

Annual Drinking Water Quality Report 2012

Castle Rock Water System

We're pleased to present to you this year's Annual Quality Water Report in accordance with EPA regulations. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water. Our primary water source is *the Cowlitz River*. **Additionally, there are 4 seasonal and 2 emergency deep water wells.** We have completed a source water assessment that provides more information such as potential sources of contamination, which is available from our office.

I'm pleased to report that our drinking water is safe and meets federal and state requirements.

If you have any questions about this report or concerning your water utility, please contact **David Vorse, Public Works Director, at Castle Rock Public Works Department, (360) 274-7478.** We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled City Council meetings. They are held on **the second and fourth Monday of each month at 7:30 p.m. in the Castle Rock Senior Center, located at 141 A Street SW in Castle Rock, WA.**

The Castle Rock Water System routinely monitors for constituents in your drinking water according to Federal and State laws. The following table shows the results of our monitoring for the period of January 1st to December 31st, **2012.** All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some constituents. It's important to remember that the presence of these constituents does not necessarily pose a health risk.

In the table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

Constituent - An essential part; component, element.

NA - Not applicable

Contaminant - To make inferior or impure by admixture.

Maximum Contaminant Level (MCL) - The "Maximum Allowed" is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology. MCL's are set at very stringent levels. To experience the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having a health effect from the drinking water.

Maximum Contaminant Level "Goal"(MCLG) - The "Goal" is 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.

Action Level (AL) - Is the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.

Parts per million (ppm) or Milligrams per liter (mg/l) - One part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter - One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Nephelometric Turbidity Unit (NTU) - Nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person. It is monitored because it is a good indicator of water quality and assists in the effectiveness of the water filtration system.

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

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 from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

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 at 1-800-426-4791.

We at the City of Castle Rock work around the clock to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future. Please call our office if you have questions. This notice has been provided to property owners and tenants supplied with potable water from the Castle Rock Distribution System. The City of Castle Rock is an equal opportunity provider.

2012 TEST RESULTS

Constituent	Violation Y/N	Level Detected	Unit Measure	MCLG	MCL	Likely Source of Contamination	Possible Health Effects
Turbidity	No	High .24 Avg. <.04 <.3/100%	NTU	No Goal Listed	TT= 1 NTU TT= <.3/95%	Soil runoff	Turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease causing organisms.
Fluoride	No	.72 - .98	ppm	4	4	Erosion of natural deposits; Discharge from fertilizer and aluminum factories	Exposure in excess of the MCL over many years could cause bone disease. Fluoride at half the MCL may cause mottling of children's teeth, usually in children less than nine.
<i>Fluoride is added to the drinking water to assist in dental hygiene. A level of .7 ppm - 1.3 ppm is necessary to be effective.</i>							
Nitrate (as Nitrogen)	No	<.2 – 2.0 seasonal wells	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits	Infants below the age of six months with exposure in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.
Total Trihalomethanes (TTHMs)	No	29.6	ppb	NA	80	Byproduct of drinking water chlorination	Exposure above the MCL over many years has the potential to cause liver, kidney or central nervous system problems and may increase the risk of cancer.
Haloacetic Acids (HAA5s)	No	23.8	ppb	NA	60	Byproduct of drinking water disinfection	Exposure above the MCL over many years may increase the risk of cancer.
Lead	No	>.015 in 1 of 22 samples	ppm	.015	TT = AL AL is >.015/10%	Corrosion of household plumbing systems; Erosion of natural deposits	Infants and children with exposure in excess of the AL could have delays in physical or mental development. Adults with exposure above the MCL over many years could develop kidney problems or high blood pressure.
Copper	No	>1.3 in 0 of 22 samples	ppm	1.3	TT = AL AL is >1.3/10%	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives	Exposure in excess of the AL over many years could suffer liver or kidney damage. People with Wilson's Disease should consult a doctor. Short term exposure can cause gastrointestinal distress

As you can see by the table, our system had no violations. We're proud that your drinking water meets or exceeds all Federal and State requirements. We have learned through our monitoring and testing for more than 282 constituents in 2012, that some constituents have been detected. **The EPA has determined that your water IS SAFE at these levels.**

2012 RATES	CITY OF CASTLE ROCK'S WATER USE EFFICIENCY PLAN
WATER	Goal: To reduce the city's water loss by 2% annually so that by 2019 the water loss is at 10% or less.
\$29.65 base fee + \$4.25 per 100 cubic feet	To accomplish this goal, the City will take the following actions:
	Require metering of all hydrant use except for Fire Department use;
	Conduct water audits every three years;
	Replace old meters with low flow / leak detection features (10 year project) and
	Repair / replace leaky mains and services.
SEWER	In 2012, water loss was at 11.3%.
\$28.45 base fee + \$7.55 per 100 cubic feet	Goal: To reduce the average consumption per capita by 1 gallon per day so that the average daily consumption per capita is 114 gallons. The City will take the following action to accomplish this goal:
	Use reclaimed water at the Castle Rock Wastewater Treatment Plant for landscape irrigation and equipment use;
	Convert to drip irrigation at the road side and island landscape areas;
1 cubic feet = 7.48 gallons	Include water usage history on the monthly water bills;
	Develop education on rainwater reclamation program and
100 cubic feet = 748 gallons	Develop and initiate a school outreach program on water conservation.
	In 2012, this goal has been reached with an average daily consumption per capita of 68 gallons.