

# ANNUAL WATER QUALITY REPORT

Reporting Year 2021

*Presented By*  
**Clermont County Water**



## We've Come a Long Way

Once again, we are proud to present our annual water quality report covering the period between January 1 and December 31, 2021. In a matter of only a few decades, drinking water has become exponentially safer and more reliable than at any other point in human history. Our exceptional staff continues to work hard every day—at all hours—to deliver the highest-quality drinking water without interruption. Although the challenges ahead are many, we feel that by relentlessly investing in customer outreach and education, new treatment technologies, system upgrades, and training, the payoff will be reliable, high-quality tap water delivered to you and your family.

### Source Water Description

The Clermont County Water System operates three water treatment plants that pump into a common distribution system of pipes serving our customers. The MGS plant, located near Miami, draws from wells in the Little Miami River Aquifer. In 2004 the Ohio EPA performed a source water assessment for the MGS wellfield and designated it as highly susceptible to contamination. This is based in part on the geology of the aquifer, which is shallow and has little or no impermeable materials atop it. Another factor is the presence of potential sources of pollution in the area. The Ohio EPA also noted the presence of nitrates in the water, which suggests human-made influences in the aquifer. However, the water continues to meet drinking water standards. The wellfield is monitored for contamination and cared for under an Ohio EPA-endorsed Wellhead Protection Plan. If you wish to learn more, please call Rick Fueston at (513) 553-3338.

The PUB plant is near New Palestine, and its wells draw from the Ohio River Valley Aquifer. A susceptibility analysis from the Ohio EPA has determined that this aquifer has a high susceptibility for contamination based on a relatively thin layer of low permeable material overlying the aquifer and the relatively shallow depth of the aquifer. Potential pollution sources in the area and a possible hydraulic connection to the Ohio River also contribute to this assessment. However, the Ohio EPA agrees that there is no evidence of existing chemical contaminants. These wellfields are also monitored for contamination and cared for under an Ohio EPA-endorsed Wellhead Protection Plan. If you wish to learn more, please call Rick Fueston at (513) 553-3338.

The Bob McEwen Water Treatment Plant (BMW) is located near Batavia and draws surface water from Harsha Lake. Surface water is more susceptible to contamination than groundwater, so extensive testing of the raw water is conducted frequently. Chemical and bacteriological testing, as well as evaluation of the biological organisms living upstream of the lake, is used to determine raw water quality and identify areas of concern. The Ohio EPA completed a source water assessment for BMW in 2004. The protection area around Harsha Lake and the upstream portions of the East Fork Little Miami River include a number of commercial and industrial facilities, but the greater concerns are runoff from agricultural fields, the potential for spills at road and rail crossings, and residential septic systems in the watershed. If you wish to learn more, please contact Ryan Hancock at (513) 732-5386. Information on the watershed collected by Clermont County is available from the Office of Environmental Quality at (513) 732-7894 or online at <http://www.oeq.net>.

### Water Treatment Process

The treatment process consists of a series of steps. First, raw water is drawn from our water source and sent to a mixing tank, where polyaluminum chloride is added. The addition of these substances causes small particles (called “floc”) to adhere to one another, making them heavy enough to settle into a basin from which sediment is removed. At this point, the water is filtered through layers of fine coal and silicate sand. As smaller suspended particles are removed, turbidity disappears and clear water emerges.

Chlorine is added as a precaution against any bacteria that may still be present. (We carefully monitor the amount of chlorine, adding the lowest quantity necessary to protect the safety of your water without compromising taste.) Finally, caustic soda (to adjust the final pH and alkalinity) and fluoride (to prevent tooth decay) are added before the water is pumped to reservoirs and water towers and into your home or business.

“  
When the well is dry, we  
know the worth of water.

—Benjamin Franklin

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### Important Health Information

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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or <http://water.epa.gov/drink/hotline>.



**QUESTIONS?** Questions about the water system, which has been in operation since 1955, may be directed to Tim Neyer at (513) 732-7945.

## Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration 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 these contaminants does not necessarily indicate that the water poses a health risk.

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, in some cases, radioactive material, and substances resulting from the presence of animals or from human activity. Substances 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, or wildlife; Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater 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 stormwater runoff, and residential uses; Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and may also come from gas stations, urban stormwater runoff, and septic systems; Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

## Lead in Home Plumbing

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. We are responsible for providing high-quality drinking water, but we 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. A list of laboratories certified in the State of Ohio to test for lead may be found at <http://www.epa.ohio.gov/ddagw> or by calling (614) 644-2752. 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 (800) 426-4791 or at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

## Safeguard Your Drinking Water

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides – they contain hazardous chemicals that can reach your drinking water source.
- Pick up after your pets.
- If you have your own septic system, properly maintain it to reduce leaching to water sources, or consider connecting to a public water system.
- Dispose of chemicals properly; take used motor oil to a recycling center.
- Volunteer in your community. Find a watershed or wellhead protection organization in your community and volunteer to help. If there are no active groups, consider starting one. Use U.S. EPA's Adopt Your Watershed to locate groups in your community.
- Organize a storm drain stenciling project with others in your neighborhood. Stencil a message next to the street drain reminding people “Dump No Waste – Drains to River” or “Protect Your Water.” Produce and distribute a flyer for households to remind residents that storm drains dump directly into your local water body.



## PFAS Action Plan

In accordance with a directive from Governor Mike DeWine, the Ohio EPA's PFAS Action Plan requires that all Ohio public water systems be tested for the presence of certain per- and polyfluoroalkyl substances (PFAS). In June 2020, finished water samples were collected from all three Clermont County water treatment plants and analyzed for hexafluoropropylene oxide dimer acid (HFPO-DA), perfluorobutanesulfonic acid (PFBS), perfluorooctane sulfonic acid (PFOS), perfluorohexane sulfonate (PFHxS), and perfluorononanoic acid (PFNA). All of the results were less than detection limits.

### Q&A

A common question asked is “What is my water hardness?” Customers in Eastern Goshen, Stonelick, and Batavia Townships have a hardness of roughly 7 grains per gallon. The remainder of our service area has approximately 10.5 grains per gallon.



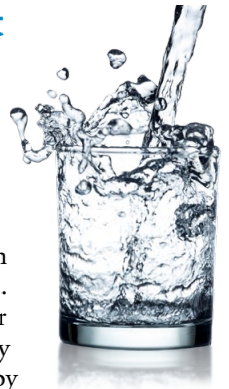
## Customer Participation Opportunity

The Clermont County Board of County Commissioners owns and operates the Clermont County Water System. Information relative to meeting dates and times can be found by visiting the county website, [www.clermontcountyohio.gov](http://www.clermontcountyohio.gov), or by calling (513) 732-7300.

While the Water Resources Department does not hold regular meetings open to the public, customers are encouraged to participate in discussions about our drinking water. The Clermont County Board of County Commissioners hold sessions at 10:00 a.m. on most Mondays and Wednesdays. Sessions of the board are held in the third-floor session room of the Clermont County Administration Building, located at 101 East Main Street in Batavia, Ohio.

## Source Water Assessment

Potential pollution sources identified in the PPSI include Walter C. Beckjord Generating Station, the PUB Water Treatment Plant, onsite wastewater treatment systems, underground and aboveground fuel storage tanks, the Ohio River, Ten Mile Creek, and transportation routes. The specific susceptibility ranking for all three plants was high. Customers may obtain a copy of the assessment report by calling Tim Neyer at (513) 732-7945.



## Definitions

**90th %ile:** The levels reported for lead and copper represent the 90th percentile of the total number of sites tested. The 90th percentile is equal to or greater than 90% of our lead and copper detections.

**AL (Action Level):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

**MCL (Maximum Contaminant Level):** 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.

**MCLG (Maximum Contaminant Level Goal):** 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.

**MRDL (Maximum Residual Disinfectant Level):** 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.

**MRDLG (Maximum Residual Disinfectant Level Goal):** 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.

**NA:** Not applicable.

**ND (Not detected):** Indicates that the substance was not found by laboratory analysis.

**NTU (Nephelometric Turbidity Units):** Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

**ppb (parts per billion):** One part substance per billion parts water (or micrograms per liter).

**ppm (parts per million):** One part substance per million parts water (or milligrams per liter).

**removal ratio:** A ratio between the percentage of a substance actually removed to the percentage of the substance required to be removed.

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



## Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule, and the water we deliver must meet specific health standards. Here, we only show those substances that were detected in our water (a complete list of all our analytical results is available upon request). Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels.

**The state recommends monitoring for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.**

Note that we have a current, unconditioned license to operate our water system.

REGULATED SUBSTANCES								
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE	
<b>Barium</b> (ppm)	2021	2	2	0.0362	0.0–0.0362	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits	
<b>Chlorine</b> (ppm)	2021	[4]	[4]	1.17	0.99–1.24	No	Water additive used to control microbes	
<b>Fluoride</b> (ppm)	2021	4	4	1.02	0.82–1.44	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories	
<b>Haloacetic Acids [HAAs]–Stage 1</b> (ppb)	2021	60	NA	36.9	ND–42	No	By-product of drinking water disinfection	
<b>Nitrate</b> (ppm)	2021	10	10	1.56	0.227–1.56	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits	
<b>Total Organic Carbon [TOC]<sup>1</sup></b> (% removal)	2021	TT	NA	1.38	1.31–1.57	No	Naturally present in the environment	
<b>TTHMs [Total Trihalomethanes]–Stage 1<sup>2</sup></b> (ppb)	2021	80	NA	76.6	10–111	No	By-product of drinking water disinfection	
<b>Turbidity<sup>3</sup></b> (NTU)	2021	TT	NA	0.220	0.020–0.220	No	Soil runoff	
<b>Turbidity</b> (Lowest monthly percent of samples meeting limit)	2021	TT = 95% of samples meet the limit	NA	100	NA	No	Soil runoff	
<b>Tap water samples were collected for lead and copper analyses from sample sites throughout the community</b>								
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH %ILE)	RANGE LOW-HIGH	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
<b>Copper</b> (ppm)	2020	1.3	1.3	0.386	0.05–0.692	0/50	No	Corrosion of household plumbing systems; Erosion of natural deposits
<b>Lead</b> (ppb)	2020	15	0	0	0–0	0/50	No	Lead service lines; Corrosion of household plumbing systems, including fittings and fixtures; Erosion of natural deposits

<sup>1</sup>The value reported under Amount Detected for TOC is the lowest ratio between percentage of TOC actually removed to the percentage of TOC required to be removed. A value greater than 1 indicates that the water system is in compliance with TOC removal requirements. A value less than 1 indicates a violation of the TOC removal requirements.

<sup>2</sup>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 system and may have an increased risk of getting cancer.

<sup>3</sup>Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system.