

# 2012 Water Quality Report

## For The City of Fairfax

This report contains important information regarding the water quality in our water system. The source of our water is groundwater. Our groundwater is drawn from the Silurian aquifer. Our water quality testing shows the following results:

CONTAMINANT	MCL - (MCLG)	Compliance		Date	Violation	Source
		Type	Value & (Range)			
Lead (ppb)	AL=15 (0)	90th	20.30 (ND - 32) 2 sample(s) exceeded AL	09/30/2012	Yes	Corrosion of household plumbing systems; erosion of natural deposits
Copper (ppm)	AL=1.3 (1.3)	90th	1.15 (0.143 - 1.620) 1 sample(s) exceeded AL	09/30/2012	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

### Distribution system:

CONTAMINANT	MCL - (MCLG)	Compliance		Date	Violation	Source
		Type	Value & (Range)			
Chlorine (ppm)	MRDL=4.0 (MRDLG=4.0)	RAA	3.3 (2.65 - 4.1)	12/03/2012	No	Water additive used to control microbes
Total Trihalomethanes (ppb) [TTHM]	80 (N/A)	SGL	2.10	07/14/2010	No	By-products of drinking water chlorination
Total Haloacetic Acids (ppb) [HAA5]	60 (N/A)	SGL	8.70	07/14/2010	No	By-products of drinking water disinfection
Total Coliform Bacteria	0		0(ND)	Twice monthly	No	Naturally present in the environment

### Well #1:

CONTAMINANT	MCL - (MCLG)	Compliance		Date	Violation	Source
		Type	Value & (Range)			
Combined Radium (pCi/L)	5 (0)	SGL	2.96	02/20/2012	No	Erosion of natural deposits
Alpha Emitters (pCi/L)	15 (0)	SGL	8.17	01/06/2009	No	Erosion of natural deposits
Barium (ppm)	2 (2)	SGL	0.0216	04/19/2011	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride (ppm)	4 (4)	SGL	0.51(0.50-0.51)	09/04/2012	No	Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories
Sodium (ppm)	N/A (N/A)	SGL	64.8	04/19/2011	No	Erosion of natural deposits; Added to water during treatment process

### Well #2:

CONTAMINANT	MCL - (MCLG)	Compliance		Date	Violation	Source
		Type	Value & (Range)			
Alpha Emitters (pCi/L)	15 (0)	SGL	3.22	02/20/2012	No	Erosion of natural deposits

Combined Radium (pCi/L)	5 (0)	SGL	1.51	01/06/2009	No	Erosion of natural deposits
Fluoride (ppm)	4 (4)	SGL	0.53(ND-0.53)	10/01/2012	No	Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories
Barium (ppm)	2 (2)	SGL	0.0206	12/13/2010	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Sodium (ppm)	N/A (N/A)	SGL	59.3	12/13/2010	No	Erosion of natural deposits; Added to water during treatment process

**Well #3:**

CONTAMINANT	MCL - (MCLG)	Compliance		Date	Violation	Source
		Type	Value & (Range)			
Combined Radium (pCi/L)	5 (0)	SGL	1.1	07/03/2008	No	Erosion of natural deposits
Barium (ppm)	2 (2)	SGL	0.354	12/13/2010	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride (ppm)	4 (4)	SGL	0.87(0.68-0.87)	05/01/2012	No	Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories
Sodium (ppm)	N/A (N/A)	SGL	31.1	12/13/2010	No	Erosion of natural deposits; Added to water during treatment process

Note: 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
- RAA – Running Annual Average
- IDSE – Initial Distribution System Evaluation
- Treatment Technique (TT) – A required process intended 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.
- 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.
- SGL – Single Sample Result
- TCR – Total Coliform Rule

## GENERAL INFORMATION

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 water posed 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 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 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).

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. FAIRFAX WATER SUPPLY 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>.

## CONTAMINANT VIOLATIONS

Violation Type	Contaminant	Begin date	End Date
Our water system violated a drinking water standard for 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.			
AL (Pb/Cu), 90th Percentile	Lead	06/01/2010	09/30/2012

## ADDITIONAL HEALTH INFORMATION

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 (800-426-4791).

## SOURCE WATER ASSESSMENT INFORMATION

This water supply obtains its water from the dolomite of the Silurian aquifer. The Silurian aquifer was determined to be susceptible to contamination because the characteristics of the aquifer and overlying materials provide some protection from contaminants from the land surface. The Silurian wells will be susceptible to surface contaminants such as leaking underground storage tanks, contaminant spills, and excess fertilizer application. A detailed evaluation of your source water was completed by the Iowa Department of Natural Resources, and is available from the City of Fairfax at 319-846-2204.

## CONTACT INFORMATION

For questions regarding this information or how you can get involved in decisions regarding the water system, please contact the City of Fairfax at 319-846-2204.