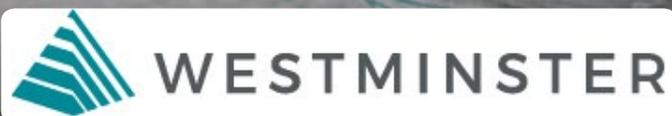
A close-up photograph of water being poured from a glass pitcher into a clear glass. The water is captured mid-pour, creating a dynamic splash and bubbles. The background is a blurred wooden surface.

ANNUAL WATER QUALITY REPORT

REPORTING YEAR 2018

Presented By



Este informe contiene información muy importante sobre su agua potable.
Tradúzcalo o hable con alguien que lo entienda bien.

PWS ID#: CO0101170

Our Mission Continues

We are once again pleased to present our annual water quality report covering all testing performed between January 1 and December 31, 2018. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We 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.

Please remember that we are always available should you ever have any questions or concerns about your water.

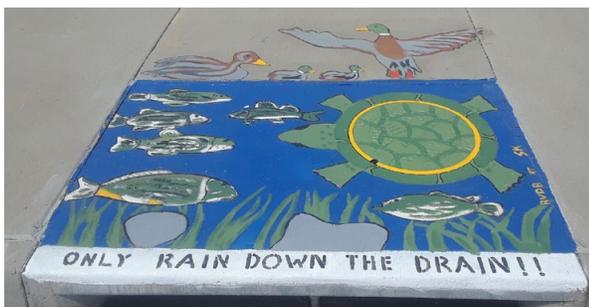
Lead in Home Plumbing

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.

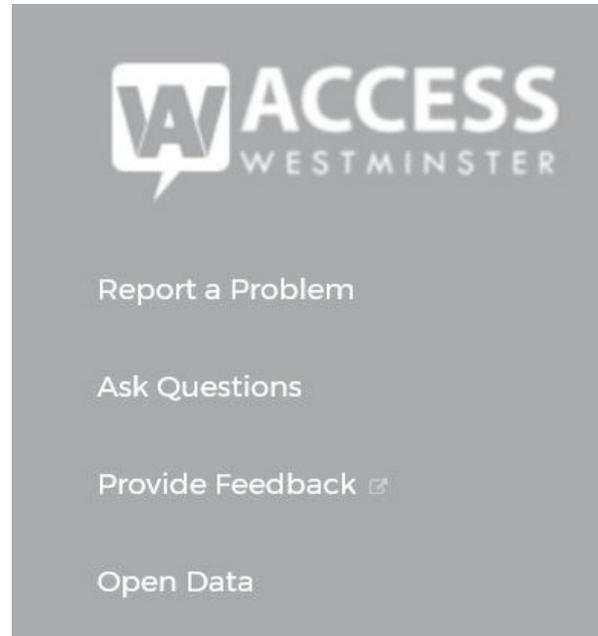
YOU can be a protector of water:

- Recognize the value of water - every drop counts
- Heed water conservation recommendations
- Keep pollutants and trash out of waterways
- Evaluate your irrigation usage and landscaping choices for water-wise options
- Visit the City's website for ways YOU can make a difference.

www.cityofwestminster.us/publicworksutilities



Find Answers to FAQs at www.cityofwestminster.us.



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 Web site at www.cityofwestminster.us for changes to the meeting schedule.

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.





Water quality and flow monitoring station on Clear Creek

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.

Monitoring Quality of the Source Water

Surface water is transported in Clear Creek from the Continental Divide down to the City of Golden and through three canal systems to Standley Lake. Water quality is checked during low flow conditions, storm events and high runoff flows. Monitoring stations, equipped with testing probes, transmit data back to the laboratory and automatically collect samples under prescribed conditions. A YSI profiler collects data at one meter intervals from the surface of the lake to the bottom four times each day.



YSI profiler - automated water quality monitor on Standley Lake

Source Water Assessment

The Colorado Department of Public Health and Environment (CDPHE) completed a Source Water Assessment Project report (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 or by contacting Westminister'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.

QUESTIONS?

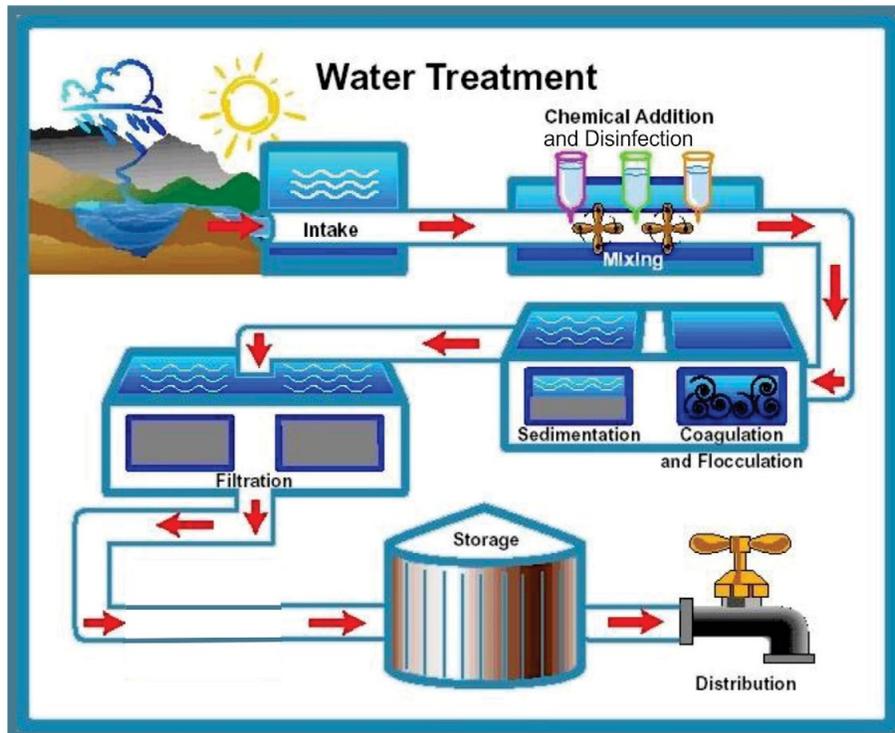
For more information about this report or any questions related to your drinking water, please call our Water Quality staff at (303) 658-2461.



Water Quality staff participate in numerous planning efforts focused on improving and protecting the source water flowing into Standley Lake. Impacts from mining, transportation, wildfire, wastewater treatment, recreation, population growth, climate change and invasive species such as zebra mussels (ZM) and milfoil can all affect the quality of the water. Treatment is not a substitute for good source water; therefore protecting water quality is a priority.

ADDITIONAL DRINKING WATER DATA FOR 2018

Analyte	Concentration Range
Total Dissolved Solids	191 - 246 ppm
pH	7.7 - 9.0
Conductivity	302 - 422 μ S/cm
Alkalinity (as CaCO ₃)	52 - 64 ppm
Total Hardness (as CaCO ₃)	100 - 135 ppm = approximately 7 to 8 grains per gallon
Sodium	21 ppm
Ammonia (as N)	0.3 - 0.5 ppm



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

2018 Test Results

Our 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 tables include only regulated contaminants that were detected in the drinking water in 2018. The amount detected is reported as the maximum range value unless otherwise specified. The state recommends monitoring for certain substances less frequently than once per year because the concentrations of these substances do not change significantly. In these cases, the most recent sample data collected in the past 5 years is included in the table.

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)	2018	2	2	0.053	0.045–0.053	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chloramines ¹ (ppm)	2018	[4]	[4]	1.9	1.0–2.5	No	Water additive used to control microbes
Chromium (ppb)	2018	100	100	1	ND–1	No	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride (ppm)	2018	4	4	0.54	0.53–0.54	No	Erosion of natural deposits
Haloacetic Acids [HAAs] ² (ppb)	2018	LRAA < 60	NA	9.6	7.6–13	No	By-product of drinking water disinfection
Nitrate (ppm)	2018	10	10	0.02	0.02–0.02	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes] ² (ppb)	2018	LRAA < 80	NA	29	24–35	No	By-product of drinking water disinfection
Total Organic Carbon ³ (ppm)	2018	RAA < 2	NA	1.9	1.34–1.9	No	Naturally present in the environment
Turbidity ⁴ (NTU)	2018	TT	NA	0.074	0.011–0.074	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2018	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 (ppb)	2018	10,000	10,000	0.68	0.68–0.68	No	Solvent fumes due to water treatment facility maintenance activities

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 ⁵ (ppm)	2018	1.3	1.3	0.25	0/56	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead ⁶ (ppb)	2018	15	0	4	1/56	No	Corrosion of household plumbing systems; Erosion of natural deposits

¹The 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 mg/L.

²HAAs and TTHMs are regulated as locational running annual average (LRAA). The Amount Detected represents the highest LRAA and the Range Low-High represents individual sample results.

³Total Organic Carbon is regulated as a quarterly running annual average (RAA). The Amount Detected represents the highest RAA and the Range Low-High represents individual sample results.

⁴Turbidity 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 result was recorded in February 2018.

⁵Copper was measured at residential taps throughout the City in 2018. 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 0.028 - 0.33 ppm. None of the sample results exceeded the Action Limit.

⁶Lead was measured at residential taps throughout the City in 2018. The Action Level (AL) for lead applies to the 90th percentile of all samples collected (i.e. 90% of all samples tested for lead must be below 15 ppb). The range of lead samples was <1 to 7 ppb, with one result at 41 ppb due to sampling error. The tap was retested with a result of 5 ppb. The system was not in violation based on one sample result above the AL.



Source Water Impacts: Water pipe clogged with zebra mussels

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.

LRAA (Locational Running Annual Average): The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters. Amount Detected values for TTHMs and HAAs are reported as the highest LRAAs.

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.

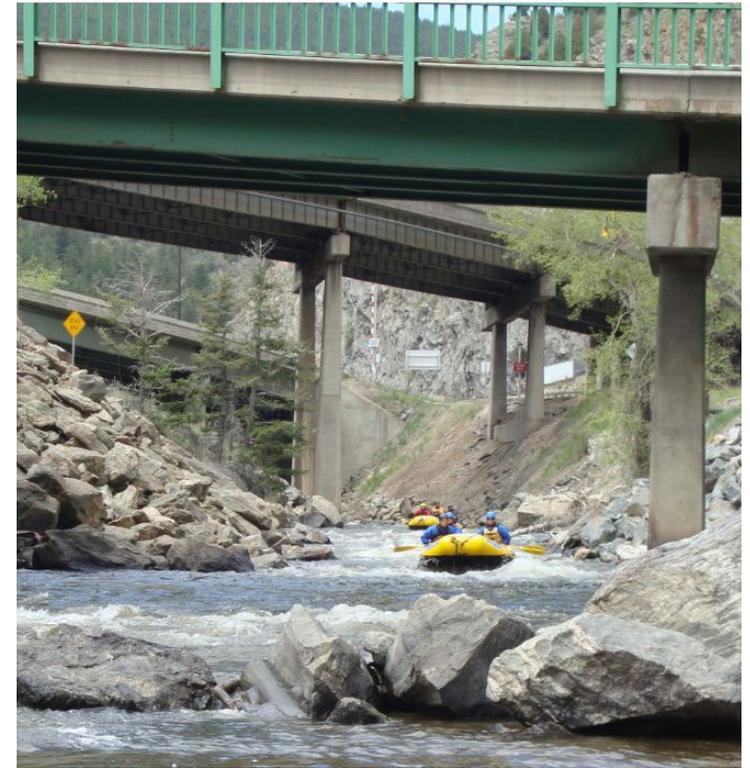
NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

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.



Source Water Impacts: Highways and recreation

