

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.

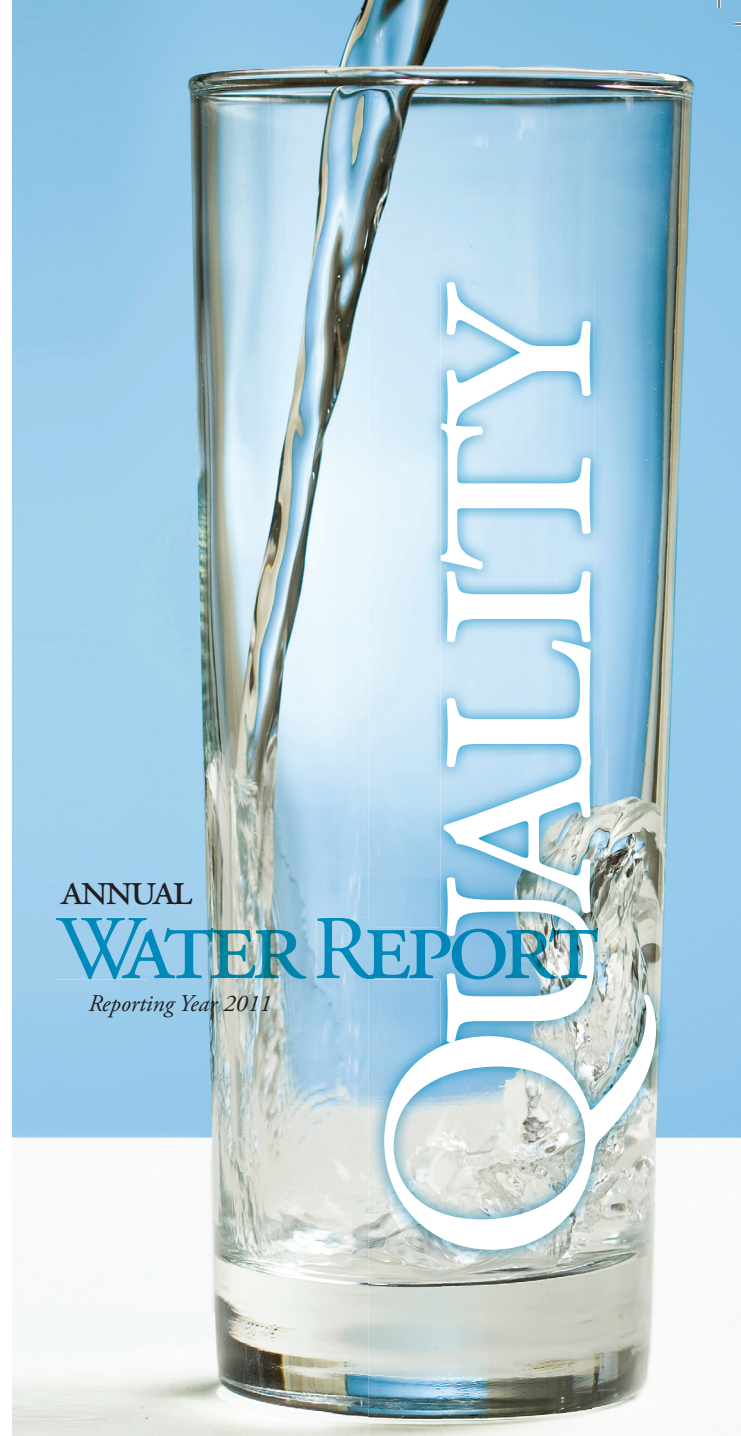
The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it can acquire naturally occurring minerals, in some cases, radioactive material, and substances 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.

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ANNUAL WATER REPORT

Reporting Year 2011

Presented By
Medina County Northwest Water District

PWS ID#: 5201903

Questions?

For more information about this report, or for any questions relating to your drinking water, please call Dave Ling, Water Distribution Systems Supervisor, at (330) 723-9585.

The Medina County Sanitary Engineering Department Backflow Prevention Program requires that all backflow prevention devices be in proper operating condition and be 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. Our Rules and Regulations, and Annual Backflow Device Maintenance Form, may be downloaded online from our Web site at <http://www.sanitaryengineer.com/medina.oh.us/downloads/downloads.html>.

If you have any question regarding backflow prevention or our backflow program, contact Dan Ingraham or Kellie Pinizzotto at our main office at (330) 723-9585.

TIL TAUGHT BY PAIN, MEN REALLY
KNOW NOT WHAT GOOD WATER
IS WORTH. -From Don Juan

The Medina County Board of Commissioners holds regularly scheduled meetings every Monday at 9:30 a.m. at the County Administration Building, 144 N. Broadway, Medina. Information regarding these meetings can be found on the Commissioners' Web site at <http://www.commiss/medina.oh.us/commiss/agenda.htm>. The public may also address any drinking water concerns to the Medina County Sanitary Engineers Superintendent of Treatment, Dave Bazilevich, at (330) 723-9585.

Community Participation

About Our Monitoring Violation

During the month of May 2011, the Medina County Northwest Water District failed to collect the required number of Total Coliform Bacteria samples as required by the Ohio EPA (39 samples collected in May, 40 samples per month required). A comprehensive monitoring plan has been implemented to ensure that all future sampling will be conducted as required by the Ohio EPA.

Source Water Assessment

In 2002, the Ohio EPA conducted a source water assessment for the Avon Lake Municipal Utilities. The plant uses surface water drawn from an intake in Lake Erie. For the purposes of source water assessments in Ohio, all surface waters are considered to be susceptible to contamination. Due to the vast size and dilution capabilities of Lake Erie, the Ohio EPA evaluated Avon Lake's contamination potential based on a critical assessment zone (CAZ), for which it was determined there was no direct source of pollution. The Ohio EPA further determined that undetected contamination would be minimized, due to Avon Lake's Emergency Operation Plan, and that no water quality violations have been recorded, thanks to Avon Lake's source water analysis.

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 Municipal Utilities, and is purchased through a consortium with Avon Lake, Rural Lorain County Water Authority, Medina County, and the City of Medina.

Information on the Internet

The U.S. EPA Office of Water (www.epa.gov/waterhome) and the Centers for Disease Control and Prevention (www.cdc.gov) Web sites provide a substantial amount of information on many issues relating to water resources, water conservation, and public health. Also, the Ohio Environmental Protection Agency has a Web site (www.epa.state.oh.us) that provides complete and current information on water issues in Ohio, including valuable information about our watershed.

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>.

Meeting the Challenge

We are once again proud to present our annual water quality report covering all testing performed between January 1 and December 31, 2011. 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 share with us your thoughts or concerns about the information in this report. After all, well-informed customers are our best allies.

Sampling Results

During the past year, Medina County and Avon Lake Municipal Utilities have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. The Ohio EPA allows us to monitor 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 Medina County has a current, unconditioned license issued by the Ohio EPA to operate the Northwest Water System.

REGULATED SUBSTANCES									
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	Avon Lake Municipal Utilities				Medina County Northwest Water System		VIOLATION	TYPICAL SOURCE
		MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH		
Barium ¹ (ppm)	2011	2	2	0.022	ND-0.026	NA	NA	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride (ppm)	2011	4	4	1.0	0.70-1.09	NA	NA	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAA] (ppb)	2011	60	NA	NA	NA	26.4	7.0-42.9	No	By-product of drinking water disinfection
Nickel ¹ (ppb)	2011	100	100	7.7	5.6-8.1	NA	NA	No	Erosion of natural deposits; Discharge from electroplating, stainless steel and alloy products
Nitrate (ppm)	2011	10	10	1.2	0.20-1.2	NA	NA	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes] (ppb)	2011	80	NA	NA	NA	47.5	12.9-86.9	No	By-product of drinking water disinfection
Total Chlorine ² (ppm)	2011	[4.0]	[4.0]	NA	NA	1.15	0.35-2.07	No	Water additive used to control microbes
Total Organic Carbon [TOC] ³ (ppm)	2011	TT	NA	1.0	1.0-2.68	NA	NA	No	Naturally present in the environment
Turbidity ⁴ (NTU)	2011	TT	NA	0.22	0.04-0.22	NA	NA	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2011	TT	NA	100	NA	NA	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	AMOUNT DETECTED (90TH% TILE)			SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
		AL	MCLG	AMOUNT DETECTED			
Copper (ppb)	2009	1300	1300	221	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2009	15	0	6.3	2/30	No	Corrosion of household plumbing systems; Erosion of natural deposits

UNREGULATED SUBSTANCES (AVON LAKE MUNICIPAL UTILITIES)

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Bromodichloromethane (ppb)	2011	10.8	6.1-12.9	By-product of drinking water disinfection
Bromoform (ppb)	2011	0.28	ND-0.6	By-product of drinking water disinfection
Chloroform (ppb)	2011	22.4	8.7-34.6	By-product of drinking water disinfection
Dibromochloromethane (ppb)	2011	4.10	3.3-5.3	By-product of drinking water disinfection

INITIAL DISTRIBUTION SYSTEM EVALUATION (MEDINA COUNTY NORTHWEST WATER SYSTEM)⁵

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Haloacetic Acids [HAA]-IDSE Results (ppb)	2009	NA	ND-60.2	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes]-IDSE Results (ppb)	2009	NA	18.3-110.8	By-product of drinking water disinfection

¹Amount Detected for these contaminants is the highest compliance value based on a running annual average. This average includes values from 2010 and 2011.

²Amount Detected for Total Chlorine is based on a running annual average. This average includes values from 2010 and 2011.

³The value reported under Amount Detected for Total Organic Carbon (TOC) is the lowest ratio between 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 one (1) indicates that the water system is in compliance.

⁴Turbidity 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.

⁵Under the Stage 2 Disinfectants/Disinfection By-products Rule (D/DBPR), our public water system was required by the U.S. EPA to conduct an evaluation of our distribution system. This is known as an Initial Distribution System Evaluation (IDSE) and is intended to identify locations in our distribution system with elevated disinfection by-product concentrations. The locations selected for the IDSE may be used for compliance monitoring under Stage 2 DBPR, beginning in 2012. 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 sets standards for controlling the levels of disinfectants and disinfection by-products in drinking water, including both TTHMs and HAA5s.

Definitions

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).

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



What's a Cross-connection?

Cross-connections that contaminate drinking water distribution lines are a major concern. A cross-connection is formed at any point where a drinking water line connects to equipment (boilers), systems containing chemicals (air conditioning systems, fire sprinkler systems, irrigation systems), or water sources of questionable quality. Cross-connection contamination can occur when the pressure in the equipment or system is greater than the pressure inside the drinking water line (backpressure). Contamination can also occur when the pressure in the drinking water line drops due to fairly routine occurrences (main breaks, heavy water demand), causing contaminants to be sucked out from the equipment and into the drinking water line (backsiphonage).

Outside water taps and garden hoses tend to be the most common sources of cross-connection contamination at home. The garden hose creates a hazard when submerged in a swimming pool or when attached to a chemical sprayer for weed killing. Garden hoses that are left lying on the ground may be contaminated by fertilizers, cesspools, or garden chemicals. Improperly installed valves in your toilet could also be a source of cross-connection contamination.

Community water supplies are continuously jeopardized by cross-connections unless appropriate valves, known as backflow prevention devices, are installed and maintained. For more information, review the Cross-connection Control Manual from the U.S. EPA's Web site at <http://water.epa.gov/infrastructure/drinkingwater/pws/crossconnectioncontrol/index.cfm>. You can also call the Safe Drinking Water Hotline at (800) 426-4791.

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. 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/safewater/lead.