

# 2018 Water Quality Report



Annual copies of the reports can be found at CRgov.com/waterquality

Public Water System ID: CO0118010

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

Castle Rock Water's goal is to provide you with a safe and reliable supply of drinking water. The Water Quality Report or "consumer confidence reports" are produced annually to describe the overall quality of water from its raw collection and storage to the treated purity at your tap. We are pleased to report Castle Rock Water was in full compliance with State and Federal drinking water requirements (i.e. there were no violations or formal enforcement actions or other issues) for the current reporting period of 2017. The terms and abbreviations on page 5 will be useful to you, as our customer, in better understanding the information in this report.

## **Our Water Sources**

In 2017, approximately 82 percent of the Town's water was pumped from the Town's 49 deep groundwater wells. The remaining 18 percent came from renewable water resources which included 13 shallow alluvial wells and a surface water diversion along East Plum Creek. Castle Rock overlies the Denver Basin, a geologic formation with four principal aquifers: the Dawson, Denver, Arapahoe, and the deepest of the four, the Laramie-Fox Hills. Castle Rock utilizes five treatment plants to purify and distribute potable water. Having five facilities provides redundancy to ensure reliable service. During the winter with low demand, several plants may not be in use. For a complete list of water supplies and water plants, see page 8.

## Lead Testing in Castle Rock

Castle Rock Water is required by State and Federal regulations to conduct periodic lead and copper testing. Samples are collected from indoor taps in designated single family homes built between 1982 - 1986. These homes have been identified because they were built during the timeframe when lead-based solder was more widely used. Lead can enter the water through contact with plumbing pipes and fixtures containing lead within the home. It does this by leaching lead and copper from your private plumbing through the corrosion of pipes, solder, faucets and fittings. As part of our treatment process, Castle Rock Water treats the water to minimize, reduce and eliminate to the extent possible the potential for this corrosion to occur. Since Castle Rock started this sampling in 1992, there have been no elevated levels of either lead or copper from the samples collected.

If you have any concerns, or would like your home to be considered for lead testing, contact our Water Quality staff at 720-733-6000 or visit CRgov.com/waterquality. This test is performed at no cost to the homeowner.

	Lead and Copper Sampled in the Distribution System												
Contaminant Name (unit of measure)	Time Period	90th Percentile	Sample Size	90th Percentile AL*	Sample Sites Above AL*	90th Percentile AL* Exceedance	Typical Sources						
Copper (ppm)	3/6/2017 to 3/9/2017	0.15	60	1.3	0	No	Corrosion of household plumbing systems; erosion of natural deposits						
Lead (ppm)	3/6/2017 to 3/9/2017	2.2	60	15	0	No	Corrosion of household plumbing systems; erosion of natural deposits						
Copper (ppm)	8/21/2017 to 9/12/2017	0.18	60	1.3	0	No	Corrosion of household plumbing systems; erosion of natural deposits						
Lead (ppm)	8/21/2017 to 9/12/2017	2.5	60	15	0	No	Corrosion of household plumbing systems; erosion of natural deposits						

<sup>\*</sup>AL - Action Level (see definition on page 5)

## 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.ega.gov/safewater/lead.

## Source Water Assessment and Protection (SWAP)

The Colorado Department of Public Health and Environment (CDPHE) has provided Castle Rock Water with a Source Water Assessment Report for the Town's water supply.

The Source Water Assessment provides a screening-level evaluation of potential contamination that could occur. It does not mean that the contamination has or will occur. Castle Rock Water can use this information to evaluate the need to improve current water treatment capabilities and prepare for future contamination threats. This can help ensure that quality finished water is delivered to every home. In addition, the source water assessment results provide a starting point for developing a source water protection plan.

The Town of Castle Rock adopted a Source Water Protection Plan on March 6, 2018. The plan is desigend to create awareness of the community's drinking water sources and the potential risks to



surface water and/or groundwater quality within the watershed; encourage education and voluntary solutions to alleviate pollution risks; promote management practices to protect and enhance the drinking water supply; and provide for a comprehensive action plan in case of an emergency that threatens or disrupts the community water supply. To view the Plan, visit CRgov.com/waterplans. Potential sources of contamination in our source water area are listed on pages 30-33 in that Plan.

Please contact Castle Rock Water to learn more about what residents can do to help protect drinking water sources, to ask any questions about the Drinking Water Consumer Confidence Report, to learn more about the water 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.

For general information or to obtain a copy of the report, please visit https://www.colorado.gov/cdphe/ccr. The report is located under "Guidance - Source Water Assessment Reports." Search the table using 118010 - Castle Rock, Town Of. Copies of the report are also available by contacting Water Operations staff at 720-733-6000.

The Source Water Assessment Report provides Castle Rock Water a screening level evaluation of potential source water contamination. Through this Assessment Report, the total susceptibility of the Town's water sources to potential contamination from both discrete and dispersed contaminant sources was determined. These potential sources of

Discrete Contaminant Sources generally include facility-related operations from which the potential release of contamination would originate from a relatively small area.

Aboveground, underground and leaking storage tank sites.

Dispersed Contaminant Sources generally include broad-based land uses and miscellaneous sources from which the potential release of contamination would be spread widely over a relatively large area.

Commercial/industrial/transportation

Residential

Urban recreational grasses

Small grains

Pasture/hay

**Forests** 

Septic systems

Road miles

Castle Rock Water has worked with the community on a Source Water Protection Plan to help mitigate risks associated with these potential contaminants. That plan is avilable at CRgov.com/waterplans.



## 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. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's 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. 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 from their health care providers about drinking water.

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 other microbiological contaminants as well as potential health risks, 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 materials, 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, agriculture 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: these chemicals may come from a variety of sources, such as agriculture, urban stormwater runoff and residential uses.

Radioactive contaminants: naturally occuring materials or may be the result of oil and gas production and mining activities.

Organic chemical contaminants: including synthetic and volatile organic chemicals, are byproducts of industrial processes and petroleum production, and also may come from gas stations, urban stormwater 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.

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

THERE WERE NO SIGNIFICANT VIOLATIONS, DEFICIENCIES OR FORMAL ENFORCEMENT ACTIONS FOR 2017.

Note: If any violation relates to failing to install adequate filtration or disinfection equipment or processes, or have had a failure of such equipment or processes, then the water may be inadequately treated. Inadequately treated water may contain disease-causing organisms. These organisms included bacteria, viruses, and parasites, which can cause symptoms, such as nausea, cramps, diarrhea, and associated headaches.

## Terms and Abbreviations

The following definitions will help you understand the terms and abbreviations used in this report.

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment and other regulatory requirements.

Average (x-bar): Typical value.

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).

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.

Gross Alpha (no abbreviation): A measure of radioactivity is the gross alpha particle activity compliance value. It includes a measure of radium-226, but excludes radon 222 and uranium.

Health-Based: A violation of either a MCL or TT.

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 a 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 a water system on multiple occasions.

Maximum Contaminant Level (MCL): The highest level of a contaminant allowed in drinking water.

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 (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 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.

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.

Non-Health-Based: A violation that is not a MCL or TT.

Not Applicable (N/A): Does not apply or not available.

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.

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.

Picocuries per liter (pCi/L): Measure of the radioactivity in water.

Range (R): Lowest value to the highest value.

Sample Size (n): Number or count of values (i.e. number of water samples collected).

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

Variance and Exemptions (V/E): Department permission not to meet a MCL or a treatment technique under certain conditions.

Violation (no abbreviation): Failure to meet a Colorado Primary Drinking Water Regulation.

### **Questions or Comments**

Please contact us at 720-733-6000 with any questions about the Drinking Water Confidence Rule or for public participation opportunities affecting water quality.

To report a water emergency, call 720-733-6000 from 8 a.m. to 5 p.m. or 303-663-6100 all other times. You can also email waterquality@crgov.com, or visit our website at CRgov.com/waterquality.

The Castle Rock Water Commission meets the 4th Wednesday of each month at 6 p.m. in the Operations & Maintenance (O&M) Building #183, 175 Kellogg Ct. (Use Gate C), Castle Rock, CO 80109

## **Detected Contaminants in Treated Water**

Castle Rock Water routinely monitors for contaminants in the Town's 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, 2017, unless otherwise noted. The State of Colorado requires monitoring 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 the data, though representative, may be more than one year old. NOTE: Only detected contaminants sampled within the last five years appear in this report. If no tables appear in this section then no contamniants 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 (unit of measure)	Time Period	Results	Number of Samples Below Level	Sample Size	TT Violation	MRDL				
Chloramine	2017	Lowest period percentage of samples meeting TT requirement: 100%	0	70/month	No	4.0 ppm				

Disinfectants Sampled at the Entry Point to the Distribution System											
Disintectant Name (unit of measure)											
Chlorine / Chloramine	2017	0	2,150	TT = No more than 4 hours with a sample below 0.28 MG/L	No	Water additive used to control microbes					

Disinfection Byproducts Sampled in the Distribution System												
Contaminant Name (unit of measure)	Year	Average	Range Low - High	Sample Size	MCL	MCLG	MCL Violation	Typical Source				
Total Haloacetic Acids (HAA5) (ppb)	2017	0.37	0 to 5.89	32	60	N/A	No	Byproduct of drinking water disinfection				
Total Trihalomethanes (TTHM)	2017	4.85	0 to 31.6	32	80	N/A	No	Byproduct of drinking water disinfection				

Summary of Turbidity Sampled at the Entry Point to the Distribution System											
Contaminant Name	Sample Date	Level Found	TT Requirement	TT Violation	Typical Sources						
Turbidity	2017	Highest single measurement: 0.02 NTU	Maximum 0.5 NTU for any single measurement	No	Soil runoff						
Turbidity	2017	Lowest monthly percentage of samples meeting TT requirement for our technology: 100%	In any month, at least 95% of samples must be less than 0.1 NTU	No	Soil runoff						

Radionuclides Sampled at the Entry Point to the Distribution System												
Contaminant Name Year Average Range Sample MCL MCLG MCL Typical Source (unit of measure) Size Violation												
Gross Alpha (pCi/L)	2017	3.51	0.6 to 7.63	4	15	0	No	Erosion of natural deposits				
Combined Radium (pCi/L)	2017	2.75	2.5 to 3	4	5	0	No	Erosion of natural deposits				
Combined Uranium (ppb)	2017	0.85	0 to 1.4	4	30	0	No	Erosion of natural deposits				

I	Inorganic Contaminants Sampled at the Entry Point to the Distribution System												
Contaminant Name (unit of measure)	Year	Average	Range Low - High	Sample Size	MCL	MCLG	MCL Violation	Typical Source					
Barium (ppm)	2017	0.14	0.1 to 0.17	7	2	2	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits					
Fluoride* (ppm)	2017	0.8	0.66 to 0.92	7	4	4	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories					
Nitrate (ppm)	2017	0.14	0 to 0.28	7	10	10	No	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits					
Nitrate-Nitrite (ppm)	2017	0.18	0.08 to 0.28	5	10	10	No	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits					
Selenium (ppb)	2017	0.16	0 to 1.1	7	50	50	No	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines					

<sup>\*</sup>Note: Unlike some water providers, Castle Rock Water does not add flouride to treated water.

#### Secondary Contaminants\* \*\*Secondary standards are non-enforceble 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 Sample Size Secondary Standard (unit of measure) Low - High 15 to 38 Sodium (ppm) 2017 24 7 N/A Calcium (ppm) 2017 50.5 50 to 51 2 N/A

#### **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. Castle Roc k Water 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.

The Unregulated Contaminant Monitoring Rule 3 (UCMR-3) sampling was completed in 2015, and no official sampling was required in 2016. However, once the UCMR-3 study was complete, Castle Rock Water decided to further investigate the findings of the Hexavalent Chromium results. The table below shows sampling events conducted from finished drinking water at the Plum Creek Water Purification Facility from late 2016 to early 2018 along with an explanation of each event. This sampling will continue quarterly to monitor these levels over time.

	Additional Hexavalent Chromium (Cr-6) Testing Results									
Sample Point	Date Sampled	Hexavalent Chromium (ppb)	Notes							
PCWPF Finished	11/21/2016	0.96	This sampling was conducted after the UCMR 3 study was completed as a means of better understanding where the Hex Chromium levels from the UCMR 3 tests were coming from.							
PCWPF Finished	8/22/2017	0.14	Castle Rock Water made treatment adjustments to reduce Hexavalent Chromium and now monitors this constituent quarterly							
PCWPF Finished	11/15/2017	0.13								

<sup>\*\*\*</sup>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

Safe Drinking Water Hotline at (800) 426-4791 or http://water.epa.gov/drink/contact.cfm

## **Detected Contaminants in Raw Source Water**

Raw water is any water found in the environment that has not been treated. This means that any minerals, ions, particles or living organisms have not yet been removed. Raw water includes rainwater, snow melt, ground water, and water from bodies like lakes and rivers. Evaluation of contaminants in this water helps Castle Rock Water to ensure the proper types of treatment are put in place for our drinking water.

Cryptosporidium and Raw Source Water E. coli										
Contaminant Name	Contaminant Name Year Number of Positives Sample Size Typical Sources									
E. coli	E. coli 2017 5 9 Surface water									

## Castle Rock's Water Sources and Water Treatment Plants

Why are water types important? The type of water helps Castle Rock Water determine the appropriate level of treatment and design the correct type of treatment plant.

Source	Source Type	Water Type	Water Plant
Well 150 Meadows D2	Well	GW	MWTP
Well CR101 CS1D	Well	GW	RWRWTC
Well CR217	Well	GW	RWRWTC
Well 43 Weaver A2	Well	GW	FWTP
Well CR86	Well	GW	MWTP
Well 219 A13	Well	GW	MWTP
Well 168 LDA4	Well	GW	MWTP
Well 31R	Well	GW	RWRWTC
Well 41 Weaver 1	Well	GW	FWTP
Well 111	Well	GW	RWRWTC
Well 170 Meadows DA6	Well	GW	MWTP
Well 174 Meadows D6	Well	GW	MWTP
Well CR220	Well	GW	MWTP
Well CR222	Well	GW	MWTP
Well CR224	Well	GW	RWRWTC
Well CR118	Well	GW	RWRWTC
Well CR123	Well	GW	RWRWTC
Well CR72R Castle Oaks 6 Denver	Well	GW	MWTP
Well CR152 Meadows A7 Dawson	Well	GW	MWTP
Well CR15 EDI Den1	Well	GW	PSMWTP
Well 22 Mikelson DA1	Well	GW	FWTP
Well 45 Weaver D2	Well	GW	FWTP
Well 49 Meadows A8	Well	GW	MWTP
Well 149 Meadows D3	Well	GW	MWTP
Well CR67 Meadows A7 Arapahoe	Well	GW	MWTP
Plum Creek Diversion No. 1	Intake	Surface	PCWPF
Well 78 PC Alluvium	Well	GW UDI Surface	PCWPF
Well CR 203 - AL 20	Well	GW UDI Surface	PCWPF
Well 12R Redrilled	Well	GW UDI Surface	PCWPF
Well 192 (AL-9)	Well	GW UDI Surface	PCWPF
Well 11R	Well	GW UDI Surface	PCWPF
Well 184 (AL-1)	Well	GW UDI Surface	PCWPF
Well 79 PC Alluvium	Well	GW UDI Surface	PCWPF

Source	Source Type	Water Type	Water Plant
Well CR117 CS1A	Well	GW	RWRWTC
Well 28R Meadows A-2R	Well	GW	MWTP
Well CR218	Well	GW	RWRWTC
Well CR83	Well	GW	MWTP
Well CR51A Meadows D-7A	Well	GW	RWRWTC
Well 148 Den4	Well	GW	MWTP
Well CR14R PC Miller East	Well	GW	PCWPF
Well 33R Enderud	Well	GW	RWRWTC
Well 82 A4	Well	GW	MWTP
Well 124	Well	GW	RWRWTC
Well 204	Well	GW	PCWPF
Well 50R	Well	GW	MWTP
Well CR221	Well	GW	MWTP
Well CR223	Well	GW	RWRWTC
Well CR225	Well	GW	RWRWTC
Well CR105	Well	GW	RWRWTC
Well CR110	Well	GW	RWRWTC
Well CR84 Meadows A7 Denver	Well	GW	MWTP
Well CR73R Castle Oaks 6 Arapahoe	Well	GW	RWRWTC
Well CR21 Mikelson Den1	Well	GW	FWTP
Well CR20 Mikelson A1	Well	GW	FWTP
Well CR27	Well	GW	out of service
Well 44 Weaver LDA2	Well	GW	FWTP
Well CR47 Meadows D1	Well	GW	MWTP
Well 39 Weaver 1	Well	GW	FWTP
Well CR16 EDI DAI	Well	GW	PCWPF
Well 80 Alluvium	Well	GW UDI Surface	PCWPF
Well CR 199 - AL 16	Well	GW UDI Surface	PCWPF
Well CR 201 - AL 18	Well	GW UDI Surface	PCWPF
Well 191 (AL-8)	Well	GW UDI Surface	PCWPF
Well 13R	Well	GW UDI Surface	PCWPF
Well 185 (AL-2)	Well	GW UDI Surface	PCWPF
D		-	-

GW - Groundwater GW UDI - Groundwater under direct influence

The PCWPF (Plum Creek Water Purification Facility) treats surface water using flocculation/coagulation/sedimentation, greensand filtration, membrane filtration and disinfection.

The following water treatment plants treat groundwater using greensand filtration and disinfection:

FWTP (Founders Water Treatment Plant)

MWTP (Meadows Water Treatment Plant)

PSMWTP (P.S. Miller Water Treatment Plant)

RWRWTC (Ray Waterman Regional Water Treatment Center)

## **Common Questions About Water**

#### Is my water safe to drink?

Yes. Our water meets all the regulatory standards set by the Colorado Department of Public Health and Environment and the U.S. Environment Protection Agency. We are required to conduct frequent and routine water quality testing to ensure your water stays safe.

#### Why is my water discolored?

If you see black or brown water coming from your hot water tap, the culprit may be your hot water heater. Most manufacturers suggest flushing your water heater at least once a year. This discoloration is due to sediment settling at the bottom of the tank which over time will build up. The sediment includes naturally occurring minerals in the water, such as manganese (a black color) and iron (a brown color).

White or cloudy water may be due to air in the pipes that is released as oxygen bubbles when water leaves the tap. It is not a health risk. Other causes of this type of discoloration may be due to the time of the year – during colder months water in outdoor pipes is colder and holds more oxygen than household pipes. When the cold water enters your home or building and begins to warm, the oxygen bubbles escape which can cause the water to look milky. Another cause may be maintenance or construction on the distribution system lines. This may allow air to enter the water pipes and cause the water to have a cloudy appearance.

Brown or yellow water from the first draw, may be the internal plumbing of your home or building. This may be the issue if you only see the discoloration for the first minute or two after your tap is turned on. If you see this discoloration constantly, it may be due to sediments in the water mains. Sediment can get stirred up if there is flushing or maintenance in the area and may cause a brown or yellow color. One way to figure out whether the discoloration is due to your indoor plumbing or from the water mains is to consult with your neighbors and see if they are having similar issues with their water quality.

Please contact us at 720-733-6000 or email waterquality@CRgov.com with any questions about discoloration of water.

#### Is the water in Castle Rock hard?

Castle Rock has moderately hard water. Hardness is caused by naturally occurring calcium and magnesium ions in the water. White spots on glassware or other fixtures are caused by the calcium. This is not harmful. In fact, calcium and magnesium are found in many food products. For more information about hardness, visit CRgov.com/waterquality.

#### Why does my water taste/smell funny?

Your water may taste funny to you if you recently moved from an area containing very few naturally occurring minerals, or if you are accustomed to a certain type of source water. We sometimes gets reports from customers that their water smells like rotten eggs or sewage/septic. Often, these smells are caused by gases that are formed in the household drains and may not be directly related to your water supply. Bacteria that live on hair, food, soap and other organic matter can form gases and can produce unpleasant odors. Another cause of these odors may be your water heater. If your water heater has been turned off and not in use for a while, it can produce a septic or sulfuric smell.

#### Is there fluoride in my water?

Yes, there is naturally occurring fluoride in Castle Rock's water. Fluoride comes from the erosion of natural deposits. The fluoride level in Castle Rock has an average of 0.8 ppm with the Maximum Contaminant Level set at 4 ppm. Castle Rock does not add fluoride to the water supply.

#### Is there lead in my drinking water? If so, what is the Town of Castle Rock doing about it?

There is no lead in Castle Rock Water's drinking water. Lead enters the water through contact with plumbing pipes and fixtures within the home. It does this by "leaching" through the corrosion of pipes, solder, fixtures and faucets (brass) and fittings. We are required to conduct periodic lead and copper testing. The purpose of this testing is to see if there is proper treatment that prevents the corrosion of the piping materials in homes. Since Castle Rock started this sampling back in 1992, there have been no elevated levels of either lead or copper from the samples collected.

If you would like to have your home tested for lead, please contact us at waterquality@CRgov.com or 720-733-6000.

#### Where can I get my water tested?

Typically, we do not test water from individual customer homes. If you would like to have your individual tap water tested by a state-certified laboratory, contact us.