

2017 Annual Water Quality Report

For Calendar Year 2016.

This water quality report applies to the water provided by DENVER SE SUBURBAN WSD, PINERY PWSID C00118025



We are pleased to submit to you this year's Annual Water Quality Report. The United States Environmental Protection Agency (EPA) requires community water systems to prepare and provide to their customers, an Annual Consumer Confidence Report on the quality of the water delivered by their system. Our constant goal is to provide you with a safe and dependable supply of drinking water.

General Information About Drinking Water

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. Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised 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 or by visiting <http://water.epa.gov/drink/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:

- **Microbial contaminants**, such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- **Inorganic contaminants**, such as 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** that may come from a variety of sources, such as agriculture, urban storm water runoff, and residential uses.
- **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.
- **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 regulation establish limits for contaminants in bottled water that must provide the same protection for public health.

Our Water Source

The District relies on water from two sources; seven alluvial wells along Cherry Creek and seventeen wells drilled in the deeper Denver Basin Aquifers. These wells feed a system of pump stations that pump the water to underground storage reservoirs serving homes, parks, schools and other users within the Pinery Water and Wastewater District. In 2016, we delivered 993 million gallons of water.

We test the water each year to make sure your tap water meets all EPA and State drinking water health standards. The District safeguards its water supplies and we are proud to report that our system has not violated a maximum contaminant level.

Source Water Assessment Report and Ground Water Protection Plan

The Colorado Department of Public Health and Environment provided us with a Source Water Assessment Report for our water supply. You can obtain a copy of the report by visiting <http://wqcdcompliance.com/ccr> or by contacting Paul Makowski at 303-841-2797 ext. 202.

Potential sources of contamination in our source water area come from, but are not limited to: leaking storage tanks, septic systems, commercial and urban transportation, runoff/leaching of fertilizer used on crops and community lawns and erosion of natural deposits.

The Source Water Assessment Report provides a screening-level evaluation of the potential contamination that **could** occur. It does not mean that the contaminant **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. Our District is concerned about protecting our water source and has developed a Ground Water Protection Plan to help identify potential contaminants and hazards within our ground water protection area. We routinely monitor the water for potential contaminants and enforce the rules and regulations of the Ground Water Protection Plan to ensure that quality finished water is delivered to your homes and businesses.

Help Us-----Help You

We encourage public interest and participation in our community's decisions affecting drinking water. The staff of the Pinery Water & Wastewater District is available to answer questions concerning our water system. Once every month the Board meets to discuss the business of the District and the public is welcome. Board meetings are held at our District office at 6:30 p.m. on the third Wednesday of each month.

Water Quality Data Tables

The tables below list all of the drinking water contaminants that were detected. Unless otherwise noted, the data presented in these tables are from testing done between January 1, 2016 and December 31, 2016. The State permits us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. All other contaminants that we tested for were below the detection limit with current laboratory equipment, so they are not included in this report. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk.

Regulated at the Customer's Tap

Contaminant	Action Level	90 th Percentile Value	Units	Number of Samples	Sample Sites Above Action Level	Monitoring Period	Violation	Typical Source of Contaminant
Lead	15	1.50	ppb	25	0	08/26/2015 – 09/02/2015	No	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Copper	1.3	0.98	ppm	25	0	08/26/2015 – 09/02/2015	No	

Infants and young children are typically more vulnerable to lead in drinking water than the general population. 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 elevated lead levels in your home's water, you may wish to have it tested and flush your tap for 30 seconds to 2 minutes before using tap water. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at 1-800-426-4791 or at <http://www.epa.gov/safewater/lead>. Lead is not found in the source water and copper levels at the source are extremely low. Once water enters the business or home plumbing systems, copper and lead levels may increase. We are required by state and federal regulations to test a representative number of "high risk" homes for lead and copper. The regulations require that 90 percent of samples taken at the tap in 20 homes must be below the Action Level of 15 parts per billion for lead and 1.3 parts per million for copper. NOTE: NEXT TESTING CYCLE IS IN 2018

Regulated in the Distribution System

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	Lowest period percentage of samples meeting TT requirement: 100%	0	12	No	4.0 ppm

Regulated in the Distribution System

Contaminant	MCL	MCLG	Average of Individual Samples	Units	Range of Individual Samples	Number Of Samples	Sample Date	Violation	Typical Source of Contaminant
Organic Disinfection By-Products (TTHM's) Total Trihalomethanes	80	na	50.3	ppb	49.9 – 50.7	2	2016	No	By-product of drinking water chlorination
Total Haloacetic acids (HAA5)	60	na	18.35	ppb	17.7 – 19	2	2016	No	By-product of drinking water disinfection

Regulated at System Entry Points

Contaminant	MCL	MCLG	Average of Individual Samples	Units	Range of Individual Samples	Number of Samples	Sample Date	MCL Violation	Typical Source of Contaminant
Arsenic	10	0	2.7	ppb	2.7 to 2.7	1	2015	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium	2	2	0.2	ppm	0.2 to 0.2	1	2015	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride	4	4	0.4	ppm	0.4 to 0.4	1	2015	No	Erosion of natural deposits; discharge from fertilizer and aluminum factories
Nitrate (as N)	10	10	0.61	ppm	0 to 1.8	6	2016	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

Regulated at System Entry Points

Contaminant	MCL	MCLG	Average of Individual Samples	Units	Range of Individual Samples	Number of Samples	Sample Date	MCL Violation	Typical Source of Contaminant
Nitrite (as N)	1	1	0.12	ppm	0.12 to 0.12	1	2015	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium	50	50	6.4	ppb	6.4 to 6.4	1	2015	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines

Radionuclides Sampled at the Entry Point to the Distribution System

Contaminant	MCL	MCLG	Average of Individual Samples	Units	Range of Individual Samples	Number of Samples	Sample Date	Violation	Typical Source of Contaminant
Combined Radium (-226 & -228)	5	0	0.6	pCi/L	0.4 – 0.7	5	2016	No	Erosion of natural deposits.
Combined Uranium	30	0	10.87	ppb	2.1 – 24	3	2016	No	Erosion of natural deposits.
Gross Alpha, Excl. Radon & Uranium	15	0	3.16	pCi/L	0.39 – 5.92	2	2016	No	Erosion of natural deposits.

Secondary Contaminants**

Contaminant	SMCL	Average Range of Individual Samples	Units	Range of Individual Samples	Number of Samples	Sample Date
Sodium	NA	30.9	ppm	30.9 – 30.9	1	2015
Total Dissolved Solids	500	265.67	ppm	116 - 427	3	2016
Dibromoacetic Acid	NA	6.85	N/A	6.6 to 7.1	2	2015
Dichloroacetic Acid	NA	4.3	N/A	4.1 to 4.5	2	2015
Trichloroacetic Acid	NA	2.2	N/A	2.1 to 2.3	2	2015

** Secondary standards are non-enforceable guidelines for contaminants that may cause cosmetic effects (such as skin and tooth discoloration) or aesthetic effects (such as taste, odor or color) in drinking water. EPA recommends these standards, but does not require water systems to comply.

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 use the results of the 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 the Third Unregulated Contaminant Rule (UCMR3). Once EPA reviews the submitted results, the results are made available in the EPA's National Contaminant Occurrence Database (NCOD) <https://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.

Contaminant	MCL	MCLG	Average of Individual Samples	Units	Range of Individual Samples	Number of Samples	Sample Date	MCL Violation
Chlorate	NA	NA	176.3	ppb	95 to 280	4	2013	No
Chromium	NA	100	0.3	ppb	ND to 0.32	4	2013	No
Chromium Hexavalent	NA	NA	0.1	ppb	0.038 to 0.1	4	2013	No
Molybdenum	NA	NA	1.1	ppb	1.0 to 1.3	4	2013	No
Strontium	NA	NA	370	ppb	270 to 440	4	2013	No
Vanadium	NA	NA	1.8	ppb	ND to 3.5	4	2013	No

***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/dinnk/dontact.cfm>.

Waivers

The Colorado Department of Public Health and Environment has issued the District waivers for Cyanide, Nitrite, Glyphosate, Dioxin & Asbestos. This is due to the Colorado Department of Public Health and Environment not expecting to find these contaminants in our water.

Violation(s) and Formal Enforcement Action(s)

Violations: No Violations to Report

Formal Enforcement Actions: No Formal Enforcement Actions to Report

Glossary of Terms and Measurements

Terms:

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Average of Individual Samples (No Abbreviation): The typical value. Mathematically, it is the sum of values divided by the number of samples.

Below Detectable Limit (BDL): Indicates the compound was analyzed for, but was below the lab method detection limit.

Contaminant: A potentially harmful physical, biological, chemical or radiological substance in water.

Gross Alpha, Including RA, Excluding RN & U (No Abbreviation): This is the gross alpha particle activity compliance value. It includes radium-226, but excludes radon 222 and uranium.

Maximum Contaminant Level Goal (MCLG): The level of contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum Contaminant Level (MCL): The highest level of contaminant that is allowed in drinking water. MCLs are set as close to the MCLG as feasible using the best available treatment technology.

Secondary Maximum Contaminant Level (SMCL): 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. EPA recommends these standards but does not require water systems to comply.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant, below which there is no known or expected risk to health.

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.

Microscopic Particle Analysis (MPA Raw Water Only) An analysis of surface water organisms and indicators in water. This analysis can be used to determine performance of a surface water treatment plant or in our case to determine the existence of surface water influence on a ground water well.

Not Available (na): Standards for these contaminants do not exist.

Non Detectable (ND): Indicates the compound was analyzed for, but was below the lab method detection limit.

Number of Samples (No Abbreviation): The number or count of the values.

Range of Individual Samples (No Abbreviation): The lowest to the highest value.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

Variances and Exemptions: State or EPA permission not to meet an MCL or treatment technique under certain conditions.

Violation (No Abbreviation): A failure to meet a Colorado Primary Drinking Water Regulation.

Units of Measurement:

Parts Per Million (ppm): Equivalent to milligrams per liter (mg/l). One ppm corresponds to one minute in two years or a single penny in \$10,000.

Parts Per Billion (ppb): Equivalent to micrograms per liter (ug/l). One ppb corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Parts Per Trillion (ppt): Equivalent to nanograms per liter (ng/l). One ppt corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.

PicoCuries Per Liter (pCi/L): A measure of radioactivity.

If you have any questions or comments please contact us at:

Mailing Address – 5242 Old Schoolhouse Road - Parker, CO 80134

Water Quality Questions? Call Paul Makowski at 303-841-2797 ext. 202 or PaulM@Pinerywater.com

Billing or other Information? Call Customer Service at 303-841-2797 ext. 0 or email to information@pinerywater.com

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