

This information presents the 2022 Annual Water Quality Report. The City of Bainbridge Island is pleased to advise you that your water system is in compliance with all state and federal water quality regulations. In this annual report, you will find important information about your water system as well as the results of all testing that has been completed from January 1 through December 31, 2022.

If you have any questions or would like additional information, please call the Public Works Operations and Maintenance Division at 206-842-1212. We welcome your questions and encourage community involvement. Community involvement is important to protecting our water resources. Information on City meetings is available on the City's website. The City's website address is www.bainbridgewa.gov.

Source of your Drinking Water

Last year the City of Bainbridge Island Winslow Water System produced 255,605,000 gallons of water to supply over 6000 customers in the historic Winslow and Fletcher Bay areas. The water supply is provided by eleven wells located at four well sites. At each well site the water is treated with chlorine and fluoride before being pumped into the distribution system to supply customers and fill storage reservoirs. The wells draw from three separate aquifers giving the City flexibility to meet changing conditions and future demands. Of the eleven wells that supply the system, the state has determined eight have a low risk of contamination while only three have a moderate to high risk of contamination. A wellhead protection plan and an active cross-connection control program help protect the water system from contamination.

Sources of Contaminants

Sources of drinking water (both tap and bottled) include springs, rivers, lakes, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and can pick up substances resulting from the presence of animal or human activity.

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

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 Bainbridge Island 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 at www.epa.gov/safewater/lead.

Arsenic Health Statement

While your drinking water meets the EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the cost of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

Special Precautions

Some people may be more vulnerable to contaminants in drinking water than the general population. Individuals who are immune-compromised, those undergoing chemotherapy, organ transplant patients, 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 healthcare providers. United States Environmental Protection Agency (EPA)/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants are available from the Safe Water Drinking Hotline (1-800-426-4791).

Water Use Efficiency

Water Use Efficiency goals were adopted during a public forum on December 15, 2015. The goals are: 1) To reduce the water system's Equivalent Residential Unit (ERU) value by one percent annually until reaching a value of 135 gpd/ERU, and 2) To maintain Distribution System Leakage (DSL) levels under 4.7 percent as calculated on a 3-year rolling average.

- Goal 1 was not met. Annual average water use per single family residence (ERU) has changed as follows: 2015 – 156 gpd, 2016 – 152 gpd, 2017 – 155 gpd, 2018 – 161 gpd, 2019 – 154 gpd, 2020 – 157 gpd, 2021 – 172 gpd and 2022 – 150 gpd.
- Goal 2 was not met. DSL as calculated on a 3-year rolling average was 5.9 percent in 2022 which is above the goal of 4.7 percent.

For more information go to <https://fortress.wa.gov/doh/eh/portal/odw/si/Intro.aspx>.

Water Quality Data Table

This table shows only those compounds that were detected above the state reporting level. Although all the substances listed here are under the Maximum Contaminant Level (MCL) set by the EPA, we feel it is important you know exactly what was detected and how much of the substance was present in the water. The state requires us to monitor for certain substances less than once per year because the concentration of these substances does not change frequently. In these cases, the most recent sample results collected within the last five years are included.

Regulated at the Water Source and Distribution System

Compound	Year Tested	MCL	MCLG	Highest Reported Detection Range	Highest Results	Meets Standard	Potential Sources
Arsenic (ppb)	2019	10	0	3 – 5	5	Yes	Erosion of natural deposits. Runoff from orchards; glass and electronic production.
Alpha Emitters (pCi/l)	2017 - 2022	15	0	0.3 – 3.6	3.6	Yes	Erosion of natural deposits.
Radium 228 (pCi/l)	2017 - 2022	5	0	0.6 – 2.4	2.4	Yes	Erosion of natural deposits.
Chlorine Residual (ppm)	2022	4.0 MRDL	4.0 MRDLG	0.02 – 2.4	2.0 Ave	No ⁽¹⁾	Water additive used to control microbes.
Fluoride (ppm)	2022	4.0	4.0	0.5– 0.9	0.7 Ave	Yes	Water additive to promote dental health.
Haloacetic Acids (ppb)	2022	60	NA	0 - 15	15	Yes	Byproduct of chlorine disinfection.
Total Trihalomethanes (ppb)	2022	80	NA	25 – 40	40	Yes	Byproduct of chlorine disinfection.

1) Chlorine residuals measured in some parts of the distribution system are below 0.2 ppm. This does not meet current treatment technique standards. Infrastructure upgrades are being planned to improve reservoir mixing and insure more uniform chlorine residuals that meet standards throughout the distribution system.

Regulated at the Customer Tap

Compound	Year Tested	AL	MCLG	Sites Above AL/Total Sites	90th Percent ile Results	Meets Standard	Potential Sources
Lead (ppb)	2022	15	0	1/30	0.003	Yes	Corrosion of household plumbing. Erosion of natural deposits.
Copper (ppm)	2022	1.3	1.3	0/30	0.09	Yes	Corrosion of household plumbing. Erosion of natural deposits.

In 2014, 2018, and 2019 the City of Bainbridge Island Winslow Water System and many other water systems throughout the United States tested for substances that are not currently regulated. This is required by the EPA and is called the Unregulated Contaminant Monitoring Rule (UCMR). These parameters do not yet have drinking water standards and the results of this nationwide monitoring will help EPA decide which parameters should have set health standards.

EPA-Required Unregulated Contaminant Monitoring

Compound	Year Tested	Highest Reported Detection Range	Highest Results	Potential Sources
Molybdenum (ppb)	2014	0 - 2.6	2.6	Naturally occurring.
Strontium (ppb)	2014	44 - 110	110	Naturally occurring.
Vanadium (ppb)	2014	0 - 0.5	0.5	Naturally occurring.
Chlorate (ppb)	2014	0 - 220	220	Byproduct of chlorine disinfection.
Chromium-6 (ppb)	2014	0 - 0.05	0.05	Naturally occurring.
Manganese (ppb)	2018 - 2019	23 – 108	108	Naturally occurring.
Total Organic Carbon (ppb)	2018 - 2019	0 - 1350	1350	Naturally occurring.
Bromide (ppb)	2018 - 2019	0 – 47	47	Naturally occurring, manufacturing byproduct.
HAA9 (ppb)	2018 - 2019	0.7 – 16	16	Byproduct of chlorine disinfection.

Definition of Terms

AL (Action Level): The concentration of a contaminant which, if exceeded, triggers treatment or other drinking water supplier requirements

MCL (Maximum Contaminant Level): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to what is called the Maximum Contamination Level Goal (MCLG) as possible.

MCLG (Maximum Contaminant Level Goal): The level of a contaminant in drinking water below which there is no known or expected risk of health. MCLGs allow for a margin of safety.

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.

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.

PPM (Parts per million): Equals one part of liquid per million parts of liquid.

PPB (Parts per billion): Equals one part of liquid per billion parts of liquid.

pCi/l (Picocuries per liter): A measure of radioactivity.

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