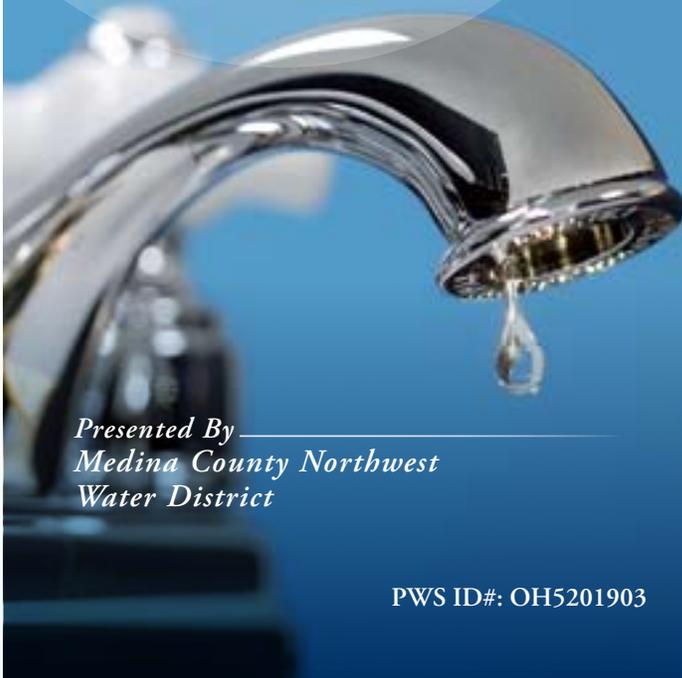


Annual
WATER
QUALITY
REPORT

Reporting Year 2012



Presented By _____
Medina County Northwest
Water District

PWS ID#: OH5201903

There When You Need Us

We are once again proud to present our annual water quality report, covering all testing performed between January 1 and December 31, 2012. 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 to assist you should you ever have any questions or concerns about your water.

Community Participation

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.co.medina.oh.us/commiss/agenda.htm>. The public may also address any drinking water concerns to the Medina County Sanitary Engineering Department Superintendent of Treatment, Dave Bazilevich, at (330) 723-9585.

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. Medina County also maintains emergency connections with the City of Cleveland Division of Water System. These emergency connections were not used during the 2012 calendar year.

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 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.

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>.

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. Avon Lake Municipal Utilities treats the water to meet drinking water quality standards. Implementing measures to protect Lake Erie and the Black River can further decrease the potential for water quality impacts. More detailed information is provided in the Drinking Water Assessment Report, which can be obtained by calling the Medina County Sanitary Engineers at (330) 723-9585.

QUESTIONS?

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

Backflow Prevention Program

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.co.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.

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. We have surveyed all industrial, commercial, and institutional facilities in the service area to make sure that all potential cross-connections are identified and eliminated or protected by a backflow preventer. We also inspect and test each backflow preventer to make sure that it is providing maximum protection.

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.



You may not be aware of it, but every time you pour fat, oil, or grease (FOG) down your sink (e.g., bacon grease), you are contributing to a costly problem in the sewer collection system. FOG coats the inner walls of the plumbing in your house as well as the walls of underground piping throughout the community. Over time, these

greasy materials build up and form blockages in pipes, which can lead to wastewater backing up into parks, yards, streets, and storm drains. These backups allow FOG to contaminate local waters, including drinking water. Exposure to untreated wastewater is a public health hazard. FOG discharged into septic systems and drain fields can also cause malfunctions, resulting in more frequent tank pump-outs and other expenses.

Communities spend billions of dollars every year to unplug or replace grease-blocked pipes, repair pump stations, and clean up costly and illegal wastewater spills. Here are some tips that you and your family can follow to help maintain a well-run system now and in the future:

NEVER:

- Pour fats, oil, or grease down the house or storm drains.
- Dispose of food scraps by flushing them.
- Use the toilet as a waste basket.

ALWAYS:

- Scrape and collect fat, oil, and grease into a waste container such as an empty coffee can, and dispose of it with your garbage.
- Place food scraps in waste containers or garbage bags for disposal with solid wastes.
- Place a wastebasket in each bathroom for solid wastes like disposable diapers, creams and lotions, and personal hygiene products including nonbiodegradable wipes.

Water Main Flushing

Distribution mains (pipes) convey water to homes, businesses, and hydrants in your neighborhood. The water entering distribution mains is of very high quality; however, water quality can deteriorate in areas of the distribution mains over time. Water main flushing is the process of cleaning the interior of water distribution mains by sending a rapid flow of water through the mains.

Flushing maintains water quality in several ways. For example, flushing removes sediments like iron and manganese. Although iron and manganese do not pose health concerns, they can affect the taste, clarity, and color of the water. Additionally, sediments can shield microorganisms from the disinfecting power of chlorine, contributing to the growth of microorganisms within distribution mains. Flushing helps remove stale water and ensures the presence of fresh water with sufficient dissolved oxygen, disinfectant levels, and an acceptable taste and smell.

During flushing operations in your neighborhood, some short-term deterioration of water quality, though uncommon, is possible. You should avoid tap water for household uses at that time. If you do use the tap, allow your cold water to run for a few minutes at full velocity before use and avoid using hot water, to prevent sediment accumulation in your hot water tank.

Please contact us if you have any questions or if you would like more information on our water main flushing schedule.

Sampling Results

During the past year, Medina County and Avon Lake Municipal Utilities have taken hundreds of water samples in order to determine if any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants are present. 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									
				Medina County Northwest Water District		Avon Lake Municipal Utilities			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Barium ¹ (ppm)	2012	2	2	NA	NA	0.024	0.02–0.025	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine (ppm)	2012	[4]	[4]	1.04	0.29–2.07	NA	NA	No	Water additive used to control microbes
Fluoride (ppm)	2012	4	4	NA	NA	1.0	0.80–1.10	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAA]–Stage 2 (ppb)	2012	60	NA	37.6	24.3–40.8	16.3	8.5–23.9	No	By-product of drinking water disinfection
Nickel ¹ (ppb)	2012	100	100	NA	NA	7.7	5.0–10.0	No	Erosion of natural deposits; Discharge from electroplating, stainless steel, and alloy products
Nitrate (ppm)	2012	10	10	NA	NA	0.93	ND–0.93	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes]–Stage 2 (ppb)	2012	80	NA	60.7	37.2–99.4	35.8	25.6–49.1	No	By-product of drinking water disinfection
Total Organic Carbon [TOC] ² (ppm)	2012	TT	NA	NA	NA	1.0	1.0–2.06	No	Naturally present in the environment
Turbidity ³ (NTU)	2012	TT	NA	NA	NA	0.19	0.04–0.19	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2012	TT	NA	NA	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)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE		
Copper (ppm)	2012	1.3	1.3	0.240	0/32	No	Corrosion of household plumbing systems; Erosion of natural deposits		
Lead (ppm)	2012	.015	0	<0.005	1/32	No	Corrosion of household plumbing systems; Erosion of natural deposits		

INITIAL DISTRIBUTION SYSTEM EVALUATION (IDSE) ⁴

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

¹The levels reported by Avon Lake Municipal Utilities are the highest compliance values based on running annual averages. These averages include results from 2011 and 2012.

²The 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.

³Turbidity 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 percent of the daily samples and shall not exceed 1 NTU at any time. As reported above, the Avon Lake WTP highest recorded turbidity result for 2012 was 0.19 NTU and the lowest monthly percentage of samples meeting the turbidity limits was 100 percent.

⁴Under 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 disinfectant 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).

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.