

A close-up photograph of clear water being poured from a glass pitcher into a clear glass. The water is captured mid-pour, creating a dynamic splash and bubbles. The background is a blurred wooden surface.

ANNUAL WATER QUALITY REPORT

REPORTING YEAR 2018



Presented By
**Medina County
Northwest Water District**



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, 2018. 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. For more information about this report, or for any questions relating to your drinking water, please call David Ling, our Water Operations Specialist, at (330) 723-9585.

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. The Medina County Northwest Water System is 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. 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.



Backflow Prevention Program

The Medina County Sanitary Engineering Department Backflow Prevention Program requires that all backflow prevention devices be in proper operating condition and tested annually by persons certified by the State of Ohio Department of Commerce. Our backflow prevention program requirements are included in our rules and regulations. These rules and regulations and our backflow maintenance form may be downloaded from www.sanitaryengineer.co.medina.oh.us. If you have any questions regarding backflow prevention or our program, contact our main office at (330) 723-9585 or email mcse_backflow@medinaco.org.

Where Does My Water Come From?

Medina County Northwest Water System obtains all of its water from Lake Erie. Our water is treated by Avon Lake Regional Water and purchased through a consortium with Avon Lake Regional Water, Rural Lorain County Water Authority, Medina County, and the City of Medina. Medina County also maintains two emergency connections with the City of Cleveland Division of Water system in Brunswick, Ohio: one on Boston Road and one on Pearl Road. These were not used during 2018.

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

Important Health Information

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.

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>.



Source Water Information

Avon Lake Regional Water receives its drinking water from Lake Erie. In Avon Lake, there are two separate intakes to ensure our ability to pump from this virtually endless source of quality raw water.

Avon Lake Regional Water treats water to meet U.S. EPA drinking water quality standards. A Source Water Assessment Report was prepared for Avon Lake Regional Water by Ohio EPA. A copy of the Drinking Water Source Assessment can be obtained by calling the Medina County sanitary engineers at (330) 723-9585.

Excerpt from Drinking Water Source Assessment for the City of Avon Lake:

6.0 SUSCEPTIBILITY ANALYSIS

For the purposes of source water assessments, all surface waters are considered to be susceptible to contamination. By their nature surface waters are accessible and can be readily contaminated by chemicals and pathogens with relatively short travel times from source to the intake. Based on the information compiled for this assessment, the Avon Lake Water System drinking water source protection area (CAZ) is susceptible to contamination from municipal waste water treatment discharges, industrial waste water discharges, air contamination deposition, combined sewer overflows, runoff from residential, agricultural and urban areas, oil and gas production and transportation, and accidental releases and spills from rail and vehicular traffic as well as from commercial shipping operations and recreational boating.

It is important to note that this assessment is based on available data, and therefore may not reflect current conditions in all cases. Water quality, land uses and other activities that are potential sources of contamination may change with time. While the source water for the City of Avon Lake is considered susceptible to contamination, historically, the Avon Lake Public Water System has effectively treated this source water to meet drinking water quality standards.

Community Participation

The Medina County Board of Commissioners holds regularly scheduled meetings every Tuesday at 9:30 a.m. at the County Administration Building, 144 North Broadway, Medina. Information regarding these meetings can be found on the Medina County Meetings and Events Calendar at <http://www.co.medina.oh.us/calendar.html>. The public may also address any drinking water concerns to the Medina County Sanitary Engineering Department Superintendent of Treatment, David Bazilevich, at (330) 723-9585.

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.

Table Talk

Get the most out of the Testing Results data table with this simple suggestion. In less than a minute, you will know all there is to know about your water:

For each substance listed, compare the value in the Amount Detected column against the value in the MCL (or AL, SMCL) column. If the Amount Detected value is smaller, your water meets the health and safety standards set for the substance.

Other Table Information Worth Noting

Verify that there were no violations of the state and/or federal standards in the Violation column. If there was a violation, you will see a detailed description of the event in this report.

If there is an ND or a less-than symbol (<), that means that the substance was not detected (i.e., below the detectable limits of the testing equipment).

The Range column displays the lowest and highest sample readings. If there is an NA showing, that means only a single sample was taken to test for the substance (assuming there is a reported value in the Amount Detected column).

If there is sufficient evidence to indicate from where the substance originates, it will be listed under Typical Source.



BY THE NUMBERS

The number of Olympic-sized swimming pools it would take to fill up all of Earth's water.

800
TRILLION

1¢

The average cost for about 5 gallons of water supplied to a home in the U.S.

The amount of Earth's water that is salty or otherwise undrinkable, or locked away and unavailable in ice caps and glaciers.

99%

50
GALLONS

The average daily number of gallons of total home water use for each person in the U.S.

The amount of Earth's surface that's covered by water.

71%

330
MILLION

The amount of water on Earth in cubic miles.

The amount of Earth's water that is available for all of humanity's needs.

1%

75%

The amount of the human brain that contains 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 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.

Please note that in 2018, Medina County had an unconditioned license issued by Ohio EPA to operate the Medina County Northwest Water System.

REGULATED SUBSTANCES

				Medina County Northwest Water District		Avon Lake Regional Water			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Barium (ppm)	2018	2	2	NA	NA	0.028 ¹	0.028–0.028 ¹	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine (ppm)	2018	[4]	[4]	1.16 ¹	0.84–1.35 ¹	NA	NA	No	Water additive used to control microbes
Fluoride (ppm)	2018	4	4	NA	NA	1.0	0.7–1.2	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAA] ² (ppb)	2018	60	NA	27.73	12.8–45.9	NA	NA	No	By-product of drinking water disinfection
Nitrate (ppm)	2018	10	10	NA	NA	1.4	0.1–1.4	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes] ² (ppb)	2018	80	NA	58.85	28–75.4	NA	NA	No	By-product of drinking water disinfection
Total Organic Carbon [TOC] ³ (removal ratio)	2018	TT	NA	NA	NA	1.11	1.11–1.72	No	Naturally present in the environment
Turbidity ⁴ (NTU)	2018	TT	NA	NA	NA	0.29	0.04–0.29	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2018	TT = 95% of samples meet the limit	NA	NA	NA	100	NA	No	Soil runoff

Tap water samples were collected for lead and copper analyses from sample sites throughout the community⁵

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH %ILE)	RANGE LOW-HIGH	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2018 (first half)	1.3	1.3	0.1806	ND–0.337	0/61	No	Corrosion of household plumbing systems; Erosion of natural deposits
Copper (ppm)	2018 (second half)	1.3	1.3	0.0712	ND–0.471	0/64	No	Corrosion of household plumbing systems; Erosion of natural deposits

¹ Highest compliance value based on a running annual average including results from 2017 and 2018.

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 (TTHM) and haloacetic acids (HAA5). U.S. EPA sets standards for controlling the levels of disinfectants and disinfectant by-products in drinking water, including TTHMs and HAA5s.

³ The value reported under Amount Detected for total organic carbon (TOC) is the lowest ratio of percentage of TOC actually removed to the percentage of TOC required to be removed. This removal ratio is calculated as the ratio between the actual TOC removal and the TOC rule removal requirements and other parameters. A value of at least 1 indicates that the water system is in compliance with TOC removal requirements.

⁴ Turbidity is a measure of the cloudiness of 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 the Avon Lake WTP highest recorded turbidity result for 2018 was 0.29 NTU and lowest monthly percentage of samples meeting the turbidity limits was 100%.

⁵ Medina County Northwest Water System tested for both Lead and Copper for the first and second six month periods of 2018. Lead was not detectable in any of the samples analyzed during the calendar year.

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.

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.