

ANNUAL WATER QUALITY REPORT

Reporting Year 2022



Presented By
**The City of Niles
Water Division**



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, 2022. 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.

Water Treatment Process

The treatment process consists of a series of steps. First, raw water is drawn from our water source and sent to an aeration tower, which allows for oxidation of high iron levels. Then the water is held in a detention tank where it is filtered through layers of fine coal. Chlorine is added as a precaution against any bacteria that may still be present. (We carefully monitor the amount of chlorine, adding the lowest quantity necessary to protect the safety of your water without compromising taste.) Fluoride (to prevent tooth decay) and a corrosion inhibitor (to protect distribution system pipes) are added before the water is pumped to sanitized water towers and into your home or business.

Source Water Assessment

A Source Water Assessment Plan (SWAP) is now available at our 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 the following susceptibility ratings:

- Airport Wells, moderately low
- Western Well, moderate
- Decker Well, low
- Clay Well, moderately low
- Parker Well, moderately low
- Front Street Well, moderate

If you would like to review the SWAP, please feel free to contact our office during regular office hours.

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>.

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 have a service line that is lead, galvanized previously connected to lead, or unknown but likely to be lead, it is recommended that you run your water for at least five minutes to flush water from both your home plumbing and the lead service line. 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 on the U.S. EPA's website at <http://water.epa.gov/drink/info/lead>.

Where Does My Water Come From?

All of Niles's drinking water comes from groundwater. Seven wells take water from deep in the ground. Each well is protected from surface contamination by a designated wellhead protection area.

QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call James Stevens, Operator-in-Charge, at (269) 684-3901, ext. 1310.

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.

Variations and Exemptions

The City of Niles was granted a variance by the Michigan Department of Environment, Great Lakes, and Energy (EGLE) to sample lead and copper on a triannual schedule. The variance was granted after the results of lead and copper samples fell below the action levels set by the U.S. EPA.

Lead Service Lines

The City of Niles has 434 known lead service lines. There are 1,085 service lines with unknown material. The total number of service lines is 5,561.

About Our Violation

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail. We are required to report the results of your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether your drinking water meets health standards. While we collected our monthly total coliform samples on time, we did not report the results to EGLE by the July 10, 2022, deadline for the June 2022 compliance period.

There is nothing you need to do at this time. This is not an emergency. You do not need to boil water or use an alternative source of water at this time. The results of the samples were negative for bacteria. Even though public health was not impacted, as our customers, you have a right to know what happened and what we did to correct the situation.

While we collected the sample on time, we inadvertently missed reporting the sample results to EGLE by the required deadline. We are required to monitor total coliform by collecting 15 samples per month. We collected the required samples on June 6, 14, and 20, 2022, but failed to report the results until August 1, 2022. We are making efforts to ensure this does not happen again. We have already returned to compliance. For more information, please contact James Stevens at (269) 684-3901, ext. 1310.

Community Participation

You are invited to participate in our public forum and voice your concerns about your drinking water. We meet the second and fourth Monday of each month at 6:00 p.m. in City Council Chambers, which is located within the Niles Fire Station Complex, 1345 East Main Street. You may also address your concerns at our utilities board meeting, held on the third Monday of each month at 5:00 p.m. in the City Hall Conference Room, second floor, 333 North Second Street. Please visit www.nilesmi.org for current meeting times and locations.

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 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.

REGULATED SUBSTANCES									
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	District I		District II		VIOLATION	TYPICAL SOURCE
				AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH		
Alpha Emitters (pCi/L)	2020	15	0	1.4	NA	NA	NA	No	Erosion of natural deposits
Arsenic (ppb)	2020	10	0	2	ND–2	NA	NA	No	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium (ppm)	2020	2	2	0.10	ND–0.10	NA	NA	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Beta/Photon Emitters (pCi/L)	2019	50 ¹	0	0.64	NA	NA	NA	No	Decay of natural and human-made deposits
Chlorine (ppm)	2022	[4]	[4]	1.32	0.72–1.93	NA	NA	No	Water additive used to control microbes
Combined Radium (pCi/L)	2022	5	0	2.13	NA	NA	NA	No	Erosion of natural deposits
Fluoride (ppm)	2022	4	4	0.95	0.02–1.88	NA	NA	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs]–Stage 1 (ppb)	2021	60	NA	<2	NA	NA	NA	No	By-product of drinking water disinfection
Haloacetic Acids [HAAs]–Stage 2 (ppb)	2022	60	NA	4.7	<2–4.7	NA	NA	No	By-product of drinking water disinfection
Hexafluoropropylene Oxide Dimer Acid [HFPO-DA] (ppt)	2022	370	NA	<2/0	NA	NA	NA	No	Discharge and waste from industrial facilities utilizing the Gen X chemical process
Nitrate (ppm)	2022	10	10	1.3	NA	NA	NA	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; erosion of natural deposits
Perfluorobutanesulfonic Acid [PFBS] (ppt)	2022	420	NA	<2.0	NA	NA	NA	No	Discharge and waste from industrial facilities; stain-resistant treatments
Perfluorohexanesulfonic Acid [PFHxS] (ppt)	2022	51	NA	<2.0	NA	NA	NA	No	Firefighting foam; discharge and waste from industrial facilities
Perfluorohexanoic Acid [PFHxA] (ppt)	2022	400,000	NA	<2.0	NA	NA	NA	No	Firefighting foam; discharge and waste from industrial facilities
Perfluorononanoic Acid [PFNA] (ppt)	2022	6	NA	<2.0	NA	NA	NA	No	Discharge and waste from industrial facilities; breakdown of precursor compounds
Perfluorooctanesulfonic Acid [PFOS] (ppt)	2022	16	NA	<2.0	NA	NA	NA	No	Firefighting foam; discharge from electroplating facilities; discharge and waste from industrial facilities
Perfluorooctanoic Acid [PFOA] (ppt)	2022	8	NA	<2.0	NA	NA	NA	No	Discharge and waste from industrial facilities; stain-resistant treatments
TTHMs [total trihalomethanes]–Stage 1 (ppb)	2022	80 ²	NA	50.4	26.3–50.4	NA	NA	No	By-product of drinking water disinfection
TTHMs [total trihalomethanes]–Stage 2 Hydro Plant Hydrant DBP1	2022	80 ²	NA	26.3	26.3 - 50.4	NA	NA	No	By-product of drinking water disinfection
TTHMs [total trihalomethanes]–Stage 2 Lilac Hydrant M60 DBP2	2022	80 ²	NA	50.4	26.3 - 50.4	NA	NA	No	By-product of drinking water disinfection

Tap water samples were collected for lead and copper analyses from sample sites throughout the community											
				District I			District II				
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH %ILE)	RANGE LOW-HIGH	SITES ABOVE AL/TOTAL SITES	AMOUNT DETECTED (90TH %ILE)	RANGE LOW-HIGH	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2022	1.3	1.3	0.5	ND-0.6	0/30	0.1	ND-0.1	0/20	No	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	2022	15	0	2	ND-10	0/30	ND	ND-1	0/20	No	Lead service lines; corrosion of household plumbing systems, including fittings and fixtures; erosion of natural deposits

SECONDARY SUBSTANCES

				District I			District II				
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE		
Chloride (ppm)	2020	250	NA	36	12-36	NA	NA	No	Runoff/leaching from natural deposits		
Sulfate (ppm)	2020	250	NA	46	28-46	NA	NA	No	Runoff/leaching from natural deposits; industrial wastes		

UNREGULATED SUBSTANCES

			District I			District II					
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE					
1,4-Dioxane (ppb)	2022	1.2	0.07-1.2	NA	NA	Groundwater contamination from manufacturing processes and landfills					
Bromide (ppb)	2019	38.3	24.7-38.3	NA	NA	Naturally occurring in groundwater					
Bromochloroacetic Acid (ppb)	2019	1.97	1.21-1.97	NA	NA	By-product of disinfection in drinking water					
Bromodichloroacetic Acid (ppb)	2019	1.64	0.937-1.64	NA	NA	By-product of disinfection in drinking water					
Chlorodibromoacetic Acid (ppb)	2019	0.743	0.581-0.743	NA	NA	By-product of disinfection in drinking water					
Dibromoacetic Acid (ppb)	2022	1	ND-1	NA	NA	By-product of disinfection of drinking water					
Dichloroacetic Acid (ppb)	2022	1.9	1.0-2.7	NA	NA	Part of a group of haloacetic acids that are by-products of disinfection of drinking water					
Manganese (ppb)	2019	212	0.9-212	NA	NA	Runoff/leaching from natural deposits; industrial wastes					
Sodium (ppm)	2020	20	4.3-20	NA	NA	Erosion of natural deposits					
Trichloroacetic Acid (ppb)	2022	2.0	1-2.0	NA	NA	Part of a group of haloacetic acids that are by-products of disinfection of drinking water					

¹The MCL for beta particles is 4 millirems per year. U.S. EPA considers 50 pCi/L to be the level of concern for beta particles.
²Some 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.

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.

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.

pCi/L (picocuries per liter): A measure of radioactivity.

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).

ppt (parts per trillion): One part substance per trillion parts water (or nanograms per liter).

SMCL (Secondary Maximum Contaminant Level): These standards are developed to protect aesthetic qualities of drinking water and are not health based.