

# City of Toledo

## 2017 Water Quality Report



Consumers have relied on the city of Toledo to produce and deliver safe, excellent drinking water that meets or exceeds all quality standards for more than 140 years.

In 2017, water treatment professionals at the Collins Park Water Treatment Plant produced more than 24 billion gallons of high-quality drinking water for 500,000 people in Toledo and Lucas County, portions of Fulton and Wood Counties, and for South County Water in Monroe, Michigan.

Dear Toledo Residents and Neighbors,

Excellent drinking water is important to our city and region. I'm pleased to present the 2017 Water Quality Report with information about our drinking water, the source of our water, testing results that take place throughout the year, and other helpful information.

In 2017, we broke ground on Basins 7 and 8 at the Collins Park Water Treatment Plant — expanding the plant for the first time in more than 60 years. The two new basins will add 40 million gallons of treatment capacity to water operations, and together will cost approximately \$70 million. Plant electrical upgrades and renovation of the Low Service Pumping Station also occurred in 2017. These projects are part of a ten-year, \$500 million Ohio EPA-approved general plan of capital improvements that will be completed in 2022.

The Collins Park Water Treatment Plant is on track to be a state-of-the-art facility with the best technologies available. In 2018, we will begin building ozonation facilities as an additional water treatment method.

We invite you to monitor our progress at [www.toledoH2O.com](http://www.toledoH2O.com).

Thank you for supporting these important initiatives to maintain a healthy water system.

Sincerely,

Wade Kapszukiewicz  
Mayor



## 2017 Drinking Water Quality Results

The table below shows the results of the Toledo Water Treatment Plant's water quality tests for 2017. The EPA requires regular sampling to ensure drinking water safety. Samples were collected for dozens of different contaminants, most of which were not detected in Toledo's water supply. Those that were detected are included in the table below. The Ohio EPA requires us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not frequently change.

### Regulated Contaminants in Drinking Water

Parameter	Year	Units	Level Found	Range	MCLG	MCL	Violation?	Likely Sources
Chlorite	2017	ppm	0.18	0.06 – 0.19	0.5	1	No	Byproduct of drinking water disinfection
Fluoride	2017	ppm	1.07	0.82 – 1.20	4	4	No	Water additive to promote strong teeth
Nitrate	2017	ppm	3.25	<0.2 – 3.25	10	10	No	Fertilizer runoff; septic tank leaching, sewage; erosion of natural deposits
Atrazine	2017	ppb	0.18	na	3	3	No	Runoff from herbicide used on row crops
TTHM <sup>1</sup>	2017	ppb	58.4	18.8 – 67.0	0	80	No	Byproducts of drinking water disinfection
HAA5 <sup>1</sup>	2017	ppb	21	6.8 – 27.5	none	60	No	Byproducts of drinking water disinfection
Turbidity <sup>2</sup>	2017	ntu	0.9	0.05 – 0.90	none	TT	No	Soil runoff, suspended matter in lake water
TOC <sup>3</sup>	2017	see note <sup>3</sup>	2.82	2.82 – 3.86	none	TT	No	Naturally present in the environment
Alpha	2017	piC/L	8	na	na	15	No	Erosion of natural deposits

Parameter	Year	Units	90th	Sites >AL	MCLG	MCL	Violation?	Likely Sources
Copper	2017	ppm	0.012	None	1.3	AL=1.3	No	Corrosion of household plumbing and erosion of natural deposits
Lead	2017	ppb	<4	None	15	AL=15	No	Corrosion of household plumbing

Parameter	Year	Units	Level Found	Range	MLDG	MRDL	Violation?	Likely Sources
Total Chlorine	2017	ppm	1.41	1.02 – 1.62	4	4	No	Additive used to control microbes
Chlorine Dioxide	2017	ppm	0.4	0.2 – 0.4	0.8	0.8	No	Additive used to control microbes

1. TTHM stands for Total Trihalomethanes. HAA5 stands for Haloacetic Acids. MCL compliance for both TTHM and HAA5 is based on the highest locational running annual average (shown as level found). The range shows the highest and lowest single detects from quarterly compliance monitoring at twelve different sites in the distribution system.

2. Turbidity is a measure of the cloudiness of the water. We monitor it daily because it is a good indication of the effectiveness of our filtration system. The turbidity limit set by the EPA states that all samples must be below 1 ntu and that 95% of the daily samples must be lower than 0.3 ntu. In 2017, 99.950% of our samples were below 0.3 ntu.

3. TOC stands for Total Organic Carbon. The value reported under "Level Found" for TOC is the running annual average ratio between the percentage of TOC actually removed to the percentage of TOC required to be removed. A value of greater than one (1.0) indicates that the water system is in compliance with TOC removal requirements. A value of less than one indicates a violation of the TOC removal requirements. The value reported under the "Range" for TOC is the lowest monthly ratio to the highest monthly ratio. Toledo remained in compliance with TOC removal requirements.

This table shows the results from 2013 Unregulated Contaminants Monitoring Rule 3 (UCMR3) Results. These test results will assist USEPA in developing new regulatory requirements to protect the public health and safety. Any contaminant found in the UCMR3 quarterly sampling will not have an MCLG or MCL and will be listed below.

### Unregulated Contaminants in Drinking Water

Parameter	Sample Year	Units	Level Found	Range	MCLG	MCL	Violation?
Chromium, Hexavalent	2013	ppb	0.232	0.19 – 0.232	na	na	No
Chromium, Total	2013	ppb	0.24	0.20 – 0.24	na	na	No
Chlorate	2013	ppb	100	39.6 – 100	na	na	No
Molybdenum, Total	2013	ppb	2.11	nd – 2.11	na	na	No
Strontium, Total	2013	ppb	151	86 – 151	na	na	No
Vanadium, Total	2013	ppb	0.85	0.423 – 0.850	na	na	No
Sodium <sup>1</sup>	2017	ppm	32.2	8.7 – 32.2	na	na	No

Parameter	Sample Year	Units	Level Found	Range	Threshold	Likely Sources
Microcystin <sup>2</sup>	2017	ppb	nd	nd	0.3 Children under the age 6; 1.6 Anyone 6 or older	Toxins produced by harmful algal blooms

1. This information is provided for those concerned with sodium in their diet; 32.2 mg/l of sodium equates to 7.6 milligrams of sodium per 8 ounce glass of water.

2. Microcystin is a toxin produced by harmful algal blooms. The following thresholds were developed by the USEPA (United States Environmental Protection Agency) based on a 10-day exposure. The 0.3 ppb Do Not Drink Advisory threshold is for children 6 and under. The 1.6 ppb Do Not Drink Advisory threshold is for anyone 6 and older. For information on Harmful Algal Bloom Response Strategy go to [http://epa.ohio.gov/Portals/28/documents/habs/2017\\_PWS\\_HAB\\_Response\\_Strategy\\_5-15-17-FINAL.pdf](http://epa.ohio.gov/Portals/28/documents/habs/2017_PWS_HAB_Response_Strategy_5-15-17-FINAL.pdf).

### Unregulated Contaminants in the Distribution System

Parameter	Sample Year	Units	Level Found	Range	MCLG	MCL	Violation?
Chromium, Hexavent	2013	ppb	0.26	0.21 – 0.26	na	na	No
Chromium, Total	2013	ppb	0.389	0.21 – 0.389	na	na	No
Chlorate	2013	ppb	111	43.4 – 111	na	na	No
Molybdenum, Total	2013	ppb	3	1.20 – 3.0	na	na	No
Strontium, Total	2013	ppb	200	98.0 – 200.0	na	na	No
Vanadium, Total	2013	ppb	0.82	0.502 – 0.820	na	na	No

For more information on the Unregulated Contaminants Monitoring Rule 3 go to:

<https://www.epa.gov/dwucmr/fact-sheets-about-third-unregulated-contaminant-monitoring-rule-ucmr-3>

## Water Quality Terminology

**Parts per million (ppm) and parts per billion (ppb)** – One ppm can be equated to 4 teaspoons of salt in a standard 24 foot backyard pool. One ppb is like 1 teaspoon of salt in an Olympic-sized pool.

**Maximum Contaminant Level (MCL)** – The MCL is 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. MCLs are set at very stringent levels by State and Federal governments.

**Maximum Contaminant Level Goal (MCLG)** – The MCLG is 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 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 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.

**Nephelometric Turbidity Unit (ntu)** – A measure of water clarity.

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

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

**Contact Time (CT)** – Time required to deactivate microbes with chlorine.

**Picocuries per liter (pCi/l)** – Common measurement of radioactivity.

**nd** – Not detectable.

**na** – Not applicable.

## Source Water Assessment Report

The Ohio EPA has completed a Source Water Assessment for the City of Toledo, which uses surface water drawn from Lake Erie. By their nature, all surface waters are considered to be susceptible to contamination from chemicals and pathogens. The time it would take for a contaminant to travel from our source water to our drinking water intake is relatively short. Although the water system's main intake is located offshore, susceptibility of the source water to contamination may be increased by its proximity to the following: municipal sewage treatment plants; industrial wastewater; combined sewer overflows; septic system discharges; open water dredge disposal operations; runoff from agricultural and urban areas; oil and gas production; mining operations; and accidental releases and spills, especially from commercial shipping operations and recreational boating.

The City of Toledo treats its water to meet and even surpass drinking water quality standards, but no single treatment protocol can address all potential contaminants. The potential for water quality impacts can be further decreased by implementing measures to protect Lake Erie. More detailed information is provided in the City of Toledo's Drinking Water Source Assessment Report, which can be viewed online at [www.toledo.oh.gov/services/public-utilities/water-treatment/drinking-water-quality-information](http://www.toledo.oh.gov/services/public-utilities/water-treatment/drinking-water-quality-information) or obtained by calling 419-936-2020.

For information on what residents can do to protect our source water, please visit [www.toledolakeerie.clearchoicescleanwater.org](http://www.toledolakeerie.clearchoicescleanwater.org).

## What are sources of contamination to drinking water?

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. 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 at 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. EPA/CDC guidelines on appropriate means to lessen the risk of infection are available from the Safe Drinking Water Hotline at 800-426-4791.

The Ohio Environmental Protection Agency has formally approved the Toledo HAB General Plan, which identifies the proactive steps the city is taking to protect our drinking water from the impact of Harmful Algal Blooms.

## Cryptosporidium

The City of Toledo Water Department has completed the second round of source water monitoring required by the Long Term 2 Enhanced Surface Water Treatment Rule. Forty-eight (48) samples were collected and tested for Giardia and Cryptosporidium. Only one cell of Cryptosporidium was detected in untreated water during the testing period from April 2015 to March 2017. It was not detected in the finished water. In 2005, 21 samples were taken from Toledo's raw water supply. Cryptosporidium was not detected in any of these samples. Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. Although filtration removes cryptosporidium, the most commonly used filtration methods cannot guarantee 100% removal. Monitoring of source water indicates the presence of these organisms. Current test methods do not enable us to determine if the organisms are dead or if they are capable of causing disease. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease. However, immuno-compromised people are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease and it may be spread through means other than drinking water.

## 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. Toledo 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 [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

## Toledo Water Treatment Process Maintains Protective Corrosion Controls

- Toledo provides safe drinking water for customers from the plant to the tap.
- Toledo's water treatment plant is operated at all times to maintain corrosion controls to inhibit corrosion and protect the water supply throughout its distribution system and into homes and businesses.
- Orthophosphate and polyphosphates are fed in small amounts to stabilize water quality and minimize corrosion in Toledo's drinking water system.
- This process creates a protective coating on the inside of the piping to protect the water supply from leaching any harmful material.
- Toledo tests its water for stability every day to ensure that the water is not corrosive. (*PH and calcium carbonate levels*)
- Toledo reports results related to lead and copper control to the Ohio EPA twice per year. The parameter levels are in accordance with an Ohio EPA-approved corrosion control study.
- The City of Toledo offers frequently asked questions and additional information about "Lead Safety and Your Water" on its website at [www.toledo.oh.gov/services/public-utilities/](http://www.toledo.oh.gov/services/public-utilities/).

## In 2017 Toledo had an unconditioned license to operate its water system.

Toledo's Water Treatment Plant has an outstanding record of success, consistently maintaining compliance with federal and state drinking water quality regulations. Its outstanding performance in 2017 was achieved through a proactive commitment by its staff to produce a higher level of drinking water safety and reliability than is currently required by law.



Our water quality standards are established by the Environmental Protection Agency (EPA) and the Ohio EPA.

To stay informed, please sign up to receive text alerts through the quick link on the City of Toledo website or at [www.lucascountyalerts.com](http://www.lucascountyalerts.com).

## Public Participation Information

Public participation and comment are encouraged at Toledo City Council which meets regularly every other Tuesday at 4 pm at One Government Center. Please visit [www.toledo.oh.gov/government/city-council](http://www.toledo.oh.gov/government/city-council) for its calendar, meeting notices, legislation and audio minutes or call 419-245-1050. For more information on your drinking water contact Jeff Calmes at 419-936-3020. Thank you.