

VILLAGE OF BELLWOOD

2018 WATER QUALITY REPORT

July

2019

Este informe contiene información muy importante. Tradúscalo ó hable con alguien que lo entienda bien.

This year, as in years past, your tap water met all USEPA and state drinking water health standards. Our system vigilantly safeguards its water supply, and we are able to report that the department had no violation of a contaminant level or of any water quality standard in the previous year. This report summarizes the quality of water that we provided last year, including details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies.

The Village of Bellwood purchases Lake Michigan water through a distribution agreement with the Village of Melrose Park. We also have three (3) backup wells, located within the Bellwood Village limits, drilled into the Galesville and Mt. Simon aquifers, which are used on an emergency basis only. An aquifer is a geological formation that contains water.

The sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travel 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 contaminant, 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 may be naturally-occurring or 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 1-800-426-4791.

In order to insure that tap water is safe to drink, EPA prescribes regulations that 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 EPA Safe Drinking Water Hotline (1-800-426-4791).

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 at 1-800-426-4791 or <https://www.epa.gov/safewater/lead>.

We want our residents to be informed about their water quality. If you would like to learn more, please feel welcome to attend any of our regularly scheduled Board Meetings. Board Meetings are held each month at 6:00 p.m. at the Village Hall municipal building located at 3200 Washington Boulevard. 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 Village Hall or call our Director of Public Works, Marty Walker at 708-547-3541, Monday through Friday, 7:00 a.m. to 3:30 p.m. To view a summary version of the completed Source Water Assessment, 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>.

Source Water Location

The City of Chicago utilizes Lake Michigan as its source water via two water treatment plants. The Jardine Water Purification Plant serves the northern areas of the City and suburbs, while the South Water Purification Plant serves the southern areas of the City and suburbs. Lake Michigan is the only Great Lake that is entirely contained within the United States. It borders Illinois, Indiana, Michigan and Wisconsin, and is the second largest Great lake by volume with 1,180 cubic miles of water and third largest by area.

Source Water Assessment Summary

The Illinois EPA implemented a Source Water Assessment Program (SWAP) to assist with watershed protection of public drinking water supplies. The SWAP inventories potential sources of contamination and determined the susceptibility of the source water to contamination. The Illinois EPA has completed the Source Water Assessment Program for our supply. Further information on our community water supply's Source Water Assessment Program is available by calling the City of Chicago, Department of Water Management at 312-744-6635.

Susceptibility of Contamination

The Illinois EPA considers all surface water sources of community water to be susceptible of 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 water fowl, 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.

Further information on our community water supply's Source Water Assessment Program is available by calling the City of Chicago, Department of Water Management at 312-744-6635.

Definition of Terms

Avg: Regulatory compliance with some MCLs are based on running annual average of monthly samples.

Maximum Contaminant Goal (MCLG): 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.

Maximum Contaminant Level (MCL): 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.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use disinfectants to control microbial contaminants.

Maximum Residual Disinfectant Level (MRDL): The highest level of drinking water disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Level 1 Assessment: A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Level 2 Assessment: A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

Highest Level Detected: This column represents the highest single sample reading of a contaminant of all the samples collected.

Range of Detections: This column represents a range of individual sample results, from lowest to highest that were collected during the CCR calendar year.

Date of Sample: If a date appears in this column, the Illinois EPA requires monitoring for this contaminant less than once per year because the concentrations do not frequently change. If no date appears in the column, monitoring for this contaminant was conducted during the Consumer Confidence Report calendar year.

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

Water Quality Data Table Footnotes

Turbidity

Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of water quality and the effectiveness of our filtration system and disinfectants.

Unregulated Contaminants

A maximum contaminant level (MCL) for this contaminant has not been established by either state or federal regulations, nor has mandatory health effects language. The purpose for monitoring this contaminant is to assist USEPA in determining the occurrence of unregulated contaminants in drinking water, and whether future regulation is warranted.

Fluoride

Fluoride is added to the water supply to help promote strong teeth. The Illinois Department of Public Health recommends an optimal fluoride range of 0.9 mg/l to 1.2 mg/l.

Sodium

There is not a state or federal MCL for sodium. Monitoring is required to provide information to consumers and health officials that are concerned about sodium intake due to dietary precautions. If you are on a sodium-restricted diet, you should consult a physician about this level of sodium in the water.

2018 WATER QUALITY DATA FOR THE CITY OF CHICAGO

Contaminant (unit of measurement) Typical Source of Contaminant	MCLG	MCL	Level found	Range of detection	Violation	Date of Sample
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Turbidity Data

TURBIDITY (NTU/Lowest Monthly % <0.3 NTU) Soil runoff. Lowest monthly percent	N/A	TT (Limit 0.3 NTU)	100% (Lowest Monthly %)	100% – 100%		
TURBIDITY (NTU) Soil runoff. Highest single measurement	N/A	TT (Limit: 1 NTU max)	0.19	N/A		

Inorganic Contaminants

BARIUM (ppm) Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.	2	2	0.0214	0.0203 - 0.0214		
NITRATE (AS NITROGEN) (ppm) Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits	10	10	0.42	0.31 - 0.42		
TOTAL NITRATE & NITRITE (ppm) Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits	10	10	0.42	0.31 - 0.42		

Total Organic Carbon (TOC)

The percentage of TOC removal was measured each month and the system met all TOC removal requirements set by IEPA.

Unregulated Contaminants

SULFATE (ppm) Erosion of naturally occurring deposits.	N/A	N/A	27.6	26.3 – 27.6		
SODIUM (ppm) Erosion of naturally occurring deposits; Used as water softener regeneration.	N/A	N/A	8.89	8.14 - 8.89		

State Regulated Contaminants

FLUORIDE (ppm) Erosion from natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.	4	4	0.86	0.64 – 0.86		
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Radioactive Contaminants

COMBINED RADIUM (226/228) (pCi/L) Decay of natural and man-made deposits	0	5	0.84	0.50 – 0.84		02-11-2014
GROSS ALPHA excluding radon & uranium (pCi/L) Decay of natural and man-made deposits	0	15	6.6	6.1 – 6.6		02-11-2014

Unit of Measurement

ppm – Parts per million, or milligrams per liter

ppb – Parts per billion, or micrograms per liter

NTU: Nephelometric Turbidity Unit, used to measure cloudiness in drinking water.

%<0.3 NTU: Percent samples less than or equal to 0.3 NTU

pCi/L: Picocuries per liter, used to measure radioactivity

The state requires us to monitor certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though accurate, is more than one year old. Some contaminants are sampled less frequently than once a year; as a result, not all contaminants were sampled for during the CCR calendar year. If any of these contaminants were detected the last time they were sampled for, they are included in the table along with the date that the detection occurred. Compliance monitoring for lead and copper is conducted every 3 years. Radiochemical contaminant monitoring is conducted every 6 years.

2018 Voluntary Monitoring

The City of Chicago has continued monitoring for Cryptosporidium, Giardia and E. coli in its source water as part of its water quality program. To date, Cryptosporidium has not been detected in these samples, but Giardia was detected in 2010 in one raw lake water sample collected in September 2010. Treatment processes have been optimized to provide effective barriers for removal of Cryptosporidium oocysts and Giardia cysts in the source water, effectively removing these organisms in the treatment process. By maintaining low turbidity through the removal of particles from the water, the possibility of Cryptosporidium and Giardia organisms getting into the drinking water system is greatly reduced.

In 2018, CDWM has also continued monitoring for hexavalent chromium, also known as chromium-6. USEPA has not yet established a standard for chromium-6, a contaminant of concern which has both natural and industrial sources. Please address any questions or concerns to DWM's Water Quality at 312-742-7499. Data reports on the monitoring program for chromium-6 are posted on the City's website which can be accessed at the following address:

http://www.cityofchicago.org/city/en/depts/water/supp_info/water_quality_resultsandreports/city_of_chicago_emergincontaminantstudy.html

2018 WATER QUALITY DATA FOR THE VILLAGE OF BELLWOOD

Contaminant (unit of measurement) Typical Source of Contaminant	MCLG	MCL	Level found	Range of detection	Violation	Date of Sample
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Inorganic Contaminants

BARIUM (ppm) Discharge of drilling wastes; Discharge from metal Refineries; Erosion of natural deposits.	2	2	0.15	0.0195 – 0.15	N	2018
FLUORIDE (ppm) Erosion of natural deposits; Water additive which Promotes strong teeth; Discharge from fertilizer and aluminum factories.	4	4.0	3.32	1 – 3.32	N	2018
IRON (ppm) This contaminant is not currently regulated by the USEPA. However, the state regulates. Erosion of natural deposits.		1.0	0.592	0.217 – 0.592	N	2018
SODIUM (ppm) Erosion from naturally occurring deposits: Used in water softener regeneration.			338	66.2 - 338	N	2018
Arsenic (ppb) Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics Production wastes.	0	10	1.47	0 – 1.47	N	2018
Manganese (ppb) This contaminant is not currently regulated by the USEPA. However, the state regulates erosion of natural deposits.	150	150	48.5	0 – 48.5	N	2018
Selenium (ppb) Discharge from petroleum and metal refineries. Erosion of natural deposits. Discharge from mines.	50	50	7.04	0-7.04	N	2018

Disinfection/Disinfectant By-Products

HAA5 [TOTAL HALOACETIC ACIDS] (ppb) By-product of drinking water disinfection.	No goal for the total	60	16	8.35 – 25.4	N	2018
TTHMs [TOTAL TRIHALOMETHANES] (ppb) By-product of drinking water disinfection.	No goal for the total	80	36	14.93– 52	N	2018
CHLORINE (ppm) Water additive used to control microbes.	MRDLG=4	MRDL=4	0.9	0.7 – 1	N	12/31/2018

Radioactive Contaminants

COMBINED RADIUM 226/228 (pCi/L) Erosion of natural deposits.	0	5	18.1	18.1 – 18.1	N	7/26/2016
GROSS ALPHA EXCLUDING RADON & URANIUM Erosion of natural deposits.	0	15	5.4	5.4 – 5.4	N	7/26/2016

Lead and Cooper

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

Lead and Cooper	Date Sampled	MCLG	Action Level (AL)	90 th Percentile	# Sites over AL	Units	Violation
Lead	2018	0	15	3.46	0	ppb	N

Likely Source of Contamination – Corrosion of household plumbing systems; erosion of natural deposits.

2018 Violation Summary Table

The Consumer Confidence Rule requires community water systems to prepare and provide to their customers annual consumer confidence reports on the quality of the water delivered by the system.

Violation Type	Violation Begin	Violation End	Violation Explanation
None.			