



WESTMINSTER

PUBLIC WATER SYSTEM ID# CO-101170

2010 Water Quality Report

The City of Westminster provides its customers with drinking water that surpasses all regulatory expectations for quality. As a drinking water supplier, we are required annually by the Safe Drinking Water Act to summarize the water quality for our customers. We also welcome this opportunity to provide you with information about your water supply source, the treatment process and the effective management of potential risks within the system. Our customers play a significant role in maintaining the highest quality

drinking water for the entire community and we appreciate the time you take to read this report, recognize your role and promote responsible action by everyone in the watershed.

Our goal is to serve you. If you would like more information about any topic in this report, please call the City of Westminster Water Quality Hotline at 303-658-2461 or e-mail us at water@cityofwestminster.us. This report is available on the City of Westminster website at www.cityofwestminster.us



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Where does our water come from?

Westminster's water supply is stored in Standley Lake until it is delivered to the water treatment facility for treatment and distribution. The source of the surface water that fills Standley Lake originates as rain or snow at the Continental Divide in the Upper Clear Creek Watershed. The water flows down Clear Creek and is transferred to Standley Lake by way of three diversion canals. Standley Lake holds 13 billion gallons of water.

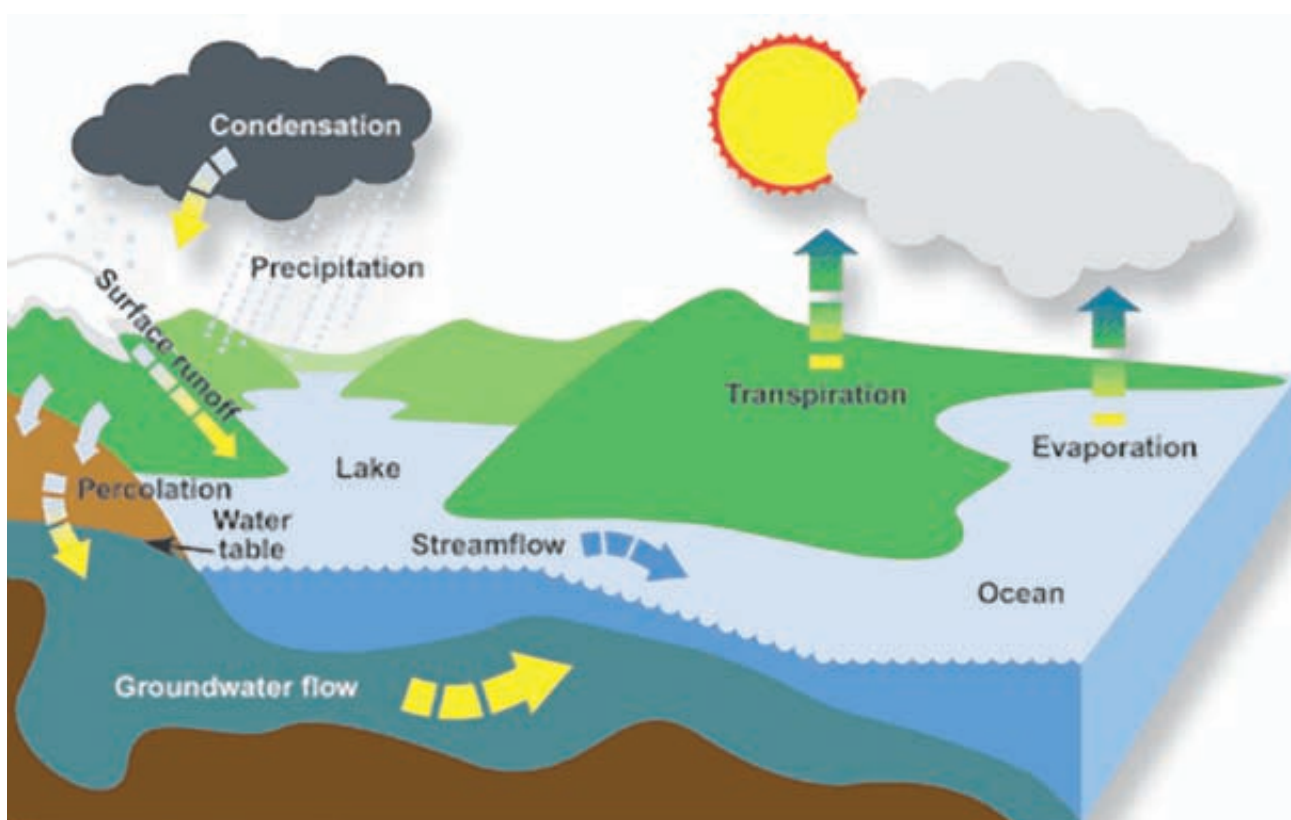
As of March 2010, the source for all drinking water distributed to Westminster residents is drawn from Standley Lake and treated at Westminster water treatment facilities, thus ending a nearly 30-year arrangement with the City of Thornton to supplement our treated drinking water supply.



Why is it important to keep the water source as clean as possible?

Water is not a renewable resource – it is a reusable resource. The amount of water on the planet doesn't change. The water cycle (see diagram) demonstrates how the form of water changes, but the quantity remains the same. Only 1% of the water on Earth is suitable for drinking; therefore, it is important to use clean water wisely and protect its purity. Keeping the source water clean means we can operate the water treatment plants efficiently and cost effectively, while assuring a high-quality drinking water.

WATER CYCLE:
The water cycle demonstrates how the form of water changes, but the quantity remains the same.

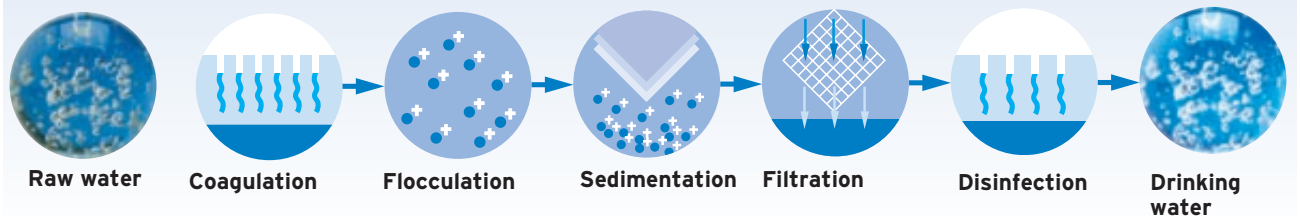


How does the water treatment facility clean the source water?

Westminster's two water treatment facilities are capable of treating 59 million gallons of lake water per day. The treatment process begins with the initial chemical assessment of the source water coming into the facility from the lake. Water quality changes based on lake conditions; therefore, it is critical that the treatment process is monitored 24 hours a day, every day of the year. Certified water treatment operators continuously adjust and balance treatment options to provide consistent quality in the treated water delivered to consumers.

Chemicals are added during the water treatment coagulation process in order to remove harmful chemicals that may be found in the source water. By means of flocculation, small source water particles are clumped together and allowed to settle out of the water before the final filtration and disinfection phases in the treatment process.

WATER TREATMENT PROCESS



Protecting water sources requires forming cooperative partnerships in order to share information, identify potential risks, optimize resources and achieve progress toward common goals. It is important to educate municipal leaders, business owners and citizens about the importance of protecting water quality. In partnership with the cities of Northglenn and Thornton, Westminster received a grant from the Colorado Department of Public Health and Environment in 2008 to work with interested stakeholders to develop a source water protection plan, which was completed in early 2010. Westminster is leading the development of a source water protection project that will focus on emergency notification of incidents in the upper watershed that may affect water quality for downstream uses. Such incidents may include traffic accidents that release hazardous materials into Clear Creek or contaminated water released from old mining sites in Clear Creek County. The emergency notification system will provide downstream users time to take action to protect drinking water reservoirs from contaminants.

How does drinking water get to my faucet?

Water leaving the water treatment facility is piped to customers or to storage tanks. Storage tanks hold treated drinking water for times when the usage by consumers is more than usual – think about a hot summer day or early mornings when most families are getting ready for work and school. The storage tanks also hold the large volumes of water necessary for fighting fires. It is important that the water treatment facility is aware of how long the water is stored in the tanks to ensure the quality remains acceptable for all uses.

The nearly 500 miles of pipes used to move drinking water from the treatment plants and storage tanks to consumers' taps are monitored weekly to ensure water meeting the Safe Drinking Water Act standards is delivered to every customer. Occasionally it becomes necessary to flush the fire hydrants in a section of the city where the water may not circulate adequately due to various factors. Be assured that the city is not wasting water. For the health of the entire system, hydrant flushing is performed only as needed.

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FREE services that help customers conserve water and protect water quality

Slow the Flow

At least 30% of residential use of drinking water is for landscape irrigation. The City of Westminster is offering FREE residential irrigation system audits through Slow the Flow Colorado. An auditor will inspect your yard and irrigation system, highlighting any needed improvements and creating a custom watering schedule for your lawn. This program is very popular and fills up fast each year we offer it. To schedule your free irrigation audit, please contact the Center for ReSource Conservation at www.conservationcenter.org or call 303-999-3820, ext. 217. Audits are available on a first-come, first-served basis to City of Westminster single-family water customers with automatic irrigation systems, who have not previously received a free Slow the Flow irrigation audit.



Household Hazardous Waste Pickup

Keep chemicals out of landfills and waterways. The city has contracted with Curbside HHW Inc. to collect household hazardous waste from your home. This service is offered FREE to Westminster residents only. For more information call 303-706-3362.

Contact Us

The Water Quality Laboratory staff welcomes the opportunity to address your questions or concerns. The laboratory is staffed Monday through Friday from 7 a.m. to 3:30 p.m.

Water Quality Hotline
303-658-2461

Water Quality e-mail
www.water@cityofwestminster.us

Water Conservation or Landscaping
303-658-2386

If you have an immediate concern about the water quality in your home after normal business hours, please phone the Water Treatment Plant operator on duty at 303-658-2447.

Public Comment

Citizens are invited to provide comments at City Council meetings. Westminster City Council meets in regular session on the second and fourth Monday of each month. Meetings are at 7 p.m. in the Council Chambers at Westminster City Hall, 4800 W. 92nd Ave.



WATERSHED ASSESSMENT

The Colorado Department of Public Health and Environment has provided us with a Source Water Assessment Report for our water supply. The Source Water Assessment Report provides a screening evaluation of potential contamination that could occur. It does not mean that the contamination has 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. You may obtain a copy of the report by visiting <http://www.cdph.state.co.us/wq/sw/swapreports/swapreports.html> or by contacting the Water Quality Hotline at 303-658-2461.

Potential sources of contamination to our source water include existing/abandoned mines, above-ground/underground and leaking storage tanks, EPA abandoned contaminated sites and Superfund sites, EPA chemical inventory/storage sites 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 road miles.

ALERT

If someone comes to your door and says the city needs to test your water, ask them for their identification. All City of Westminster employees carry an ID badge and drive a city vehicle when sampling. When the city requests a sample of your water, the employee will not enter your house unless previously arranged with you. Samples are usually collected from an outside tap. Salespeople for home water systems may try to gain entrance to your home by implying they are with the city. Beware! When in doubt, call the city at 303-658-2461.

UCMR2 RESULTS AVAILABLE

The Unregulated Contaminant Monitoring Rule (UCMR) is a tool for the U.S. Environmental Protection Agency (EPA) to find unregulated contaminants of concern in the nation's drinking water. The Safe Drinking Water Act gives EPA the responsibility to protect public health and to set minimum standards for drinking water. As a part of this process, EPA works with local water systems to periodically test the water that is delivered to consumers' homes for contaminants that are not regulated. This helps EPA to know whether these contaminants occur often enough and at high enough levels to warrant further attention. This testing takes place as part of the Unregulated Contaminant Monitoring Regulation, or UCMR. The second cycle of UCMR testing, called UCMR2, required testing for 25 contaminants. EPA required all public water systems serving more than 10,000 people to participate. Westminster completed sampling for UCMR2 compliance in 2009. Only one compound, N-nitrosodimethylamine (NDMA), was detected in one distribution system sample during January 2009 at a concentration of 0.2 parts per trillion; which is the lowest concentration the analytical instrumentation can reliably detect. NDMA is a chemical compound that can form when disinfectants are added to water to kill microbes. EPA will evaluate the results of the nationwide study to determine the need for regulation under the Safe Drinking Water Act.

Additional information on UCMR is available at www.epa.gov/safewater/ucmr/index.html.

OTHER CHEMICALS IN THE DRINKING WATER

| Analyte | Concentration Range |
|--|---|
| Total Dissolved Solids | 150 - 230 ppm |
| Sulfate | 51 ppm |
| pH | 7.4 - 8.7 |
| Conductivity | 272 - 363 umhos/cm |
| Alkalinity (as CaCO ₃) | 51 - 64 ppm |
| Total Hardness (as CaCO ₃) | 100 ppm = approximately 6 grains per gallon |
| Sodium | 13 - 31 ppm |
| Ammonia (as N) | 0.13 - 0.8 ppm |

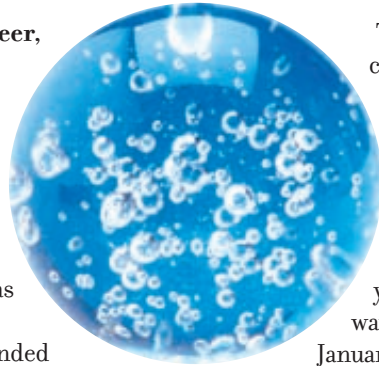
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2009 Drinking Water Results

Elements/chemicals found in drinking water

Esta es informacion importante. Si no la pueden leer, necesitan que alguien se la traduzca.

All drinking water supplied to Westminster residents met the quality criteria established by the state. Although additional tests were performed on the drinking water, only detectable concentrations of reportable contaminants are listed in the table below. A portion of the Westminster drinking water supply was provided by the City of Thornton in 2009. The water treated by Thornton may be distributed directly or blended with Westminster treated water in the distribution system.



The State of Colorado requires monitoring for certain contaminants in drinking water less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. Some of our data, though representative, may be more than one year old. This table summarizes the results of water quality monitoring for the period of January 1 to December 31, 2009, unless otherwise noted. The "Range" column in the table below will show a single value for those contaminants that were sampled only once.

| Contaminant Detected | Reporting Units | Year Sample Collected | Maximum Detected Concentration | Range of Detected Concentrations | MCL/MRDL | MCLG/MRDLG | Violation? | Major Sources of Contaminant |
|--|-----------------------------|-----------------------|--------------------------------|--|--|------------|------------|--|
| Inorganic Contaminants | | | | | | | | |
| Barium ¹ | ppm | 2009 | 0.04 | 0.016 - 0.04 | 2 | 2 | NO | Discharge of drilling waste; discharge from metal refineries; erosion of natural deposits |
| Chromium ² | ppb | 2009 | 2 | 1 - 2 | 100 | 100 | NO | Erosion of natural deposits |
| Copper | ppm | 2008 | 0.82 | 0.01 - 0.82 | 90th percentile = 0.48 | 1.3 | NO | Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives |
| Lead | ppb | 2008 | 14 | 3 - 14 | 90th percentile = 3 | 0 | NO | Corrosion of household plumbing systems; erosion of natural deposits |
| Fluoride ¹ | ppm | 2009 | 0.9 | 0.6 - 0.9 | 4 | 4 | NO | Erosion of natural deposits |
| Nitrate (as N) ¹ | ppm | 2009 | 0.6 | 0.03 - 0.6 | 10 | 10 | NO | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits |
| Microbiological Contaminants | | | | | | | | |
| Turbidity ¹ | NTU | 2009 | 0.36 | 0.01 - 0.36 | TT - 95% of samples < 0.3; 99% of samples < 0.3 | n/a | NO | Soil runoff - measured at the water treatment plant |
| Total Organic Carbon (as RAA) | ppm | 2009 | Highest quarterly RAA = 1.5 | 1.3 - 1.5 | TT - RAA < 2 | n/a | NO | Naturally present in the environment |
| Total Organic Carbon ² | RAA removal ratio | 2009 | 1 | 1 | TT - Removal ratio RAA > 1 | n/a | NO | Naturally present in the environment |
| Total Coliform Bacteria | greatest monthly % positive | 2009 | 0.83% positive in March | 1 positive in 120 samples collected in March | < 5% monthly positive for coliform | 0 | NO | Naturally present in the environment |
| Organic Contaminants | | | | | | | | |
| Chloramines (as Cl ₂) | ppm | 2009 | 2.9 | 0.06 - 2.9 | RAA < 4; No more than 5% in one month non-detect | n/a | NO | Water additives used to control microbes - measured in the distribution system |
| Chloramines (as Cl ₂) ¹ | ppm | 2009 | 2.9 | 1.0 - 2.9 | MRDL = 4 | MRDLG = 4 | NO | Water additives used to control microbes - measured at the water treatment plant |
| Haloacetic Acids (HAA) | ppb | 2009 | Highest RAA = 14 | 5.0 - 17.8 | RAA = < 60 | n/a | NO | By-product of drinking water disinfection |
| Total Trihalomethanes (TTHM) | ppb | 2009 | Highest RAA = 26 | 19.4 - 32.2 | RAA = < 80 | n/a | NO | By-product of drinking water disinfection |
| 2,4-D ² | ppb | 2009 | 0.2 | 0.2 | 70 | 70 | NO | Runoff from herbicide application |
| Radioactive Contaminants | | | | | | | | |
| Alpha Emitters ¹ | pCi/L | 2009 | 3 | 0.2 - 3 | 15 | 0 | NO | Erosion of natural deposits |
| Beta/Photon Emitters ¹ | pCi/L | 2009 | 2.1 | 0.1 - 2.1 | 50 ³ | 0 | NO | Decay of natural and man-made deposits |

TABLE NOTES

(1) The range of detected concentrations includes water that was treated by Westminster and Thornton.

(2) The range of detected concentrations includes water that was treated by Thornton.

(3) The MCL for beta particles is 4 mrem/yr. The EPA considers 50 pCi/L to be the level of concern for beta particles.

KEY TO TABLE

= Equals
< Less than
> Greater than
AL Action Level
Cl₂ Chlorine

HAA Haloacetic Acids
MCL Maximum Contaminant Level
MCLG Maximum Contaminant Level Goal
µg/L Microgram per liter or

ppb
MRDL Maximum Residual Disinfectant Level
MRDLG Maximum Residual Disinfectant Level Goal
n/a Not applicable

N Nitrogen
NTU Nephelometric Turbidity Units
ppb Parts per billion or micrograms per liter (µg/L)
ppm Parts per million or mil-

ligrams per liter (mg/L)
pCi/L Picocuries per liter
RAA Running Annual Average
TT Treatment Technique
TTHM Total Trihalomethanes
TOC Total Organic Carbon

DEFINITIONS

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

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

Health Information

The quality of your drinking water is a top priority for the City of Westminster. To ensure that tap water is safe to drink, the Environmental Protection Agency (EPA) prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water that must provide similar protection for public health. The presence of contaminants does not necessarily indicate that water poses a health risk. Both public and bottled water sources may reasonably be expected to contain at least small amounts of some contaminants.

The sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of land or through the ground, it dissolves naturally occurring minerals and radioactive material. The water may also pick-up substances resulting from the presence of animals or human activity. Contaminants that may be present in drinking water include:

A: Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

B: Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

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. Westminster 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, 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 <http://www.epa.gov/safewater/lead>.

C: Pesticides and herbicides, which may come from a variety of sources such as agriculture, stormwater runoff, and residential uses.

D: Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production which can also come from gas stations, urban stormwater runoff and septic systems.

E: Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

Other Contaminants

The EPA and the Center for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and Giardia are available from the Safe Drinking Water Hotline at 800-426-4791. The City of Westminster tested for and did not detect Cryptosporidium or Giardia in the finished water in 2009.

Some people may be more vulnerable to contaminants in drinking water than is the general population. Immuno-compromised 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 can be particularly at risk from infections. These people should seek advice about drinking water from their healthcare providers. To learn more about contaminants and potential health effects, call the EPA's Safe Drinking Water Hotline at 800-426-4791.