



## CITY OF WILLIAMSTON 2011 ANNUAL WATER QUALITY REPORT

### KEEPING YOU INFORMED!

The City of Williamston provides your drinking water and is pleased to present you with this annual water quality report for the calendar year 2011. This report follows the guidelines set by the Environmental Protection Agency (EPA) and the Michigan Department of Natural Resources and Environment (MDNRE). Our goal is to provide you with a safe and dependable water supply. This report will illustrate that we are achieving this goal.

### SOURCE WATER ASSESSMENT PROGRAM

The MDEQ performed an assessment of our source water in 2003 to determine susceptibility or the relative potential of contamination. The susceptibility rating is on a seven-tiered scale from "very low" to "very high" based primarily on geologic sensitivity, water chemistry and contaminant sources. The average susceptibility rating of our source wells is "moderate." If you would like to know more about the report, please contact City Hall.

### ARSENIC RULES REVISED

Arsenic is a contaminant that enters water supplies through the erosion of natural deposits, orchard runoff, and glass and electronics production wastes. The State of Michigan has revised the maximum level allowed for arsenic from 50 parts per billion to 10 parts per billion (ppb), effective January 2006.

The City of Williamston's water supply was tested for arsenic during 2010 and the concentration was 3 ppb, well below the new standard of 10 ppb. No additional treatment or action will be necessary for the City of Williamston to remain in compliance with the new arsenic rules.

### OUR DRINKING WATER

Your drinking water comes from five groundwater wells. The water is pumped from a zone deep within the bedrock. Filtration through the soil above helps keep the water clean. The water is treated for iron removal and softening (removal of Calcium and Magnesium). Chlorine is then added for disinfection. The water is tested on a weekly basis for bacteria.

The finished drinking water is pumped to the distribution system and to an above ground storage tank for use during peak demands. The distribution system is flushed a minimum of three times per year to remove mineral deposits from the water mains. This improves the taste of the water and helps prevent a cloudy appearance.

### HEALTH AND SAFETY INFORMATION

Drinking water, including bottled water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily pose a health risk.

The sources of both tap and bottled drinking water include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of land or through the ground, it dissolves

naturally occurring minerals and, in some cases, radioactive materials, and can also pick up substances resulting from animal or human activity. Contaminants that may be present in source water include:

- *Microbial contaminants*, such as viruses and bacteria, which 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 resulting from urban storm water runoff and residential uses.
- *Pesticides and herbicides*, which may come from a variety of sources such as agricultural and residential uses.
- *Organic chemical contaminants*, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, septic systems, and urban or agricultural runoff (i.e. pesticides and herbicides).
- *Radioactive contaminants*, which can be naturally occurring or the result of oil and gas production and mining activities.

To ensure that tap water is safe, the EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration is in the process of establishing limits for contaminants in bottled water, which must provide the same protection for public health.

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 Williamston 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>.

### WATER TREATMENT & SUPPLY WELLS

In March 2012, the new iron removal and softening treatment plant went on line with three of the new and refurbished wells. In June 2012, the remaining two refurbished wells went on line to complete the project. The plant is performing well, producing finished water with just a trace of iron and a 50 to 60% reduction in hardness (Calcium and Magnesium). Customers with in-home water softeners are advised to adjust the settings to reduce the amount of regenerations required if they choose to keep them in service. Due to

years of mineral deposits in the distribution system water mains, there may be dissolving of these minerals back into the treated water for a period of time. The City has been monitoring this occurrence particularly in older parts of the system and performs additional flushing to clean the water mains. Customers are advised that pipes and water heaters within their building may also need to be flushed to clear old mineral deposits.

#### **INFORMATION FOR PEOPLE WITH SPECIAL HEALTH CONCERNS:**

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons, such as persons 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. Federal guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are also available from the EPA's Drinking Water Hotline 800-426-4791.

#### **DEFINITIONS**

**Parts per million (ppm) and parts per billion (ppb)** – One ppm can be equated to 4 teaspoons of salt in a standard 24-foot backyard pool. One ppb is one teaspoon of salt in an Olympic-sized pool.

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

**Maximum Contaminant Level (MCL)** – The MCL is the highest level of a contaminant that is allowed in the drinking water. MCLs are set as close to the MCLGs as feasible, using the best available treatment technology. MCLs are set at very stringent levels by the State and Federal government. To understand the possible health effects, a person would have to drink about two liters (quarts) of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the associated health effect.

**Maximum Contaminant Level Goal (MCLG)** – The MCLG is the level of a contaminant in drinking water below which there is no known or expected health risk. MCLGs provide for a margin of safety.

**Maximum Residual Disinfectant Level (MRDL)** – The MRDL means 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.

**Maximum Residual Disinfectant Level Goal (MRDLG)** - means 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.

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

Monitoring and Reporting Requirements: The State and EPA require us to test our water on a regular basis to ensure safety.

**nd** – not detectable at testing limit.

We will update this report annually and will keep you informed of any problems that may occur throughout the year, as they happen.

Copies are available at City Hall, 161 E. Grand River Ave. This report will not be sent to you unless requested

Monitoring and Reporting Requirements: The State and EPA require us to test our water on a regular basis to ensure safety.

We invite public participation in decisions that affect drinking water quality. City Council meetings are held every second and fourth Monday of the month at 7:00 p.m. at City Hall. For more information about your water, or the contents of this report, contact the DPW Director at (517) 655-2221 extension 20. For more information about safe drinking water, visit the U.S. Environmental Protection Agency at [www.epa.gov/safewater/](http://www.epa.gov/safewater/).

#### **IMPORTANT CONTACTS**

**Williamston City Hall**  
161 E. Grand River Ave.  
Williamston, MI 48895

**Billing Questions:**  
517-655-2774

#### **Water System Emergencies:**

517-655-2774 Monday – Friday (8:00 a.m. – 5:00 p.m.)  
517-374-7321 After Hours and Weekends

#### **EPA Safe Drinking Water Hotline:**

800-426-4791

#### **EPA Website:**

[www.epa.gov/safewater/](http://www.epa.gov/safewater/)

#### **Water Costs Money . . . Don't Waste It!**

Little leaks add up in a hurry. A faucet drip or invisible toilet leak that totals only two teaspoons a minute comes to 15 gallons a day. That's 105 gallons a week and 5,460 wasted gallons of water a year. Check every faucet in the house. A single dripping faucet can waste far more water in a single day than one person needs for drinking in an entire week. Leaky toilets can waste as much as 200 gallons each day. Identify leaks by adding food coloring in your toilet tank. If the color shows up in the bowl without the toilet being flushed, you have a leak to repair.

Adjust lawn watering to the weather. Following a heavy rain, for instance, skip your regular watering a day until the grass needs it again. Teach the family how to turn off an automatic sprinkler system in case a storm comes up during the sprinkling cycle. With or without an automatic sprinkler system, it is wise to water during the evening or early morning hours. Water applied to a lawn during the hottest part of the day tends to evaporate before it has time to soak into the roots of the grass. If you have an automatic sprinkler system, check the heads periodically. Be sure they haven't shifted direction to spray water on the side of the house, driveway, or sidewalk instead of the lawn.

# CITY OF WILLIAMSTON WATER QUALITY TEST RESULTS FOR 2011

The table below lists all the drinking water contaminants that were detected during the 2011 calendar year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done January 1 – December 31, 2011. The State allows 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. All of the data is representative of the water quality, but some are more than one year old.

Regulated Contaminant	MCL	MCLG	Highest Level Detected	Range	Sample Date	Violation Yes / No	Typical Source of Contaminant
Arsenic (ppb)	10	0	3	nd - 3	06/22/10	No	erosion of natural deposits; runoff from orchards
Barium (ppm)	2	2	.62	.16 – .62	06/22/10	No	discharge of drilling wastes; erosion of natural deposits
Fluoride (ppm)	4	4	.51	.38 – .51	04/14/11	No	erosion of natural deposits; discharge from fertilizer factories
Chlorine (ppm)	MRDL	MRDLG	2.7	0.2 – 2.7	Weekly	No	Water additive used to control microbes
	4	4					
Radioactive Contaminant	MCL	MCLG	Highest Level Detected	Range	Sample Date	Violation Yes / No	Typical Source of Contaminant
Combined Radium (pCi/L)	5	0	5.1 <sup>3</sup>	3.0 – 5.1	Quarterly	No	erosion of natural deposits
Volatile Organic Contaminants	MCL	MCLG	Highest Level Detected	Range	Sample Date	Violation Yes / No	Typical Source of Contaminant
Total Trihalomethanes (TTHMs) (ppb)	80	None <sup>2</sup>	17	15 - 17	06/09/11	No	byproduct of drinking water disinfection
Haloacetic Acids (HAA5s) (ppb)	60	None <sup>2</sup>	6	3 - 6	06/08/11	No	
Special Monitoring and Unregulated contaminant <sup>1</sup>			Average Level Detected	Range	Sample Date	Typical Source of Contaminant	
Sodium (ppm)			79	59 – 114	04/14/11	erosion of natural deposits	
Contaminant Subject to AL	Action Level		90% of Samples < This Level		Sample Date	Number of Samples Above AL	Typical Source of Contaminant
Copper (ppm)	.26 ppm		0		06/30/09	0	corrosion of plumbing; erosion of natural deposits
Lead (ppb)	0 ppb		0		06/30/09	0	corrosion of plumbing; erosion of natural deposits
Microbial Contaminants	MCL			MCLG	Number Detected	Violation Yes / No	Typical Source of Contaminant
Total Coliform Bacteria	1 positive monthly sample			0	1	No	naturally present in the environment
Fecal Coliform and <i>E. coli</i>	Routine and repeat sample total Coliform positive, and one is also fecal or <i>E. coli</i> positive			0	0	No	human and animal fecal waste

<sup>1</sup> Unregulated contaminants are those for which EPA has not established drinking water standards. Monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants.

<sup>2</sup> MCLGs were not established before the 1986 Amendments to the Safe Drinking Water Act. Therefore, there is no MCLG for this contaminant.

<sup>3</sup> Radium levels are monitored on a running four quarter average. Our 2011 running average for radium is 4.2 pCi/L.