



# City of Bellingham <sup>2021</sup> WaterQuality REPORT

By Mayor Seth Fleetwood

With regular reports underscoring the urgent need to slow climate change, and our local experience with extreme weather events in the last year, our climate crisis is on people's minds. Significant steps to meet our climate action goals are at the forefront the City's work, including protecting our water system from the impacts of climate change.

Our City is doing the work that every community in the world should be doing, taking bold action to meet our climate goals and continue the important work of building a sustainable, equitable and thriving city.

Recent improvements to create a climate-resilient water system are described in this report. These measures and others are part

of the outstanding work of the City's water treatment plant staff, who produce some of the best drinking water in the state. Thanks to this team, the City recently received the TOP Gold Award from the Washington State Department of Health in recognition of ten years of water quality excellence. More details about the award and how it was achieved can be found at [cob.org/water-quality-monitoring](http://cob.org/water-quality-monitoring).

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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 2021 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.

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

## Creating a Climate Resilient Water System

In 2021 we witnessed extreme heat, extended drought, and record precipitation that led to record flooding. These are the local impacts of climate change, and they amplify the importance of all our work to meet our City's climate action goals, an ambitious plan that is available at [cob.org/climate](http://cob.org/climate).

This important work includes protecting our water system from the impacts of climate change, including protecting and restoring the Lake Whatcom Watershed, the source of our drinking water. A healthy watershed acts like a sponge during large rainstorms; the plants and soils soak



up rain and slowly deliver the water into streams that feed the lake. **Land preservation and restoration** projects help retain the watershed's ability to absorb and store water.

The City recently installed three upgrades to our drinking water treatment, delivery and energy supply system to help reduce climate impacts and save water. Installed in 2018, the dissolved air flotation pretreatment process removes algae and sediment from the lake water, **saving over 60 million gallons of water** annually. Upgraded "smart" water meters and monthly billing provide the ability to monitor and quickly respond to water leaks for less overall water

loss. Finally, rooftop **solar panels provide renewable energy** to the water treatment plant, reducing the carbon footprint of treating our drinking water.

A climate-resilient water system doesn't stop at the edge of city property, **you have a role too!** Water conservation saves energy and **saves you money**. Protect pipes from freezing by insulating crawl spaces and winterizing outdoor faucets. Plant native and drought-tolerant plants to reduce the need for summertime watering. And save water indoors by upgrading to low-flow fixtures. City water rebates can help cover the cost. For more information visit [cob.org/conserve](http://cob.org/conserve).

# Detected Regulated Contaminants

## 2021 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 reporting level.

Parameter (2021 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?
<b>Total Coliform Bacteria</b>	% Positive	0	5% positive per month	1% positive in September. All repeat samples at the site that month were negative. 0% positive all other months.	1% positive in September. 0% positive all other months.	<b>Yes</b>
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 <i>Escherichia coli</i> . No <i>Escherichia coli</i> was detected in 2021.						
<b>Free Chlorine Levels</b>	ppm	Detectible in 95% of samples	4.0 MRDL	Range: < 0.02 to 0.93 ppm	Average 0.41 ppm free available chlorine	<b>Yes</b>
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.						
<b>Haloacetic Acids-5 (HAA-5)</b>	ppb	0	60	Range: 7.4 to 18.0 ppb	Highest site X 12.8 ppb	<b>Yes</b>
<b>Total Trihalomethanes (TTHM)</b>	ppb	0	80	Range: 15.0 to 43.0 ppb	Highest site X 34.8 ppb	<b>Yes</b>
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 2021 is shown above.						
<b>Turbidity</b>	NTU	< 0.3	Treatment Technique	Range: 0.02 to 0.06 NTU. At or below 0.3 NTU 100% of the time.	Highest value 0.06 NTU	<b>Yes</b>
The turbidity limit is 0.3 NTU. In 2021 no filtered water turbidity result exceeded 0.3 NTU so Bellingham met the Department of Health's limit 100% of the time.						
<b>Lead (2020 sampling)</b>	ppb	0	15*	6 ppb as the 90th percentile	< 1 to 12 ppb	<b>Yes</b>
<b>Copper (2020 sampling)</b>	ppb	1300	1300*	65 ppb as the 90th percentile	2 to 118 ppb	<b>Yes</b>
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.						
<b>Inorganics:</b>						
<b>Alkalinity</b>	ppm as CaCO3			Range: 23.2 to 28.6 ppm as CaCO3	Average 25.9 ppm as CaCO3	<b>Yes</b>
<b>Chloride</b>	ppm			5.2		<b>Yes</b>
<b>Hardness</b>	ppm as CaCO3			Range: 20.0 to 24.5 ppm as CaCO3	Average 21.2 ppm as CaCO3	<b>Yes</b>
<b>Nitrate</b>	ppm as N	10	10	0.24		<b>Yes</b>
<b>Sodium</b>	ppm			9.1		<b>Yes</b>
<b>Sulfate</b>	ppm			7.1		<b>Yes</b>

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.