

City of Bellingham 2019 Water Quality REPORT



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 2019 so you can assess for yourself how clean your water is.

By Mayor Fleetwood

This consumer confidence report is a requirement of the Safe Drinking Water Act. In it, you'll see results from the 2019 testing of your treated drinking water. This information will show that Bellingham's water treatment and drinking water is excellent. It does make us mindful of the importance of drinking water to our quality of life.

As a lifetime resident of Bellingham and advocate for our city, community and environment, I place a high priority on protecting Lake Whatcom and ensuring high quality City services. We have made

impressive strides in our work to improve lake health, but we still have much work to do. Influencing change on a large environmental system requires an equally large effort. Full scale managerial programs matter, but so do the everyday activities of each of us. This report details larger efforts as well as actions we all can take to make a difference.

Protection – Caring for Lake Whatcom is a shared concern. Bellingham partners with Whatcom County and the Lake Whatcom Water and Sewer District to ensure we have a mutual and sustainable vision and plan to protect this vital drinking water source. The article on our updated Lake Whatcom Work Plan has details about this effort.

Conservation – Reducing water use delivers a double win. Water conservation helps preserve precious supply, while also

reducing related energy consumption. It's an easy way to make a difference. The articles "Every Drop Counts" and "Save Watts and Drops" show how.

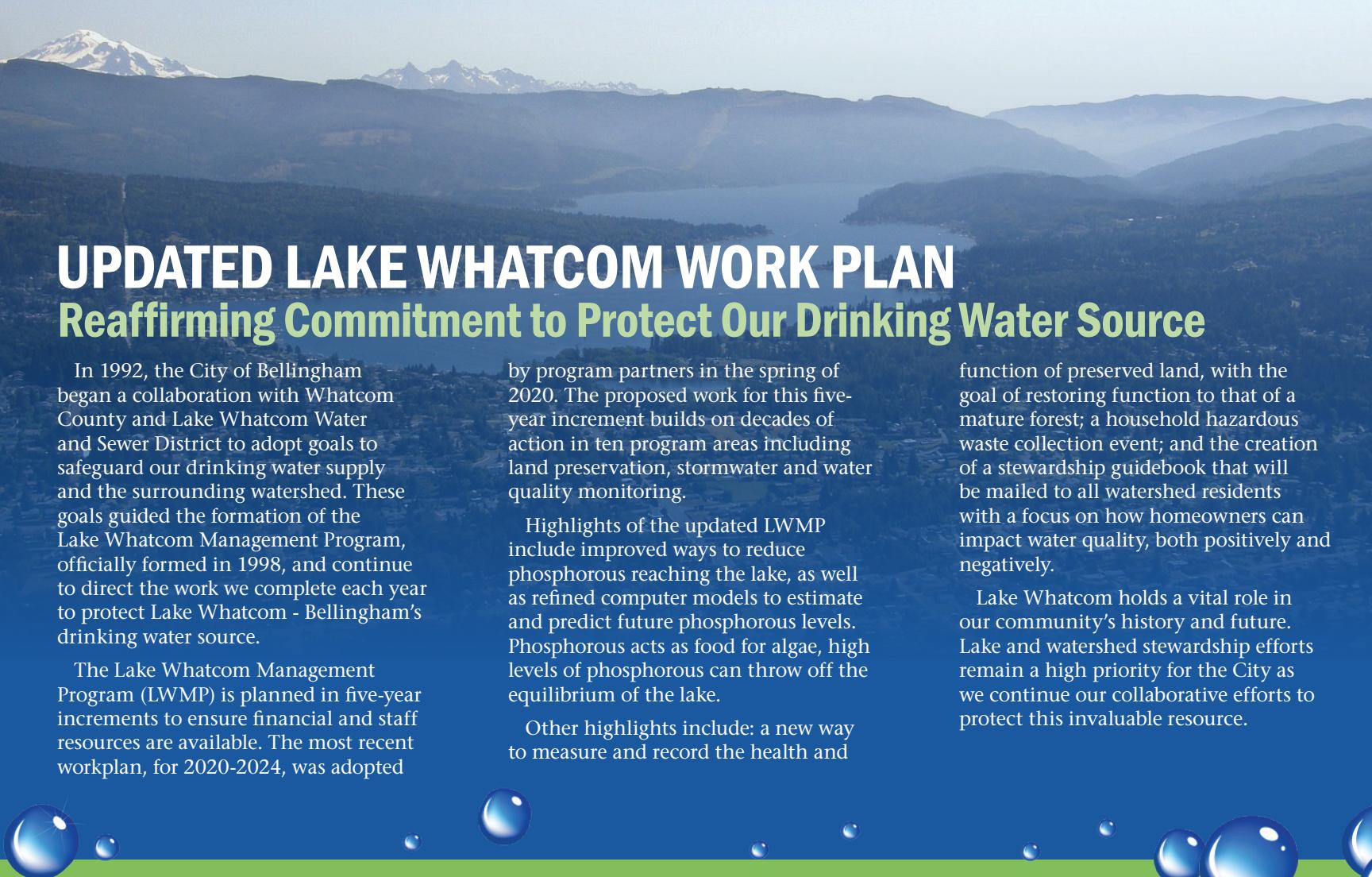
Just as there are many partners and many ways to ensure a healthy lake, there is more than one way you can make a difference. Opportunities to become involved can be found on the website <http://www.lakewhatcom.whatcomcounty.org/> (check the "Get Involved" link) or via this link <https://www.cob.org/gov/public>. We have many reasons to be proud as citizens of Bellingham and being good stewards of our drinking water source is one of them.

Thank you for joining in this important effort.

A handwritten signature in black ink.



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



UPDATED LAKE WHATCOM WORK PLAN

Reaffirming Commitment to Protect Our Drinking Water Source

In 1992, the City of Bellingham began a collaboration with Whatcom County and Lake Whatcom Water and Sewer District to adopt goals to safeguard our drinking water supply and the surrounding watershed. These goals guided the formation of the Lake Whatcom Management Program, officially formed in 1998, and continue to direct the work we complete each year to protect Lake Whatcom - Bellingham's drinking water source.

The Lake Whatcom Management Program (LWMP) is planned in five-year increments to ensure financial and staff resources are available. The most recent workplan, for 2020-2024, was adopted

by program partners in the spring of 2020. The proposed work for this five-year increment builds on decades of action in ten program areas including land preservation, stormwater and water quality monitoring.

Highlights of the updated LWMP include improved ways to reduce phosphorous reaching the lake, as well as refined computer models to estimate and predict future phosphorous levels. Phosphorous acts as food for algae, high levels of phosphorous can throw off the equilibrium of the lake.

Other highlights include: a new way to measure and record the health and

function of preserved land, with the goal of restoring function to that of a mature forest; a household hazardous waste collection event; and the creation of a stewardship guidebook that will be mailed to all watershed residents with a focus on how homeowners can impact water quality, both positively and negatively.

Lake Whatcom holds a vital role in our community's history and future. Lake and watershed stewardship efforts remain a high priority for the City as we continue our collaborative efforts to protect this invaluable resource.

EVERY DROP COUNTS!

One of the best ways to assure plentiful clean drinking water for years to come is to make sure we only use as much water as we need now. That is why the City has a robust water conservation program. Individuals and businesses can take easy steps to reduce their water consumption, indoors and outdoors. For our water customers, the City's Water Use Efficiency Program offers technical assistance and rebates for upgrading inefficient fixtures, teaches youth about the importance of water conservation and provides community education and practical resources for limiting water use.

Some resources we have available on the City website include:

- **12 Best Management Practices for Irrigation Systems guidebook;**
- **Best Management Practices for Industrial Water Users guidebook;**
- **Rebate information for residential, multi-family and commercial customers;**
- **Information about how to make your business an EnviroStar; and**
- **Tips and resources for outdoor water conservation.**

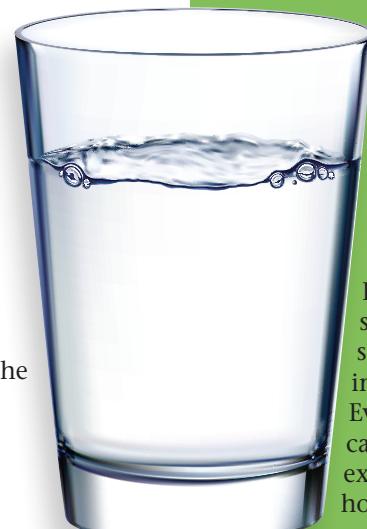


We recognize that it is not only customers who are responsible for ensuring efficient use of our drinking water. At the City we have a robust water leak detection program that addresses potential and actual leaks promptly. We also use best practices within our operations to limit excess water use. For instance, the Dissolved Air Floatation pretreatment process that was installed at the Water Treatment Plant in 2018, has saved nearly 70 million gallons of water in the first year of operation alone - due to less frequent filter backwashes.

Additionally, the City updates the goals and measures for our Water Use Efficiency Program every six years, incorporating the latest and greatest information and practices, as well as public feedback.

To learn more about any of these resources or to view our current Water Use Efficiency Program work plan, visit www.cob.org/conserve or contact us at waterconservation@cob.org or (360) 778-7700.

RAISE A GLASS



Great News – all City properties that the public can access have had drinking water assessed for lead and we are pleased to report that all results were good. To make sure we didn't miss any potential problems, water samples were collected to represent worse-case scenario conditions using a first draw sample at taps that had water sit stagnant for at least 10 hours. That means that at the library, the Children's Museum, Civic Field, or even at a drinking water fountain at a park near you, you can drink the water and be confident that it is safe.

We are fortunate in Bellingham because our water system does not have the lead service lines that are installed in other parts of the country. Even so, there are things you can do to minimize your exposure to lead within your home. For tips on how to protect your family from exposure to

lead see: www.epa.gov/lead/protect-your-family-exposures-lead#main-content

Detected Regulated Contaminants

2019 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 (2019 or most recent)	Units	EPA REGULATIONS		BELLINGHAM WATER RESULTS		
		Public Health Goal or MCLG	Maximum Allowable MCL	Bellingham Drinking Water Range or Other	Average Value or Highest Result	In Compliance?
Total Coliform Bacteria	% Positive	0	5% positive per month	1% positive in August. 0% positive all other months.	1% positive in August. 0% positive all other months.	Yes
Bellingham collects over 90 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. No Escherichia coli was detected in 2019.						
Free Chlorine Levels	ppm	Detectable in 95% of samples	4.0 MRDL	Range: 0.00 to 0.95 ppm	Average 0.44 ppm free available chlorine	Yes
Bellingham monitors chlorine levels continuously at the water filtration plant. Over 90 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 chlorine in 95% of the samples we analyze in the distribution system.						
Haloacetic Acids-5 (HAA-5)	ppb	0	60	Range: 12.0 to 22.7 ppb	Highest site \bar{x} 16.7 ppb	Yes
Total Trihalomethanes (TTHM)	ppb	0	80	Range: 13.2 to 54.4 ppb	Highest site \bar{x} 42.1 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 2019 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 2019 no filtered water turbidity result exceeded 0.3 NTU so Bellingham met the Department of Health's limit 100% of the time.						
Lead (2017 sampling)	ppb	0	15*	4 ppb as the 90th percentile	< 1 to 15^ ppb	Yes
Copper (2017 sampling)	ppb	1300	1300*	48 ppb as the 90th percentile	< 9 to 99 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 this summer.						
Unregulated Contaminant Monitoring Rule 4: Unregulated contaminants are those for which the EPA has not established drinking water standards. Monitoring helps EPA determine their occurrence in drinking water and to decide whether future regulation is warranted. Of the 31 contaminants including algal toxins, pesticides, metals, organic solvents, and alcohols monitored, only manganese (average 0.06 ppb, range 0 – 2.0 ppb) and low levels of disinfection by-products were detected as shown below:						
Bromochloroacetic Acid (BCAA): Average 0.68 ppb with a range of 0.39 – 1.30 ppb. Bromodichloroacetic Acid (BDCAA): Average 1.15 ppb with a range of 0.78 – 1.40 ppb. Dichloroacetic Acid (DCAA): Average 4.22 ppb with a range of 2.30 – 10.00 ppb. Trichloroacetic Acid (TCAA): Average 8.39 ppb with a range of 5.20 – 12.00 ppb.						

Treatment Technique is a required process intended to reduce the level of a contaminant in drinking water.

*90th percentile of samples collected ^One home was found at the action level of 15 ppb. Lead levels dropped to 2 ppb after running the faucet for 30 seconds.

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: <http://water.epa.gov/drink/info/lead>.

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.

SAVE WATTS AND DROPS!

Saving energy isn't just about turning off lights. Energy is part of nearly every aspect of our lives - including our water system. Energy is used to extract, treat and deliver drinking water from Lake Whatcom to Bellingham homes, schools and businesses, as well as to heat water in our buildings and to treat wastewater before it is released into Bellingham Bay.

Water is also an integral part of our energy system. It is used in the extraction and production of energy and in Washington State is a common source of electricity in the form of hydropower.

So, when you choose to use less water, you also save energy. And when you choose to save energy, you also save water. It's a win-win! These conservation choices protect our clean water, save you money, and help our community reach the goals in our Climate Action Plan.

Hundreds of community members have already made a personal commitment to save water and energy through the "I'm In!" for Climate Action pledge – you can join them at www.cob.org/all-in.

Bellingham's Water Conservation Rebate Program can help you follow through with your pledge and maximize your water and energy savings. Eligible participants who update their high-volume toilet(s) and/or clothes washer through the Community Energy Challenge can receive rebates to cover a portion of the costs. Learn more about this program at

www.cob.org/conserve.



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