

City of Bellevue

2015 Drinking Water Quality Report

Results from Testing in 2014

Safe, reliable, high-quality water!

The City of Bellevue is happy to report that the drinking water we deliver to your home or business is safe, dependable, and some of the best in the nation. Testing throughout 2014 showed that your drinking water met or surpassed all state and federal drinking water standards. We are sending this annual Water Quality Report in compliance with the Safe Drinking Water Act and State Department of Health requirements. Inside you'll learn where your water comes from, how it's treated, monitored, protected, and other information. If you have any questions about this report or your water, please call Bellevue's Water Quality staff at 425-452-7840.





CASCADE WATER ALLIANCE

Bellevue's excellent water comes from the Cedar River and Tolt River watersheds in the Cascade Mountains. Bellevue purchases its water from Cascade Water Alliance, an organization that purchases water from Seattle and provides it to its members.

Cascade was formed in 1999 to provide you with water today and tomorrow. In addition to Bellevue, members include Issaquah, Kirkland, Redmond, Tukwila, Sammamish Plateau Water and Sewer District, and Skyway Water and Sewer District. Each member has a voice in determining its community's future by ensuring the availability of safe and reliable drinking water.

Currently, Cascade gets its water from Seattle Public Utilities. In 2009, Cascade purchased Lake Tapps. The state issued Cascade the official water rights to develop Lake Tapps as a drinking water supply—the newest water supply in the region in decades. As a result of customers like you who use water wisely, we have enough water for the future and likely won't develop Lake Tapps until it is needed. But it is there as a vital natural resource for the region.

Planning for water takes decades. That's why Bellevue and Cascade are planning now for the future. When you turn on the tap at home or at work for a drink of clean, safe, and reliable water, it will be there today and tomorrow. Visit www.cascadewater.org



Lead in drinking water is primarily from materials and components associated with home water lines and plumbing. Bellevue is responsible for providing high quality drinking water and ensuring that materials used in the public water system meet all requirements, but we cannot control the variety of materials

used in plumbing components. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. 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 consumption (drinking, cooking, etc.) 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. If you have concerns about lead in your water, please call Water Quality at 425-452-7840.

Bellevue's 2014 Lead and Copper Monitoring Results

Parameter and Units	MCLG	Action Level+	2014 Results*	Homes Exceeding Action Level	Source
Lead, ppb	0	15	4.4	1 of 52	Corrosion of household plumbing systems
Copper, ppm	1.3	1.3	0.16	0 of 52	

* 90th Percentile: i.e. 90 percent of the samples were less than the values shown.
 + The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
 Bellevue performs Lead and Copper sampling every three years. The next sampling is scheduled for 2017.



WATER QUALITY MONITORING RESULTS FOR 2014

Your water is monitored and tested 365 days a year. After testing for close to 200 compounds, only a few were detected, and all were below the limits allowed by EPA (see chart below).

If you would like a list of all compounds your water was tested for in 2014, please call Water Quality at 425-452-7840 or visit the city's website at www.bellevuewa.gov/utilities.htm.

Detected Compounds and Units	EPA's allowable limits		Levels in Cedar Water		Levels in Tolt Water		Typical Sources	In Compliance
	MCLG	MCL	Average	Range	Average	Range		
Raw Water before treatment								
Total Organic Carbon ppm	NA	TT	0.9	0.4 - 1.9	1.3	1.1 to 1.7	Naturally present in the environment	Yes
Cryptosporidium* #100L	NA	NA	ND	ND	ND	ND	Naturally present in the environment	Yes
Finished Water after treatment								
Turbidity NTU	NA	TT	0.4	0.2 to 1.6	0.07	0.05 to 0.28	Soil runoff	Yes
Fluoride ppm	4	4	0.8	0.7 to 0.8	0.8	0.7 to 0.9	Water additive, which promotes strong teeth	Yes
Barium ppb	2000	2000	1.4	(one sample)	1.2	(one sample)	Erosion of natural deposits	Yes
Bromate ppb	0	10	ND	ND	0.2	ND - 1.5	By-product of drinking water disinfection	Yes
Nitrate ppm	10	10	0.02	(one sample)	0.11	(one sample)	Erosion of natural deposits	Yes
Total Trihalomethanes ppb	NA	80	Average = 31.2 Range = 18.5 - 39.9			By-product of drinking water chlorination		Yes
Haloacetic Acids (5) ppb	NA	60	Average = 29.7 Range = 16.8 - 44.6			By-product of drinking water chlorination		Yes
Chlorine ppm	MRDLG = 4	MRDL = 4	Average = 0.91 mg/L Range = 0.08 - 1.55 mg/L			Water additive used to control microbes		Yes
Coliform, Total %	0	5%	Highest Month = 0.92%			Naturally present in the environment		Yes

*Cryptosporidium was not detected in any samples from the Cedar or Tolt (3 samples each supply).

KEY TO ABBREVIATIONS IN CHART

MCLG: Maximum Contaminant Level Goal

The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

MCL: Maximum Contaminant Level

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.

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.

TT: Treatment Technique

A required process intended to reduce the level of a contaminant in drinking water.

NTU: Nephelometric Turbidity Unit

Turbidity is a measure of how clear the water looks. The turbidity MCL that applied to the Cedar supply in 2014 is 5 NTU, and for the Tolt it was 0.3 NTU for at least 95% of the samples in a month. 100% of the samples from the Tolt in 2014 were below 0.3 NTU.

NA: Not Applicable

ND: Not Detected

ppm: 1 part per million = 1 mg/L = 1 milligram per liter (mg/L)

ppb: 1 part per billion = 1 ug/L = 1 microgram per liter (ug/L)

1 ppm = 1000 ppb

TREATING WATER TO PROTECT YOUR HEALTH

To improve water quality, drinking water from the Tolt and Cedar river watersheds is disinfected with either ultra-violet technology or ozonation and treated at a filtration facility. The ultra-violet and ozonation disinfection methods are very effective at destroying *Cryptosporidium* and other microbial organisms. Chlorine is added to your water to prevent diseases such as cholera, giardiasis, and salmonellosis. Fluoride is added to prevent tooth decay, in accordance with a Seattle public vote in 1968. The concentration of fluoride was reduced in January, 2011 from 1 part per million to 0.8 part per million, the lowest concentration in the acceptable range defined by the WA State Department of Health. After treatment, your water contains very few contaminants, and those present are below the allowable limits.



UNREGULATED CONTAMINANTS MONITORING RULE (UCMR3) RESULTS

Similar to efforts in 2013, in 2014 the City of Bellevue collected water samples under the Unregulated Contaminant Monitoring Rule 3 (UCMR3). These were the final samples required for this effort. Bellevue and approximately 6,000 other public water systems were selected to collect samples, beginning in 2013, based on population size served, not because of a water quality concern. The Environmental Protection Agency (EPA) utilizes the UCMR3 program to collect data for contaminants expected to be present in drinking water but that do not have defined *health-based* standards. If you would like a full list of unregulated contaminants tested for or more information about Bellevue's results, please contact City of Bellevue Water Quality 425-452-7840. For more information about the program, visit EPA's website at <http://water.epa.gov/lawsregs/rulesregs/sdwa/ucmr/ucmr3/>

What did Bellevue test for?

EPA required Bellevue and other water providers to test for 30 contaminants as part of UCMR3. Of those, four were found (see chart). Chromium is an element found naturally in the environment. Chromium-6 or hexavalent chromium occurs naturally in the environment, but can also be man-made. Strontium is a mineral that occurs

naturally in the environment. Vanadium is a metal that occurs naturally in many different minerals and in fossil fuel deposits.

What do these results mean?

Bellevue's numbers for total chromium are far below EPA's drinking water standard of 0.1 milligrams per liter (mg/L) or 100 micrograms/liter (ug/L). Bellevue's numbers are displayed as ug/L in the chart (1000 times smaller than the standard). If Bellevue's drinking water ever exceeds the EPA standard for chromium, citizens will be notified. At this time, there is no federal drinking water standard for strontium or vanadium. If testing shows that a large number of drinking water systems have detected strontium or vanadium at levels of concern, EPA may decide to regulate them in the future.

Bellevue's Testing Results For Unregulated Contaminants - UCMR3		
Chromium (Total)	Average 0.26 ug/L	Range 0.22 to 0.32
Chromium-6	Average 0.11 ug/L	Range 0.069 to 0.18
Strontium	Average 24.25 ug/L	Range 13 to 30
Vanadium	Average 0.41 ug/L	Range ND to 0.61

SAFEGUARDING YOUR WATER

To ensure your water is safe to drink, the EPA and the Washington State Dept. of Health (WSDOH) prescribe regulations that limit the amount of contaminants in water provided by public water systems. The Food and Drug Administration and the Washington State Department of Agriculture regulations establish similar limits on bottled water.

As part of this process, the state assesses potential sources of contamination prior to treatment. WSDOH rates all surface drinking water supplies in Washington as having a susceptibility rating of high, regardless of

whether contaminants have been detected or whether there are any sources of contaminants in the watershed. The Tolt and Cedar watersheds in the Cascade Mountains are highly protected. Because no agricultural, industrial, or recreational activities are permitted, and no one is allowed to live there, little opportunity exists for contaminants to enter the water. However, there is some potential for natural sources of contamination such as viruses, bacteria, and protozoa from wildlife; inorganic contaminants, such as salts and metals, which are naturally occurring; and organic contaminants, such as those resulting from chlorine combining with naturally occurring organic matter. For more information on Source Water Protection, visit www.doh.wa.gov/ehp/dw/default.htm

WHAT THE EPA WANTS YOU TO KNOW

Sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals, in some cases, radioactive material; and substances resulting from the presence of animals or from human activity. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the 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. 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. Environmental Protection Agency/Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791.

HOW DOES BELLEVUE MAKE SURE YOUR WATER IS SAFE?

Water from the Cedar River and Tolt River watersheds enters Bellevue's public water system through large pipelines at 15 locations around the city. Some of the water is used immediately by homes and businesses, but most flows into huge water storage tanks built at higher elevations than surrounding homes. Most of the water stored in storage tanks is available to fight fires and to help maintain positive pressure in the distribution system. The rest serves surrounding neighborhoods. To protect Bellevue's water supply and to make sure it's safe by the time it reaches you, our team of water quality specialists:

- Monitor drinking water quality throughout the city to make sure it meets or exceeds state and federal water quality standards.
- Manage the Cross Connection Control/Backflow Prevention Program to prevent contaminants from entering the city's water system. Visit www.bellevuewa.gov/backflow.htm
- Establish procedures used during water main breaks and other event responses to protect drinking water quality.
- Conduct water main flushing, sampling and results tracking to ensure freshness.
- Inspect water storage tanks to ensure they have secure and sanitary conditions as well as oversee storage tank cleaning to remove any accumulated sediments.
- Assist customers with water quality issues in their homes.
- Keep abreast of changing state and federal regulations.
- Maintain strong relationships with Washington State's Department of Health – Office of Drinking Water.
- Train for water emergencies with other regional water providers.



FAST FACTS
RESIDENTIAL
POPULATION SERVED

142,900

The City of Bellevue Has
soft water
1.56 GRAINS PER
GALLON

620 MILES OF WATER
MAIN PIPE

Bellevue's Water System Contains

25 WATER STORAGE TANKS **40,702** WATER METERS

22 PUMP STATIONS **5,863** FIRE HYDRANTS



FREQUENTLY ASKED QUESTIONS

I NO LONGER USE MY IRRIGATION SYSTEM; DO I STILL HAVE TO GET MY BACKFLOW ASSEMBLY TESTED?

Yes. Unless the backflow assembly is removed, capped permanently and inspected, an annual backflow assembly test is required. Even if you aren't using your irrigation system, the water service line is still connected and could be operated. It's still a cross connection to your drinking water system and must be

disconnected or protected by a backflow preventer that is tested annually. If you choose to have your backflow assembly removed, a separate backflow assembly permit will be needed. For more information on backflow prevention and cross connection control, visit our web page at www.bellevuewa.gov/backflow.htm

WILL I BE NOTIFIED IF BELLEVUE LEARNS OF A WATER QUALITY CONCERN THAT COULD IMPACT MY HEALTH?

Absolutely! Bellevue's drinking water quality is continuously monitored and frequently sampled at various locations to ensure it meets State and Federal drinking water standards. If there is ever an issue that could impact public health, Bellevue Utilities will take immediate action and contact Washington State's Department of Health. We will work with them to prepare and distribute a *Public Health Advisory* to potentially affected customers. Examples of situations that could trigger an advisory would be a confirmed unsatisfactory water quality sample result, a potentially harmful backflow event, or a large main break that may have impacts to public health. Most advisories are precautionary and are distributed using door-to-door notification, the city's website, social media such as the city's Twitter account, regional online, radio, and print news sources, or any combination of these and more. If you have questions or concerns about public health advisories, feel free to contact Water Quality at 425-452-7840 or check Washington State's Department of Health's Office of Drinking Water website: <http://www.doh.wa.gov/CommunityandEnvironment/DrinkingWater>.

OUR WATER SOMETIMES HAS A FUNNY ODOR AND TASTES ODD. WHY IS THAT?

If you live in a home with limited water use, have been away for a couple of days, or have recently moved into a home that was vacant, it's common to experience drinking water taste and odor issues due to lack of water use. When water sits for an extended time in pipes, it warms up and starts to have taste and odor issues. Lead and copper levels can also increase in some older homes. Open all cold water faucets in your home at once for a minute or two over a couple of days to freshen the water. If you still have a problem, call Water Quality at 425-452-7840.

WATER SYSTEM UPGRADES

Keeping Bellevue's 620 miles of underground water main in top shape is critical for delivering high quality, dependable water. Bellevue is ahead of many cities in upgrading its system because of our ongoing maintenance, capital planning, and financial policies. In 2014 Bellevue replaced 15,928 linear feet of aging asbestos cement (AC) water main pipe with new ductile iron pipe. Utilities is ramping up to a sustainable replacement rate of five miles of AC water main every year.

WATER USE EFFICIENCY REPORT TO CUSTOMERS

Using water efficiently is important to provide a reliable supply of water for our community's needs today and in the future. On behalf of Bellevue and other members, Cascade Water Alliance adopted a water use efficiency goal of 0.6 million gallons per day on an annual basis and 1.0 million gallons per day on a peak season (June-September) basis by the end of 2019.

In 2014, Bellevue supplied 5.96 billion gallons of water to residents, workers, students, and visitors. Bellevue's water system is fully metered. The city encourages the efficient use of water by minimizing water loss caused by leaks. Water loss was 6.1 percent of total consumption in 2014, below the Washington State standard of 10 percent.

Cascade programs for Bellevue include gardening classes, youth education, installation of high efficiency products, distribution of leak detection tablets, and distribution of water efficient items, such as showerheads, shower timers, and rain gauges. These programs resulted in about 12,000 customer interactions and a savings of an estimated 178,459 gallons of water per day, or 29.7 percent of Cascade's 2014-2019 Water Use Efficiency goal. Thank you for doing your part to conserve!

To learn more about what you can do to save water, visit Cascade Water Alliance at www.cascadewater.org



City of Bellevue Resources

Utilities 24-hour Emergency Services

water main breaks, water outages **425-452-7840**

Drinking Water Quality **425-452-7840**

Cross Connections and Backflow Assembly Testing **425-452-7840**

Billing Issues **425-452-6973**

Discounts for low-income seniors and low-income citizens with disabilities

425-452-5285

Email: Utilities@bellevuewa.gov

Website: www.bellevuewa.gov/utilities.htm

The Environmental Services Commission advises Bellevue City Council on Utilities issues. To get involved in water issues, call Bellevue Utilities at 425-452-4497 for meeting dates and other information.

Safe Drinking Water Act Hotline

Direct your drinking water questions to EPA's hotline: **1-800-426-4791**.

This report contains important information about your drinking water. To read it in other languages, visit www.bellevuewa.gov/water_quality.htm

