

ANNUAL WATER QUALITY REPORT

REPORTING YEAR 2019



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, 2019. 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.



How do I participate in decisions concerning my drinking water?

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

Your Water Supply

The MVSD public water system uses surface water drawn from the Meander Creek Reservoir. 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.



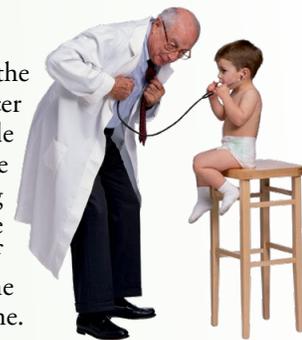
MVSD's drinking water source protection area is susceptible to runoff from row crop agriculture and animal feedlot operations, oil and gas wells, failing home and commercial septic systems, road/rail crossings, and new housing and commercial development that could raise runoff from roads and parking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

The MVSD water system and the City of Youngstown treat 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 the MVSD's Drinking Water Source Assessment Report, which can be obtained by calling John Nemet at (330) 652-3614. The MVSD Meander Creek Reservoir Drinking Water Source Protection Plan is available at meanderwater.org by clicking on the links for District Info and Public Records.

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

Source Water Assessment

A Source Water Assessment Plan (SWAP) is now available from the MVSD office. This plan 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 SWAP, our water system had a susceptibility rating of medium. If you would like to review the SWAP, please feel free to contact MVSD during regular office hours.

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.

“ We remain vigilant in delivering the best-quality drinking water ”

Benefits of Chlorination

Disinfection, a chemical process used to control disease-causing microorganisms by killing or inactivating them, is unquestionably the most important step in drinking water treatment. By far, the most common method of disinfection in North America is chlorination.

Before communities began routinely treating drinking water with chlorine (starting with Chicago and Jersey City in 1908), cholera, typhoid fever, dysentery, and hepatitis A killed thousands of U.S. residents annually. Drinking water chlorination and filtration have helped to virtually eliminate these diseases in the U.S. Significant strides in public health are directly linked to the adoption of drinking water chlorination. In fact, the filtration of drinking water plus the use of chlorine is probably the most significant public health advancement in human history.

How chlorination works:

Potent Germicide Reduction in the level of many disease-causing microorganisms in drinking water to almost immeasurable levels.

Taste and Odor Reduction of many disagreeable tastes and odors like foul-smelling algae secretions, sulfides, and decaying vegetation.

Biological Growth Elimination of slime bacteria, molds, and algae that commonly grow in water supply reservoirs, on the walls of water mains, and in storage tanks.

Chemical Removal of hydrogen sulfide (which has a rotten egg odor), ammonia, and other nitrogenous compounds that have unpleasant tastes and hinder disinfection. It also helps to remove iron and manganese from raw water.

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's Office at (330) 743-5338. This information is also available at our website, www.youngstownohio.gov/water.

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 tested substances below their respective maximum allowed levels.

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.

We participated in the fourth stage of the U.S. EPA's Unregulated Contaminant Monitoring Rule (UCMR4) program by performing additional tests on our drinking water. UCMR4 sampling benefits the environment and public health by providing the U.S. EPA with data on the occurrence of contaminants suspected to be in drinking water in order to determine if U.S. EPA needs to introduce new regulatory standards to improve drinking water quality. Unregulated contaminant monitoring data are available to the public, so please feel free to contact us if you are interested in obtaining that information. If you would like more information on the U.S. EPA's Unregulated Contaminant Monitoring Rule, please call the Safe Drinking Water Hotline at (800) 426-4791.

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

REGULATED SUBSTANCES								
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE	
Chlorine (ppm)	2019	[4]	[4]	1.92	1.55–2.43	No	Water additive used to control microbes	
Fluoride ¹ (ppm)	2019	4	4	1.01	0.79–1.11	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories	
Haloacetic Acids [HAAs] ² (ppb)	2019	60	NA	26.25	12.9–34.6	No	By-product of drinking water disinfection	
Nitrate ¹ (ppm)	2019	10	10	0.440	<0.1–0.440	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits	
Total Organic Carbon [TOC] ^{1,7} (ppm)	2019	TT	NA	1.7	1.6–2.1	No	Naturally present in the environment	
TTHMs [Total Trihalomethanes] ² (ppb)	2019	80 ⁶	NA	54.68	37.7–80.4	No	By-product of drinking water disinfection	
Turbidity ^{1,3} (NTU)	2019	TT	NA	0.17	0.04–0.17	No	Soil runoff	
Turbidity (Lowest monthly percent of samples meeting limit)	2019	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
Copper ⁴ (ppm)	2019	1.3	1.3	0.0489	<0.01–0.0489	0/50	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead ⁵ (ppb)	2019	15	0	<5	NA	0/50	No	Corrosion of household plumbing systems; Erosion of natural deposits



UNREGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH
1-Butanol (ppb)	2019	<2.0	NA
2-Methoxyethanol (ppb)	2019	<0.4	NA
2-Propen-1-ol (ppb)	2019	<0.5	NA
alpha-Hexachlorocyclohexane (ppm)	2019	<0.01	NA
Anatoxin-a (ppb)	2019	<0.03	NA
Butylated Hydroxyl Anisole (ppb)	2019	<0.03	NA
Chlorpyrifos (ppb)	2019	<0.03	NA
Cylindrospermopsin (ppb)	2019	<0.09	NA
Dimethipin (ppb)	2019	<0.2	NA
Ethoprop (ppb)	2019	<0.03	NA
Germanium (ppb)	2019	<0.3	NA
HAA5 (ppb)	2019	24.92	3.26–40.6
HAA6Br (ppb)	2019	5.61	2.03–9.98
HAA9 (ppb)	2019	30.06	7.71–46.1
Manganese (ppb)	2019	1.73	ND–3.06
Microcystin, Total (ppb)	2019	<0.3	NA
o-Toluidine (ppb)	2019	<0.007	NA
Oxyfluorfen (ppb)	2019	<0.05	NA
Permethrins, Total (ppb)	2019	<0.04	NA
Profenofos (ppm)	2019	<0.3	NA
Quinoline (ppb)	2019	0.02	0–<0.02
Tebuconazole (ppb)	2019	<0.2	NA
Tribufos (ppb)	2019	<0.07	NA

¹ Results were provided by Mahoning Valley Sanitary District.

² Disinfection 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. Disinfection by-products are grouped into two categories: total trihalomethanes (TTHMs) and haloacetic acids (HAAs). U.S. EPA sets standards for controlling the levels of disinfectants and disinfectant by-products in drinking water, including both TTHMs and HAAs.

³ Turbidity is a measure of the cloudiness of water and is an indication of the effectiveness of the filtration system. The turbidity limit set by the U.S. EPA is 0.3 NTU in 95 percent of the daily samples and shall not exceed 5 NTU at any time.

⁴ The 1.3 ppm (milligrams per liter) listed in the AL column is an action level. Action levels are the thresholds of sampling at the 90th percentile.

⁵ The 15 ppb (micrograms per liter) listed in the AL column is an action level. Action levels are the thresholds of sampling at the 90th percentile.

⁶ 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.

⁷ The value reported under Amount Detected for TOC is the lowest ratio of the percentage of TOC actually removed to the percentage of TOC required to be removed. A value of greater than one indicates that the water system is in compliance with TOC removal requirements. A value of less than one indicates a violation of the TOC removal requirements.

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 percent 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.

LRAA (Locational Running Annual Average): The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters. Amount Detected values for TTHMs and HAAs are reported as the highest LRAAs.

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.

Reporting Error

As a result of oversight, the Youngstown City Public Water System received a notice of violation for failure to comply with the Consumer Confidence Report requirements. The Youngstown City PWS failed to list the 2018 detection of chlorine in the table of detected contaminants. The 90th-percentile calculation for copper in the 2018 CCR was also incorrect. Once we became aware of these inaccuracies, we updated the 2018 Consumer Confidence Report with the correct information. The parameters for chlorine and copper were both well below action levels.

At no time did this incident pose a threat to public health and safety, nor did it have any impact on the high-quality drinking water provided to our customers. We have already taken the steps to ensure that adequate reporting will be performed in the future so that this oversight will not be repeated.

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.

