

WATER DEMAND AND WASTEWATER DISPOSAL REPORT

FOR

**PIONEER LANDING AT LORSON RANCH
FILING NO. 3**

FINAL PLAT

September, 2017

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. 100.028a

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2016 WWSD ANNUAL WATER AND WASTEWATER REPORT, JDS
HYDRO

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. **Pioneer Landing at Lorson Ranch Filing No. 3** is a 1.836 acre site within Lorson Ranch. The site is located on Decker Drive. The legal description for this site is:

A PORTION OF THE NORTHEAST QUARTER (NE 1/4) OF THE SOUTHEAST QUARTER (SE 1/4) OF SECTION 14, TOWNSHIP 15 SOUTH, RANGE 65 WEST OF THE SIXTH PRINCIPAL MERIDIAN, EL PASO COUNTY COLORADO MORE PARTICULARLY DESCRIBED AS FOLLOWS:

TRACT G OF "PIONEER LANDING AT LORSON RANCH FILING NO. 2" AS RECORDED AT RECEPTION NO. 217713888 IN THE RECORDS OF EL PASO COUNTY, COLORADO.

TRACT H OF "PIONEER LANDING AT LORSON RANCH FILING NO. 2" AS RECORDED AT RECEPTION NO. 217713888 IN THE RECORDS OF EL PASO COUNTY, COLORADO.

TRACT K OF "PIONEER LANDING AT LORSON RANCH FILING NO. 2" AS RECORDED AT RECEPTION NO. 217713888 IN THE RECORDS OF EL PASO COUNTY, COLORADO.

SAID TRACT OF LAND CONTAINS 1.836 ACRES OF LAND, MORE OR LESS.

This site contains 12 new single family lots.

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 WWSD has an existing 16" diameter potable water main located on the west side of Marksheffel Road directly adjacent to Lorson Ranch. In addition, a 24" water main is constructed from the Goldfield tanks (Powers Blvd.) to Lorson Ranch. Lorson Ranch watermain consists of a 24" watermain in Fontaine Boulevard and a 12" watermain in Old Glory Drive. All watermain infrastructure in Decker Drive was constructed in 2016 as part of the Pioneer Landing Filing No. 2 infrastructure including water services to the proposed 12 lots. This existing main and services will provide potable water service to this site.

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. Sewer infrastructure currently exists in Decker Drive including sewer services to the proposed 12 lots

Water Serviceability

The WWSD's has a current developed physical water supply of 5246 ac-ft of water per year and the current demand is 2248 ac-ft per year which is roughly 43% of the existing physical supply.

Wastewater Serviceability

The WWSD collects and treats wastewater from users within its service area at the WWCD treatment plant located near Hwy 16 and Fountain Creek. The treatment plant has a current hydraulic capacity of **2.5 MGD**. Currently, the plant is operating at a capacity of **1.43 MGD**. The District has the capability to treat an additional **1.07 MGD** with its existing plant.

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.

The new water commitments are 4.20 ac-ft per year for the 12 lots.

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. The rural lot will be included in the sewer calculations because the proposed lot size does not meet code to be served by the existing septic system. Therefore, a sanitary sewer will be extended to the lot and it will be required to hook into the sewer system when the existing septic system fails.

Based on the wastewater loading, the total wastewater load projected for this site is 0.00246MGD for the 12 lots.

3.0 SUMMARY AND CONCLUSIONS

The maximum allowable water demand and the anticipated wastewater contributions from the proposed Pioneer Landing at Lorson Ranch Filing No. 3 are as follows:

Item	ac. ft./yr	Avg. Daily Flow (gpd)
Water Demand	4.20	3,748
Wastewater Flow		2,460

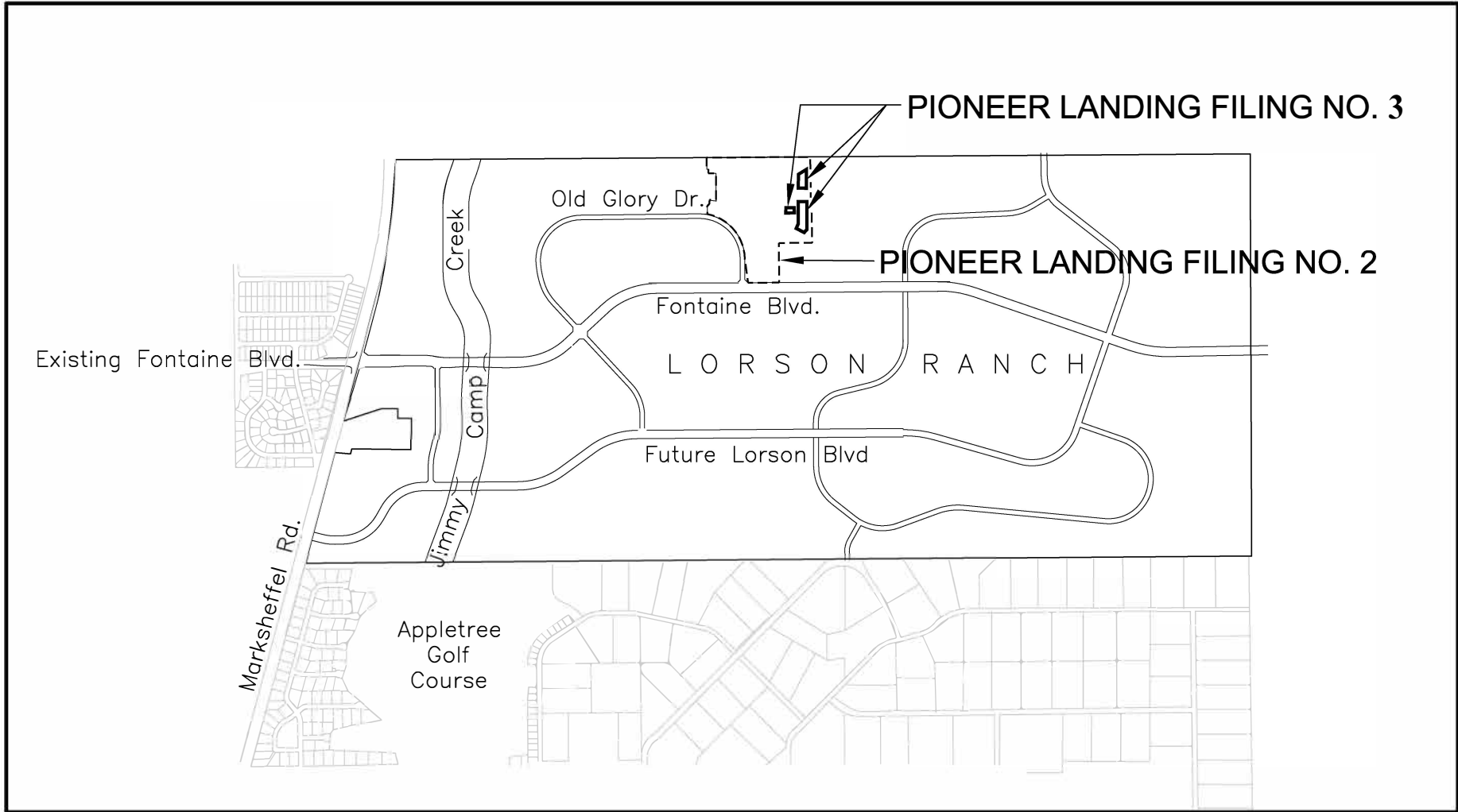
The Widefield Water and Sanitation District has an excess capacity in their existing water supply system to serve this subdivision

The WWSD has excess capacity at their existing wastewater treatment plant to treat an additional **1.07 MGD** of wastewater effluent. The proposed development will only contribute an additional **0.00246 MGD** of flow to the existing plant.

Construction costs of proposed off-site infrastructure have not been included in this report since all infrastructure currently existing in Decker Drive.

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 constructed, 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**



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

PIONEER LANDING FILING NO. 3
VICINITY MAP

SCALE:
NTS

DATE:
SEPTEMBER, 2017

FIGURE NO.
--

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

Pioneer Landing at Lorson Ranch Filing No. 3

2. LAND USE ACTION Final Plat

3. NAME OF EXISTING PARCEL AS RECORDED

SUBDIVISION

FILING

BLOCK

LOT

4. TOTAL ACREAGE 1.836

5. NUMBER OF LOTS PROPOSED 12

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.

NE 1/4 OF SE 1/4 SECTION 14 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 # <u>12</u> of units	<u>3,748</u> GPD	<u>4.20</u> AF
COMMERCIAL USE # _____ of S.F.	_____ GPD	_____ AF
IRRIGATION # _____ of acres	_____ GPD	_____ AF
STOCK WATERING # _____ of head	_____ GPD	_____ AF
OTHER _____	_____ GPD	_____ AF
TOTAL	<u>3,748</u> GPD	<u>4.20</u> AF

10. WATER SUPPLY SOURCE

EXISTING WELLS DEVELOPED SPRING

WELL PERMIT NUMBERS _____

NEW WELLS -

PROPOSED AQUIFERS - (CHECK ONE)

- | | |
|---------------------------------------|--|
| <input type="checkbox"/> ALLUVIAL | <input type="checkbox"/> UPPER ARAPAHOE |
| <input type="checkbox"/> UPPER DAWSON | <input type="checkbox"/> LOWER ARAPAHOE |
| <input type="checkbox"/> LOWER DAWSON | <input type="checkbox"/> LARAMIE FOX HILLS |
| <input type="checkbox"/> DENVER | <input type="checkbox"/> DAKOTA |
| <input type="checkbox"/> OTHER _____ | |

- MUNICIPAL
 ASSOCIATION
 COMPANY

DISTRICT
 NAME Widefield W+S

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 _____



October 19, 2017

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: Commitment Letter for Pioneer Landing Filing #3 at Lorson Ranch

Dear Jeff and Cole:

This commitment is for the Final Plat known as Pioneer Landing Filing #3. These lots were left in 3 tracts with the initial filing of Pioneer Landing Two.

Widefield Water and Sanitation District commits to and will serve water and sewer to the above named PUD subdivision which includes approximately **12 single family lots or 4.20 AC-FT/year**. The expected **wastewater loads are 2,460 gallons/day** on an average daily-maximum monthly basis.

Sincerely,
Widefield Water and Sanitation District

A handwritten signature in blue ink that reads "Robert K. Bannister".

Robert Bannister, PE, District Engineer
C: Steve Wilson, General Manager
Brandon Bernard, Water Superintendent
Mark McCormick, Wastewater Superintendent
John McGinn, PE,

**APPENDIX B –
2016 WWSD ANNUAL WATER AND WASTEWATER REPORT, JDS HYDRO**

WIDEFIELD WATER AND SANITATION DISTRICT

37 Widefield Blvd

Security, CO 80911

District Water and Wastewater Report

Annual Update

Date of Update January 1, 2016

Update Author John P. McGinn, PE;

District Engineer for Widefield Water and Sanitation District,
JDS-Hydro Consultants, Inc.

Attachments

- Widefield Water Facilities Map (2 sheets)
- Widefield 2015 Water Quality Consumer Confidence Report
- End of 2015 Year Commitment Balance Sheet

1. Water General

The Widefield Water and Sanitation District's Water System was originally created in the 1960's and has been expanded for nearly 50 years. The system serves approximately 8000 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 Holdings of the District are estimated at 9495 annual acre-feet.

The current Developed Physical Supply is 5246 annual acre-feet. The three year running average actual use is 2248 acre-feet which is roughly 43% 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, 2016.

2. **Recent Water Volumes Used** The recent three years water use and tap data are as follows;

Year	Annual Use (Acre-feet)	Single Family Equivalent (Taps in SFE)
2013	2318	7632 (corrected)
2014	2309.	7797 (corrected)
2015	2117	8058

3. **Water Supply**

Changes in Water Supply There have been NO RECENT CHANGES in the Widefield Water Supply Inventory in the last 3 years, since the last Full Report. All existing sources have been previously documented on file at County Attorney’s office.

Listing of Water Supplies:

Renewable Groundwater; All sources previously documented at County Attorney’s office

- Widefield Aquifer; Widefield is allocated the use of 2575 annual acre-feet through the Widefield Aquifer Stipulation
- Jimmy Camp Aquifer; Widefield is allocated 650 annual acre-feet through the Widefield Aquifer Stipulation
- Vennetucci Lease: Widefield 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. This is currently subleased to the City of Fountain through the year 2017.

Surface Water Supplies: Sources documented at County Attorney’s Office

- Widefield owns 1500 annual acre-feet of the Fountain Valley Authority Project which safely yields 1425 annual acre-feet of fully consumable water.
- Widefield 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.

- Widefield owns roughly 1025 annual acre-feet of return flows from CSU's portion of the FVA project. This is used in augmentation, but is mostly leased out annually because demand has not required the need.
- Widefield owns a mix of senior surface water supplies and out-of-priority water supplies that total 1351 annual acre-feet. This is the fully consumable portion and this water is leased out and has not been developed into physical supply.

Potential or intended Future Supplies

Although Widefield 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. Widefield Water Quality

The water quality provided by the Widefield Water and Sanitation District meets or exceeds all required State and Federal Drinking Water Standards. For a detailed water quality report, please see the Widefield Consumer Confidence Report which is updated annually and accessible at <http://wwsdonline.com/index.php?page=consumer-confidence-report>. A 2015 copy is attached.

5. Widefield Physical Water System

The Widefield System is too large to show all lines and facilities, the attachment shows the major facilities. The Widefield Water System consists of:

Service area of roughly 10 square miles.

Pipelines over 550,000 linear feet varying in size from 4 to 30 inches in diameter

Seven Water Tanks totaling roughly 10.0 Million Gallons

Five Pressure Zones

Three Booster Stations

24 Inch Transmission from FVA

Participation in Pueblo Reservoir and Frying Pan Arkansas Water project

Two Water Treatment Plants

Eleven Active Wells (not including inactive or the Vennetucci System)

6. Major capital improvements accomplished during recent years and anticipated improvements for the upcoming years

- Most Recent Three Years Upgrades to water facilities include the following:
 - Begin Development of West to East Transmission Line: This project includes certain transmission line upgrades which will continue over the next 10 years
 - Replacement of well equipment in three Widefield and Jimmy Camp wells. (No addition to sources)
 - Repair and Rehabilitation of a 2.1 MG Tank
- Expected Upcoming 3 Years Improvements - These are all system-wide capital projects.
 - No additional Sources
 - Phase IV West to East Transmission System
 - Repair and changes to Well C-1
 - Demolition of two older tanks and reconstruction of one tank
 - Relocation of JHW-2 Well
 - Well Manifolding

Wastewater Report Update

1. Wastewater General

The Widefield Water and Sanitation District's Wastewater System was originally created in the 1960's and has been expanded for nearly 50 years. The system serves over 8000 single family equivalent households.

The current hydraulic capacity of the Widefield Wastewater Treatment Plant is 2.50 MGD. *Note—WWTP are rated on the basis of Average daily Maximum Monthly Flow, which differs from Max Day Flow.* There have been no increases to plant capacity since 2001.

The treatment plant discharges to Lower Fountain Creek.

Current 3 year running average loading is 1.43 MGD which is roughly 58% of Plant Capacity.

Current projected use plus active commitments are projected to be roughly 1.69 MGD which represents about 66% of Current Hydraulic Plant Capacity. *Note—WWTP are rated on the basis of Average daily Maximum Monthly Flow, which differs from Max Day Flow.*

2. Actual Wastewater Volumes Treated

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

Year	Average Daily Flow (MGD)	Single Family Equivalent (Taps in SFE)
2013	1.47	7724 (Corrected)
2014	1.44	7885 (Corrected)
2015	1.40	8131

Note; Widefield provided wastewater treatment to Colorado Centre Metropolitan District from late 2011 through mid 2014.

3. Existing Widefield Wastewater System

The Widefield Water System consists of:

Service area of roughly 10 square miles.

Pipelines over 570,000 linear feet varying in size from 8 to 24 inches in diameter

Five Lift Stations

Wastewater Treatment Plant—2.5 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 year

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

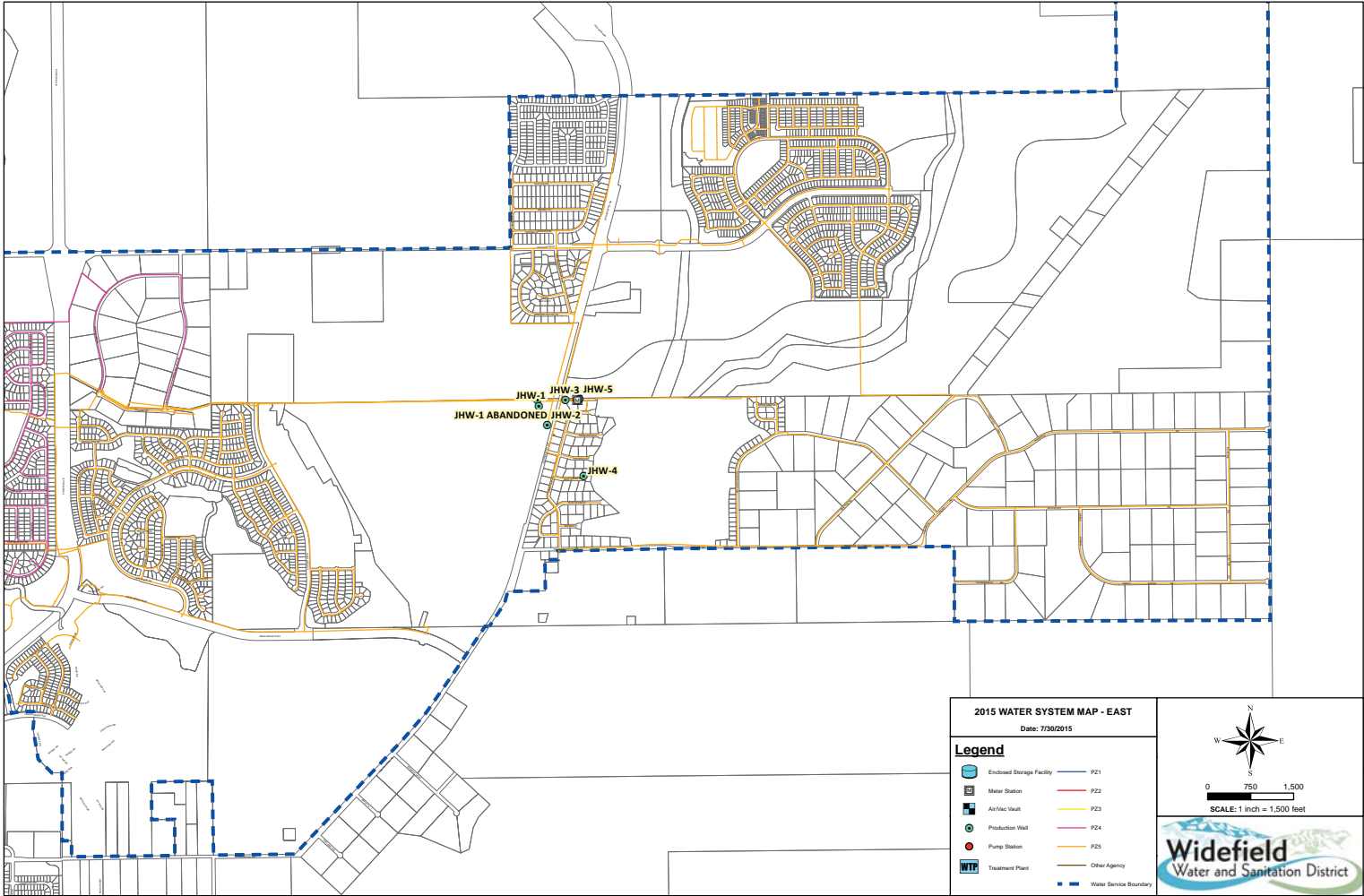
Some replacement of older lines in older areas of the District

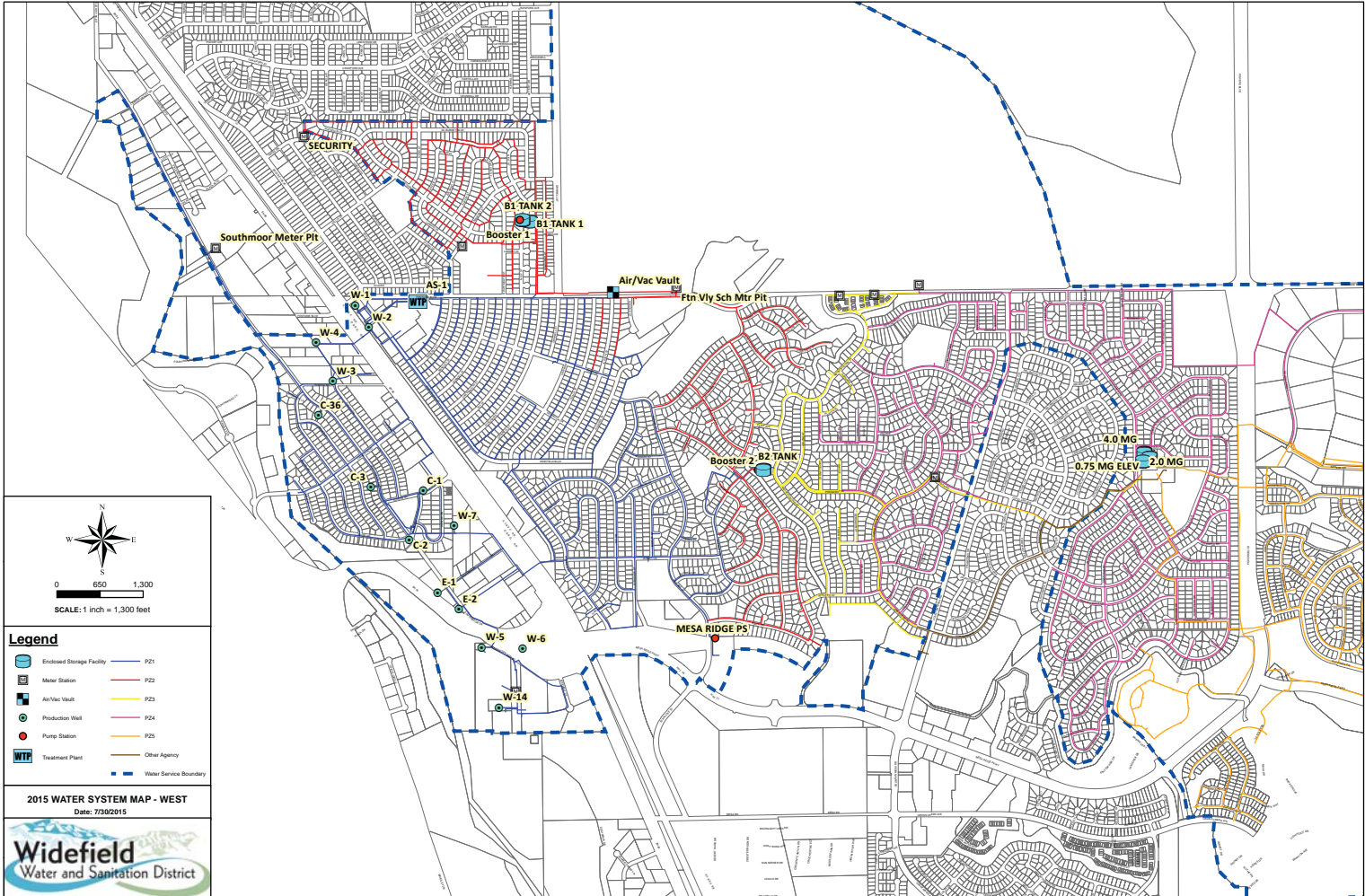
- Expected Upcoming Three Years Improvements

Upgrade of Treatment systems to meet future Regulation 85 requirements. This upgrade includes Bio-nutrient Removal required by 2019. This is not expected to include increases in capacity.

Continued Line replacement of older lines

Upgrades of solids handling





Legend

- Enclosed Storage Facility (Blue circle with 'E')
- Meter Station (Square with 'M')
- Air/Vac Vault (Square with 'V')
- Production Well (Circle with 'C')
- Pump Station (Circle with 'P')
- Treatment Plant (Square with 'T')
- Water Service Boundary (Dashed blue line)
- P21 (Blue line)
- P22 (Red line)
- P23 (Yellow line)
- P24 (Pink line)
- P25 (Orange line)
- Other Agency (Yellow line)

2015 WATER SYSTEM MAP - WEST
 Date: 7/30/2015

WIDEFIELD WSD 2017 Drinking Water Quality Report For Calendar Year 2016

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 719-955-0548 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 stormwater 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 stormwater 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 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 <http://wqcdcompliance.com/ccr>. The report is located under "Source Water Assessment Reports", and then "Assessment Report by County". Select EL PASO County and find 121900; WIDEFIELD WSD or by contacting BRANDON BERNARD at 719-955-0548. 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>Source</u>	<u>Source Type</u>	<u>Water Type</u>	<u>Potential Source(s) of Contamination</u>
W4 WELL	Well	Groundwater	Environment, Industry
W2 WELL	Well	Groundwater	Environment, Industry
W3 WELL	Well	Groundwater	Environment, Industry
WELL C1	Well	Groundwater	Environment, Industry
W7 WELL	Well	Groundwater	Environment, Industry
WELL E2	Well	Groundwater	Environment, Industry
WELL C3	Well	Groundwater	Environment, Industry
WELL C36	Well	Groundwater	Environment, Industry
JHW5R WELL	Well	Groundwater	Environment, Industry
JHW4R WELL	Well	Groundwater	Environment, Industry
W1 WELL	Well	Groundwater	Environment, Industry
PURCHASED FOUNTAIN VALLEY 121300 SW	Consecutive Connection	Surface Water	Soil runoff, 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 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

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, 2016 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						
Contaminant Name	Time Period	Results	Number of Samples Below Level	Sample Size	TT Violation	MRDL
Chlorine	December, 2016	<u>Lowest period</u> percentage of samples meeting TT requirement: 100%	0	20	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	08/05/2014 to 08/21/2014	0.32	30	ppm	1.3	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead		5	30	ppb	15	1	No	

Disinfection Byproducts Sampled in the Distribution System

Name	Year	Average	Range Low – High	Sample Size	Unit of Measure	MCL	MCLG	Highest Compliance Value	MCL Violation	Typical Sources
Total Haloacetic Acids (HAA5)	2016	23.17	1.8 to 45.6	16	ppb	60	N/A	20.8	No	Byproduct of drinking water disinfection
Total Trihalomethanes (TTHM)	2016	54.24	7.52 to 98	16	ppb	80	N/A	48.9	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
Gross Alpha	2014	1.31	0 to 2.63	2	pCi/L	15	0	No	Erosion of natural deposits
Combined Radium	2014	0.05	0 to 0.1	2	pCi/L	5	0	No	Erosion of natural deposits
Combined Uranium	2014	12.5	11 to 14	2	ppb	30	0	No	Erosion of natural deposits

Inorganic Contaminants Sampled at the Entry Point to the Distribution System

Contaminant Name	Year	Average	Range Low – High	Sample Size	Unit of Measure	MCL	MCLG	MCL Violation	Typical Sources
Barium	2016	0.07	0.06 to 0.08	3	ppm	2	2	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium	2016	1.03	0 to 1.7	3	ppb	100	100	No	Discharge from steel and pulp mills; erosion of natural deposits

Inorganic Contaminants Sampled at the Entry Point to the Distribution System

Contaminant Name	Year	Average	Range Low – High	Sample Size	Unit of Measure	MCL	MCLG	MCL Violation	Typical Sources
Fluoride	2016	1.12	0.51 to 2	3	ppm	4	4	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate	2016	5.47	0.81 to 7.5	12	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	2016	0.42	0 to 1.4	13	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	2016	53.33	50 to 58	3	ppm	N/A
Total Dissolved Solids	2014	1105	1100 to 1110	2	ppm	500

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

No Violations or Formal Enforcement Actions

FOUNTAIN CITY OF 2017 Drinking Water Quality Report For Calendar Year 2016

Public Water System ID: CO0121275

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

Our Water Sources

<u>Source</u>	<u>Source Type</u>	<u>Water Type</u>	<u>Potential Source(s) of Contamination</u>
GOLDFIELD CC - RECEIVED FROM WIDEFIELD	Consecutive Connection	Surface Water	N/A
RICE LANE CC - RECEIVED FROM WIDEFIELD	Consecutive Connection	Surface Water	N/A
MESA RIDGE CC - RECEIVED FROM WIDEFIELD	Consecutive Connection	Surface Water	Ray Nixon Road
PURCHSD FVA 121300 SW	Consecutive Connection	Surface Water	N/A
WELL NO 2 SOUTH PARK WELL	Well	Groundwater	South end of Park, 213 W. Alabama
WELL NO 3 SHOP WELL	Well	Groundwater	South Main St. and Missouri Ave; 120 E Missouri Ave
WELL NO 4 DALE ST	Well	Groundwater	Corner of Dale St/Linda Vista; 625 Dale St.

Detected Contaminants

FOUNTAIN CITY OF 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, 2016 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

Contaminant Name	Time Period	Results	Number of Samples Below Level	Sample Size	TT Violation	MRDL
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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

Contaminant Name	Time Period	Results	Number of Samples Below Level	Sample Size	TT Violation	MRDL
Chlorine	December, 2016	<u>Lowest period</u> percentage of samples meeting TT requirement: 100%	0	20	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	08/14/2016 to 08/23/2016	0.37	30	ppm	1.3	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead	08/14/2016 to 08/23/2016	6.2	30	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	Highest Compliance Value	MCL Violation	Typical Sources
Total Haloacetic Acids (HAA5)	2016	40.83	27.5 to 65	16	ppb	60	N/A	65	No	Byproduct of drinking water disinfection
Total Trihalomethanes (TTHM)	2016	62.11	37.1 to 87.7	16	ppb	80	N/A	87.7	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
Gross Alpha	2014	4.28	2.8 to 7.8	4	pCi/L	15	0	No	Erosion of natural deposits
Combined Radium	2012	0.99	0.62 to 1.38	4	pCi/L	5	0	No	Erosion of natural deposits
Combined Uranium	2014	5.7	2.6 to 7.2	4	ppb	30	0	No	Erosion of natural deposits

Inorganic Contaminants Sampled at the Entry Point to the Distribution System									
Contaminant Name	Year	Average	Range Low – High	Sample Size	Unit of Measure	MCL	MCLG	MCL Violation	Typical Sources
Barium	2014	0.04	0.04 to 0.05	4	ppm	2	2	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium	2014	0.9	0 to 1.4	4	ppb	100	100	No	Discharge from steel and pulp mills; erosion of natural deposits
Fluoride	2014	1.83	1.6 to 2	4	ppm	4	4	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate	2016	2.17	1 to 3.3	3	ppm	10	10	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium	2014	5.88	3.1 to 8.4	4	ppb	50	50	No	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines

Synthetic 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
Oxamyl (Vydate)	2014	0.01	0 to 0.1	8	ppb	200	200	No	Runoff/leaching from insecticide used on apples, potatoes and tomatoes
Pentachlorophenol	2014	0.04	0 to 0.1	8	ppb	1	0	No	Discharge from wood preserving factories

Secondary Contaminants**

**Secondary standards are non-enforceable guidelines for contaminants that may cause cosmetic effects (such as skin, or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water.

Contaminant Name	Year	Average	Range Low – High	Sample Size	Unit of Measure	Secondary Standard
Sodium	2014	113	92 to 120	4	ppm	N/A



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

Violations

Name	Category	Time Period	Health Effects	Compliance Value	TT Level or MCL
DBP GROUP	MONITORING, ROUTINE (DBP), MAJOR - NON-HEALTH-BASED	10/01/2016 - 12/31/2016	N/A	N/A	N/A



Fountain Valley Authority (PWSID # CO0121300)
2016 Water Quality Report Information 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 flow 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 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 <http://wqcdcompliance.com/ccr>. The report is located under "Source Water Assessment Reports", and then "Assessment Report by County". Select EL PASO County and find 121300; Fountain Valley Authority or by contacting 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

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:

Contaminants that may be present in source water include:

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

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.

Immunocompromised Persons Advisory

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>.

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>.

MICROBIOLOGICAL INFORMATION

Fountain Valley Authority performs a Microscopic Particulate Analysis (MPA) at its treatment plant. The MPA determines particulate removal, expressed as a log reduction, between the source water entering the filters and the treated water exiting the filters. For 2016, the log reduction for Fountain Valley Authority was 4.5, which can be equivalently expressed as 100%.

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. No cryptosporidia were

detected in the treated water distributed from our water treatment plant. Current test methods do not allow us to determine if the organisms found in the source water are dead or if they are capable of causing disease. Ingestion of cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immunocompromised people are at greater risk of developing the life-threatening illness. We encourage immunocompromised 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.

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 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.

WANT MORE INFORMATION

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

TABLE OF DETECTED CONTAMINANTS

Fountain Valley Authority is required to monitor for certain contaminants less than once a year because the concentration of the contaminants are not expected to vary significantly from year to year, or the drinking water system is not considered vulnerable to this type of contamination. Some of the data, though representative, may be more than one year old.

Fountain Valley Authority has been issued waivers for asbestos, cyanide, dioxin, glyphosate, nitrite and all unregulated inorganic contaminants. The table on the following page shows the results of our monitoring for the period of January 1 through December 31, 2016, unless otherwise noted.

Detected Contaminants Table

Fountain Valley Authority (PWSID CO0121300)

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
Arsenic	10	0	ppb	1	No	April 2016	
Barium	2	2	ppm	0.0594	No	April 2016	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chlorine¹	TT	N/A	ppm	0 samples above or below the level	No	Jan – Dec 2016	Water additive used to control microbes
Fluoride	4	4	ppm	0.43	No	April 2016	Erosion of natural deposits; discharge from fertilizer and aluminum factories
Hexachlorocyclopentadiene	50	50	ppb	ND - 0.06	No	April, July 2016	Discharge from chemical factories
Nickel	N/A	N/A	ppb	1.8	N/A	April 2016	Erosion of natural deposits; discharge from industries; discharge from refineries and steel mills
Nitrate (as Nitrogen)	10	10	ppm	0.43	No	April 2016	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Radium, Combined 226, 228	5	0	pCi/L	0.1	No	Mar 2011	Erosion of natural deposits
Selenium	50	50	ppb	5.3	No	April 2016	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Sodium	N/A	N/A	ppm	20.9	No	April 2016	Erosion of natural deposits
Total Organic Carbon (TOC)	TT minimum ratio = 1.00	N/A	N/A	0.86 – 1.46	Yes	Running Annual Average	Naturally present in the environment
Turbidity²	TT ≤0.3 in 95% of monthly samples	N/A	NTU	Highest turbidity 0.37 (Sept 2016) 100% of samples ≤0.3	No	Jan – Dec 2016	Soil Runoff
Uranium	30	0	ppb	1.1	No	Mar 2011	Erosion of natural deposits

¹Chlorine is monitored continuously at the water treatment plant. TT = no more than 4 hours with a sample below 0.2ppm

²Turbidity is a measure of the cloudiness of the water and has no known health effects. We monitor turbidity because it is a good indicator of the effectiveness of our filtration system. Compliance with the TT of 95% of samples ≤0.3NTU is calculated using combined filter effluent turbidity results taken 6 times per day at 1:00, 5:00 and 9:00 a.m. and p.m.

Long Term 2 Enhanced Surface Water Treatment Rule Monitoring

Monitored raw source water before it enters the Treatment Plants

Contaminant	Units	Range	MCL Violation	Sample Dates	Possible Source(s) of Contamination
Cryptosporidium	Oocysts/L	0 – 1	N/A	Jan – Dec 2016	Naturally occur in the environment
E. coli	MPN	0 - 8	N/A	Jan – Dec 2016	Naturally occur in the environment
Turbidity	NTU	0.45 – 2.7	N/A	Jan – Dec 2016	Soil Runoff

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

Contaminant	Category	Time Period	Health Effects	Compliance Value	TT Level or MCL
Turbidity¹	Monitoring, Source (LT2), Major Non-health-based	05/04/2016 – 5/04/2016	N/A	N/A	N/A
E. coli	Monitoring, Source (LT2), Major Non-health-based	05/04/2016 – 5/04/2016	N/A	N/A	N/A
Cryptosporidium	Monitoring, Source (LT2), Major Non-health-based	05/04/2016 – 5/04/2016	N/A	N/A	N/A
Carbon, Total²	Inadequate DBP Precursor Removal – health-based	01/01/2016 – 03/31/2016	Total Organic Carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these byproducts in excess of the Maximum Containment Level (MCL) may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.	2.05 mg/L Treated water	2.0 mg/L Treated water

¹ Turbidity, E. coli and Cryptosporidium as part of the LT2 requirement were not collected on the specified date in the month of May, therefore, we were issued a Failure to Monitor Violation. Turbidity, E. coli, and Cryptosporidium were sampled later in the month on May 10th.

² Total Organic Carbon (TOC) increases in source water during periods of heavy rain fall and snow melt due to runoff entering our reservoirs and creeks. During 2015 and into 2016 we saw higher precipitation than average leading to increased levels of TOC. The Fountain Valley Authority Treatment Plant will be installing a ferric chloride system in July 2017. This system will aid in reducing the levels of TOC.