

Northwestern Water & Sewer District – Toledo Service Area Drinking Water Consumer Confidence Report For 2017

In 2017 we had an unconditioned license to operate our water system. Together, the City of Toledo and the Northwestern Water & Sewer District – Toledo Service Area 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 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).

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 source water assessment report prepared for the City of Toledo can be accessed at Ohio EPA's website. Utilizing the Interactive Web Map located at <http://epa.ohio.gov/ddagw/swap.aspx> and selecting "Source Water Protection Areas" under the "Quick Links". When the map appears, you can search by water system name or by the 7-digit PWS ID number which is OH4801411 for the City of Toledo.

The City of Toledo also has an emergency connection with the City of Oregon. During 2017 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 and disinfection byproducts during 2017. Samples were collected for a total of 12 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 2017. 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
Residual Disinfectants							
Total Chlorine (ppm)	4	4	1.31	0.83 – 1.72	NO	2017	Water additive used to control microbes.
Disinfection Byproducts							
Total Trihalomethanes TTHMs (ppb)	0	80	72.3	24.1 – 92.9	NO	2017	By-product of drinking water chlorination.
Haloacetic Acids HAA5 (ppb)	0	60	13.1	6.3 – 23.5	NO	2017	
Lead and Copper							
Contaminants (Units)	Action Level (AL)	Individual Results over the AL	90% of test levels were less than	Violation	Sample Year	Typical Source of Contaminants	
Lead (ppb)	15 ppb	2	6.45 ppb	NO	2016	Corrosion of household plumbing systems.	
	Two out of 31 samples was found to have lead levels in excess of the lead action level of 15 ppb.						
Copper (ppm)	1.3 ppm	0	0.0158 ppm	NO	2016	Corrosion of household plumbing systems.	
	Zero 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	0.90	0.05 – 0.90	NO	2017	Soil runoff.
Turbidity (% meeting standard)	NA	TT	99.95%	0-100%	NO	2017	
Total Organic Carbon	NA	TT	2.82	2.82– 3.86	NO	2017	Naturally present in the environment.
Inorganic Contaminants							
Chlorite (ppm)	0.5	1.0	0.18	0.06- 0.19	NO	2017	By-product of drinking water chlorination.
Fluoride (ppm)	4	4	1.07	0.82 – 1.20	NO	2017	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.

Nitrate (ppm)	10	10	3.25	<0.2 – 3.25	NO	2017	Runoff from fertilizer use; leaching from septic tanks, sewage; Erosion of natural deposits.
Synthetic Organic Contaminants							
Atrazine (ppb)	3	3	0.18	NA	NO	2017	Runoff from herbicide used on row crops.
Radioactive Contaminants							
Alpha emitters (pCi/l)	0	15	8	NA	NO	2017	Erosion of natural deposits.
Unregulated Contaminants							
Chlorate (ppb)	NA	NA	100	39.6 – 100	NO	2013	Presently, there are no MCL or Action Levels for these contaminants. Unregulated contaminants monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants.
Chromium Hexavalent (ppb)	NA	NA	0.232	0.19 – 0.232	NO	2013	
Molybdenum (ppb)	NA	NA	2.11	ND – 2.11	NO	2013	
Sodium (ppm)	NA	NA	32.2	8.7 – 32.2	NO	2017	
Strontium (ppb)	NA	NA	151	86 – 151	NO	2013	
Vanadium (ppb)	NA	NA	0.850	0.423 – 0.85	NO	2013	
Microcystin							
Microcystin (ppb)	0.3 Children under 6 years	ND	NA	NO	2017	Toxins produced by harmful algal blooms.	
	1.6 Anyone 6 or older						

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 2017 was 0.90 NTU and lowest monthly percentage of samples meeting the turbidity limits was 99.95%.

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>.

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (1-800-426-4791).

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 2017. It was not detected in the finished water. 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 percent removal. Our monitoring of source water and/or finished water indicate 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 within a few weeks. However, immuno-compromised people are at greater risk of developing a life threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

Radon

The City of Toledo monitored for radon in the finished water during 2017. One sample was collected and the radon level was 8 pCi/L. Radon is a radioactive gas that occurs naturally in some ground water. It may pose a health risk when the gas is released from water into air, as occurs during showering, bathing, or washing dishes and clothes. Radon gas released from drinking water is a relatively small part of the total radon in air. Major sources of radon gas are soil and cigarettes. Inhalation of radon gas has been linked to lung cancer; however, the effects of radon ingested in drinking water are not yet clear. If you are concerned about radon in your home, tests are available to determine the total exposure level. For additional information on how to have your home tested, call 1-800-SOS RADON.

Revised Total Coliform Rule (RTCR) Information

All water systems were required to 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.

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 Jeff Calmes, Operations Administrator 419-936-3021 or jeff.calmes@toledo.oh.gov

Section 21: 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.
- Contact Time (CT) means the mathematical product of a “residual disinfectant concentration” (C), which is determined before or at the first customer, and the corresponding “disinfectant contact time” (T).
- Microcystins: Liver toxins produced by a number of cyanobacteria. Total microcystins are the sum of all the variants/congeners (forms) of the cyanotoxin microcystin.
- Cyanobacteria: Photosynthesizing bacteria, also called blue-green algae, which naturally occur in marine and freshwater ecosystems, and may produce cyanotoxins, which at sufficiently high concentrations can pose a risk to public health.
- Cyanotoxin: Toxin produced by cyanobacteria. These toxins include liver toxins, nerve toxins, and skin toxins. Also sometimes referred to as “algal toxin”.
- 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 (µg/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.
- Picocuries per liter (pCi/L): A common measure of radioactivity.

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