

Northwestern Water & Sewer District – Toledo Service Area Drinking Water Consumer Confidence Report For 2019

Together, the Northwestern Water & Sewer District – Toledo Service Area and the City of Toledo have prepared the following report to provide information to you, the consumer, on the quality of our drinking water. Included within this report is general health information, water quality test results, how to participate in decisions concerning your drinking water and water system contacts.

Source Water Information

The Northwestern Water & Sewer District – Toledo Service Area purchases water from the City of Toledo.

The City of Toledo Water Treatment Plant uses surface water from Lake Erie as its source water. The two story water intake was constructed in 1942. It is located less than a mile away from the intake for the City of Oregon's public water system, and farther from shore. Both intakes are located beyond the normal flow of the Maumee River as well as that of the Detroit River to the north.

The integrity of the Toledo intake structure is inspected in the spring of each year. The present water treatment plant has a capacity of 181 million gallons per day based on 4gpm/sf filtration loading rate. The average daily production is 80 million gallons per day (winter) and 140 million gallons per day (summer). The system has 70 million gallons of finished water storage at the plant and 10.5 million gallons of ground storage in the distribution system. The Toledo water line is a 108-inch diameter pipe that runs parallel with the City of Oregon's water line, but extends farther out into the lake. Processes include lime softening, sedimentation, filtration, fluoridation, coagulation, flocculation, stabilization and disinfection prior to distribution.

For the purposes of source water assessments, all surface waters are considered to be susceptible to contamination. By their nature surface waters are accessible and can be readily contaminated by chemicals and pathogens with relatively short travel times from the source to the intake. Based on the information compiled for this assessment, the Toledo Public Water System CAZ is susceptible to contamination from accidental spills or releases associated with commercial shipping and recreational boating, sediments from river dredging disposal operations, air contaminant deposition, point and nonpoint source discharges from industrial and agricultural operations along the shore and along streams that empty into the lake, contamination from oil and gas production and mining operations, natural processes such as erosion, contaminated storm water runoff from urban areas, municipal sewage treatment system and home sewage disposal system discharges, and combined sewer overflows (CSOs).

The intake's degree of sensitivity combined with information obtained from the survey form and local data such as intake construction, lake bottom characteristics, localized flow patterns, thermal effects and benthic nepheloid layers can be used to complete a sensitivity analysis. The benthic nepheloid layer is a zone of suspended sediment kept suspended by the interactions of current and sedimentation. The layer's characteristics around an intake depend on sediment density, water temperature, bottom currents and animal activity. Lake Erie waters in the protection area generally flow from the Maumee River west to east along the shoreline and across the Toledo and Oregon intakes. The Detroit River also impacts flow throughout the western basin which sets up a southerly flow toward the Toledo and Oregon intakes.

It is important to note that this assessment is based on available data, and therefore may not reflect current conditions in all cases. Water quality, land uses and other activities that are potential sources of contamination may change with time. While the source water for the City of Toledo public water system is

considered susceptible to contamination, historically, the City of Toledo has effectively treated this source water to meet drinking water standards.

The City of Toledo Public Water System treats water to meet 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 Public Water System's Drinking Water Source Water Assessment report. Copies of the source water assessment report prepared for the City of Toledo are available by contacting the City of Toledo water treatment plant at 419-936-3021.

The City of Toledo also has an emergency connection with the City of Oregon. During 2019 we used no water from this connection over the entire year. On average, this connection is used for approximately 0 days each year. This report does not contain information on the water quality received from the City of Oregon but a copy of their consumer confidence report can be obtained by contacting them at 419-698-7123.

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).

About your drinking water.

The EPA requires regular sampling to ensure drinking water safety.

- The Northwestern Water & Sewer District – Toledo Service Area conducted sampling for bacteria; disinfection byproducts; lead and copper during 2019. Samples were collected for a total of 15 different contaminants most of which were not detected in the Northwestern Water & Sewer District – Toledo Service Area water supply.
- The City of Toledo conducted sampling for bacteria; inorganic; synthetic organic and volatile organics during 2019. Samples were collected for a total of 77 different contaminants most of which were not detected in the City of Toledo 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.

Listed below is information on those contaminants that were found in the Northwestern Water & Sewer District – Toledo Service Area and the City of Toledo drinking water.

TABLE OF DETECTED CONTAMINANTS: Northwestern Water & Sewer District - Toledo Service Area

Contaminants (Units)	MCLG	MCL	Level Found	Range of Detections	Violation	Sample Year	Typical Source of Contaminants
Disinfectant and Disinfectant By-Products							
Total Chlorine (ppm)	MRDLG = 4	MRDL = 4	1.07	0.92 - 1.22	No	2019	Water additive used to control microbes
Haloacetic Acids (HAA5) (ppb)	NA	60	15.8	6.2 - 25.1	No	2019	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb)	NA	80	84.2	37.8 - 124	Yes	2019	By-product of drinking water disinfection
Lead and Copper							
Contaminants (units)	Action Level (AL)	Individual Results over the AL	90% of test levels were less than	Violation	Year Sampled	Typical source of Contaminants	
Lead (ppb)	15 ppb	0	0 ppb	No	2019	Corrosion of household plumbing systems; erosion of natural deposits	
	0 out of 31 samples were found to have lead levels in excess of the lead action level of 15 ppb.						
Copper (ppm)	1.3 ppm	0	0.0187 ppm	No	2019	Erosions of natural deposits; leaching from wood preservatives; Corrosions of household plumbing systems	
	0 out of 31 samples were found to have copper levels in excess of the copper action level of 1.3 ppm.						

TABLE OF DETECTED CONTAMINANTS: City of Toledo

Contaminants (Units)	MCLG	MCL	Level Found	Range of Detections	Violation	Sample Year	Typical Source of Contaminants
Microbiological Contaminants							
Turbidity (NTU)	NA	TT	0.47	0.03 - 0.47	No	2019	Soil runoff.
Turbidity (% meeting standard)	NA	TT	100%	0 - 100%	No	2019	
Total Organic Carbon	NA	TT	2.76	2.76 - 3.19	No	2019	Naturally present in the environment.
Inorganic Contaminants							
Chlorite (ppm)	0.5	1	0.25	<0.02 - 0.25	No	2019	By-product of drinking water chlorination.

Fluoride (ppm)	4	4	1.02	0.85 - 1.12	No	2019	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate (ppm)	10	10	2.21	<0.2 - 2.21	No	2019	Run off from fertilizer use, Leaching from septic tanks, sewage; Erosion of natural deposits

Turbidity

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 samples analyzed each month and shall not exceed 1 NTU at any time. As reported above, the City of Toledo's highest recorded turbidity result for 2019 was 0.47 NTU and lowest monthly percentage of samples meeting the turbidity limits was 99.5%.

What is the Unregulated Contaminant Monitoring Rule?

The 1996 amendments to the Safe Drinking Water Act (SDWA) require that once every five years, the US Environmental Protection Agency (EPA) issue a new list of no more than 30 unregulated contaminants to be monitored by public water systems (PWSs). The Unregulated Contaminant Monitoring Rule (UCMR) provides EPA and other interested parties with scientifically valid data on the occurrence of contaminants in drinking water. This national survey is one of the primary sources of information on occurrence and levels of exposure that the Agency uses to develop regulatory decisions for contaminants in the public drinking water supply.

The "Revisions to the Unregulated Contaminant Monitoring Rule (UCMR 4) for Public Water Systems and Announcement of Public Meeting" was published in the Federal Register on December 20, 2016 (81 FR 92666). UCMR 4 monitoring will occur from 2018-2020 and includes monitoring for a total of 30 chemical contaminants: 10 cyanotoxins (nine cyanotoxins and one cyanotoxin group) and 20 additional contaminants (two metals, eight pesticides plus one pesticide manufacturing byproduct, three brominated haloacetic acid [HAA] disinfection byproducts groups, three alcohols, and three semivolatile organic chemicals [SVOCs]).

TABLE OF DETECTED CONTAMINANTS: City of Toledo

Contaminants (Units)	MCLG	MCL	Level Found	Range of Detections	Violation	Sample Year	Typical Source of Contaminants
Unregulated Contaminants							
Contaminants (Units)	Sample Year	Average Level Found	Range of Detections	Sample Location	Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. In 2018 the City of Toledo participated in the fourth round of the Unregulated Contaminant Monitoring Rule (UCMR 4). For a copy of the results please call the City of Toledo Water Treatment Plant at 419-936-3021.		
Manganese (ppb)	2018	0.478	<0.4 - 0.777	Distribution			
Haloacetic Acids (HAA5) (ppb)	2018	12.9	5.26 - 17.54	Distribution			
Haloacetic Acids (HAA6Br) (ppb)	2018	11.22	1.72 - 14.37	Distribution			
Haloacetic Acids (HAA9) (ppb)	2018	20.81	9.4 - 26.47	Distribution			
Sodium (ppm)	2019	28.4	9.7 - 28.4	Source Water			

Violations

The Northwestern Water & Sewer District – Toledo Service Area had a MCL exceedance for TTHM compliance during the third quarter of 2019 based on the running annual average at DS203. The annual average for TTHM during this time was .0842 mg/L. Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems and may

have an increased risk of getting cancer. Northwestern Water & Sewer District – Toledo Service Area took/is taking the following steps to correct this violation and prevent future violations from occurring: Plans were submitted to an approved by OEPA to add aeration equipment to the water tower that serves this section of waterline. Aeration will reduce contributing factors to the formation of TTHM’s in this portion of the water system and we will be able to deliver better quality water to our customers.

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. Northwestern Water & Sewer District – Toledo Service Area 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>.

Cryptosporidium Information.

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 during the testing period from April 2015 to March 2018. 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 immune 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.

In 2019 we had an unconditioned license to operate our water system.

How do I participate in decisions concerning my drinking water?

Public participation and comment are encouraged at regular meetings of the Board of Trustees which meets at 7:30 am every 2nd and 4th Thursday of each month. Meetings are held at the District’s Operations facility located at 12560 Middleton Pike, Bowling Green, OH 43402. For more information on your drinking water contact Customer Service at 419-354-9090.

Additionally, public participation and comment are encouraged at regular meetings of City Council which 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. For more information on your drinking water contact the City of Toledo Water Quality Control Lab at 419-936-3049.

Definitions of some terms contained within this report.

- 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 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.
- Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- 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 ($\mu\text{g/L}$) are units of measure for concentration of a contaminant. A part per billion corresponds to one second in 31.7 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.