



2016

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.

In 2016 construction was focused on improving reliability of the water system, replacing the chemical feed system, refurbishing existing pump stations and backup backwash facilities.

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 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,

A handwritten signature in blue ink that reads "Paula Hicks-Hudson".

Paula Hicks-Hudson

Mayor



Collins Park Water Treatment Drinking Water was incompliance with all state and federal health standards

Detected 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
Chlorite (ppm)	1	0.5	0.241	0.092-0.263	No	2016	Byproduct of drinking water disinfection
Fluoride (ppm)	4	4	1.03	0.83 - 1.15	No	2016	Water additives to promote strong teeth
Nitrate (ppm)	10	10	2.48	<0.2-2.48	No	2016	Fertilizer runoff; erosion of natural deposits
TTHM (ppb) ¹	80	0	47.8	12.5 - 64.0	No	2016	Byproducts of drinking water disinfection
HAA5 (ppb) ¹	60	None	15.3	<6.0-18.6	No	2016	Byproducts of drinking water disinfection
Turbidity (ntu) ²	TT	None	0.30	0.05-0.30	No	2016	Runoff, soil suspended matter in lake
TOC ³	TT	None	3.0	2.60-4.1	No	2016	Naturally present in environment
Total Chlorine (ppm)	MRDL=4	MRLDG=4	1.30	1.10-1.34	No	2016	Additive used to control microbes
Chlorine Dioxide (ppm)	MRDL=0.8	MRLDG=0.8	0.30	0.2 - 0.3	No	2016	Additive used to control microbes
Alpha (piC/L)	15	N/A	8	N/A	No	2015	Erosion natural deposits

Copper and Lead Reporting

Substance (Unit)	Maximum Allowed (MCL) *	MCLG*	90 th 4	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)	AL = 15	15	7	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 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 Toledo Water System’s highest recorded turbidity result for 2016 was 0.3 NTU and lowest monthly percentage of samples meeting the turbidity limits was 99.73% below 0.3NTU.

3. TOC stands for Total Organic Carbon. The value reported under “Level Found” for TOC is the lowest 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. 90th percentile refers to a set of sample results used to require water systems to implement additional corrective actions

Microcystin wasn’t detected in any of the tap samples for 2016.

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

Detected 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 determining occurrence of unregulated contaminants on whether future regulation is warranted. . Any contaminant found in the UCMR3 quarterly sampling will not have an MCLG or MCL and are listed below:

Substance (Unit)	Maximum Allowed (MCL) *	MCLG*	Level Detected ²	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)	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	26.6	8.8-26.6	No	2016

1. This information is provided for those concerned with sodium in their diet; 26.6 mg/l of sodium equates to 6.3 milligrams of sodium per 8 ounce glass of water.

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

Unregulated Contaminants in Distribution System

*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
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 2016, 24 samples were taken from Toledo's raw water supply. Cryptosporidium was not detected in any of these samples.

License Status

In 2016 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

What are sources of contamination to drinking water? (continued)

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, U.S. EPA 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 U.S. EPA'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).

Revised Total Coliform Rule (RTCR) Information

This Consumer Confidence Report (CCR) reflects changes in drinking water regulatory requirements during 2016. All water systems were required to comply with the Total Coliform Rule from 1989 to March 31, 2016, and 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.

Water Quality Terminology

Parts per million (ppm) – is a unit of measurement for concentration of a contaminant. One ppm can be equated to one second in approximately 11.5 days.

Water Quality Terminology (continued)

Parts per billion (ppb)- is a unit of measurement of concentration of a contaminant. One ppb corresponds to one second in 31.7 years.

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.

Microcystins - Liver toxins produced by a number of cyanobacteria. Total microcystins are the same of all the variants/congeners (forms) of the cyanotoxin microcystin.

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.

CDC – Center for Disease Control

PWS – Public Water System

Picocuries per liter (pCi/l) – common measurement of radioactivity

ND – Not detectable

N/A – Not applicable

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.

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 2016 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 or call 419-245-1050.

Questions?

If you have any questions on this report, please feel free to contact Jeff Calmes at 419 936-3021 or jeff.calmes@toledo.oh.gov.