



452 Park Avenue
Clarendon Hills, Illinois 60514
630.286.4750

The Village of Clarendon Hills

2018

Annual Water Quality Statement

January 1st 2017

Thru

December 31st 2017

Available online @

www.clarendonhills.us

Hard copies at Village Hall 1 N. Prospect Ave
and Public Works 452 Park Ave.

Village of Clarendon Hills 2018 CCR **Annual Water Quality Statement for 2017**

The Village of Clarendon Hills wants all of its consumers to be aware of what is being done to insure that the drinking water is safe for you and your family. **The Village of Clarendon Hills currently meets or exceeds all water quality standards established by the United States Environmental Protection Agency and Illinois Environmental Protection Agency.** This report summarizes the quality of water that we provided beginning January 1, **2017** and ending December 31, **2017**. Additionally this report will not be mailed but copies will be available upon request at the Village Hall or Public Works. This report is mandated by the EPA and will be released annually by July 1. Included in these details are: where your water comes from, what may be in your water, and how it compares to standards set by regulatory agencies. We are committed to providing the safest drinking water possible.

Contact People

If you have any questions about this report, any questions concerning your water system or would like to participate with drinking water quality please contact Joe Ferrel at (630) 286-4750. Joe Ferrel is available to answer any questions about this report or questions about the way we operate the water system. This report will also be posted on the Village website @ www.clarendonhills.us. To participate in discussions of water quality the Village of Clarendon Hills board meetings are the 1st and 3rd Monday of every month.

Source Water Information

Lake Michigan is the sole source of water used to provide drinking water for Chicago and many other suburban communities. **The Village of Clarendon Hills purchases 100% Lake Michigan water from the DuPage Water Commission and delivers only 100% Lake Michigan water to its customers.** The DuPage Water Commission purchases its water from the City of Chicago's Jardine Water Purification Plant, which is a surface water treatment plant.

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 dissolve naturally occurring minerals including radioactive materials and pick up substances resulting from the presence of animal or human activity. Possible contaminants consist of:

- **Microbial Contaminants** – Such as viruses and bacteria, which may come from improperly treated sewage, septic systems, and agricultural livestock operations.
- **Inorganic Compounds** – Such as salts and metals, which may be naturally occurring or a 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 agricultural, 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 may be naturally occurring or be the result of gas and oil production and mining activities.

Since the quality of the raw water source is good, conventional treatment methods of disinfection, coagulation and sedimentation, and sand filtration are adequate for producing water that is free of harmful contaminants. In order to ensure that tap water is safe to drink, USEPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. FDA regulations also establish limits for contaminants in bottled water, which must provide the same protection for public health.

The regulations in place restrict the industrial and sewage treatment plant effluents from entering Lake Michigan, thereby reducing the risk of having these contaminants in the water.

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 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, marina's and shoreline point sources due to the influx of groundwater to the lake. Throughout history there have been extraordinary steps taken to assure a safe source of drinking water in the Chicago land area. From the building of the offshore cribs and the introduction of interceptor sewers to the lock-and-dam system of Chicago's waterways and the city's Lakefront Zoning Ordinance. Lake Michigan has a variety of organizations and associations that are currently working to either maintain or improve water quality.

Finally, one of the best ways to ensure a safe source of drinking water is to develop a program designed to protect the source water against potential contamination on the local level. Since the predominant land use within Illinois' boundary of Lake Michigan watershed is urban, a majority of the watershed protection activities in this document are aimed at this purpose. Citizens should be aware that everyday activities in an urban setting might have a negative impact on their source water. Efforts should be made to improve awareness of storm water drains and their direct link to the lake within the identified local source water area. A proven best management practice (BMP) for this purpose has been the identification and stenciling of storm water drains within a watershed. Stenciling along with an educational component is necessary to keep the lake a safe and reliable source of drinking water.

Drinking water, including bottled waters, may reasonably be expected to contain at least trace amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling USEPA's Safe Drinking Water Hotline (1-800-426-4791).

But, some people may be more vulnerable to contaminants 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. USEPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants are available from the USEPA's Safe Drinking Water Hotline at (1-800-426-4791) or at <http://www.epa.gov/safewater/lead>.

2017 Clarendon Hills Water Quality Data

-Definition of Terms-

Maximum Contaminant Level 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.

Level Found: This column represents an average of sample result data collected during the CCR calendar year. In some cases, it may represent a single sample if only one sample was 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.

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

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

Nd: Not detectable at testing limits. **N/a:** Not applicable

Maximum Residual Disinfectant Level Goal (MRDLG): 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 disinfectants are to control microbial contaminants.

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

Action Level Goal – (ALG) The level of contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety.

AVG: Regulatory compliance with some MCLs are based on a running annual average.

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

Level 2 Assessment: a very detailed study of the water system to identify potential water 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.

Village of Clarendon Hills Regulated Contaminants Detected

<u>Lead and copper</u>	<u>Date Sampled</u>	<u>MCLG</u>	<u>AL</u>	<u>90th %</u>	<u>#sites over AL</u>	<u>Units</u>	<u>Violation</u>	<u>Likely Source Of Contamination</u>
Lead	2017	0	15	3.46	20	ppb	No	
Copper	2017	0	1.3	0.104	20	ppm	No	Erosion of natural deposits: leaching from preservatives corrosion of household plumbing.

Regulated Contaminants

<u>Disinfectants and By Products</u>	<u>Collection Date</u>	<u>Highest Level Detected</u>	<u>Range of levels Detected</u>	<u>MCLG</u>	<u>MCL</u>	<u>Units</u>	<u>Violation</u>	<u>Likely Source of contamination</u>
Chlorine	12/31/2017	0.9	0.7-1.01	MRDLG = 4	MRDL = 4	ppm	No	Water additive used control microbes.
Haloacetic Acids (Haa5)	2017	24	13.01-23.6	No goal	60	ppb	No	By-product of drinking water Chlorination.
Total Trihalo-methanes(TThm)	2017	52	35.5-52.4	No goal	80	ppb	No	By-product of Drinking water chlorination
<u>Inorganic Contaminants</u>	<u>Collection Date</u>	<u>Highest Level Detected</u>	<u>Range of levels Detected</u>	<u>MCLG</u>	<u>MCL</u>	<u>Units</u>	<u>Violation</u>	<u>Likely Source of contamination</u>
Arsenic	11/04/15	2.24	0-2.24	0	10	ppb	No	Erosion of natural deposits, runoff from production wastes.
Barium	11/04/15	0.0364	0.0258-0.0364	2	2	ppm	No	Discharge of drilling Wastes, metal refineries, natural deposits.

Fluoride	11/04/15	1.09	0.29-1.09	4	4.0	ppm	No	Natural deposits additive for healthy teeth, discharge from factories.
Iron	11/04/15	1.17	0.558-1.17		1.0	ppm	No	Erosion of natural deposits.
Manganese	11/04/15	46.3	21-46.3	150	150	ppb	No	Erosion of natural deposits.
Nitrate (measured As Nitrogen)	2014	0.013	0-0.013	1	1	ppm	No	Runoff from fertilizer use; leaching From septic tanks, sewage
Sodium	11/04/15	50.3	45.1-50.3			ppm	No	Erosion of natural deposits. Erosion natural deposits and water softener
Combined Radium 226/228	2016	11.8	11.8-11.8	0	5	pCi/L	No	Erosion of natural deposits
Gross alpha Excluding radon And uranium	10/25/2013	0.28	0.28-0.28	0	15	pCi/L	No	Erosion of natural deposits
Uranium	10/17/2013	0.2533	0.2533-0.2533	0	30	ug/l	No	Erosion of natural deposits

In 2017 the Village of Clarendon Hills reported one drinking water quality violations.

Violation Type:CCR adequacy/ availability/ content Violation Began: 07/01/2017 Violation End: 2017 Violation Explanation: We failed to provide you, our drinking customers, an annual report that adequately informed you about the quality of our drinking water and the risks from exposure to contaminants detected in our drinking water.

2017 City of Chicago Water Quality Data

Detected Contaminants

<u>Turbity Data</u>	<u>MCLG</u>	<u>MCL</u>	<u>Highest Detected</u>	<u>Range of Detection</u>	<u>Violation</u>	<u>Likely Source Of Contamination</u>
Turbidity (%<0.3 NTU)	n/a	TT=.3NTU	100%	100%-100%		Soil runoff
Turbidity (NTU)	n/a	TT=1NTU	0.26	n/a		Soil runoff
<u>Inorganic Contaminants</u>	<u>MCLG</u>	<u>MCL</u>	<u>Highest Detected</u>	<u>Range of Detection</u>	<u>Units</u>	<u>Likely Source of contamination</u>
Barium	2	2	0.0193	.0191-.0193		metal refineries; natural Deposits; drilling waste
Nitrate (as nitrogen)	10	10	0.36	0.32-0.36	ppm	Runoff from fertilizer, Leaching from septic, Natural deposits
Total Nitrate & Nitrite (as Nitrogen)	10	10	0.36	0.32-36	ppm	Runoff from fertilizer, Leaching from septic, Natural deposits
Arsenic	0	10	0.77	0.519-0.767	ppb	Erosion of natural deposits; Runoff from orchards; Glass and electronics Production wastes.
Selenium	50	50	2.48	ND-2.48	ppb	Discharge from petroleum And metal refineries; Erosion Of natural deposits; Discharge from mines.
<u>Total Organic Carbon</u>						

TOC (Total Organic carbon) The percentage of TOC removal was measured each month and the system met all TOC removal requirements set by IEPA

Unregulated Contaminants

Sulfate	n/a	n/a	26.3	26.2-26.3	ppm	Erosion of naturally occurring deposits
Sodium	n/a	n/a	8.06	7.81-8.06	ppm	Erosion of naturally occurring deposits. Water softener.

State Regulated Contaminates

Fluoride	4	4	0.75	0.59-0.75	ppm	Water additive which promotes strong teeth.
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Radioactive Contaminates

Combined Radium 226/228	0	5	0.84	0.50- 0.84	pCi/L	Decay of natural and man-made deposits
Gross Alpha (Excluding radon And uranium pCi/L)	0	15	6.6	6.10-6.60	pCi/L	Decay of natural and man-made deposits

2017 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 of 2010. Treatment process has 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. Also, in compliance with the Long Term 2 Enhanced Surface water Treatment Rule (LT2ESWTR) Round 2, the City of Chicago has continued the 24 month long monitoring program (April 2015 through April 2017), collecting samples from its source water once per month for Cryptosporidium, Giardia, E. coli and turbidity, with no detections for the Cryptosporidium and Giardia so far.

In 2017, 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 Division @ 312-742-7499. Data reports on the monitoring program for Chromium-6 are posted on the City's website which can be accessed @ the following address: http://www.cityofchicago.org/city/en/depts/water/supp_info/water_quality_results_and_reports/city_of_chicago_emergincontaminantstudy.html.

In 2017 the City of Chicago reported the following drinking water monitoring violation.

The City of Chicago announced that no monitoring, reporting, treatment technique, maximum residual disinfectant level, or maximum contaminant level violations were recorded during 2016 for the distribution of water to the suburban serviced areas.

Unit of Measurement

ppm - Parts per million, or milligrams per liter or one ounce in every 7,350 gallons pCi/l -Pico curies per liter
ppb - Parts per billion, or micrograms per liter or one ounce in every 7,350,000 gallon # pos/mo - Number of positive samples per month

NTU - Nephelometric Turbidity Unit, used to measure cloudiness in drinking water %<0.5 NTU - Percent samples less than 0.5 NTU

Water Quality Data Table Footnotes

***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.

About the Data

Turbidity

Turbidity is a measure of cloudiness of water. Chicago monitors this because it is a good indicator of water quality and the effectiveness of their filtration and disinfectants.

Lead

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. Clarendon Hills is 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 30seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead levels in your home's water, you may wish to have it 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>.

Copper

Copper is an essential nutrient, but some people who drink water-containing copper in excess of the "Action Level" over a relatively short amount of time could experience gastrointestinal distress, or could suffer kidney and liver damage. People with Wilson's disease should consult their physician for recommended action. Flushing your tap for 30 seconds to 2 minutes will reduce copper levels caused by water remaining motionless for long periods in household plumbing systems.

Fluoride

The City of Chicago adds fluoride to the source water. It is added as a health benefit to reduce dental decay and the City of Chicago monitors compliance with the Safe Drinking Water Act. The Illinois Department of Public Health recommends an optimal fluoride range of 0.9 mg/l to 1.2 mg/l until November of 2015. As of November 2015, the new recommendation is an optimal fluoride level of 0.7 mg/l.

Barium

Some people who drink water-containing barium in excess of the MCL over many years could experience an increase in their blood pressure.

Sodium

There is no 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.