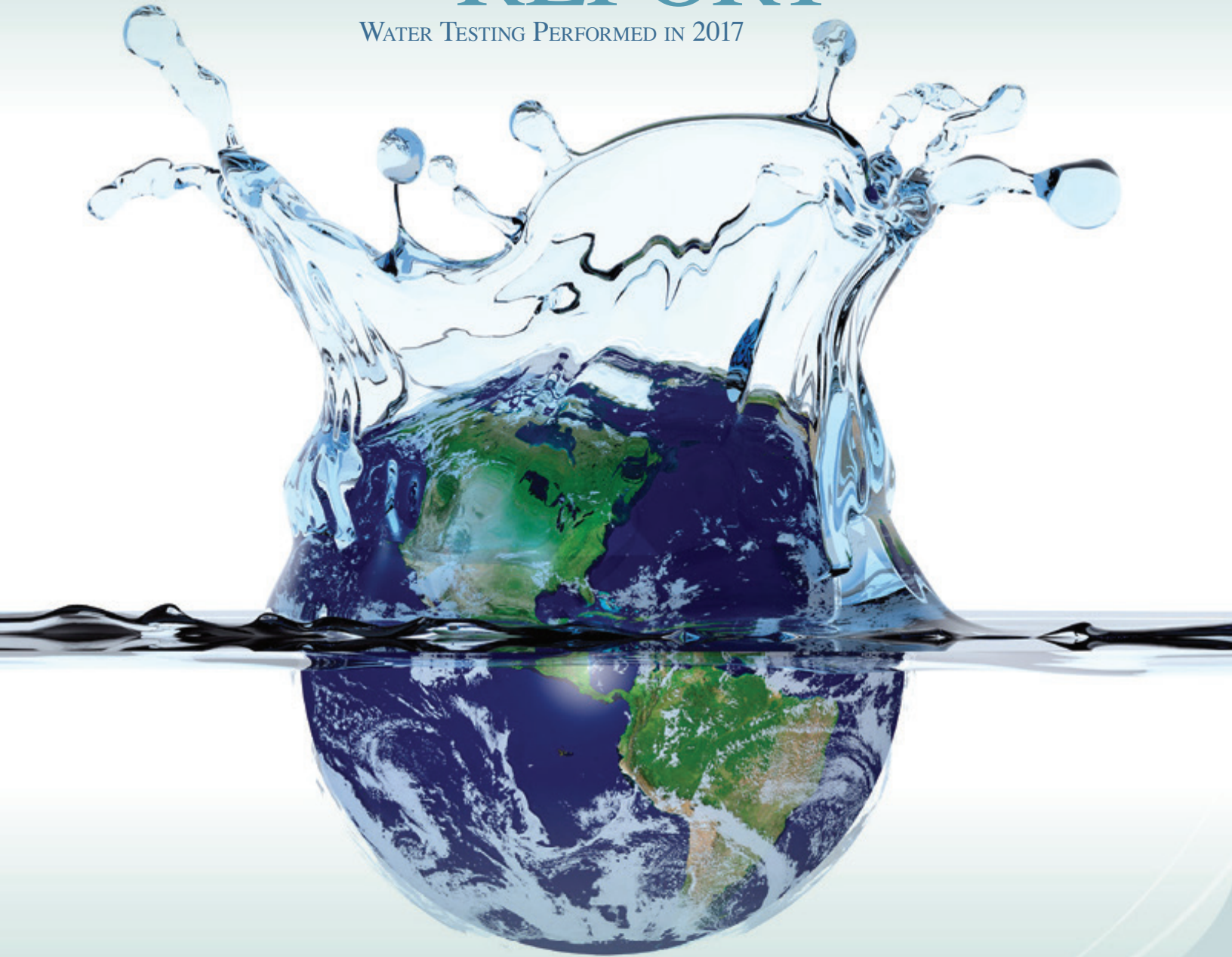


ANNUAL WATER QUALITY REPORT

WATER TESTING PERFORMED IN 2017



Presented By
City of Youngstown

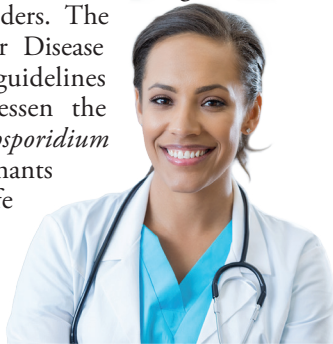
Continuing Our Commitment

The City of Youngstown has prepared the following report to provide information to you, the consumer, on the quality of our drinking water. This report is required as part of the Safe Drinking Water Act Reauthorization of 1996.

The City of Youngstown obtains its drinking water from the Meander Reservoir. The Meander Reservoir is operated by the Mahoning Valley Sanitary District (MVSD) and is considered a surface water source, which requires treatment prior to use as drinking water. The City of Youngstown purchases a finished product from the MVSD and operates a water distribution system only. The City of Youngstown is licensed to operate as a public water system as ID OH5002303.

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>.



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.

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.

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 Wednesdays of every month at 5:30 p.m. on the sixth floor of Youngstown City Hall at 26 S. Phelps St. To request permission to address City Council, please contact City Council Chambers at (330) 742-8708.

How is Your Drinking Water Treated?

The Mahoning Valley Sanitary District 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 Twp., and Liberty, and sells bulk to Mineral Ridge, Mahoning County (Jackson & Milton Townships), and the Cities of Girard and Canfield.



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 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 AT (800) 426-4791.

Your Water Supply

The Mahoning Valley Sanitary District 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.

The Mahoning Valley Sanitary District'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 Mahoning Valley Sanitary District 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 Mahoning Valley Sanitary District'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 the meanderwater.org website by clicking on the link for Administration Public Records.

Water treatment is a complex, time-consuming process.

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

Water Conservation

You can play a role in conserving water and saving yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water. Here are a few tips:

- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you save more than 30,000 gallons a year.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water using appliances. Then check the meter after 15 minutes. If it moved, you have a leak.

What's Your Water Footprint?

You may have some understanding about your carbon footprint, but how much do you know about your water footprint? The water footprint of an individual, community, or business is defined as the total volume of freshwater that is used to produce the goods and services that are consumed by the individual or community or produced by the business. For example, 11 gallons of water are needed to irrigate and wash the fruit in one half-gallon container of orange juice. Thirty-seven gallons of water are used to grow, produce, package, and ship the beans in that morning cup of coffee. Two hundred and sixty-four gallons of water are required to produce one quart of milk, and 4,200 gallons of water are required to produce two pounds of beef.



According to the U.S. EPA, the average American uses over 180 gallons of water daily. In fact, in the developed world, one flush of a toilet uses as much water as the average person in the developing world allocates for an entire day's cooking, washing, cleaning, and drinking. The annual American per capita

water footprint is about 8,000 cubic feet; twice the global per capita average. With water use increasing six-fold in the past century, our demands for freshwater are rapidly outstripping what the planet can replenish.

To check out your own water footprint, go to <http://goo.gl/QMoIXT>

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 could be stored up to six months before needing to be replaced. Refrigeration will help slow the bacterial growth.



BY THE NUMBERS

The number of gallons of water produced daily by public water systems in the U.S. **34 BILLION**

1 MILLION The number of miles of drinking water distribution mains in the U.S.

The amount of money spent annually on maintaining the public water infrastructure in the U.S. **135 BILLION**

300 MILLION The number of Americans who receive water from a public water system.

The age in years of the world's oldest water found in a mine at a depth of nearly two miles. **2 BILLION**

151 THOUSAND The number of active public water systems in the U.S.

The number of highly trained and licensed water professionals serving in the U.S. **199 THOUSAND**

93 The number of federally regulated contaminants tested for in drinking water.

Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule. The information in the data tables shows only those substances that were detected between January 1 and December 31, 2017. Remember that detecting a substance does not necessarily mean the water is unsafe to drink; our goal is to keep all detects 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.

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
Barium (ppm)	2017	2	2	0.01	0.01–0.01	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride (ppm)	2017	4	4	1.15	0.84–1.15	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAA] ¹ (ppb)	2017	60	NA	21.21 LRAA	12.50–28.30	No	By-product of drinking water disinfection
Nitrate (ppm)	2017	10	10	0.532	0.1–0.532	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes] ¹ (ppb)	2017	80	NA	44.99 LRAA	33.8–64.3	No	By-product of drinking water disinfection
Total Organic Carbon [TOC] ² (ppm)	2017	TT	NA	2.0	1.4–2.0	No	Naturally present in the environment
Turbidity ³ (NTU)	2017	TT	NA	0.10	0.05–0.10	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2017	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%TILE)	RANGE LOW-HIGH	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper ⁴ (ppm)	2017	1.3	1.3	0.041	ND–0.0524	0/50	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead ⁵ (ppb)	2017	15	0	ND	ND–37.6	1/50 ⁶	No	Corrosion of household plumbing systems; Erosion of natural deposits

¹ 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 (TTHM) and Haloacetic Acids (HAA5). The U.S. EPA has set standards for controlling the levels of disinfectants and disinfectant by-products in the drinking water, including both THMs and HAAs.

² The value reported under Amount Detected for TOC is the lowest ratio between 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.

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 EPA is 0.3 NTU in 95% of the daily samples and shall not exceed 5 NTU at any time.

⁴ The 1.3 ppm (milligrams per liter) listed under the heading of maximum contaminant level (MCL) for copper is an action level. Action levels are the thresholds of sampling at the 90th percentile.

⁵ The 15 ppb (micrograms per liter) listed under the heading of maximum contaminant level (MCL) for lead are action levels. Action levels are the thresholds of sampling at the 90th percentile.

⁶ There was 1 sample that was detected above the AL at 37.6 ppb.

Definitions

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.