

# ANNUAL WATER QUALITY REPORT

REPORTING YEAR 2019



*Presented By*



**WESTMINSTER**

## Here When You Need It

The City of Westminster is proud to report no violations of Safe Drinking Water Act requirements in 2019. We present our water quality report that details testing performed in calendar year 2019. We are dedicated to producing drinking water that meets all state and federal standards and continually strive to adopt new methods for delivering the best-quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all our water users.

For more information about this report or any questions related to your drinking water, please call our Water Quality staff at (303) 658-2461.

## Community Participation

Citizens are invited to provide comments about drinking water quality at City Council meetings. Westminster City Council meets in regular session on the second and fourth Mondays of each month, at 7:00 p.m., in the Council Chambers at Westminster City Hall, 4800 W. 92nd Avenue. Refer to the City's website at [www.cityofwestminster.us](http://www.cityofwestminster.us) for changes to the meeting schedule and for remote meeting information.

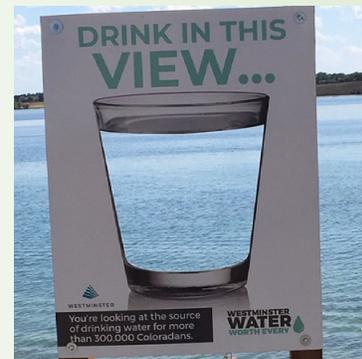
## Help Keep the Bucket Full

City staff fondly refer to Standley Lake as our "bucket" for holding all the raw source water that will become treated drinking water. Water Resources staff keep close tabs on the quantities of surface water that result from snow melt and rain in the Clear Creek basin. The water travels to the lake via three canal systems. Water conservation is a critical component for helping us keep the bucket as full as possible for years when water may not be as plentiful.

Westminster has actively promoted water conservation and efficiency since 1976, and is committed to promoting smart water use and water-wise development for all residents and businesses. Many of the measures implemented in the beginning are still part of our City's current conservation and efficiency programming. Today, our customers can utilize the following programs to help manage their water usage:

- Free irrigation system consultations
- Water-wise garden kit discounts
- Grass to Garden landscape remodel assistance
- Lawn removal service
- Income-qualified toilet replacement and leak repair

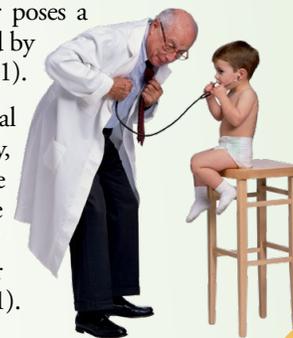
Learn more and sign up for these programs at: [www.CityofWestminster.us/Conservation](http://www.CityofWestminster.us/Conservation).



## Important Health Information

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 Environmental Protection Agency's Safe Drinking Water Hotline at (800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons 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. 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 at (800-426-4791).



## Source Water Assessment

The Colorado Department of Public Health and Environment (CDPHE) completed a Source Water Assessment Project (SWAP) for our water supply that provides a screening evaluation of potential contamination that could occur. It does not mean that the contamination has occurred or will occur. This information will be used to evaluate the need to improve our current water treatment capabilities and prepare for future contamination threats. A copy of the report is available at [www.colorado.gov/cdphedir/wq/swap/adams/101170westminstercityof.pdf](http://www.colorado.gov/cdphedir/wq/swap/adams/101170westminstercityof.pdf) or by contacting Westminster's Water Quality staff at (303) 658-2461. Potential sources of contamination to our source water include existing/abandoned mines, above-ground and underground leaking storage tanks, EPA abandoned contaminated sites and Superfund sites, EPA chemical inventory/storage site and toxic release inventory sites, EPA hazardous waste generators, permitted wastewater discharges, solid waste sites, forests, residential areas, urban recreational grasses, commercial/industrial transportation, quarries/strip mines/gravel pits, row crops, fallow and pasture/hay, septic systems, oil/gas wells, and roads.

## What's Your Water Footprint?

You may have some understanding about your carbon footprint, but how much do you know about your water footprint? The water footprint of an individual, community, or business is defined as the total volume of freshwater that is used to produce the goods and services that are consumed by the individual or community or produced by the business. For example, 11 gallons of water are needed to irrigate and wash the fruit in one half-gallon container of orange juice. Thirty-seven gallons of water are used to grow, produce, package, and ship the beans in that morning cup of coffee. Two hundred and sixty-four gallons of water are required to produce one quart of milk, and 4,200 gallons of water are required to produce two pounds of beef.



According to the U.S. EPA, the average American uses over 180 gallons of water daily. In fact, in the developed world, one flush of a toilet uses as much water as the average person in the developing world allocates for an entire day's cooking, washing, cleaning, and drinking. The annual American per capita water footprint is about 8,000 cubic feet; twice the global per capita average. With water use increasing six-fold in the past century, our demands for freshwater are rapidly outstripping what the planet can replenish. To check out your own water footprint, go to [www.watercalculator.org](http://www.watercalculator.org).

## Substances That Could Be in Water

In order to ensure that tap water is safe to drink, the Colorado Department of Public Health and Environment prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

The 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. 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, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may 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 may also come from gas stations, urban stormwater runoff, and septic systems;

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

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

## Lead in Home Plumbing

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. We are responsible for providing high-quality drinking water, but we 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, 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 at (800) 426-4791 or at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

## 2019 Test Results

Westminster's drinking water is monitored for many different kinds of substances on a very strict sampling schedule. The water we deliver must meet specific health standards. The following tables include testing results for substances that were detected in our drinking water in 2019. The amount detected is reported as the maximum range value unless otherwise specified.

We participated in the 4th stage of the U.S. EPA's Unregulated Contaminant Monitoring Rule (UCMR4) program by performing additional tests on our drinking water. UCMR4 sampling benefits the environment and public health by providing the U.S. EPA with data on the occurrence of contaminants suspected to be in drinking water, in order to determine if the EPA needs to introduce new regulatory standards to improve drinking water quality. The UCMR4 contaminants detected are included in the 2019 Test Results tables. All unregulated contaminant monitoring data are available to the public, so please feel free to contact us if you are interested in obtaining that information. For more information on UCMR4 contaminants, visit <https://drinktap.org/Water-Info/Whats-in-My-Water/Unregulated-Contaminant-Monitoring-Rule-UCMR>.

### REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Alpha Emitters (pCi/L)	2018	15	0	0.8	0.3–0.8	No	Erosion of natural deposits
Barium (ppm)	2019	2	2	0.055	0.047–0.055	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chloramines <sup>1</sup> (ppm)	2019	[4]	[4]	1.85	1.23–2.19	No	Water additive used to control microbes
Fluoride (ppm)	2019	4	4	0.65	0.61–0.65	No	Erosion of natural deposits
Haloacetic Acids [HAAs] <sup>2</sup> (ppb)	2019	LRAA < 60	NA	12.0	7.6–18.1	No	By-product of drinking water disinfection
Nitrate (ppm)	2019	10	10	0.04	0.04–0.04	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes] <sup>2</sup> (ppb)	2019	LRAA < 80	NA	37.1	26.0–49.8	No	By-product of drinking water disinfection
Total Organic Carbon <sup>2</sup> (ppm)	2019	RAA < 2	NA	1.5	1.19–1.97	No	Naturally present in the environment
Turbidity <sup>3</sup> (NTU)	2019	TT	NA	0.051	0.011–0.051	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2019	TT = 95% of samples meet the limit	NA	100	NA	No	Soil runoff
Uranium (ppb)	2018	30	0	1.1	ND–1.1	No	Erosion of natural deposits
Xylenes (ppm)	2019	10	10	0.00061	ND–0.00061	No	Facility maintenance products

Tap water samples were collected for lead and copper analyses from sample sites throughout the community.

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper <sup>4</sup> (ppm)	2019	1.3	1.3	0.20	0/54	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead <sup>5</sup> (ppb)	2019	15	0	3	0/54	No	Corrosion of household plumbing systems; Erosion of natural deposits

## Definitions

**90th %ile:** The levels reported for lead and copper represent the 90th percentile of the total number of sites tested. The 90th percentile is equal to or greater than 90% of our lead and copper detections.

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

**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.

**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.

**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.

**NA:** Not applicable

**ND (Not detected):** Indicates that the substance was not found by laboratory analysis.

**NTU (Nephelometric Turbidity Units):** Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

**pCi/L (picocuries per liter):** A measure of radioactivity.

**ppb (parts per billion):** One part substance per billion parts water (or micrograms per liter).

**ppm (parts per million):** One part substance per million parts water (or milligrams per liter).

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

## UNREGULATED CONTAMINANT MONITORING RULE - PART 4 (UCMR4)

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED <sup>6</sup>	RANGE LOW-HIGH	TYPICAL SOURCE
<b>Bromochloroacetic Acid</b> (ppb)	2019	4.1	3.4–5.3	By-product of drinking water disinfection
<b>Bromodichloroacetic Acid</b> (ppb)	2019	2.8	2.3–3.9	By-product of drinking water disinfection
<b>Chlorodibromoacetic Acid</b> (ppb)	2019	1.6	1.2–2.2	By-product of drinking water disinfection
<b>Manganese</b> (ppb)	2019	1.0	0.43–1.9	Naturally occurring element; Commercially available in fertilizer, batteries, and fireworks
<b>Tribromoacetic Acid</b> (ppb)	2019	2.4	2.1–2.5	By-product of drinking water disinfection

<sup>1</sup>The Amount Detected for Chloramines represents the average of individual sample results collected in the distribution system. 100% of the samples collected at the entry points to the distribution system met the TT requirement that at least 95% of samples collected in one month must be at least 0.2 ppm.

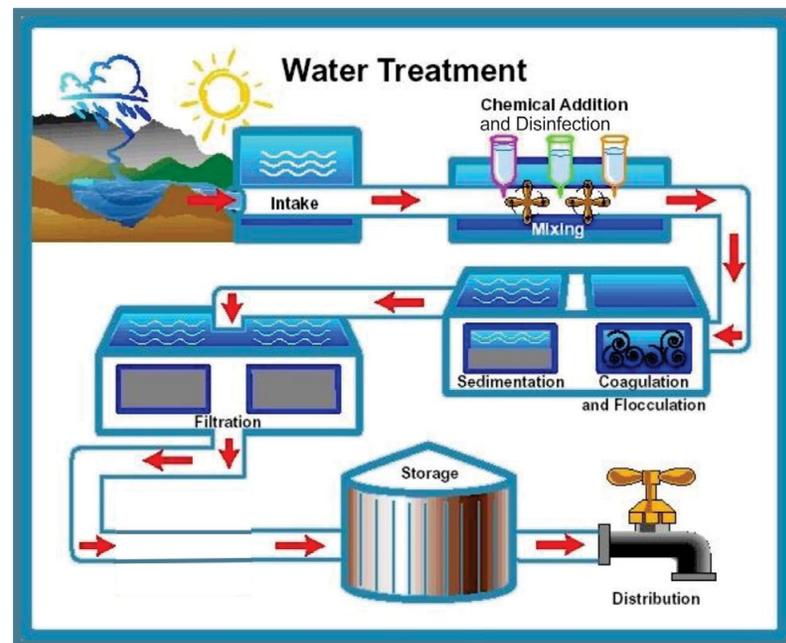
<sup>2</sup>Total Organic Carbon is regulated as quarterly running annual average (RAA). HAA and TTHM are regulated as locational running annual average (LRAA). The Amount Detected represents the highest RAA or LRAA, and the Range Low-High represents individual sample results.

<sup>3</sup>Turbidity is measured at the water treatment plant to assess cloudiness of the water as a good indicator of the effectiveness of the filtration process. The TT requires that a maximum single sample result must not exceed 0.5 NTU and, in any month, at least 95% of samples must be less than 0.1 NTU. The highest turbidity reading was recorded in October 2019.

<sup>4</sup>Copper was measured at residential taps throughout the City in 2019. The Action Level (AL) for copper applies to the 90th percentile of all samples collected (i.e., 90% of all sample results for copper must be below 1.3 ppm). The range of copper results was 0.012 - 0.83 ppm. None of the sample results exceeded the Action Limit.

<sup>5</sup>Lead was measured at residential taps throughout the City in 2019. None of the sample results exceeded the Action Limit. The Action Level (AL) for lead applies to the 90th percentile of all samples collected (i.e., 90% of all samples for lead must be below 15 ppb). The range of lead results was <1 - 11 ppb.

<sup>6</sup>The Amount Detected for UCMR4 analytes is the average concentration for all samples collected.



WATER TREATMENT FACILITIES	SEMPER	NORTHWEST
<b>Production capacity (million gallons per day)</b>	44	15
<b>Filtration type</b>	conventional	membranes
<b>Disinfection</b>	chloramines	chloramines
<b>Year built</b>	1969	2001

### ADDITIONAL DRINKING WATER DATA FOR 2019

Analyte	Concentration Range
<b>Total Dissolved Solids</b>	189 - 281 ppm
<b>pH</b>	8.2 - 9.0
<b>Conductivity</b>	312 - 481 $\mu$ S/cm
<b>Alkalinity (as CaCO<sub>3</sub>)</b>	50 - 70 ppm
<b>Total Hardness (as CaCO<sub>3</sub>)</b>	100 - 150 ppm = approximately 8 to 9 grains per gallon
<b>Sodium</b>	30 ppm
<b>Ammonia (as N)</b>	0.24 - 0.61 ppm

