



## THE CITY OF ASPEN

# Drinking Water Consumer Confidence Report For Calendar Year 2008

Public Water System ID # CO0149122

*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. A copy of this report can also be found on the internet at:

<http://www.aspenpitkin.com/depts/58/waterquality.cfm>

### 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
Intake Castle Creek	Surface Water
Intake Maroon Creek	Surface Water
Intake Leonard Thomas Reservoir	Surface Water
Well Little Nell	Ground Water
Well Mill Street	Ground Water
Well Rio Grande	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](http://www.cdphe.state.co.us/wq/sw/swaphom.html) or by contacting Charles Bailey at 970-920-5110.

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 come from factors relating to Aspen's history of mining. The ratings given are consistent with disruption of soils due to mining operation and subsequent chemical leaching. Our source water susceptibility has been identified as a Discrete contaminant source. Generally these include facility-related operations from which the potential release of contamination would be confined to a relatively small area. Our water source areas are identified as *Surface Water* and *Ground Water*. Continued analysis of these sources shows no contamination from past activities and at this time there is no immediate danger to our drinking water sources.

**Surface water** sources include Castle Creek, Maroon Creek and the Leonard Thomas Reservoir and are rated as **Moderately Low to Moderate** with potential contamination from aboveground or underground leaking storage tank sites and existing/ abandoned mine sites.

**Ground water** sources include Little Nell Well, Mill Street Well and Rio Grande Well and are rated as **High** with potential contamination from aboveground or underground leaking storage tank sites and existing/ abandoned mine sites.

Please contact CHARLES BAILEY at 970-920-5110 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.

### **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 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.

### **Detected Contaminants**

City of Aspen 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 City of Aspen did not detect any contaminants in the last round of monitoring.

Organics and Inorganics	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
BARIUM	2/5/2008	0.142	0.05 -0.142	ppm	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
FLUORIDE	2/5/2008	1.85	0.88 - 1.85	ppm	4	4	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
NITRATE	2/5/2008	1.02	<0.30 - 1.02	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

Disinfection By-Products	Date	Average	Range	Highest RAA	Unit	MCL	MCLG	Typical Source
TOTAL HALOACETIC ACIDS (HAA5)	2008	10.82	7.06 – 20.20	11	ppb	60	N/A	By-product of drinking water disinfection
TOTAL TRIHALOMETHANES (TTHM)	2008	9.90	2.76-18.18	10	ppb	80	N/A	By-product of drinking water chlorination

Disinfection By-Products	Year	Compliance Description	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

Turbidity	Sample Date	Level Found	TT Requirement	Typical Source
TURBIDITY	Date:	Highest single measurement: 0.09	Maximum 1 NTU for any single measurement	Soil Runoff
	Month: 1	Lowest monthly percentage of samples meeting TT requirement for our technology: 100%	In any month, at least 95% of samples must be less than 0.3 NTU	

Lead and Copper	Collection Date	90 <sup>TH</sup> Percentile	Unit	AL	Typical Source
COPPER, FREE	2008 - 2010	0.27	ppm	1.3	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
LEAD	2008 - 2010	2	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)	6/18/2008	1.6	1.6	pCi/L	5	0	Erosion of natural deposits
COMBINED URANIUM	6/18/2008	0.29	0.29	ppb	30	0	Erosion of natural deposits
GROSS ALPHA, EXCL. RADON & U	9/24/2007	2.8	2 - 2.8	pCi/L	15	0	Erosion of natural deposits
GROSS BETA PARTICLE ACTIVITY	9/24/2007	2.2	1.3 - 2.2	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	2/5/2008	10.4	3.7 - 10.4	MG/L	10000
TDS	2/5/2008	326	151 - 326	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.

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 of radon 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 1-800-SOS-RADON.

### **Other Information About Aspen's Water**

Disinfection of drinking water is one of the major public health advances in the 20th century. Since its construction in 1966, Aspen's water treatment plant has been using Chlorine gas effectively, however there are numerous Federal and State regulations we meet that are associated with delivery, storage and use of Chlorine gas. It is with public safety in mind that we are currently undergoing a conversion from using Chlorine gas to Sodium Hypochlorite, which is a liquid bleach that contains 12% active chlorine versus regular household bleach with a chlorine concentration of 5-6%. During this transitional period there is the possibility of small changes in the taste and odor of your drinking water. The use of Sodium Hypochlorite will reduce health and environmental risks associated with Chlorine gas. We are dedicated to continuing the safe, reliable drinking water you expect.



### **Violations**

Type	Category	Analyte	Compliance Period
No Violations Occurred in the Calendar Year of 2008			