

# City of Reading 2021 Annual Water Report

City of Reading  
Water Department  
PO Box 240  
Reading, MI 49274

POSTAL CUSTOMER  
READING, MICHIGAN

Postal  
Customer  
Reading, MI

## Definitions and Abbreviations

**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.

**Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water and is enforceable.

**Maximum Residual Disinfectant Level (MRDL):** The highest level of disinfectant allowed in drinking water. The addition of a disinfectant is necessary for control of microbial contaminants.

**Treatment Technique (TT):** A required process to reduce the level of a contaminant in drinking water.

**Highest Level Detected:** This column usually represents the highest result measured. For turbidity, it is the highest single measurement and the lowest monthly percentage of samples meeting the turbidity limits for the filtration technology being used. For Disinfectant By-Products, it is the highest running annual average.

**ND:** Not detectable within testing limits

**N/A:** Not applicable

**ppm:** Parts per million or milligrams per liter or one ounce in 7,350 gallons of water

**ppb:** Parts per billion or micrograms per liter or one ounce in 7,350,000 gallons of water

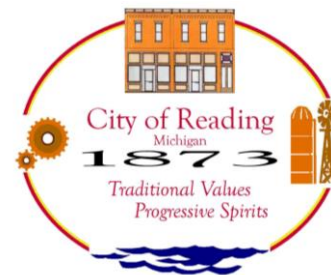
**ppt:** parts per trillion or nanograms per liter

**pCi/l:** picocuries per liter (a measure of radioactivity)

**Action Level (AL):** A level of contaminant that if exceeded, treatment may be required.

**Level 1 Assessment:** A study of the water supply to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system

**Level 2 Assessment:** A detailed study of the water system to identify potential problems and determine why an *E. coli* MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions



# City of Reading Consumer Confidence Report Water Quality Report for 2021

*Este informe contiene información muy importante sobre el agua que usted bebe. Tradúzcala ó habla con alguien que lo entienda bien*

## Introduction

The City of Reading has developed and distributed this water quality report as part of our continued effort to provide our water customers with educational information regarding your drinking water supply. This report also demonstrates that your drinking water supply is safe by meeting or exceeding all water quality standards listed in the Safe Drinking Water Act (SDWA).

The United States Environmental Protection Agency (USEPA) and the Michigan Department of Environment Great Lakes & Energy (MIEGLE) continually monitor all drinking water utilities to comply with SDWA regulations. As required by Consumer Confidence Report (CCR) regulations of the recently amended SDWA, a water quality report will be distributed to all water customers by July 1 of each year.

During the past year, The City of Reading Water Department has taken hundreds of water samples to determine the presence of any biological, inorganic, volatile organic, or synthetic organic contaminants.

**No drinking water violations were recorded during 2021 for the City of Reading. All monitoring and reporting requirements were met.**

We want our valued customers to be informed about their water quality and safety. If you have any questions or comments regarding this report or our water supply system, please contact Paul Seegert, Reading, Drinking Water Operator-In-Charge, at (517) 283-2835. The Reading City Council meets once a month at 6:30 p.m. in the Council Chambers at Reading City Hall. This report is available on the website at: <http://www.reading.mi.us>.

## Drinking-Water Information

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of contaminants. Contaminants do not necessarily indicate that water poses a health risk. More information about these contaminants and potential health effects can be obtained by calling USEPA's Safe Drinking Water Hotline (800) 426-4791.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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. USEPA/CDC guidelines on appropriate means to reduce infection risk by microbial contaminants are available from the USEPA's Safe Drinking Water Hotline (800) 426-4791.



To ensure that tap water is safe to drink, the USEPA sets regulations that limit the number of certain contaminants in water provided by public water systems. The food and Drug Administration (FDA) regulates limits for contaminants in bottled water, which must provide the same protections for public health.

## Source Water Contaminants

To ensure that tap water is safe, the USEPA prescribes regulations limiting the number of certain contaminants in public water systems. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. These contaminants do not necessarily indicate that the water poses a health risk. The USFDA establishes limits on bottled water, which must provide the same protections for public health.

As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals, in some cases, radioactive material and substances resulting from the presence of animals or human activity. The drinking water sources (tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. Substances that may be in source water include:

**Microbial contaminants**, such as viruses and bacteria, may come from sewage treatment plants, septic systems, farming, livestock and wildlife.

**Inorganic contaminants**, such as salts and metals, can naturally result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

**Pesticides and herbicides** may come from various sources such as agricultural uses, urban stormwater runoff, and residential uses.

**Organic chemical contaminants**, including synthetic and volatile organic chemicals, are by-products of industrial processes and petroleum production and come from gas stations, urban stormwater runoff, and septic tanks/systems.

**Radioactive contaminants** can naturally result from oil and gas production and mining activities.

## Source Water Location

The City of Reading relies on groundwater for its drinking water supply. The City owns and operates two (2) wells located 3 miles south of the community. The groundwater supply is a complex system composed of pumps, electronic instruments, and other appurtenances. Routine maintenance is performed on all equipment to ensure the reliability of the groundwater supply when it's needed, either in an emergency or as part of the seasonal supply. The municipal drinking water utilizes chlorine for disinfection; the drinking water is then pumped to the 100,000-gallon elevated storage tank water tower for public use.



City of Reading Treatment Plant

## Source Water Assessment Program and Susceptibility to Contamination

The MiEGLE provided us with a Source Water Assessment Report for our water supply. This assessment determines the susceptibility or relative potential of contamination to our drinking water wells. The susceptibility rating for the City of Reading water source was listed as "moderate to high." The ratings are determined by geologic sensitivity, water chemistry, and potential contaminant sources located in the groundwater wells' areas. The source water assessment report provides a screening-level evaluation of potential contamination that **could** occur. It **does not** mean that the contamination **has or will** occur. This information is used to evaluate current water treatment capabilities and prepare for future threats. This report helps us ensure that quality finished water is delivered to your homes.

## Water Quality Data Table

According to Federal and State laws, the City of Reading routinely monitors for contaminants in your drinking water. The table below lists the drinking water contaminants that we detected during the calendar year of this report unless otherwise noted. The State of Michigan requires us to monitor certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. Therefore, though representative, some of our data may be more than one year old. If any, violations and Formal Enforcement Actions are reported in the next section of this report.

Information about 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. 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 have a lead service line it is recommended that you run your water for at least 5 minutes to flush water from both your home plumbing and the lead service line. 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 at <http://www.epa.gov/safewater/lead>.

## 2021 Water Quality Detected Contaminants for the City of Reading

### City of Reading Lead and Copper Results – Taken at Customer's Tap (2021)

| Contaminant (Units) | MCL                        | City Water Amount Detected | Number of Sites Above the AL | Range of Amount Detected (Low-High) | Testing Frequency            | Typical Source of Contamination            |
|---------------------|----------------------------|----------------------------|------------------------------|-------------------------------------|------------------------------|--|
| Copper (ppm)        | Action Level* (AL) 1.3 ppm | 90% of the homes: 0.10 ppm | 1 out of 10 sampled          | 0.000 – 0.204 ppm                   | 10 samples every three years | Corrosion of household Lead (ppb) plumbing |
| Lead (ppb) plumbing | Action Level** (AL) 15 ppb | 90% of the homes: 4 ppb    |                              | 0 – 1.3 ppb                         |                              |  |

\* Action Level for Copper – 90% of the homes tested must have levels less than 1.3 ppm detected.

\*\* Action Level for Lead – 90% of the homes tested must have levels less than 15 ppb detected.

\*\*\* Infants and children who drink water containing lead 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.

## 2021 Water Quality Detected Contaminants for the City of Reading

| Contaminant (Units)  | MCLG, MRDL Reporting Limit           | MCL or AL | Highest Level Detected | Range of Detections | Violation | Sample Date | Typical Source of Contaminant   |
|--|--------------------------------------|-----------|------------------------|---------------------|-----------|-------------|---|
| <b>City of Reading Inorganic Contaminants</b>  |                                      |           |                        |                     |           |             |   |
| Arsenic (ppb)  | 0                                    | 10        | 3                      | 0                   | No        | 2021        | Erosion of Natural deposits; Runoff from orchards and various production wastes                             |
| Barium(ppm)  | 2                                    | 2         | 0.06                   | 0.06 to 0.37        | No        | 2021        | Discharge of drilling wastes; Discharge of metal refineries; Erosion of natural                             |
| <b>City of Reading Regulated Chemicals and Contaminants</b>  |                                      |           |                        |                     |           |             |   |
| Chlorine (ppm)   | 4                                    | N/A       | 1.5                    | 0.1 to 4.0          | No        | 2021        | Water additive used to control microbes.  |
| Fluoride (ppm)   | 4                                    | 4         | 0.17                   | 0.1 to 4.0          | No        | 2021        | Erosion of natural deposits. Discharge from fertilizer and aluminum factories.                              |
| Nitrate / Nitrite (ppm)  | 0.5 / 0.04                           | 10 / 1    | Not Detected           | 0-0.0005            | No        | 2021        | Fertilizer use runoff; Leaching from septic tanks, sewage; Erosion of natural deposits                      |
| Total Coliform (total positive samples / month)  | TT                                   | N/A       | Not Detected           | N/A                 | No        | 2021        | Naturally present in the environment  |
| Distribution system <i>E. coli</i> (positive samples)  | See <i>E. coli</i> note <sup>1</sup> | 0         | Not Detected           | N/A                 | No        | 2021        | Human and animal fecal waste  |
| Fecal Indicator -Positive <i>E. coli</i> at the source   | TT                                   | N/A       | Not Detected           | N/A                 | No        | 2021        | Human and animal fecal waste  |
| <b>City of Reading Disinfectant By-Products</b>  |                                      |           |                        |                     |           |             |   |
| TTHM – Total Trihalomethanes (ppb)   | N/A                                  | 80        | Not Detected           | N/A                 | No        | 2021        | By-product of drinking water disinfection.  |
| HAA5Haloacetic Acids (ppb)   | N/A                                  | 60        | Not Detected           | N/A                 | No        | 2021        | By-product of drinking water disinfection.  |
| <b>City of Reading Radioactive Contaminants</b>  |                                      |           |                        |                     |           |             |   |
| Alpha emitters (pCi/L)   | <5-pCi/L                             | 15        | Not Detected           | N/A                 | No        | 2021        | Erosion of natural deposits   |
| Combined radium (pCi/L)  | <5-pCi/L                             | 5         | Not Detected           | N/A                 | No        | 2021        | Erosion of natural deposits   |
| <b>City of Reading Radioactive Per- and Polyfluoroalkyl Substances (PFAs) – Parts Per Trillion (ppt)</b> |                                      |           |                        |                     |           |             |   |
| Hexafluoropropylene oxide dimer acid (HFPO-DA) (ppt)   | <0.1-Ng/L                            | 370       | Not Detected           | N/A                 | No        | 2021        | Discharge and waste from industrial facilities utilizing the Gen X chemical                                 |
| Perfluorobutane sulfonic acid (PFBS) (ppt)   | <0.1-Ng/L                            | 420       | Not Detected           | N/A                 | No        | 2021        | Discharge and waste from industrial facilities; Stain-resistant treatments                                  |
| Perfluorohexane sulfonic acid (PFHxS) (ppt)  | <0.1-Ng/L                            | 51        | Not Detected           | N/A                 | No        | 2021        | Firefighting foam; Discharge and waste from industrial facilities   |
| Perfluorohexanoic acid (PFHxA) (ppt)   | <0.1-Ng/L                            | 400K      | Not Detected           | N/A                 | No        | 2021        | Firefighting foam; Discharge and waste from industrial facilities   |
| Perfluorononanoic acid (PFNA) (ppt)  | <0.1-Ng/L                            | 6         | Not Detected           | N/A                 | No        | 2021        | Discharge and waste from industrial facilities; Breakdown of precursors                                     |
| Perfluorooctane sulfonic acid (PFOS) (ppt)   | <0.1-Ng/L                            | 16        | Not Detected           | N/A                 | No        | 2021        | Firefighting foam; Discharge from electroplating facilities; Discharge and waste from industrial facilities |
| Perfluorooctanoic acid (PFOA) (ppt)  | <0.1-Ng/L                            | 8         | Not Detected           | N/A                 | No        | 2021        | Discharge and waste from industrial facilities; Stain-resistant treatments                                  |

<sup>1</sup> *E. coli* MCL violation occurs if: (1) routine and repeat samples are total coliform-positive and either is *E. coli*-positive, or (2) the supply fails to take all required repeat *E. coli*-positive routine samples, or (3) the supply fails to analyze positive repeat sample for *E. coli*.