

2013 ANNUAL DRINKING WATER QUALITY REPORT

We're pleased to present to you this year's Annual Drinking Water Quality Report. This report is designed to keep you informed about the quality water and services we have delivered to you over the past year. Our goal is, and always has been, to provide to you a safe and dependable supply of drinking water. Our water source is from 2 wells located in the Reading Wellhead protection zone which was initiated to protect our ground water supply.

The City water supply is treated at the wells with chlorine before it is pumped to the distribution system.

If you have any questions about this report, please contact Tom Stephenson at 283-2835. We want our valued customers to be informed about their water.

The City of Reading routinely monitors for constituents in your drinking water according to Federal and State laws. The attached table shows the results of our monitoring for the period of January 1, 2013 to December 31, 2013

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 poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA'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). The sources of drinking water (both tap 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. The water can also pick up substances resulting from the presence of animals or from human activity.

In order to ensure that the tap water is safe to drink, EPA prescribes regulations which limit

The amount of certain contaminants in drinking water provided to the public by the water utility.

Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

In this table you will find terms and abbreviations you might not be familiar with.

To help you better understand these terms we have provided the following definitions:

Non-Detects (ND)- laboratory analysis indicates that the constituent is not present.

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 - 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.

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

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- The “Maximum Allowed” (MCL) 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 technologies.

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

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 result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

Pesticides and Herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential use.

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.

Radioactive Contaminants, which can be naturally - occurring or be the results of oil and gas production and mining activities.

MRDL, Maximum residual disinfectant level, Means the highest level of a disinfectant allowed in drinking Water. There s convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG, Maximum residual disinfectant level goal, Means the level of a drinking water disinfectant below which there is no known risk to health. **MRDLGs** do not reflect the benefits of the use of disinfectants to control microbial contaminants.

DETECTED CONTANIMINANTS

<u>Contaminant</u>	<u>Violation</u>	<u>Level Detected</u>	<u>MCLG</u>	<u>MCL</u>	<u>Likely source of Contamination</u>
<u>Radioactive Contaminants 2011</u>					
Water treatment Plant Alpha/	N	2.18 pCi/l	0	15	Erosion of natural deposits
Well #1 Alpha/	N	1.48 pCi/l	0	15	Erosion of natural deposits

Inorganic Contaminants

Arsenic *

Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.

2013 testing

Arsenic wells 6 & 7

(Running average)	N	3 ppb	10	10	Erosion of natural deposits, runoff from orchards' runoff from glass and electronics production wastes
Back up well system					
Arsenic (well 1)	N	4 ppb	10	10	Erosion of natural deposits, runoff from orchards, runoff From glass and electronic Production waste,
(9-18-12)					
Copper 90 th percentile -10 homes tested -0 exceeded action levels	N	94 ppb	1300 ppb		Corrosion of household plumbing systems; erosion of natural deposits
Lead 90 th percentile -10 homes tested -1 exceeded action levels	N	0ppb	15ppb		
(9-19-2013)					
Fluoride treatment plant	N	0.41 ppm	4	4	Erosion of natural deposits water additive which promotes strong teeth, discharge from fertilizer factories and Aluminum factories
Well 1	N	0.20 ppm			
(9-19-2013) special monitoring					
Sodium Treatment plant	N	12 ppm	0	NA	Erosion of natural deposits
Well 1	N	28 ppm			

DETECTED CONTANIMINANTS

<u>Contaminant</u>	<u>Violation</u>	<u>Level Detected</u>	<u>MCLG</u>	<u>MCL</u>	<u>Likely source of Contamination</u>
Chlorine Residual results for 2013					
Highest monthly Average	N	1.20 mg/l	MRDL 4	MRDLG 4	Water additive used to control Microbes
Lowest Monthly Average		0.69 mg/l			
Highest running Annual Average		0.99mg/l			
Disinfection results 2013					
TTHM (9-19-13)	N	22.4 ppb	80	NA	By product of drinking water Disinfection
HAA5s (9-19-13)	N	5 ppb	60	NA	

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 Reading 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 your 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>.

2004 Source Water Assessment

Your Water comes from (2) ground water wells located in the township drawing from a depth of over 90 feet. Both are in the Reading Well Head Protection Area which was established in 1998 to protect your drinking water from possible sources of contamination and to establish protocol for the response of an accidental release in the WHPA should one occur.

The State of Michigan performed an assessment of our water source and upon review of the contaminate source Inventory, as detailed in the September 1998 city of Reading WHP program, there are very few concerns related to possible contamination of the WHPA

Due to the nature of the aquifer, the likelihood of contamination is reduced. Potential sources of contamination include agricultural fertilizer and pesticide applications, machinery-related fluid spills, improperly functioning septic systems, or a hazardous materials release along the M-49 highway.

Based on the above sensitivity analysis and listed potential contaminant sources within the WHPA, wells 6 and 7 have been determined by the DEQ to have moderate susceptibility to potential contaminants.