

Annual Drinking Water Quality Report

Village of Niles

Utility Number IL0312010

Annual Water Quality Report for the period of January 1 to
December 31, 2014

This report is intended to provide you with important information about your drinking water and the efforts made by the Village of Niles water system to provide safe drinking water. The source of drinking water used by the Village is Niles is Lake Michigan and is purchased through the City of Chicago. For more information regarding this report contact Chris Colletti at (847) 588-7900.

Este informe contiene información muy importante sobre el agua que usted bebe. Tradúzcalo ó hable con alguien que lo entienda bien.



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Source of Drinking Water

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 and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants 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 and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm water 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 storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

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 EPA's Safe Drinking Water Hotline at (800) 426-4791.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised 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 can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

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 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 <http://www.epa.gov/safewater/lead>.

Source Water Assessment Summary

We want our valued customers to be informed about their water quality. If you would like to learn more, please feel welcome to attend any of our regularly scheduled Village Board meetings held at 1000 Civic Center Drive. The source water assessment for our supply has been completed by the Illinois EPA. If you would like a copy of this information, please stop by the Niles Public Services Department or call our Water Plant Supervisor at 847-588-7900. To view a summary version of the completed Source Water Assessments, including: Importance of Source Water; Susceptibility to Contamination Determination; and documentation/recommendation of Source Water Protection Efforts, you may access the Illinois EPA website at <http://www.epa.state.il.us/cgi-bin/wp/swap-fact-sheets.pl>.

The Illinois EPA considers all surface water sources of community water supply to be susceptible to potential pollution problems. The very nature of surface water allows contaminants to migrate into the intake with no protection only dilution. This is the reason for mandatory treatment for all surface water supplies in Illinois. Chicago's offshore intakes are located at a distance that shoreline impacts are not usually considered a factor on water quality. At certain times of the year, however, the potential for contamination exists due to wet-weather flows and river reversals. In addition, the placement of the crib structures may serve to attract waterfowl, gulls and terns that frequent the Great Lakes area, thereby concentrating fecal deposits at the intake and thus compromising the source water quality. Conversely, the shore intakes are highly susceptible to storm water runoff, marinas and shoreline point sources due to the influx of groundwater to the lake.

2014 Regulated Contaminants Detected

Village of Niles Water System

Coliform Bacteria

Maximum Contaminant Level Goal	Total Coliform maximum Contaminant Level	Highest Number of Positive	Fecal Coliform or E. Coli Maximum Contaminant Level	Total Number of Positive E. Coli or Fecal Coliform Samples	Violation	Likely Source Of Contaminant
0	1 positive monthly sample.	2		0	Y	Naturally present in the environment.

Lead and Copper

Definitions:

- Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- Action Level Goal (ALG): The level of a contaminant in drinking water below which there is no known or expected risk to health. ALG's allow for a margin of safety.

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90 th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Lead	2014	0	15	8.66	1	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

Water Quality Test Results

Definitions: The following tables contain scientific terms and measures, some of which may require explanation.

- Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.
- Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the Maximum Contaminant Level Goal as feasible using the best available treatment technology.
- Maximum Residual Disinfectant Level (MRDL): The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- Maximum Residual Disinfectant Level (MRDLG): The level of disinfectant in drinking water 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.
- ppm: milligrams per liter or parts per million - or one ounce in 7,350 gallons of water
- ppb: micrograms per liter or parts per billion - or one ounce in 7,350,000 gallons of water.
- n/a: not applicable.
- Avg: Regulatory compliance with some MCLs are based on running annual average of monthly samples.

Regulated Contaminants

Disinfectants & Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source Of Contaminant
Chlorine	12/31/2014	0.9	0.7 – 1.2	MRDLG = 4	MRDL = 4	ppm	No	Water additive used to control microbes.
Haloacetic Acids (HAA5)*	2014	16	7.66 – 14.4	No goal for the total	60	ppb	No	By-product of drinking water disinfection
TTHMs (Total Trihalomethanes)	2014	40	24.5 – 43.3	No goal for the total	80	ppb	No	By-product of drinking water disinfection

Violation Table

Total Coliform			
Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.			
Violation Type	Violation Begin	Violation End	Violation Explanation
MCL (TCR), MONTHLY	8/1/2014	8/31/2014	Total coliform bacteria were found in our drinking water during the period indicated in enough samples to violate a standard.

Since the Village of Niles purchases Lake Michigan from the City of Chicago, water system information from Chicago is included in our report.

2014 Regulated Contaminants Detected

City of Chicago Water System

Coliform Bacteria

Maximum Contaminant Level Goal	Total Coliform maximum Contaminant Level	Highest Number of Positive	Fecal Coliform or E. Coli Maximum Contaminant Level	Total Number of Positive E. Coli or Fecal Coliform Samples	Violation	Likely Source Of Contaminant
0	5% of monthly samples are positive	0.6		0	N	Naturally present in the environment.

Lead and Copper

Definitions:

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Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90 th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	8/23/2012	1.3	1.3	0.046	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	8/23/2012	0	15	6.6	1	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

Water Quality Test Results

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Total Organic Carbon

- The percentage of Total Organic Carbon (TOC) removal was measured each month and the system met all TOC removal requirements set, unless a TOC violation is noted in the violations section.

Disinfectants and Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source Of Contaminant
Chlorine	12/31/2014	1	1 – 1	MRDLG = 4	MRDL = 4	ppm	N	Water additive used to control microbes.
Haloacetic Acids (HAA5)*	2014	11	2.6 – 14.6	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
Total Trihalomethanes (TTHm)*	2014	22	9.4 – 31.1	No goal for the total	80	ppb	N	By-product of drinking water disinfection.

2014 Regulated Contaminants Detected

City of Chicago Water System (Continued)

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source Of Contaminant
Barium	2014	0.0227	0.0223 – 0.0227	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride	2014	1	0.941 – 0.977	4	4.0	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate [measured as Nitrogen]	2014	0.308	0.304 – 0.308	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Sodium	2014	10	9.5 – 10.0			ppm	N	Erosion from naturally occurring deposits: Used in water softener regeneration.

Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source Of Contaminant
Combined Radium 226/228	2014	0.84	0.5 – 0.84	0	5	pCi/L	N	Erosion of natural deposits.
Gross alpha excluding radon and uranium	2014	6.6	6.1 – 6.6	0	15	pCi/L	N	Erosion of natural deposits

Turbidity	Limit (Treatment Technique)	Level Detected	Violation	Likely Source of Contamination
Highest single measurement	1 NTU	0.11 NTU	N	Soil runoff.
Lowest monthly % meeting limit	0.3 NTU	100%	N	Soil runoff.

Information Statement: Turbidity is a measurement of the cloudiness of the water caused by suspended particles. We monitor it because it is a good indicator of water quality and the effectiveness of our filtration system and disinfectants.

UCMR3 Compliance Reporting

In compliance with the Unregulated Contaminant Monitoring Rule 3 (UCMR3) as required by the EPA, the City of Chicago has monitored for 28 contaminants suspected to be present in drinking water, but that do not have health-based standards set under the Safe Drinking Water Act. The monitoring results were reported to the EPA. The list of UCMR3 contaminants that we have monitored included volatile organic chemicals, metals, perfluorinated compounds, hormones, 1,4-dioxane and chlorate. The contaminants that were detected in this monitoring program are listed below.

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source Of Contaminant
Chromium	-	0.3	0.2 – 0.3	100	100	ppb	-	Naturally occurring element; used in making steel and other alloys.
Molybdenum	-	1.1	1.0 – 1.1	NA	NA	ppb	-	Naturally occurring element found in ores and present in plants, animals and bacteria; commonly used form molybdenum trioxide.
Strontium	-	120	110 – 120	NA	NA	ppb	-	Naturally occurring element; has been used in cathode-ray tube TVs to block x-ray emissions.
Vanadium	-	0.3	ND – 0.3	NA	NA	ppb	-	Naturally occurring metal; vanadium pentoxide is used as a catalyst and a chemical intermediate.
Chromium-6 or Hexavalent Chromium	-	0.22	0.18 – 0.22	NA	NA	ppb	-	Naturally occurring element; used in making steel and alloys.
4-Androstene-3,17-Dione	-	0.0008	0.0006 – 0.0008	NA	NA	ppb	-	Steroidal hormone naturally produced in the human body; and used as an anabolic steroid and a dietary supplement.
Testosterone	-	0.0001	0.0001 – 0.0001	NA	NA	ppb	-	Androgenic steroid naturally produced in the human body; and used in pharmaceuticals.