



By Mayor Seth Fleetwood

2022 WaterQuality REPORT

Advancing new ideas and initiatives to protect our drinking water

Throughout City government, we are leading the way locally, regionally and nationally in advancing new ideas and initiatives. Our stewardship of Lake Whatcom – our precious source of drinking water – is a prime example:

- You'll read in this publication how we are proactively testing for PFAS, or "forever chemicals," in our drinking water.

- Our purchasing more than 2,500 acres of natural areas to preserve forever reduces development impacts and filters harmful pollutants before they reach the lake.
- Award-winning retrofits to our Park Place stormwater facility exceed requirements and chart new territory with locally developed processes to remove lake-damaging phosphorous.

Not just meeting standards but exceeding them: that's a core City value as we work to ensure clean, safe drinking water, and protect our community's health and quality of life, now and in the future.

TO GET INVOLVED VISIT
[cob.org/gov/public](https://www.cob.org/gov/public)

This report is a requirement of the Safe Drinking Water Act. It provides our customers a summary of the tests performed on your drinking water in 2022 so you can assess for yourself how clean your water is.

Este informe contiene información importante acerca de su agua potable. Haga que alguien lo traduzca para usted, o hable con alguien que lo entienda.

No 'Forever Chemicals' Found in Drinking Water

Recent samples of City drinking water detected no "forever chemicals" or PFAS, Perfluorinated and Polyfluorinated Substances, which are manmade chemicals used in a vast number of consumer and industrial products. PFAS are found in everything from nonstick cookware, fast food wrappers and Gore-Tex clothing, to fire-fighting foam. They are often referred to as "forever chemicals" because they don't break down easily. The characteristics that make PFAS useful in products are the reason they persist in the environment and can build up in our bodies. This is a problem because PFAS have been linked to cancer, reproductive and immune system harm, and other diseases.

Regulations to eliminate products containing PFAS have worked to phase out many products containing them in this county; however, due to the persistence of these chemicals, they are still found as a contaminant in some drinking water sources.

Federal regulators have responded to concerns about PFAS by requiring that water providers monitor for these compounds. Washington state drinking water regulators have taken it one step further and set very low limits for five PFAS compounds in treated water starting in 2024. At the City of Bellingham we didn't want to wait. We sampled our treated

drinking water for PFAS compounds in 2022. We looked for them at parts-per-trillion levels and are happy to report that **we detected none of the PFAS chemicals** assessed. We will continue to monitor for PFAS and report the results in future editions of this report.

For more information on PFAS visit: www.cob.org/contaminants-of-emerging-concern

Detected Regulated Contaminants

2022 Water Quality analysis results

In accordance with federal and state regulations, the table below includes all results from contaminants that were detected or are above the state detection reporting limit.

Parameter (2022 or most recent)	Units	EPA REGULATIONS		BELLINGHAM WATER RESULTS		
		Public Health Goal or MCLG	Maximum Allowable MCL	Bellingham Drinking Water Range or Reported Value	Average Value or Highest Result	In Compliance?
Total Coliform Bacteria	% Positive	0	5% positive per month	2% positive in July. 1% positive in August. 0% positive all other months. No E. coli bacteria were detected.	2% positive in July.	Yes
Bellingham collects over 100 samples a month at locations throughout our water distribution system and analyzes these for coliform bacteria to ensure water purity. No more than 5% of these samples can be positive for total coliform bacteria and none can be positive for Escherichia coli (E.coli). No Escherichia coli was detected in 2022.						
Free Residual Chlorine Levels	ppm	Detectible in 95% of samples	4.0 MRDL	Range: < 0.02 to 0.93 ppm	Average 0.50 ppm free available chlorine	Yes
Bellingham monitors chlorine levels continuously at the water filtration plant. Over 100 distribution system samples are also analyzed each month to ensure a disinfectant residual remains in treated water on its way to our customer's homes. We must be able to detect free chlorine in 95% of the samples we analyze in the distribution system.						
Haloacetic Acids-5 (HAA-5)	ppb	0	60	Range: 7 to 18 ppb	Highest site \bar{x} 14 ppb	Yes
Total Trihalomethanes (TTHM)	ppb	0	80	Range: 16 to 50 ppb	Highest site \bar{x} 39 ppb	Yes
Haloacetic acids and total trihalomethanes are formed as byproducts of the drinking water chlorination process. The HAA-5 and TTHM results are from 8 representative locations in Bellingham's treated water distribution system. Compliance is based on a site-specific running average. The highest site average from 2022 is shown above.						
Turbidity	NTU	< 0.3	Treatment Technique	Range: 0.02 to 0.07 NTU. At or below 0.3 NTU 100% of the time.	Highest value 0.07 NTU	Yes
The turbidity limit is 0.3 NTU. In 2022 no filtered water turbidity result exceeded 0.3 NTU so Bellingham met the Department of Health's limit 100% of the time.						
Lead (2020 sampling)	ppb	0	15*	6 ppb as the 90th percentile	< 1 to 12 ppb	Yes
Copper (2020 sampling)	ppb	1300	1300*	65 ppb as the 90th percentile	2 to 118 ppb	Yes
Lead and copper are monitored every 3 years in our customers' homes to assess the amount of corrosion occurring in home plumbing. The water sampled is the first draw of stagnant water in homes identified as having lead solder and copper pipe. There are no lead service lines in Bellingham. Sampling will next be conducted in 2023.						
Treatment Technique is a required process intended to reduce the level of a contaminant in drinking water. *The 90th percentile value of all samples collected.						
Barium	ppm		2	0.0069	0.0069	Yes
Nitrate, (also nitrate + nitrite)	ppm		10	0.10	0.10	Yes
Inorganics detected that do not have a Maximum Contaminant Level (MCL):						
Hardness	ppm			20.3	20.3	Yes
Manganese	ppb			3.0	3.0	Yes
Sodium	ppm			9.3	9.3	Yes
Inorganics with detections above state detection reporting levels:				Bellingham Level 2022	SMCL Limit Allowed**	
Chloride	ppm			5.6	250	Yes
Sulfate	ppm			8.2	250	Yes

**Secondary maximum contaminant levels are limits that are not based on health concerns, but instead based on the aesthetic properties of water such as taste, color, and odor.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. Bellingham's source water is Lake Whatcom on the eastern edge of town. 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. Contaminants that may be present in source water include:

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

Inorganic contaminants, such as salts and metals, which can occur naturally or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, and farming.

Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

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

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

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. The 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).

In order to ensure that 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 State Department of Agriculture regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

Elevated levels of lead in drinking water can cause serious health problems, especially for pregnant women and young children. In Bellingham, fortunately, lead is not found in the treated water, but lead in drinking water can come from pipes and faucets in our customers' homes. The City of Bellingham is responsible for providing high quality drinking water, but

cannot control the variety of materials used in customers' plumbing. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for at least 30 seconds before using the water for drinking or cooking. You can capture this water to use on plants. If you are concerned about lead in your water, you may opt to have your water analyzed by a local laboratory. To learn more about lead in water, go to: <https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water>.

Definitions

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

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 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 (e.g., chlorine, chloramines, chlorine dioxide).

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 are set by the U.S. Environmental Protection Agency.