



The CITY OF ARVADA

COLORADO PUBLIC WATER SYSTEM IDENTIFICATION NUMBER CO0130001

is pleased to provide you with our 2009 Water Quality Report.

The purpose of this Report is to inform our customers about the high quality of their drinking water and their water system. We want you to know where your water comes from, what it contains, and how it compares to stringent federal water quality standards. The City of Arvada's drinking water meets or exceeds the strict standards as regulated by the State of Colorado and the U.S. Environmental Protection Agency (EPA).

Our Water



Spanish - Esta es información importante. Si no la pueden leer, necesitan que alguien se la traduzca.

City of Arvada Main Number720.898.7000

City WEB sitewww.arvada.org

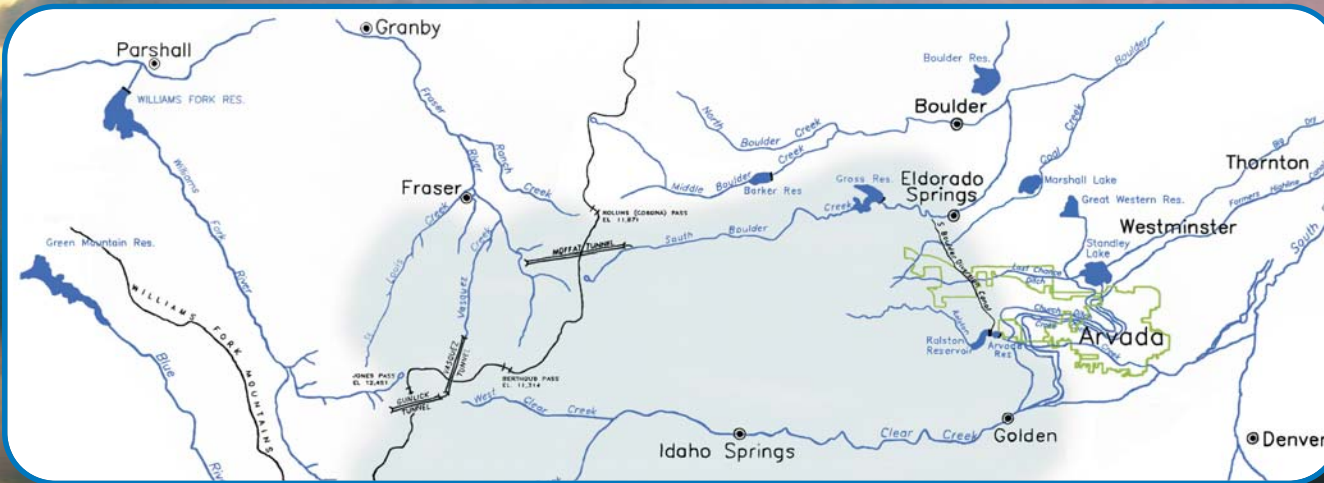
Utilities, Water Quality, Judy Schmidt720.898.7802

EPA's Safe Drinking Water Hotline1.800.426.4791

EPA's WEB sitewww.epa.gov/safewater

If you are interested in learning more about your water department and water quality issues, information is available from the following sources: the City's WEB site, KATV - Channel 8, local newspapers, or by contacting any of the organizations listed.

Our Source



SOURCES OF ARVADA'S WATER

Arvada's drinking water comes from two surface water sources: the Denver Water Department's Moffat System and Clear Creek. The Moffat water system is our year-round source and is diverted from Denver's Ralston Reservoir. This snow melt, mountain water is collected from the Fraser River and South Boulder Creek Basins and transported first to Gross Reservoir and then to Ralston Reservoir. Approximately 25% of the City's water supply is diverted from Clear Creek where it is stored in the Arvada/Blunn Reservoir until needed during the spring and summer months when water demand is high.

WHAT ARE WATERSHEDS? WHY ARE THEY IMPORTANT TO PROTECT?

A watershed is somewhat like a bowl. It is rimmed by ridgetops and high ground that direct the flow of water downhill toward the river in the valley below. This downward gravity flow of water also carries with it the effects of human activities throughout the watershed.

Protection of our watershed begins with our *Source Water Assessment Plan* (SWAP). The Colorado Department of Public Health and Environment has provided us with a report for our water supply. You may obtain a copy of the report by visiting www.cdphe.state.co.us/wq/sw/swaphom.html or by contacting the City of Arvada at 720.898.7800.

The Source Water Assessment Report provides a screening-level evaluation of potential contamination that could occur. It does not mean that the contamination has or will occur. We can use this information to evaluate the need to improve our current water treatment capabilities and prepare for future contamination threats. This can help us ensure that quality finished water is delivered to your homes. In addition, the source water assessment results provide a starting point for developing a source water protection plan.

Potential sources of contamination in our source water area include EPA sites, permitted wastewater discharge sites, storage tank and mine sites, as well as various types of land use sites.

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 human activity.

Contaminants which 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, and wildlife.
- * Inorganic contaminants, such as salts and metals, which can be naturally-occurring or the result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- * Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and also may come from gas stations, urban stormwater runoff, and septic systems.
- * Pesticides and herbicides that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential users.
- * Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

The City tests the water supply for many types of contaminants. The following tables list contaminants that EPA requires to be listed if they were detected. The data is from the 2008 monitoring period January 1 to December 31, 2008, unless otherwise noted.

Inorganic Chemical Contaminants: These chemicals are metals, salts, and other non-carbon based compounds. Health concerns are not focused on cancer, but rather on their suspected link to physical and mental human disorders. Inorganics are regulated at the City's two Water Treatment Plants.

Chemical Compound	MCLG	MCL	Ralston WTP	Arvada WT	Lowest to Highest	Violation	Sample Dates	Likely Source of Contamination
Barium(ppm)	2.0	2.0	0.019	0.029	0.019 to 0.029	No	5-28-08	Erosion of natural deposits Discharge of drilling wastes
Fluoride(ppm)	4.0	4.0	1.03	0.79	0.79 to 1.03	No	Quarterly	Erosion of natural deposits. Water additive which promotes strong teeth
Unregulated Secondary Compound								
Sodium(ppm)	NA	10,000*	4.7	14	4.7 to 14	No	5-28-08	Naturally present in the environment
Sulfate(ppm)	500	250 *	15	44	15.0 to 44	No	5-28-08	Secondary Standards are non-enforceable guidelines for contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor or color) in drinking water. EPA recommends these stds but does not require water systems to comply.
Total Dissolved Solids(ppm)	NA	500 *	70	143	70.0 to 143	No	Quarterly	
*Recommended level, this is a Secondary Maximum Contaminant Level								

Maximum Contaminant Level Goal (**MCLG**) - The "GOAL" is 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 Contaminant Level (**MCL**) - The "Maximum Allowed" is 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.

Parts per million (**ppm**) or Milligrams per liter (**mg/l**): One part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts per billion (**ppb**) or Micrograms per liter (**ug/l**): One part per billion corresponds to one minute in 2,000 years or single penny in \$10,000,000.

Lead and Copper: Regulated at the customer's tap. The results are from the City's 2008 monitoring program. There were no violations. Samples were taken at 65 customers' homes between 7-01-08 and 9-04-08

Chemical Compound	MCLG	MCL (AL)	90th percentile*	# of sites found above the Action Level	Violation	Likely Source of Contamination
Lead(ppb)	0	AL=15	7.0	1 out of 65 samples	No	Corrosion in household plumbing systems, Erosion of natural deposits
Copper(ppm)	0	AL=1.3	3.32	1 out of 65 samples	No	Corrosion in household plumbing systems, Leaching from wood preservatives, Erosion of natural deposits

Note: *The 90th percentile is the 59th largest result out of the 65 samples taken

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

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than other homes in the community as a result of materials used in your home's plumbing. 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 2 minutes before using tap water for drinking purposes.

Turbidity - Turbidity measurements indicate the clarity of the finished water. High levels may pose a health hazard by interfering with disinfection. Samples of the system's filtered water must be less than or equal to 0.3 NTU in at least 95% of the samples. Turbidity is regulated at the City's two Water Treatment Plants.

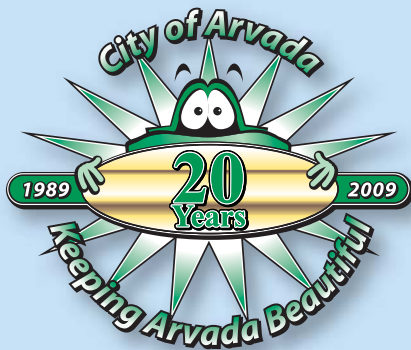
Turbidity	MCLG	MCL TT	Highest Level Found	Sample Date	Violation	Likely Source of Contamination
Ralston WTP	0	Highest Single Reading = 1.0 NTU	0.39 NTU	3-06-08	No	Soil runoff
Ralston WTP	Percentage of samples less than 0.3 NTU		99.9%			
Arvada WTP	0	Highest Single Reading = 1.0 NTU	0.35 NTU	9-05-08	No	Soil runoff
Arvada WTP	Percentage of samples less than 0.3 NTU		99.9%			

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

Nephelometric Turbidity Unit (**NTU**) - A measure of the clarity of the water. Turbidity in excess of 5 NTU is just noticeable to the average person.



Peak **City of Arvada** water consumption usually occurs during June/July/August. The highest daily usage in 2008 was 40.4 million gallons on July 21, 2008. The City's two water treatment plants can produce and pump **52 million gallons a day.**



Who is Fillup A. Can?

Fillup A. Can is a googly-eyed trash can that loves to gobble up trash. Fillup A. Can encourages residents and visitors in Arvada to pick up and throw away trash properly, so we can all benefit from a cleaner Arvada.

Why is littering a problem? Litter ends up in our streams and waterways when it rains or snow melts, and can contaminate water used downstream by others. Litter can hurt or kill wildlife.

Remember that each of us has an obligation to Keep Arvada Beautiful!!

CRYPTOSPORIDIUM is a microscopic organism that, when ingested, can result in diarrhea, fever, and other gastrointestinal symptoms. The City of Arvada has tested for Cryptosporidium in both raw water and treated water since 1994 and has never detected it in the water. The organism exists in all of Colorado's rivers and streams and comes from animal wastes in the watershed. Cryptosporidium is eliminated by an effective treatment combination including filtration, sedimentation and disinfection.

Total Organic Carbon - TOC has no health effects. However, Total Organic Carbon provides a medium for the formation of disinfection byproducts. These byproducts include Trihalomethanes (THMs) and Haloacetic Acids (HAA5s). TOC is regulated at the City's Water Treatment Plants.

Disinfection By-Products	Year	Compliance Description	TT Requirement	Typical Sources
CONTROL OF DISINFECTION BY-PRODUCT PRECURSORS	2008	We used enhanced treatment to remove the required amount of natural organic material and/or we demonstrated compliance with alternative criteria.	TT	Natural organic material that is present in the environment

Organic Chemical Contaminants - Total Trihalomethanes (TTHMs) and Haloacetic Acids (HAA5s). These compounds may be formed during chlorination by reactions with natural organic material in the water. Some THMs and HAAs are thought to be cancer-causing agents at certain levels. The samples were taken throughout the water distribution system quarterly in 2008.

Organic Compound	MCLG	MCL	Annual Average	Lowest to Highest	Violation	Likely Source of Contamination
TTHM(ppb)	NA	80	26.0	12.8 to 46.2	No	By-products of drinking water chlorination
HAA5(ppb)	NA	60	33.7	17.9 to 61.9	No	

Units ppb - parts per billion

Disinfectant - Disinfectant is used in drinking water to kill microbes. The levels are monitored and regulated throughout the City's distribution system.

Organic Compound	MRDLG	MRDL	Annual Average	Lowest to Highest	Violation	Likely Source of Contamination
Chlorine(ppm)	4	4	1.51	0.97 to 2.14	No	Water additive used to control microbes

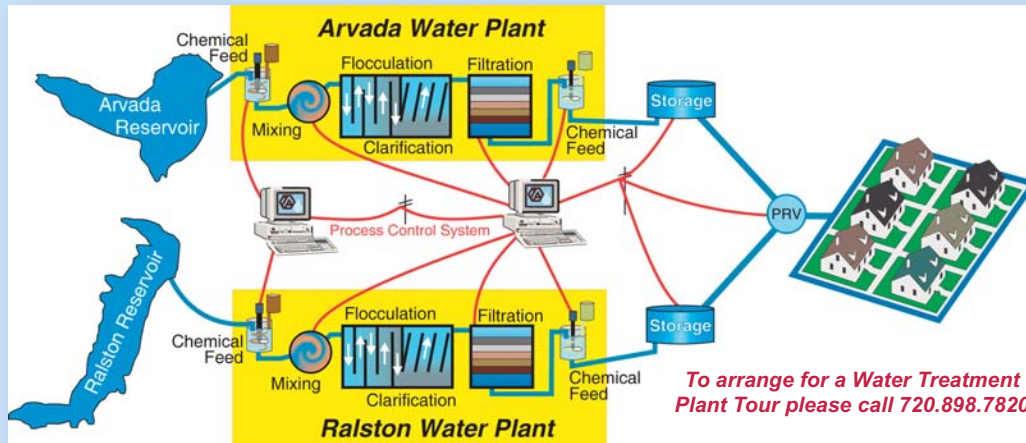
Units ppm - parts per million

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.

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.

Microbiological	Result	MCL	MCLG	Likely Source of Contamination
Coliform, Total (TCR)	In the month of March 2008, 0.61% of samples returned as positive In 2008 - 0.08% of samples returned as positive 1 positive out of 1,227 samples	MCL: Systems that collect 40 or more samples per month - No more than 5% positive monthly samples	0	Naturally present in the environment

Our Quality



WATER SYSTEM INFORMATION

All of the City's water is processed through one of two Water Treatment Plants (WTP) for purification and disinfection before it is conveyed to the customer. Extensive monitoring of the process takes place to ensure high quality drinking water. This diagram shows how the treatment process for each of the City's WTPs work.

What about Water Conservation?

Using our water efficiently helps to protect our water supplies, especially during periods of drought. It is always important to conserve water and it should never be wasted. Only 1% of the earth's water can be used because 97% of the water is in the oceans and 2% is stored in the polar ice caps.

Therefore, it is very important to protect and conserve our water resources to help keep the cost of collecting and preparing potable water down. You can **protect** water resources by disposing of hazardous household waste appropriately. In Jefferson County, call the Rooney Road Recycling Center at **303.316.6262**. Remember to always follow the manufacturer's directions when applying or disposing of fertilizers or pesticides.

You can **conserve** our water resources by designing your landscaping to reduce irrigation demands, and by trying to not waste water at home, work, or school. Conserving water also cuts water and sewer bills and reduces water heating costs. Using water wisely helps the City reduce costs and energy used to treat and pump drinking water and wastewater.

What about Stormwater?

When it rains or snows, the water that runs off of residences, parking lots, and construction sites can wash sediment, oil, grease, toxins, bacteria, and other pollutants into nearby storm drains. Once this pollution has entered the storm drains, it is discharged – untreated – into local waterways. The City of Arvada must address water quality degradation that results from stormwater run-off to satisfy State requirements to reduce the pollution that originates from urban stormwater run-off through public education and business outreach. For information, visit the City's website at www.arvada.org or call **720.898.7800**.

CROSS-CONNECTION CONTROL AND BACKFLOW PREVENTION

Backflow is the reversed flow of contaminated water into the City's distribution system through a cross connection. State regulations prohibit contaminated sources from entering the public potable water supply through cross connections.

To prevent backflow in plumbing systems, City Code requires backflow prevention assemblies to be installed at specific locations in the system. The assemblies are inspected and tested annually by a certified technician.

For more information about backflow prevention and cross-connection control, call the City at **720.898.7800**.

PUBLIC NOTIFICATION

Should the City of Arvada violate any of the **Maximum Contaminant Levels** or treatment techniques, the *Safe Drinking Water Act* requires that we notify our water customers of the violation immediately:

By publication in a daily newspaper within 14 days following the violation; and

By mail delivery (direct mail or in the water bill) or hand delivery no later than 45 days following the violation; and

By radio and television for those violations the State Health Department deems an acute risk to human health, such as total coliform, fecal coliform, or nitrate.

The notification must also include mandatory language and health information contained in the EPA's Federal Register.

RALSTON WATER TREATMENT PLANT





GENERAL INFORMATION ABOUT DRINKING WATER

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

All 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. 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 of infections. These people should seek advice about drinking water from their health care providers.

For more information about contaminants and potential health effects, or to receive a copy of the U.S. Environmental Protection Agency (EPA) and the U.S. Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by cryptosporidium and microbiological contaminants, call the EPA Safe Drinking Water Hotline at 1.800.426.4791.



CITY OF ARVADA
PUBLIC WORKS DEPARTMENT - WATER QUALITY

June 1, 2009

Dear Water Customer,

This is the annual Water Quality Report for the City of Arvada's drinking water system. This Report covers calendar year 2008 and provides important information about the quality of your drinking water. Please take a few minutes to review the Report, and contact us with any questions or comments about the information it contains.

During the year 2008, the Arvada drinking water system operated without any type of violation, variance, or exemption concerning drinking water quality requirements. Your water meets or exceeds all applicable federal, state, and local standards for drinking water quality. We intend to continue to provide you with a high quality product at the lowest possible cost, protecting public health to the utmost of our ability.

Some people who drink Arvada water are not billed directly, and may not receive a copy of this Report. If you own or operate a facility that provides water to customers, employees, or tenants, whom we do not bill individually, please post copies of this Report on a message board or other common areas so everyone who relies on Arvada's water can view the Report. Additional copies of this report may be obtained by calling 720.898.7800.

Thank you for giving us the opportunity to share with you this information about water quality in the City of Arvada.

Sincerely,

Bob Manwaring,
Utilities Manager

