

# MONTGOMERY COUNTY ENVIRONMENTAL SERVICES

# Drinking Water Quality Report

*for the 2018 Testing Year*

## Reinvesting in Vital Infrastructure



**DIRECTOR**  
**PAT TURNBULL**

I am pleased to say that Montgomery County has met or exceeded all state and federal drinking water quality standards for the 2018 testing year. This says a lot about our dedication to protecting public health and serving our citizens. As always, Montgomery County is committed to continued investment in our water system, and to providing safe, affordable water for all citizens.

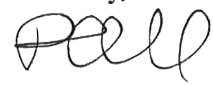
We recently passed a new rate structure and we are using the revenue from that to actively reinvest in our aging infrastructure. Most of our underground infrastructure is over 50 years old and it is time to reinvest. We also updated our rate structure to provide the revenue necessary for the long-term

maintenance of our system, which we estimate will cost about \$750 million over the next 20 years. We also began work on the Sanitary Conveyance and Treatment Improvement project for our Western Regional Wastewater Treatment Plant, which is the largest infrastructure project undertaken by our department in more than twenty years.

Last year, we proactively sent a notice to all customers about extremely low amounts of PFAS (per- and polyfluoroalkyl substances), which had been detected in treated drinking water at the City of Dayton's water treatment plant. The City of Dayton is our water provider; in other words, we purchase all of our treated drinking water from the City and then distribute it to our customers. The City routinely tests drinking water and the latest tests show PFAS readings of 7-13 parts per trillion well below the U.S. EPA's health advisory limit of 70 parts per trillion. The City will continue to use the latest available technology to proactively monitor and safeguard our drinking water in coordination with the Ohio EPA, and we will continue to share new information with our customers as it becomes available.

This report includes general health information, water quality test results, and information about public participation opportunities. I hope reviewing this information gives you greater insight into your local water source, and helps you appreciate the hard working people who keep your water clean, safe, and reliable.

Sincerely,



Director Patrick Turnbull, P.E.

## Our County Commissioners



**DEBBIE LIEBERMAN**



**JUDY DODGE**



**CAROLYN RICE**

## Contact Information and Additional Services

**Administrative Offices**  
1850 Spaulding Road  
Kettering, Ohio 45432  
  
(937) 781-2500  
[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
Maintenance & Repairs	(937) 781-2678
Education & Outreach	(937) 781-3065
Lab & Water Testing	(937) 781-3024

**Engineering Services**

Backflow Prevention	(937) 781-2631
Permits	(937) 781-2653

**Water Reclamation (Sewer)**

Eastern Regional	781-3034
Western Regional	781-3029

# Montgomery County drinking water met all EPA standards in sample year 2018.

In 2018, Montgomery County Environmental Services had an unconditioned license to operate our water system. Listed below is information on those contaminants that were found in Montgomery County drinking water.

Contaminants (Units)	MCLG	MCL	Level Found	Range of Detections	Violation?	Sample Year	Contaminant Source
<b>Regulated at the Treatment Facility: Dayton's Miami Plant</b>							
Fluoride (ppm)	4.0	4.0	0.91	0.8-1.03	No	2018	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate (ppm)	10.0	10.0	0.638	0.167-0.638	No	2018	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Turbidity (NTU) <sup>1</sup>	N/A	TT	0.07	0.03-0.07	No	2018	Lime softening residuals; Soil runoff
			TT ≥ 95% must be ≤ 0.3 <sup>(1)</sup>				
Barium (ppm)	2	2	0.55	N/A	No	2018	Discharge from drilling wastes and/or metal refineries; Erosion of natural deposits
Total Beta(pCi/L)	0	AL = 50	ND	ND	No	2018	Decay of natural and man-made deposits
Total Organic Carbon (ppm)	N/A	TT	0.65 <sup>2</sup>	0.56-0.78	No	2018	Naturally present in the environment
<b>Unregulated Compounds at the Treatment Facility: Dayton's Miami Plant</b>							
Bromodichloromethane (ppb)	N/A	N/A	1.54	1.318-1.662	N/A	2018	Byproducts of chlorination
Bromoform (ppb)	N/A	N/A	ND	ND	N/A	2018	
Chloroform (ppb)	N/A	N/A	1.00	0.87-1.13	N/A	2018	
Dibromochloromethane (ppb)	N/A	N/A	1.52	1.27-1.69	N/A	2018	
Perfluorooctanoic Acid (ppt) PFOA	N/A	N/A	ND	ND	N/A	2018	Man-made industrial product
Perfluorooctanesulfonic Acid (ppt) PFOS	N/A	N/A	ND	ND	N/A	2018	
2-methoxyethanol	N/A	N/A	15.9	15.9-15.9	N/A	2018	Industrial Solvent
<b>Regulated at the Treatment Facility: Dayton's Ottawa Plant</b>							
Fluoride (ppm)	4.0	4.0	0.91	0.79-1.05	No	2018	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate (ppm)	10.0	10.0	1.83	0.596-1.83	No	2018	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Turbidity (NTU) <sup>1</sup>	N/A	TT	0.13	0.01-0.13	No	2018	Lime softening residuals; Soil runoff.
			TT ≥ 95% must be ≤ 0.3 <sup>(1)</sup>				
Barium (ppm)	2	2	0.050	N/A	No	2018	Discharge from drilling wastes and/or metal refineries; Erosion of natural deposits
Total Beta(pCi/L)	0	AL = 50	5.5	5.5 - 5.5	No	2018	Decay of natural and man-made deposits
Total Organic Carbon (ppm)	TT	N/A	0.56 <sup>2</sup>	0.41-0.66	No	2018	Naturally present in the Environment
<b>Unregulated Compounds at the Treatment Facility: Dayton's Ottawa Plant</b>							
Bromodichloromethane (ppb)	N/A	N/A	1.923	1.750-2.096	N/A	2018	Byproducts of chlorination
Bromoform (ppb)	N/A	N/A	ND	ND	N/A	2018	
Chloroform (ppb)	N/A	N/A	1.45	1.43-1.48	N/A	2018	
Dibromochloromethane (ppb)	N/A	N/A	1.68	1.43-1.93	N/A	2018	Man-made industrial product
Perfluorooctanoic Acid (ppt) PFOA	N/A	N/A	1.7	ND-5.27	N/A	2018	
Perfluorooctanesulfonic Acid (ppt) PFOS	N/A	N/A	9.03	ND-13.7	N/A	2018	
2-methoxyethanol	N/A	N/A	10.1	10.1-10.1	N/A	2018	

<b>Regulated in Distribution System*</b>							
Contaminants (Units)	MCLG	MCL	Level Found	Range of Detections	Violation?	Sample Year	Contaminant Source
Total Chlorine (ppm), north <sup>5</sup>	4 MRDLG	4 MRDL	1.13 <sup>4</sup>	1.02 – 1.19	No	2018	Water additive to control microbes
Total Chlorine (ppm), south <sup>5</sup>	4 MRDLG	4 MRDL	1.22 <sup>4</sup>	1.10 – 1.29	No	2018	
Haloacetic Acids (ppb), north	N/A	60	6.2 <sup>3</sup>	<6.0 – 11.6	No	2018	By-products of drinking water chlorination
Haloacetic Acids (ppb), south	N/A	60	6.4 <sup>3</sup>	<6.0 – 10.8	No	2018	
Trihalomethanes (ppb), north	N/A	80	38.1 <sup>3</sup>	12.6 – 45.9	No	2018	
Trihalomethanes (ppb), south	N/A	80	35.2 <sup>3</sup>	17.3 – 53.2	No	2018	
<i>* Montgomery County Environmental Services data from the distribution system. All other data is provided by the City of Dayton.</i>							
<b>Lead and Copper*</b>							
Contaminants (units)	Action Level (AL)	Individual Results over AL	90% of Test Levels were less than...	Violation?	Sample Year	Contaminant Source	
Lead* (ppb), north	15	N/A	<5	No	2018	Corrosion of household plumbing systems; Erosion of natural deposits	
	No samples were found to have lead above the lead AL of 15 ppb.						
Copper* (ppb), north	1.3	N/A	0.052	No	2018	Erosion of natural deposits	
	No samples were found to have copper above the copper AL of 1.3 ppm.						
Lead* (ppb), south	15	21.4 ppb	<5	No	2018	Corrosion of household plumbing systems; Erosion of natural deposits	
	No samples was found to have lead above the lead AL of 15 ppb.						
Copper* (ppb), south	1.3	N/A	0.062	No	2018	Erosion of natural deposits	
	No samples were found to have copper above the copper AL of 1.3 ppm.						
<i>* Montgomery County Environmental Services data from the distribution system. All other data is provided by the City of Dayton.</i>							

### Notice of Violation: pH Testing

On May 23, 2018, Montgomery County Environmental Services received a notice of violation for failing to maintain the specified pH level of 7.8 or greater at the entry points in our water system. This letter of non-compliance was reflected in our 2017 water testing parameters. Notification of this treatment technique violation was given to the public on June 18, 2018, based on EPA guidelines. Since this notice was given in the calendar year of 2018, it was necessary to make sure the public was informed of it in our CCR and informed that we have since remedied the situation.

### UNREGULATED CONTAMINANT MONITORING

In 2014 and 2015 the City of Dayton participated in UCMR3 which required monitoring for Per- and Polyfluoroalkyl substances (PFAS). This monitoring revealed no detections of PFAS above the health advisory limit. In April 2016, the city proactively decided to discontinue use of production wells located near the Tait's Hill area, due to suspected of contamination at Dayton's Fire Training Center. The City also started a monitoring program for PFAS and no detections at or above the health advisory limit of 70 ppt were found in finished drinking water, however some detections were made in the monitoring wells located in the areas of the Mad River Wellfield. In 2017 the City of Dayton complied with all of Ohio EPA's requests for sampling for PFAS. We continue to proactively sample the monitoring wells installed that have PFAS detections and monitor our finished water that is supplied to all our consumers. No finished water detections for PFAS occurred in 2017. In 2018, Dayton Public Water System began monthly monitoring of finished water at both the Miami and Ottawa Treatment Plants. All finished water levels have been below the 70 ppt health advisory limit. The City of Dayton is committed to maintaining a safe drinking water supply and continues to work with Ohio EPA to address new, emerging contaminants.

#### FOOTNOTES

- Dayton complied with requirements for every month in 2018. 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 2018 at Miami Plant was 0.07 NTU and lowest monthly percentage of samples meeting the turbidity limits was 100%, and at Ottawa Treatment Plant was 0.13 NTU and lowest monthly percentage of samples meeting the turbidity limits was 100%.
- Dayton complied with alternate compliance criteria for TOC regulations under the D/DBP Rule. The level reported is "average".
- Locational running annual average.
- Highest running quarterly average.
- 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.

#### DEFINITIONS

**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 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):** 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.

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

**NTU:** Nephelometric Turbidity Units (measure of "cloudiness")

**ND:** Not detected

**Treatment Technique (TT):** A method for treating water to achieve acceptable levels of the contaminants in lieu of establishing a maximum contaminant level

**Picocuries per liter (pCi/l)** are a measure of radioactivity.

**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.

**Parts per Trillion (ppt)** or Nanograms per Liter (ng/L) are units of measure for concentration of a contaminant. A part per trillion corresponds to one second in 31,700 years.

**The "<" symbol:** 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.

# Your Water Source and Other Helpful Information

## Our Water 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 2018, 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 Contamination to Drinking Water

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.

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 (1-800-426-4791).

## Lead Educational Information

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 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.

## Special Precautions and Health Concerns

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 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. Contact (937) 225-4690 for more information.