



**ENVIRONMENTAL SERVICES**

# Drinking Water Quality Report

*for 2022 Testing Year*



**COMMISSIONER  
JUDY DODGE**



**COMMISSION PRESIDENT  
CAROLYN RICE**



**COMMISSIONER  
DEBBIE LIEBERMAN**

## ***Quality Water Ensured by Quality Staff***

We are honored to once again deliver Montgomery County customers reliable water that meets our state standards.

Our department is so proud of all our staff, but I'd like to highlight our Environmental Lab staff. Ohio Environmental Protection Agency (Ohio EPA) regulations require water utility labs be certified. To maintain certification, our staff must participate in the annual drinking water proficiency testing program. The program serves as an opportunity for our staff to demonstrate proficiency in analyzing random water samples, ultimately ensuring that our customers are being provided safe clean drinking water.

The MCES lab's samples were submitted in November, and all 77 samples met OEPA's standards, reinforcing our confidence in our output. You can be assured that the Montgomery County numbers you see in this Consumer Confidence Report are accurate and reliable.

Looking ahead to 2023, we are anticipating changes to the Health Advisory Limits of PFAS compounds. These substances are a group of man-made chemicals applied to many consumer goods to make them waterproof, stain resistant or nonstick. PFAS are classified as contaminants of emerging concern, meaning that research into the harm they may cause to human health is still ongoing.

The most studied PFAS are perfluorooctanoic acid (PFOA), perfluorooctane sulfonic acid (PFOS), perfluorohexane sulfonic acid (PFHxS), and perfluorononanoic acid (PFNA). In 2022, the U.S. Environmental Protection Agency released updated, unenforceable guidance documents that give us a sneak peek into what the future holds for updated drinking water standards.

Montgomery County purchases all drinking water from the City of Dayton. We will support the City of Dayton as they navigate this changing regulatory landscape. It is our ongoing commitment to ensure our residents have a safe and reliable water supply.

Sincerely,



**ADMINISTRATOR  
MICHAEL B. COLBERT**



**DIRECTOR  
MATT HILLIARD**

**Michael B. Colbert  
County Administrator**

**Matt Hilliard  
Director**

# Montgomery County drinking water met all EPA standards in sample year 2022.

In 2022, Montgomery County Environmental Services had an unconditioned license to operate our water system. Listed below is information on the contaminants that were found in Montgomery County drinking water.

Contaminants (Units)	Maximum Allowed (MCL)	Ideal Goals (MCLG)	Highest Level Detected	Range of Detections	Violation? (Yes/No)	Sample Year	Contaminant Source
<b>Regulated at the Treatment Facility: Dayton's Miami Plant</b>							
Fluoride (ppm)	4.0	4.0	1.07	0.81-1.04	No	2022	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate (ppm)	10.0	10.0	0.93	0.124-0.93	No	2022	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Turbidity (NTU) <sup>1</sup>	TT=1	N/A	0.12	0.01-0.12	No	2022	Lime softening residuals; Soil runoff.
	TT>95% must be<0.3		100%<0.3 <sup>1</sup>				
Total Organic Carbon (ppm)	TT	N/A	0.62 <sup>2</sup>	0.365-0.732	No	2022	Naturally present in the environment.
Cis-1,2-Dichloroethylene(ppm)	70	70	0.78	N/A	No	2022	
Barium (ppm)	2	2	0.056	N/A	No	2022	Discharge from metal refineries; Erosion of natural deposits.
<b>Unregulated Compounds at the Treatment Facility: Dayton's Miami Plant</b>							
Bromodichloromethane (ppb)	N/A	N/A	2.07	N/A	N/A	2022	By-products of drinking water chlorination.
Bromoform (ppb)	N/A	N/A	0.95	N/A	N/A	2022	
Chloroform (ppb)	N/A	N/A	1.44	N/A	N/A	2022	
Dibromochloromethane (ppb)	N/A	N/A	2.36	N/A	N/A	2022	
Perfluorooctanoic Acid (ppt) PFOA	N/A	N/A	ND <sup>6</sup>	ND	N/A	2022	See PFAS definition on page 4.
Perfluorooctanesulfonic Acid (ppt) PFOS	N/A	N/A	ND <sup>6</sup>	ND	N/A	2022	
Perfluorohexanesulfonic Acid (ppt) PFHxS	N/A	N/A	ND <sup>6</sup>	ND	N/A	2022	
<b>Regulated in the Distribution System (Miami Plant)</b>							
Trihalomethanes (THMs) (ppb)	80 <sup>3</sup>	N/A	26.35 <sup>3</sup>	13.32-35.2	No	2022	By-product of drinking water chlorination.
Haloacetic Acids (HAA5s) (ppb)	60 <sup>3</sup>	N/A	8.325 <sup>3</sup>	ND-10.9	No	2022	
Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.27 <sup>4</sup>	1.16-1.35	No	2022	Water additive used to control microbes.

Contaminants (Units)	Maximum Allowed (MCL)	Ideal Goals (MCLG)	Highest Level Detected	Range of Detections	Violation? (Yes/No)	Sample Year	Contaminant Source
<b>Regulated at the Treatment Facility: Dayton's Ottawa Plant</b>							
Fluoride (ppm)	4.0	4.0	1.01	0.80-0.99	No	2022	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate (ppm)	10.0	10.0	1.48	0.65-1.48	No	2022	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Turbidity (NTU) <sup>1</sup>	TT=1	N/A	0.08	0.01-0.08	No	2022	Lime softening residuals; Soil runoff.
	TT>95% must be<0.3		100%<0.3 <sup>1</sup>				
Total Organic Carbon (ppm)	TT	N/A	0.56 <sup>2</sup>	0.464-0.85	No	2022	Naturally present in the environment.
Cis-1,2-Dichloroethylene(ppm)	70	70	ND	ND	No	2022	
Barium (ppm)	2	2	0.045	N/A	No	2022	Discharge from metal refineries; Erosion of natural deposits.
<b>Unregulated Compounds at the Treatment Facility: Dayton's Ottawa Plant</b>							
Bromodichloromethane (ppb)	N/A	N/A	1.313	N/A	N/A	2022	By-products of drinking water chlorination.
Bromoform (ppb)	N/A	N/A	0.68	N/A	N/A	2022	
Chloroform (ppb)	N/A	N/A	1.04	N/A	N/A	2022	
Dibromochloromethane (ppb)	N/A	N/A	1.47	N/A	N/A	2022	
Perfluorooctanoic Acid (ppt) PFOA	N/A	N/A	ND <sup>6</sup>	ND	N/A	2022	See PFAS definition on page 4.
Perfluorooctanesulfonic Acid (ppt) PFOS	N/A	N/A	8.92 <sup>6</sup>	5.4-13.1	N/A	2022	
Perfluorohexanesulfonic Acid (ppt) PFHxS	N/A	N/A	10.3 <sup>6</sup>	6.5-14.2	N/A	2022	
<b>Regulated in the Distribution System (Ottawa Plant)</b>							
Trihalomethanes (THMs) (ppb)	80 <sup>3</sup>	N/A	26.35 <sup>3</sup>	13.32-35.2	No	2022	By-product of drinking water chlorination.
Haloacetic Acids (HAA5s) (ppb)	60 <sup>3</sup>	N/A	8.325 <sup>3</sup>	ND-10.9	No	2022	
Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.27 <sup>4</sup>	1.16-1.35	No	2022	Water additive used to control microbes.

# Montgomery County drinking water met all EPA standards in sample year 2022.

In 2022, Montgomery County Environmental Services had an unconditioned license to operate our water system. Listed below is information on the contaminants that were found in Montgomery County drinking water.

## Regulated in the Distribution System

Contaminants (Units)	MCLG	MCL	Level Found	Range of Detections	Violation?	Sample Year	Contaminant Source
Total Chlorine (ppm) North	MRDLG 4	MRDL 4	1.15 <sup>(1)</sup>	0.94-1.22	No	2022	Water additive to control microbes.
Total Chlorine (ppm) South	MRDLG 4	MRDL 4	1.21 <sup>(1)</sup>	1.04-1.22	No	2022	
Haloacetic Acids (ppb) North	N/A	60	8.5 <sup>(2)</sup>	<6-11.9	No	2022	By-products of drinking water chlorination.
Haloacetic Acids (ppb) South	N/A	60	7.1 <sup>(2)</sup>	<6-11.3	No	2022	
Trihalomethanes (ppb) North	N/A	80	29.3 <sup>(2)</sup>	17.5-33.0	No	2022	
Trihalomethanes (ppb) South	N/A	80	31.4 <sup>(2)</sup>	16.5-38.1	No	2022	

\* Montgomery County Environmental Services data from the distribution system. All other data is provided by the City of Dayton. 1 - Highest running quarterly average. 2 - Locational running annual average.

## Lead and Copper\*

Contaminants (Units)	Action Level (AL)	Individual Results over the AL	90 % of Test Levels were less than	Violation?	Sample Year	Contaminant Source
Lead (ppb) North	15	N/A	<5	No	2022	Corrosion of household plumbing systems; Erosion of natural deposits
	None of the 31 samples were found to have lead above the AL of 15 ppb.					
Copper (ppm) North	1.3	N/A	0.0716	No	2022	
	None of the 31 samples were found to have copper above the AL of 1.3 ppm.					
Lead (ppb) South	15	N/A	<5	No	2022	
Copper (ppm) South	1.3	N/A	0.0636	No	2022	

\* Montgomery County Environmental Services data from the distribution system. All other data is provided by the City of Dayton.

## FOOTNOTES

- Dayton complied with alternate compliance criteria for TOC regulations under the D/DBP Rule. The level reported is "average"
- Dayton complied with requirements for every month in 2022. Turbidity is a measure of the cloudiness of water and is an indication of the effectiveness of our filtration system. The turbidity limit set by the EPA is 0.3 NTU in 95% of the daily samples and shall not exceed 1 NTU at any time. As reported above, the City of Dayton's highest recorded turbidity result for 2022 at Miami Plant was 0.12 NTU and lowest monthly percentage of samples meeting the turbidity limits was 100%, and at Ottawa Treatment Plant was 0.08 NTU and lowest monthly percentage of samples meeting the turbidity limits was 100%.
- Highest running annual average.
- Highest running quarterly average.
- Montgomery County Environmental Services data from the distribution system. All other data is provided by the City of Dayton. Montgomery County has 2 distinct water service areas, one on the north side of the City of Dayton and one on the south side. The north system serves: Butler Township, Harrison Township, Huber Heights, areas of Jefferson Township, Riverside, and Trotwood. The south system serves: Centerville, areas of Jefferson Township, Kettering, Miami Township, Moraine, and Washington Township. The Ottawa and Miami plants are redundant feeds and at any time, any Montgomery County water customer could receive water from either plant or both.
- Health Action Levels for PFAS. PFOA: 70 ppt, PFOS: 70 ppt, Combined PFOA + PFOS: 70 ppt, PFHxS: 140 ppt

## DEFINITIONS

### 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 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.

### NTU (Nephelometric Turbidity Units):

- Measure of "cloudiness".

### 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 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.

**Per- and polyfluoroalkyl substances (PFAS)** are a group of man-made chemicals applied to many industrial, commercial and consumer products to make them waterproof, stain resistant or nonstick. PFAS are also used in products like cosmetics, fast food packaging, and a type of firefighting foam called aqueous film forming foam (AFFF) which are used mainly on large spills of flammable liquids, such as jet fuel. PFAS are classified as contaminants of emerging concern, meaning that research into the harm they may cause to human health is still ongoing.

### TT (Treatment Technique):

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

### AL (Action Level):

- The concentration of a contaminant which, if exceeded, triggers treatment or other requirements for a water system.

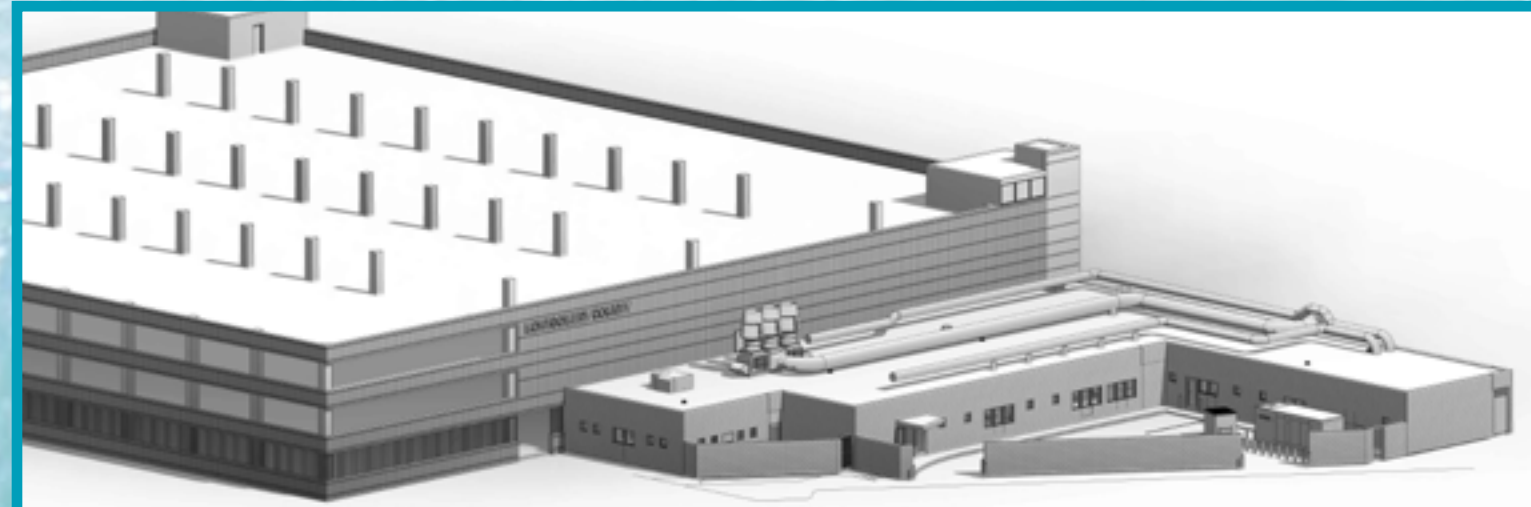
**picocuries per liter (pCi/L)** are units of measure of radioactivity

**N/A:** Not applicable > greater than < less than **ND** = Not detected

**Parts per Million (ppm)** are units of measure for concentration of a contaminant. A part per million corresponds to one second in 11.5 days.

**Parts per Billion (ppb)** are units of measure for concentration of a contaminant. A part per billion corresponds to one second in 31.7 years.

**Parts per Trillion (ppt)** are units of measure for concentration of a contaminant. A part per trillion corresponds to one second in 31,710 years.



The Montgomery County Environmental Lab will open its newly-renovated location within the Administration Building in the fall of 2023

## Our Source: Great Miami Valley Aquifer

Montgomery County Environmental Services receives its drinking water from the City of Dayton Water Department. The source of Dayton's drinking water is the Great Miami Buried Valley Aquifer. This Aquifer is a large underground area of water-bearing sand and gravel deposits. This groundwater is influenced by surface water.

The Ohio EPA conducted a source water assessment of Dayton's water source. The assessment concluded that the aquifer supplying water to the City of Dayton's well fields has a high susceptibility to contamination. This determination is based on: the influence of surface water recharge to the aquifer; the presence of a relatively thin protective layer of clay overlying the aquifer; the shallow depth of the aquifer; contaminant plumes in Dayton's well field protection area; the presence of significant potential contaminant sources in the protection area; and the presence of contaminants in treated water. Copies of the source water assessment report prepared for Dayton are available by contacting the Division of Environmental Management at 937-333-3725.

## About Your Drinking Water

The EPA requires regular sampling to ensure drinking water safety. During 2020, Montgomery County Environmental Services conducted sampling for chlorine, bacteria, Haloacetic Acids, Trihalomethanes, Lead, and Copper. Samples were collected for a total of 15 different contaminants, most of which were not detected in the Montgomery County water supply. The Ohio EPA requires us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently.

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.

## Sources of Drinking Water Contamination

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

## Great Miami Buried Valley Aquifer



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.

In order to ensure that tap water is safe to drink, USEPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. 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 does not necessarily indicate that water poses a health risk.

More information about contaminants and potential health effects can be obtained by calling the Federal Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

## Lead Educational Information

In 2020, Montgomery County tested 81 samples for lead and none were found to have lead above the lead action level of 15 ppb. 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. Montgomery County Environmental Services 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 thirty 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 <http://www.epa.gov/safewater/lead>.

## Revised Total Coliform Rule Information

All water systems were required to begin compliance with a new rule, the Revised Total Coliform Rule, on April 1, 2016. The 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 rule there is no longer a maximum contaminant level violation for multiple total coliform detections. Instead, the 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.

## Special Precautions and Health Concerns

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised people, such as those with cancer undergoing chemotherapy, people 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 lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the safe drinking water hotline 800-426-4791.

## Public Participation Welcome

Public participation and comment are encouraged at meetings of the Montgomery County Board of County Commissioners, held most Tuesdays at 1:30 p.m. on the 10th Floor of the County Administration Building, 451 W. Third St., Dayton, OH 45422.





**MONTGOMERY**  
C O U N T Y

**ENVIRONMENTAL SERVICES**

**Administrative Offices**

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[www.mcoho.org/water](http://www.mcoho.org/water)

- Water/Sewer Billing 937-781-2688
- 24-Hour Emergency 937-781-2678
- Water Quality 937-781-2666
- Lab & Water Testing 937-781-3024