	4.9	
		LCS	90 - 110	103.3	-	
Silver	QC71770	MS	70 - 130	111.0	-	EPA 200.8
		MSD	0 - 10	-	0.9	
		LCS	90 - 110	103.5	-	
Thallium	QC71770	MS	70 - 130	79.7	-	EPA 200.8
		MSD	0 - 10	-	0.5	
		LCS	90 - 110	102.5	-	
Zinc	QC71770	MS	70 - 130	81.2	-	EPA 200.8
		MSD	0 - 10	-	4.9	
		LCS	90 - 110	102.8	-	
Iron	QC71705	MS	70 - 130	103.9	-	EPA 200.8
		MSD	0 - 10	-	3.4	
		Duplicate	0 - 20	-	4.4	
Nitrate Nitrogen	QC71684	LCS	90 - 110	102.8	-	EPA 200.7
		MS	75 - 125	103.0	-	
		Duplicate	0 - 20	-	0.0	
Nitrite Nitrogen	QC71685	LCS	90 - 110	102.6	-	EPA 300.0
		MS	75 - 125	94.1	-	
		Duplicate	0 - 20	-	3.4	
Sulfate	QC71689	LCS	90 - 110	98.7	-	EPA 300.0
		MS	75 - 125	96.8	-	
		Duplicate	0 - 20	-	0.8	
		LCS	90 - 110	100.8	-	EPA 300.0
		MS	75 - 125	104.9	-	
		Duplicate	0 - 20	-	-	

All analyses were performed in accordance with approved methods under the latest revision to 40 CFR Part 136 unless otherwise identified. Based on my inquiry of the person or persons directly responsible for analyzing the wastewater samples and generating the report (s), the analyses, report, and information submitted are, to the best of my knowledge and belief, true, accurate, and complete.



DATA APPROVED FOR RELEASE BY

**Abbreviations/ References:**

RL = Reporting Limit = Minimum Level  
 mg/L = Milligrams Per Liter or PPM  
 ug/L = Micrograms Per Liter or PPB  
 mpn/100 mls = Most Probable Number Index/ 100 mls  
 Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.  
 (s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

MCL = Maximum contaminant level per the EPA  
 ND = Not Detected at Reporting Limit.

# Drinking Water Chain of Custody



<b>Report To Information</b> Company Name: <u>MVE</u> Contact Name: <u>DAVE GORMAN</u>		<b>Project Information</b> PWSID: <u>6211</u> System Name: _____	
Address: <u>1903 LELBRAY ST</u> City: <u>C/S</u> State: <u>CO</u> Zip: <u>80909</u>		Compliance Samples: Yes <input type="checkbox"/> No <input type="checkbox"/> Send Results to CDPHE: Yes <input type="checkbox"/> No <input type="checkbox"/>	
Phone: <u>719-635-5736</u> Email: <u>DAVEG@MVECLIVIL.COM</u>		Task Number (Lab Use Only): <u>CAL Task 240301008</u> KES	
Sample Collector: <u>TOM WENDLAND</u> Sample Collector Phone: <u>719-330-8365</u> PO Number: _____			

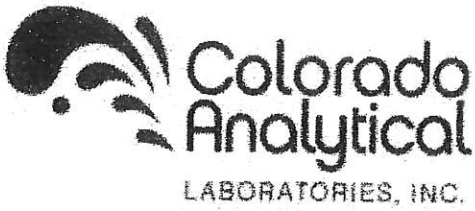
Commerce City Lab  
 10411 Heinz Way  
 Commerce City CO 80640

Lakewood Service Center  
 610 Garrison Street, Unit E  
 Lakewood CO 80215

Phone: 303-659-2313

[www.coloradolab.com](http://www.coloradolab.com)

Report To Information		PHASE I, II, V Drinking Water Analyses (check requested analysis)												Subcontract Analyses																		
Date	Time	Client Sample ID / Sample Pt ID	No. of Containers	Residual Chlorine (mg/L)	P/A Samples Only	Total Coliform P/A	504.1 EDB/DBCP	505 Pests/PCBS	515.4 Herbicides	524.2 VOCs	525.2 SOCs-Pest	531.1 Carbamates	547 Glyphosate	548.1 Endothal	549.2 Diquat	524.2 TTHMs	522.2 HAA5s	Lead/Copper	Nitrate	Nitrite	Fluoride	Inorganics	Alk./Lang. Index (Circle)	TOC, DOC (Circle)	SUVA, UV 254 (Circle)	Gross Alpha/Beta	Radium 226/228	Radon	Uranium	Chlorite		
3/1	8:45	001-009																														
<b>Instructions:</b> SEE QUOTE Relinquished By: <u>Tom Wendland</u> Date/Time: <u>3/1-10:16</u>		Delivered Via: <u>Hand</u> Date/Time: _____ Relinquished By: _____ Date/Time: _____		C/S Info: _____ C/S Charged: <u>108</u> Temp. °C/fice: <u>Y</u> Sample Pres. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Received By: <u>JAM</u> Date/Time: <u>3-1-24 10:18a</u>		Seals Present Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Headspace Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																										



CAL Task  
240301008

**Bottle Order  
Test Detail**

Order ID: QBO24020124

Date Created: 2/26/24

KES

**Ship To:** Monument Valley Engineers - MVE Civil  
1903 Lelaray St  
Suite 200  
Colorado Springs CO 80909

**Shipping Options:**

Ship Via: UPS Cooler: Yes

Chain of Custody Drinking Water: 1  
Standard:

**Attention:** David R Gorman, P.E.

**Customer Needs By: 3/1/24**

**Ships From: Commerce City**

719-635-5736

**\*\*Verify All Shipping Addresses\*\***

**Project:**

Greaves Subdivision 61211

Qty.	Bottle / Preservative / Test
1	<b>100 ml sterile - Na2S2O3</b> Total Coliform P/A - Water - Drinking
1	<b>1L - Unpreserved</b> Gross Alpha/Beta (Sub) - Water - Drinking
1	<b>4 - 1L - Unpreserved</b> Radium 226 (Sub) - Water - Drinking Radium 228 (Sub) - Water - Drinking
1	<b>500 ml Cylinder - HNO3</b> Ag - Total - Water - Drinking Al - Total - Water - Drinking As - Total - Water - Drinking Ba - Total - Water - Drinking Be - Total - Water - Drinking Cd - Total - Water - Drinking Cr - Total - Water - Drinking Fe - Total - Water - Drinking Hg - Water - Drinking Mn - Total - Water - Drinking Sb - Total - Water - Drinking Se - Total - Water - Drinking

**\*\*Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.\*\***

<b>Internal Shipping Instructions:</b>	Shipped By: _____
	Date: _____
	Checked By: _____

10411 Heinz Way / Commerce City, CO 80640 / 303-659-2313  
Mailing Address: P.O. Box 507 / Brighton, CO 80601-0507

**Ship To:** Monument Valley Engineers - MVE Civil  
1903 Lelaray St  
Suite 200  
Colorado Springs CO 80909

**CAL Task**  
240301008

**Shipping Options:**

Ship Via: UPS Cooler: Yes

Chain of Custody Drinking Water: 1  
Standard:

**Attention:** David R Goman, P.E.

KES

**Customer Needs By: 3/1/24**  
**Ships From: Commerce City**

719-635-5736

**\*\*Verify All Shipping Addresses\*\***

**Project:**

Greaves Subdivision 61211

**Qty. Bottle / Preservative / Test**

TI - Total - Water - Drinking  
Zn - Total - Water - Drinking

1 **500 ml Cylinder - NaOH**  
Cyanide-Total - Water - Drinking

1 **500 ml Cylinder - Unpreserved**  
Chloride - Water - Drinking  
Fluoride - Water - Drinking  
Langelier Index - Water - Drinking  
Nitrate Nitrogen - Water - Drinking  
Nitrate/ Nitrite Nitrogen - Water - Drinking  
Nitrite Nitrogen - Water - Drinking  
Sulfate - Water - Drinking

**\*\*Samples should be shipped or hand delivered the same day they are collected. Orders that require sub-lab analysis should be delivered to the lab Monday thru Wednesday only.\*\***

**Internal Shipping Instructions:**

Shipped By: \_\_\_\_\_

Date: \_\_\_\_\_

Checked By: \_\_\_\_\_

10411 Heinz Way / Commerce City, CO 80640 / 303-659-2313  
Mailing Address: P.O. Box 507 / Brighton, CO 80601-0507