CITY OF IONIA

Department of Public Utilities
2019
Annual Drinking Water Quality Report
WSSN 03370
2/13/20

The Department of Public Utilities is pleased to provide you with this year's Annual Water Quality Report. We want to keep you informed about the excellent water and services we have delivered to you over the past years. Our goal is and always has been, to provide to you a dependable supply of drinking water. Our water source is groundwater**.** The City of Ionia has nine wells each are over one hundred feet in depth drawing from a glacial drift aquifer of the Pleistocene age.

* We are pleased to report that our drinking water meets Federal and State requirements.*

If you have any questions about this report or concerning your water utility, please contact Chris Kenyon at 720 Wells St. Ionia, MI 48846. Telephone 616-523-0165 or e-mail ckenyon@ci.ionia.mi.us. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled City Council meetings. They are held on the first Tuesday of every month at 7:00 pm in the council chambers at City Hall 114 N. Kidd St. Ionia, MI 48846

The City of Ionia Department of Public Utilities routinely monitors for constituents in your drinking water according to Federal and State laws. This table shows the results of our monitoring for the period of January 1st through December 31st 2019. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some constituents. It's important to remember that the presence of these constituents does not necessarily pose a health risk.

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

-*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 (*ug/l)* - 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 (ng/l)* – one part per trillion corresponds to one minute in 2,000,000 years or a single penny in $1,000,000,000
- *Action Level* - the concentration of a contaminant, which, if exceeded, triggers treatment or other requirements, which a water system must follow.
-*Maximum Contaminant Level* - The "Maximum Allowed" (MCL) is the highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLGs using the best available technology.

-*Maximum Contaminant Level Goal* - 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.
-*Picocuries per litre* - pCi/l – the measure of the radioactivity in water.
-*Maximum Residual Disinfectant Level* (MDRL): 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 Disinfection Level Goal* (MRDLG): The level of a drinking water disinfectant below which there is no know or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

TEST RESULTS

Contaminant	Violation Y/N	Highest Level Detected	Unit Measurement	MCLG (MRDLG)	MCL (MRDL)	Likely Source of Contamination
Inorganic Contaminants						
1. Fluoride	N	0.52	mg/L	N/A	50	Erosion of natural deposits; water additive, which promotes strong teeth; discharge from fertilizer and aluminum factories.
2. Arsenic	N	Not Detected	mg/L	0	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes.
3. Barium	N	0.05	mg/L	2	2	Discharge from drilling waste; discharge from metal refineries; erosion of natural deposits.
4. Copper (2017)	N	0.5 (90^{th} Per-centile)	mg/L	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
5. Lead (2017) Note: One sample was found to be above the action level at 30.9 ppb. Repeat sample was <3.00 ppb.	N	4 (90^{th} Per-centile)	ppb	15	AL=15	Corrosion of household plumbing systems, erosion of natural deposits.
6. Nitrate (as Nitrogen)	N	0.5	mg/L	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
7. Trihalomethanes	N	Highest running annual average 14 Range 12-16	ppb	N/A	80	Byproducts of drinking water chlorination
8. Haloacetic Acids	N	Highest running annual average 5 Range 4-6	ppb	N/A	60	Byproducts of drinking water chlorination
9. Chlorine Residual	N	Highest running annual average 0.5 Range 0.4- 0.6	mg/L	N/A	4	Water additive used to control microbes.

Microbial Contaminants

10. Total Coliform	N	0	Presence / Absence	0	Not more than one positive.	Naturally present in the environment.

Radiological Contaminants

11. Alpha emitters (2016)	N	1.62	pCi/L	0	15	Erosion of natural deposits.

Polyfluoroalkyl Substances

12. PFAS (2018)	N	ND	ng/L	0	70	A group of industrial chemicals in common consumer products and manufacturing processes.

* "Unregulated contaminant monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants." This testing was conducted in 2019 and the results are available upon request.

"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 Ionia 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"

"Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or emotional 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."

"The State allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old."

"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 profession doctor."

"The sources of drinking water (both tap water 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, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in the source water include:

- Microbial contaminants, such as virus 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 uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, can also come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

"In order to ensure that tap water is safe to drink, EPA prescribes regulations, which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health."

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

"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 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. Immune-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 microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Your water comes from nine groundwater wells located North in the City. The State of Michigan preformed an assessment of our source water in 2003 to determine the susceptibility or the relative potential of contamination. The susceptibility rating is on a seven-tiered scale from "very low" to "high" based primarily on geologic sensitivity, water chemistry and contaminant sources. The susceptibility of our source is high.

We at the City of Ionia Department of Public Utilities work around the clock to provide top quality water to every tap. Through the City Ordinance, continuous training, extensive monitoring, fire hydrant flushing, cross connection inspections and a Wellhead Protection Program we are dedicated to protecting our ground water supply now and in the future. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future.