



WATER RESOURCES REPORT

for

***FALCON HIGHLANDS SOUTH
PUD/PRELIMINARY PLAN***

August 2022

Prepared By:



FALCON HIGHLANDS METROPOLITAN DISTRICT

FALCON HIGHLANDS SOUTH

PUD/PRELIMINARY PLAN

WATER RESOURCES REPORT

August 2022

Prepared for:

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1.0 INTRODUCTION AND CONCLUSION

The purpose of this report is to provide an update to prior water resource supply reports for the Falcon Highlands Metropolitan District (FHMD, the District) and address the specific needs of *Falcon Highlands South* PUD/Preliminary Plan in Falcon, CO. ***Please note that this report supersedes prior reports for this filing and should not be counted as an addition to the prior Sketch Plan Amendment for this filing.***

2.0 PROJECTED LAND USES

2.1 Projected Land Uses

The lands proposed for the Falcon Highlands South PUD/Preliminary Plan are included within the FHMD boundary. Lands within the subject area were previously planned to anticipate 157 single-family homes on 125.6 acres of land. The proposed PUD/Preliminary Plan calls for 378 single-family lots in four (4) phases, which is very typical of Preliminary Plans. Those phases are as follows (also depicted in **Appendix A**):

- Phase 1 – 50 Lots
- Phase 2 – 193 Lots
- Phase 3 – 24 Lots
- Phase 4 – 111 Lots

Remaining proposed land uses outside of residential include roughly 1.6 acres of irrigated grass in a park and drip-irrigation for trees along Antelope Meadows Drive. For estimating purposes, a total area of two (2) acres of irrigation are accounted for in this report.

Using Section 8.4.7(B)(7)(d) of the El Paso County Land Development Code, two acres (87,120 square-feet) is equivalent to 4.93 AF per year, or approximately 16 SFEs when using FHMD's user characteristics.

With 378 single family homes and 16 SFEs of irrigation, a total of 394 SFEs are proposed in the PUD/Preliminary Plan. This equates to roughly 118 acre-feet (AF)/year when utilizing the unit user characteristic of 0.30 AF/SFE discussed in 3.1 below.

2.2 Projected Points of Tie-In

The locations for water and wastewater tie-ins are already established and the stub-out locations are in place (see **Appendix B**).

3.0 WATER NEEDS AND CURENT SUPPLY

3.1 Water Demand

Water demands are expressed in acre-feet (AF) per year and are determined using single-family equivalent (SFE) user characteristics. This is an established and well-known practice used to determine projected water demands.

Existing water users in the District are represented by the following:

- 348 single-family homes
- 16 commercial taps (being the equivalent of 75 SFEs)
- 6 irrigation taps (being the equivalent of 27 SFEs)
- *This yields a current total of 450 SFEs currently served by the District.*

In addition to the SFEs currently served by the district, FHMD has committed to serve another 50 SFEs for a total of 500 SFEs currently committed by the District.

In previously submitted water reports (dated March 2004 and prepared by URS Corporation) which were the basis for initial development, water requirements were based on an assumed water need of 0.23 AF/SFE for indoor use and 0.0566 AF/1,000 square feet of irrigation. Thus, the resulting total water use would be 0.2866 AF/SFE (assuming 1,000 square-feet of irrigation).

This is roughly equivalent to the neighboring Woodmen Hills Metropolitan District (WHMD) actual annual average of 0.285 AF/SFE.

The following table provides a two-year history of usage in the District for the months of June and July.

Table 3-1: Two-Year Use History (June through July)

| Year | Annual Water Use (AF) | SFE (No.) | Unit User Characteristic (AF/SFE) |
|------|-----------------------|-----------|-----------------------------------|
| 2020 | 130.94 | 450 | 0.291 |
| 2021 | 135.88 | 450 | 0.302 |

Actual metered use over these two years is an average of 0.297 AF/SFE, which remains extremely close to the original anticipated values. For planning purposes, we are rounding up a user characteristic to **0.30 AF/SFE**.

3.2 Current (2022) Demand versus Supply

Legal Supply Component

The District's formal water inventory is noted in **Table 3.2** below. The total legal water supply for the District is estimated at 213.16 acre-feet when considered on a 300-year basis (denoted as AF₃₀₀ in successive areas of this report). Based on a unit user characteristic of 0.30 AF/SFE, this will provide adequate 300-year supply to 710 total SFEs (213.16 AF divided by 0.30 AF/SFE).

In summary, the District has adequate (current) legal supply for an additional 210 SFEs.

710 total legal SFEs
-450 existing SFEs
-50 existing committed SFEs
210 available SFEs

Table 3.2 Falcon Highlands Legal Water Supply

| Land Formation/Aquifer | Finding/ Determination/ Decree | Tributary Status | Volume | Annual Allocation 100 Year | Annual Allocation 300 Year | Approved Well Locations | Notes | Area |
|--|---|--|---------------|----------------------------------|----------------------------------|-------------------------------|---|--------|
| | | | Acre-Feet | A-F/Year | A-F/Year | | | |
| Currently Available Water Legal Sources | | | | | | | | |
| Upper Black Squirrel | | | | | | | | |
| Laramie Fox Hills | 141 BD | NT | 12,796 | 127.96 | 42.65 | 57949-F | 449 acres UBS Only | Area A |
| Arapahoe | 142-BD | NT | 11820 | 118.20 | 39.40 | 57950-F | 449 acres UBS Only | Area A |
| Denver | BD-143 | NNT 4 % | 18931 | 189.31 | 63.10 | | 449 acres UBS Only | Area A |
| | | | | | 145.16 | | | |
| Outside UBS | | | | | | | | |
| Laramie Fox Hills | 01CW065 | NT | 4910 | 49.10 | 16.37 | | 183 acres--Non UBS Use on or off Property | Area C |
| Arapahoe | 01CW065 | NT | 5760 | 57.60 | 19.20 | | 183 acres--Non UBS Use on or off Property | Area C |
| Potential Relinquishment | | 2 % of 01 CW 065 | | -0.71 | -0.71 | | If 01 CW 065 is used outside of Sand Creek, this relinquishment should be considered | |
| | | | | | 34.86 | | | |
| | | | | | 180.01 | | | |
| Laramie Fox Hills | 83 CW 134 | NT | 6455 | | 0.00 | | 179 acres Non UBS | Area B |
| Laramie Fox Hills | Split By SEO Sept 07 | | | 48.70 | 16.23 | | 179 acres Non UBS | Area B |
| Laramie Fox Hills Sands | | | | 15.85 | 5.28 | | | |
| | 01 CW 110 | Augmentation--Vacated | | | | | 64.55 Annual AF set aside as augmentation--Vacated for 00 CW 110 | |
| Arapahoe | 83 CW 133 00 CW 110 06 CW 102 | NNT Augmentation Vacated Aug by Bissel | 5970 3490 | 0.00 34.90 | 0.00 11.63 | | 179 acres Non UBS 19.9 Annual AF augmented by 00 CW 110 Anywhere in current future Dist | |
| Denver | 83 CW 135 00 CW 110 06 CW 102 | NNT Augmentation Vacated Augmentation | 480 | 0.00 | 0.00 0.00 33.15 | | 179 acres Non UBS 1.6 Annual AF augmented by 00 CW 110 Can only be used on 179 acres | |
| Total Current Legal Supply | | | 70,612 | 640.91 | 213.16 | 213.16 | | |

Physical Supply Component

The District has been limited in recent years by the available, physical supply. Past operational characteristics limited the current supply to nearly the existing taps. However, in 2019, FHMD contracted with WHMD for operation and maintenance of the system. Numerous minor upgrades and operational improvements enhanced the available physical supply to roughly 500 SFEs. However, this still does not equal the available legal supply.

The 2022/2023 addition of an Arapahoe well outside of the Upper Black Squirrel (UBS) Groundwater Management District boundary will alleviate the remaining deficiency between available physical and legal supply. This will bring the number of potential SFEs within FHMD up to the 710 legal capacity by the end of 2022/23.

Adequacy of Water Supply

Once the new Arapahoe well is complete, an additional 210 SFEs would potentially be available, bringing the physical supply to 710 SFEs, matching the available legal supply.

Long-Term Plans

FHMD is currently seeking additional water rights to develop either in their own right or in conjunction with a neighboring District. Per Table 3.2, the District currently has approximately 640 AF of water based on a 100-year allocation. When determining that legal right on a 300-year basis and accounting for potential augmentation, an allocation of 213.16 AF is calculated.

The District is seeking roughly 400 AF+/- of new legal water rights in order to satisfy ultimate demands. With an additional 400 AF of new rights, the total available 100-year legal supply would be roughly 1,040 acre-feet (640 AF existing plus 400 AF of new rights). Per the 300-year rule, this would be roughly 347 AF that can be allocated to development.

With 347 AF of 300-year supply, the District can serve approximately 1,156 SFEs, exceeding the total expected development which includes the proposed PUD/Preliminary Plan.

4.0 LONG-TERM AND MASTER PLANNING ELEMENTS

4.1 El Paso County Water Planning Area

FHMD is within the El Paso County Water Planning Area 3. The County Water Master Plan does not show a recent exclusion from the District. The actual District size has been pared down to roughly 500 acres.

4.2 Adequacy of Water Rights for 2040 and 2060 Needs

Current water rights holdings are adequate for approximately 710 SFEs. With 394 SFEs proposed in this PUD/Preliminary Plan, 450 SFEs currently served, and 50 SFEs committed to future commercial development, this gives a total of 894 SFEs (268 AF). Therefore, a possible shortfall of approximately 184 SFEs (55 AF of 300-year allocated supply) is estimated.

No expansions of the District are likely, and buildout is expected to fall within the 2040 timeframe.

| | |
|-----------------------------|--------------------------|
| Current Use and Commitments | 150 AF ₃₀₀ |
| Current Legal Supply | 213.16 AF ₃₀₀ |
| Current Physical Supply | 150 AF ₃₀₀ |
| 2022/2023 Physical Supply | 213.16 AF ₃₀₀ |
| Buildout Need (total) | 268 AF ₃₀₀ |

Future Supply

Options for future supply include:

- Off-site purchase near the existing District
- Off-site purchase with participation from other adjacent entities
- Colorado Springs Utilities
- Regional water project

4.3 Municipal Interconnects

In 2019, FHMD installed an interconnect with WHMD who also has interconnects with Cherokee Metropolitan District and Meridian Service Metropolitan District.

4.4 Recent and Upcoming System Expansions

4.4.1 Recent Expansions 2019/2020

The District is now operated and maintained by WHMD, who has initiated numerous minor improvements to the system, including:

- Upgraded raw water metering
- Replacement of media in main filters
- Rehabilitation of a Laramie-Fox Hills well

These improvements have dramatically enhanced the physical supply capacity.

4.4.2 Upcoming Improvements

FHMD is preparing to initiate bond funding to add a new Arapahoe well (A-2), which will expand available 300-year physical supply from roughly 150 AF to 213.16 AF, matching the current 300-year legal supply.

There are several other upcoming improvements, such as combining treatment into a single, more efficient system and rehabilitation of tank coatings.

Additionally, funds are being budgeted for future water acquisitions.

5.0 WATER SYSTEM FACILITIES AND PHYSICAL SUPPLY

5.1 Source of Supply

The District has three (3) wells in the Falcon area in the Arapahoe and Laramie-Fox Hills formations. These wells are all within the District's service area boundary.

The District has adequate legal water supply for existing customers and substantial addition. However, the District has had certain limitations in physical supply, which should be addressed in 2022/2023 with the additional Arapahoe well.

5.2 Water Treatment

The District owns and operates two water treatment plants (treating its entire supply) with the following capacities:

- Filter Plant #1 1.300 Million Gallons per Day Capacity
- Filter Plant #2 0.216 Million Gallons per Day Capacity

5.3 Water Storage

The District currently owns and operates one water storage tank with a capacity of 1.0 million gallons.

5.4 Distribution, Pumping, and Transmission Lines

The District has a single pressure zone which is a "direct-feed system" from the pump station located near the existing water storage tank.

5.5 Existing Infrastructure

Most of the existing infrastructure was installed in 2005 and/or later, meaning these elements are well within their typical design lives of 50 years and longer. In order to support the additional development proposed in this PUD/Preliminary Plan, the existing lift station will need to be upgraded/replaced to handle the additional flow. Please refer to the *Wastewater Disposal Report* for existing and future capacities of the lift station.

5.6 Water Quality

The District disinfects and filters 100% of its water supply to meet and/or exceed all CDPHE drinking water standards. Filtration is utilized for iron and manganese removal. **Appendix C** contains a copy of the 2021 FHMD Consumer Confidence Report, which outlines water quality delivered to District customers.

5.7 Future Facilities

The District is going to drill an additional well in 2022/2023 which will add additional physical supply capabilities.




Appendix A

Land Use Exhibits



1. THIS PHASING PLAN CONSISTS OF TWO INITIAL PHASES THAT ENCOMPASS A TOTAL OF 243 LOTS WHICH IS UNDERSTOOD TO BE THE NUMBER OF AVAILABLE WATER TAPS FOLLOWING CONSTRUCTION OF A PROPOSED WELL BY WOODMEN HILLS METRO DISTRICT. PHASE 1 CONSISTS OF 50 LOTS WHICH IS UNDERSTOOD TO BE THE NUMBER OF AVAILABLE WATER TAPS AT PRESENT WITH NO NEW ADDITIONAL WELL.
2. THERE ARE TWO EXISTING DETENTION PONDS OWNED AND MAINTAINED BY EL PASO COUNTY WITHIN FALCON HIGHLANDS FILING NO. 3 - POND 1 (SOUTHWEST) AND POND 2 (SOUTH-CENTRAL).
3. POND WU IS OWNED AND MAINTAINED BY EL PASO COUNTY AND IS CONSIDERED TRACT T WITHIN FALCON HIGHLANDS FILING NO. 2. THERE IS LIMITED CONSTRUCTION WITHIN POND WU FOR A FOREBAY AND TRICKLE CHANNEL FOR INFLOW FROM THE FUTURE PHASE TO THE NORTH EAST.
4. PHASE 2 IS TO CONSIST OF 50 LOTS WITH A TEMPORARY TURNAROUND AT THE TERMINATION POINT OF THE PHASE'S SOUTH PUBLIC ROADWAYS. SHOULD A TEMPORARY SECONDARY ACCESS TO ANTELOPE MEADOWS CIRCLE BE REQUIRED, A CORNER LOT MAY ACT AS A TEMPORARY ACCESS. PHASE 2 INCLUDES A SECONDARY ACCESS CONNECTION TO ANTELOPE MEADOWS CIRCLE.
5. EXISTING DETENTION POND 1 REQUIRES STORM INFRASTRUCTURE RETROFITTING AND EARTHWORK. STORM NETWORK IMPROVEMENTS THAT OUTFALL TO EXISTING DETENTION POND 1 AND RETROFITS ARE INCLUDED IN PHASE 2 AND ARE REQUIRED PRIOR TO CONSTRUCTION OF ALL OTHER PHASES TRIBUTARY TO EXISTING DETENTION POND 1 (PART OF PHASE 2).
6. EXISTING DETENTION POND 2 REQUIRES STORM INFRASTRUCTURE RETROFITTING AND EARTHWORK. STORM NETWORK IMPROVEMENTS THAT OUTFALL TO EXISTING DETENTION POND 2 AND RETROFITS ARE INCLUDED IN PHASE 2 AND ARE REQUIRED PRIOR TO CONSTRUCTION OF ALL OTHER PHASES TRIBUTARY TO EXISTING DETENTION POND 2 (PART OF PHASE 2 AND FUTURE PHASES).
7. SIGNIFICANT UTILITY INSTALLATIONS THAT ARE REQUIRED FOR CONTINUED SERVICE, DRAINAGE, AND LOOPING ARE SHOWN ON THIS PLAN. THESE ARE DETAILED LOCATIONS OF UTILITY STUBS BETWEEN PHASES ARE SHOWN ON A PRELIMINARY UTILITY PLAN.
8. THE EXISTING SANITARY SEWER FROM FALCON HIGHLANDS FILING NO. 2 IS TO BE MAINTAINED AND REPLACED AS SHOWN ON THIS PLAN. THE EXISTING 30" UTILITY EASEMENT THAT THE EXISTING SYSTEM IS WITHIN IS TO BE VACATED AS A PART OF PHASE 2 FOLLOWING REPLACEMENT AND REMOVAL OF THE FILING NO. 2 SYSTEM. CONSTRUCTION PHASING IS TO MAINTAIN SERVICE FROM FALCON HIGHLANDS FILING NO. 2 TO THE EXISTING LIFT STATION. ANY DEMOLITION OF THE EXISTING SANITARY SEWER SYSTEM WITHIN FALCON HIGHLANDS SANITARY SERVICES FALCON HIGHLANDS FILING NO. 2 IS TO BE ROUTED FOR CONTINUED SERVICE PRIOR TO DEMO AND VACATION OF THE UTILITY EASEMENT. THE PHASING PLAN REFLECTS THIS CONSTRUCTION SEQUENCING.

LEGEND:

- FILING 1
 FILING 2
 FILING 3
 FILING 4

STORM SEWER SYSTEM THROUGH
PHASE 2 TO BE CONSTRUCTED AS
A PART OF PHASE 1 TO OUTFALL
TO EXISTING DETENTION POND 1

PHASE 1 TEMPORARY TURNAROUND LOCATION,
TO BE REMOVED AFTER SECOND ACCESS ESTABLISHED
IN PHASE 2

STORM SEWER SYSTEM THROUGH
PHASE 2 TO BE CONSTRUCTED AS
A PART OF PHASE 1 TO OUTFALL
TO EXISTING DETENTION POND 1

POND 1 RETROFITS
TO BE DONE AS A
PART OF PHASE 1

EXISTING SANITARY SEWER SYSTEM FROM
FIL. NO. 2 TO LIFT STATION TO REMAIN

STORM SEWER SYSTEM THROUGH
PHASE 2 TO BE CONSTRUCTED AS
A PART OF PHASE 1 TO OUTFALL
TO EXISTING DETENTION POND 1

FALCON HIGHLANDS FIL
NO. 1

FALCON HIGHLANDS FIL.
NO. 2

CONNECT TO EX. PUBLIC WATER MAIN
IN ANTELOPE MEADOWS CIRCLE
(PHASE 2)

CONNECT TO EX. PUBLIC STORM

CONNECT TO EX. PUBLIC SANITARY
SYSTEM IN ESMT. (PHASE 2)

FILING 3

FILING 4

EXISTING
DETENTION POND
WU

POND WU FOREBAY
AND CONCRETE
TRICKLE CHANNEL
TO BE INSTALLED AS
A PART OF FILING 4

REMAINING 1,170 LF OF DRAINAGE DITCH TO BE
CUT IN FOR FUTURE PHASE, COMM LINES TO
BE RELOCATED

PROTECTED WETLAND AREA
USACE PERMIT NO.:

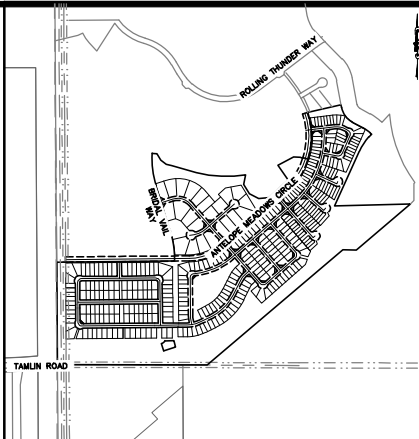
PROPOSED 2,980 LF OF PUBLIC WATER MAIN
EXTENSION TO CONNECT TO EX. PUBLIC
SYSTEM IN ANTELOPE MEADOWS CIRCLE (PHASE 2)

APPROX. 800 LF OF DRAINAGE DITCH TO BE
CUT IN FOR PHASE 2

REMOVAL 2,170 LF OF EXISTING PUBLIC SANITARY SEWER
MAIN AND VACATION OF EXISTING UTILITY EASEMENT TO
TAKE PLACE DURING PHASE 2 FOLLOWING INSTALLATION OF
PROPOSED EXTENSION AND CONNECTION TO EX. SYSTEM

PROPOSED 2,050 LF OF PUBLIC SANITARY
SEWER MAIN EXTENSION TO CONNECT TO
EX. PUBLIC SYSTEM (PHASE 2)

PHASE 1 TEMPORARY TURNAROUND LOCATION,
TO BE REMOVED AFTER SECOND ACCESS ESTABLISHED
IN PHASE 2



KEY MAP
1'' = 1000'



Know what's **below**.
Call before you dig.

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

NOTICE:
CONSTRUCTION SITE SAFETY IS THE
SOLE RESPONSIBILITY OF THE
CONTRACTOR; NEITHER THE OWNER
NOR THE ENGINEER SHALL BE
EXPECTED TO ASSUME ANY
RESPONSIBILITY FOR SAFETY OF
THE WORK, OF PERSONS ENGAGED
IN THE WORK, OF ANY NEARBY
STRUCTURES, OR OF ANY OTHER
PERSONS.

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CHALLENGER HOMES

FALCON HIGHLANDS SOUTH
L PASO COUNTY, COLORADO

PHASING PLANS UTILITY PHASING PLAN

ממלכה

DATE 08/23/2022

REVISIONS

| | | | |
|-----|-----|-----|-----|
| OR. | ARP | CH. | RDI |
|-----|-----|-----|-----|

P.M. RDL

OB 21005234

SHEET NO.

13

CAD FILE: 21005234_PHASING.DWG

Appendix B


Projected Points of Tie-In

N:\Projects\310 Falcon Highlands Metro District\310.01 General District Engineering\Drawings\Exhibits\31001_Appendix_B.dwg 2022/09/17 11:40 AM By: Ryan Mangino




VICINITY MAP
N.T.S.

LEGEND




WATER CONNECTIONS



SEWER CONNECTIONS





0'300'600'

SCALE 11x17: 1" = 600'

SCALE 24x36: 1" = 300'

CONSULTANTS, INC.
5540 TECH CENTER DR, SUITE 100
COLORADO SPRINGS, COLORADO 80919
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DISCLAIMER: THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY ERRORS OR OMISSIONS SHALL BE REPORTED TO JDS-HYDRO CONSULTANTS, INC. JDS-HYDRO ASSUMES NO LIABILITY FOR UNAUTHORIZED CHANGES AND/OR REVISIONS MADE TO PLANS.

FALCON HIGHLANDS METROPOLITAN DISTRICT

APPENDIX B

VICINITY MAP & POINTS OF TIE-IN

| REVISIONS | | | |
|-----------|-------------|----|-----------|
| NO. | DESCRIPTION | BY | APP. DATE |
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |

EXHIBIT

B

Project No.: 310.01

Date: 10/26/21

Design: JPM

Drawn: SKG

Check: JPM

Appendix C
2021 FHMD Consumer Confidence Report

FALCON HIGHLANDS MD 2021 Drinking Water Quality Report

Covering Data For Calendar Year 2020

Public Water System ID: CO0121247

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 JOSH MILLER at 719-635-0330 with any questions or for public participation opportunities that may affect water quality.

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

If present, elevated levels of lead can cause serious health problems (especially for pregnant women and young children). It is possible that lead levels at your home may be higher than other homes in the community as a result of materials used in your home's plumbing. If you are concerned about lead in your water, you may wish to have your water tested. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. Additional information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (1-800-426-4791) or 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 121247, FALCON HIGHLANDS MD, or by contacting JOSH MILLER at 719-635-0330. 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

| <u>Sources (Water Type - Source Type)</u> | <u>Potential Source(s) of Contamination</u> |
|--|--|
| WELL LFH2 (Groundwater-Well) WELL A1 (Groundwater-Well) WELL LFH1 (Groundwater-Well) | There is no SWAP report, please contact JOSH MILLER at 719-635-0330 with questions regarding potential sources of contamination. |

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

FALCON HIGHLANDS MD 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, 2020 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 <u>OR</u> 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, 2020 | <u>Lowest period</u> percentage of samples meeting TT requirement: 100% | 0 | 2 | No | 4.0 ppm |

| Lead and Copper Sampled in the Distribution System | | | | | | | | |
|--|--------------------------|-----------------------------|-------------|-----------------|--------------------------------|-----------------------|---|--|
| Contaminant Name | Time Period | 90 th Percentile | Sample Size | Unit of Measure | 90 th Percentile AL | Sample Sites Above AL | 90 th Percentile AL Exceedance | Typical Sources |
| Copper | 08/03/2020 to 08/05/2020 | 0.05 | 10 | ppm | 1.3 | 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) | 2020 | 1.7 | 1.7 to 1.7 | 1 | ppb | 60 | N/A | No | Byproduct of drinking water disinfection |
| Total Trihalomethanes (TTHM) | 2020 | 23.6 | 23.6 to 23.6 | 1 | ppb | 80 | N/A | No | Byproduct of drinking water disinfection |

| 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 | 2017 | 0.01 | 0.01 to 0.01 | 1 | ppm | 2 | 2 | No | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits |
| Fluoride | 2017 | 0.95 | 0.95 to 0.95 | 1 | ppm | 4 | 4 | No | Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories |
| Nitrate-Nitrite | 2017 | 0.03 | 0.03 to 0.03 | 1 | ppm | 10 | 10 | No | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits |

| Secondary Contaminants** | | | | | | |
|---|------|---------|------------------|-------------|-----------------|--------------------|
| **Secondary standards are <u>non-enforceable</u> 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 | 2017 | 110 | 110 to 110 | 1 | ppm | N/A |

Violations, Significant Deficiencies, and Formal Enforcement Actions

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| No Violations or Formal Enforcement Actions |
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