



2022 ANNUAL DRINKING WATER REPORT

Water Treatment Operators



The City of Port Townsend is pleased to present our Annual Water Quality Report for the year 2022. The following is an overview of the high-quality water supplied to residents and visitors of Port Townsend throughout the year. The City of Port Townsend has worked in cooperation with the U.S. Forest Service for over 90 years to manage and protect our municipal watershed and maintain high quality source water. Our highly skilled, state certified operators are committed to provide safe, clean water through multi-barrier protection from the source to the tap. Our treatment process utilizes ultra-filtration membranes for contaminant removal and chlorine is added as a disinfectant to prevent biological contamination. After treatment, the finished water is distributed to our customers via the 100 plus miles of well-maintained water distribution pipeline. Water testing in 2022 shows that Port Townsend's drinking water meets all State and Federal regulatory standards. Our essential workers remain committed to serving our residents in the best way possible.

Water Sources

The City's water supply (System ID #69000R) is surface water from the Big Quilcene and the Little Quilcene Rivers (Source numbers 01 & 02) which are located in the northeast corner of the Olympic National Forest. Water is stored in Lords Lake and City Lake Reservoirs. The Washington State Department of Health, by definition, rates all surface water sources as highly susceptible to contamination. More information on Source Water is available through the Source Water Assessment Program (SWAP). <https://doh.wa.gov/community-and-environment/drinking-water/source-water/source-water-protection#intro>



To ensure tap water is safe to drink, the Department of Health and EPA prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) and the Washington Department of Agriculture regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.



Water Use Efficiency Report

The efficient use of water ensures reliable, safe water is available to our customers and it is an essential benefit to the environment. In 2022, the City delivered an average of 1,003,164 gallons of water per day to our more than 11,000 customers and visitors. Residential consumption averaged 56 gallons per person, per day, down from 61 gallons in 2021. Total City consumption for 2022 was 366 million gallons, 20 million gallons less than the year before. Distribution system leakage (DSL) was 8.2% for the year and 7.8% for the three-year annual average which continues to meet the standards set by the state. DSL or unaccounted for water can be things such as use of fire hydrants, leaking underground pipes or under registering water meters. The City replaced 66 older meters in 2022 with a newer model featuring increased reliability and accuracy. We are continually working to improve water use efficiency, accountability and conservation.

Your Health and Safety

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 microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791). 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). 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.

Little Quilcene River Diversion



Lords Lake Reservoir



Contaminants that may be present in source water include:

Inorganic contaminants, such as salts and metals, which can be naturally occurring.

Pesticides and herbicides, which may come from sources such as forestry management.

Organic chemical contaminants, including synthetic and volatile organic chemicals, which can come from vehicles in the watershed or that result from chlorine combining with naturally occurring organic matter.

Radioactive contaminants, which can occur naturally or result from oil and gas production and mining activities.

Microbial contaminants, such as viruses, protozoans, and bacteria, which may come from wildlife, people and pets visiting the watershed.



Water quality sampling results are for the monitoring performed January 1 - December 31, 2022, unless otherwise noted in the tables. Sampling for certain contaminants occurs less than once per year because concentrations of these contaminants are not expected to vary significantly from year to year. While the City tests for more than eighty regulated contaminants, the substances listed in the following tables were the only ones detected in our water.

Contaminants	Sample Date/ Frequency	Detected Levels	Units	MCL/MCLG	Violation	Typical Source
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Microbiological

Total Coliform Bacteria	15 samples per month	*0	NA	Contaminant Present	No	Naturally present in the environment
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**There were zero coliforms present in the 180 samples taken throughout the distribution system in 2022.*

Turbidity	Continuous	0.012-0.066	NTU	TT	No	Soil runoff
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Turbidity is a measure of the cloudiness of water. We monitor it because it is a good indicator of the effectiveness of our filtration system. 100% of our turbidity samples were within specified limits.

Disinfection Residuals

Chlorine	Continuous	0.37-1.25	ppm	4	No	Water additive used to control microbes
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Disinfection By-Products

Haloacetic Acids	Quarterly	**15.0-42.1 ***LRAA 26.4	ppb	60	No	By-product of drinking water chlorination
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Total Trihalomethanes	Quarterly	**17.8-47.7 ***LRAA 32.2	ppb	80	No	By-product of drinking water chlorination
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***Lowest and highest actual value. ***Highest Locational Running Annual Average of the 4 sites. The HAA5s and TTHMs are results from 4 testing locations in Port Townsend, which are monitored quarterly to comply with regulations. Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer. Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer. Chlorine provides the required microbiological disinfection of our drinking water. Some people who use water containing chlorine well in excess of the MRDL could experience an irritating effect to their eyes and nose and may experience stomach discomfort.*

Residential Testing

Lead 30 sites sampled	July 2022 Every 3 years	4 (90th Percentile)	ppb	15	No	Corrosion of plumbing in certain homes
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Copper 30 sites sampled	July 2022 Every 3 years	0.26 (90th Percentile)	ppm	1.3	No	Corrosion of plumbing in certain homes
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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. Port Townsend is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components. 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 www.epa.gov/safewater/lead.

Inorganic Contaminants	Last Sampled/ Frequency	Detected Levels	Units	MCL/MCLG	Violation	Typical Source
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Barium	2020/Every 7 years	0.38	ppm	2	No	Erosion of natural deposits
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Source Monitoring Waivers

A waiver is permission granted by the WA State Department of health for reduced monitoring requirements because contamination to the source is sufficiently at minimal risk. The following waivers are granted to the City of Port Townsend.

Monitoring Waivers	Last Sampled	Frequency	Violation
Inorganic Chemicals	2020	Every 9 Years	No
Volatile Organics	2017	Every 6 Years	No
Radionuclides	2021	Every 6 Years	No
Herbicides (SOC)	2022	Every 9 Years	No



Historic Photograph of Waterline Break



Definitions used in this newsletter:

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

Lead and Copper 90th Percentile: Out of every 10 homes sampled, 9 were at or below this level.

Locational Running Annual Average (LRAA): Highest quarterly average of four samples taken at the four sampling locations.

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.

Million Fibers per Liter (MFL): Used to measure asbestos, which exists as tiny fibers.

Maximum Residual Disinfectant Level (MRDL): 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.

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.

NA: Not Applicable

ND: Not Detected or below State Reporting Limit.

NTU: Nephelometric Turbidity Units - a measure of the cloudiness of the water.

ppb: Parts per billion or micrograms per liter ($\mu\text{g}/\text{L}$).

ppm: Parts per million or milligrams per liter (mg/L).

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

The public is invited to participate in decisions that affect drinking water through comment to the Port Townsend City Council. Information about scheduled meetings is available through the City Clerk's Office (360) 385-5083 or via the City's website: <https://cityofpt.us> If you have additional questions about drinking water or would like a complete list of substances for which we test, please call Port Townsend's Water Resources office at (360) 379-5001. Information is also available on the City's website: <http://www.cityofpt.us/Water/>

