

Arapahoe County WWA 2009 Drinking Water Consumer Confidence Report For Calendar Year 2008

Public Water System ID # CO0203002

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

We are pleased to present to you this year's water quality report. Our constant goal is to provide you with a safe and dependable supply of drinking water.

General Information About Drinking Water

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.

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 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 viruses and bacteria that 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 result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- **Pesticides and herbicides** that 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 byproducts of industrial processes and petroleum production, and also

may come from gas stations, urban storm water runoff, and septic systems.

- **Radioactive contaminants**, that can be naturally occurring or be the result of oil and gas production and mining activities.

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. The Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

Our Water Source(s)

Source	Water Type
Race Well No 1	Ground Water
Loyd Alluvial Well	Ground Water
Ford Well No 2	Ground Water
Loyd Dawson Antonoff Well	Ground Water
Denmark Arapahoe Well	Ground Water
Airport Well	Ground Water
A2 Well	Ground Water
A1 Well	Ground Water
Race 4 Well	Ground Water
Braun Well	Ground Water
Smith 2 Well	Ground Water

The Colorado Department of Public Health and Environment has provided us with a Source Water Assessment 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 Mike Keefover at 303-790-4830 Ext: 325.

Potential sources of contamination in our source water area come from: _

Above/Below Storage Tanks Auto Repair Facilities
Auto Body and Painting Hazardous Waste Generators
Manufacturing Facilities

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.

Please contact Mike Keefover at 303-790-4830 Ext: 325 to learn more about what you can do to help protect your drinking water sources, any questions about the Drinking Water Consumer Confidence Report, to learn more about our system, or to attend scheduled public meetings. We want you, our valued customers, to be informed about the services we provide and the quality water we deliver to you every day.

Terms and Abbreviations

The following definitions will help you understand the terms and abbreviations used in this report:

- **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 a single penny in \$10,000,000.
- **Parts per trillion (ppt) or Nanograms per liter (nanograms/L)** - one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.
- **Parts per quadrillion (ppq) or Picograms per liter (picograms/L)** - one part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in \$10,000,000,000,000.
- **Picocuries per liter (pCi/L)** - picocuries per liter is a measure of the radioactivity in water.
- **Nephelometric Turbidity Unit (NTU)** - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
- **Action Level (AL)** - the concentration of a contaminant which, if exceeded, triggers treatment or other



Detected Contaminants

Arapahoe County WWA routinely monitors for contaminants in your drinking water according to Federal and State laws. The following table(s) show all detections found in the period of January 1 to December 31, 2008 unless otherwise noted. The State of Colorado requires us to monitor for certain contaminants 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. Therefore, some of our data, though representative, may be more than one year old. The “Range” column in the table(s) below will show a single value for those contaminants that were sampled only once. Violations, if any, are reported in the next section of this report.

Note: Only detected contaminants appear in this report. If no tables appear in this section, that means that Arapahoe County WWA did not detect any contaminants in the last round of monitoring.

- requirements which a water system must follow.
- **Treatment Technique (TT)** - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.
- **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.
- **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.
- **Running Annual Average (RAA)** - An average of monitoring results for the previous 12 calendar months.
- **Gross Alpha, Including RA, Excluding RN & U** - This is the gross alpha particle activity compliance value. It includes radium-226, but excludes radon 222 and uranium.
- **Microscopic Particulate Analysis (MPA)** - An analysis of surface water organisms and indicators in water. This analysis can be used to determine performance of a surface water treatment plant or to determine the existence of surface water influence on a ground water well.

Organics and Inorganics	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
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Organics and Inorganics	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
ARSENIC	5/24/2007	5.4	2.3 - 5.4	ppb	10	0	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
BARIUM	1/30/2007	0.28	0.097 - 0.28	ppm	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
CHROMIUM	1/30/2007	13	1.5 - 13	ppb	100	100	Discharge from steel and pulp mills; Erosion of natural deposits
DI(2-ETHYLHEXYL) PHTHALATE	1/30/2007	0.98	0.98	ppb	6	0	Discharge from rubber and chemical factories
FLUORIDE	1/30/2007	1.9	0.53 - 1.9	ppm	4	4	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
NITRATE	1/30/2008	4.2	0.061 - 4.2	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
SELENIUM	1/30/2007	19	3 - 19	ppb	50	50	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
TETRACHLOROETHYLENE	4/30/2008	2.34	0.51 - 2.34	ppb	5	0	Discharge from factories and dry cleaners

Disinfection By-Products	Date	Average	Range	Highest RAA	Unit	MCL	MCLG	Typical Source
TOTAL HALOACETIC ACIDS (HAA5)	2008	5.16	1.8 - 9	9	ppb	60	N/A	By-product of drinking water disinfection
TOTAL TRIHALOMETHANES (TTHM)	2008	15.78333	2.16 - 24.55	25	ppb	80	N/A	By-product of drinking water chlorination

Lead and Copper	Collection Date	90 TH Percentile	Unit	AL	Typical Source
COPPER, FREE	2008 - 2010	1.5	ppm	1.3	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
LEAD	2008 - 2010	5.5	ppb	15	Corrosion of household plumbing systems; Erosion of natural deposits

Radionuclides	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
COMBINED RADIUM (-226 & -228)	7/19/2007	4.5	1 - 4.5	pCi/L	5	0	Erosion of natural deposits
COMBINED URANIUM	4/25/2007	26	15 - 26	ppb	30	0	Erosion of natural deposits
GROSS ALPHA, EXCL. RADON & U	1/30/2007	22.2	0.3 - 22.2	pCi/L	15	0	Erosion of natural deposits
GROSS BETA PARTICLE ACTIVITY	12/7/2004	21	6 - 21	pCi/L	Trigger level = 15	0	Decay of natural and man-made deposits

Secondary Contaminants/ Other Monitoring	Collection Date	Highest Value	Range	Unit	Secondary Standard
SODIUM	5/24/2007	77	29 - 77	MG/L	10000
TDS	1/14/2004	350	240 - 350	MG/L	500

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 standards but does not require water systems to comply.

Health Information About Water Quality

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. Additional information is available from the Safe Drinking Water Hotline (800)426-4791.

While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems. As of January 23, 2006, the Arsenic MCL is now 10 ppb.

Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.

Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta particle and photon radioactivity in excess of the MCL over many years may have an increased risk of getting cancer.

Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilsons Disease should consult their personal doctor.



Violations

Type	Category	Analyte	Compliance Period
No Violations Occurred in the Calendar 2009			

Information About the Above Violation(s)

There are no additional required health effects violation notices.

Arapahoe County WWA is required to include an explanation of the violation(s) in the above table and the steps taken to resolve the violation(s) with this report.
