

City of Beaverton

2017 Water Quality Report

(Monitoring Data from 2016)



This document is available in other languages and formats upon request.

Este documento está disponible en otros idiomas y formatos para quien lo solicite.

CONSUMER CONFIDENCE REPORT 2017

BeavertonOregon.gov/ccr



The City of Beaverton is pleased to present you with this 2017 Water Quality Report, now available online.

The 2017 City of Beaverton Water Quality Report, also known as the Consumer Confidence Report (CCR), is now available online at www.BeavertonOregon.gov/CCR.

Using data collected in 2016, this report summarizes information about your water supply sources, the water system facilities that deliver water to your tap, and the quality of your drinking water. Also included is information about programs underway that are helping to ensure that you have safe and dependable drinking water.

The City of Beaverton is proud of the high quality of our water supply, which meets or exceeds state and federal water quality requirements. If you have any questions regarding your water quality or about information presented in this report, please call us at 503-350-4017.

Paper copies of the Water Quality Report are available at City Hall, City libraries (main branch and Murray Scholls branch), and the Operations Center. If you would like a copy of the report mailed to you, call Shelley Searle at 503-526-2278. For translation services or to speak with someone about the report, call the City of Beaverton's Water Quality Report Hotline at 503-350-4017.

Information in this report is available upon request in alternative formats by calling the Water Quality Report Hotline at 503-350-4017.

The purpose of the report is:

To provide you with information about your drinking water and comply with the reporting requirements of the U.S. Environmental Protection Agency (EPA), Consumer Confidence Report Rule, 40 CFR, Part 141, Subpart O.

Additional Water Quality Information From the U.S. Environmental Protection Agency (EPA)

The sources of drinking water (both tap and bottled) 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 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 the water include:

- Microbial contaminants, such as cryptosporidium, 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 be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or 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 also can come from gas stations, urban stormwater runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring or result from oil and gas production and mining activities. To ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water to provide the same protection for public health.

A source water assessment completed by the Oregon Departments of Environmental Quality (DEQ) and Human Services (DHS) in 2003 is available at:

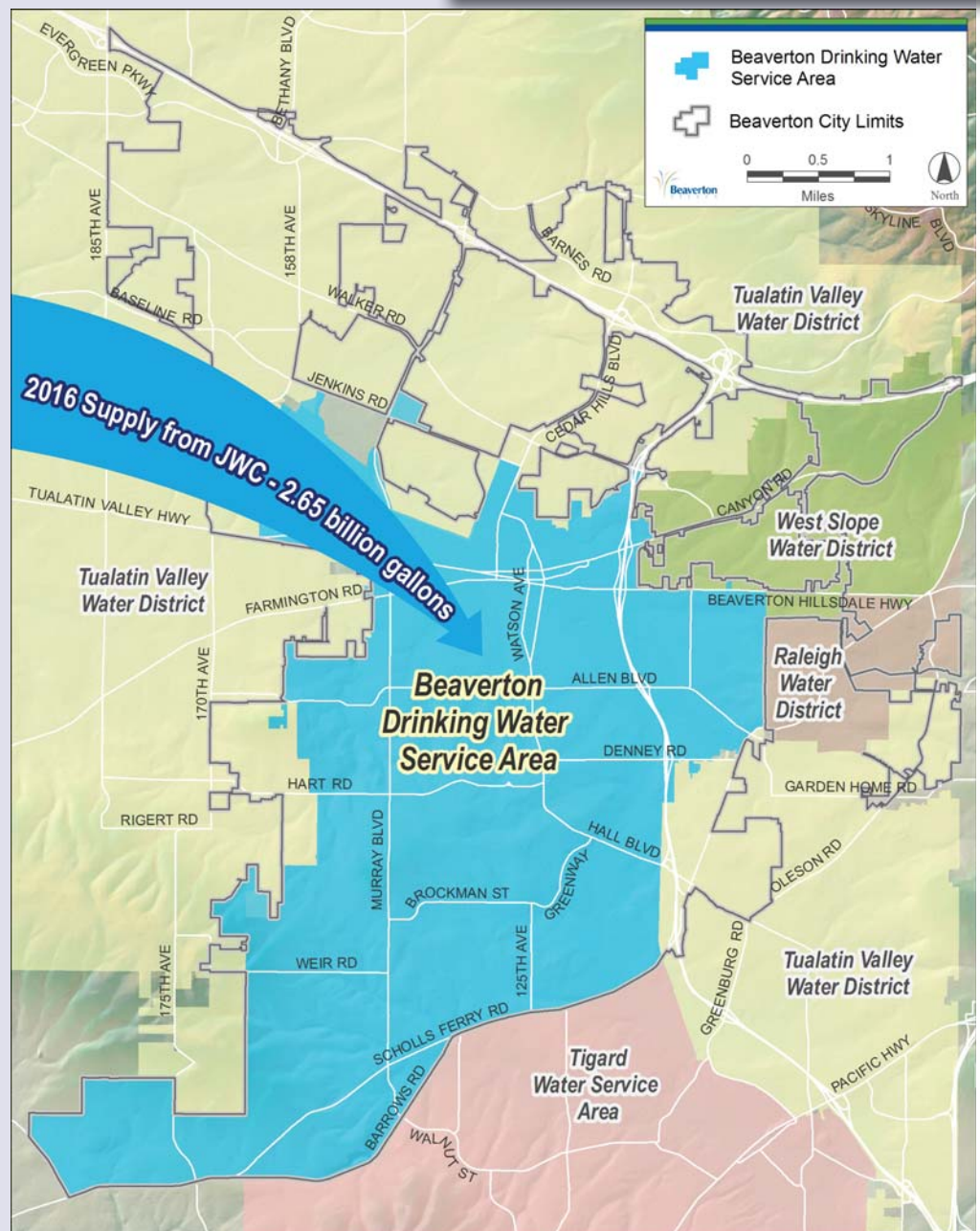
<http://www.deq.state.or.us/wq/dwp/docs/swasummary/pws00379985.pdf>.

Your Water is Our First Priority

Your City Water System at a Glance

Facts about the City's Water System:

- The distribution system includes five local water storage reservoirs, with a combined total storage volume of 28.25 million gallons (MG).
- The distribution system (separate from the Joint Water Commission (JWC) supply system) consists of approximately 276 miles of pipe, ranging from 4 to 36 inches in diameter.
- In 2016, the City consumed an average of 7.17 million gallons per day (mgd) or a total of 2.62 billion gallons of water for the year. August 19, 2016, was the highest demand day for the year, when the City consumed 12.34 MG of drinking water.
- The City has nearly a 4-day supply of stored drinking water in its local reservoirs.
- The distribution system contains four pumping stations that lift water from the largest water service pressure zone on the valley floor through pipes to the nine other higher-elevation water pressure zones within the City's water service area.
- The City's owned capacity in the JWC water treatment plant is 18.75 mgd.
- The City has an additional water supply of 5 mgd available from Aquifer Storage and Recovery (ASR) wells, commonly used only in the summer, but are available for emergency use year round.
- The City owns additional reservoir storage of 10 MG near the JWC water treatment plant.
- In addition to the JWC water and the City's ASR wells, there is an emergency supply capacity of 8 mgd available from two adjoining public water providers—Tualatin Valley Water District (TVWD) and the City of Portland.



City of Beaverton Water Quality Data

Major Sources of Water: Joint Water Commission Water Treatment Plant, and Aquifer Storage and Recovery Wells.

(Monitoring Data from 2016)

Regulated Substances						
	Unit of Measure	Federal/State Water Quality Standard/Goal	Range	Amount Detected	Regulatory Exceedance	Major Sources in Drinking Water
Inorganic Substances						
Barium	ppm	2 (MCL/MCLG)	0.002 to 0.005	0.005	No	Erosion of natural deposits and discharge from metal refineries
Chromium	ppb	100 (MCL/MCLG)	ND to 1.12	1.12	No	Erosion of natural deposits and discharge from steel and pulp mills
Fluoride (treatment plant and ASR wells)	ppm	4 (MCL/MCLG)	ND to 0.37	0.37	No	Erosion of natural deposits, water additive, and fertilizers
Fluoride (City meter)	ppm	4 (MCL/MCLG)	0.041 to 1.075	1.075	No	
Copper	ppm	1.3 (Action Level/MCLG)	ND to 0.247	0.169 ^a	No	Erosion of natural deposits and corrosion of household plumbing
Lead	ppb	15 (Action Level) 0 (MCLG)	ND to 6.8	ND ^a	No	
Nitrate	ppm	10 (MCL/MCLG)	0.18 to 0.52	0.52	No	Erosion of natural deposits, runoff from fertilizer use, leaching from septic tanks, sewage
Nitrite	ppm	1 (MCL/MCLG)	ND to 0.018	0.018	No	
Disinfection By-Products and Residuals within the Distribution System						
Total Trihalomethanes	ppb	80 (MCL)	23.3 to 56.7	39 ^b	No	By-product of drinking water disinfection
Total Haloacetic Acids	ppb	60 (MCL)	ND to 33.6	28 ^b	No	
Chlorine	ppm	4 (MRDL/MRDLG)	0.44 to 0.83	0.80 ^c	No	Water additive used to control microbes
Microbiological Contaminants and Treatment Considerations						
Total Organic Carbon	ppm	NA (TT)	ND to 1.67	1.67	No	Naturally present in the environment
Turbidity (JWC)	NTU	NA (TT)	0.02 to 0.05	0.05	No	Soil runoff
*100% of samples were below the turbidity limit set for the Joint Water Commission (JWC) water treatment plant.						

FOOTNOTES

^a Lead and Copper: the value shown is in the 90th percentile result of samples collected during the 2016 system-wide sampling event.

^b Total trihalomethanes and total haloacetic acids are monitored at eight locations within the distribution system. Locational running annual averages (LRAAs) are calculated quarterly at each location, and the value shown is the highest LRAA calculated for 2016.

^c The value shown is the maximum quarterly running annual average of samples collected in 2016.



Unregulated Substances

	Unit of Measure	Federal/State Water Quality Standard/Goal	Range	Amount Detected	Regulatory Exceedance	Major Sources in Drinking Water
Radon (ASR wells only)	pCi/L	NA	one sample	560	No	Erosion of natural deposits
Sodium	ppm	20 (Advisory Level)	7.9 to 13.1	13.1	No	Erosion of natural deposits and treatment additive
Chloride	ppm	250 (SMCL)	4.3 to 15	15	No	
Aluminum	ppb	50 to 200 (SMCL)	ND to 16	16	No	Erosion of natural deposits
Sulfate	ppm	250 (SMCL)	10 to 18	18	No	
Total Dissolved Solids	ppm	500 (SMCL)	63 to 146	146	No	Naturally occurring in water—depends on dissolved constituents

DEFINITIONS

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 allow for a margin of safety.

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.

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

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

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.

Maximum Residual Disinfectant Level Goal (MRDLG): 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 contamination.

Secondary MCL (SMCL): National Secondary Drinking Water Regulations (NSDWR or secondary standards) are nonenforceable guidelines regulating contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste or color) in drinking water. EPA recommends secondary standards to water systems, but does not require systems to comply. However, states may choose to adopt them as enforceable standards.

Advisory Level for Sodium: Sodium is included on EPA's list of contaminants that may require future regulation under the Safe Drinking Water Act. The advisory is based on aesthetic effects (taste) and is intended as a guideline for water providers.

NA: Not applicable

ND: Not detected

NTU: Nephelometric turbidity unit (measurement of cloudiness in water)

Part per Billion (ppb): One part substance per billion parts water (or microgram per liter)

Part per Million (ppm): One part substance per million parts water (or milligram per liter)

Picocurie per Liter (pCi/L): A unit of measure for the concentration of radiological substances in water

Turbidity: Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the water treatment plant filtration system.

Lead: If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Beaverton is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. 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 drinking or cooking. If you are concerned about lead in your water, consider having 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 (800-426-4791) or at <http://www.epa.gov/safewater/lead>.

Radon is a radioactive gas that you cannot see, taste, or smell. It is found throughout the United States. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can build up to high levels in all types of homes. Radon also can get into indoor air when released from tap water from showering, washing dishes, and other household activities. Compared to radon entering the home through soil, radon entering the home through tap water in most cases will be a small source of radon in indoor air. Radon is a known human carcinogen. Breathing air containing radon can lead to lung cancer. Drinking water containing radon also may cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy. Fix your home if the level of radon in your air is 4 picocuries per liter of air (pCi/L) or higher. There are simple ways to fix a radon problem that are not too costly. For additional information, (1) contact Oregon Health Authority's radon program at 971-673-0440 or visit the Web site at www.healthoregon.org/radon, or (2) call EPA's Radon Hotline (800-SOS-RADON).

Water Quality Information

Water Quality Testing



The City is committed to providing safe drinking water to its water consumers. To ensure that the City's drinking water meets state and federal drinking water standards, the City collects

an average of 140 water samples per month (1,680 samples per year) for testing by a state-certified laboratory. A table summarizing 2016 water quality data is provided in this report. For a fee, private laboratories will test your tap water for lead and other substances. Not all laboratories are certified to test for all contaminants. For information regarding water quality testing, consult the Oregon Drinking Water Program's Web site. Download a list of all laboratories certified by the Oregon Health Authority at:

<http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Documents/acclab.pdf>.

You will need the FREE Adobe Acrobat Reader to view these files.

Important Information about Water and Your Health

Some people may be more vulnerable to contaminants in drinking water than the general population.

Immune-compromised people, such as those with cancer undergoing chemotherapy, those 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's Center for Disease Control (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).

Safe Drinking Water Hotline

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. For more information about contaminants and potential health effects, call the the U.S. Environmental Protection Agency's (EPA) Safe Drinking Water Hotline at 1-800-426-4791.

Drinking Water Fluoridation

The City fluoridates drinking water to improve the dental health for consumers of Beaverton's water. The City's fluoridation system was completed, tested, and began service in mid-May 2004 with a target fluoridation level of 0.9 parts per million (ppm). Based on EPA recommendations, the City reduced the target fluoride level from 0.9 to 0.7 ppm in 2011.

Sodium fluoride is added to Beaverton's drinking water after it leaves the JWC water treatment plant and before entering the City for distribution. The City's fluoride facility employs sensitive instruments to measure and maintain the desired level of fluoride in the drinking water system. In addition, seven online electronic fluoride analyzers are situated in different locations throughout the City to monitor fluoride levels in the drinking water 24 hours a day.

The Value of Reliable Water

The value of a safe and reliable water supply, and the water system responsible for delivering it, is immeasurable. Beyond providing safe tap water that meets or exceeds state and federal regulatory standards, a quality, reliable water system supplies:

Public Health Protection ... Beaverton's water allows its customers to drink from any public tap with an assurance of highest quality.

Support for the Local Economy ... Residential and commercial customers can't thrive without safe and sustainable water. Tap water is critical for business operation, especially restaurants, and home activities.

Fire Protection ... Fire is a threat every community faces and a well-maintained water system is crucial in ensuring protection. A system that provides reliable water can be the difference between a small house fire and an urban inferno. The ability of a water system to suppress fires influences new home construction, business location decisions, and insurance rates.



Water Conservation

Regional Water Providers Consortium (RWPC)



The RWPC is a group of 20 local water providers. For more information and resources to help conserve water at your home or business, please visit the RWPC Web site at www.ConserveH2o.org.

"WaterSense" Rebate Program



The City's Water Conservation Program offers rebates toward the purchase of new high efficiency toilets (HET) and water-efficient clothes washers.

This program is for residential City water customers only.

To receive rebates, applicants must have a current Beaverton water account, and meet program eligibility requirements. In addition, customers must recycle old toilets to receive the HET rebate. Information about the rebate program, eligibility requirements, and a downloadable application can be found on the City's Web site: <http://www.BeavertonOregon.gov/ToiletRebate>.

For additional information, contact Shelley Searle at 503-526-2278 or email SSearle@BeavertonOregon.gov.



WaterSense is a voluntary public-private partnership program sponsored by the EPA that offers consumers a simple way to make product choices that use less water. For more information, please visit: www.epa.gov/WaterSense.



Opportunities for Public Involvement

For information about opportunities for public participation with the Beaverton City Council regarding drinking water, visit:

www.BeavertonOregon.gov/CouncilMeetings.



Water Questions? We Have Answers!

Water Billing Question?

Call 503-526-2257

Water Quality Question?

Call 503-781-0704

BDolbow@BeavertonOregon.gov

Water Conservation Question?

Call 503-526-2278

SSearle@BeavertonOregon.gov

Backflow Prevention Question?

Call 503-350-4042

CJack@BeavertonOregon.gov

Water Pressure Question?

Call 503-816-0217

Ttilander@BeavertonOregon.gov

Future Water Sources Question?

Call 503-526-2434

DWinship@BeavertonOregon.gov

Water Emergency?

Call 503-526-2220

After-hours Water Emergency?

Call 503-526-2260

Joint Water Commission Water Treatment Plant

The Joint Water Commission (JWC) is the primary drinking water supplier for Washington County, including Beaverton, and is responsible for treating, transmitting, and storing potable water for more than 365,000 customers.

Four agencies share ownership in the JWC - Cities of Hillsboro, Forest Grove, Beaverton and the Tualatin Valley Water District (TVWD). The JWC also wholesales water to the City of North Plains.



www.BeavertonOregon.gov/CCR

This information can be made available in large print or audio tape upon request. Assistive listening devices, sign language interpreters, or qualified bilingual interpreters can be made available at any public meeting or program with 72 hours advance notice. To request these services, please contact Shelley Searle at SSearle@BeavertonOregon.gov, or call 503-526-2278.