

# 2016 Drinking Water Consumer Confidence Report

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## City of Warren Utility Services

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This brochure explains the quality of drinking water provided by the City of Warren Utility Services. Included is a listing of results from water quality tests as well as an explanation of where our water comes from and tips on how to interpret the data. We're proud to share our results with you. Additionally, the City of Warren has also been issued a current, unconditional license to operate by the Ohio Environmental Protection Agency.

### Water Source Protection

The City of Warren public water system uses surface water drawn from the Mosquito Creek Reservoir. For the purposes of source water assessments in Ohio, all surface waters are considered to be susceptible to contamination. By their nature, surface waters are readily accessible and can be contaminated by chemicals and pathogens which may rapidly arrive at the public drinking water intake with little warning or time to prepare.

The City of Warren's drinking water source protection area is susceptible to wastewater treatment discharges, home sewage disposal system discharges, runoff from construction sites, residential, agricultural and urban areas, oil and gas production and transportation, and accidental releases and spills from vehicular traffic as well as from recreational boating.

The City of Warren public water system treats the water to meet drinking water quality standards, but no single treatment technique can address all potential contaminants. The potential for water quality impacts can be further decreased by implementing measures to protect Mosquito Creek Reservoir and its watershed. More detailed information is provided in the City of Warren's Drinking Water Source Assessment Report, which can be obtained by calling the chemist at 330-841-2578.

### Important Health Information

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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

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 also 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, 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.

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 infections. 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 (800-426-4791).

### How to Read the Water Quality Table

The results of tests performed in 2016 are presented in the table. Terms used in the Water Quality Table and in other parts of this report are defined here:

**Maximum Contaminant Level or MCL:** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to MCLGs as feasible using the best available treatment technology.

### **Maximum Contaminant Level Goal or 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.

**Detected Level:** The highest level detected of a contaminant for comparison against the acceptance levels for each parameter. These levels could be the highest single measurement, or an average of values depending on the contaminant.

**Range:** The lowest to the highest values for all samples tested for each contaminant. If only one sample is tested, or no range is required for this report, then no range is listed for that contaminant in the table.

**Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water.

We encourage public interest and participation in our community's decisions affecting drinking water. Regular meetings are held twice monthly at Council Chambers at 6:00 pm. Please call 330-841-2578 for specific dates. The public is welcome.  
PWSID #: 7803811

## City of Warren Water Quality Table

Inorganic Contaminants	Date Tested	Units	MCLG	MCL	Detected Level	Range	Violation	Major Sources
Barium	2016	ppm	2	2	0.013	na	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride	2016	ppm	4	4	0.95	0.80-0.95	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate	2016	ppm	10	10	0.23	<0.10-0.23	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Copper	2015	ppm	AL=1.3	AL=1.3	0.011	na	No	Corrosion of household plumbing and erosion of natural deposits
Lead	2015	ppb	0	AL=15	6.5	na	No	Corrosion of household plumbing systems and erosion of natural deposits

Two of the thirty samples were found to have lead levels in excess of the Action Level.

\*= 90th percentile

Microbiological Contaminants	Date Tested	Units	MCLG	MCL	Detected Level	Range	Violation	Major Sources
Turbidity (1)	2016	NTU	na	TT	0.14	0.03-0.14	No	Soil runoff
TOC (Total Organic Carbon) (2)	2016	ratio	na	TT	0.83	0.74-1.03	No (3)	Naturally present in the environment
Volatile Organic Contaminants	Date Tested	Units	MCLG	MCL	Detected Level	Range	Violation	Major Sources
TTHMs (Total Trihalomethanes)	2016	ppb	na	80	65.4	32.2-87.9	No	By-product of drinking water chlorination
HAA (Total Haloacetic Acids)	2016	ppb	na	60	39	19.5-56.9	No	By-product of drinking water chlorination
Unregulated Contaminants	Substances for which EPA requires monitoring to determine where certain substances occur and whether it needs to regulate those substances.							
	Date Tested	Units	MCLG	MCL	Detected Level	Range	Violation	Major Sources
Chlorate	2014/15	ppb	na	na	352	133-352	na	
Molybdenum	2014/15	ppb	na	na	1.6	nd-1.6	na	
Strontium	2014/15	ppb	na	na	69	54-69	na	
Chromium-6	2014/15	ppb	na	na	0.037	nd-0.037	na	
Chromium (total)	2014/15	ppb	na	na	0.24	nd-0.24	na	
Vanadium	2014/15	ppb	na	na	0.28	nd-0.28	na	
Synthetic Organic Contaminants	Date Tested	Units	MCLG	MCL	Detected Level	Range	Violation	Major Sources
Simazine	2015	ppb	4	4	0.14	na	No	Runoff from herbicide used on row crops
Atrazine	2016	ppb	3	3	0.16	na	No	Runoff from herbicide used on row crops

### Water Quality Table Footnotes

(1) 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 Ohio EPA is 0.3NTU in 95% of the daily samples and shall not exceed 5NTU at any time. As reported above, the Warren Water Department's highest recorded turbidity result for 2016 was 0.14NTU and the lowest monthly percentage of samples meeting the turbidity limits was 100%.

(2) The value reported under 'Detected Level' for Total Organic Carbon (TOC) is the lowest ratio between percentage of TOC actually removed to the percentage of TOC required to be removed. A value greater than one indicates that the water system is in compliance with TOC removal requirements.

(3) The city is not in violation for TOC because we are currently using an alternate method (SUVA value) to meet TOC requirement. All SUVA values are within the required range.

### Health Effects Language for Total Trihalomethanes

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 system, and may have an increased risk of getting cancer. The result represented in this table does not indicate a violation. For more information, call our chemist with the City of Warren Utility Services at 330-841-2578.

### Health Effects Language for Lead

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 Warren Water Department 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 your 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 or at <http://www.epa.gov/safewater/lead>.

### Cryptosporidium Information

The City of Warren Water Department monitored for Cryptosporidium in the source water during 2016 to comply with the Long Term 2 Enhanced Surface Water Treatment Rule (LT2). Cryptosporidium was detected in 1 sample of 3 collected from the raw 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% 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 immuno-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.

### Key to Table

MCL=Maximum Contaminant Level

NTU=Nephelometric Turbidity Unit

TT= Treatment Technique

nd=not detected at testing limits

na=not applicable

AL=Action Level (the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow)

ppm or mg/L are units of measure for concentration of a contaminant. A ppm is the same as 1 inch in 16 miles.

ppb or µg/L are units of measure for concentration of a contaminant. A ppb is the same as 1 inch in 16,000 miles.

MCLG= Maximum Contaminant Level Goal

ppm=parts per million or milligrams per liter (mg/L)

ppb=parts per billion or micrograms per liter (µg/L)

## Water Quality Table Footnotes

<sup>1</sup>Greater than 99% of the samples tested were below the treatment technique level of 0.3NTU. Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

<sup>2</sup>The value reported under "Detected Level" for Total Organic Carbon (TOC) is the lowest ratio between percentage of TOC actually removed to the percentage of TOC required to be removed. A value greater than one indicates that the water system is in compliance with TOC removal requirements.

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•Parts per million (ppm) or milligrams per liter (mg/L) are units of measure for concentration of a contaminant. A part per million is the same as 1 inch in 16 miles.

•Parts per billion (ppb) or micrograms per liter (µg/L) are units of measure for concentration of a contaminant. A part per billion is the same as 1 inch in 16,000 miles.

MCLG=Maximum Contaminant Level Goal

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- Of all the earth's water, 97 percent is salt water in oceans and seas.
- Only one percent of the earth's water is available for drinking water. Two percent is currently frozen.
- About two-thirds of the human body is water. Some parts of the body contain more water than others. For example, 70 percent of human skin is water.
- Approximately one million miles of pipelines and aqueducts carry water throughout the United States and Canada. That's enough to circle the earth 40 times.
- Typically, households use 50 percent of their water by lawn sprinkling. Inside of the home, toilets use the most water with an average of 27 gallons per person per day.
- You can survive about a month without food but only five to seven days without water.
- Each person uses about 100 gallons of water a day at home.
- The average five-minute shower uses roughly 15 to 25 gallons of water.
- You can refill an eight-ounce glass of water about 15,000 times for the same cost as a six-pack of pop.
- If every household in America had a faucet that dripped once each second, 928 million gallons of water a day would leak away.
- One gallon of water weighs about eight and one-third pounds.

### **Cost of Tap Water vs. Bottled Water**

On average, tap water costs \$0.006/gal and bottled water (bought in the case) costs \$1.33/gal. The cost for bottled water is significantly higher when individual bottles of water are purchased!