THE CITY OF ASPEN

Drinking Water Consumer Confidence Report for Year 2011

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. Please contact **Charles Bailey** at **970-920-5110** with any questions about the Drinking Water Consumer Confidence Report or for public participation opportunities that may affect the water quality. A copy of this report can also be found on the internet at:
www.aspenpitkin.com/Departments/Utilities/Water/Water-Quality/

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 storm water 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
Well Rio Grande	Groundwater

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 http://www.cdphe.state.co.us/wq/sw/swapreports/swapreports.html, clicking on **Pitkin** County and selecting **149122; Aspen City Of** or by contacting **Charles Bailey** at **970-920-5110.** 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 operations 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.

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.

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.
- **Violation –** A failure to meet a Colorado Primary Drinking Water regulation
- **Formal Enforcement Action –** An escalated action taken by the State to bring a non-compliant water system back into compliance by a certain time, with an enforceable consequence if the schedule is not met**.**

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, 2010 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. Violations are reported in the next section of this report.

Note: Only detected contaminants sampled within the last 5 years 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.

Microorganism Contaminants Sampled in the Distribution System

Contaminant Name	Monitoring Period	Results	Number of Samples	MCL	MCLG	MCL Violation?	Typical Sources
COLIFORM (TCR)	07/01/2011 to 07/31/2011	1 Positive Sample(s)	25	No More Than 1 Positive Sample Per Period	0	No	Naturally present in the environment

Lead and Copper Sampled in the Distribution System

Contaminant Name	Monitoring Period	90th Percentile	Number of Samples	Unit of Measure	Action Level	Sample Sites Above Action Level	Typical Sources
COPPER	01/01/2011 to 12/31/2013	0.11	20	ppm	1.3	0	Corrosion of household plumbing systems; Erosion of natural deposits.
LEAD	01/01/2011 to 12/31/2013	4	20	ppb	15	0	Corrosion of household plumbing systems; Erosion of natural deposits.

Disinfection By Products (TTHMs, HAA5, and Chlorite) Sampled in the Distribution System

Contaminant Name	Year	Average of Individual Samples	Range of Individual Samples (Lowest - Highest)	Number of Samples	Unit of Measure	MCL	MCLG	MCL Violation?	Typical Sources
TOTAL HALOACETIC	2011	5.478	3.41 - 8.89	8	ppb	60	N/A	No	By-product of drinking water

ACIDS (HAA5)									disinfection.
TTHM	2011	8.479	5.99 - 13.4	8	ppb	80	N/A	No	Byproduct of drinking water disinfection.

Turbidity Sampled at the Entry Point to the Distribution System

Contaminant Name	Sample Date	Level Found	TT Requirement	TT Violation?	Typical Sources
TURBIDITY	Date: July, 2011	Highest single measurement: 0.09 NTU	Maximum 1 NTU for any single measurement	No	Soil Runoff
TURBIDITY	Month: December, 2011	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	No	Soil Runoff

Total Organic Carbon (Disinfection By Products Precursor) Percentage Removal Ratio of Raw & Finished Water

Contaminant Name	Year	Average of Individual Ratio Samples	Range of Individual Ratio Samples (Lowest - Highest)	Number of Ratio Samples	Unit of Measure	TT Minimum Ratio	TT Violation?	Typical Sources
CARBON, TOTAL	2011	1.11	1 - 4	4	Ratio	The TT Minimum Level is a Ratio of 1	No	Naturally present in the environment.

Regulated Contaminants Sampled at the Entry Point to the Distribution System

Contaminant Name	Year	Average of Individual Samples	Range of Individual Samples (Lowest - Highest)	Number of Samples	Unit of Measure	MCL	MCLG	MCL Violation?	Typical Sources
ANTIMONY, TOTAL	2011	0.9	0 - 1.8	2	ppb	6	6	No	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder.
BARIUM	2011	0.012	0 - 0.025	2	ppm	2	2	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
FLUORIDE	2011	1.44	0.98 - 1.9	2	ppm	4	4	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories.
NITRATE	2011	0.14	0 - 0.27	3	ppm	10	10	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
PENTACHLOROPHENOL	2011	0.015	0 - 0.089	6	ppb	1	0	No	Discharge from wood preserving factories.

Radionuclides Sampled at the Entry Point to the Distribution System

Contaminant Name	Year	Average of Individual Samples	Range of Individual Samples (Lowest - Highest)	Number of Samples	Unit of Measure	MCL	MCLG	MCL Violation?	Typical Sources
COMBINED RADIUM (-226 & -228)	2011	0.333	0.2 - 0.6	3	pCi/L	5	0	No	Erosion of natural deposits.

COMBINED URANIUM	2011	17.725	2.9 - 34	4	ppb	30	0	No	Erosion of natural deposits.
GROSS ALPHA, EXCL. RADON & U	2011	2.387	0.36 - 3.6	3	pCi/L	15	0	No	Erosion of natural deposits.
GROSS BETA PARTICLE ACTIVITY*	2007	1.75	1.3 - 2.2	2	pCi/L*	50	0	No	Decay of natural and man-made deposits.

*The MCL for Gross Beta Particle Activity is 4 mrem/year. Since there is no simple conversion between mrem/year and pCi/L EPA considers 50 pCi/L to be the level of concern for Gross Beta Particle Activity.

Secondary Contaminants**

Contaminant Name	Year	Average of Individual Samples	Range of Individual Samples (Lowest - Highest)	Number of Samples	Unit of Measure	Secondary Standard
SODIUM	2011	4.65	4.2 - 5.1	2	ppm	N/A
TDS	2007	221	164 - 278	2	ppm	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.

Violation(s) and Formal Enforcement Action(s)

Formal Enforcement Actions

No Formal Enforcement Actions to Report

Violations

Type	Category	Analyte Name	Monitoring Period	Federal Period	Health Effects	Compliance Result	MCL or TT Level
MONITORING, ROUTINE	Failure to Monitor Violation	NITRATE	07/01/2011 to 09/30/2011	07/01/2011 to 09/30/2011	Health Effects Unknown	N/A	N/A

Additional Violation Information

Nitrate sampling for Rio Grande Well was inadvertently missed during laboratory scheduling. Nitrate was sampled throughout the year (January, June and then later in December) with all samples being well below MCL 10ppm (average 0.14ppm). All other contaminants were sampled correctly for the well.