PONDEROSA PINE ESTATES

A replat of Lots 1 and 2, Morgan Subdivision No. 1

PART OF THE SE1/4 SECTION 9, T.11 S. R.67W. of the 6TH P.M.

Parcel #'s 7109002018 and 7109002019

WATER RESOURCES REPORT

December 12, 2023

Revised

August 20,2024

Prepared for:

Cliff Joyner

Joyner Construction Company, inc.

1270 Fawnwood Road

Monument, CO 80132

Prepared by:

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614 Elkton Drive

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EPC Project No.: VR2324

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1.0 INTRODUCTION AND EXECUTIVE SUMMARY

The purpose of this report is to address the specific water needs of the proposed Ponderosa Pine Estates subdivision: Assessor's Parcel #'s 7109002018 and 7109002019 in El Paso County, CO. This 3.07 Acre site is located in Section 9, Township 11 South, Range 65 West, 6th P.M., El Paso County, Colorado. The site is currently platted as Lots 1 and 2, Morgan Subdivision No. 1.

The site is within the Forest View Acres Water District Service Area. Forest View Acres Water District is a Title 32 Special District which provides water to 3 non contiguous subdivided developments in the northwest corner of unincorporated El Paso County north and west of Monument. Currently, Forest View Acres Water District serves approximately 350 residential taps and 0 commercial taps. A copy of the service area map of the FVAWD is included in the Appendix.

Section 30-28-133,(d), C.R.S. requires that the applicant submit to the County, "Adequate evidence of a water supply that is sufficient in terms of quantity, quality, and dependability will be available to ensure an adequate supply of water. The purpose of this report is to meet the requirements of this section. The State Engineers Office (SEO) water supply information summary sheet is included in the Appendix.

Only water services will be provided by Forest View Acres Water District. The Commitment Letter is included in the Appendix, and reflects the most updated irrigation square footages and consumption estimates for the residential use involved in the project.

CONCLUSION: This report is being submitted in support of the replat, which encompasses continued residential use of the site. There will be no change in usage amount caused by this replat.

***EXECUTIVE SUMMARY**:* **The water rights provided by Forest View Acres Water District for theexisting parcel are adequate to meet the needs of the proposed 4- lot resubdivision on a 300-year basis.**

2.0 PROJECTED LAND USES

2.1 *Projected Land Uses*

This report pertains to the existing 3.07-acre residential use parcel that is proposed to be resubdivided into 4 lots. Please refer to the *Legal Description*depicting the proposed subdivision.

3.0 WATER NEEDS AND PROJECTED DEMANDS

3.1 *Water Demand Summary*

The resubdivision is projected to use a total of 0.94 acre feet of water a year, via 2 existing water connections on the subject property and 2 added water connections on the proposed lots. All of this will be for residential demand. There is no demand for water for irrigation purposes. The connections servicing the existing houses are 18810 & 18820 Cloven Hoof Drive. See the attached 12-1-23 Forest View Acres Water District Commitment Letter attached to this report. Thisinformation is based on data provided by Forest View Acres Water District in the aforementioned letter.

3.2 *District Water Supply*

Forest View Acres Water District water is sourced both from groundwater and surface water. The FVAWD sources their ground water from the Denver Basin via the Arapaho Aquifer and their surface water from Monument Creek, via Limbaugh Canyon. Forest View Acres Water District also owns water rights to a well drilled into the Dawson Aquifer as well as 2 unnamed alluvial wells, all three of which are currently not in use.

4.0 WATER SYSTEM FACILITIES AND PHYSICAL SUPPLY

4.1 *Sources of Water Supply*:

Forest View Acres Water District will provide treatment and delivery of the water to the development. The proposed water system will connect to the existing water system in place on Cloven Hoof Rd.

The District owns 4 wells (2 aquifer and 2 alluvial) but only operates 1 well out of the Denver Basin via the Arapaho Aquifer. Also, the District operates 1 surface water source, sourced from Monument Creek via the Limbaugh Canyon.

4.2 *Sufficient Dependability of Water Supply:*

Ponderosa Pine Estates subdivision is to be served by the Forest View Acres Water District water system. As stated above, the proposed water system will connect to the existing water system in place on Cloven Hoof Rd. An Intent to Serve letter from Forest View Acres Water District to serve the development is included in the Appendix. There are no groundwater sources on this site proposed to be utilized by this development. Short term water supplies will be provided by Forest View Acres Water District.

4.3 *Sufficient Quantity of Water Supply*

Per the Water Distribution System Master Plan dated June of 2013 (the most recent available on their site), Forest View Acres Water District's water commitments for the Cloven Hoof area had an average 2012 daily requirement of 9,438 GPD. Per their commitment letter, the Forest View Acres Water District estimates the 4 lots, with the additional proposed houses, will have a total water demand of 0.94 acre/foot per year (~839 gpd). Forest View Acres Water District estimated the Cloven Hoof area completely built out to have an average demand of 12,675 gpd. The proposed 4 lots are well within projected limits. These estimates are broken down in Table 1.

Table 1

FVAWD Subdivision Lot / Demand Breakdown					
Neighborhood	**Current Lots**	**2012 Avg. Day Demand (gpd/neighborhood)**	**Vacant Lots**	**Future Avg. Day Demand at Build - Out (gpd/neighborhood)**	**Total Lots**
Cloven Hoof	44	9,438	13	12,675	57
Red Rock Ranch	141	35,391	18	39,873	159
Red Rock Reserve	8	2,498	18	6,980	26
Shiloh Pines	44	13,919	2	14,417	46
Sundance	40	9,363	0	9,363	40
The Villas	22	3,722	2	4,220	24
Total	299	74,331	53	87,528	352

4.4 *Sufficient Quality and Potability of Water*

Water delivery will be provided by Forest View Acres Water District. Ponderosa Pines Subdivision understands that the quality and potability of the Forest View Acres Water District water supply is already approved. Forest View Acres Water District surface water from Monument Creek is monitored for primary and secondary drinking water contaminants and has always fallen below maximum contaminant limits (MCL). CL2 (chlorine) is applied at the Surface Water Treatment plant for disinfection before being sent through a series of garnet filters before it is determined to be safe. From there, the safe water is sent to a storage tank for holding until it is disbursed as needed. Forest View Acres Water District ground water from Arapaho is monitored for primary and secondary drinking water contaminants and has always fallen below maximum contaminant limits (MCL). The raw well water is first injected with sodium hypochlorite (chlorine) and potassium permanganate solutions (injected via a metering pump) and then processed through three manganese greensand pressure filters before being sent to a storage tank for holding until it is disbursed as needed.

The District's water supply meets and or exceeds all CDPHE Drinking Water Standards. The Appendix provides a copy of the 2023 Forest View Acres Water District Consumer Confidence Report which outlines water quality as delivered to District customers.

4.5 *Water Storage:*

The District currently owns and operates a single 250,000 gallon water tank that serves the entire district via gravity feed. The tank has an estimated 4 day capacity for the currently served 311 residential taps at an estimated 50,000 gallons a day. The tank was constructed in 1975 and has been inspected for safety quarterly with a comprehensive inspection every 5 years. Current estimates (as stated in the Distribution System Master Plan dated June 2013) state the tank will be viable for several decades more.

4.6 *Distribution, Pumping and Transmission Lines:*

Overall, the District operates two major delivery lines, one from the northern Denver Basin wells and one from the eastern UBS Aquifer wells. Each of these lines has one pump station to boost pressure.

5.0 CONCLUSION:

The subject property has adequate water supply to meet the needs of the proposed subdivision on a 300-year basis.

WATER SUPPLY INFORMATION SUMMARY

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
Ponderosa Pine Estates

2. LAND USE ACTION resubdivision

3. NAME OF EXISTING PARCEL AS RECORDED

SUBDIVISION Morgan FILING 1 BLOCK n/a LOT 1 and 2

4. TOTAL ACREAGE 3.07 | 5. NUMBER OF LOTS PROPOSED 4 PLAT MAP ENCLOSED ☒ YES

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 ☒ NO
B. Has the parcel ever been part of a division of land action since June 1, 1972? ☒ YES ☐ NO
If yes, describe the previous action Subdivided into the Morgan Sub No 1, 4-1-75

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

NE 1/4 OF SE 1/4 SECTION 9 TOWNSHIP 11 ☐ N ☒ S RANGE 67 ☐ E ☒ W

PRINCIPAL MERIDIAN: ☒ 6TH ☐ N.M. ☐ UTE ☐ COSTILLA

8. PLAT - Location of all wells on property must be plotted and permit numbers provided. No wells on site
Surveyors plat ☐ Yes ☐ No If not, scaled hand drawn sketch ☐ Yes ☐ No

9. ESTIMATED WATER REQUIREMENTS - Gallons per Day or Acre Feet per Year

HOUSEHOLD USE # 4 of units	____ GPD	.94 AF
COMMERCIAL USE # ____ of S.F.	____ GPD	____ AF
IRRIGATION # ____ of acres	____ GPD	____ AF
STOCK WATERING # ____ of head	____ GPD	____ AF
OTHER ____	____ GPD	____ AF
TOTAL	____ GPD	____ AF

10. WATER SUPPLY SOURCE

☐ EXISTING WELLS ☐ DEVELOPED SPRING
WELL PERMIT NUMBERS
____
____
____

☐ NEW WELLS -
PROPOSED AQUIFERS - (CHECK ONE)
☐ ALLUVIAL ☐ UPPER ARAPAHOE
☐ UPPER DAWSON ☐ LOWER ARAPAHOE
☐ LOWER DAWSON ☐ LARAMIE FOX HILLS
☐ DENVER ☐ DAKOTA
☐ OTHER ____

☐ MUNICIPAL
☐ ASSOCIATION
☐ COMPANY
☒ DISTRICT
NAME Forest View Acres Water Dist
LETTER OF COMMITMENT FOR SERVICE ☒ YES ☐ NO

WATER COURT DECREE CASE NO.'S
____
____
____
____

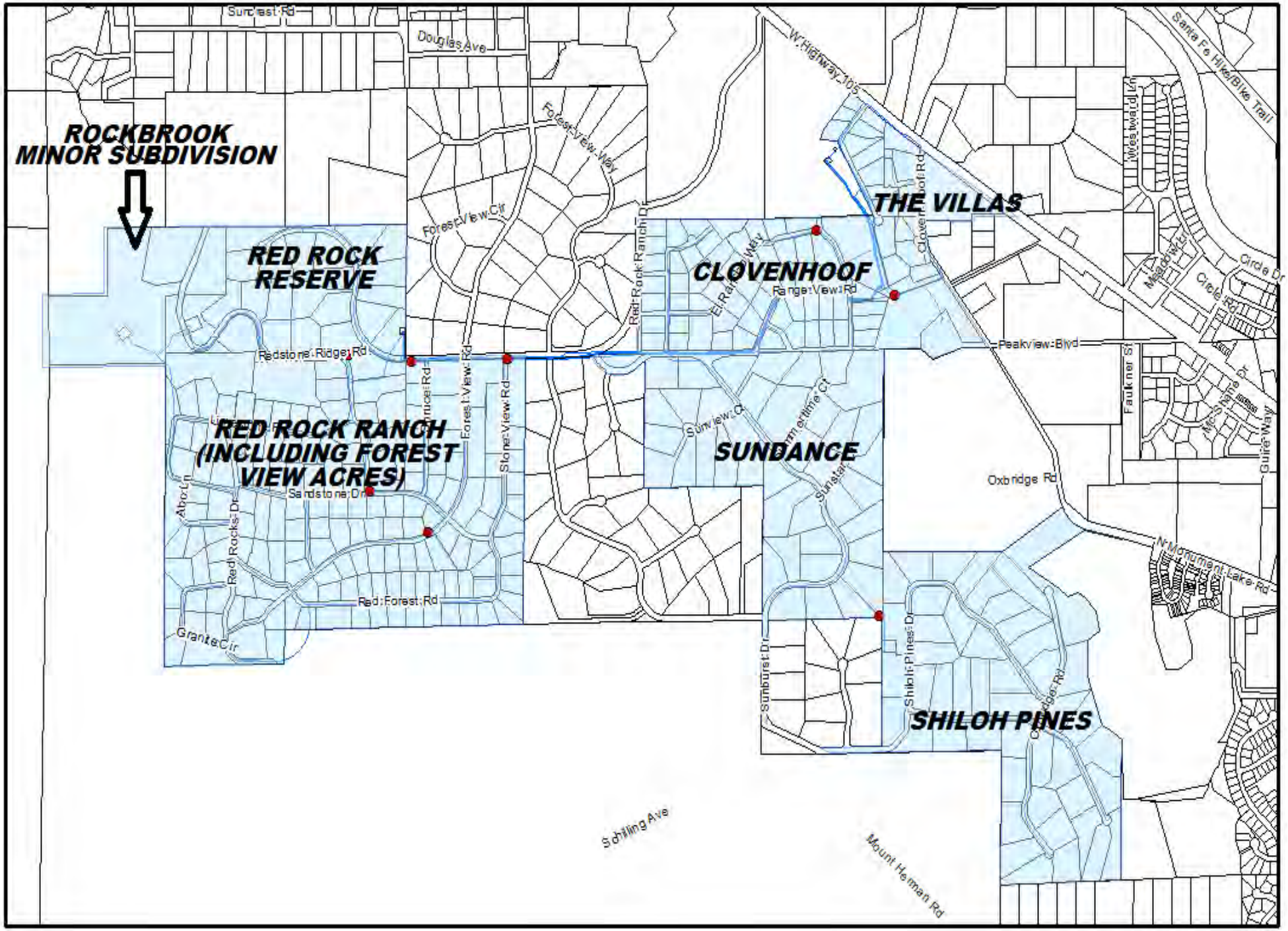
11. ENGINEER'S WATER SUPPLY REPORT ☐ YES ☒ NO IF YES, PLEASE FORWARD WITH THIS FORM. (This may be required before our review is completed)

12. TYPE OF SEWAGE DISPOSAL SYSTEM

☐ SEPTIC TANK/LEACH FIELD ☒ CENTRAL SYSTEM - DISTRICT NAME Palmer Lake Sanitation District

☐ LAGOON ☐ VAULT - LOCATION SEWAGE HAULED TO ____

☐ ENGINEERED SYSTEM (Attach a copy of engineering design) ☐ OTHER ____


ROCKBROOK
MINOR SUBDIVISION
RED ROCK
RESERVE
RED ROCK RANCH
(INCLUDING FOREST
VIEW ACRES)
CLOVENHOOF
THE VILLAS
SUNDANCE
SHILOH PINES
Sunforest Rd
Douglas Ave
W Highway 105
Santa Fe Hike/Bike Trail
Forest View Way
Forest View Cir
Red Rock Ranch Dr
El Rancho Way
Clovenhoof Rd
Range View Rd
Westward Ln
Meadowlark Ln
Circle Dr
Circle Rd
Peakview Blvd
Faulkner St
Redstone Ridge Rd
Forest View Rd
Stone View Rd
Sunview Ct
Summertime Ct
Sunstar Dr
Guide Way
Oxbridge Rd
N Monument Lake Rd
Abo Ln
Red Rocks Dr
Sandstone Dr
Red Forest Rd
Granite Cir
Sunburst Dr
Shiloh Pines Dr
Cloudcrest Rd
Schilling Ave
Mount Herman Rd

FOREST VIEW ACRES WATER DISTRICT

c/o Community Resource Services of Colorado, LLC
7995 E. Prentice Ave. Suite 103E
Greenwood Village, CO 80111
Ph. (303) 381-4960 * F. (303) 381-4961

August 7, 2023

Clifford Joyner
1270 Fawnwood Road
Monument, CO 80132

RE: Commitment Letter for Lot 1 in the Morgan Subdivision

Dear Mr. Joyner:

The Forest View Acres Water District (FVAWD) commits to providing water for 2 detached single-family dwellings to be located on Lot 1 in the Morgan Subdivision off of Cloven Hoof Drive. The property is located within the FVAWD's service area.

The water commitment for the proposed lot equates to a total of two single family equivalents (SFE). This commitment is conditional, requiring compliance with all FVAWD Rules and Regulations, including payment of appropriate fees. Charges include tap fees and all applicable water service fees.

The Forest View Acres Water District has adequate water supply to provide this service.

Sincerely,

FOREST VIEW ACRES WATER DISTRICT

Joel Meggers
District Manager

FOREST VIEW ACRES WD 2023 Drinking Water Quality Report
Covering Data For Calendar Year 2022

Public Water System ID: CO0121250

Esta es información importante. Si no la pueden leer, necesitan que alguien se la traduzca.

We are pleased to present to you this year's water quality report. Our constant goal is to provide you with a safe and dependable supply of drinking water. Please contact JOEL MEGGERS at 303-381-4960 with any questions or for public participation opportunities that may affect water quality. **Please see the water quality data from our wholesale system(s) (either attached or included in this report) for additional information about your drinking water.**

General Information

All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (1-800-426-4791) or by visiting epa.gov/ground-water-and-drinking-water.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV-AIDS or other immune system disorders, some elderly, and infants can be particularly at risk of infections. These people should seek advice about drinking water from their health care providers. For more information about contaminants and potential health effects, or to receive a copy of the U.S. Environmental Protection Agency (EPA) and the U.S. Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and microbiological contaminants call the EPA Safe Drinking Water Hotline at (1-800-426-4791).

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:

- **Microbial contaminants:** viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- **Inorganic contaminants:** salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- **Pesticides and herbicides:** may come from a variety of sources, such as agriculture, urban storm water runoff, and residential uses.
- **Radioactive contaminants:** can be naturally occurring or be the result of oil and gas production and mining activities.
- **Organic chemical contaminants:** including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and also may come from gas stations, urban storm water runoff, and septic systems.

In order to ensure that tap water is safe to drink, the Colorado Department of Public Health and Environment prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

Lead in Drinking Water

Lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. We are responsible for providing high quality drinking water and removing lead pipes, but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water. If you are concerned about lead in your water and wish to have your water tested, contact JOEL MEGGERS at 303-381-4960. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at epa.gov/safewater/lead.

Source Water Assessment and Protection (SWAP)

The Colorado Department of Public Health and Environment may have provided us with a Source Water Assessment Report for our water supply. For general information or to obtain a copy of the report please visit wqcdcompliance.com/ccr. The report is located under "Guidance: Source Water Assessment Reports". Search the table using system name or ID, or by contacting JOEL MEGGERS at 303-381-4960. The Source Water Assessment Report provides a screening-level evaluation of potential contamination that ***could*** occur. It ***does not*** mean that the contamination ***has or will*** occur. We can use this information to evaluate the need to improve our current water treatment capabilities and prepare for future contamination threats. This can help us ensure that quality finished water is delivered to your homes. In addition, the source water assessment results provide a starting point for developing a source water protection plan. Potential sources of contamination in our source water area are listed on the next page.

Please contact us to learn more about what you can do to help protect your drinking water sources, any questions about the Drinking Water Quality Report, to learn more about our system, or to attend scheduled public meetings. We want you, our valued customers, to be informed about the services we provide and the quality water we deliver to you every day.

Our Water Sources

Sources (Water Type - Source Type)	Potential Source(s) of Contamination
PURCHASED WATER FROM CO0121575 (Surface Water-Consecutive Connection) N MONUMENT CREEK (Surface Water-Intake) ARAPAHOE WELL (Groundwater-Well)	Aboveground, Underground and Leaking Storage Tank Sites, Existing/Abandoned Mine Sites, Commercial/Industrial/Transportation, Low Intensity Residential, Row Crops, Fallow, Pasture / Hay, Deciduous Forest, Evergreen Forest, Road Miles

Terms and Abbreviations

- **Maximum Contaminant Level (MCL)** − The highest level of a contaminant allowed in drinking water.
- **Treatment Technique (TT)** − A required process intended to reduce the level of a contaminant in drinking water.
- **Health-Based** − A violation of either a MCL or TT.
- **Non-Health-Based** − A violation that is not a MCL or TT.
- **Action Level (AL)** − The concentration of a contaminant which, if exceeded, triggers treatment and other regulatory requirements.
- **Maximum Residual Disinfectant Level (MRDL)** − The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

- **Maximum Contaminant Level Goal (MCLG)** − The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
- **Maximum Residual Disinfectant Level Goal (MRDLG)** − The level of a drinking water disinfectant, below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
- **Violation (No Abbreviation)** − Failure to meet a Colorado Primary Drinking Water Regulation.
- **Formal Enforcement Action (No Abbreviation)** − Escalated action taken by the State (due to the risk to public health, or number or severity of violations) to bring a non-compliant water system back into compliance.
- **Variance and Exemptions (V/E)** − Department permission not to meet a MCL or treatment technique under certain conditions.
- **Gross Alpha (No Abbreviation)** − Gross alpha particle activity compliance value. It includes radium-226, but excludes radon 222, and uranium.
- **Picocuries per liter (pCi/L)** − Measure of the radioactivity in water.
- **Nephelometric Turbidity Unit (NTU)** − Measure of the clarity or cloudiness of water. Turbidity in excess of 5 NTU is just noticeable to the typical person.
- **Compliance Value (No Abbreviation)** – Single or calculated value used to determine if regulatory contaminant level (e.g. MCL) is met. Examples of calculated values are the 90th Percentile, Running Annual Average (RAA) and Locational Running Annual Average (LRAA).
- **Average (x-bar)** − Typical value.
- **Range (R)** − Lowest value to the highest value.
- **Sample Size (n)** − Number or count of values (i.e. number of water samples collected).
- **Parts per million = Milligrams per liter (ppm = mg/L)** − One part per million corresponds to one minute in two years or a single penny in $10,000.
- **Parts per billion = Micrograms per liter (ppb = ug/L)** − One part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.
- **Not Applicable (N/A)** – Does not apply or not available.
- **Level 1 Assessment** – A study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.
- **Level 2 Assessment** – A very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

Detected Contaminants

FOREST VIEW ACRES WD routinely monitors for contaminants in your drinking water according to Federal and State laws. The following table(s) show all detections found in the period of January 1 to December 31, 2022 unless otherwise noted. The State of Colorado requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. Therefore, some of our data, though representative, may be more than one-year-old. Violations and Formal Enforcement Actions, if any, are reported in the next section of this report.

Note: Only detected contaminants sampled within the last 5 years appear in this report. If no tables appear in this section, then no contaminants were detected in the last round of monitoring.

Disinfectants Sampled in the Distribution System **TT Requirement**: At least 95% of samples per period (month or quarter) must be at least 0.2 ppm ***OR*** If sample size is less than 40 no more than 1 sample is below 0.2 ppm **Typical Sources:** Water additive used to control microbes						
Disinfectant Name	**Time Period**	**Results**	**Number of Samples Below Level**	**Sample Size**	**TT Violation**	**MRDL**
Chlorine	December, 2022	Lowest period percentage of samples meeting TT requirement: 100%	0	1	No	4.0 ppm

Lead and Copper Sampled in the Distribution System								
Contaminant Name	**Time Period**	**90th Percentile**	**Sample Size**	**Unit of Measure**	**90th Percentile AL**	**Sample Sites Above AL**	**90th Percentile AL Exceedance**	**Typical Sources**
Copper	07/16/2022 to 09/23/2022	0.2	10	ppm	1.3	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead	07/16/2022 to 09/23/2022	1	10	ppb	15	0	No	Corrosion of household plumbing systems; Erosion of natural deposits

Disinfection Byproducts Sampled in the Distribution System									
Name	**Year**	**Average**	**Range Low – High**	**Sample Size**	**Unit of Measure**	**MCL**	**MCLG**	**MCL Violation**	**Typical Sources**
Total Haloacetic Acids (HAA5)	2022	3.6	0 to 13.4	4	ppb	60	N/A	No	Byproduct of drinking water disinfection
Total Trihalomethanes (TTHM)	2022	12.38	0 to 22.8	4	ppb	80	N/A	No	Byproduct of drinking water disinfection

Summary of Turbidity Sampled at the Entry Point to the Distribution System					
Contaminant Name	**Sample Date**	**Level Found**	**TT Requirement**	**TT Violation**	**Typical Sources**
Turbidity	Date/Month: Jul	Highest single measurement: 0.947 NTU	Maximum 1 NTU for any single measurement	No	Soil Runoff
Turbidity	Month: Jan	Lowest monthly percentage of samples meeting TT requirement for our technology: 95 %	In any month, at least 95% of samples must be less than 0.3 NTU	No	Soil Runoff

Radionuclides Sampled at the Entry Point to the Distribution System									
Contaminant Name	**Year**	**Average**	**Range Low – High**	**Sample Size**	**Unit of Measure**	**MCL**	**MCLG**	**MCL Violation**	**Typical Sources**
Gross Alpha	2022	2.4	1 to 3.8	2	pCi/L	15	0	No	Erosion of natural deposits
Combined Radium	2022	2.85	1.1 to 4.6	2	pCi/L	5	0	No	Erosion of natural deposits

Inorganic Contaminants Sampled at the Entry Point to the Distribution System									
Contaminant Name	**Year**	**Average**	**Range Low – High**	**Sample Size**	**Unit of Measure**	**MCL**	**MCLG**	**MCL Violation**	**Typical Sources**
Barium	2022	0.05	0.05 to 0.05	1	ppm	2	2	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium	2022	1	1 to 1	1	ppb	100	100	No	Discharge from steel and pulp mills; erosion of natural deposits
Fluoride	2022	1.32	1.32 to 1.32	1	ppm	4	4	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories

Secondary Contaminants**						
**Secondary standards are non-enforceable guidelines for contaminants that may cause cosmetic effects (such as skin, or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water.						
Contaminant Name	**Year**	**Average**	**Range Low – High**	**Sample Size**	**Unit of Measure**	**Secondary Standard**
Sodium	2022	9	9 to 9	1	ppm	N/A

Violations, Significant Deficiencies, and Formal Enforcement Actions

Health-Based Violations

Maximum contaminant level (MCL) violations: Test results for this contaminant show that the level was too high for the time period shown. Please read the information shown below about potential health effects for vulnerable populations. This is likely the same violation that we told you about in a past notice. We are evaluating, or we already completed an evaluation, to find the best way to reduce or remove the contaminant. If the solution will take an extended period of time, we will keep you updated with quarterly notices.

Treatment technique (TT) violations: We failed to complete an action that could affect water quality. Please read the information shown below about potential health effects for vulnerable populations. This is likely the same violation that we told you about in a past notice. We were required to meet a minimum operation/treatment standard, we were required to make upgrades to our system, or we were required to evaluate our system for potential sanitary defects, and we failed to do so in the time period shown below. If the solution will take an extended period of time, we will keep you updated with quarterly notices.

Name	Description	Time Period	Health Effects	Compliance Value	TT Level or MCL
STORAGE TANK RULE	FAILURE TO INSPECT STORAGE TANK(S) AND/OR FAILURE TO CORRECT STORAGE TANK DEFECTS - F326	07/15/2022 - 08/12/2022	May pose a risk to public health.	N/A	N/A
Describe the steps taken to resolve the violation(s), and the anticipated resolution date: On the 06/23/2022 sanitary survey, it was discovered the Supplier hadn't completed a comprehensive inspection report on the Pump (Booster) Station Tank. Tank inspection was completed 08/11/2022 and public notice was distributed on 08/02/2022. Violation satisfied 08/12/2022.					
STORAGE TANK RULE	FAILURE TO INSPECT STORAGE TANK(S) AND/OR FAILURE TO CORRECT STORAGE TANK DEFECTS - F318	07/15/2022 - 08/12/2022	May pose a risk to public health.	N/A	N/A
Describe the steps taken to resolve the violation(s), and the anticipated resolution date: On the 06/23/2022 sanitary survey, it was discovered the Supplier hadn't completed a periodic inspection report on the Pump (Booster) Station Tank. Tank inspection was performed 06/29/2022 and public notice was distributed on 08/02/2022. Violation satisfied 08/12/2022.					
CHLORINE	FAILURE TO MAINTAIN MINIMUM TREATMENT FOR SURFACE WATER FILTRATION AND DISINFECTION	04/01/2022 - 04/30/2022	Disinfectant residual serves as one of the final barriers to protect public health. Lack of an adequate disinfectant residual may increase the likelihood that disease-causing organisms are present.	MG/L	MG/L
Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites, which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.					
Describe the steps taken to resolve the violation(s), and the anticipated resolution date: Due to an unprecedented increase in water production at the surace water treatment plant, we were unable to maintain the required chlorine residual. This issue was corrected on 04/23/2022 and a public notice was distributed on 06/02/2022. Violation has been satisfied.					

Health-Based Violations

Maximum contaminant level (MCL) violations: Test results for this contaminant show that the level was too high for the time period shown. Please read the information shown below about potential health effects for vulnerable populations. This is likely the same violation that we told you about in a past notice. We are evaluating, or we already completed an evaluation, to find the best way to reduce or remove the contaminant. If the solution will take an extended period of time, we will keep you updated with quarterly notices.

Treatment technique (TT) violations: We failed to complete an action that could affect water quality. Please read the information shown below about potential health effects for vulnerable populations. This is likely the same violation that we told you about in a past notice. We were required to meet a minimum operation/treatment standard, we were required to make upgrades to our system, or we were required to evaluate our system for potential sanitary defects, and we failed to do so in the time period shown below. If the solution will take an extended period of time, we will keep you updated with quarterly notices.

Name	Description	Time Period	Health Effects	Compliance Value	TT Level or MCL
Backflow and Cross-Connection					
CROSS CONNECTION RULE	FAILURE TO MEET CROSS CONNECTION CONTROL AND/OR BACKFLOW PREVENTION REQUIREMENTS - M614	07/15/2022 - 07/15/2022	We have an inadequate backflow prevention and cross-connection control program. Uncontrolled cross connections can lead to inadvertent contamination of the drinking water. This is due to one or more of the following: We have permitted an uncontrolled cross connection, as we failed to complete the testing requirements for backflow prevention devices or methods, and we failed to notify the State Health Dept of a possible backflow contamination event.	N/A	N/A

On the 06/23/2022 sanitary survey, it was discovered the Supplier had an inadequate backflow prevention and cross-connection control program. In 2019, the Supplier failed to achieve assembly testing compliance ratio, which may have resulted in an uncontrolled cross connection that can lead to inadvertent contamination of the drinking water. Backflow assembly testing compliance was met in 2020, 2021, and 2022, and a public notice was distributed on 08/02/2022. Violation has been satisfied.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.


105
Rockbrook Rd
105
Masterbilt Homes Inc
7109002018
105
Cloven Hoof Rd
105
200 ft

Memorandum

To:	Pete Johnson, Esq.
From:	Stephanie Luce, P.E.
Date:	May 29, 2024
Project:	Forest View Acres Water District
Subject:	Water Supply Review

LRE Water (LRE) has been asked to prepare an analysis of the water supplies available to the Forest View Acres Water District (FVAWD, District) to serve the existing water service demands and evaluate if additional taps can reasonably be served.

Background

FVAWD provides water service for residents within its District using a combination of surface water and groundwater supplies. Currently, the District serves approximately 342 homes (single-family equivalents, or SFEs), and may serve as many as 358 SFEs in the future. Figure 1, attached, is a general location map illustrating the extent of the FVAWD boundaries, the location of water supply sources and infrastructure supporting FVAWD water service.

Water Demands Served

Current System

Currently, the District relies on its Arapahoe Well (Permit No. 39865-F), and to a lesser extent on its Monument Ditch surface water supply. The Arapahoe Well withdrawals are limited by an existing permit to 85 acre-feet per year (AF/yr). As noted in Table 1, above, the water rights owned by the District can legally provide a significant supply of water; and with the necessary permitting and infrastructure may produce more water than the District may need on an annual basis.

Water service data provided by the District shows that currently there are 342 taps served and the annual demand met in 2022 was 76.7 acre-feet (AF/yr). The District's current annual demand averages approximately 80 AF/yr. This results in an average per-capita demand factor for the District of approximately 210 gallons per day per SFE (gpd/SFE), which is consistent with the average demand factor used by the District.

Again, the District has a large supply of water that is either unpermitted and/or inaccessible with current infrastructure (new wells would be required). The District currently utilizes less than half of its permitted supply from the Arapahoe Well, on average, but in a dry year the District could use the full permitted supply from the Arapahoe Well.

If the District were to serve 2 additional SFEs, the average annual water demands for the District would increase by 0.47 AF. The total water demands served by FVAWD would be around 81 AF/yr.

Water Supplies

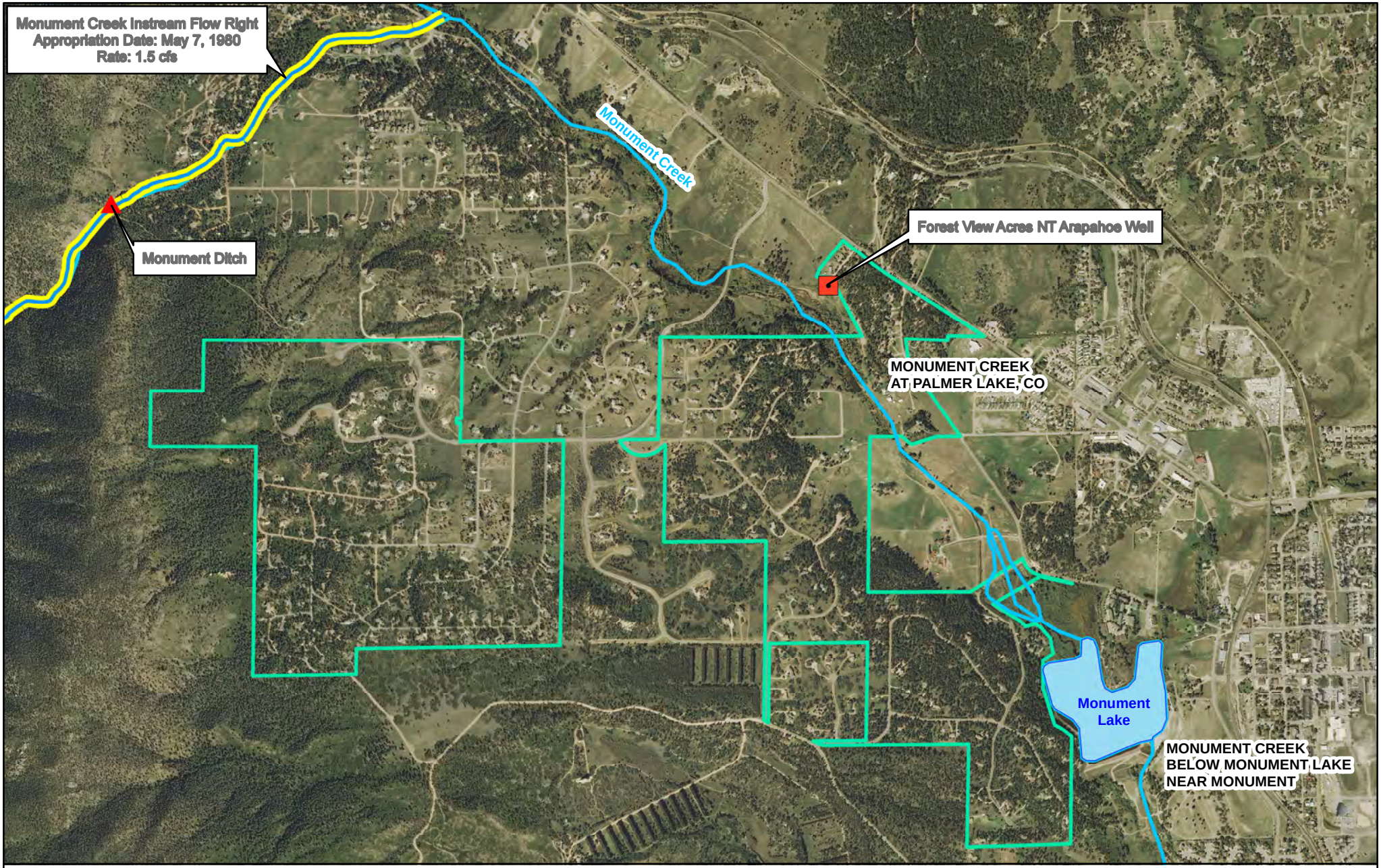
With water supply planning it is critical to evaluate the water supplies available in dry times, and to rely upon those supplies that will be available in all years. The water supplies owned by the District include surface water and groundwater, and the estimated firm yield of these supplies is also summarized in Table 1, below. Because the Monument Ditch surface water supply may not be reliable in drought years, firm yield water supply is zero. The Arapahoe Well currently has a permitted annual limit of 85 AF/yr, which could be increased to 402.8 AF/yr.

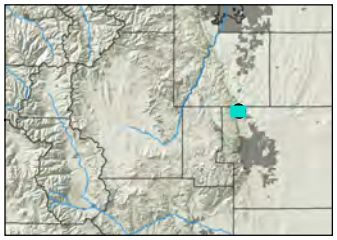
Table 1 – Firm Yield of Primary Water Supplies for FVAWD

Water Supply	Average Annual Supply	Firm Yield
Monument Ditch	51 AF/yr	0 AF/yr
Arapahoe Well	40 AF/yr	85 AF/yr

Conclusions

LRE reviewed the water supplies currently operated to serve the FVAWD's 342 SFEs. The average annual water demand to serve these SFEs is approximately 80 AF/yr. If the District were to serve 344 SFEs, this demand would likely increase to less than 81 AF/yr. Based on the firm supply available from the District's currently permitted Arapahoe Well, 85 AF/yr can reasonably be served by the available water supplies.





Ditch Headgates

Forest View Acres NT Arapahoe

Streamflow Gages

Monument Creek Instream Flow Reach

Monument Lake

Rivers

Forest View Acres Water District Boundary

1552FVA01 | MAY 2024

0 0.1 0.2 0.3

1:20,000 Miles

N

FIGURE 1
FOREST VIEW ACRES
WATER DISTRICT
GENERAL LOCATION MAP

LRE WATER