

WATER REPORT 2021

The City of Miamisburg Drinking Water Quality Report For 2021



Introduction

The City of Miamisburg has prepared the following report to provide information to you, the consumer, on the quality of our drinking water. It should be noted that the

City of Miamisburg's drinking water met all regulatory standards during 2021. Included within this report is general health information, water quality test results, how to participate in decisions concerning your drinking water and water system contacts. We hold a current, unconditional license to operate our water system.

Source Water Information

The City of Miamisburg receives its drinking water from the Great Miami River Buried Valley Aquifer System. The City currently uses five (5) production wells to draw water from the Aquifer for treatment at the Water Treatment Facility. The water production wells are located on the land adjacent to the Great Miami River. Ground water is pumped to the Water Treatment Facility where it is treated by chemical oxidation to remove iron and manganese, gravity filtered, softened by reverse osmosis, blended, disinfected with chlorine, and fluoridated prior to being pumped to our water customers. Water from the City of Miamisburg Water Treatment Facility used to have an average hardness of 22 grains per gallon (376 mg/L). With the new reverse osmosis plant, we now average 7.5 grains per gallon (128 mg/L). The minerals calcium and magnesium make up water hardness. In October of 2018, the City of Miamisburg Water Treatment Facility put its new softening plant online and has gradually reduced the hardness to these current numbers. The

City of Miamisburg treated an average of 1.733 million gallons per day in 2021. The City of Miamisburg also has emergency connections with the City of West Carrollton and Montgomery County. These emergency connections were not used during the year of 2021.

The Ohio Environmental Protection Agency (EPA) performed a source water assessment on the City of Miamisburg's source of drinking water to determine its susceptibility. According to this study, the aquifer (water-rich zone) that supplies water to the City of Miamisburg has a high susceptibility to contamination. This determination is based on the following:

- Lack of a protective layer of clay overlying the aquifer.
- Shallow depth (less than 15 feet below ground surface) of the aquifer (although we are not getting our water from this shallow one. Our water comes from a much deeper aquifer below this shallow aquifer).
- The presence of significant potential contaminant sources in the area; and
- The presence of manmade contaminants in the aquifer. 1,1,1-trichloroethane, Tetrachloroethene, and Trichloroethene were detected in the raw water.

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The City of Miamisburg has worked very hard to develop and implement a comprehensive source water protection plan to help prevent additional contamination from entering the aquifer and prevent the existing contamination from impacting the drinking water source. The protection plan, which has been endorsed by the Ohio EPA, contains an educational component, a citizen-based committee, source control strategies, a contingency and emergency response plan, ground water monitoring strategies, well field commercial and industrial facility inspections, and a well field protection zoning ordinance. Additionally, this program utilizes a series of monitoring wells throughout the City of Miamisburg to track potential pollutants that may enter the groundwater. The program serves to identify and avert potential sources of groundwater contamination. For further information regarding our source water protection program or to find out what consumers can do to assist in aquifer protection, please contact the **Public Works Department at (937) 847-6635 or at PublicUtilities@cityofmiamisburg.com**.

What are sources of contamination to drinking water?

The sources of drinking water, both tap water and bottled, 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 can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- A** Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- B** 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.
- C** Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- D** 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, urban storm water runoff, and septic systems.
- E** Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

To ensure that tap water is safe to drink, the United States Environmental Protection Agency (U.S. EPA) prescribes regulations which limit the number of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants below the regulated levels does not pose a health risk. More information about contaminants and potential health effects can be obtained by calling the **U.S. EPA's Safe Drinking Water Hotline (1-800-426-4791) or at www.epa.gov/safewater**.

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 Miamisburg 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 two 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>**.

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community because of materials used in your homes plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to two minutes before using tap water. Additional information is available from the **Safe Drinking Water Hotline (1-800-426-4791)**.

Who needs to take special precautions?

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 infection. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (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 (1-800-426-4791) or at www.epa.gov/safewater**.

How do I participate in decisions concerning my drinking water?

Public participation and comment are encouraged by contacting the Public Works Department at (937) 847-6635 or at PublicUtilities@cityofmiamisburg.com. Water customers may also address questions at regular meetings of the Miamisburg City Council, which meets the first and third Tuesdays of the month at the Miamisburg Civic Center, 10 N. First Street.

About your drinking water

The City of Miamisburg samples drinking water on a regular basis to ensure drinking water safety. The sampling is consistent with U.S. EPA and Ohio EPA requirements. The City of Miamisburg routinely

conducts sampling for various classes of contaminants: bacteriological, inorganic, pesticides /herbicides, radiological, organic, and unregulated contaminants. Most of these contaminants were not detected in the City of Miamisburg's water supply and the City of Miamisburg met all EPA standards during 2021. The presence of contaminants does not necessarily indicate that water poses a health risk. The Ohio EPA requires municipalities to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data, although accurate, are more than one year old.

Listed below is information on those contaminants that were found in the City of Miamisburg's drinking water.

Contaminants (Units)	MCLG	MCL	Level Found	Range of Detections	Violation	Sample Year	Typical Source of Contaminants
Regulated Inorganic Contaminants							
Fluoride (ppm)	4	4	0.93	0.76-1.07	No	2021	Erosion of natural deposits; water additive which, promotes strong teeth; discharge from fertilizer and aluminum factories.
Nitrate (ppm)	10	10	0.47	n/a	No	2021	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Copper (ppb)	AL=1350	AL=1350	86.80	14.8-163	No	2021	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Zero out of 30 samples were found to have copper levels more than the Action Level of 1350 ppb.							
Lead (ppb)	0	AL=15	2.90	0.0-4.7	No	2021	Corrosion of household plumbing systems; erosion of natural deposits.
Zero out of 30 samples were found to have lead levels more than the Action Level of 15 ppb.							
Disinfection Byproducts							
Total Trihalomethanes (ppb)	na	80	24	10.6-24.0	No	2021	By-product of drinking water chlorination.
Haloacetic Acids (ppb)	na	60	5.9	2.6-5.9	No	2021	Byproduct of drinking water chlorination.
DS 201	TTHM's - 24.0 HAA5's - 5.9				DS 202	TTHM's - 10.6 HAA5's - 2.6	
Residual Disinfectants							
Total Chlorine (ppm)	MRDLG = 4.0	MRDL = 4.0	1.00	0.75-1.35	No	2021	Water additive to control microbial bacteria.
Radiological Contaminants							
Gross Alpha	15 pCi/L	15 pCi/L	2.06 pCi/L	n/a	No	2021	Naturally occurring radioactive elements emit alpha particles as they decay.
Radium-228	5 pCi/L	5 pCi/L	0.32 pCi/L	n/a	No	2021	Erosion of natural deposits.
Inorganic Contaminants							
Barium (ppm)	2	2	0.042	n/a	No	2021	Discharge of drilling wastes & metal refineries; erosion of natural deposits.
Nickel (ppm)	n/a	n/a	0.029	n/a	No	2021	Erosion of natural and man-made deposits.
Antimony (ppm)	.006	.006	.00081	n/a	No	2021	Decay of natural and man-made deposits.

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Revised Total Coliform Rule (RTCR)

This Consumer Confidence Report (CCR) reflects changes in drinking water regulatory requirements during 2017. All water systems were required to comply with the Total Coliform Rule from 1989 to March 31, 2016, and begin compliance with a new rule, the Revised Total Coliform Rule, on April 1, 2016. The new rule maintains the purpose to protect public health by ensuring the integrity of the drinking water distribution system and monitoring for the presence of total coliform bacteria, which includes E. coli bacteria. The U.S. EPA anticipates greater public health protection under the new rule, as it requires water systems that are vulnerable to microbial contamination to identify and fix problems. As a result, under the new rule there is no longer a maximum contaminant level violation for multiple total coliform detections. Instead, the new rule requires water systems that exceed a specified frequency of total coliform occurrences to conduct an assessment to determine if any significant deficiencies exist. If found, these must be corrected by the PWS.



Maximum Contaminant Level (MCL): The highest level of contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Residual Disinfectant Level (MRDL): 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): 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.

BDL: Below Detection Limit.

ND: Non-Detect

LLRAA: Locational Running Annual Average is used for reporting levels of Total Trihalomethanes and Haloacetic Acids which are a by-product of disinfection.

Parts per Million (ppm) or Milligrams per Liter (mg/L): Are units of measure for concentration of a contaminant. A part per million corresponds to one second in a little over 11.5 days.

Parts per Billion (ppb) or Micrograms per Liter (µg/L): Are units of measure for concentration of a contaminant. A part per billion corresponds to one second in 31.7 years.

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 required process intended to reduce the level of a contaminant in drinking water.

The "<" symbol: A symbol which means less than. A result of <5 means that the lowest level that could be detected was 5 and the contaminant in that sample was not detected.

na: not applicable.

nr: not regulated.

Unregulated Contaminant Monitoring Rule (UCMR) Sampling:

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. In 2020, the City of Miamisburg participated in the fourth round of the Unregulated Contaminant Monitoring Rule (UCMR 4). For a copy of the results **please call Bart Wagner at 937-847-6649**.

Contaminants (Units)	Sample Year	Average Level Found	Range of Detections	Sample Location
Germanium (PPB)	2020	<0.30	NA	EP001
Manganese (PPB)	2020	0.97	NA	EP001

For more information on your drinking water, please contact the **Public Works Department at (937) 847-6635 or at PublicUtilities@cityofmiamisburg.com**. A copy of this report is also available on the City of Miamisburg's web page at **www.cityofmiamisburg.com**.

Definitions of some terms contained within this report

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 and are non-enforceable public health goals.

