



AURORA WATER

2012 Water Quality Report



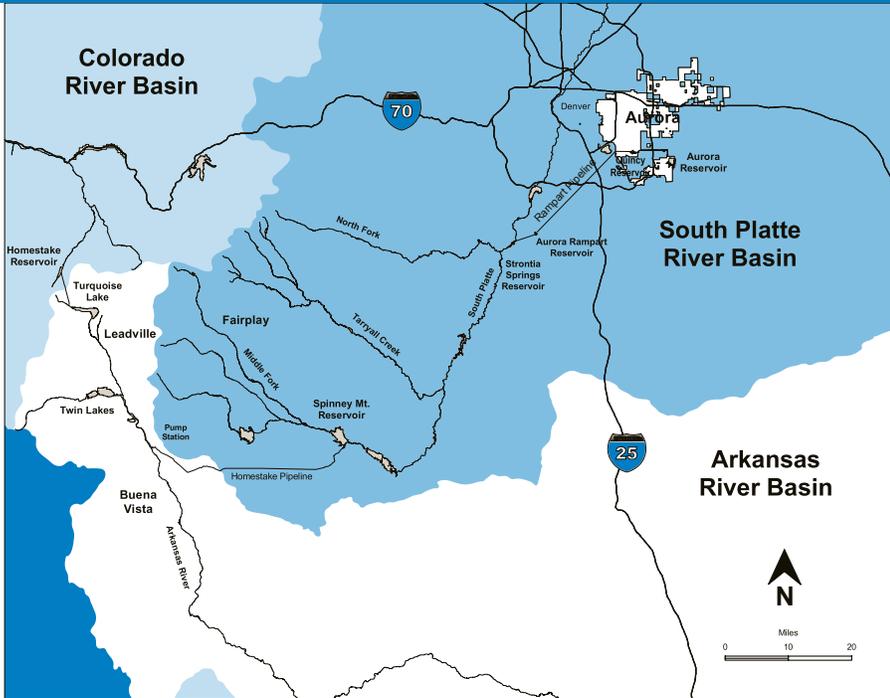
drink it up.



Quality. Service. Reliability.

The next time you turn on your faucet and grab an ice cold glass of water, taste it. Really taste it. The water in Aurora is, simply put, some of the best H2O around, and we have won many awards to prove it. At Aurora Water, delivering safe, high-quality water to your home is our top priority. You can learn more about our water in this EPA-mandated disclosure of our performance. If you have any questions or need any additional information, feel free to call us or go to aurorawater.org.

Where your water comes from



In Colorado, we rely heavily on snowmelt for our water supply, but from year to year, it can be difficult to predict how much will be available. In Aurora, through the combined use of reservoirs, the natural river system, pipes, tunnels and pumps, water is transported from as far as 180 miles away to ensure a reliable water supply for Aurora residents and businesses. Most of our water comes from three of the seven major river basins: the Colorado, Arkansas and South Platte. Aurora also receives a small percentage of water from aquifers, which are essentially underground rivers. That water is then stored in 12 reservoirs and lakes: Aurora, Homestake, Turquoise, Twin Lakes, Spinney Mountain, Jefferson, Strontia Springs, Rampart, Quincy, Pueblo, Henry and Meredith.

To protect the city in drought years, we recently added a new water system that will ensure an ample water supply for years to come. The latest addition, Prairie Waters, begins in Brighton, where water from the lower South Platte is piped 34 miles to the Peter D. Binney Water Purification Facility, a state-of-the-art, 70-acre campus that has some of the most advanced purification processes available today.

Colorado Source Water Assessment and Protection is a state program designed to provide consumers with information about their drinking water, as well as provide opportunities for public involvement. At this time, Aurora Water's Colorado State Source Water Assessment Report is in the process of being reviewed by CDPHE. When the report is complete, it will be available by calling 303-739-6770 or by visiting cdphe.state.co.us/wq/sw/swaphom.html.

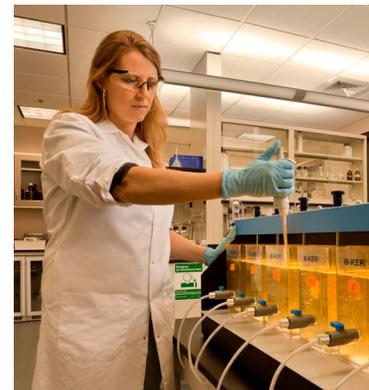
Aurora Water's goal is to provide outstanding service and clean, safe drinking water to all of its customers. We take great pride in the quality of our water and are proud to be recognized as one of the top water departments in the country. Recognition as the only utility in the United States to have two water purification facilities to receive the "Excellence in Water Treatment" designation through the Partnership for Safe Water. Partnership for Safe Drinking Water is a voluntary program that began in 1994 to encourage cities to increase their water quality and safety standards. The standards encourage cities to optimize treatment plant performance to increase protection against microbial contamination, which can create a public health risk. The Partnership program is sponsored by American Water Works Association (AWWA), United States Environmental Protection Agency and four other national drinking water organizations.

In order to receive the designation, staff had to pass a rigorous evaluation after undergoing three levels of review that required extensive documentation of a variety of components, including evidence of staff training and development, equipment testing and monthly water quality statistics.

Numerous other awards demonstrate our ongoing commitment of delivering the best possible product for our citizens. For instance, we won the Rocky Mountain Section AWWA Taste Test for the second time in three years and Prairie Waters, our newest water system, has been recognized by countless organizations. In fact, every division in the department has received a professional award or recognition of some type.

The awards and recognition are impressive but what really makes us proud is serving our customers superior drinking water with top-notch service each and every day. We do it because you matter to us.

Life is complicated. Paying your bill shouldn't be.
We have a wide range of options so you can pay your bill in the way that works best for you, whether it's dropping it off, calling in a payment or paying online. For more information on all of our billing options, go to aurorawater.org or call us at 303-739-7388.



aurorawater.org

Table of Detected Contaminants

Microbiological Contaminants	Violation	Units	MCL	MCLG	Level Detected	Range	Sample Date	Typical Source of Contamination
Total Coliform Bacteria	No	%	No more than 5% positives per month	0	Highest monthly percentage: 1.0%	6 positive samples out of 2,338 total samples collected for the year, or 0.26%	Jan., July, Aug., Sept., Oct.	Naturally present in the environment
E.Coli*	Yes	%	A routine sample and a repeat sample are Total Coliform Positive and one is also Fecal/E. coli positive.	0	1 positive sample		January	Human and animal fecal waste
Turbidity	Violation	Units	TT Requirement	MCLG	Level Detected	Range	Sample Date	Typical Source of Contamination
Turbidity ¹	No	NTU	Maximum 1 NTU for any single measurement	N/A	Highest turbidity for 2011 was 0.10	N/A	1/4/2011	Soil runoff, river sediment, provides a medium for microbiological growth
	No	%	In any month, at least 95% of samples must be below 0.3 NTU ²	N/A	100% of samples were <0.3NTU	N/A	N/A	
Radionuclides	Violation	Units	MCL	MCLG	Highest Level	Range	Sample Date	Typical Source of Contamination
Gross Beta particle activity	No	pCi/l	trigger level = 50	0	5	5	2011	Decay of natural and man-made deposits
Combined Radium (-226 & -228)	No	pCi/l	5	0	1	<0.6-1	2011	Decay of natural and man-made deposits
Combined Uranium	No	ppb	30	0	2	<1-2	2011	Decay of natural and man-made deposits
Lead and Copper	Violation	Units	Action Level	MCLG	90th Percentile	Range	Sample Date	Typical Source of Contamination
Copper	No	ppm	1.3	N/A	0.186	0 out of 52 sites sampled exceeded AL	2010	Corrosion of household plumbing systems
Lead	No	ppb	15	N/A	3	0 out of 52 sites sampled exceeded AL	2010	Corrosion of household plumbing systems

The above chart details the contaminants detected in Aurora's drinking water during 2011. All are well below allowed levels. To safeguard your health, Aurora Water tests for approximately 150 other contaminants that were not detected. Tests on Aurora's water are conducted in the Aurora Water Quality Control Laboratory, which is certified by the Colorado Department of Public Health and Environment (CDPHE). Independent laboratories conduct other tests as necessary. Each year, more than 85,000 tests are conducted. Aurora Water also tests for contaminants not yet regulated by the Environmental Protection Agency.

Colorado has a statewide waiver for dioxin monitoring. Aurora has monitoring waivers for cyanide and asbestos. The waivers were granted because the CDPHE determined the Aurora Water system is not vulnerable to contamination. The state permits monitoring less than once per year for some contaminants because the concentrations of these contaminants do not vary significantly. Some of the data, though representative, may be more than one year old.

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 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 disinfectant allowed in drinking water, 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.

Running Annual Average (RAA): An average of monitoring results for the previous 12 calendar months.

Secondary Maximum Contaminant Level (SMCL): The concentration of a contaminant that is recommended, but not enforceable, in drinking water due to its effect on taste, color, odor or appearance.

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

Waiver: State permission not to test for a specific contaminant.

N/A: Not applicable

NTU: Nephelometric Turbidity Units (a measure of water clarity)

pCi/l: Picocuries per liter (a measure of radioactivity)

ppm: Parts per million

ppb: Parts per billion

Notes:

1. Turbidity is a measure of the clarity of water and has no health effects. Nevertheless, turbidity may interfere with disinfection and provides a medium for microbial growth.
2. Must be less than 0.3 in 95 percent of monthly samples. The higher the percentage, the better.

City of Aurora • PWSID CO103005 • All data from January 1, 2011 to December 31, 2011, unless otherwise noted.

Aurora Water is required to monitor its drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards.

EPA's Safe Drinking Water Hotline
1-800-426-4791

Aurora Water Customer Service
303-326-8645

Turbidity monitoring violation: Aurora Water failed to monitor individual filter turbidity on May 5, 2011, 6:31 p.m. We experienced instrument failure on an individual filter. The instrument was repaired and the system returned to compliance on May 6 at 6:41 am. The final turbidity of the plant was being monitored throughout this time and was well below regulated limits, at an average of 0.027 NTU. The health effects are unknown. However, the instrument failure did not pose a direct threat to the quality of our water.

* During routine testing, E. coli was detected in a sample January 11, 2011 and a repeat sample, at a different location, was total coliform positive. The subsequent samples at each location did not indicate the presence of either of these contaminants. When the original tests were taken, aerators on the sinks were not removed and the faucets were not sanitized. When follow-up samples were taken, the aerators were removed, and a large amount of debris was discovered in the faucets. The faucets were then sanitized before subsequent samples were taken. Total Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other,

potentially harmful, bacteria may be present. E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely-compromised immune systems. Affected customers were notified at the time of this occurrence. You do not need to do anything at this time, the system returned to compliance on January 13, 2011. We have reinforced proper testing techniques with staff and continue to monitor regularly.

Table of Detected Contaminants

Inorganic Contaminants	Violation	Units	MCL	MCLG	Average Level Detected	Range	Sample Date	Typical Source of Contamination
Barium	No	ppm	2	2	0.048	0.041-0.056	2011	Erosion of natural deposits
Chromium	No	ppb	100	100	<1	<1-2	2011	Erosion of natural deposits
Fluoride	No	ppm	4	4	1.14	1.07-1.18	2011	Erosion of natural deposits
Nitrate	No	ppm	10	10	<0.5	<0.5-0.95	2011	Runoff from fertilizer use; leaching from septic tanks; sewage and erosion of natural deposits.
Nitrate + Nitrite	No	ppm	10	10	<0.5	<0.5-0.95	2011	Runoff from fertilizer use; leaching from septic tanks; sewage and erosion of natural deposits.
Disinfection	Violation	Units	MCL	MCLG	Average Level Detected	Range	Sample Date	Typical Source of Contamination
Chloramines	No	ppm	MRDL = 4	MRDLG = 4	1.85	1.26-2.72	daily	Water additive used to control microbes
Chlorine dioxide	No	ppb	MRDL = 800	MRDLG = 800	78	0-210	daily	Water additive used to control microbes
Disinfection By-Products-Precursors	Violation	Units	MCL		Average of Individual Ratio Samples	Range of Individual Ratio Samples	Sample Date	Typical Source of Contamination
Total Organic Carbon	No	ratio	ratio > 1		3.4	1.9-5.5	2011	Naturally present in the environment
Disinfection By-Products	Violation	Units	MCL	MCLG	Highest RAA	Range	Sample Date	Typical Source of Contamination
Chlorite	No	ppm	1.0	0.8	0.30	<0.02-0.44	daily	By-product of drinking water disinfection
Halocetic Acids	No	ppb	60	N/A	16.4	5.56-36.1	monthly	By-product of drinking water disinfection
Trihalomethanes	No	ppb	80	N/A	14.2	3.51-38.5	monthly	By-product of drinking water disinfection
Secondary Contaminants/Other Unregulated Monitoring	Violation	Units	MCL	SMCL	Average Level Detected	Range	Sample Date	Typical Source of Contamination
Chloride	N/A	ppm	N/A	250	37	17-71	monthly	Erosion of natural deposits
Hardness (as CaCO ₃)	N/A	ppm	N/A	N/A	119	87-156	daily	Erosion of natural deposits
Nickel	N/A	ppm	N/A	100	5	4-6	quarterly	Erosion of natural deposits
Sodium	N/A	ppm	N/A	10000	45	17-72	quarterly	Erosion of natural deposits
Sulfate	N/A	ppm	N/A	250	53	36-91	monthly	Erosion of natural deposits
Total Dissolved Solids	N/A	ppm	N/A	500	253	176-363	monthly	Erosion of natural deposits

Cryptosporidium

Aurora tests regularly for Cryptosporidium, a microbial pathogen found in surface water throughout the United States. Although filtration removes Cryptosporidium, the most commonly used filtration methods cannot guarantee 100 percent removal. Aurora Water’s monitoring indicates the presence of this organism in its source water, but it has never been detected in our treated water. Current test methods do not enable Aurora Water to determine if these source water organisms are dead or if they are capable of causing disease.

Ingestion of Cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immunocompromised people are at greater risk of developing a life-threatening illness. Immunocompromised individuals are encouraged to consult with their doctor about any appropriate precautions they should take to avoid infection. Cryptosporidium must be ingested to cause disease, and may be spread through means other than drinking water. Aurora Water tested for Cryptosporidium monthly in 2011 and detected 0.013 organisms per liter in our source water in January.

Lead

Infants and young children are typically more vulnerable to lead in drinking water than the general population. As a result of materials used in your home’s plumbing, it is possible that lead levels in your home may be higher than in other homes within your community. If you are concerned about elevated lead levels in your home’s water, you may wish to have your water tested and flush your tap for 30 seconds to two minutes before using tap water. Additional information on lead in drinking water is available from the Safe Drinking Water Hotline at 1-800-426-4791.

Radon

Radon is a radioactive gas that you cannot see, taste or smell. It is found in the soil throughout the United States. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can reach high levels in all types of homes. Radon can also be released from tap water from showering, washing dishes and other household activities. Compared to radon entering the home through the soil, radon entering the home through tap water will be, in most cases, a small source of radon in indoor air.

Radon is a known human carcinogen. Breathing air that contains radon can lead to lung cancer. Drinking water that contains radon may also 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 in your air is four (4) picocuries per liter of air (pCi/L) or higher. There are simple ways to fix a radon problem that are relatively inexpensive. For additional information, call the state radon program at 303-692-3030 or call the EPA Radon Hotline at 800-SOS-RADON. Aurora Water tested for radon in July 2008 and detected 99 pCi/L in finished water.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As the 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 source water include:

- Microbial contaminants, such as bacteria and viruses, which may come from wastewater treatment plants, septic systems, agricultural livestock operations and wildlife.
- Inorganic contaminants, such as salts and metals, 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 that come from a variety of sources such as agriculture, urban stormwater runoff and residential uses.
- Organic chemical contaminants include synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and also may come from gas stations, urban stormwater runoff and septic systems.
- Radioactive contaminants can be naturally occurring or the result of oil and gas production and mining activities. In order to ensure tap water is safe to drink, the Environmental Protection Agency 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.

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 the water poses a health risk. 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 can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The EPA and the Centers 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 at 1-800-426-4791.