

Montgomery County is proud to say that your drinking water has once again met all state and federal water quality standards. Drink up!



MONTGOMERY
COUNTY

ENVIRONMENTAL SERVICES

MONTGOMERY COUNTY ENVIRONMENTAL SERVICES

Drinking Water Quality Report

for the 2017 Testing Year

Reinvesting in Vital Infrastructure



DIRECTOR
PAT TURNBULL

It is my pleasure to share our annual Drinking Water Consumer Confidence Report with you. Montgomery County has once again met or exceeded all state and federal drinking water quality standards, which is a reflection of our commitment to protect public health and serve our citizens.

We often take our water resources for granted. At the time of this report's release, Cape Town, one of the largest cities in South Africa, was scheduled to run out of water by summer 2018. In the United States, cities are facing water shortages due to droughts and population growth, and other cities have seen their water systems contaminated by lead, toxic algae blooms, and even salt water. Clean and reliable drinking water is something we all expect and demand, but it requires care and investment. We must protect our water resources and make sure that our infrastructure is resilient.

To that end, our staff members have been working diligently for several years to plan for our long-term water system reliability and safety. In January 2018, we embarked on our multi-year capital reinvestment program, which will fund the ongoing repair and replacement of our large and complex drinking water and sanitary sewer systems. This long-term plan to fund infrastructure repair and replacement will allow us to continue providing high-quality water and sewer services, protecting public health and the natural environment.

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. We look forward to providing you with excellent water and sewer services for years to come.

Sincerely,

Director Patrick Turnbull, P.E.

Our County Commissioners



DEBBIE LIEBERMAN



JUDY DODGE



DAN FOLEY

Contact Information and Additional Services

Administrative Offices

1850 Spaulding Road
Kettering, Ohio 45432

(937) 781-2500

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) 781-2650

Permits (937) 781-2628

Water Reclamation (Sewer)

Eastern Regional 781-3034

Western Regional 781-3029

Montgomery County drinking water met all EPA standards in sample year 2017.

In 2017, 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
Regulated at the Treatment Facility: Dayton's Miami Plant							
Fluoride (ppm)	4.0	4.0	0.94	0.8-1.09	No	2017	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate (ppm)	10.0	10.0	1.05	0.11-1.05	No	2017	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Turbidity (NTU) ¹	N/A	TT = 1	0.08	0.03-0.08	No	2017	Lime softening residuals; Soil runoff
		TT ≥ 95% must be ≤ 0.3					
Barium (ppm)	2	2	0.5	N/A	No	2017	Discharge from drilling wastes and/or metal refineries; Erosion of natural deposits
Total Organic Carbon (ppm)	N/A	TT	0.62 ²	0.49-0.78	No	2017	Naturally present in the environment
Unregulated Compounds at the Treatment Facility: Dayton's Miami Plant							
Bromodichloromethane (ppb)	N/A	N/A	1.55	1.21-1.84	N/A	2017	Byproducts of chlorination
Bromoform (ppb)	N/A	N/A	ND	ND-0.53	N/A	2017	
Chloroform (ppb)	N/A	N/A	0.88	0.52-1.32	N/A	2017	
Dibromochloromethane (ppb)	N/A	N/A	1.40	0.83-1.73	N/A	2017	
Regulated at the Treatment Facility: Dayton's Ottawa Plant							
Fluoride (ppm)	4.0	4.0	0.95	0.41-1.10	No	2017	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate (ppm)	10.0	10.0	1.63	0.86-1.63	No	2017	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Turbidity (NTU) ¹	N/A	TT = 1	0.08	0.02-0.08	No	2017	Lime softening residuals; Soil runoff.
		TT ≥ 95% must be ≤ 0.3					
Barium (ppm)	2	2	0.36	N/A	No	2017	Discharge from drilling wastes and/or metal refineries; Erosion of natural deposits
Total Organic Carbon (ppm)	N/A	TT	0.52 ²	0.36-0.64	No	2017	Naturally present in the environment
Unregulated Compounds at the Treatment Facility: Dayton's Ottawa Plant							
Bromodichloromethane (ppb)	N/A	N/A	1.30	1.09-1.56	N/A	2017	Byproducts of chlorination
Bromoform (ppb)	N/A	N/A	ND	ND-0.57	N/A	2017	
Chloroform (ppb)	N/A	N/A	0.943	0.72-1.14	N/A	2017	
Dibromochloromethane (ppb)	N/A	N/A	1.32	1.00-1.61	N/A	2017	

UNREGULATED CONTAMINANT MONITORING

In 2014 and 2015, the City of Dayton participated in Unregulated Contaminant Monitoring (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 PFSA contamination at Dayton's Fire Training Center.

The City of Dayton 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 Tait's Hill and Huffman Dam areas of the Mad River Wellfield. In 2017, the City of Dayton complied with all of Ohio EPA's requests for sampling for PFAS. The City continued to proactively sample the monitoring wells installed that have PFAS detections, and monitored finished water that is supplied to all their consumers, including Montgomery County. No finished drinking water detections for PFAS occurred in 2017.

The City of Dayton is committed to maintaining a safe drinking water supply and continues to work with Ohio EPA to address new and emerging contaminants. Monitoring for PFAS will continue in 2018.

Regulated in Distribution System*							
Contaminants (Units)	MCLG	MCL	Level Found	Range of Detections	Violation?	Sample Year	Contaminant Source
Total Chlorine (ppm), north ⁵	4 MRDLG	4 MRDL	1.14 ⁴	1.08 – 1.25	No	2017	Water additive to control microbes
Total Chlorine (ppm), south ⁵	4 MRDLG	4 MRDL	1.22 ⁴	1.15 – 1.26	No	2017	
Haloacetic Acids (ppb), north	N/A	60	6.8 ³	<6.0 – 8.5	No	2017	By-products of drinking water chlorination
Haloacetic Acids (ppb), south	N/A	60	7.2 ³	<6.0 – 9.9	No	2017	
Trihalomethanes (ppb), north	N/A	80	39.4 ³	16.4 – 46.1	No	2017	
Trihalomethanes (ppb), south	N/A	80	35.8 ³	14.6 – 46.8	No	2017	

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

Lead and Copper*						
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	2017	Corrosion of household plumbing systems; Erosion of natural deposits
	0 out of 33 samples were found to have lead above the lead AL of 15 ppb.					
Copper* (ppb), north	1.3	N/A	57	No	2017	
	0 out of 33 samples were found to have copper above the copper AL of 1.3 ppm.					
Lead* (ppb), south	15	21.4 ppb	<5	No	2017	
	1 out of 51 samples was found to have lead above the lead AL of 15 ppb.					
Copper* (ppb), south	1.3	N/A	50	No	2017	
	0 out of 51 samples were found to have copper above the copper AL of 1.3 ppm.					

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

FOOTNOTES

- Dayton complied with requirements for every month in 2017. 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 2017 at Miami Plant was 0.08 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%.
- 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 two distinct water system 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.

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 disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG): 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.

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

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: 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.

Picocuries per liter (pCi/L): A common measure of radioactivity.

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 2017, 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. Some of our data, though accurate, are more than one year old.

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 30 seconds to 2 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 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. 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. EPA/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). Guidelines on how to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the USEPA's Safe Drinking Water Hotline at 1-800-426-4791. More information and resources are available from the USEPA at <http://water.epa.gov/drink>, or from the Centers for Disease Control (CDC) at www.cdc.gov/healthywater.

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.