

**CONSUMER CONFIDENCE REPORT**  
**on**  
**DRINKING WATER QUALITY**

**CARROLL WATER DEPARTMENT**

**2012**

We're pleased to present to you this year's annual Drinking Water Quality Report. This Report is designed to inform you about the quality of water and services we deliver to you every day. Our goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water.

Water is pumped from underground aquifers through eight wells. The wells range in depth from 149 to 190 feet. They are located adjacent to the Middle Raccoon River within the City. Our water source is the Pleistocene and Dakota Sandstone aquifers. The Pleistocene and Dakota Sandstone aquifers were determined to be not susceptible to contamination because the characteristics of the aquifers and overlying materials prevent easy access of contaminants to the aquifers. The Pleistocene and Dakota Sandstone aquifers will not be susceptible to most contaminant sources except through pathways to the aquifers such as abandoned or poorly maintained wells. A detailed evaluation of the source water was completed by the Iowa Department of Natural Resources and is available from the Water Department at 792-6753.

Water is treated at the Water Treatment Plant to remove objectionable constituents and to insure safety for use. Treatment includes aeration to oxidize iron, filtration to remove iron and manganese, disinfection to kill bacteria and fluoridation to aid in the prevention of tooth decay.

"We believe that the best way to assure you that your drinking water is safe and dependable is to provide you with accurate information. This Consumer Confidence Report provides information about water quality and the water system. It also illustrates the extent of the testing performed on the water to assure that it is safe when it reaches your tap. I hope all residents will read this Report and not hesitate to contact the Water Department with any questions." Mayor Adam Schweers.

If you have any questions about this Report or concerning your water utility, please contact Terry Kluver, Water Superintendent, at 792-6753 between 7:00 AM and 4:00 PM, Monday through Friday. We want our valued customers to be informed about their water. If you want to learn more, please attend any of the regularly scheduled City Council meetings. They are held on the second and fourth Mondays of each month at 5:15 P.M. in the Council Chambers in City Hall, 112 E. 5th Street.

The Water Department routinely monitors for constituents in your drinking water according to Federal and State laws. The table shows the results of monitoring for the period of January 1, to December 31, 2011. The State requires monitoring for certain constituents less than once per year because the concentrations of these constituents are not expected to vary significantly from year to year. The data presented is from the most recent testing completed in accordance with the regulations. Some of the data in the table, though representative of water quality, is more than one year old. It is important to remember that the presence of a constituent in the water does not necessarily indicate that the water poses a health risk.

In this table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the definitions.

TEST RESULTS <sup>(A)</sup>							
Contaminant	Violation	Carroll Detected Level	Sample Date	Range of detection	MCLG	MCL or AL	Likely Source of Contamination
<b>Inorganic Contaminants</b>							
Copper <sup>(B)</sup>	No	0.802 ppm <sup>(C)</sup>	June-Sept 2011	0.0637 - 1.050 ppm	1.3 ppm	1.3 ppm <sup>(D)</sup>	Corrosion of household plumbing systems; Erosion of natural deposits.
Fluoride	No	1.4 ppm	Jan-Dec 2011	0.9 – 1.4 ppm	4 ppm	4 ppm	Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories.
Lead <sup>(B,F)</sup>	No	13 ppb <sup>(E)</sup>	June-Sept 2011	0 – 140 ppb	0 ppb	15 ppb <sup>(D)</sup>	Corrosion of household plumbing systems; Erosion of natural deposits.
Sodium	No	12.9 ppm	05-04-10	NA	NA	NA	Erosion of natural deposits; Added to water during treatment process.
<b>Disinfection</b>							
Chlorine	No	1.83 ppm	Jan-Dec 2011	.22 – 2.19 ppm	MRDLG = 4.0 ppm	MRDL = 4.0 ppm	Water additive to control microbes.

- Notes:*
- A. The EPA requires monitoring of over 100 drinking water contaminants. Those listed in this table are the only contaminants detected in your drinking water.
  - B. Regulated at customer tap; 30 sites tested.
  - C. 90<sup>th</sup> percentile test results value = 0.802 ppm.
  - D. Action Level – 90% of samples must be below this level.
  - E. 90<sup>th</sup> percentile test result value = 13 ppb. Three of the 30 sites (10%) tested exceeded the 15 ppb Action Level.
  - F. Infants and children who drink water containing lead in excess of the Action Level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

*Action Level (AL)* – the concentration of a contaminant, which, if exceeded, triggers treatment or other requirements, which a water system must follow.

*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 Contaminant Level Goal (MCLG)* – the “Goal” is the level of a contaminant in drinking water below which there is no known or risk to health. MCLGs allow for a margin of safety.

*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.

NA – Not applicable.

*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.

*Picocuries per liter (pCi/L)* – picocuries per liter is a measure of the radioactivity in water.

Sampling and testing for lead was performed one time in 2011 at the taps of 30 residents. The results of the testing show that the lead action level was not exceeded in more than 10% of the sampling sites in a sampling period. Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure. The Water Department is continuing to sample and test for lead, providing public notification and education, advising owners of homes whose plumbing materials are contributing to elevated lead levels and analyzing our water’s corrosivity all in an effort to correct the elevated lead levels.

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 at 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 (1-800-426-4791).

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Carroll is responsible for providing high-quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

All sources of drinking water are subject to potential contamination by constituents that are naturally occurring or are man made. Those constituents can be microbes, organic or inorganic chemicals, or radioactive materials.

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. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency’s Safe Drinking Water Hotline.

MCL’s are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

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 from infections. These people should seek advice from their health care providers about drinking water. EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline.

Thank you for allowing us to continue providing your family with clean, quality water this year. In order to maintain a safe and dependable water supply, we periodically need to make improvements that will benefit all of our customers. These improvements are sometimes reflected as rate structure adjustments. Thank you for understanding.

We at the Water Department work to provide quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children’s future.

Please call our office if you have questions.