Clackamas River Water

2013 Water Quality Report

Based on data from calendar year 2012
PWS #4100594

Clairmont- South Service Area

Questions or comments? Contact Suzanne DeLorenzo at sdelorenzo@crwater.com

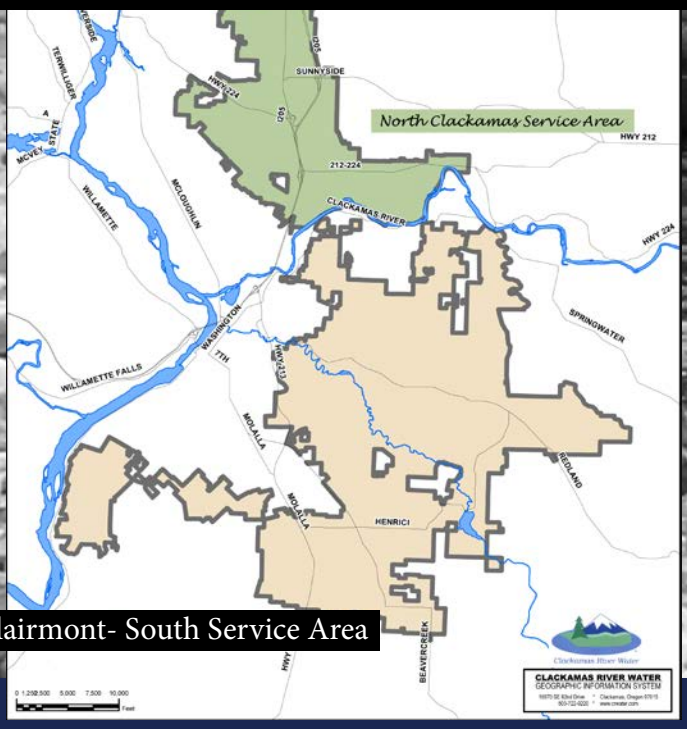
Welcome

Clackamas River Water (CRW) is pleased to welcome you to our 2013 Water Quality Report. The report provides you with an easy to follow overview of our water. We hope that you will take a minute to review this report and learn more about your drinking water.

At CRW we are committed to providing you with clean, safe drinking water.

Your home or business is located in our Clairmont-South Service Area. Most customers in our Clairmont- South Service Area receive water that is a blend of well water and surface water from the Clackamas River. Customers in the Holcomb area receive surface water purchased from South Fork Water Board.

This report covers water quality for the Clairmont- South Service Area.



Clairmont- South Service Area

Our Source

The Clackamas River begins at an elevation of 4,909 feet on the western slopes of the Cascade Range in the Mt. Hood National Forest. Forty seven miles of the river are federally protected as part of the National Wild and Scenic Rivers System.

The Clackamas River Watershed drains nearly 940 square miles of forests, mountain meadows, agricultural land, suburban neighborhoods, and light industrial areas before meeting with the Willamette River. More than 300,000 Oregonians rely on the Clackamas River for high quality drinking water, hydroelectric power, and outdoor recreation.

CRW is committed to maintaining and protecting the Clackamas River and maintains a vigorous watershed management and monitoring program. CRW also participates as a member of the Clackamas River Water Providers, a coalition of drinking water providers committed to promoting the health and sustainability of the Clackamas River Watershed by identifying, mitigating, and preventing ecosystem degradation to ensure the delivery of high quality drinking water to the community.

Source Water Assessment

A source water assessment of the Clackamas River Basin was completed in 2003 by the Oregon Department of Environmental Quality (DEQ) and reported under the requirements and guidelines of the Federal Safe Drinking Water Act. The assessment identifies potential sources of contamination within the watershed allowing water providers, businesses, and individuals in the Clackamas River Basin to begin developing strategies to protect the source of their drinking water.

You can view a summary of the assessment at: http://goo.gl/0w3v7

Lead in Drinking Water

Clackamas River Water has never detected measurable levels of lead in our source water and has no lead service connections. The main sources of lead contamination in drinking water within the Clairmont- South Service Area are from components associated with your home plumbing system. These include lead solder used to join copper pipes and brass or chrome plated plumbing fixtures.

Elevated levels of lead are most likely to be found in homes built prior to 1985 when lead-based solder was still being used in home construction. If your home contains lead-based solder you are considered a "high risk" home for lead exposure through drinking water.

Lead can cause serious health problems if too much enters your body from drinking water. It can cause damage to the brain and kidneys, and can interfere with the production of red blood cells that carry oxygen to all parts of the body. The greatest risk of lead exposure is to infants, young children, and pregnant women. Scientists have linked the effects of lead on the brain with lowered IQ in children. Adults with kidney problems and high blood pressure can be affected by low levels of lead more than healthy adults. Lead is stored in the bones, and it can be released later in life. During pregnancy, the child receives lead from the mother's bones, which may affect brain development.

Corrosion Treatment

Recently Clackamas River Water conducted a bench top and full scale pilot study to investigate the corrosive properties of water and examine the effectiveness of various corrosion control treatments. The results of our study indicated that too little sulfate combined with too much chloride in the water may enhance lead corrosion in home plumbing systems. When trace amounts of magnesium sulfate were added, balancing the ratio of sulfate to chloride, a significant reduction in lead corrosion was observed. CRW now adds trace amounts of magnesium sulfate to the water prior to distribution to tip the natural water properties back in balance. This treatment is safe and does not affect the taste of your water.

Water Testing

Routinely 30 to 60 homes known to contain lead plumbing components are monitored in the service area. These houses represent a worst-case scenario for lead in water. Samples are collected after the water has been standing in the household plumbing for more than 6 hours.

A Lead and Copper Rule exceedance for lead occurs when more than 10 percent of these homes exceed the lead action level of 15 parts per billion. In the most recent round of testing conducted by Clackamas River Water 9 percent of homes exceeded the lead action level.

Easy steps to reduce possible lead exposure in drinking water

- Run the cold water tap for 15-30 seconds before using it for drinking or cooking. The longer water resides in your home's plumbing, the more lead it may contain.
- Use only cold water for preparing baby formula, cooking and drinking. More lead dissolves in hot water than cold.
- Do not cook with or drink water from the hot water tap. If you need hot water, draw water from the cold tap and heat if for cooking.
- Periodically remove loose debris from the faucet screens at all the taps used for drinking water.
- Identify and replace lead solder with a solder approved for use in drinking water. Lead solder looks dull gray, and when scratched with a key looks shiny.
- Have a licensed electrician check the wiring to see if grounding wires from your homes electrical system are attached to your pipes. Do not attempt to change the wiring yourself.
- In-line water filtration systems fitted with a carbon-type filter may greatly improve the removal of lead. Be sure to change your filter according to the manufacturer's recommendations.

To ensure that tap water is safe to drink the US EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

The sources of drinking water contamination (for both tap 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, in some cases radioactive material and substances resulting from the presence of animals or from human activity.

According to the EPA, drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses any health risk.

Important Health Information

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 may be particularly at risk from infections. These people should seek advice from health care providers. Environmental Protection Agency (EPA) and Center for Disease Control and Prevention (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791.

Substances that may be in Drinking Water

Microbial contaminants include viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.

Inorganic contaminants include salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic waste discharges, oil and gas productions, mining, or farming.

Pesticides and herbicides may come from a variety of sources such as agriculture, urban stormwater run-off, and residential use.

Organic chemical contaminants include synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and may come from gas stations, urban stormwater runoff, and septic systems.

Radioactive contaminants can be naturally occurring or may be the result of oil and gas production and mining activities.

Cryptosporidium and Giardia are microscopic parasites that can cause gastrointestinal illness if untreated water is consumed. Clackamas River Water uses filtrations and chlorine to control these organisms and conducts routine monitoring to ensure our control practices are effective.

In 2012 Cryptosporidium and Giardia were NOT detected in the finished drinking water.

Water Quality Results for 2012 - Clackamas River Water - Clairmont, PWSID #4100594

Substance (units)	Goal (MCLG)*	Highest Level Allowed (MCL)*	Highest Level Detected	Range Low - High	Source of Substance	Violation ?
Regulated at the Treatment Plant						
Turbidity* (Turbidity Units)	NA	0.3 Treatment Technique*	0.12	0.03 - 0.12	Soil runoff	No
Regulated in the Distribution System						
Total Coliform (positive samples/ month)	0	More than 5% positive sample per month	0	0	Naturally present in the environment	No
Total Trihalomethanes (ppb)*	NA	80	56.0 highest running annual average	36.0 - 77.8	By-product of drinking water disinfection.	No
Haloacetic Acids (ppb)*	NA	60	31.4 highest running annual average	16.1 - 46.7	By-product of drinking water disinfection.	No
Barium	2	2	0.01	0.01	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits	No
Nitrate	10	10	0.5	ND - 0.5	Runoff from fertilizer use; Leaching from septic tanks; sewage; Erosion of natural deposits	No
Gross Alpha	0	15	2.8	ND - 2.8	Erosion of natural deposits	No
Radium 226 & 228	0	5	1.5	ND - 1.5	Erosion of natural deposits	No
Chlorine (ppm)*	MRDLG*=4	MRDL*=4	1.06	0.09 - 1.06	Water additive used to control bacteria.	No
Regulated at the Consumer Tap						
Copper (ppm)*	1.3	1.3 Action Level*	0.08 at the 90th percentile	ND - 0.35	Corrosion of household plumbing systems.	No
Lead (ppb)*	0	15 Action Level*	12 at the 90th percentile	ND - 72	Corrosion of household plumbing systems.	No
Unregulated Contaminants						
(1)Sodium (ppm)*	NA	NA	5.5	NA	Natural deposits and soda ash	NA
(2)Sodium (ppm)*	NA	NA	23.5	NA	Natural deposits and soda ash	NA
(3)Radon (pCi/L)	NA	NA	96	NA	Naturally occurring in soils, rock, and water	NA
(4)Radon (pCi/L)	NA	NA	568	NA	Naturally occurring in soils, rock, and water	NA

(1)Water from SFWB Treatment Plant
(2)30% water from Well #1 blended with 70% water from SFWB
(3)Radon - level detected after treatment - last measured in 2008
(4)Radon - level detected before treatment - last measured in 2008
*Indicated that the term is defined in the "Definitions" section. NA: Not Applicable ND: None Detected

Radon

In 2008 radon gas was detected in the raw groundwater at Well 1 at a level of 568 pCi/L prior to treatment and blending with surface water. After treatment and blending, before entering the distribution system, the radon gas levels were significantly reduced to 96 pCi/L. As the water flows to the tap radon gas levels continue to decline. The greatest risk of exposure to radon is from soil beneath homes, where it enters through cracks or openings in structures and concentrates in indoor air. The EPA estimates only 1-2% or radon in household air comes from drinking water and has proposed a 400 pCi/L MCL in drinking water. Radon levels in the drinking water in the Clairmont Service Area are well below the proposed MCL.

Definitions

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

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.

Maximum Residual Disinfectant Level (MRDL): The highest level of disinfectant allowed in drinking water. There is convincing evidence that the addition of a disinfectant is necessary for the control of microbial contaminants.

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

Turbidity: A measure of cloudiness caused by suspended particles in the water.

Nephlometric Turbidity Unity (NTU): A measurement of water turbidity.

Parts per million (ppm): One part of a substance in one million parts of water.

Parts per billion (ppb): One part of a substance in one billion parts of water.

Community Participation

The Clackamas River Water Board of Commissioners encourages you to participate in decisions that may affect the quality of your drinking water. You can present your comments through the CRW website at www.crwater.com or come in person to the monthly meetings of the Board of Commissioners. Meetings are held on the second Thursday of each month at 6:00 PM at 16770 SE 82nd Drive, in Clackamas, Oregon. All meetings are announced to the public in accordance with public meetings law.

Drinking water regulations require CRW to provide this information to customers each year — it's the law. Most of the language is required by the EPA to make sure that our ratepayers know what is in their drinking water.

CRW has tried to make this complex information readable and produce this report at a low cost. The report was designed in-house by CRW staff. By switching to an online format of delivery CRW saved our ratepayers over $2000. For a print copy contact Suzanne DeLorenzo at 503-722-9241 or sdelorenzo@crwater.com.

Our drinking water data is now online! Visit our website at www.crwater.com.