

# 2010 Water Quality Report

## For the

### City of Charles City Water Supply

This report contains important information regarding the water quality in our public water system. This water supply obtains water from one or more groundwater aquifers. Every aquifer has a degree of susceptibility to contamination because of the characteristics of the aquifer, overlying materials, and human activity. Susceptibility to contamination generally increases with shallower aquifers, increasing permeability of the aquifer and overlying materials, nearby development or agricultural activity, and abandoned or poorly maintained wells. A detailed evaluation of your water source was completed by the Iowa Department of Natural Resources, and is available from this water supply. The Charles City Water Supply obtains its water from the Devonian (Cedar Valley) Aquifer and has a low level of susceptibility to contamination.

Analyte	MCL/AL	MCGL	Compliance		Detection		Samples		Begin Date	End Date	Source
			Type	Value	Minimum	Maximum	Total	Exceed			
Alpha emitters (pCi/L)	15.0	0	SGL	2.2	0	2	1	0	05/14/03	06/30/09	Erosion of natural Deposits.
Barium (ppm)	2.0	2.0	SGL	0.28	0	2	1	0	02/19/04	02/19/04	Discharge from drilling wastes; discharge from metal refineries; erosion of natural deposits
Chlorine	MRDL=4.0	MRDGL=4.0	RAA	1.9	0.5	2.2	108	0	10/01/07	09/30/08	Water additive used to control microbes
Combined Radium PC/L	5	0	SGL	1.3	N/A	N/A	1	0	02/19/04	02/19/04	Erosion of natural deposits
Copper (PPM)	AL= 1.3	1.3	90 <sup>th</sup> %	<0.005	<0.005	0.17	20	0	09/18/07	09/30/10	Corrosion of household plumbing systems; erosion of natural deposits
Fluoride	4.0	4.0	SGL	4.9	N/A	N/A	1	0	03/14/07	03/14/07	Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories
Lead (PPB)	AL=15	0	95 <sup>th</sup> %	<0.005	<0.005	.0077	20	0	09/18/07	09/30/10	Corrosion of household plumbing systems; erosion of natural deposits
Nitrate[as N] (ppm)	10	10	SGL	<0.02	<0.02	<0.02	1	0	03/06/08	03/06/08	Runoff from fertilizer use; Leaching from septic tanks, sewage, erosion of natural deposits.
Sodium (ppm)	N/A	N/A	SGL	4.9	N/A	N/A	1	0	03/14/08	03/14/08	Erosion of natural deposits; Added to water during treatment process.

Note: This report is for the period from January 01, 2009 to December 31, 2009. Contaminants with dates indicate results from the most recent testing done in accordance with regulations.

#### DEFINITIONS

- Maximum Contaminant Level (MCL) – 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 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.
- ppb – Parts per Billion
- ppm – Parts per Million
- pCi/L – Picocuries per Liter

- N/A – Not applicable
- ND – Not detected
- Treatment Technique (TT) – A required process to reduce the level of a contaminant in drinking water.
- Action Level (AL) – The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

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 or potential health effects can be obtained by calling the Environmental Protection Agency's "Safe Drinking Water Hotline" (800 426 4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as people 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 about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the "Safe Drinking Water Hotline" (800 426 4791).

#### CONTAMINANT VIOLATIONS

*None*

#### ADDITIONAL HEALTH INFORMATION

**Lead:** 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. Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that the 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. You should also make it a practice to flush your tap for 30 seconds to two minutes before using tap water. Additional information is available from the "Safe Drinking Water Hotline" (800 426 4791).

**Copper:** 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 "Wilson's disease" should consult their personal doctor.

**Alpha Emitters:** Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. People who drink water containing these alpha emitters in excess of the MCL over many years may have increased risk of getting cancer.

**Fluoride:** Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Children may get mottled teeth,

#### OTHER VIOLATIONS:

*None*

## OTHER INFORMATION

In March of 2009 construction began on the Phase III Water Plant Project. When this project is completed in the fall of 2010, we will have a virtually new water plant with the capacity to pump and treat 5 million gallons of water a day.

## CONTACT INFORMATION

For questions regarding the above report, please contact Bill Conaway at 641 257 6315 during regular working hours of 7:00 am to 3:30 pm Monday through Friday.

Decisions pertaining to the public water system are made at the City Council meetings held on the 1<sup>st</sup> and 3<sup>rd</sup> Mondays of the month. These meetings begin at 7:00 pm and are open to the public. These meetings are also televised on public access channel 4 on a regular basis.

**Este informe contiene informacion muy importante sobre u aqua bebar. Traduzcalo o hable alguien que to entienda bien.**