

2012 Annual Drinking Water Quality Report

City of Ironwood Public Water Supply March 4, 2013

We are pleased to present to you this year's Annual Drinking Water Quality Report. This is designed to inform you about the quality of water and services we deliver to you every day. Our constant 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 Source

Our water source is two glacial aquifers, which serve the Big Springs and Spring Creek Well Fields. These six wells range with a depth of 54 feet to 140 feet. The City of Ironwood water supply recently completed a State of Michigan approved wellhead protection plan to protect the public area water supply.

Information About This Report

If you have any questions about this report or concerning your water quality, please contact Bob Tervonen at (906)932-5050 or Jim Ansami. We want our valued customers to be informed about their water quality. If you want to learn more, please attend any of our regularly scheduled meetings. They are normally held on the second and fourth Monday each month at 5:30 pm in the commission chambers of the Memorial Building at 213 South Marquette Street in Ironwood, MI.

Water Contaminants

All sources of drinking water are subject to potential contamination by substances that are naturally occurring or man made. As water travels over the land or underground, it can pick up substances or contaminants such as microbes, inorganic and organic chemicals, and radioactive substances. All drinking water, including bottled water, is expected to contain at least small amounts of some contaminants. It is important that the presence of these contaminants does not necessarily pose 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 at 1-800-426-4791.

Abbreviations and Terms

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

Parts per million (ppm) on 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) on Micrograms per liter – One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Action Level (AL) – The concentration level of a contaminant, if exceeded, triggers treatment or other requirements that a water system must follow.

Treatment Technique (TT) – A treatment technique is a required process intended to reduce the level of a contaminant in the drinking water.

Maximum Contaminant Level (MCL) – 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 technology.

Maximum Contaminant Level Goal (MCLG) – The “goal” (MCLG) is 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.

The City of Ironwood Water Department routinely monitors for contaminants in your drinking water according to federal and state laws. This table shows the results of our monitoring for the period January 1st to December 31st, 2012.

TEST RESULTS

<u>Contaminants</u>	<u>Violation</u>	<u>Level</u>	<u>Unit</u>	<u>MCLG</u>	<u>MCL</u>	<u>Likely Source of Contamination</u>
Inorganic Contaminants						
Copper	NO	.55	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Fecal Coliform/E coli	NO	NEG				Confirmed presence means that the routine distribution system sample or the repeat sample was total coliform-positive or fecal-positive or E. coli positive and the other sample (routine distribution system sample or repeat

Contaminant	Result	Concentration	Unit	MCL	MCLG	Health/Environmental Concerns
Fluoride	NO	.16	ppm	4	4	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Lead	NO	<1.0	ppb	0	AL=15	Corrosion of household plumbing systems; erosion of natural deposits
Nitrate	NO	ND	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks (as nitrogen); sewage; erosion of natural deposits
Nitrite	NO	ND	ppm	1	1	Runoff from fertilizer use; leaching from septic tanks (as nitrogen); sewage; erosion
Sodium	NO	13	ppm	N/A	N/A	Sodium has no MCL or MCLG. Sodium contamination is a source of erosion of natural deposits.
Total Coliform	NO	POS	(*See note below)			Confirmed presence means that the routine distribution system sample or the repeat sample was total coliform positive.

*Total coliform tests were positive during a routine sample test on April 6, 2012 at the DPW test site and on June 5, 2012 at the Memorial Building test site. Fecal and E-Coli tests were also taken and **all results were NEGATIVE and NOT PRESENT**. As required, the eighteen (18) repeat total coliform samples that were taken were also **NEGATIVE and NOT PRESENT**. The repeat sample results indicate that **the City of Ironwood is in compliance** regarding the original false positive sample taken.

Trihalomethanes	NO	.046	ppm	.000	.080	By-product of drinking water chlorination
Chlorine Residual (Free) 2011			ppm	High 2.30	4.00	
				Low 1.20	4.00	
				Average 1.85	4.00	
Chlorine Residual (Free) 2012			ppm	High 2.33	4.00	
				Low 0.99	4.00	
				Average 1.73	4.00	

Inorganic Contaminants

Copper – Copper is an essential nutrient. Few individuals who drink water with copper in excess of the action level over a relatively short amount of time may experience gastrointestinal distress. Individuals who drink water with copper in excess of the action level over many years may suffer liver or kidney damage. People with Wilson’s Disease should consult their personal doctor.

Fecal coliform or E. coli – Susceptible vulnerable subpopulation are infants, young children, the elderly and people with severely compromised immune supplies. Confirmed presence means that the routine distribution system sample or the repeat sample was total coliform-positive or fecal-positive or E. coli positive and the other sample (routine distribution system sample or repeat sample) was fecal-positive or E. coli positive. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.

Fluoride – Individuals who drink water with fluoride in excess of the MCL over many years may get bone disease, including pain and tenderness of the bones. Children may also get mottled teeth.

Lead – 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 Ironwood 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 at 1-800-426-4791 or at <http://water.epa.gov/drink/info/lead/index.cfm>

Nitrate – Infants below the age of six months who drink water with nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and baby blue syndrome.

Nitrite - Infants below the age of six months who drink water with nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and baby blue syndrome.

Sodium – Sodium has no MCL or MCLG. Sodium contamination is a source of erosion of natural deposits.

Total Coliform - Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present.

Trihalomethane (TTHM) – Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, any may have an increased risk of getting cancer.

What This Means

As you can see by the table, our system had no violations. We are proud that your drinking water meets or exceeds all federal and state requirements. We have learned through our monitoring and testing that some constituents have been detected. **The EPA has determined that your water IS SAFE at these levels.**

MCL's are set at very stringent levels. To understand the possible health effects described for many regulated constituents, one 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.

Water System Improvements

The City of Ironwood secured funding with the USDA Rural Development for phase I and phase II of the Jessievile/Norrie area water and sewer projects. Construction for both phase I and phase II is approximately 90% completed by the end of the 2012 construction season and will be completed during the 2013 construction season. These projects will improve the sanitary sewer system as well as eliminating problems with infiltration and inflow. Water system improvements will include replacing defective water mains and installing new lines to provide better water flow from the Jessievile area to the Norrie areas.

Since 1997, the City of Ironwood has invested in over fourteen million dollars (\$14 million) in our pump station, well fields and distribution system. These improvements were completed with very modest water rate increases, which are still below the water rate average in the Upper Peninsula region. In our continuing efforts to maintain a safe and dependable water supply future water system improvements are necessary. The costs of these improvements may be reflected in the water rate structure.

Precautions

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-compromised persons such as cancer patients undergoing chemotherapy, patients who have received organ transplants, patients with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk with infections. These individuals 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 microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Please call our office at 932-5050 if you have any questions.