



# ANNUAL WATER QUALITY REPORT

Reporting Year 2023



*Presented By*  
**City of Youngstown**



PWS ID#: 5002303



## Our Commitment

We are pleased to present to you this year's annual water quality report. This report is a snapshot of last year's water quality covering all testing performed between January 1 and December 31, 2023. Included are details about your source of water, what it contains, and how it compares to standards set by regulatory agencies. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water and providing you with this information because informed customers are our best allies.

## Source Water Assessment

For the purpose of source water assessments in Ohio, all surface waters are susceptible to contamination. By nature, surface waters are accessible and can be contaminated by chemicals and disease-causing organisms, which may rapidly arrive at the public drinking water intake with little warning or time to prepare.

A drinking water source assessment has been prepared for our water source. This is an assessment of the delineated area around our listed sources through which contaminants, if present, could migrate and reach our source water. It also includes an inventory of potential sources of contamination within the delineated area and a determination of the water supply's susceptibility to contamination by the identified potential sources.

According to the assessment, our water system had a high susceptibility rating. MVSD's drinking water source protection area is susceptible to runoff from row crop agriculture and animal feedlot operations, oil and gas wells, failing home and commercial septic systems, road/rail crossings, and new housing and commercial development that could raise runoff from roads and parking lots.

MVSD treats the water to meet drinking water supply quality standards, but no single treatment technique can address all potential contaminants. The potential for water quality impacts can further be decreased by measures to protect Meander Creek Reservoir and its watershed.

More detailed information is provided in MVSD's Drinking Water Source Assessment Report, which can be obtained by calling Jon Jamison at (330) 652-3614. The MVSD Meander Creek Reservoir Drinking Water Source Protection Plan is available at [meanderwater.org](http://meanderwater.org); select District Info and then Public Records.

## How do I participate in decisions concerning my drinking water?

Public participation and comments regarding water are encouraged at regular city council meetings, scheduled on the first and third Wednesday of every month at 5:30 p.m. on the sixth floor of Youngstown City Hall, 26 South Phelps Street. To request permission to address city council, please contact City Council Chambers at (330) 742-8708.

## Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. Environmental Protection Agency (EPA)/Centers for Disease Control and Prevention (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 at (800) 426-4791 or [water.epa.gov/drink/hotline](http://water.epa.gov/drink/hotline).



## Lead in 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. We are responsible for providing high-quality drinking water, but we 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 two 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 may be found at [epa.ohio.gov/ddagw](http://epa.ohio.gov/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 [epa.gov/safewater/lead](http://epa.gov/safewater/lead).

## QUESTIONS?

For technical water quality information, contact the Mahoning Valley Sanitary District (MVSD) at (330) 799-6315. For information regarding water distribution, pressure, discolored water, or lead and copper sampling, contact the Engineering office at 330 742 8765. This information is also available at [youngstownohio.gov/water](http://youngstownohio.gov/water), [https://youngstown.gov/water\\_lead](https://youngstown.gov/water_lead), <https://youngstown.gov#backflow> and <https://youngstownohio.gov/water#quality>.



## Q&A

### What type of container is best for storing water?

Consumer Reports has consistently advised that glass or bisphenol A (BPA)-free plastics such as polyethylene are the safest choices. To be on the safe side, do not use any container with markings on the recycle symbol showing 7PC (that's code for BPA). You could also consider using stainless steel or aluminum with BPA-free liners.

### How much emergency water should I keep?

Typically, one gallon per person per day is recommended. For a family of four, that would be 12 gallons for three days. Humans can survive without food for one month but can only survive one week without water.

### How long can I store drinking water?

The disinfectant in drinking water will eventually dissipate, even in a closed container. If that container housed bacteria prior to filling up with the tap water, the bacteria may continue to grow once the disinfectant has dissipated. Some experts believe that water can be stored up to six months before needing to be replaced. Refrigeration will help slow the bacterial growth.

### How long does it take a water supplier to produce one glass of treated drinking water?

It can take up to 45 minutes to produce a single glass of drinking water.

### How many community water systems are there in the U.S.?

About 53,000 public water systems across the United States process 34 billion gallons of water per day for home and commercial use. Eighty-five percent of the population is served by these systems.

### Which household activity wastes the most water?

Most people would say the majority of water use comes from showering or washing dishes; however, toilet flushing is by far the largest single use of water in a home (accounting for 40 percent of total water use). Toilets use about 4 to 6 gallons per flush, so consider an ultra-low-flow (ULF) toilet, which requires only 1.5 gallons.

## Your Water Supply

The MVSD public water system uses surface water drawn from the Meander Creek Reservoir. MVSD treats approximately 21 million gallons per day of raw water from Meander Creek Reservoir and pumps it to Youngstown, Niles, and McDonald. These communities distribute the water to residents and surrounding areas. Treatment includes chemical addition for softening, disinfection, fluoridation, taste and odor control, mixing, settling, filtration, and pumping.

Youngstown distributes approximately 16 million gallons per day through 750 miles of pipelines to residents of Youngstown, Austintown, Boardman, Canfield Township, and Liberty and sells bulk water to Mahoning County (Jackson and Milton Townships) and the Cities of Girard and Canfield.

## Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration 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 these contaminants does not necessarily indicate that the water poses a health risk.

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, in some cases radioactive material, and substances resulting from the presence of animals or from human activity. Substances 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, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may 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, urban stormwater runoff, and residential uses;

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and may also come from gas stations, urban stormwater runoff, and septic systems;

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

## Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule, and the water we deliver must meet specific health standards. Here, we only show those substances that were detected in our water (a complete list of all our analytical results is available upon request). Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels.

Note that we have a current, unconditioned license to operate our water system.

The state recommends monitoring for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

### REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
<b>Antimony</b> (ppb)	2022	6	6	<3.0 <sup>1</sup>	NA	No	Discharge from petroleum refineries; Fire retardants; Ceramics; Electronics; Solder
<b>Arsenic</b> (ppb)	2022	10	0	<3.0 <sup>1</sup>	NA	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
<b>Barium</b> (ppm)	2022	2	2	<10 <sup>1</sup>	NA	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
<b>Beryllium</b> (ppb)	2022	4	4	<0.5 <sup>1</sup>	NA	No	Discharge from metal refineries and coal-burning factories; Discharge from electrical, aerospace, and defense industries
<b>Cadmium</b> (ppb)	2022	5	5	<0.5 <sup>1</sup>	NA	No	Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from metal refineries; Runoff from waste batteries and paints
<b>Chlorine</b> (ppm)	2023	[4]	[4]	2.07	1.87–2.17	No	Water additive used to control microbes
<b>Chromium</b> (ppb)	2022	100	100	<10.0 <sup>1</sup>	NA	No	Discharge from steel and pulp mills; Erosion of natural deposits
<b>Cyanide</b> (ppb)	2022	200	200	<0.005 <sup>1</sup>	NA	No	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories
<b>Fluoride</b> (ppm)	2023	4	4	1.02	0.87–1.29	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
<b>Haloacetic Acids [HAAs]– Stage 2</b> (ppb)	2023	60	NA	28.7	18.5–42.7	No	By-product of drinking water disinfection
<b>Mercury [inorganic]</b> (ppb)	2022	2	2	<0.200 <sup>1</sup>	NA	No	Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills; Runoff from cropland
<b>Nitrate</b> (ppm)	2023	10	10	0.32	0.20–0.47	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
<b>Selenium</b> (ppb)	2022	50	50	<3.0 <sup>1</sup>	NA	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
<b>Thallium</b> (ppb)	2022	2	0.5	<1.0 <sup>1</sup>	NA	No	Leaching from ore-processing sites; Discharge from electronics, glass, and drug factories
<b>Total Organic Carbon [TOC]</b> (removal ratio)	2023	TT <sup>2</sup>	NA	1.61	1.40–1.90	No	Naturally present in the environment
<b>TTHMs [total trihalomethanes]– Stage 2</b> (ppb)	2023	80	NA	58.08	38.0–74.7	No	By-product of drinking water disinfection
<b>Turbidity</b> <sup>3</sup> (NTU)	2023	TT	NA	0.11	NA	No	Soil runoff
<b>Turbidity</b> (lowest monthly percent of samples meeting limit)	2023	TT = 95% of samples meet the limit	NA	100	NA	No	Soil runoff

### Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH %ILE)	RANGE LOW-HIGH	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
<b>Copper</b> (ppm)	2023	1.3	1.3	0.084 <sup>4</sup>	<0.01–0.48	0/120	No	Corrosion of household plumbing systems; Erosion of natural deposits
<b>Lead</b> (ppb)	2023	15	0	<5 <sup>5</sup>	<2–324	8/120	No	Lead service lines; Corrosion of household plumbing systems, including fittings and fixtures; Erosion of natural deposits

### SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
<b>Fluoride</b> (ppm)	2022	2.0	NA	0.997 <sup>1</sup>	NA	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories

### UNREGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
<b>Nickel</b> (ppb)	2022	<10.0 <sup>1</sup>	NA	Naturally occurring

<sup>1</sup>Results provided by MVSD.

<sup>2</sup>The value reported under Amount Detected for TOC is the lowest ratio between percentage of TOC actually removed and percentage of TOC required to be removed. A value of greater than 1 indicates that the water system is in compliance with TOC removal requirements. A value of less than 1 indicates a violation of the TOC removal requirements.

<sup>3</sup>Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system. All samples should be <1 NTU; 95% of them <0.3 NTU.

<sup>4</sup>90th-percentile totals for Rounds 1 and 2: Round 1 (January 1 - June 30) 98.1 ppm Round 2 (July 1 - December 31) 51.7 ppm. 0.084 is the full year 90TH & ILE combination of Sample Round 1 and 2.

<sup>5</sup>90th-percentile totals for Rounds 1 and 2: Round 1 (January 1 - June 30) <5.0 ppb Round 2 (July 1 - December 31) <2.0 ppb

## Definitions

**90th %ile:** The levels reported for lead and copper represent the 90th percentile of the total number of sites tested. The 90th percentile is equal to or greater than 90% of our lead and copper detections.

**AL (Action Level):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

**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.

**MCLG (Maximum Contaminant Level Goal):** 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.

**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 a 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.

**NA:** Not applicable.

**NTU (Nephelometric Turbidity Units):** Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

**ppb (parts per billion):** One part substance per billion parts water (or micrograms per liter).

**ppm (parts per million):** One part substance per million parts water (or milligrams per liter).

**removal ratio:** A ratio between the percentage of a substance actually removed to the percentage of the substance required to be removed.

**SMCL (Secondary Maximum Contaminant Level):** These standards are developed to protect aesthetic qualities of drinking water and are not health based.

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

## PFAS Sampling Initiative

Per- and polyfluoroalkyl substances (PFAS) are a group of human-made chemicals applied to many industrial, commercial, and consumer products to make them waterproof, stain-resistant, or nonstick. PFAS are also used in products like cosmetics, fast food packaging, and a type of firefighting foam called aqueous film forming foam (AFFF) used mainly on large spills of flammable liquids, such as jet fuel. PFAS are classified as contaminants of emerging concern, meaning that research into the harm they may cause to human health is still ongoing.

During the reporting year, our public water system was sampled as part of the State Drinking Water PFAS Sampling Initiative. Results from this sampling indicated PFAS were detected in our drinking water below the action level established by Ohio EPA. Follow-up monitoring is being conducted. For more information about PFAS and to view our latest results, please visit [pfas.ohio.gov](https://pfas.ohio.gov).

### DETECTIONS ABOVE MDL\* IN FIRST QUARTER 2023 UCMR5 SAMPLES

Perfluorobutanesulfonic Acid (PFBS)	1.4 (ppt)
Perfluorobutanonic Acid (PFBA)	3.7 (ppt)
Perfluoroheptanoic Acid (PFHpA)	1.0 (ppt)
Perfluorohexanesulfonic Acid (PFHxS)	4.8 (ppt)
Perfluorohexanoic Acid (PFHxA)	1.5 (ppt)
Perfluorooctanesulfonic Acid (PFOS)	13.2 (ppt)
Perfluorooctanoic Acid (PFOA)	1.9 (ppt)
Perfluoropentanonic Acid (PFPeA)	1.2 (ppt)

\*Minimum detection limit: 0.9 ppt

## Individual Lead Samples Exceeding AL

Lead and copper sampling is reported as Round 1, January to June 2023, and Round 2, July to December 2023. Each round has 100 individual samples for a total of 200 for 2023.

Of the 200 samples tested for lead, 9 were above the action level of 15 parts per billion; 6 in Round 1 and 3 in Round 2.

### SIX-MONTH LEAD AND COPPER SAMPLING

	ROUND 1, JANUARY-JUNE 2023	ROUND 2, JULY-DECEMBER 2023
LC207	32.8 (ppb)	
LC221	74.9 (ppb)	324 (ppb)
LC240	17.9 (ppb)	
LC242	23.1 (ppb)	
LC279	58.6 (ppb)	
LC346	83.0 (ppb)	
LC228		26.3 (ppb)
LC231		36.9 (ppb)