



City of Bremerton; ID 08200R Drinking Water Quality Report 2023



Customer's Views Welcome

Public Works & Utilities Department • 100 Oyster Bay Ave N • Bremerton, WA 98312

Contact **Customer Response** at 360-473-5920 or Bremerton1@ci.bremerton.wa.us.
Check out **Bremerton1** in your app store.

The Bremerton City Council meets Wednesdays at 5:30 p.m.
at the Norm Dicks Government Center, 345 6th Street, Bremerton.

For billing information call 360-473-5316. The Bremerton Utility Billing Division
is located on the first floor of the Norm Dicks Government Center.

For flushing instructions call our Water Hotline at 360-473-5490.

Visit the City's website at www.BremertonWA.gov/e-News and sign up for
e-News to receive updates about the City of Bremerton.



Celebrate National Drinking Water Week
First Full Week of May

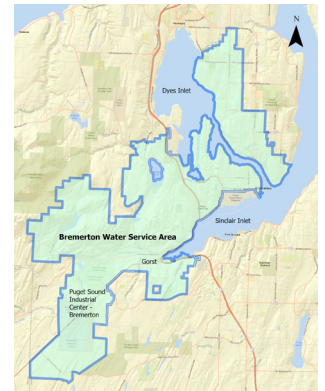
Call 360-473-5920 for more information.

Bremerton Drinking Water Quality is Excellent

The City of Bremerton Water Utility is pleased to provide you with its annual water quality and efficiency report. Bremerton is committed to safeguarding its surface and groundwater sources. This report is a summary of the test results for water provided to over 72,000 customers last year. It reflects the commitment of Water Utility employees to deliver you excellent quality water. Included are details about:

- where your water comes from,
- what it contains, and
- how it compares to standards set by regulatory agencies.

Safe drinking water is essential. Well-informed customers can wisely utilize water resources and support improvements necessary to maintain high quality drinking water.



Protecting Our Water Supplies

Bremerton is fortunate to have high quality water supplies. Surface water from the Union River headwaters and groundwater from wells located in the Bremerton area provide Bremerton's water supply. Bremerton owns and protects the 3,000-acre watershed surrounding the Union River supply – this allows Bremerton's surface water system to remain one of only a few systems not required to filter. This is a great value to our rate payers as water filtration plants cost 15-20 million dollars to construct and close to a million dollars a year to operate and maintain. To continue to ensure the source can remain unfiltered, access to the Union River Watershed is secured, patrolled, and limited to water supply and forestry management activities.

Groundwater wells are also safeguarded through the City's Wellhead Protection Program to protect critical areas around the wellheads. All sources are managed according to state and federal regulations and best management practices for water supply systems. The Washington State Department of Health regularly inspects Bremerton's water system, including the surface supply. Bremerton was selected for an "Exemplary Source Water Protection" Award in 2017 by the American Water Works Association.

Source Water Assessment Program

Washington State Department of Health Office of Drinking Water has compiled source water assessment data for all public water systems in Washington. This assessment shows wellhead protection zones and inventories potential contaminants as part of a coordinated effort to protect drinking water sources in Washington.

Washington DOH's Source Water Assessment Program is online at <https://doh.wa.gov/community-and-environment/drinking-water/source-water/source-water-protection>.

BREMERTON SOURCES					
Source #	Source Name	Water Type	Depth (feet)	Susceptibility Assessment	Treatment
S01	Union River Main Stem	Surface Water		High	Chlorine, UV
S02	Union River West Branch	Surface Water		High	Chlorine, UV
S07	Bremerton Well 2R	Groundwater	273	Low	Chlorine
S08	Bremerton Well 3	Groundwater	316	Moderate	Chlorine
S12	Bremerton Well 7	Groundwater	627	Low	Chlorine
S13	Bremerton Well 8	Groundwater	578	Low	Chlorine
S14	Bremerton Well 13	Groundwater	273	Low	Chlorine
S15	Bremerton Well 14	Groundwater	278	Low	Chlorine
S17	Bremerton Well 17	Groundwater	293	Low	Chlorine
S20	Bremerton Well 15	Groundwater	294	High	Chlorine
S21	Bremerton Well 19	Groundwater	182	Moderate	Chlorine
S22	Bremerton Well 20	Groundwater	210.5	Low	Chlorine
S25	Bremerton Well 6R	Groundwater	645	Low	Chlorine
S27	Bremerton Well 18R	Groundwater	164	Moderate	Chlorine

Outside Sources

Bremerton's Water System receives water from Port Orchard's McCormick Woods Water System, through a shared reservoir in the area between Gorst and Port Orchard.

Bremerton Water Needs Minimal Treatment

Bremerton's water system is operated and maintained by experienced personnel certified by the State. Bremerton's Union River water source is such good quality that the City is not required to install a filtration facility as long as all water quality, operational, and watershed protection requirements are met. Bremerton consistently meets these high standards. Treatment of Bremerton's water currently consists of disinfection (chlorine and ultraviolet light) and corrosion control. Corrosion treatment increases the pH of water to about 8 and is required to prevent Bremerton's water from leaching lead from customer's household plumbing. Sampling results confirm this treatment is successful in achieving corrosion control.

The City of Bremerton performs systematic flushing of the water distribution system. Customers are notified about flushing through newspaper ads, neighborhood signs, the City's website, e-News, and the Water Hotline (360-473-5490). Flushing is a process of sending a rapid flow of water through the mains to clean them. This helps to maintain water quality by removing naturally-occurring sediment. Flushing may cause temporary discoloration of your water. If this happens, call the Water Hotline or visit Bremerton's website for instructions on flushing your service. If your water does not clear up after the flushing process, please call the Customer Response Line at 360-473-5920.

Water Quality Summary

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. Your drinking water is regularly tested according to federal and state regulations in water sources and the distribution system. Last year the City of Bremerton conducted over 1,400 water quality compliance tests for the parameters listed in the water quality summary below. Only those detected are listed in the water quality summary.

Listed below are the few substances detected in Bremerton's water last year. All results meet protective standards set by federal and state agencies. Not listed are the substances that were tested but NOT detected. The amounts allowed in drinking water are so small, they are measured in parts per million or parts per billion. We have tried to make this report easy to understand; however, drinking water quality issues can be technical. For additional water quality information, please call 360-473-5920. Some of the data, though representative of the water quality, are more than a year old as the results reflect the most recent required sampling period.

SUBSTANCES DETECTED						
Parameter	Highest Level Allowed EPA's MCL	Ideal Goals EPA's MCLG	Potential Sources	Highest Level Detected in 2022 to Determine Compliance	Ranges of Levels Detected in 2022	Meets Standards
Regulated at the Surface Water Source						
Turbidity	Treatment Technique 5 NTU	N/A	Soil runoff	1.99 NTUs	0.35 - 1.99 NTUs	Yes
Sodium <small>Most recently sampled in 2021</small>	No limit set	N/A	Naturally-occurring	5.19 ppm	ND - 5.19 ppm	Yes
Nitrate	10 ppm	10 ppm	Fertilizer use	< 0.5 ppm	< 0.5 ppm	Yes
Regulated at the Groundwater Sources						
Arsenic <small>Most recently sampled in 2021</small>	10 ppb	0	Erosion of natural deposits	3 ppb	ND - 3 ppb	Yes
Sodium <small>Most recently sampled in 2021</small>	No limit set	N/A	Naturally-occurring	11.7 ppm	< 5 - 11.7 ppm	Yes
Nitrate	10 ppm	10 ppm	Fertilizer use	0.80 ppm	< 0.5 - 0.80 ppm	Yes
Regulated in the Distribution System						
Total Coliform	Presence of coliform in less than 5% of monthly samples	0	Naturally-occurring	There were three coliforms present in the 968 samples taken in 2022.		Yes
Trihalomethanes	80 ppb	N/A	By-product of drinking water chlorination	58 ppb locational running annual average	2.5 - 69 ppb	Yes
Haloacetic acids	60 ppb	N/A	By-product of drinking water chlorination	42 ppb locational running annual average	2.5 - 61 ppb	Yes
Chlorine	4 ppm	4 ppm	Water additive used to control microbes	0.81 ppm annual average	0 - 1.64 ppm	Yes
Regulated at the Customer Tap						
Lead <small>Most recently sampled in 2020</small>	Action Level = 15 ppb	0	Household plumbing	5 ppb 90th percentile	No sample sites exceeded Action Level	Yes
Copper <small>Most recently sampled in 2020</small>	Action Level = 1300 ppb	0	Household plumbing	41 ppb 90th percentile	No sample sites exceeded Action Level	Yes

Definitions

Action Level is the concentration of contaminant that, if exceeded, triggers treatment or other requirements a water system must follow. Ninety percent (90%) of all samples must be below this amount.

MCL (Maximum Contaminant Level) is 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.

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

MRDL (Maximum Residual Disinfectant Level) is the highest level of a disinfectant allowed in water.

MRDLG (Maximum Residual Disinfectant Level Goal) is the level of a drinking water disinfectant below which no known or expected risk to health exists.

pCi/l stands for picocuries per liter. This is in parts per trillion.

ppb is parts per billion and is the same as a microgram per liter (ug/L) (equivalent to one penny in \$10,000,000).

ppm is parts per million and is the same as a milligram per liter (mg/L) (equivalent to one penny in \$10,000).

N/A means not applicable.

ND means the laboratory did not detect this substance.

NTU (Nephelometric Turbidity Unit) is the measurement of water clarity. Monitoring turbidity is a good indicator of water quality.

Treatment Technique is a required process intended to reduce the level of a contaminant. Bremerton's surface supply is shut off when turbidity increases above set points.

Waiver Information

The Washington State Department of Health reduced monitoring requirements for the Bremerton system for various contaminants because sources were determined not to be at risk of contamination. Inorganic compounds, including arsenic and sodium, are among the list of contaminants with a waiver; the year of the most recent sampling event is listed in the table, and results met all applicable standards.

Unregulated Contaminant Monitoring

Unregulated contaminants are those for which the Environmental Protection Agency (EPA) has not established drinking water standards. The purpose of unregulated contaminant monitoring is to help EPA determine their occurrence in drinking water and potential need for future regulation. These contaminants may be naturally occurring, or are, in some cases, byproducts of disinfection. Those found by the City of Bremerton in the 2018 round of UCMR sampling are listed in the following table. No cyanotoxins were detected in the 2018 sampling event. The next round of UCMR sampling will be conducted in 2025 and will include PFAS and Lithium (see PFAS information on the next page).

UNREGULATED CONTAMINANT MONITORING 2018		
Parameter	Highest Level Detected in 2018	Ranges of Levels Detected in 2018
Manganese	57.1 ppb	9 - 57.1 ppb
TOC (indicator)	1400 ppb	1200 - 1400 ppb
HAA5	58.3 ppb	0.4 - 58.3 ppb
6BR	4.3 ppb	ND - 4.3 ppb
HAA9	60.9 ppb	0.4 - 60.9 ppb

Information From EPA

Sources of both tap and bottled drinking water include rivers, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring substances such as minerals and radioactive materials. It also dissolves substances resulting from animal or human activity. Contaminants that may be present in source water are microbes; pesticides; herbicides; and radioactive, organic and inorganic chemicals. To ensure tap water is safe to drink, the Environmental Protection Agency (EPA) and the Washington State Board of Health regulate the amount of certain contaminants in public drinking water.

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 at 1-800-426-4791.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons, such as those 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 guidelines on appropriate means to lessen risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791.

In Washington State, lead in drinking water comes primarily from materials and components used in household plumbing. The more time water has been sitting in pipes, the more dissolved metals, such as lead, it may contain. Elevated levels of lead can cause serious health problems, especially in pregnant women and young children. To help reduce potential exposure to lead: for any drinking water tap that has not been used for 6 hours or more, flush water through the tap until the water is noticeably colder before using for drinking or cooking. You can use the flushed water for watering plants, washing dishes, or general cleaning. Only use water from the cold-water tap for drinking, cooking, and especially for making baby formula. Hot water is likely to contain higher levels of lead. If you are concerned about lead in your water, you may wish to have your water tested by a state-certified laboratory: <https://apps.ecology.wa.gov/laboratorysearch/Default.aspx> Information on lead in drinking water is available from EPA's Safe Drinking Water Hotline at 1-800-426-4791 or online at <http://www.epa.gov/safewater/lead>.

PFAS Monitoring

PFAS (per- and polyfluoroalkyl substances) are a large family of long-lasting, human-made chemicals (also called “forever chemicals”) in use since the 1950s to make stain-resistant, water-resistant, and non-stick consumer products (including clothing, food packaging, and kitchenware). In Washington State, PFAS have been used in some types of firefighting foams used by the U.S. military, local fire departments, and airports. Some of the most common PFAS have been removed from most products because of health and environmental concerns. Some of these chemicals accumulate in the human body over time.

Current research has shown that people can be exposed to PFAS by:

- Working in occupations such as firefighting or chemical manufacturing/processing
- Drinking water contaminated with PFAS
- Eating certain foods (including fish) that may contain PFAS
- Swallowing contaminated soil or dust, or breathing air containing PFAS
- Using products made with PFAS or that are packaged in materials containing PFAS (for example, using frying pans with non-stick coating or eating from a microwave popcorn bag)

Concurrent with EPA’s decision to include PFAS in the next round of UCMR sampling, the WA State Board of Health adopted the PFAS Rule which sets State Action Levels (SALs) for PFAS and requires Group A public drinking water systems to monitor for PFAS chemicals in drinking water supplies (<https://doh.wa.gov/community-and-environment/contaminants/pfas>). Though the first round of PFAS Rule monitoring was not required until this year (2023), the City chose to participate in early, EPA-funded monitoring and tested for PFAS in its sources in 2022. Only one of the 25 PFAS chemicals measured was detected, and only in one well (see table of results below). The concentration was extremely low (<1% of the SAL), so no further action is required. The next round of sampling is scheduled for 2025.

PFAS MONITORING IN 2022			
<i>Results measured in nanograms per liter (ng/L); one ng/L = one part per trillion</i>			
Parameter	Highest Level Detected in 2022	Ranges of Levels Detected in 2022	State Action Level
PFOA	ND	ND	10
PFOS	ND	ND	15
PFHxS	ND	ND	65
PFNA	ND	ND	9
PFBS	3.66 ng/L*	2.7-3.66 ng/L*	345
PFHpA	ND	ND	
PFHzA	ND	ND	
PFDA	ND	ND	
PFUnA	ND	ND	
PFDoA	ND	ND	
ADONA	ND	ND	
9CI-PF3ONS	ND	ND	
HFPO-DA	ND	ND	
11CI-PF3OUdS	ND	ND	
4:2FTS	ND	ND	
6:2FTS	ND	ND	
8:2FTS	ND	ND	
NFDHA	ND	ND	
PFBA	ND	ND	
PFHpS	ND	ND	
PFMBA	ND	ND	
PFMPA	ND	ND	
PFPeA	ND	ND	
PFPeS	ND	ND	
PFEESA	ND	ND	

*Results are less than 1% of the SAL; no further action required

Be Prepared for Emergencies

Normally your water is safe to drink, but should a disaster happen, you will need to treat it or have an emergency supply on hand if the city's water supply is interrupted. To prepare for a drinking water emergency, the American Red Cross recommends storing one gallon of water per person per day – consider storing about a two-week supply at home, or at least 3 days for evacuation - for drinking, food preparation, and sanitation. For more information on preparing for emergencies we recommend the following resources:

"Treating Drinking Water for Emergency Use," WA Dept. of Health: <http://www.doh.wa.gov/portals/1/Documents/pubs/331-115.pdf>

"Preparedness," Kitsap County Department of Emergency Management: <http://www.kitsapdem.org/get-prepared/>

Professional Water Organizations

The City of Bremerton is proud to be members of the following professional water organizations:



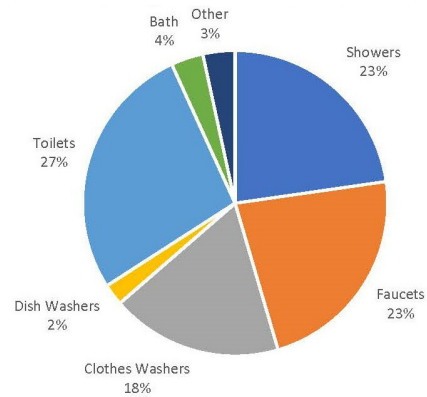
Water Use Efficiency Performance Report for 2022

Efficient water use benefits the environment, public health, and economy by helping to improve water quality, maintain aquatic ecosystems, and protect water resources. The City of Bremerton has emphasized water use efficiency since the 1990s. The City has a customer conservation program and is active in water use efficiency programs such as the Water Purveyors Association of Kitsap County, the Partnership for Water Conservation, the Alliance for Water Efficiency, and EPA's WaterSense.

2022 Total Annual Water Production—6.4 Million Gallons per Day

Bremerton's Main System Water Use Efficiency	
Goal	How Goal Was Met Last Year
Maintain water use per single family residence to below 180 gallons per day on a three year average.	Three year average water use per single family residence was 143 gallons per day. Goal was met. Great job by our customers!
State Regulation	How Regulation Was Met Last Year
Keep distribution system leakage less than 10% on a three year average.	Bremerton water system leakage was 5.2% on a three year average.

National Average Residential Indoor Water Use



Source: American Water Works Association Water Research Foundation, "Indoor Household Use by Fixture", 2016

How to Use Water Wisely

Rain fills the reservoir and feeds underground aquifers to supply our drinking water. Wise water use is always recommended and your conservation efforts are important. Use water wisely to save money and this remarkable resource.

Tackle the biggest water guzzlers first!

- Install high efficiency low flow toilets.
- Consider purchasing a water/energy efficient clothes washer/dishwasher.
- Repair leaky toilets and faucets.
- Use water-saving habits such as washing full loads only. Turn off the faucet when you shave or brush your teeth, and take shorter showers.
- Install low flow showerheads.
- Look for the WaterSense label on new plumbing fixtures.

Nearly 1/3 of the water demand in the summer is used outdoors.

- Water late in the evening or early in the morning.
- Consider drought tolerant plants and native plants in your landscape.
- Use soaker hoses or install drip irrigation.
- Repair broken irrigation system sprinkler heads.
- Water lawns no more than 1 inch per week using a shallow can to measure.
- Install a rainwater collection barrel.
- Wash your car in a commercial car wash that recycles.

Bremerton Water is a Great Value

Your water rates pay for delivering high-quality water to your tap and keeping the water system in top condition. City customers pay water rates among the lowest in Washington State and nationwide. We are able to keep rates low through ownership of the watershed, conscientious system operation and maintenance, and award of ARRA funding for our Advanced Disinfection Facility completed in 2011.

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