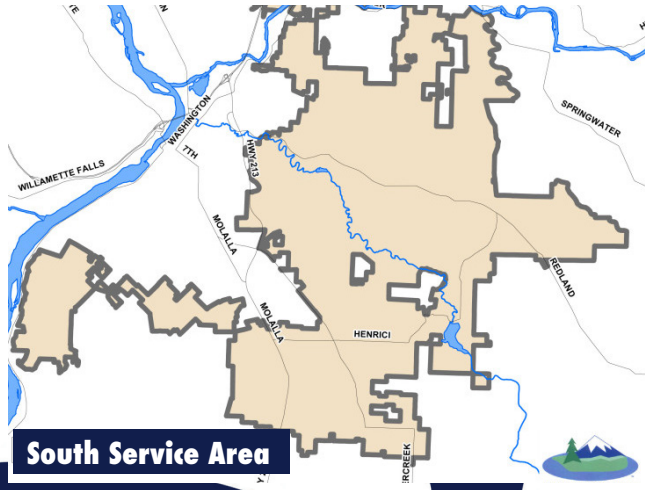
This report covers water quality for the South (Clairmont) Service Area

If your home or business is south of the Clackamas River you are in our South (Clairmont) Service Area. This service area encompasses parts of unincorporated Clackamas County and Oregon City. Customers in the South Service Area receive water that is treated by South Fork Water Board but serviced by Clackamas River Water.

If your home or business is north of the Clackamas River you are in our North (Clackamas) Service Area. This service area encompasses parts of unincorporated Clackamas County, Milwaukee, Clackamas, and Portland. Customers in the North Service Area receive water that is treated by Clackamas River Water's water treatment plant.



We're Here For You

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.

For Board Agendas and Meeting Minutes, or for information on upcoming meetings visit us at www.crwater.com.

Why am I getting this report?

Clackamas River Water (CRW) is pleased to welcome you to our 2017 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.

Drinking water regulations require CRW to provide this information to customers each year. 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.

Beginning in 2013, the EPA no longer requires a paper copy of this report to be mailed to each customer and allows electronic posting on the utility website to serve as notice. CRW saves thousands of dollars in paper and printing costs as well as postage fees.

Please consider the environment before printing.

Questions?

Questions concerning this report or requests for more information should be directed to:

Suzanne DeLorenzo, PhD at 503-722-9241 or sdelorenzo@crwater.com.

Clackamas River Water

South (Clairmont) Service Area
PWSID #4100594

Clackamas River Water

2017 Drinking Water Quality Report

based on data from calendar year 2016

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 (CRWP), 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. For more information about the CRWP visit:

http://www.clackamasproviders.org.

The Water You Drink

Clackamas River Water is proud to report that the water supplied to our customers throughout 2016, met or exceeded all federal and state drinking water standards. We continuously strive to deliver safe, reliable, high quality tap water to our customers in the most cost effective manner possible.

About This Report

In order to ensure that tap water is safe to drink, the Environmental Protection Agency (EPA) prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. The Oregon Health Authority, Drinking Water Program is charged with monitoring compliance with those limits by water providers in the state.

All drinking water, including bottled water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. For more information about contaminants and potential health effects call the EPA's Safe Drinking Water Hotline at 800-426-4791 or visit www.epa.gov/safewater.

The sources of drinking water, both tap and bottled, include surface sources such as rivers, streams, lakes, and reservoirs, and groundwater sources (wells). As water moves through the ground or over surfaces it dissolves naturally occurring minerals and, in some cases, radioactive material. Water can also pick up substances resulting from the presence of human or animal activity. Contaminants that may be present in the source water include:

Microbial- such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, pet waste, and wildlife.

Inorganic- salts and metals, which can occur naturally or result from urban storm runoff, industrial, or domestic wastewater discharges, oil and gas productions, mining, or farming.

Pesticides and Herbicides- from a variety of sources such as agriculture, stormwater runoff, and residential uses.

Organic Chemicals- both synthetic and volatile, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

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

A Note to People with Special Health Concerns

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 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 reduce the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at 800-426-4791.

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. Click here to view a summary of the assessment.

Definitions

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

Haloacetic Acids (HAAs): By-products of the treatment process that are formed when the disinfectant chlorine combines with organic matter in the source water. Since chlorine is important for disinfection, HAAs will be present, but they are monitored very closely by water utilities.

Parts Per Million (ppm) or Milligrams Per Liter (mg/L): A measure of the concentration of a substance in a given volume of water. One part per million corresponds to one penny in $10,000.

Parts Per Billion (ppb) or Micrograms Per Liter: An even finer measure of concentration. One part per billion corresponds to one penny in $1,000,000.

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

Maximum Contaminant Level (MCL): 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.

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 disinfectant allowed in drinking water. The addition of 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 Units (ntu): A measure of particles in water.

Total Trihalomethanes (TTHMs): By-products of the treatment process that are formed when the disinfectant chlorine combines with organic matter in the source water. Since chlorine is important for disinfection, TTHMs will be present, but they are monitored very closely by water utilities.

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

Water treatment and distribution are complex endeavors. It takes a team to deliver clean water to your tap. Clackamas River Water (CRW) has more than 50 years of exceptional water treatment plant operation and distribution.

Water from the Clackamas River is filtered and disinfected with chlorine. Minerals are added to adjust the pH for corrosion control. Then, our water is ready to drink.

Water Quality Results for 2016- CRW South (Clairmont) Service Area, 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)	Not Applicable	0.3 Treatment Technique	0.10	0.02 - 0.10	Soil run-off	No
Regulated in the Distribution System						
Total Coliform (positive samples/month)	0	NA	0%	0%	Naturally present in the environment	No
E. coli (positive samples/month)	0	Samples are total coliform-positive and E. coli-positive, or system fails to take repeat samples following E. coli-positive routine sample, or system fails to analyze total coliform-positive repeat sample for E. coli	0%	0%	Naturally present in the environment	No
Total Trihalomethanes (ppb)	Not Applicable	80	41.9 (Highest running annual average at any one location)	26.8 - 52.2	By-product of drinking water disinfection.	No
Haloacetic Acids (ppb)	Not Applicable	60	43.5 (Highest running annual average at any one location)	25.0 - 58.9	By-product of drinking water disinfection.	No
Barium (ppm)	2	2	0.008	0.003 - 0.008	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits	N0
Nitrate (ppm)	10	10	0.36	0.15 - 0.36	Runoff from fertilizer use; Leaching from septic tanks; sewage; Erosion of natural deposits	No
Chlorine (ppm)	MRDLG=4	MRDL=4	1.17	0.20 - 1.17	Water additive used to control bacteria.	No
Unregulated Contaminants						
Sodium (ppm)	Not Applicable	Not Applicable	7.5	NA	Natural deposits and soda ash	No

The data presented are from the most recent testing done in accordance with regulations.

Lead & Copper in Drinking Water

How You Can Reduce Your Exposure to Lead

Homes that are at a higher risk of lead leaching from the plumbing system and fixtures are those build between 1920 and 1985. If you are concerned about your exposure to lead you can reduce the risk by taking the following actions:

- Run water for 30 seconds prior to the use if water has been unused for more than six hours.
- Use only cold water for cooking, drinking, and making baby formula. Hot water may leach more metals from your plumbing system.
- Use only lead-free solder when making plumbing repairs.
- Use NSF certified faucets and plumbing fixtures.

Contact NSF International for more information about certified faucets and plumbing fixtures. They can be reached at 877-867-3435, online at www.nsf.org, or by email at info@nsf.org.

Clackamas River Water does not detect measurable levels of lead in our source water and has no lead service connections. The main sources of lead contamination in drinking water 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.

Water Testing

Routinely 30 to 60 homes known to contain lead plumbing components are monitored in the CRW's service areas. 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 zero out of 38 homes exceeded the action level for lead and copper.

Substance (units)	Goal (MCLG)*	Action Level (AL)*	Highest Level Detected	Range (Low - High)	Source of Substance	Violation?
Regulated at the Consumer Tap						
Copper (ppm)	1.3	1.3 Action Level*	0.11 at the 90th percentile	ND - 0.20	Corrosion of household plumbing systems.	No
Lead (ppb)	0	15 Action Level*	4.5 at the 90th percentile	ND - 11.8	Corrosion of household plumbing systems.	No

*See "Definitions" for more info

Corrosion Treatment

Clackamas River Water's corrosion control treatment reduces corrosion of home plumbing components by increasing the pH of the water. Monitoring results have shown this slight adjustment to be effective in reducing lead exposure in drinking water.

Cryptosporidium & Giardia

Cryptosporidium & Giardia are microscopic organisms that may cause gastrointestinal disease in some people, especially individuals with conditions that affect the immune system. Currently, there is not an established Maximum Contaminant Level for either of these organisms. However, because of the potential health effects of these organisms, CRW tests both raw and treated water for presence regularly. Tests administered in 2016 did not detect Cryptosporidium & Giardia in finished drinking water. Tests conducted for the *Long Term Enhanced Surface Monitoring Rule* 2 in 2016 did not detect Cryptosporidium in raw water.

To view a comprehensive list of all the substances that CRW tests for visit us at http://www.crwater.com/water/water-quality.