2014
City of Toledo
Drinking Water Quality Report

Dear Citizens and Neighbors:

The City of Toledo prides itself on providing the highest quality drinking water to our 500,000 customers, situated throughout Toledo and surrounding communities. Once a year, the City presents its Water Quality Report to our consumers. This annual report is a regulatory requirement of the U.S. EPA and the Ohio EPA to demonstrate to our customers that our drinking water meets or surpasses all State and Federal laws. The contents of this report contain valuable information that we hope you will find interesting and helpful.

We extend thanks and appreciation to our customers for their patience this year while we underwent a series of improvements and encountered an unprecedented interruption in our service, due to the water event. Our citizens and extended community can be proud of the way in which our region worked together. We are grateful that local, state and federal officials have taken several measures to address the long-term issues related to protecting the quality of our precious Lake Erie source water.

The City is also managing a $264 million five-year capital improvement plan to upgrade and modernize the Collins Park Water Treatment Plant. During 2014 more than $32 million was spent on several projects, including new chlorination facilities which will benefit our customers for many years to come. In 2015, an additional $50 million of plant improvements are programmed for construction.

In the summer of 2015 at least 20 water quality monitoring buoys in the lake will provide technical data and act as an early warning system to conditions in the lake. Toledo will complete construction of additional chemical treatment facilities at the Collins Park Water Treatment Plant by July 1 to increase protection of our drinking water.

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.

Thank You,

City of Toledo

2014 Drinking Water Quality Results

The table below shows the results of the Toledo Water Treatment Plant's water quality tests for 2014. 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 (See Water Quality Terminology Below for Definitions)

Inorganic Parameters

Parameter	Sample Year	Units	Level Found	Range	MCLG	MCL	Violation?	Likely Sources
Chlorite	2014	ppm	0.25	0.2 - 0.25	0.5	1.0	no	Byproduct of drinking water disinfection
Fluoride	2014	ppm	1.28	0.3 - 1.28	4	4	no	Water additive to promote strong teeth
Nitrate	2014	ppm	4.06	nd -- 4.06	10	10	no	Fertilizer runoff; septic tank leaching, Sewage; erosion of natural deposits

Synthetic Organic Parameters including Pesticides and Herbicides

Atrazine	2014	ppb	0.071	nd - 0.071	3	3	no	Runoff from herbicide used on row crops
Simazine	2014	ppb	0.051	nd - 0.051	4	4	no	Herbicide runoff

Volatile Organic Parameters

TTHM[1]	2014	ppb	45.0	16.3 - 83.2	none	80	*yes	Byproducts of drinking water disinfection
HAA5[1]	2014	ppb	14.8	4.0 - 25.2	none	60	no	Byproducts of drinking water disinfection

Microbiological Parameters

Turbidity[2]	2014	ntu	0.22	0.04 - 0.22	none	TT	no	Soil runoff, suspended matter in lake water
TOC[3]	2014	see note[3]	2.43	2.43 - 4.18	none	TT	no	Naturally present in the environment

Residual Disinfectants

Total Chlorine	2014	ppm	2.20	1.10 - 2.20	4	4	no	Additive used to control microbes

Copper and Lead Testing

Parameter	Sample Year	Units	90th	Sites >AL	MCLG	MCL	Violation?	Likely Sources
Copper	2014	ppm	0.017	none	1.3	AL=1.3	no	Corrosion of household plumbing and
Lead	2014	ppb	7	none	15	AL=15	no	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 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.

*While the average for the year didn't exceed the MCL, there was an MCL violation determined during the 2014 year that included results from 2013 which had a level greater than 80 ppb for 1 out of 12 sample locations. The standard TTHM is 80 ppb. The 11 other sample sites ranged from 39- 70 ppb. The sample site at Clarion and Angola was located on a dead end line which can affect water age and result in higher levels of TTHM. You do not need to use an alternative (e.g. bottled) water supply. The levels detected do not pose an immediate risk to your health. However, some people who drink water containing triahalomethanes in excess of the MCL for many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.

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 2014, 99% 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.

2014 Significant Deficiencies

The Ohio EPA has identified significant deficiencies associated with the water treatment alum feed system and the sedimentation basin vents. The City of Toledo distributed public notifications beginning on April 17, 2014. Below are the completion dates for each project:

- The alum feed system deficiency was corrected on September 18, 2014.
- The sedimentation vents were repaired on June 13, 2014.

Unregulated Contaminants Monitoring

This table shows the results from the Unregulated Contaminants Monitoring Rule 3 (UCMR3). These parameters were analyzed during the years 2013 and 2014 and are now included in the 2014 Drinking Water Quality Report. These test results will assist USEPA in developing new regulatory requirements to protect the public health and safety. UCSMR 3 requires monitoring at the treatment plant and in the distribution system. Any contaminant found in the UCMR3 quarterly sampling will not have an MCLG or MCL and will be listed below with its range of highest and lowest results:

Unregulated Contaminants in Drinking Water at the Treatment Plant Tap

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	100.0	39.6 - 100	na	na	no
Molybdenum, Total	2013	ppb	2.11	nd - 2.11	na	na	no
Strontium, Total	2013	ppb	151.0	0.086 - 151	na	na	no
Vanadium, Total	2013	ppb	0.850	0.423 - 0.850	na	na	no

Unregulated Contaminants in Distribution System at Maximum Residence Time

Parameter	Sample Year	Units	Level Found	Range	MCLG	MCL	Violation?
Chromium, Hexavalent	2013	ppb	0.26	0.21- .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	3.0	1.20 - 3.0	na	na	no
Strontium, Total	2013	ppb	200	98.0 - 200	na	na	no
Vanadium, Total	2013	ppb	0.820	0.502 - 0.820	na	na	no

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

Other Unregulated Contaminants Monitoring

Parameter	Sample Year	Units	Level Found	Range	Threshold	Likely Sources
Sodium[1]	2014	ppm	65.2	11.4 - 65.2	na	Naturally occurring
Microcystin[2]	2014	ppb	2.469	nd - 2.469	1.0	Toxin produced by harmful algal blooms

1. This information is provided for those concerned with sodium in their diet; 65.2 mg/l of sodium equates to 15.45 milligrams of sodium per 8 ounce glass of water.

2. Microcystin is a toxin produced by harmful algal blooms. The 1.00 ppb Do Not Drink Advisory Threshold was established by OEPA and Ohio Department of Public Health. There is no current MCL for Microcystin. For information on Harmful Algal Bloom Response Strategy go to http://epa.ohio.gov/Portals/28/documents/HABs/PWS_HAB_Response_Strategy_2014.pdf.

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.

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 obtained by calling 419-936-3021 or toledo.oh.gov/services/public-utilities/water-treatment/drinking-water-quality-information. Email us at dpucustomerservice@toledo.oh.gov.

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 those undergoing chemotherapy, who have undergone organ transplants, with HIV/AIDS or other immune system disorders, and some elderly and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. Federal guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbiological contaminants are available from the EPA's Safe Drinking Water Hotline at 800-426-4791.

Information about Lead in Service Lines and Home Plumbing

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. The 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 thirty seconds to two minutes before using water for drinking and cooking.

Information about Cryptosporidium

In 2005, 21 samples were taken from Toledo's raw water supply. Cryptosporidium was not detected in any of these samples.

License to Operate (LTO) Status Information

The City of Toledo has a current, unconditional license to operate its water system.

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 meeting notices, pending and enacted legislation as well as audio minutes. Call 419-245–1050 for more information.

For More Information about Your Drinking Water

Additional information including archived Water Quality Reports and Frequently Asked Questions about Water Quality is available online at www.toledo.oh.gov/services/public-utilities/water-treatment/drinking-water-quality-information. Specific questions about this report may be directed to the Collins Park Water Treatment Plant at 419-936-3021. While the Water Treatment Plant is staffed with an Ohio EPA certified Chemist twenty-four hours a day seven days a week, the chemist is not always available to answer the phone as they may be gathering samples or running tests. The U.S. Environmental Protection Agency operates the Safe Drinking Water Hotline at 800-426-4791.

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.

To ensure that tap water is safe, the EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) establishes limits for contaminants in bottled water, which must provide the same protection for public health.