

ANNUAL WATER QUALITY REPORT

Reporting Year 2022



Presented By
City of Youngstown



Our Mission Continues

We are once again pleased to present our annual water quality report covering all testing performed between January 1 and December 31, 2022. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best-quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all our water users. Please remember that we are always available should you ever have any questions or concerns about your water.

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. 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 www.meanderwater.org/public-records.

“Thousands have lived without love, not one without water.”
—W.H. Auden

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 the State of Ohio to test for lead may be found at <http://www.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 at www.epa.gov/safewater/lead.

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. EPA/CDC (Centers for Disease Control and Prevention) 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 <http://water.epa.gov/drink/hotline>.



How is Your Drinking Water Treated?

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 pipeline to residents of Youngstown, Austintown, Boardman, Canfield Township, and Liberty and sells bulk to Mineral Ridge, Mahoning County (Jackson and Milton Townships), and the Cities of Girard and Canfield.

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 chief engineer at (330) 743-5338. This information is also available at www.youngstownohio.gov/water.

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.

Lead and Copper Control Requirements Violation

On December 22, 2022, the Youngstown public water system was issued a violation from the Ohio EPA (Violation of Ohio Administration Code Rule 3745-81-84(C)) for failure to collect a lead service line sample within 72 hours of conducting a partial lead service line replacement. Upon receiving the sampling violation, we updated our 72-hour sampling process to the Ohio EPA and are conducting 72-hour sampling when a portion of a lead service line is replaced and calls for sampling. At no time did the incident pose a threat to public health and safety. We have already taken steps to ensure that adequate recordkeeping will be performed so that this oversight will not be repeated.

Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's disease should consult their personal doctor.

Individual Lead Samples Exceeding AL

Lead and copper sampling is reported as Round 1, January to June 2022, and Round 2, July to December 2022. Each round has 100 individual samples for a total of 200 for 2022.

Of the 200 samples tested, 8 samples contained lead above the action level of 15 micrograms per liter, or parts per billion (ppb). Five out of 100 were over the action level for the first half of sampling, and 3 out of 100 were over the action level for the second half of sampling.

SIX-MONTH LEAD AND COPPER SAMPLING		
	ROUND 1, JANUARY-JUNE 2022	ROUND 2, JULY-DECEMBER 2022
LC212	56.7 (ppg)	
LC221	609 (ppg)	355 (ppb)
LC231	28.4 (ppg)	63.8 (ppb)
LC267	18.8 (ppg)	26.6 (ppb)
LC271	32.5 (ppg)	

How do I participate in decisions concerning my drinking water?

Public participation and comments regarding water are encouraged at regular city council meetings 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 the city council, please contact City Council Chambers at (330) 742-8708.

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
Chlorine (ppm)	2022	[4]	[4]	1.86	1.71–2.11	No	Water additive used to control microbes
Fluoride (ppm)	2022	4	4	1.02 ¹	0.86–1.24 ¹	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs]–Stage 2 ² (ppb)	2022	60	NA	30.73	21.1–37.9	No	By-product of drinking water disinfection
Nitrate (ppm)	2022	10	10	0.24 ¹	<0.10–0.44 ¹	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Total Organic Carbon [TOC] (removal ratio)	2022	TT ³	NA	1.62 ¹	1.62–1.79 ¹	No	Naturally present in the environment
TTHMs [total trihalomethanes]–Stage 2 ² (ppb)	2022	80	NA	53.18	37.2–69.2	No	By-product of drinking water disinfection
Turbidity ⁴ (NTU)	2022	TT	NA	0.09 ¹	0.04–0.09 ¹	No	Soil runoff
Turbidity (lowest monthly percent of samples meeting limit)	2022	TT = 95% of samples meet the limit	NA	100 ¹	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
Copper ⁵ (ppm)	2022	1.3	1.3	0.109	<0.01–0.184	0/100	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead ⁶ (ppb)	2022	15	0	<5	<5–609	5/100	No	Corrosion of household plumbing systems; Erosion of natural deposits

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.

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

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.

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

UNREGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
1-Butanol (ppb)	2019	<2.0	NA	NA
2-Methoxyethanol (ppb)	2019	<0.4	NA	NA
2-Propen-1-ol (ppb)	2019	<0.5	NA	NA
alpha-Hexachlorocyclohexane (ppm)	2019	<0.01	NA	NA
Anatoxin-a (ppb)	2019	<0.03	NA	NA
Butylated Hydroxyl Anisole (ppb)	2019	<0.03	NA	NA
Chlorpyrifos (ppb)	2019	<0.03	NA	NA
Cylindrospermopsin (ppb)	2019	<0.09	NA	NA
Dimethipin (ppb)	2019	<0.2	NA	NA
Ethoprop (ppb)	2019	<0.03	NA	NA
Germanium (ppb)	2019	<0.3	NA	NA
HAA6Br (ppb)	2019	5.61	2.03–9.98	NA
HAA9 (ppb)	2019	30.06	7.71–46.1	NA
Manganese (ppb)	2019	1.73	ND–3.06	NA
Microcystin, Total (ppb)	2019	<0.3	NA	NA
o-Toluidine (ppb)	2019	<0.007	NA	NA
Oxyfluorfen (ppb)	2019	<0.05	NA	NA
Permethrins, Total (ppb)	2019	<0.04	NA	NA
Profenofos (ppm)	2019	<0.3	NA	NA
Quinoline (ppb)	2019	0.02	ND–0.02	NA
Tebuconazole (ppb)	2019	<0.2	NA	NA
Tribufos (ppb)	2019	<0.07	NA	NA

¹Results provided by MVSD.

²Disinfection by-products are the result of providing continuous disinfection of your drinking water and form when disinfectants combine with organic matter naturally occurring in the source water. They are grouped into two categories: TTHMs and HAAs. The U.S. EPA sets standards for controlling the levels of disinfectants and disinfectant by-products in drinking water, including TTHMs and HAAs.

³The value reported under Amount Detected for TOC is the lowest ratio of percentage of TOC actually removed to 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.

⁴Turbidity is a measure of the cloudiness of water and an indication of the effectiveness of the filtration system. The turbidity limit set by the U.S. EPA is 0.3 NTU in 95% of the daily samples and shall not exceed 5 NTU at any time.

⁵Results are from Round 1, January to June 2022. For Round 2, July to December 2022, the 90th-percentile value was 0.065 ppm, with a range of <0.01 to 0.223 ppm. No sites were above the AL, and there were no violations.

⁶Results are from Round 1, January to June 2022. For Round 2, July to December 2022, the 90th-percentile value was <5 ppb, with a range of <5 to 355 ppb. Five sites were above the AL, and there were no violations.

Q&A

What type of container is best for storing water?

Consumer Reports has consistently advised that glass or 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

MVSD uses surface water drawn from the Meander Creek Reservoir.

