# WATER DEMAND AND WASTEWATER DISPOSAL REPORT

**FOR**

# THE HILLS AT LORSON RANCH
# PRELIMINARY PLAN

**May, 2020**

***Prepared for:***

Lorson, LLC
212 N. Wahsatch, Suite 301
Colorado Springs, Colorado 80903
Contact: Jeff Mark
(719) 635-3200

***Prepared by:***

Core Engineering Group
15004 1st Avenue S.
Burnsville, MN 55306
719-570-1100

Project No. 100.061

## TABLE OF CONTENTS

## 1.0 INTRODUCTION

The proposed 1361.4 acre Lorson Ranch is located in El Paso County and is bounded on the west by Marksheffel Road, the east by existing ranch land and the future Meridian Road, the north by Banning Lewis Ranch and unplatted property, and on the south by Peaceful Valley Estates, a rural and urban residential subdivision and the Appletree golf course. **The Hills at Lorson Ranch** is a 123.167 acre site within Lorson Ranch. The site is located north of Lorson Boulevard, east of Lorson Ranch East Filing No. 4, and south of Lamprey Drive on a vacant tract.

The legal description for this site is:

**The Hills at Lorson Ranch**
**BOUNDARY LEGAL DESCRIPTION (123.167 ACRES)**

A PARCEL OF LAND IN THE NORTH HALF (N 1/2) SECTION 24 AND IN THE SOUTH HALF (S 1/2) SECTION 13, T15S, R65W OF THE 6TH P.M., EL PASO COUNTY, COLORADO MORE PARTICULARLY DESCRIBED AS FOLLOWS;

BEGINNING AT THE SOUTHEAST CORNER OF "LORSON RANCH EAST FILING NO. 1" AS RECORDED UNDER RECEPTION NO. 219714285 IN THE EL PASO COUNTY, COLORADO RECORDS;

THENCE N38°22'41"E ALONG THE EASTERLY LINE THEREOF AND ITS NORTHERLY EXTENSION, SAID LINE BEING THE NORTHWESTERLY LINE OF THAT 100 FOOT TRI-STATE GENERATION AND TRANSMISSION ASSOCIATION INC. EASEMENT DESCRIBED IN BOOK 2665 PAGE 715 OF THE EL PASO COUNTY RECORDS, 1352.92 FEET TO THE SOUTHERLY CORNER OF THE MOUNTAIN VIEW ELECTRIC ASSOCIATION (MVEA) SUBSTATION AS RECORDED UNDER RECEPTION NO. 206041590;
THENCE CONTINUING N38°22'41"E ALONG THE SOUTHEASTERLY LINE OF SAID MVEA SUBSTATION, 295.16 FEET;
THENCE N38°22'41"E A DISTANCE OF 447.40 FEET TO THE SOUTH RIGHT-OF-WAY LINE OF FONTAINE BOULEVARD AS PLATTED IN "LORSON RANCH EAST FILING NO. 1"

THENCE ALONG SAID RIGHT-OF-WAY LINE THE FOLLOWING THREE (3) COURSES;
(1) THENCE S70°06'29"E, A DISTANCE OF 34.95 FEET;
(2) THENCE N18°59'47"E, A DISTANCE OF 99.98 FEET;
(3) THENCE N38°22'35"E, A DISTANCE OF 0.03 FEET TO THE SOUTHWEST CORNER OF TRACT J, "LORSON RANCH EAST FILING NO. 1";

THENCE ALONG THE LINES OF SAID TRACT J THE FOLLOWING FOUR (4) COURSES;
(1) THENCE N38°22'35"E, ALONG THE EASTERLY LINE THEREOF 345.15 FEET;
(2) THENCE N58°24'10"W, A DISTANCE OF 314.29 FEET;
(3) THENCE N43°26'13"W, A DISTANCE OF 336.42 FEET;
(4) THENCE N0°00'00"E, A DISTANCE OF 440.98 FEET TO THE SOUTH LINE OF "LORSON RANCH EAST FILING NO. 3" AS RECORDED UNDER RECEPTION NO. 220714474 IN THE EL PASO COUNTY RECORDS;

THENCE ALONG THE SOUTHERLY LINES THEREOF THE FOLLOWING SIX (6) COURSES;
(1) THENCE N87°26'51"E, A DISTANCE OF 11.92 FEET;
(2) THENCE 304.57 FEET ALONG A CURVE TO THE LEFT, SAID CURVE HAVING A RADIUS OF 704.79 FEET, A CENTRAL ANGLE OF 24°45'36", THE CHORD OF 302.21 FEET BEARS N75°30'05"E;
(3) THENCE N63°33'19"E, A DISTANCE OF 194.38 FEET;
(4) THENCE N67°51'09"E, A DISTANCE OF 113.39 FEET;
(5) THENCE N65°49'40"E, A DISTANCE OF 232.85 FEET;

(6) THENCE 90.04 FEET ALONG A CURVE TO THE RIGHT, SAID CURVE HAVING A RADIUS OF 533.00 FEET, A CENTRAL ANGLE OF 9°40'45", THE CHORD OF 89.94 FEET BEARS N21°59'18"W;

THENCE S57°31'41"E, A DISTANCE OF 30.77 FEET;
THENCE S22°54'14"E, A DISTANCE OF 56.00 FEET;
THENCE S7°28'57"W, A DISTANCE OF 33.43 FEET;
THENCE 213.93 FEET ALONG A CURVE TO THE LEFT, SAID CURVE HAVING A RADIUS OF 533.00 FEET, A CENTRAL ANGLE OF 22°59'49", THE CHORD OF 212.50 FEET BEARS S40°31'27"E;
THENCE S52°01'21"E, A DISTANCE OF 254.46 FEET TO THE NORTHWESTERLY LINE OF AFORESAID 100 FOOT TRI-STATE GENERATION AND TRANSMISSION ASSOCIATION INC. EASEMENT;

THENCE S37°58'39"W, ALONG SAID NORTHWESTERLY LINE 2.00 FEET;
THENCE S52°01'21"E, A DISTANCE OF 185.54 FEET;
THENCE 210.78 FEET ALONG A CURVE TO THE LEFT, SAID CURVE HAVING A RADIUS OF 970.00 FEET, A CENTRAL ANGLE OF 12°27'02", THE CHORD OF 210.37 FEET BEARS S58°14'52"E;
THENCE S64°28'23"E, A DISTANCE OF 122.30 FEET;
THENCE N78°34'24"E, A DISTANCE OF 33.27 FEET;
THENCE S64°28'23"E, A DISTANCE OF 50.00 FEET;
THENCE S27°31'10"E, A DISTANCE OF 33.27 FEET;
THENCE S64°28'23"E, A DISTANCE OF 56.25 FEET;
THENCE 141.30 FEET ALONG A CURVE TO THE RIGHT, SAID CURVE HAVING A RADIUS OF 630.00 FEET, A CENTRAL ANGLE OF 12°51'04", THE CHORD OF 141.01 FEET BEARS S58°02'51"E;
THENCE S51°37'19"E, A DISTANCE OF 94.90 FEET;
THENCE N83°22'41"E, A DISTANCE OF 33.94 FEET;
THENCE S51°37'19"E, A DISTANCE OF 62.00 FEET;
THENCE S38°22'41"W, A DISTANCE OF 159.73 FEET;
THENCE 267.95 FEET ALONG A CURVE TO THE LEFT, SAID CURVE HAVING A RADIUS OF 868.00 FEET, A CENTRAL ANGLE OF 17°41'14", THE CHORD OF 266.89 FEET BEARS S29°32'04"W;
THENCE S23°47'26"E, A DISTANCE OF 29.39 FEET;
THENCE S18°59'47"W, A DISTANCE OF 50.00 FEET;
THENCE S61°35'11"W, A DISTANCE OF 30.06 FEET;
THENCE S18°59'47"W, A DISTANCE OF 567.87 FEET;
THENCE S26°00'13"E, A DISTANCE OF 36.77 FEET;
THENCE S18°59'47"W, A DISTANCE OF 93.91 FEET;
THENCE S63°59'47"W, A DISTANCE OF 25.46 FEET;
THENCE S18°59'47"W, A DISTANCE OF 119.41 FEET;
THENCE S23°17'08"W, A DISTANCE OF 106.97 FEET;
THENCE S18°59'47"W, A DISTANCE OF 307.87 FEET;
THENCE S23°45'41"E, A DISTANCE OF 29.46 FEET;
THENCE S18°59'47"W, A DISTANCE OF 50.00 FEET;
THENCE S61°45'15"W, A DISTANCE OF 29.46 FEET;
THENCE S18°59'47"W, A DISTANCE OF 396.74 FEET;
THENCE S23°45'41"E, A DISTANCE OF 29.46 FEET;
THENCE S18°59'47"W, A DISTANCE OF 50.00 FEET;
THENCE S61°45'15"W, A DISTANCE OF 29.46 FEET;
THENCE S18°59'47"W, A DISTANCE OF 134.57 FEET;
THENCE 62.79 FEET ALONG A CURVE TO THE RIGHT, SAID CURVE HAVING A RADIUS OF 1,032.00 FEET, A CENTRAL ANGLE OF 3°29'10", THE CHORD OF 62.78 FEET BEARS S20°44'22"W;
THENCE S22°28'57"W, A DISTANCE OF 349.86 FEET;
THENCE 90.69 FEET ALONG A CURVE TO THE RIGHT, SAID CURVE HAVING A RADIUS OF 632.00 FEET, A CENTRAL ANGLE OF 8°13'18", THE CHORD OF 90.61 FEET BEARS S26°35'36"W;
THENCE S30°42'15"W, A DISTANCE OF 26.72 FEET;
THENCE S13°07'56"E, A DISTANCE OF 27.70 FEET;

THENCE S33°01'53"W, A DISTANCE OF 64.00 FEET;
THENCE N56°58'07"W, A DISTANCE OF 9.29 FEET;
THENCE 178.22 FEET ALONG A CURVE TO THE LEFT, SAID CURVE HAVING A RADIUS OF 968.00 FEET, A CENTRAL ANGLE OF 10°32'56", THE CHORD OF 177.97 FEET BEARS N62°14'35"W;
THENCE N67°31'03"W, A DISTANCE OF 789.35 FEET;
THENCE S73°54'03"W, A DISTANCE OF 32.07 FEET;
THENCE N67°31'03"W, A DISTANCE OF 50.00 FEET;
THENCE N28°50'34"W, A DISTANCE OF 32.01 FEET;
THENCE N67°31'03"W, A DISTANCE OF 263.79 FEET;
THENCE 226.85 FEET ALONG A CURVE TO THE LEFT, SAID CURVE HAVING A RADIUS OF 568.00 FEET, A CENTRAL ANGLE OF 22°53'00", THE CHORD OF 225.35 FEET BEARS N78°57'32"W;
THENCE S89°35'58"W, A DISTANCE OF 490.91 FEET TO THE POINT OF BEGINNING.

SAID PARCEL CONTAINS AN AREA OF 5,365,144 S.F. (123.167 ACRES MORE OR LESS).

This site contains 514 single family detached lots and several tracts for open space and parks.

## 2.0 WATER SUPPLY AND WASTEWATER COLLECTION

The development is located within the service boundary of the Widefield Water and Sanitation District (WWSD). A commitment letter is included in Appendix A from WWSD for this project.

### Existing Infrastructure

The Hills at Lorson Ranch is located in Pressure Zone 6 (upper zone). WWSD has an existing 16" diameter potable water main in Grayling Drive and a Booster Station (Rolling Hills Booster Pump Station) located on the north side of Grayling Drive east of Lamprey Drive. In addition, a 12" water main is constructed from Lorson Ranch to an offsite water tank (Rolling Hills Tank) which will serve this development.

The WWSD has a regional lift station south of Lorson Ranch at Marksheffel Road and Mesa Ridge Parkway that will be used to provide wastewater gravity service to Lorson Ranch. Existing sanitary sewer has been stubbed out to this site from Lorson Ranch East and will provide gravity sewer service to the site.

### Water Serviceability

The WWSD's has a current developed physical water supply of 5271 ac-ft of water per year and the three year average demand is 2615 ac-ft per year which is 49.6% of the existing physical supply.

### Wastewater Serviceability

The WWSD collects and treats wastewater from users within its service area at the WWSD treatment plant located near Hwy 16 and Fountain Creek. The treatment plant has a current hydraulic capacity of **2.14 MGD**. Currently, the plant is operating at a three year average loading of **1.67 MGD** which is roughly 78% of capacity

### Water Demand

Water Demand calculations were completed based on the proposed zoning and densities. Water demand is 0.35 ac-ft/year for each single family lot. This subdivision also includes irrigation for landscaping (park) which has been estimated at 32 single family equivalents.

The new water commitments are 191.1 ac-ft per year for the 514 lots and the landscaping (32sfe).

### Wastewater Demand

Sewer loading calculations were completed based on the proposed zoning and densities. Sanitary loads of 205 Gal/Unit for single family residential lots can be expected.

Based on the wastewater loading, the total wastewater load projected for this site is 0.0105 MGD for the 514 lots.

## 3.0 SUMMARY AND CONCLUSIONS

The maximum allowable water demand and the anticipated wastewater contributions are as follows:

| Item | ac. ft./yr | Avg. Daily Flow (gpd) |
|---|---|---|
| Water Demand | 191.10 | 170,519 |
| Wastewater Flow | | 105,370 |

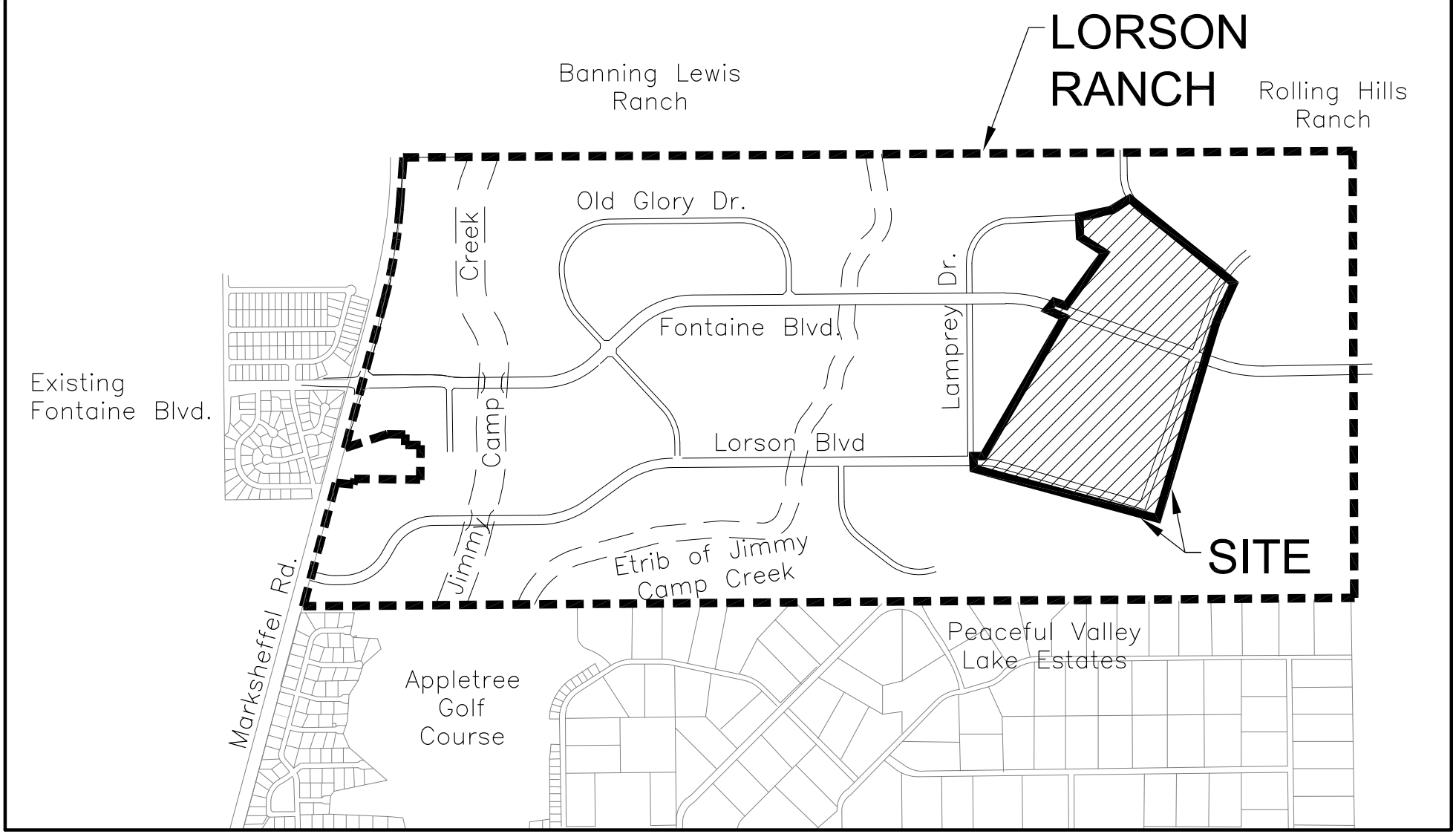
The Widefield Water and Sanitation District has an excess capacity in their existing water supply system to serve this subdivision

The WWSD has excess capacity at their existing wastewater treatment plant to treat an additional **0.47 MGD** of wastewater effluent. The proposed development will only contribute an additional **0.0105 MGD** of flow to the existing plant.

Construction costs of proposed off-site infrastructure have not been included in this report since the infrastructure is located within Lorson Ranch adjacent to this site.

In conclusion, the proposed development is within the limits of the District's ability to serve it both with water and wastewater collection. Water and wastewater infrastructure is onsite, thus, no unusual costs will be incurred by the district or the Developer in developing this project.

## APPENDIX A –
## VICINITY MAP, WATER SUPPLY INFORMATION, COMMITMENT LETTER




N

VICINITY MAP

NO SCALE

CORE
ENGINEERING GROUP

15004 1ST AVE. S.
BURNSVILLE, MN 55306
PH: 719.570.1100

CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: Rich@ceg1.com

THE HILLS AT LORSON RANCH
VICINITY MAP

| SCALE: | DATE: | FIGURE NO. |
|---|---|---|
| NTS | MAY 25, 2020 | -- |

# 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
The Hills at Larson Ranch

2. LAND USE ACTION PUD / Prelim

3. NAME OF EXISTING PARCEL AS RECORDED N/A

SUBDIVISION FILING BLOCK LOT

4. TOTAL ACREAGE 123.167 5. NUMBER OF LOTS PROPOSED 514 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 _____

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

N 1/2 OF SEC 24 and S 1/2 SEC 13
_____ 1/4 SECTION _____ TOWNSHIP 15 ☐ N ☒ S RANGE 65 ☐ E ☒ W

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

8. PLAT - Location of all wells on property must be plotted and permit numbers provided.
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 # 514 | of units 160,525 | GPD 179.9 | AF |
| COMMERCIAL USE # _____ | of S.F. _____ | GPD _____ | AF |
| IRRIGATION # _____ | of acres 9.994 | GPD 11.2 | AF |
| STOCK WATERING # _____ | of head _____ | GPD _____ | AF |
| OTHER _____ | | GPD _____ | AF |
| TOTAL | | 170,519 GPD | 191.1 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 WWSD - Widefield
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 Widefield W&S District
☐ LAGOON ☐ VAULT - LOCATION SEWAGE HAULED TO _____
☐ ENGINEERED SYSTEM (Attach a copy of engineering design) ☐ OTHER _____

**8495 Fontaine Boulevard, Colorado Springs, Colorado 80925**

May 26, 2020

Jeff Mark
Landhuis Company
212 North Wahsatch, Suite 301
Colorado Springs, Colorado 80903

Cole Emmons
County Attorney's Office
27 East Vermijo Avenue
Colorado Springs, Colorado 80903

**Re: Revised Commitment Letter "The Hills at Lorson Ranch"**

Dear Jeff and Cole:

The Widefield Water and Sanitation District commits to providing water and sewer service to the above-mentioned subdivision per this letter.

The water commitment supersedes the commitment dated May 22, 2020 and is for **514 Residential Lots plus Median Landscaping (32 sfe) for 191.10 acre-feet.** The expected wastewater load is 105,370 gallons per day.

The Widefield Water and Sanitation District has more than adequate water supply and wastewater treatment capacity to provide services.

Sincerely,

Rob Bannister, District Engineer

C: Lucas Hale, District Manager
Brandon Bernard, Water Division Manager
Jason Dreessen, Wastewater Division Manager

## APPENDIX B –
## 2019 WWSD ANNUAL WATER AND WASTEWATER REPORT

**WIDEFIELD WATER AND SANITATION DISTRICT**

**8945 Fontaine Blvd.**
**Colorado Springs, CO 80925**

**District Water and Wastewater Report**
**Annual Update**

**Date of Update** January 1, 2020

**Update Author** Robert K. Bannister, P.E.
District Engineer
Widefield Water and Sanitation District

**Attachments**

- Widefield Water Facilities Map
- Widefield 2019 Water Quality Consumer Confidence Report
- End of 2019 Year Commitment Balance Sheet

## WATER REPORT UPDATE

### 1. Water General

The Widefield Water and Sanitation District's (the District) Water System was originally created in the 1960's and has been expanded for nearly 60 years. The system serves approximately 9350 single family equivalent households.

All water supply is based on surface water rights, renewable groundwater, and a mix of various sources. The system does not rely on any non-renewable water sources.

The current Legal Water Supply Holding of the District are estimated at 7,900 annual acre-feet.

The current Developed Physical Supply is 5271 annual acre-feet. The three-year running average actual use is 2615 acre-feet which is roughly 48% of the existing available physical supply.

A revised table of active commitments, and completed subdivisions is attached. This table is valid as of January 1, 2019.

### 2. Recent Water Volumes Used

The recent three-year water use and tap data are as follows:

| Year | Annual Use (Acre-Feet) | Single Family Equivalent (Taps in SFE) |
|---|---|---|
| 2017 | 2612 | 8521 |
| 2018 | 2702 | 8927 |
| 2019 | 2531 | 9350 |

## 3. Water Supply

**Changes in Water Supply:** In 2019, the District placed the Fontaine Water Treatment Facility online. This plant uses ion exchange to remove PFOS and PFOA from the District's water supply. This plant added an additional 500 gpm of treated water to the system.

The District added an additional raw water pipeline to include additional wells in the Widefield Aquifer to the Southmoor Water Treatment Facility. This increased the production in the facility to maximum capacity of 2,200 gpm and allowed for five wells to be treated by the facility, up from three wells previously.

The District hired consultants to design a new Booster 2 Pump Station to provide additional pumping for the West to East Project. This pump station is expected to be constructed in 2021.

The District hired consultants to design a new Zone 6 Storage Tank known as the Rolling Hills Tank. Design is in its infancy and size has not been determined by the end of 2019. Construction is expected in 2020 and 2021.

**Listing of Water Supplies:**

*Renewable Groundwater* – All sources previously documented at County Attorney's Office.

- Widefield Aquifer – The District is allocated the use of 2,650 annual acre-feet through the Widefield Aquifer Stipulation.
- Jimmy Camp Aquifer – The District is allocated 650 annual acre-feet through the Widefield Aquifer Stipulation.
- Vennetucci Lease – The District is perpetually leased an allocation of 596 annual acre-feet through a Public Trust Partnership which provides for funding of the Vennetucci Trust farm through water revenues on a perpetual basis. The Vennetucci Lease has become contaminated and the District has suspended the lease until treatment has been established. This is expected in 2021.

*Surface Water Supplies* – Sources documented at County Attorney's Office.

- The District owns 1,500 annual acre-feet of the Fountain Valley Authority Project which safely yields 1,425 annual acre-feet of fully consumable water.

- The District has 812 shares of Fountain Mutual Irrigation Water and is the owner/operator of the Crews Gulch Augmentation Station as this supply is used in augmentation or leased out on an annual basis, as it has never been fully needed.
- The District owns roughly 1,931 annual acre-feet of return flows from CSU's portion of the FVA project. This is used in augmentation.
- The District owns a mix of senior surface water supplies and out-of-priority water supplies that total 1,274 annual acre-feet. This is the fully consumable water right for future growth that is currently leased to a third party.

**Potential or Intended Future Supplies**

Although the District does have active cases that are intended to extend supplies, the District does not wish to disclose the volumes or nature of those supplies that are in active acquisition states.

**Legal Documentation Accompanying New Water Acquisitions and Augmentations Plans**

None.

## 4. The District's Water Quality

The water quality provided by the District meets or exceeds all required State and Federal Drinking Water Standards. For detailed water quality report, please see the Widefield Consumer Confidence Report which is updated annually and accessible at https://www.wwsdonline.com/media/WWSD.2018CCR.2019.pdf. A copy is attached.

## 5. The District's Physical Water System

The District's system is too large to show all lines and facilities, the attached Facilities Map shows the major facilities. The District's System consists of:

Service area of roughly 16.2 square miles.

Over 665,000 lineal feet of water mains varying in size from 4 to 30-inches in diameter.

Six water tanks totaling approximately 9.8 million gallons of storage.

Six Pressure Zones.

Four booster stations.

24-inch transmission main from Fountain Valley Authority.

Participation in Pueblo Reservoir and Frying Pan Arkansas Water project.

Two Ion Exchange Water Treatment Plant, one includes an Air Stripper Water Treatment Plant.

Eleven active wells (not including inactive wells or Venetucci wells).

## 6. Major Capital Improvement Projects Accomplished During Recent Years and Anticipated Improvements for the Upcoming Years

Most Recent Three Years – Upgrades to water facilities include the following:

- Continuation of the West to East Transmission line. This project includes certain transmission line upgrades which will continue over the next 10 years.
- Construction of an Ion Exchange plant to remove PFC's from the District's drinking water.
- Construction of the Veterans Affairs Pikes Peak National Cemetery Water Delivery System.
- Development of Zone 6 in the northeast section of the District.
- Well Manifold to bring additional wells to the Ion Exchange water treatment facility.

Expected Upcoming Three-Year Improvements – These are all system-wide capital projects.

- Additional construction of the West to East Transmission line.
- Upgrade of the Booster #2 Pump Station.
- Refurbishment of the existing air stripper facility to ion exchange technology.
- Construction of new Zone 6 tank (Developer funded).
- Construction of new Zone 7a Booster Station (Developer funded).

## WASTEWATER REPORT UPDATE

### 1. Wastewater General

The Widefield Water and Sanitation District's (the District) Wastewater System was originally created in the 1960's and has been expanded for nearly 60 years. The system serves over 8737 single family equivalent households.

The current hydraulic capacity of the Widefield Wastewater Treatment Plant is 2.14 MGD. *Note – WWTO are rated on the basis of Average Daily Maximum Monthly Flow, which differs from Max Day Flow.* There has been no increase to plant capacity since 2001, however, the plant was rerated in 2016 to 2.14 MGD due to lack of air processing capabilities.

The treatment plant discharges to the Lower Fountain Creek.

Current 3 year running average loading is 1.67 MGD which is roughly 78% of Plant Capacity.

Current projected use plus active commitments are projected to be roughly 1.72 MG which represents approximately 69% of Current Hydraulic Plant Capacity. *Note – wastewater treatment plants are rated on the basis of Average Daily Maximum Monthly Flow, which differs from Max Day Flow.*

### 2. Actual Wastewater Volumes Treated

The three most recent years of wastewater plant loads and tap data are as follows:

| Year | Average Daily Flow (MGD) | Single Family Equivalent (Taps in SFE) |
|---|---|---|
| 2017 | 1.75 | 8326 |
| 2018 | 1.71 | 8737 |
| 2019 | 1.56 | 9253 |

## 3. Existing Widefield Wastewater System

The District's Wastewater System consist of:

Service area of roughly 14.3 square miles.

Over 530,000 lineal feet of pipeline varying in size from 4 to 24-inches in diameter.

Over 23,00 lineal feet of pressure pipeline varying in size from 4 to 12-inches in diameter.

Five lift stations.

Wastewater Treatment Plant – 2.14 MGD capacity.

The existing wastewater plant remains in compliance with CDPHE Discharge Standards.

## 4. Major Capital Improvements Accomplished during the Past Year and Anticipated Improvements for the Upcoming Years

Most Recent Three Years – Upgrades to wastewater facilities include the following:

- Some replacement of older lines in older areas of the District.
- Installed 3rd pump at the Jimmy Camp Lift Station.
- Continued construction of East Jimmy Camp Interceptor along the East Jimmy Camp Creek (Developer funded).
- Upgrade of treatment system to meet Regulation 85 requirements. This upgrade includes Bio-nutrient Removal. This is not expected to increase capacity.
- Upgrade of solids handling to perform dewatering of sludge.
-

Expected Upcoming Three-Year Improvements – These are all system wide capital projects:

- Continued replacement of older lines or relining of existing pipe.
- Upgrade air handling equipment.
- Upgrade step screen.

N
E
S
W

SCALE
1 inch = 1,200 feet
0
1,200

WATER
BOUNDRY
PARCELS
PZ RAW WATER
PZ1
PZ2
PZ3
PZ4
PZ5
PZ6
Water Network Structure

Well W1
Well W2
Well W4
Well C3b
Well W3
Well C3
Well C4
Well W7
Well E2
Well C2
Southmoor WTP
FONTAINE WTP
Booster 2 Pump Station
Booster 2 0.75 MG Tank
0.75 MG Elevated Tank
2 MG Tank
4 MG Tank
Well HW2
Well HW4
Well HW5
VA Pump Station
0.3 MG EQ Tank
Rolling Hills Booster Pump Station

Project No:
Scale: AS SHOWN
Date:03/19/2020
Design By: RKB
Drawn By: RKB
Reviewed By: RKB
Revised:

# WIDEFIELD WATER AND SANITATION DISTRICT
# WATER SYSTEM MAP 2020

Widefield
Water and Sanitation District

# WIDEFIELD WSD 2019 Drinking Water Quality Report
# For Calendar Year 2018

***Public Water System ID:*** CO0121900

**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 BRANDON BERNARD at 719-464-2051 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 http://water.epa.gov/drink/contaminants.

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 http://www.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 www.colorado.gov/cdphe/ccr. The report is located under "Guidance: Source Water Assessment Reports". Search the table using 121900, WIDEFIELD WSD, or by contacting BRANDON BERNARD at 719-464-2051. 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 |
|---|---|
| WELL W4 (Groundwater-Well)<br>WELL W2Groundwater-Well)<br>WELL W3 (Groundwater-Well)<br>WELL C1 (Groundwater-Well)<br>WELL W7 (Groundwater-Well)<br>WELL E2 (Groundwater-Well)<br>WELL C3 (Groundwater-Well)<br>WELL C36 (Groundwater-Well)<br>JHW2 WELL REDRILL (Groundwater-Well)<br>JHW5R WELL (Groundwater-Well)<br>JHW4R WELL (Groundwater-Well)<br>WELL C2 REDRILL (Groundwater-Well)<br>PURCHASED FROM CO0121275 (Groundwater-Consecutive Connection)<br>WELL W1 (Groundwater-Well)<br>PURCHASED FROM CO0121775 (Surface Water-Consecutive Connection)<br>PURCHASED FROM CO0121300 (Surface Water-Consecutive Connection) | Environment, Industry, Soil runoff, and erosion of natural deposits |

## 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 90$^{th}$ 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

WIDEFIELD WSD 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, 2018 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 | March, 2018 | Lowest period percentage of samples meeting TT requirement: 95% | 1 | 20 | No | 4.0 ppm |

**Assessments for Microorganism Contaminants Sampled in the Distribution System**

| Contaminant Name | TT Requirement | TT Violation |
|---|---|---|
| Total Coliform | We were required to conduct an assessment of our system due to one of the following:<br>More than 5.0% positive samples per period (If sample size is greater than or equal to 40) ***OR***<br>More than 1 positive sample per period (If sample size is less than 40) ***OR***<br>Repeat samples not collected after positive sample. | No |

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.

***During the past year we were required to conduct ZERO Level 1 assessment(s)!***

| 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 | 02/22/2018 to 03/14/2018 | 0.38 | 60 | ppm | 1.3 | 0 | No | Corrosion of household plumbing systems; Erosion of natural deposits |
| Lead | 07/31/2018 to 12/12/2018 | 2.8 | 60 | ppb | 15 | 0 | No | Corrosion of household plumbing systems; Erosion of natural deposits |
| Copper | 07/31/2018 to 12/12/2018 | 0.33 | 60 | ppm | 1.3 | 0 | No | Corrosion of household plumbing systems; Erosion of natural deposits |
| Lead | 02/22/2018 to 03/14/2018 | 2.6 | 60 | ppb | 15 | 1 | 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) | 2018 | 12.3 | 1.41 to 30 | 16 | ppb | 60 | N/A | No | Byproduct of drinking water disinfection |
| Total Trihalomethanes (TTHM) | 2018 | 28.62 | 4.1 to 59.71 | 16 | ppb | 80 | N/A | No | Byproduct of drinking water disinfection |

| 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** |

| 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 | 2017 | 1.68 | 0.71 to 2.65 | 2 | pCi/L | 15 | 0 | No | Erosion of natural deposits |
| Combined Radium | 2017 | 1.5 | 1.5 to 1.5 | 1 | pCi/L | 5 | 0 | No | Erosion of natural deposits |
| Combined Uranium | 2017 | 6.83 | 6.1 to 8.2 | 3 | ppb | 30 | 0 | No | Erosion of natural deposits |
| Gross Beta Particle Activity | 2017 | 2 | 2 to 2 | 1 | pCi/L* | 50 | 0 | No | Decay of natural and man-made deposits |

*The MCL for Gross Beta Particle Activity is 4 mrem/year. Since there is no simple conversion between mrem/year and pCi/L EPA considers 50 pCi/L to be the level of concern for Gross Beta Particle Activity.

| 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 | 2018 | 0.01 | 0.01 to 0.01 | 2 | ppm | 2 | 2 | No | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits |
| Fluoride | 2018 | 0.89 | 0.89 to 0.89 | 1 | ppm | 4 | 4 | No | Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories |
| Nitrate | 2018 | 4.39 | 0.85 to 6.9 | 7 | ppm | 10 | 10 | No | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits |

**Nitrate**: *Nitrate in drinking water at levels above 10 ppm* is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you should ask advice from your health care provider.

| Volatile Organic 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 |
|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethylene | 2018 | 0.13 | 0 to 0.63 | 5 | ppb | 5 | 0 | No | Discharge from factories and dry cleaners |

**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 | 2018 | 180 | 180 to 180 | 2 | ppm | N/A |
| Total Dissolved Solids | 2014 | 1105 | 1100 to 1110 | 2 | ppm | 500 |

**Unregulated Contaminants*****

EPA has implemented the Unregulated Contaminant Monitoring Rule (UCMR) to collect data for contaminants that are suspected to be present in drinking water and do not have health-based standards set under the Safe Drinking Water Act. EPA uses the results of UCMR monitoring to learn about the occurrence of unregulated contaminants in drinking water and to decide whether or not these contaminants will be regulated in the future. We performed monitoring and reported the analytical results of the monitoring to EPA in accordance with its Unregulated Contaminant Monitoring Rule (UCMR). Once EPA reviews the submitted results, the results are made available in the EPA's National Contaminant Occurrence Database (NCOD) (http://www.epa.gov/dwucmr/national-contaminant-occurrence-database-ncod) Consumers can review UCMR results by accessing the NCOD. Contaminants that were detected during our UCMR sampling and the corresponding analytical results are provided below.

| Contaminant Name | Year | Average | Range Low – High | Sample Size | Unit of Measure |
|---|---|---|---|---|---|
| Bromochloroacetic Acid | 2018 | 2.41 | 0.909-4.53 | 8 | Parts per Billion |
| Chlorodibromoacetic Acid | 2018 | 0.90 | 0.379-1.58 | 8 | Parts per Billion |
| Dibromoacetic Acid | 2018 | 1.92 | 1.14-2.91 | 8 | Parts per Billion |
| Bromodichloroacetic Acid | 2018 | 1.43 | 0-3.7 | 8 | Parts per Billion |
| Dichloroacetic Acid | 2018 | 4.24 | 0-10.8 | 8 | Parts per Billion |
| Monobromoacetic Acid | 2018 | 0.25 | 0-0.83 | 8 | Parts per Billion |
| Trichloroacetic Acid | 2018 | 2.88 | 0-7.14 | 8 | Parts per Billion |
| Manganese | 2018 | 4.8 | 0.412-9.35 | 2 | Part per Billion |
| Perfluorobutanesulfonic acid | 2018 | Non-Detect | Non-Detect | 12 | Parts per Trillion |
| Perfluorheptanoic acid | 2018 | Non-Detect | Non-Detect | 12 | Parts per Trillion |
| | | | | | |

**Unregulated Contaminants*****

EPA has implemented the Unregulated Contaminant Monitoring Rule (UCMR) to collect data for contaminants that are suspected to be present in drinking water and do not have health-based standards set under the Safe Drinking Water Act. EPA uses the results of UCMR monitoring to learn about the occurrence of unregulated contaminants in drinking water and to decide whether or not these contaminants will be regulated in the future. We performed monitoring and reported the analytical results of the monitoring to EPA in accordance with its Unregulated Contaminant Monitoring Rule (UCMR). Once EPA reviews the submitted results, the results are made available in the EPA's National Contaminant Occurrence Database (NCOD) (http://www.epa.gov/dwucmr/national-contaminant-occurrence-database-ncod) Consumers can review UCMR results by accessing the NCOD. Contaminants that were detected during our UCMR sampling and the corresponding analytical results are provided below.

| Contaminant Name | Year | Average | Range Low – High | Sample Size | Unit of Measure |
|---|---|---|---|---|---|
| Perfluorohexanesulfonic Acid | 2018 | Non-Detect | Non-Detect | 12 | Parts per Trillion |
| Perfluorooctanesulfonic Acid | 2018 | Non-Detect | Non-Detect | 12 | Parts per Trillion |
| Perfluorooctanoic Acid | 2018 | Non-Detect | Non-Detect | 12 | Parts per Trillion |

***More information about the contaminants that were included in UCMR monitoring can be found at: https://drinktap.org/Water-Info/Whats-in-My-Water/Unregulated-Contaminant-Monitoring-Rule-UCMR. Learn more about the EPA UCMR at: http://www.epa.gov/dwucmr/learn-about-unregulated-contaminant-monitoring-rule or contact the Safe Drinking Water Hotline at (800) 426-4791 or http://water.epa.gov/drink/contact.cfm.

## Violations, Significant Deficiencies, Backflow/Cross-Connection, and Formal Enforcement Actions

**No Violations or Formal Enforcement Actions**

# CITY OF FOUNTAIN - 2018 MONITORING RESULTS

The table below displays the levels of contaminants detected from water samples taken throughout the 2018 calendar year from the City of Fountain. This table also reflects Fountain Valley (FVA) Authority's (PWSID #CO0121300) test results for 2018 as the City of Fountain purchases 99% of it's drinking water from FVA. If you have any questions regarding the FVA's results, please contact them directly. The City of Fountain joined with Security Water District and Widefield Water & Sanitation District on a water exchange joint project; therefore, Security and Widefield's CCR information has also been included. If you would like a complete copy of their CCR, you are welcome to contact them directly. If you would like to view all test results for the City of Fountain's Water Department, they are available at 301 E. Iowa Avenue, Fountain, CO during normal business hours. NOTE: Only detected contaminants sampled within the last five years appear in this report. If no tables appear in this section, that means the City of Fountain did not detect any contaminants in the last round of monitoring.

| **INORGANIC CONTAMINATES** | UNIT | MCLG | MCL | FOUNTAIN WATER | | | | WIDEFIELD WATER | | | | FOUNTAIN VALLEY AUTHORITY | | | | TYPICAL SOURCES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | RANGE | AVERAGE | SAMPLE SIZE | YEAR SAMPLED | RANGE | AVERAGE | SAMPLE SIZE | YEAR SAMPLED | LEVEL DETECTED | AVERAGE | SAMPLE SIZE | YEAR SAMPLED | |
| ARSENIC | ppb | 0 | 10 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 1 - 1 | 1 | 1 | 2016 | Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production waste. |
| BARIUM | ppm | 2 | 2 | .04 - .05 | 0.04 | 2 | 2017 | 0.01 - 0.01 | 0.01 | 2 | 2018 | 0.06 | N/A | N/A | 2018 | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits. |
| CHROMIUM | ppb | 100 | 100 | N/A | N/A | N/A | N/A | 0 - 1 | 0.25 | 4 | 2017 | N/A | N/A | N/A | N/A | Discharge from steel and pulp mills; erosion of natural deposits. |
| FLOURIDE | ppm | 4 | 4 | 1.7 - 1.8 | 1.75 | 2 | 2017 | 0.89 - 0.89 | 0.89 | 1 | 2018 | 0.53 | N/A | N/A | 2018 | Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories. |
| NICKEL | ppb | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 0.53 | N/A | N/A | 2018 | Erosion of natural deposits; discharge from industries; discharge from refineries and steel mills. |
| NITRATE | ppm | 10 | 10 | 1.6 - 3 | 2.3 | 2 | 2018 | 0.85 - 6.9 | 4.39 | 7 | 2018 | 0.44 | N/A | N/A | 2018 | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits. |
| SELENIUM | ppb | 50 | 50 | 4 - 7.4 | 5.7 | 2 | 2017 | N/A | N/A | N/A | N/A | 6 | N/A | N/A | 2018 | Discharge from pertroleum and metal refineries; erosion of natural deposits; discharge from mines. |
| TETRACHLOROETHYLENE | ppb | 0 | 5 | N/A | N/A | N/A | N/A | 0 - 0.63 | 0.13 | 5 | 2018 | N/A | N/A | N/A | N/A | Discharge from factories and dry cleaners. |
| TRICHLOROETHYLENE | ppb | 0 | 5 | N/A | N/A | N/A | N/A | 0 - 1 | 0.17 | 6 | 2017 | N/A | N/A | N/A | N/A | Discharge from metal degreasing sites and other factories. |

| **SECONDARY CONTAMINATES** | UNIT | MCLG | MCL | FOUNTAIN WATER | | | | WIDEFIELD WATER | | | | FOUNTAIN VALLEY AUTHORITY | | | | TYPICAL SOURCES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | RANGE | AVERAGE | SAMPLE SIZE | YEAR SAMPLED | RANGE | AVERAGE | SAMPLE SIZE | YEAR SAMPLED | RANGE | AVERAGE | SAMPLE SIZE | YEAR SAMPLED | |
| SODIUM | ppm | N/A | N/A | 120 - 140 | 130 | 2 | 2017 | 180 - 180 | 180 | 2 | 2018 | 19.6 | N/A | N/A | 2018 | Erosion of natural deposits |
| TOTAL DISSOLVED SOLIDS | ppm | N/A | N/A | N/A | N/A | N/A | N/A | 1100 - 1110 | 1105 | 2 | 2014 | N/A | N/A | N/A | N/A | Secondary Standard: 500 |
| DIBROMOACETIC ACID | ppb | N/A | N/A | N/A | N/A | N/A | N/A | 1.14 - 2.91 | 1.92 | 8 | 2018 | N/A | N/A | N/A | N/A | N/A |
| DICHLOROACETIC ACID | ppb | N/A | N/A | N/A | N/A | N/A | N/A | 0 - 10.8 | 4.24 | 8 | 2018 | N/A | N/A | N/A | N/A | N/A |
| TIRCHLOROACETIC ACID | ppb | N/A | N/A | N/A | N/A | N/A | N/A | 0 - 7.14 | 2.88 | 8 | 2018 | N/A | N/A | N/A | N/A | N/A |

| **ORGANIC CONTAMINANTS** | UNIT | MCLG | MCL | FOUNTAIN WATER | | | | WIDEFIELD WATER | | | | FOUNTAIN VALLEY AUTHORITY | | | | TYPICAL SOURCES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | RANGE | AVERAGE | SAMPLE SIZE | YEAR SAMPLED | RANGE | AVERAGE | SAMPLE SIZE | YEAR SAMPLED | RANGE | AVERAGE | SAMPLE SIZE | YEAR SAMPLED | |
| HEXACHLOROCYCLO-PENTADIENE | ppb | 50 | 50 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 0 - .06 | 0.03 | 2 | 2016 | N/A |

DISINFECTANTS SAMPLED IN THE DISTRIBUTION SYSTEM

| **DISINFECTANT** | UNIT | | FOUNTAIN WATER | | | WIDEFIELD WATER | | | FOUNTAIN VALLEY AUTHORITY | | TYPICAL SOURCES |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CHLORINE | ppm | Lowest period percentage of samples meeting TT requirements: 100% | Number of Samples Below Level: 0 | 30 | 2018 | Number of Samples Below Level: 1 | 20 | 2018 | TT= No More Than 4 Hours With Sample Below 0.2 MG/L | 2018 | **Disinfectants Sampled in the Distribution System** - TT Requirements: 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. |

| **LEAD & COPPER (Sampled in the distribution System)** | UNIT | 90th PERCENTILE AL | FOUNTAIN WATER | | | | WIDEFIELD WATER | | | | FOUNTAIN VALLEY AUTHORITY | | | | TYPICAL SOURCES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 90th PERCENTILE | SITES ABOVE AL | SAMPLE SIZE | DATES | 90th PERCENTILE | SITES ABOVE AL | SAMPLE SIZE | DATES | 90th PERCENTILE | SITES ABOVE AL | SAMPLE SIZE | DATES | |
| COPPER | ppm | 1.3 | 0.38 | 0 | 60 | 11/8/18 - 11/16/18 | 0.33 - 0.38 | 0 | 60 | 2/22/18 - 12/12/18 | N/A | N/A | N/A | N/A | Corrosion of household plumbing systems; erosion of natural deposits. |
| LEAD | ppb | 15 | 6.3 | 2 | 60 | 11/8/18 - 11/16/18 | 2.6 - 2.8 | 1 | 60 | 2/22/18 - 12/12/18 | N/A | N/A | N/A | N/A | Corrosion of household plumbing systems; erosion of natural deposits. |

(DISINFECTION BYPRODUCTS PRECURSOR) REMOVAL RATIO OF RAW AND FINISHED WATER - FOUNTAIN VALLEY AUTHORITY

| **TOTAL ORGANIC CARBON** | UNIT | MCLG | MCL | SAMPLE DATES | AVERAGE | RANGE | MCL VIOLATION | | | TYPICAL SOURCES |
|---|---|---|---|---|---|---|---|---|---|---|
| | RATIO | N/A | TT MIN. RATIO: 1.00 | MONTHLY - Running Annual Average (2017) | 1.08 | 1 - 1.28 | NO | | | Naturally present in the environment |

FOUNTAIN VALLEY AUTHORITY (FVA) MICROBIOLOGICAL CONTAMINANTS

| **CONTAMINANT** | UNIT | AVERAGE | SAMPLE SIZE | DATE | | LEVEL DETECTED | VIOLATION | TYPICAL SOURCES |
|---|---|---|---|---|---|---|---|---|
| TURBIDITY | NTU | --- | --- | Sept. 2018 | | Highest Single Measurement: 0.128 NTU | NO | Soil Runoff |
| TURBIDITY | NTU | --- | --- | Dec. 2018 | | Lowest monthly percentage of samples meeting TT requirements: 100% | NO | Soil Runoff |

FOUNTAIN VALLEY AUTHORITY (FVA) CRYPTOSPORIDIUM AND RAW SOURCE WATER E. COLI

| **CONTAMINANT** | UNIT | MCL | RANGE DETECTED | YEAR | DESCRIPTION | TYPICAL SOURCES |
|---|---|---|---|---|---|---|
| CRYPTOSPORIDIUM | oocysts | 0 | 0 | 2018 | Cryptosporidium is a microbial pathogen found in surface water throughout the United States. Although filtration removes cryptosporidium, the most commonly used filtration methods cannot guarantee 100 percent removal. Our monitoring indicates the presence of these organisms in our source water and/or finished water. Current test methods do not allow us to determine if the organinsms are dead or if they are capeable of causing disease. Ingestion of cryptosporidium may cause cryptosporidiosis, an abdpminal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-comprimised people are at greater risk of developing life threatening illness. We encourage immuno-comprimised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water. | Naturally present in the environment |
| E. COLI | MPN | N/A | 0 - 10 | 2018 | | Naturally present in the environment |

| **DISINFECTION BY-PRODUCTS** | UNIT | MCLG | MCL | FOUNTAIN WATER | | | | WIDEFIELD WATER | | | | FOUNTAIN VALLEY AUTHORITY | | | | TYPICAL SOURCES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | RANGE | AVERAGE | SAMPLE SIZE | YEAR SAMPLED | RANGE | AVERAGE | SAMPLE SIZE | YEAR SAMPLED | RANGE | AVERAGE | SAMPLE SIZE | YEAR SAMPLED | |
| TOTAL HALOCETIC ACIDS (HAA5) | ppb | N/A | 60 | 9.2 - 27 | 19.2 | 16 | 2018 | 1.41 - 30 | 12.3 | 16 | 2018 | N/A | N/A | N/A | N/A | By-product of drinking water disinfection. |
| TOTAL TRIHALOMETHANES (TTHM) | ppb | N/A | 80 | 25.5 - 53.8 | 40.68 | 16 | 2018 | 4.1 - 59.71 | 28.62 | 16 | 2018 | N/A | N/A | N/A | N/A | By-product of drinking water disinfection. |

| **RADIONUCLIDES** | UNIT | MCLG | MCL | FOUNTAIN WATER | | | | WIDEFIELD WATER | | | | FOUNTAIN VALLEY AUTHORITY | | | | TYPICAL SOURCES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | RANGE | AVERAGE | SAMPLE SIZE | YEAR SAMPLED | RANGE | AVERAGE | SAMPLE SIZE | YEAR SAMPLED | RANGE | AVERAGE | SAMPLE SIZE | YEAR SAMPLED | |
| GROSS ALPHA | pCi/L | 0 | 15 | 4.2 - 4.2 | 4.2 | 1 | 2017 | 0.71 - 2.65 | 1.68 | 2 | 2017 | N/A | N/A | N/A | N/A | Erosion of natural deposits |
| GROSS BETA PARTICLE ACTIVITY | pCi/L | 0 | 50 | N/A | N/A | N/A | N/A | 2 - 2 | 2 | 1 | 2017 | N/A | N/A | N/A | N/A | Decay of natural and man-made deposits |
| RADIUM, COMBINED (226, 228) | pCi/L | 0 | 5 | 1.34 - 1.34 | 1.34 | 1 | 2017 | 1.5 - 1.5 | 1.5 | 1 | 2017 | N/A | N/A | N/A | N/A | Erosion of natural deposits |
| URANIUM - COMBINED | ppb | 0 | 30 | 7.2 - 7.2 | 7.2 | 1 | 2017 | 6.1 - 8.2 | 6.83 | 3 | 2017 | N/A | N/A | N/A | N/A | Erosion of natural deposits |

EPA has implemented the Unregulated Contaminant Monitoring Rule (UCMR) to collect data for contaminants that are suspected to be present in drinking water and do not have health-based standards set under the Safe Drinking Water Act. EPA uses the results of UCMR monitoring to learn about the occurrence of unregulated contaminants in drinking water and to decide whether or not these contaminants will be regulated in the future. We performed monitoring and reported the analytical results of the monitoring to EPA in accordance with its Third Unregulated Contaminant Monitoring Rule (UCMR3). Once EPA reviews the submitted results, the results are made available in the EPA's National Contaminant Occurrence Database (NCOD) (http://www.epa.gov/dwucmr/national-contaminant-occurrence-database-ncod) Consumers can review UCMR results by accessing the NCOD. Contaminants that were detected during our UCMR3 sampling and the corresponding analytical results are provided below.

| UNREGULATED CONTAMINATES | UNIT | MCLG | MCL | FOUNTAIN WATER | | | | WIDEFIELD WATER | | | | FOUNTAIN VALLEY AUTHORITY | | | | TYPICAL SOURCES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | RANGE | AVERAGE | SAMPLE SIZE | YEARS SAMPLED | RANGE | AVERAGE | SAMPLE SIZE | YEARS SAMPLED | LEVEL DETECTED | AVERAGE | SAMPLE SIZE | YEARS SAMPLED | |
| BROMOCHLOROACETIC ACID | ppb | N/A | N/A | N/A | N/A | N/A | N/A | .909 - 4.53 | 2.41 | 8 | 2018 | N/A | N/A | N/A | N/A | N/A |
| CHLORODIBROMOACETIC ACID | ppb | N/A | N/A | N/A | N/A | N/A | N/A | .379 - 1.58 | 0.90 | 8 | 2018 | N/A | N/A | N/A | N/A | N/A |
| CHROMIUM | ppb | N/A | N/A | 0 - .9 | 0.19 | 49 | 2014-2015 | .2 - 1.1 | 0.19 | 49 | 2014-2015 | N/A | N/A | N/A | N/A | N/A |
| BROMODICHLOROACETIC ACID | ppb | N/A | N/A | N/A | N/A | N/A | N/A | 0 - 3.7 | 1.43 | 8 | 2018 | N/A | N/A | N/A | N/A | N/A |
| COBALT | ppb | N/A | N/A | 0 - 1.35 | 0.03 | 48 | 2014-2015 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| MANGANESE | ppb | N/A | N/A | N/A | N/A | N/A | N/A | .412 - 9.35 | 4.8 | 2 | 2018 | N/A | N/A | N/A | N/A | N/A |
| MONOBROMOACETIC ACID | PPB | N/A | N/A | N/A | N/A | N/A | N/A | 0 - 0.83 | 0.25 | 8 | 2018 | N/A | N/A | N/A | N/A | N/A |
| MOLYBDENUM | ppb | N/A | N/A | 0 - 7.07 | 3.5 | 49 | 2014-2015 | 1.3 - 6. | 3.5 | 49 | 2014-2015 | N/A | N/A | N/A | N/A | N/A |
| CHROMIUM | ppb | N/A | N/A | 0 - .9 | 0.19 | 49 | 2014-2015 | .2 - 1.1 | 0.19 | 49 | 2014-2015 | N/A | N/A | N/A | N/A | N/A |
| STRONTIUM | ppb | N/A | N/A | 460 - 640 | 447 | 49 | 2014-2015 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| VANADIUM | ppb | N/A | N/A | 0 - .05 | 0.45 | 49 | 2014-2015 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| CHROMIUM, HEXAVALENT (DISSOLVED) | ppb | N/A | N/A | 0 - .05 | 0.14 | 53 | 2014-2015 | .032 - .62 | 0.14 | 53 | 2014-2015 | N/A | N/A | N/A | N/A | N/A |
| CHLORATE | ppb | N/A | N/A | N/A | 45 | 49 | 2014-2015 | 25 - 390 | 45 | 49 | 2014-2015 | N/A | N/A | N/A | N/A | N/A |
| 1,4-DIOXANE | ppb | N/A | N/A | 0 - .19 | 0.059 | 17 | 2014-2015 | .07 - .13 | 0.059 | 17 | 2014-2015 | N/A | N/A | N/A | N/A | N/A |
| PERFLUOROBUTANESULFONIC ACID (PFBS) | ppb | N/A | N/A | N/A | N/A | N/A | N/A | Non-Detect | Non-Detect | 12 | 2018 | N/A | N/A | N/A | N/A | N/A |
| PERFLUOROHEPTANOIC ACID (PFHpA) | ppb | N/A | N/A | 0 - .01 | 0.0096 | 18 | 2014-2015 | Non-Detect | Non-Detect | 12 | 2018 | N/A | N/A | N/A | N/A | N/A |
| PERFLUOROHEXANESULFONIC ACID (PFHxS) | ppb | N/A | N/A | 0 - .06 | 0.098 | 18 | 2014-2015 | Non-Detect | Non-Detect | 12 | 2018 | N/A | N/A | N/A | N/A | N/A |
| PERFLUOROOCTANESULFONIC ACID (PFOS) | ppb | N/A | N/A | 0 - .04 | 0.033 | 18 | 2014-2015 | Non-Detect | Non-Detect | 12 | 2018 | N/A | N/A | N/A | N/A | N/A |
| PERFLUOROOCTANOIC ACID (PFOA) | ppb | N/A | N/A | .02 - .04 | 0.017 | 18 | 2014-2015 | Non-Detect | Non-Detect | 12 | 2018 | N/A | N/A | N/A | N/A | N/A |

***More information about the contaminants that were included in UCMR3 monitoring can be found at: http://www.drinktap.org/water-info/whats-in-my-water/unregulated-contaminant-monitoring-rule.aspx. Learn more about the EPA UCMR at: http://www.epa.gov/dwucmr/learn-about-unregulated-contaminant-monitoring-rule or contact the Safe Drinking Water Hotline at (800) 426-4791 or http://water.epa.gov/drink/contact.cfm

**VIOLATIONS, SIGNIFICANT DEFICIENCIES, BACKFLOW/CROSS-CONNECTION, AND FORMAL ENFORCEMENT ACTION** - THE STATE OF COLORADO REQUIRES ALL WATER DISTRIBUTORS TO LIST ANY DETECTED CONTAMINANTS THAT APPEAR; REASON OF DETECTED CONTAMINANTS; AND CORRECTIVE MEASURES TAKEN TO PREVENT FROM REOCCURRING. THE FOLLOWING WATER PROVIDERS WERE GIVEN NOTIFICATION OF THE STATE'S FINDINGS REGARDING ANY AND ALL VIOLATIONS, IF ANY, WITH THE RESULTS LISTED BELOW:

| NAME | CATEGORY | TIME PERIOD | HEALTH EFFECTS | CORRECTIVE MEASURES |
|---|---|---|---|---|
| Cross Connection Rule | Failure to meet Cross Connection/Backflow Requirements - Health-based | 11/14/18 - Open | May pose risk to public health | State drinking water regulations require that all public drinking water systems, such as FVA, test a percentage of the backflow prevention devices located within their systems annually. In March of 2018, FVA identified 6 backflow prevention devices within its water system that were not tested as required in 2017. This means that FVA violated State drinking water regulations by failing to ensure that these 6 backflow prevention devices were tested in 2017. All 6 of the backflow prevention devices were tested on March 8, 2018 and passed the tests. Therefore, FVA is not aware of any uncontrolled cross connections to its water supply system. FVA is providing the state with an updated Backflow Prevention Cross-Connection Program Plan that includes measures to avoid this type of violation in the future. |

# Fountain Valley Authority (PWSID # CO0121300)
## 2019 Water Quality Report Information for the 2018 Calendar Year for:
### City of Fountain (PWSID # CO0121275)
### Colorado Springs Utilities (PWSID # CO0121150)
### Security Water District (PWSID # CO0121775)
### Stratmoor Hills Water District (PWSID # CO0121800)
### Widefield Water District (PWSID # CO0121900)

### WATER SOURCE INFORMATION

Fountain Valley Authority treats surface water received from the Fryingpan-Arkansas Project. The Fryingpan-Arkansas Project is a system of pipes and tunnels that collects water in the Hunter-Fryingpan Wilderness Area near Aspen. Waters collected from the system are diverted to the Arkansas River, near Buena Vista, and then flows approximately 150 miles downstream to Pueblo Reservoir. From Pueblo Reservoir, the water travels through a pipeline to the water treatment plant.

### COLORADO SOURCE WATER ASSESSMENT AND PROTECTION

The Colorado Department of Public Health and Environment may has 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 www.colorado.gov/cdphe/ccr. The report is located under "Guidance: Source Water Assessment Reports". Search the table using 121300, FOUNTAIN VALLEY AUTHORITY or by contacting Colorado Springs Utilities Laboratory Services at 719-668-4560. 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 below.

**Potential sources of contamination to our source water areas may come from:**

- EPA Superfund Sites
- EPA Abandoned Contaminated Sites
- EPA Hazardous Waste Generators
- EPA Chemical Inventory/Storage Sites
- EPA Toxic Release Inventory Sites

- Permitted Wastewater Discharge Sites
- Aboveground, Underground and Leaking Storage Tank Sites
- Solid Waste Sites
- Existing/Abandoned Mine Sites
- Concentrated Animal Feeding Operations
- Other Facilities
- Commercial/Industrial Transportation
- High-and-Low-Intensity Residential
- Urban Recreational Grasses
- Quarries/Strip Mines/Gravel Pits
- Agricultural Land (row crops, small grain, pasture/hay, orchards/vineyards, fallow and other)
- Forest
- Septic Systems
- Oil/Gas Wells
- Road Miles

Fountain Valley Authority is dedicated to protecting our source water and ensuring quality treated water is delivered to our customers. The results of the source water assessment are not a reflection of our treated water quality received at the system connections, but rather a rating of the susceptibility of contamination under the guidelines of the Colorado SWAP program.

## POSSIBLE WATER CONTAMINANTS

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 http://water.epa.gov/drink/contaminants.

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.

## FLUORIDE INFORMATION

Fluoride is a compound found naturally in many places, including soil, food, plants, animals and the human body. It is also found naturally in Fountain Valley Authority's water source. Fountain Valley Authority does not add additional fluoride to the treated water. Any fluoride in the treated water results from what occurs naturally in the source water.

## LEAD INFORMATION

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 http://www.epa.gov/safewater/lead.

## DEFINITIONS

- **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 90$^{th}$ 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.

### WANT MORE INFORMATION

For questions concerning this report, please call Colorado Springs Utilities Laboratory Services at (719) 668-4560.

### TABLE OF DETECTED CONTAMINANTS

Fountain Valley Authority 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, 2018 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.

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.

## Detected Contaminants Table

Fountain Valley Authority (PWSID CO0121300)

## Inorganic Contaminants

Monitored at the Treatment Plant (entry point to the transmission system)

| Contaminant | MCL | MCLG | Units | Level Detected | MCL Violation | Sample Dates | Possible Source(s) of Contamination |
|---|---|---|---|---|---|---|---|
| **Barium** | 2 | 2 | ppm | 0.06 | No | April 2018 | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits |
| **Fluoride** | 4 | 4 | ppm | 0.53 | No | April 2018 | Erosion of natural deposits; discharge from fertilizer and aluminum factories |
| **Nitrate (as Nitrogen)** | 10 | 10 | ppm | 0.44 | No | April 2018 | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits |
| **Nickel** | N/A | N/A | ppb | 0.53 | N/A | April 2018 | Erosion of natural deposits, discharge from industries, discharge from refineries and steel mills |
| **Selenium** | 50 | 50 | ppb | 6 | No | April 2018 | Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines |
| **Sodium** | N/A | N/A | ppm | 19.6 | N/A | April 2018 | Erosion of natural deposits |

## Organic Contaminants

Monitored at the Treatment Plant (entry point to the transmission system)

| Contaminant | MCL | MCLG | Units | Average | Range | MCL Violation | Sample Dates | Possible Source(s) of Contamination |
|---|---|---|---|---|---|---|---|---|
| **Hexachlorocyclopentadiene** | 50 | 50 | ppb | 0.03 | 0 - 0.06 | No | April, July 2016 | Discharge from chemical factories |

## Turbidity

Continuously monitored at the Treatment Plant (entry point to the transmission system)

| Contaminant | TT Requirement | Level Detected | TT Violation | Sample Dates | Possible Source(s) of Contamination |
|---|---|---|---|---|---|
| **Turbidity** | Maximum 1 NTU for any single measurement | Highest Single Measurement: 0.128 NTU | No | Sept 2018 | Soil Runoff |
| **Turbidity** | In any month, at least 95% of samples must be less than 0.3NTU | Lowest Monthly percentage of samples meeting TT requirement: 100% | No | Dec 2018 | Soil Runoff |

## Total Organic Carbon (Disinfection Byproducts Precursor) Removal Ratio and Finished Water

Monitored at the Treatment Plant (entry point to transmission system)

| Contaminant | MCL | MCLG | Units | Average | Range Low - High | MCL Violation | Sample Dates | Possible Source(s) of Contamination |
|---|---|---|---|---|---|---|---|---|
| **Total Organic Carbon (TOC)** | TT minimum ratio = 1.00 | N/A | N/A | 1.08 | 1 – 1.28 | No | Monthly - Running Annual Average | Naturally present in the environment |

### Disinfectants

Continuously monitored at the Treatment Plant (entry point to the transmission system)

| Contaminant | MRDL | Units | Level Detected | MRDL Violation | Sample Dates | Possible Source(s) of Contamination |
|---|---|---|---|---|---|---|
| **Chlorine** | TT= No more than 4 hours with a sample below 0.2 ppm | ppm | 0 samples above or below the level | No | Jan – Dec 2018 | Water additive used to control microbes |

### Violations, Significant, Backflow/Cross Connection, and Formal Enforcement Actions

| Name | Category | Time Period | Health Effects | Compliance Value | TT Level or MCL |
|---|---|---|---|---|---|
| **Cross Connection Rule** | Failure to meet Cross Connection/Backflow Requirements – Health-based | 11/14/18 - Open | May pose a risk to public health | N/A | N/A |

### Additional Violation Information

State drinking water regulations require that all public drinking water systems, such as FVA, test a percentage of the backflow prevention devices located within their systems annually. In March of 2018, FVA identified 6 backflow prevention devices within its water system that were not tested as required in 2017. This means that FVA violated State drinking water regulations by failing to ensure that these 6 backflow prevention devices were tested in 2017. All 6 of the backflow prevention devices were tested on March 8, 2018 and passed the tests. Therefore, FVA is not aware of any uncontrolled cross connections to its water supply system. FVA is providing the state with an updated Backflow Prevention Cross-Connection Program Plan that includes measures to avoid this type of violation in the future.