



2015

City of Toledo

Drinking Water Quality Report

Dear Citizens and Neighbors,

The City of Toledo provides safe drinking water for 500,000 people in Toledo and surrounding communities. Once a year, we present the Water Quality Report to consumers. The report is a regulatory requirement of the U.S. EPA and the Ohio EPA and provides data that shows our drinking water meets or surpasses all State and Federal water quality standards.

Water treatment begins at the intake crib where water is drawn from Lake Erie and flows in underground pipes to the low-service pump station for more treatment before traveling nine miles to the Collins Park Water Treatment Plant for full treatment.

Prior to the 2015 Harmful Algal Bloom (HAB) season the City of Toledo increased its ability to feed powdered activated carbon (PAC) at Collins Park and potassium permanganate (KMnO₄) at its intake crib and low service pump station. New chlorine disinfection facilities were built this year at the Collins Park Water Treatment Plant increasing application points and reliability.

These upgrades are part of an overall construction program that includes equipment replacement, structural improvements, electrical upgrades and added treatment capacity to make Collins Park into a state-of-the-art plant.

Thank you for being our customer and for your support of these positive initiatives. We look forward to continue serving you for many years to come.
Sincerely,

Paula Hicks-Hudson
Mayor



Collins Park Water Treatment met or exceeded all state and federal health standards

Regulated Contaminants

*Note Highest level detected is reported as highest level in range.

Substance (Unit)	Maximum Allowed (MCL) *	MCLG*	Level Detected	Range of Detections	Violation	Year Sampled	Typical Source of Contamination
Barium (ppm)	2	2	0.01	N/A	No	2015	Erosion of natural deposits
Chlorite (ppm)	1	0.5	0.371	0.053 - 0.5	No	2015	Byproduct of drinking water disinfection
Fluoride (ppm)	4	4	1.05	0.82 - 1.17	No	2015	Water additives to promote strong teeth
Nitrate (ppm)	10	10	3.12	ND - 3.12	No	2015	Fertilizer runoff; erosion of natural deposits.
Atrazine (ppb)	3	3	0.089	ND - 0.089	No	2015	Runoff from herbicide used on row crops
Simazine (ppb)	4	4	0.06	ND - 0.06	No	2015	Herbicide runoff
TTHM (ppb) 1	80	0	61.7	13.1 - 94.2	No	2015	Byproducts of drinking water disinfection
HAA5 (ppb) 1	60	None	18	ND - 34.1	No	2015	Byproducts of drinking water disinfection
Turbidity (ntu) 2	TT	None	0.24	0.04 - 0.24	No	2015	Runoff, soil suspended matter in lake
TOC 3	TT	None	3.02	2.58 - 3.87	No	2015	Naturally present in environment
Total Chlorine (ppm)	MRDL = 4	MRDL G = 4	1.34	1.03 - 1.39	No	2015	Additive used to control microbes
Chlorine Dioxide (ppm)	MRDL = 0.8	MRDL G = 0.8	0.50	<0.2 - 0.5	No	2015	Additive used to control microbes
Alpha (piC/L)	15	N/A	8	N/A	No	2015	Erosion natural deposits

Copper and Lead Testing

Substance (Unit)	Maximum Allowed (MCL) *	MCLG*	90th	Sites > AL	Violation	Year Sampled	Typical Source of Contamination
Copper (ppm)	AL = 1.3	1.3	0.017	None	No	2014	Corrosion of household plumbing
Lead (ppb) 4	AL = 15	15	5	None	No	2014	Erosion of natural deposits

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 our filtration system effectiveness. 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 2015, 100% 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.

4. Lead Level from 2014 was a transcription error. The revised 2014 lead level is 5 ppb.

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. City of 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 <http://www.epa.gov/safewater/lead>.

2015 Disinfection Violation

The City of Toledo Water Treatment failed to provide adequate contact time for approximately 7 hours on March 18. Chemistry tests confirmed that adequate chlorine levels and quality was maintained throughout the treatment modification. Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, and diarrhea. The City of Toledo has taken the following step to correct the problem: the addition of chlorine feed application points at the clear well will ensure continuous chlorine feed.

Unregulated Contaminants in Drinking Water

This table shows the results from 2013 Unregulated Contaminants Monitoring Rule 3 (UCMR3). 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

are listed below:

*Note Highest level detected is reported as highest level in range.

Substance (Unit)	Level Detected	Range of Detections	Threshold	Year Sampled	Likely Sources
Microcystin (ppb) 2	ND	ND	0.3 Children 5 and younger, 1.6 Anyone 6 or older	2015	Toxins produced by Harmful Algal Blooms

Substance (Unit)	Maximum Allowed (MCL) *	MCLG*	Level Detected 4	Range of Detections	Violation	Year Sampled
Chromium, Hexavalent (ppb)	N/A	N/A	0.232	0.19 - 0.232	No	2013
Chromium, Total (ppb)	N/A	N/A	0.24	0.20 - 0.24	No	2013
Chlorate (ppb)	N/A	N/A	100.0	39.6 - 100	No	2013
Molybdenum , Total (ppb)	N/A	N/A	2.11	ND - 2.11	No	2013
Strontium, Total (ppb) 3	N/A	N/A	151.0	86 - 151	No	2013
Vanadium, Total (ppb)	N/A	N/A	0.850	0.423 - 0.850	No	2013
Sodium (ppm) 1	N/A	N/A	32.4	6.8 - 32.4	No	2015

1. This information is provided for those concerned with sodium in their diet; 32.4 mg/l of sodium equates to 7.57 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 United States Environmental Protection Agency (USEPA). The 0.3 ppb Do Not Drink Advisory Threshold is for children 5 and younger. While 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/PWS_HAB_Response_Strategy_2015.pdf.

3. Strontium, Total – revised from a transcription error in 2014. (0.086 ppm or 86 ppb)

4. Due to sampling method, level found is recorded as highest in range.

Unregulated Contaminants in Distribution System

*Note Highest level detected is reported as highest level in range.

Substance (Unit)	Maximum Allowed (MCL) *	MCLG*	Level Detected	Range of Detections	Violation	Year Sampled
Chromium, Hexavalent (ppb)	N/A	N/A	0.26	0.21 - 0.26	No	2013
Chromium, Total (ppb)	N/A	N/A	0.389	0.21 - 0.389	No	2013
Chlorate (ppb)	N/A	N/A	111	43.4 - 111	No	2013
Molybdenum Total (ppb)	N/A	N/A	3.0	1.20 - 3.0	No	2013

Substance (Unit)	Maximum Allowed (MCL) *	MCLG*	Level Detected	Range of Detections	Violation	Year Sampled
Strontium, Total (ppb)	N/A	N/A	200	98.0 - 200	No	2013
Vanadium, Total (ppb)	N/A	N/A	0.820	0.502 - 0.820	No	2013

For more information on UCMR3 go to: <http://water.epa.gov/lawsregs/rulesregs/sdwa/ucmr/ucmr3/basicinformation.cfm>.

Information about Cryptosporidium

In 2015, 18 samples were taken from Toledo's raw water supply. Cryptosporidium was not detected in any of these samples

License to Operate Status

In 2015 we had an unconditioned license to operate our water system.

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 (1-800-426-4791).

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 by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

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) – (me 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:

Toledo Water Meets or Exceeds All Drinking Water Quality Standards

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 2 1/2 miles 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 obtained by calling 419-936-3021.

Toledo's Water Treatment Plant has an outstanding record of success, consistently maintaining compliance with drinking water quality regulations. Its outstanding performance in 2015 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.

How to Participate in Decisions Concerning Your Drinking Water

Toledo City Council meets every other Tuesday at 4 pm at One Government Center. Please visit www.toledo.oh.gov/government/city-council for access to calendars, council and committee notices, pending and enacted legislation as well as audio minutes. Call 419-245-1050.

Health and Safety Information

City of Toledo drinking water meets or surpasses all federal and state laws. The following is mandatory language provided by the EPA: Drinking water, including bottled water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily pose a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline, 800-426-4791. The sources of both tap and bottled drinking water include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive materials; and can also pick up substances resulting from animal or human activity. Contaminants 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, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally occurring or 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 and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, septic systems, and agricultural and urban runoff.
- Radioactive contaminants, which are naturally occurring or the result of oil and gas production, or mining activities.