

Annual Drinking Water Quality Report 2015

Castle Rock Water System

CASTLE ROCK, WASHINGTON – PUBLIC WATER SYSTEM #11800

We're pleased to present to you the **2015** 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.** Because we use both surface water and ground water our susceptibility rating is ranked 'High.' 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 analytes 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, **2015.** All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some analytes. It's important to remember that the presence of these analytes does not necessarily pose a health risk.

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

Analyte – A substance being identified and measured in a chemical analysis

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.

Important Drinking Water Terminology

| | |
|--------------|---|
| MCLG | Maximum Contaminant Level Goal: 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 |
| MCL | Maximum Contaminant Level: This highest level of a contaminant that is allowed in drinking water. MCLs are set as close as feasible using the best available treatment technology |
| TT | Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water |
| AL | Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water systems must follow |
| MRDLG | Maximum Residual Disinfectant Level Goal: 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 |
| MRDL | Maximum Residual Disinfectant Level: 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 |
| 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 |
| NA | not applicable |
| ND | not detected |
| NR | monitoring not required, but recommended |

Additional information for Lead: If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Castle Rock is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. 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. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or online at <http://water.epa.gov/drink/info/lead/index.cfm>

Additional information for Fluoride: 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.

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.

2015 TEST RESULTS

| <i>Analytes</i> | <i>Violation Y/N</i> | <i>Level Detected</i> | <i>Unit Measure</i> | <i>MCLG</i> | <i>MCL</i> | <i>Likely Source of Contamination</i> | <i>Possible Health Effects</i> |
|------------------------------|----------------------|--|---------------------|----------------|-------------------------------|---|--|
| Turbidity | No | High .07 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 | .66 – .96 | ppm | 4 | 4 | Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories | Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than nine years old. Mottling, also known as dental fluorosis, may include brown staining and/or pitting of the teeth, and occurs only in developing teeth before they erupt from the gums. |
| Nitrate (as Nitrogen) | No | <.1 – 1.68 Seasonal wells & surface water | 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. |
| TTHMs -Total Trihalomethanes | No | 17.16 – 71.9 * 39.04 | 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. |
| HAA5s - Haloacetic Acids | No | 11.8 - 34 * 23 | ppb | NA | 60 | Byproduct of drinking water disinfection | Exposure above the MCL over many years may increase the risk of cancer. |
| Lead | No | 0 of 21 samples >.015 90%=.003 | ppm | .015 | TT = AL AL is 10% >.015 | 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 | 0 of 21 samples >1.3 in 90%=.804 | ppm | 1.3 | TT = AL AL is 10% >1.3 | 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 |

*Highest average at any one location

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. In addition to the few detections we have reported here, we also monitored and testing for more than 3,472 tests for more than 127 analytes and parameters in 2014, most of which had no detections. **The EPA has determined that your water IS SAFE at these levels.**

**** Unregulated Contaminant Monitoring**

| | | | | 2016 RATES | CITY OF CASTLE ROCK'S WATER USE EFFICIENCY PLAN |
|------------|----------------|------------------|-------------------------|---|--|
| Name | Detected Level | Unit Measurement | Minimum Reporting level | WATER \$32.85 base fee + \$4.50 per 100 cubic feet | Goal: To reduce the city's water loss by 2% annually so that by 2019 the water loss is at 10% or less. To accomplish this goal, the City will take the following actions: Require metering of all hydrant use except for Fire Department use; |
| Strontium | 22.9 - 23.8 | ppb | .2 | | Conduct water audits every three years; |
| Chromium | ND – .208 | ppb | .2 | | Replace old meters with low flow / leak detection features (10 year project) and |
| Chromium-6 | .10 – .201 | ppb | .03 | | Repair / replace leaky mains and services. |
| | | | | SEWER | In 2015, water loss was at 16.8%. |
| | | | | \$30.65 base fee + \$7.90 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 2015, this goal has been reached with an average daily consumption per capita of 63 gallons. |

** The City of Castle Rock was requested by The United States Environmental Protection Agency, to participate in a special study on "unregulated contaminant monitoring rule" in 2014. As such, these analytes listed had a detection level equal to or greater than the minimum reporting level. These are only under observation at this time. Fourth quarter results were not available last year until 2015. They are listed in the above chart.