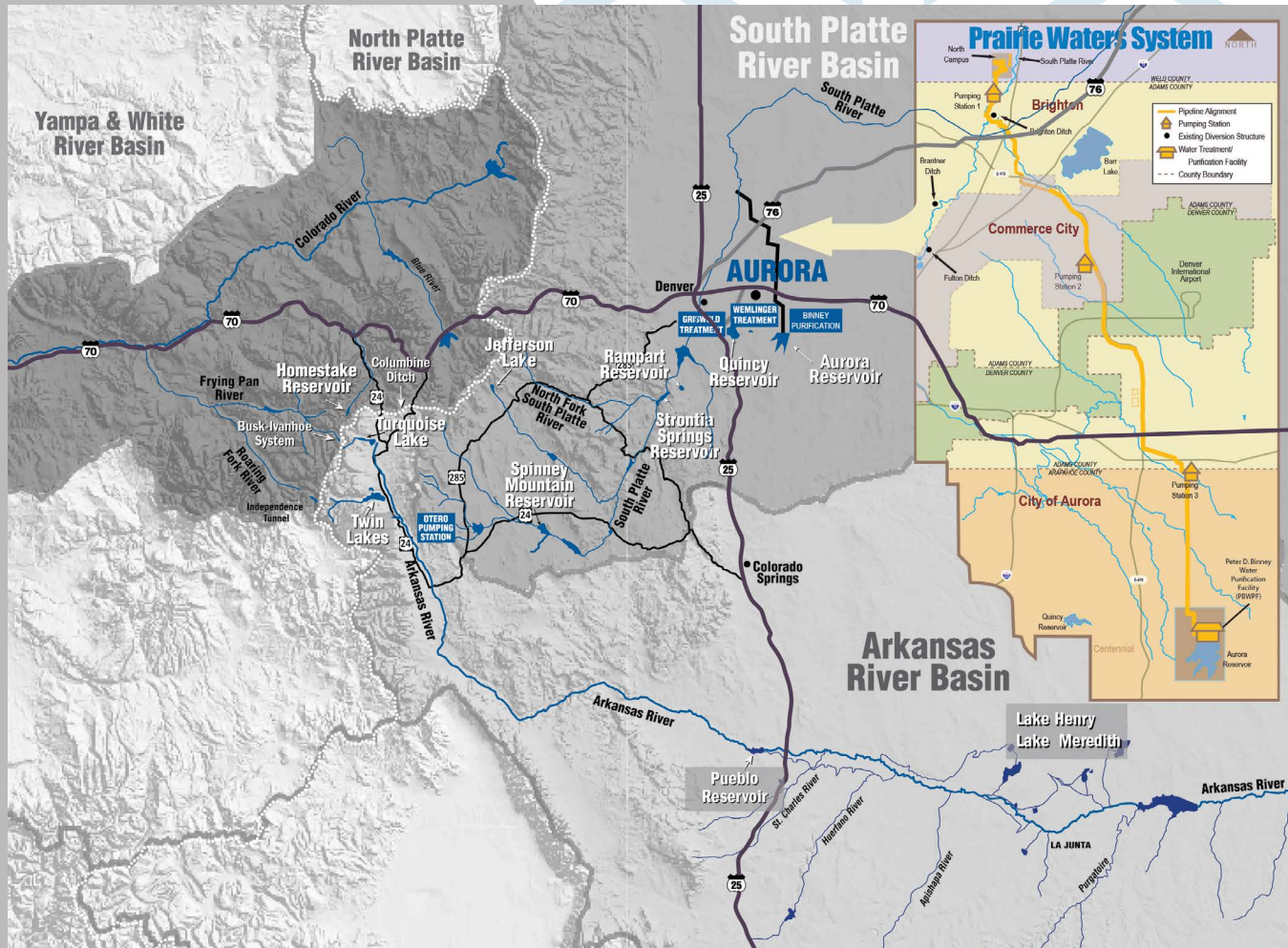




AURORA  
WATER

# 2019 AURORA WATER

## CITY OF AURORA, COLORADO



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. That's why we've developed a diverse water portfolio that allows us to access water from a variety of sources, ensuring that we will have adequate supplies to meet demand.

Our water travels from 180 miles away and our system includes the use of reservoirs, the natural river system, pipes, tunnels and pumps, all of which help us pull the water we own from the Colorado, Arkansas and South Platte river basins. That water is stored in 12 reservoirs and lakes: Aurora, Homestake, Turquoise, Twin Lakes, Spinney Mountain, Jefferson, Strontia Springs, Rampart, Quincy, Pueblo, Henry and Meredith.

**IT'S GREAT WATER.  
DRINK IT UP.**

EPA's Safe Drinking  
Water Hotline  
800.426.4791

City of Aurora  
Water Customer Service  
303.326.8645

Our 2019 Water Quality Report is an EPA-mandated disclosure of our 2018 performance. If you have any questions or need additional information, visit our website at [AuroraWater.org](http://AuroraWater.org).

# TABLE OF DETECTED CONTAMINANTS

Turbidity	Violation	Units	TT Requirement	MCLG	Level Detected	Range	Sample Date	Typical Source of Contamination
Turbidity <sup>1</sup>	No	NTU	Maximum 1 NTU for any single measurement	N/A	Highest turbidity for 2018 0.082	N/A	October 2018	Soil runoff and river sediment
	No	%	In any month, at least 95% of samples must be less than 0.3 NTU	N/A	100% of samples were less than 0.3 NTU	N/A	N/A	
Inorganic Contaminates	Violation	Units	MCL	MCLG	Average Level Detected	Range	Sample Date	Typical Source of Contamination
Gross Alpha	No	pCi/l	15	0	0.42	0 - 0.9	2017	Decay of natural and man-made deposits
Combined Radium (-226 & -228)	No	pCi/l	5	0	2.42	1.5 - 4	2017	Decay of natural and man-made deposits
Combined Uranium	No	pCi/l	30	0	2.9	1.6 - 5.2	2017	Decay of natural and man-made deposits
Copper and Lead	Violation	Units		MCLG	90th Percentile	Range	Sample Date	Typical Source of Contamination
Copper	No	ppm	1.3	N/A	0.05	0 out of 53 sites sampled exceeded action level	2018	Corrosion of household plumbing systems
Lead	No	ppb	15	N/A	2.7	1 out of 53 sites sampled exceeded action level	2018	Corrosion of household plumbing systems

Inorganic Contaminants	Violation	Units	MCL	MCLG	Average Level Detected	Range	Sample Date	Typical Source of Contamination
Arsenic	No	ppb	10	0	1.1	N/A	2018	Erosion of natural deposits
Barium	No	ppb	2000	2000	36.7	N/A	2018	Erosion of natural deposits
Chromium	No	ppb	100	100	1.6	N/A	2018	Erosion of natural deposits
Fluoride	No	ppm	4	4	0.79	N/A	2018	Erosion of natural deposits
Nitrate	No	ppm	10	10	0.43	0.60 - 0.97	2018	Runoff from fertilizer use and erosion of natural deposits
Disinfection	Violation	Units	MRDL	MRDLG	Average Level Detected	Range	Sample Date	Typical Source of Contamination
Chlorine Residual (Chloramines)	No	ppm	4	4	1.78	0.24 - 2.80	daily	Water additive used to control microbes
Chlorine dioxide	No	ppb	800	800	14	0 - 100	daily	Water additive used to control microbes
Disinfection By-Products Precursors	Violation	Units	TT Requirement		Average of Individual Ratio Samples	Range of Individual Ratio Samples	Sample Date	Typical Source of Contamination
Total Organic Carbon	No	ratio	ratio > 1	N/A	1.76	1.26 - 2.38	monthly	Naturally present in the environment
Disinfection By-Products	Violation	Units	MCL	MCLG	Average Level Detected	Range	Sample Date	Typical Source of Contamination
Chlorite	No	ppm	1.0	0.8	0.49	0.24 - 0.64	daily	By-product of drinking water disinfection
Halocetic Acids	No	ppb	60	N/A	11.87	5.33 - 22.6	quarterly	By-product of drinking water disinfection
Trihalomethanes	No	ppb	80	N/A	22.63	16.1 - 31.2	quarterly	By-product of drinking water disinfection

Beer brewers and fish tank owners often need more information about our water than the EPA requires us to report, so we've included some of it below. Hope it's helpful.

Secondary Contaminants/ Other Unregulated Monitoring	Violation	Units	MCL	SMCL	Average Level Detected	Range	Sample Date	Typical Source of Contamination
Alkalinity (as CaCO3)	N/A	ppm	N/A	N/A	90	46 - 162	daily	Water quality parameter
Calcium	N/A	ppm	N/A	N/A	41	30 - 65	monthly	Erosion of natural deposits
Chloride	N/A	ppm	N/A	250	45	17 - 98	monthly	Erosion of natural deposits
Conductivity	N/A	µmhos/cm	N/A	N/A	478	288 - 778	monthly	Water quality parameter
Hardness (as CaCO3)	N/A	ppm	N/A	N/A	132	98 - 204	daily	Erosion of natural deposits
Hardness-CA (as CaCO3)	N/A	ppm	N/A	N/A	103	75 - 163	weekly	Erosion of natural deposits
pH	N/A	SU	N/A	N/A	8.1	7.5 - 8.4	daily	Water quality parameter
Sodium	N/A	ppm	N/A	10,000	43	21 - 83	yearly	Erosion of natural deposits
Sulfate	N/A	ppm	N/A	250	71	43 - 94	monthly	Erosion of natural deposits

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 H<sub>2</sub>O around, and we have won many awards to prove it. All three of Aurora Water's drinking water purification facilities have achieved the Phase IV "Excellence in Treatment" designation, the highest level awarded by the Partnership for Safe Water (PFSW) program – an alliance of six drinking water organizations, including the American Water Works Association and United States Environmental Protection Agency. We're the only water provider in the country to earn this designation at three facilities. To receive that, staff had to demonstrate unit process optimization through extensive data analysis and plant performance documentation to the PFSW program. For perspective, only 18 treatment plants across the U.S. to date have successfully achieved this designation. We didn't pursue it for bragging rights. We did it because delivering high-quality water to your home is our top priority.

Because of the hard working staff at Aurora Water, our utility has also earned a variety of awards for our top-notch treatment practices. Here are just a few:

#### ORGANIZATION

Rocky Mountain Section of the American Water Works Association

Partnership for Safe Water

Rocky Mountain Section of the American Water Works Association

#### AWARD

2018 Outstanding Water Treatment Plant – Thomas J. Griswold Water Purification Facility

2018 Phase III Directors Award for Distribution System Optimization Program

2018 Outstanding Water Laboratory Award – Aurora Water Quality Control Laboratory

#### FAST FACTS – AURORA WATER'S DRINKING WATER TREATMENT FACILITIES

The Thomas J. Griswold and Charles A. Wemlinger water purification facilities use direct filtration processes, which include coagulation, flocculation, filtration and disinfection. Both treatment facilities have the capacity to treat up to 80 million gallons of water per day.

The Peter D. Binney Water Purification Facility has two treatment trains. One train uses conventional filtration processes and the other uses advanced treatment processes, which include softening, advanced UV oxidation, filtration, granular activated carbon filtration, and disinfection processes. The facility has the capacity to treat up to 50 million gallons per day.



City of Aurora • PWSID C00103005  
All data from January 1, 2018 to December 31, 2018, unless otherwise noted.

The table details the contaminants detected in Aurora's drinking water during 2018. All are well below allowed levels. To safeguard your health, Aurora tests for approximately 150 other contaminants that were not detected, and therefore are not included in the table of detected contaminants. Tests on our water are conducted in our 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. We also test for contaminants not yet regulated by the EPA.

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. 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 these contaminants.

**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.

**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.

Aurora 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.

#### 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. Our monitoring indicates the presence of this organism in our source water, but it has never been detected in our treated water. Current test methods do not determine if these source water organisms are dead or if they are capable of causing disease. Aurora Water tested for Cryptosporidium in 2017 and detected less than 0.091 organisms per liter in our source water.

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.

#### Lead

Aurora's water supply does not contain lead, however, lead was one of several materials used prior to 1960 in service lines to connect buildings to the city's water mains. Infants, young children and expectant mothers are typically more vulnerable to lead in drinking water than the general population. Aurora Water carefully monitors our water treatment processes to minimize the risk of service line corrosion.

If your home was built prior to 1960 and you are unsure of the material used in your water service line, Aurora Water has a program to help you identify the material used. Please call 303.326.8645 to learn more about our Lead Service Line Identification program. We have rebates available to help replace your service line, if needed. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested. In addition, you may consider flushing 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. You can also visit [epa.gov/lead](http://epa.gov/lead) for more details.

#### 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. It 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 it 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 it can lead to lung cancer. Drinking water that contains radon may also cause increased risk of stomach cancer. If you are concerned about it 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.

#### UCMR 4

The EPA has implemented the Unregulated Contaminant Monitoring Rule (UCMR) to collect data for contaminants that are suspected to be present in drinking water and do not have health-based standards set under the Safe Drinking Water Act. EPA uses the results of UCMR monitoring to learn about the occurrence of unregulated contaminants in drinking water and to decide whether or not these contaminants will be regulated in the future. Aurora Water monitored for Cyanotoxins and reported the analytical results of the monitoring to EPA in accordance with its Unregulated Contaminant Monitoring Rule (UCMR). Nothing was found in the results. Once EPA reviews the submitted results, the results are made available in the EPA's National Contaminant Occurrence Database (NCOD) at <https://www.epa.gov/dwstandardsregulations/national-contaminant-occurrence-database-ncod>. Consumers can review UCMR results by accessing the NCOD.

#### Monitoring Violation

Monitoring violation: Aurora Water made a scheduling error that resulted in a violation of Colorado's drinking water regulations. Since 2016, we've been required to inspect all eight of our drinking water storage tanks on a defined quarterly basis. In 2017 and 2018, three of our tanks were not inspected within these required timeframes, which resulted in a drinking water violation from the CDPHE. All tank inspections leading up to and following these two quarterly inspections demonstrate the tanks were sound and protective of public health. The follow-up inspections show we are in compliance with all drinking water regulations. This situation did not pose a safety risk and does not require you to take action.

#### Source Water Assessment

The CDPHE has completed a source water assessment of the potential for contaminants reaching any of Aurora Water's terminal supplies, the last stop for the water before it is treated. The potential sources of contamination that may exist are: EPA areas of concern; permitted wastewater discharge sites; above ground, underground and leaking storage tank sites; solid waste sites; existing or abandoned mine sites; other facilities; commercial, industrial and transportation activities; residential, urban recreational grasses; quarries, strip mines and gravel pits; agriculture; forests; septic systems; oil and gas wells and roads. For more information on the report, contact the CDPHE by calling 303.692.2000 or visiting [Colorado.gov/cdphe/ccr](http://Colorado.gov/cdphe/ccr). The report is located under "Guidance: Source Water Assessment Reports."

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 EPA 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 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.

## GET INVOLVED

We want you to be involved in the decisions that affect you, so we hope you will participate by attending public meetings of the Citizens' Water Advisory Committee, Water Policy Committee and City Council. You can find meeting times and agendas at [AuroraGov.org](http://AuroraGov.org).

이 안내는 매우 중요합니다.  
본인을 위해 번역인을 사용하십시오.

Данный отчет содержит важную информацию о  
вашей питьевой воде. Переведите его или  
проконсультируйтесь с тем, кто его понимает.

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