



CARLSBORG WATER DISTRICT WATER QUALITY REPORT FOR 2018 (DOH #003070)

Dear Water Customer:

We are pleased to present this year's Annual Water Quality Report (Consumer Confidence Report) as required by the Safe Drinking Water Act (SDWA). We want to keep you informed about the excellent water and services you have been receiving over the past year. Our goal is and always has been, to provide to you a safe and dependable supply of drinking water. *Informed customers are our best allies in maintaining safe drinking water!*

How can I get involved?

We encourage public interest and participation in our community's decisions affecting drinking water. Regular meetings with the District's Board of Commissioners are held every other Monday at our Main Office (104 Hooker Rd. Sequim WA) at 1:30 p.m. The public is welcome. You may also learn more about PUD #1 of Clallam County by contacting our website at www.clallampud.net, or by calling 360-452-9771 or toll free at 1-800-542-7859.

Where does my water come from?

The Carlsborg Water District is supplied groundwater pumped from a single 177-foot deep well (S01) and pump station, up to two 150,000-gallon reservoirs. The water is chlorinated at the well head, after which it is available upon demand.

Description of Water Treatment Process

Your water is treated by disinfection. Disinfection involves the addition of chlorine or other disinfectant to kill dangerous bacteria and microorganisms that may be in the water. Disinfection is considered to be one of the major public health advances of the 20th century.

Source Water Protection Tips

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides - they contain hazardous chemicals that can reach your drinking water source.
- Pick up after your pets.
- If you have your own septic system, properly maintain your system to reduce leaching to water sources or consider connecting to a public water system.
- Dispose of chemicals properly; take used motor oil to a recycling center.

Monitoring Results

Total Coliform Bacteria: Zero Coliform Bacteria were detected in the monthly samples collected. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present.

Hardness: Hardness is a natural characteristic of water caused by dissolved calcium and magnesium, which can interfere with the sudsing action of soap. The US Geological Society classifications show 0-60 mg/L as soft, while anything greater than 200 mg/L is very hard. A sample taken in 2016 showed 167.0 mg/L or 9.76 grains/gallon.

Fluoride: The District does not add fluoride to this water system. Fluoride is a natural substance found in varying degrees in almost all water supplies.

Water Quality Data Table

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of contaminants in water provided by public water systems. The table below lists all of the drinking water contaminants that we detected during the calendar year of this report. Although many more contaminants were tested, only those substances listed below were found in your water. All sources of drinking water contain some naturally occurring contaminants. At low levels, these substances are generally not harmful in our drinking water. Removing all contaminants would be extremely expensive, and in most cases, would not provide increased protection of public health. A few naturally occurring minerals may actually improve the taste of drinking water and have nutritional value at low levels. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. As such, some of our data, though representative, may be more than one year old. In this table you will find terms and abbreviations that might not be familiar to you. To help you better understand these terms, we have provided the definitions below the table.

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Detect In Your Water	Range		Sample Date	Violation	Typical Source
				Low	High			
Disinfectants & Disinfection By-Products								
(There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants)								
Haloacetic Acids (HAA5) (ppb)	NA	60	4.4	4.4	4.4	2018	No	By-product of drinking water chlorination
TTHMs [Total Trihalomethanes] (ppb)	NA	80	14.6	14.6	14.6	2018	No	By-product of drinking water disinfection
Inorganic Contaminants								
Nitrate [measured as Nitrogen] (ppm)	10	10	6.84	6.49	6.84	2018	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Contaminants	MCLG	AL	90 th Percentile (10 samples)	Sample Date	# Samples Exceeding AL	Exceeds AL	Typical Source	
Inorganic Contaminants								
Copper - action level at consumer taps (ppm)	1.3	1.3	.53	2017	0	No	Corrosion of household plumbing systems; Erosion of natural deposits	
Inorganic Contaminants								
Lead - action level at consumer taps (ppb)	0	15	4	2017	0	No	Corrosion of household plumbing systems; Erosion of natural deposits	

Secondary Regulated Water Quality Data Table (These standards are developed to protect the aesthetic qualities of drinking water and are not health based.)

Contaminant (Units)	Sample Date	SMCL	Highest Level Detected	Range	Violation	Typical Sources
Hardness as Calcium Carbonate (ppm)	2016	NA	167.0	NA	No	Weathering of various rocks and soil..

Unit Descriptions

Term	Definition
ppm	ppm: parts per million, or milligrams per liter (mg/L)
ppb	ppb: parts per billion, or micrograms per liter (µg/L)

Unit Descriptions	
NA	NA: not applicable
ND	ND: Not detected
NR	NR: Monitoring not required, but recommended.

Important Drinking Water Definitions	
Term	Definition
MCLG	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	MCL: Maximum Contaminant Level: 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.
TT	TT: Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
AL	AL: Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Variances and Exemptions	Variances and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
MRDLG	MRDLG: Maximum residual disinfection 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	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.
MNR	MNR: Monitored Not Regulated
MPL	MPL: State Assigned Maximum Permissible Level

Why are there contaminants in my drinking water?

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 water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (1-800-426-4791).

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 lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

Partners in Conservation

Water is essential to every dimension of life, yet less than 1 percent of the Earth's water supply is fit and available for human consumption. As demand for water continues to increase, every drop of water is becoming more important than ever before.

The DOH has adopted a rule that establishes water use efficiency (WUE) requirements for all municipal water suppliers. Water use efficiency will help us conserve water for the environment and future generations. It will also enhance public health by improving water system efficiency and reliability.

A few primary elements of this rule include improving operational efficiency; evaluating and reporting water production and usage; and reducing water leaks both on the distribution side and the customer side of the water system. The table below lists production amounts vs. purchased/authorized usage and the percentage of the unaccounted-for or probable system leakage. The goal is to reduce unaccounted-for water to 10% or less of the total water produced.

Distribution System Leakage Summary (in millions of gallons: 1 cubic foot = 7.48 gallons)	
Total Water Produced – Annual Volume	23.47
Total Water Purchased and Authorized Usage – Annual Volume	22.2
Distribution Unaccounted-for or System Leakage – Percent	5.5

Together we can keep the percentage to 10% or less, and save water and money in the process! Here are some tips to work towards this goal *and* to be more water efficient:

- If you see an odd wet spot in a normally dry area, call the PUD.
- Someone other than the Fire Dept. or PUD using a fire hydrant, call the PUD.
- Turn off the tap when brushing your teeth, washing, shaving, or cleaning fruits and vegetables.
- Check every faucet inside and outside your home for leaks; a slow drip can waste 15 to 20 gallons a day. Fix it and you could save up to 6,000 gallons a year.
- Use a water-efficient showerhead. They're inexpensive, easy to install, and can save you up to 750 gallons a month.
- Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water using appliances. Write down the numbers across the face of the meter. Then check the water meter after 30 minutes. If the numbers increased at all, you have a leak.
- Ask your local nursery about landscaping with native plants.
- For deep root and drought tolerance, water your plants deeply, but less often.
- Water wasted is water lost. For more information, go to these web-sites:
www.wateruseitwisely.com www.h2ouse.org www.epa.gov/watersense

Variations, Exemptions and Waivers:

The Carlsborg Water System has received waivers for reduced monitoring of the following contaminants:

Complete Inorganics (IOC)

Volatile Organics (VOC)

Herbicides

Pesticides

Soil Fumigants

Previous background test results from indicated that these substances were either not detected or below MCL in this water source. The EPA and/or DOH grant a variance or exemption only upon finding that the variance or exemption will not result in an unreasonable risk to health.

Because this water system contains less than 10% asbestos cement pipe, in May 1999 the DOH granted a waiver from monitoring for asbestos.

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 District 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. Always use cold water for cooking, drinking and especially making baby formula. Hot water is likely to contain higher levels of lead. 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 at <http://www.epa.gov/safewater/lead>.

Additional Information for Disinfection Byproducts

Haloacetic Acids (HAA)- Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

TTHMs [Total Trihalomethanes]- Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

Additional Information for Nitrate

Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.

Source water assessment and its availability

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 material and can pick up substances resulting from the presence of animals or from human activity. The DOH has completed a source water assessment for this system based on the amount or depth of the confining layer above the wells, and rated this water source as high for the susceptibility to potential sources of contamination. More information can be found on the DOH website:

<https://fortress.wa.gov/doh/eh/dw/swap/maps/>

Contaminants that may be present in source water include:

(A) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

(B) Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

(C) Pesticides and herbicides, which may come from a variety of sources such as agriculture, storm water runoff, and residential uses.

(D) Organic chemical contaminants, including synthetic and volatile organics, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff and septic systems.

(E) Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

For more information please contact:

Public Utility District No. 1 of Clallam County

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