



# **2022 DRINKING WATER CONSUMER CONFIDENCE REPORT MOSQUITO CREEK PUBLIC WATER SYSTEM OH7806403**

## **INTRODUCTION**

Trumbull County had a current, unconditioned license to operate this Public Water System in 2022. Trumbull County has prepared the following report to provide information to you the consumer, on the quality of our drinking water. This report was required as part of the Safe Drinking Water Act Re-authorization of 1996 and was required to be delivered to the consumers by July 1, 2023. Included in this report is general health information, water quality test results, how to participate in decisions concerning your drinking water and water system contacts.

Trumbull County Mosquito Creek Public Water System obtains its primary source water from the City of Warren Public Water System which draws from Mosquito Creek Reservoir. Mosquito Creek Reservoir is considered a surface water source and requires extensive treatment before it can be used as drinking water.

## **WATER SOURCE ASSESSMENT**

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 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.

## **WHAT ARE SOURCES OF CONTAMINATION TO DRINKING WATER**

The sources of drinking water, both tap water and bottled water includes rivers, lakes, streams, ponds, reservoirs, springs, and wells. As the 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:

- Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants septic systems, livestock, and wildlife.
- 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.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water run-off, and residential uses.

- 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.
- 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. Drinking water, including bottled water, may reasonably 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 Environmental Protection Agency's Safe Drinking Water Hotline.

### **Safe Drinking Water Hotline**

**1-800-426-4791**

#### **MOSQUITO CREEK WATER FACTS .....**

In their effort to supply the safest possible product, the City of Warren Public Water System uses chloramines for disinfection of viruses and bacteria. Fluoride is also added to enhance dental protection. The levels of these two additives are monitored daily to ensure proper dosages are being added.

On average the County purchases 3.85 million gallons of water per month from the city for the Trumbull County Mosquito Creek Public Water System. The distribution system consists of 6 miles of water line varying in size from 6 through 16 inches in diameter.

Trumbull County Mosquito Creek Public Water System has 668 service connections and services an estimated 1630 people.

The County strives to provide safe and aesthetically pleasing drinking water to its residents as well as many businesses and visitors.

#### **SPECIFIC HEALTH CONCERNS**

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 an infection by *cryptosporidium*** and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791)

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 Mosquito Creek Water District is responsible for providing high quality drinking water, but cannot control the variety of materials used in household 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. A list of laboratories certified in Ohio to test for lead or perform other analyses on public drinking water may be found at [www.epa.state.oh.us/ddagw](http://www.epa.state.oh.us/ddagw) or by calling 614-644-2752. 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>.

#### **REVISED TOTAL COLIFORM RULE (RTCR) INFORMATION**

The Consumer Confidence Report (CCR) reflects changes in drinking water regulatory requirements during 2022. 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.

### **ABOUT YOUR DRINKING WATER**

The EPA requires regular sampling to ensure drinking water safety. The City of Warren (CW) and the Trumbull County Sanitary Engineers conducted sampling for bacteria, inorganic, radiological, synthetic organic, and volatile organic contaminants during 2022. Samples were collected for a total of 56 different contaminants, most of which were not detected in either water supply. The Ohio EPA requires monitoring for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of their data, though accurate, are more than one-year-old. Trumbull County also takes bacteria, chlorine, lead and copper samples throughout the Mosquito Creek distribution system as required by Ohio EPA.

### **PFAS SAMPLING**

In 2020, The City of Warren Public Water System (our Wholesaler) was sampled as part of the State of Ohio's Drinking Water Per- and Polyfluoroalkyl Substances (PFAS) Sampling Initiative. Results from this sampling indicated PFAS were **NOT** detected in our drinking water. For more information about PFAS, and to view our latest results, please visit [pfas.ohio.gov](https://pfas.ohio.gov).

### **PUBLIC PARTICIPATION**

The public is encouraged to voice concerns, and learn of decisions regarding their drinking water during weekly meetings of The Trumbull County Board of Commissioners. Meetings are held each Wednesday at 10:30 A.M. in the Commissioner's Hearing Room, on the fifth floor of the County Administration Building at 160 High St. NW, Warren, Ohio, 44481. Occasional changes in meeting location, date or time do occur; please call (330) 675-2451 to confirm. Specific questions may also be directed to Gary Newbrough, Deputy Sanitary Engineer, at (330) 675-7753.

### **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.

### **HEALTH EFFECTS LANGUAGE FOR CHLORINE CONTACT TIME VIOLATION**

The United States Environmental Protection Agency (USEPA) sets drinking water standards and have determined that the presence of microbiological contaminants is a health concern at certain levels of exposure. If water is inadequately treated, microbiological contaminants in that water may cause disease. Disease symptoms may include diarrhea, cramps, nausea, and possibly jaundice, and any associated headaches and fatigue. These symptoms, however, are not just associated with disease-causing organisms in drinking water. USEPA has set enforceable requirements for treating drinking water to reduce the risk of these adverse health effects. Treatment such as filtering and disinfecting the water removes or destroys microbiological contaminants. Drinking water, which is treated to meet USEPA requirements, is associated with little to none of this risk and should be considered safe.

### **OHIO METER TAMPERING LAW**

In accordance with Sections 4933.18, 19, & 99 of the Ohio Revised Code, Trumbull County is required to notify customers annually of the Ohio Meter Tampering Law.

- 1.) Tampering is defined as interfering with, damaging or bypassing a meter or service equipment to reduce the amount of water consumption registered on the meter.
- 2.) No person shall reconnect a water meter, conduit, or attachment that has been disconnected by a utility without the consent of the utility.

Violators may be sentenced to a maximum of five years in jail, and/or fined up to \$2500. In addition, violators must pay for the value of the water used and the cost of repairs or replacement of equipment.

## **BACKFLOW PREVENTION TIPS**

### **Educational Information to help you help us keep our drinking water safe!**

#### **Why be concerned?**

- ALL cross-connections pose a potential health risk.
- Backflow can be a health hazard for your family or other consumers if contaminated water enters your water supply plumbing system and is used for drinking, cooking or bathing.  
  
Chemical burns, fires, explosions, poisonings, illness and death have all been caused by backflow through cross-connections.
- Backflow occurs more often than you think.
- You are legally responsible for protecting your water supply plumbing from backflow that may contaminate drinking water, either your own or someone else's. This includes complying with the plumbing code and not creating cross-connections.

#### **What can I do?**

- Be aware of and eliminate cross-connections.
- Maintain air gaps. Do not submerge hoses or place them where they could become submerged.
- Use hose bib vacuum breakers on fixtures (hose connections in the basement, laundry room and outside.)
- Install approved, testable backflow preventers on lawn irrigation systems.
- Do not create a connection between an auxiliary water system (well, cistern, body of water) and the water supply plumbing.

#### **What are some common backflow hazards that threaten the homeowner and other consumers?**

- Hose connections to chemical solution aspirators to feed lawn and shrub herbicides, pesticides or fertilizers.
- Lawn irrigation systems.
- Chemically treated heating systems.
- Hose connections to a water outlet or laundry tub.
- Swimming pools, hot tubs, spas.
- Private and/or non-potable water supplies located on the property.
- Water-operated sump pump devices.
- Feed lots/livestock holding areas or barnyards fed through pipes or hoses from our water supply plumbing.

#### **What are examples of cross-connection and backflow scenarios?**

- Soapy water or other cleaning compounds back siphon into the water supply plumbing through a faucet or hose submerged in a bucket or laundry basin.
- Pool water back siphons into the water supply through a hose submerged in a swimming pool.
- Fertilizers/pesticides back siphon into the water supply plumbing through a garden hose attached to a fertilizer/pesticide sprayer.
- Chemicals/pesticides and animal feces drawn into the water supply plumbing from a lawn irrigation system with submerged nozzles.
- Bacteria/chemicals/additives in a boiler system back siphon into the water supply plumbing.
- Unsafe water pumped from a private well applies backpressure and contaminates the public water supply through a connection between the private well discharge and the potable water supply plumbing.



## KEY TO TABLES

**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, when exceeded, triggers treatment or other requirements which a water system must follow.

**ppb:** parts per billion, or 1 part in a billion parts.

**ppm:** parts per million, or 1 part in a million parts.

**ug/l:** micrograms per liter: or parts per billion, or 1 part in a billion parts.

**mg/l:** milligrams per liter: or parts per million

**nd** = not detected at testing limits

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

**"<"** This is a mathematical symbol that means "less than" and **">"** is a symbol that means "greater than".

**TTHMs:** the disinfection process of water treatment creates 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 systems, and may have an increased risk of getting cancer.

**HAA5: Haloacetic Acids (5):** Contaminant group whose combined MCL is 60 ug/l and is calculated as the sum of the concentrations of the following five acids. Dibromo-acetic, Dichloro-acetic, Monobromo-acetic, Monochloro-acetic, and Trichloro-acetic based on a (RAA) Running Annual Average.

**TOC: Total Organic Carbon:** The value reported under "Level Found" for Total Organic Carbon is the lowest ratio between percentage of TOC actually removed to the percentage of TOC required to be removed. A value greater than one (1) indicates that the water system is in compliance with TOC removal requirements. A value less than one (1) indicates a violation of the TOC removal requirements.

**Nephelometric Turbidity Unit (NTU):** Nephelometric Turbidity Unit is a measure of the clarity of the water. Turbidity in excess of 5 NTU is noticeable by the average person.

**SHOULD YOU HAVE QUESTIONS OR CONCERNS REGARDING THIS REPORT, DISTRIBUTION, SERVICE, PRESSURE, LEAD AND COPPER SAMPLING RESULTS OR DISCOLORED WATER, CONTACT Gary Newbrough, Sanitary Engineer @ 330-675-7753.**

WATER QUALITY TABLE FOR 2022

WATER CONTAMINANTS		UNIT	MCLG	MCL	LEVEL FOUND	RANGE OF DETECTION	SAMPLE YEAR	VIOLATION	TYPICAL SOURCE OF CONTAMINANT
THE FOLLOWING CONTAMINANTS ARE REPORTED BY OUR WHOLESALER: THE CITY OF WARREN (CW)									
Fluoride	ppm	4	4	1.01	0.80-1.01	2022 CW	NO	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories	
Nitrate	ppm	10	10	0.25	<0.10-0.25	2022 CW	NO	Runoff from fertilizer use; Leaching from septic tanks; Erosion of natural deposits	
Barium	ppm	2	2	0.13	NA	2022 CW	NO	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits	
Turbidity (1)	ntu	NA	TT	0.11	0.02-0.11	2022 CW	NO	Soil Runoff	
Lowest monthly % meeting turbidity limits		NA	TT	100%	100%	2022 CW	NO	Soil Runoff	
Atrazine	ppb	2	2	0.081	NA	2022 CW	NO	Runoff from herbicide used on row crops	
TOC (2)	ppm	NA	TT	0.96	0.84-1.18	2022 CW	NO	Naturally present in the environment	
THE FOLLOWING CONTAMINANTS ARE REPORTED BY: TURNBULL COUNTY (TCSE)									
HAA-Halo Acetic Acid HAAS (3)	ppb	NA	NA	60	36.68 Avg	2022 TCSE	NO	By-product of drinking water chlorination	
Trihalo-methanes TTHMs (3)	ppb	NA	NA	80	64.23 Avg	2022 TCSE	NO	By-product of drinking water chlorination	
Lead (4A)	ppb	0	AL=15 ug/l	<5	<5	2020 TCSE	NO	Corrosion of household plumbing system	
Copper (4B)	ppm	1.3	AL=1.3 mg/l	0.0152	0.00-0.0507	2020 TCSE	NO	Corrosion of household plumbing system and leaching from wood preservatives	
Total Chlorine Chloramines	ppm	MRDLG=4	MRDLG=4	1.59 Avg	1.38-1.72	2022 TCSE	NO	Water additive used to control microbes	
Asbestos	MFL	7	7	0.062	0.062-0.062	2022 TCSE	NO	Decay of asbestos cement water mains; Erosion of natural deposits	
THE FOLLOWING WERE REPORTED BUT NOT REGULATED BY THE EPA									
PH					8.9 Avg	2022 CW	NO	Measure of the acidity or alkalinity of a solution	
HARDNESS	ppm				93 Avg	2022 CW	NO	Hardness is caused by compounds of calcium, magnesium, and a variety of other metals. For grains/gal, divide by 17.1	

WATER QUALITY TABLE FOOTNOTES

- (1) 100% of the samples tested were below the treatment technique level of 0.3 NTU. Turbidity is a measure of the cloudiness of the 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, City of Warren's highest recorded turbidity for the year 2022 was 0.11 NTU and (1A) the lowest monthly average of a month's readings was 0.02 NTU. We monitor it because it is a good indicator of the effectiveness of the filtration system.
- (2) The value reported under "Level Found" for Total Organic Carbon (TOC) is the lowest ratio between percentages of TOC actually removed to the percentage of TOC that would be required to be removed to meet the required range. A value of less than one indicates a violation of the TOC removal requirements. Turnbull County is not in violation for TOC because an alternate method (SUVA Value) was used to meet TOC requirements. All SUVA Values are within the required range.
- (3) 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.
- (4A) Zero of eleven samples were found to have levels in excess of the action level of 15 ug/l.
- (4B) Zero of eleven samples were found to have levels in excess of the action level of 1.3 mg/l.

Our 90th percentile values for Lead and Copper do not exceed the action levels, therefore, there are no actions being implemented at this time other than sharing this consumer notice

KEY TO TABLE

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- MCL = Maximum Contaminant Level: 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.
- MRDL = Maximum Residual Disinfectant Level: 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.
- MRDLG = Maximum Residual Disinfectant Level Goal: 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.
- AL = Action Level: The concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.
- PPM = Parts per Million or 1 part in a Billion parts
- UGAL = Micrograms per Liter or parts per Billion
- MFL = Milligrams per Liter or parts per Million
- BDL = Below Detection Limit
- TT = Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
- ND = Not detected at testing limits
- THMs = Trihalomethanes which are created by the disinfection process of water treatment.
- HAAS = Haloacetic Acids (5): Contaminant group whose combined MCL is 60 ug/l and is calculated as the sum of the concentrations of the following five acids: Dibromo-acetic, Dichloro-acetic, Monobromo-acetic, Monochloro-acetic, and Trichloro-acetic based on a (RAA) Running Annual Average.
- TOC = Total Organic Carbon
- < = Symbol meaning "Less than".
- > = Symbol meaning "Greater than".